



**INDIAN
SPACE
ASSOCIATION**
Bhumandal Se Brahmaand Tak

SPACE INDUSTRY

HANDBOOK

2026



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MESSAGE BY CHAIRMAN

Mr Arun T Ramchandani
Sr VP & Head - L&T Precision
Engineering & Systems



It is a privilege to present the Space Industry Handbook 2026, which reflects the remarkable progress and growing momentum of India's private space ecosystem.

India's space sector is undergoing a significant transformation, driven by innovation, industry participation and a strong policy push. The increasing role of private enterprises across launch systems, satellite technologies and downstream applications is accelerating our journey towards global competitiveness.

This handbook encapsulates information on all key stakeholders of the ecosystem and highlights their capabilities, achievements and contributions. It serves as a valuable platform to strengthen collaboration, enable partnerships and showcase India's potential on the global stage.

I extend my appreciation to all contributors and partners involved in this initiative and look forward to India emerging as a leading force in the global space economy.

MESSAGE BY VICE CHAIRMAN

Mr Rahul Vatts
Chief Regulatory Officer,
Bharti Airtel



It is a pleasure to be part of the creation and induction of the first Space Industry Handbook 2026 into the Indian Space ecosystem, reflecting its growing momentum and expanding capabilities.

With strong policy support and increasing private sector participation, India is witnessing a transformative phase in space-spanning launch services, satellite technologies, connectivity and downstream applications. This handbook collates information on all key industry stakeholders and highlights their contributions in shaping a globally competitive space ecosystem.

It also serves as an important platform to foster collaboration, encourage innovation and strengthen partnerships across government, industry and academia.

I extend my appreciation to all contributors and look forward to India's continued advancement as a leading space power.

MESSAGE BY DIRECTOR GENERAL

Lt Gen AK Bhatt

PVSM UYSM AVSM SM VSM (Retd)

Director General,
Indian Space Association (ISpA)
(Former DGMO, MS & GOC 15 Corps)



It gives me immense pleasure to present the Space Industry Handbook 2026, an initiative by the Indian Space Association (ISpA) to showcase the evolving landscape of India's rapidly growing space sector.

India stands at the cusp of a transformative era in space, driven by progressive policy reforms, increased private sector participation and a strong foundation built by our national space program. The opening of the space sector has unlocked new opportunities for innovation, entrepreneurship and global collaboration, positioning India as a key player in the global space economy.

This handbook reflects the diversity, capability and ambition of India's space ecosystem ranging from established industry leaders to emerging startups working across launch systems, satellite technologies, downstream applications and geospatial intelligence. It serves as a comprehensive platform to highlight the contributions of our members and to foster greater engagement among stakeholders.

We envision this document as a comprehensive compendium of the Indian space industry, to be published and updated annually. In this regard, we look forward to continued support and active participation from our members in providing inputs and insights to enrich future editions.

ISpA remains committed to enabling a robust and self-reliant space industry by facilitating policy advocacy, industry collaboration and international partnerships. As we move forward, our focus will be on strengthening capabilities, enhancing competitiveness and creating an enabling environment for sustainable growth.

I extend my sincere appreciation to all contributors and stakeholders who have supported the development of this handbook. I am confident that this publication will serve as a valuable resource for industry, government, academia and global partners.

Together, we look forward to shaping the future of India's space journey and contributing meaningfully to the global space ecosystem.

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COMPANY PROFILE

Alpha Design Technologies Private Limited (ADTL) is a company organized and existing under the laws of India having its registered office in Bangalore. The Company has been incorporated under the Companies Act 1956 on 02 - 07 - 2003. Alpha has also obtained Industrial Licenses (No. DIL-1 (2007) dated 05 March 2007 and No. DIL 97 (2008) dated 20 November 2008) for development / manufacture / supply of almost all types of defence electronics, avionics, simulation, UAVs, AFV equipment & systems. Alpha Design Technologies got acquired by Adani Enterprises on Dec 13, 2018 at an acquisition amount of \$55.5M.

YEAR OF ESTABLISHMENT:

2003

NUMBER OF EMPLOYEES (APPROX.):

- 595 employees (as on Aug 31, 2025)

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹549Cr as on Mar 31, 2024

CORE DOMAIN:

- Launch Vehicle and Subsystems: Launch vehicle systems
- Ground support and Auxiliary Services: Ground station establishment

PRODUCTS AND SERVICES:

Satellite Communication Equipment

1. 2m C-Band Fly Away VSAT

Portable satellite terminal designed for rapid deployment and high-speed voice, video and data communication.

Key Features:

- 1.2m C-band antenna with 25W BUC & LNB
- 48 dBW EIRP
- Fully motorized azimuth & elevation control
- 15-minute setup time
- Built-in Compass & GPS
- Auto/Manual tracking
- IP voice & data capability
- Man-portable rugged configuration



2. Channel Burst Demodulator

- L-band Tx/Rx
- Burst-mode multi data rate support
- High receiver sensitivity
- Excellent frequency stability



3. Antenna Control System (ACS 219)

Designed for tracking satellites in GEO and MEO orbits.

Features:

- Fully automated antenna control
- Ephemeris & TLE-based look angle calculation
- 0.1° pointing accuracy
- Ethernet-enabled GUI-based control
- Scheduled operations
- Data logging & graphical analysis

4. Portable Antenna Controller (PAC)

- Manual antenna movement control
- Slew & tracking modes
- Emergency stop capability

Satellite Navigation Equipment

IRNSS (NavIC) Receiver

- Operates at L5 band (1176.45 MHz)
- 12-channel parallel tracking
- 13m positioning accuracy
- NMEA output support

Miniature NavIC Receiver (MNR)

Compact receiver supporting NavIC (L5) & GPS (L1).

Technical Highlights:

- Zynq-7000 SoC (FPGA + ARM)
- Acquisition & tracking of NavIC & GPS satellites
- USB & satellite terminal connectivity
- Low power design (<2.5W)

NavIC Messaging Receiver (NMR)

- Receives emergency broadcast messages from IRNSS satellites
- Bluetooth-enabled alert transmission
- Low-power, compact design

Dual Band Antenna (L1 & L5)

- Supports GPS & NavIC
- High-performance RHCP polarization
- IP67 enclosure
- Suitable for satellite navigation systems

Distress Alert Transmitter (DAT)

INSAT-based satellite emergency transmitter.

- UHF uplink (402 MHz) to INSAT
- C-band relay to ground stations
- Used for maritime emergency alerting

3. Space & Aerospace Electronics

- Satellite communication subsystems
- RF & microwave modules for space applications
- Digital harness systems
- Aerospace assemblies & structural components

SERVICES

1. Hardware & Software Design (IPR-Based)

- Indigenous development of satellite communication systems
- Embedded systems for space applications
- High-end mission software

2. Assembly, Integration & Testing (AIT)

- Satellite ground equipment integration
- Subsystem testing & validation

3. System Integration

- Integration of satellite ground systems
- Deployment of communication & tracking systems

ACHIEVEMENTS:

- July 2023 - IMS-1 Satellite Bus Technology Transfer from ISRO - ISRO transferred the IMS-1 Earth Observation Satellite Bus Technology to Alpha Design Technologies. IMS-1 (developed by URSC-ISRO) operates in a Sun-Synchronous Orbit.
- December 2016 - Assembly, Integration & Testing (AIT) of IRNSS Satellites - ADT signed a contract with ISRO for the Assembly, Integration and Testing (AIT) of IRNSS (NavIC) satellites, becoming one of the first private Indian companies to participate in end-to-end satellite manufacturing activities.
- In October 2016, Alpha Design Technologies Pvt. Ltd. secured a prestigious multi-million-dollar contract from Elbit Systems for the manufacture of 600 VHF communication devices for export and subsequent large-scale production for the Indian Army's Armoured Corps.
- June 2022 - Crew Module Fairing for Gaganyaan - Through its subsidiary Alpha Tocol Engineering Services, ADT manufactured the Crew Module Fairing (CMF) for ISRO's Gaganyaan Human Spaceflight Mission.

- May 2025: SkyStriker loitering munitions, co-developed by Alpha Design Technologies (Adani Group) in partnership with Israel's Elbit Systems, were operationally deployed during Operation Sindoor, India's precision strikes against terrorist infrastructure.
- March 2025: Alpha Design Technologies delivers first Indigenous Surya VHF Radar to IAF - Bengaluru-based Alpha Design Technologies (ADTL) has successfully delivered the first of six Surya Very High Frequency (VHF) radar systems to the Indian Air Force under a ₹200 crore contract, with delivery completed in mid-March 2025.

INVESTORS/PARTNERS:

Alpha Design Technologies has 9 institutional investors.

- Elara Capital
- Cogent Global Solutions
- Astraea Fund
- One Earth Capital is the largest institutional investor
- Sumant Kapur and 1 other are Angel Investors

KEY MANAGEMENT:

- Col. H.S. Shankar, VSM (Retd)
Chairman & MD



- Hariprasad HS
President & CEO



- Sujatha Deepak
Head of SATCOM



- Suresh
Assistant Manager - Corporate



COMPANY PROFILE

Bharti Airtel Limited is a leading telecommunication company globally. Headquartered in New Delhi, we are the most trusted provider of ICT services with a global network across the USA, Europe, Africa, Middle East, Asia-Pacific, India and SAARC regions. Airtel Telecommunications ranks amongst the top 3 mobile service providers around the world (as per subscribers)

Through the diverse product portfolio and strategically located submarine cables and satellite network running across 365,000+ RKM in 50 countries and 5 continents, we are pushing the boundaries in digital service delivery with a key focus on enhanced end-user experience, round-the-clock infrastructure availability and superior service quality.

YEAR OF ESTABLISHMENT:

1995

NUMBER OF EMPLOYEES (APPROX.):

24,420 employees

CURRENT REVENUE/FUNDING:

- Rs. 1,729,852 million (Year ended March 31, 2025)
- Rs. 1,499,824 million (Year ended March 31, 2024)

CORE DOMAIN:

- Telecommunications and digital connectivity services

PRODUCTS AND SERVICES:

Bharti Airtel is one of the world's leading telecommunications and digital services companies, offering an extensive portfolio of consumer, enterprise, digital, infrastructure and satellite communication services across India, Africa and select global markets. Its offerings span the entire connectivity value chain from access networks to advanced digital platforms and next-generation satellite solutions.

1. Consumer (Retail) Services

Mobile Connectivity

Bharti Airtel provides nationwide mobile voice and data services across:

- 2G - Voice and basic services
- 4G/LTE - High-speed mobile broadband
- 5G (Airtel 5G Plus) - Ultra-low latency, high-throughput services for enhanced mobile broadband, gaming, streaming and enterprise use cases

Airtel's mobile services cater to prepaid and postpaid customers, with bundled digital content, international roaming and premium plans.

Home Broadband & Fixed-Line Services

- Airtel Xstream Fiber - High-speed fiber broadband for homes and small offices, offering symmetrical speeds, low latency and bundled OTT content
- Fixed-line Telephony - Voice services for residential and business customers

Digital TV & Entertainment

- Airtel Digital TV (DTH) - Direct-to-home television services with HD/4K channels, value-added features and recording capabilities
- Airtel Xstream Platform - Aggregated OTT content across multiple streaming platforms via set-top boxes and mobile apps

Digital & Financial Services

- Airtel Thanks App - Integrated digital platform for service management, payments, content and customer engagement
- Airtel Payments Bank - Digital banking services including savings accounts, UPI, bill payments, remittances and merchant solutions

2. Enterprise & B2B Services (Airtel Business)

Airtel Business delivers end-to-end ICT and digital transformation solutions to enterprises, governments and SMEs.

Enterprise Connectivity

- Dedicated Internet & Leased Lines
- MPLS & SD-WAN for secure enterprise networking
- International Private Leased Circuits (IPLC) and global connectivity

Cloud, Data Centre & Edge Services

- Managed cloud services (public, private, hybrid)
- Data centre colocation and hosting
- Cloud Connect solutions to hyperscalers

Cybersecurity Services

- Managed Security Operations Centre (SOC)
- Network security, threat detection and response
- Secure access and compliance services

IoT & Digital Solutions

- IoT Connectivity Platforms for smart meters, logistics, fleet tracking, utilities and smart cities
- Industry-specific solutions for energy, manufacturing, healthcare and urban infrastructure

Voice, Collaboration & CPaaS

- SIP Trunking and enterprise voice
- Unified Communications (UCaaS)
- Communications Platform as a Service (CPaaS) for messaging, APIs and customer engagement

3. Satellite Communications (SATCOM & NTN)

Satellite communications are a strategic growth area for Bharti Airtel, complementing terrestrial networks.

LEO Satellite Broadband

- Eutelsat OneWeb Services - Airtel is the exclusive partner for OneWeb services in India, delivering Low Earth Orbit (LEO) satellite connectivity for:
 1. Enterprises and government networks
 2. Remote and rural connectivity
 3. Defence, disaster response and critical infrastructure
 4. Maritime and aviation connectivity

Future Satellite Internet Services

- Starlink Partnership - Airtel has partnered with SpaceX's Starlink to explore high-speed satellite broadband services in India and Africa (subject to regulatory approvals).

Non-Terrestrial Network (NTN) Integration

- Hybrid terrestrial-satellite solutions for resilience and coverage
- Preparations for direct-to-cell satellite connectivity through Airtel Africa

4. Infrastructure & Network Services

Telecom Infrastructure

- Extensive mobile and fiber network deployment
- Strategic partnership with Indus Towers for passive infrastructure (towers)

International Network & Subsea Cables

- Ownership and participation in multiple submarine cable systems
- Global Points of Presence (PoPs) supporting international data traffic

5. Africa Operations (Airtel Africa)

Airtel Africa operates across multiple African countries, offering:

- Mobile voice and data services
- Mobile money and financial inclusion services
- Enterprise connectivity and digital solutions
- Satellite-enabled connectivity expansion, including direct-to-cell services planned with Starlink

6. Emerging & Future-Focused Services

- 5G Advanced & 6G Readiness
- AI-enabled network optimisation and customer platforms
- Edge computing and private networks
- Next-generation satellite and space-based connectivity solutions

ACHIEVEMENTS:

- December 2025: Direct-to-Cell Satellite Services in Africa - Airtel Africa announced an agreement with SpaceX to introduce Starlink's direct-to-cell satellite connectivity. Through this partnership, Airtel Africa customers with compatible smartphones in regions without terrestrial coverage will be able to access network connectivity via Starlink. The satellite-to-mobile service is expected to begin in 2026, initially offering data for select applications and text messaging.
- May 2025: Airtel Africa Partners with Starlink - Airtel Africa entered into an agreement with SpaceX to bring Starlink's high-speed internet services to its customers across Africa. The partnership aims to enhance connectivity for enterprises, businesses and socio-economic institutions such as schools and health centres, even in the most rural parts of the continent.
- March 2025: Bharti Airtel partnered with SpaceX to bring Starlink's high-speed internet services to its customers in India.
- August 2023: "We are almost ready. In India, we are hopeful that the policy will be in place soon. Our satellites are up and the ground stations are in advanced stages. I believe it is a matter of 60 days before we are ready and I am hopeful something positive will come our way," said Sunil Bharti Mittal, Chairman, Bharti Enterprises.
- April 2023: Shri Sunil Bharti Mittal, Founder and Chairman of Bharti Enterprises, was conferred the "Business Leader of the Year" award at the ET Telecom Awards by the Hon'ble Minister of Finance, Nirmala Sitharaman.

INVESTORS/PARTNERS:

- Bharti Telecom Limited - Promoter and largest shareholder
- Singtel - Strategic long-term investor
- Foreign Institutional Investors (FIIs) - Including global pension and sovereign funds
- Domestic Mutual Funds - Across multiple Indian fund houses
- Public & Retail Shareholders

KEY STRATEGIC PARTNERS

- Eutelsat OneWeb - Satellite broadband (LEO) connectivity
- SpaceX (Starlink) - Satellite internet partnership (India & Africa, subject to approvals)
- Ericsson - 5G core and network technology
- IBM - Cloud and enterprise digital solutions
- Google - AI, cloud infrastructure and digital platforms
- Indus Towers - Telecom infrastructure partnership

KEY MANAGEMENT:

- Sunil Bharti Mittal
Founder and Chairman



- Mr. Gopal Vittal
Vice Chairman & Managing Director



- Mr. Soumen Ray
Chief Financial Officer



- Rahul Vatts
Chief Regulatory officer



- Shweta Singh
Head - Regulatory - Policy & Strategy



COMPANY PROFILE

MapmyIndia is a deep-tech company specializes in maps, navigation, tracking, analytics, GIS, GPS, IoT and location technologies. It offers interactive map portal with GPS navigation system delivering the hyperlocal social discovery of nearby places along with detailed level map search. The company delivers advanced digital 4-dimensional time andspace maps for all types of users and customers, including consumers, enterprises, as well as, software developer and vehicle/device OEMs.

It helps in fixing issues faced by citizens and consumers on the ground with customized location identity platform and digital address method.

YEAR OF ESTABLISHMENT:

1995

NUMBER OF EMPLOYEES (APPROX.):

- 1000+ employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹516Cr (\$61M) on Mar 31, 2025
- Total funding: \$45.3M

CORE DOMAIN:

- Digital mapping
- Geospatial software
- Location-based IoT products

PRODUCTS AND SERVICES:

1. Digital Maps & Navigation Platforms

MapmyIndia develops and maintains high-precision digital map data and navigation platforms for India and global locations.

Key products:

- Mappls App - Consumer navigation app with live traffic, door-level navigation, safety alerts and public transport routing.
- NaviMaps - Offline navigation solution with 3D maps and voice guidance.
- MapmyIndia Map Portal - Web-based mapping platform for exploring locations and spatial data.

These services provide turn-by-turn navigation, live traffic updates, route optimisation and multimodal transport planning.



2. Geospatial Data & Mapping Services

The company offers GIS and mapping solutions for enterprises and government organizations.

Capabilities include:

- Custom map creation using satellite imagery and surveyed data
- Thematic maps, base maps and change detection maps
- LiDAR mapping and photogrammetry
- Digital Elevation Models (DEM) and 2D/3D spatial mapping

These services support urban planning, infrastructure development and environmental analysis.



3. Map APIs, SDKs & Developer Platforms

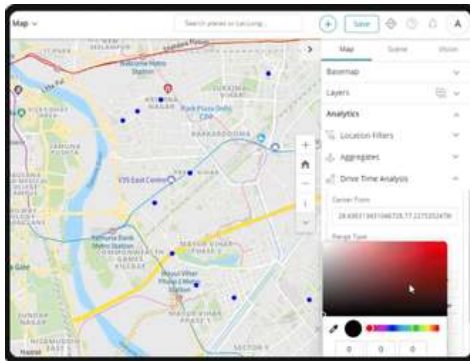
MapmyIndia provides Mappls APIs and SDKs that allow developers to integrate mapping and location intelligence into applications.

Key features:

- Mapping, search, routing and navigation APIs
- Geospatial analytics APIs
- Address cleansing and classification tools
- Telematics and IoT integration APIs
- Digital twin and 3D mapping plugins

More than 120+ APIs and 5+ SaaS platforms support developers building location-enabled applications.





4. Automotive Navigation & Connected Vehicle Solutions

MapmyIndia supplies embedded navigation and telematics technologies for vehicle manufacturers and mobility companies.

Solutions include:

- In-vehicle navigation systems
- HD maps for advanced driver assistance
- Telematics platforms for connected vehicles
- Real-time traffic and mobility analytics

These systems support safer navigation and enhanced driver experiences.



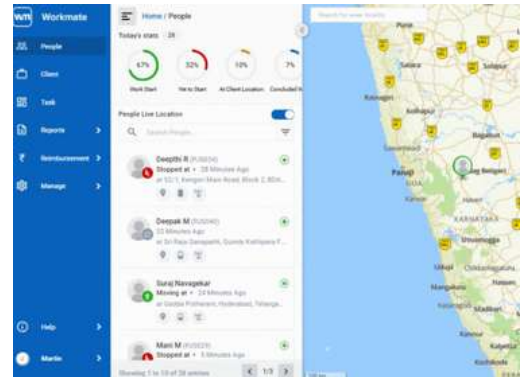
6. Enterprise Location Intelligence Solutions

MapmyIndia delivers location intelligence and geo-analytics platforms for enterprises.

Applications include:

- Sales and logistics optimisation
- Market intelligence and geo-marketing
- Supply chain planning
- Location-based CRM and analytics

These tools combine mapping data with enterprise software to improve operational decision-making.



7. Government & Smart City Solutions

MapmyIndia supports public sector agencies with geospatial platforms for governance and infrastructure management.

Use cases include:

- Smart city planning
- Traffic management and mobility systems
- Disaster response and emergency services
- Public safety and law enforcement analytics

These platforms integrate spatial data to improve policy planning and citizen services.



5. IoT & Vehicle Tracking Solutions

MapmyIndia provides IoT-enabled tracking and monitoring solutions for logistics, fleet management and personal safety.

Products include:

- GPS vehicle trackers
- Dash cameras and in-dash navigation devices
- Smart helmet kits for two-wheelers
- Fleet tracking and telematics platforms

These solutions help monitor vehicle location, safety and operational performance.



ACHIEVEMENTS:

- National Geo-Spatial Platform Development (Nov 2025): Awarded a landmark contract by the Survey of India to develop India's first National Geo-Spatial Platform, creating a unified infrastructure for geospatial data access, analysis and dissemination across government, research, industry and public sectors.
- Drone-Based Geospatial Mapping Expansion (Mar 2024): Secured a drone mapping contract with a logistics company, strengthening capabilities in aerial mapping, geospatial analytics and inspection services.
- Investment in Drone Mapping Ecosystem: Invested in Indrones Solutions to expand capabilities in drone-based surveying, remote sensing and geospatial intelligence applications.
- Integration of Digital Addressing System (DIGIPIN) (July 2025): Integrated DIGIPIN digital coordinates into the Mappls platform, enabling highly accurate geospatial addressing with ~3.8 m resolution across India in collaboration with India Post.
- Digital Mapping for Smart Governance: Developed geospatial platforms supporting traffic management, crime mapping and public infrastructure planning, including digital crime mapping for Chennai and real-time traffic data integrations.
- Partnership with Dassault Systèmes (Mar 2023): Collaborated to deliver digital twin solutions for urban infrastructure, combining geospatial intelligence with simulation technologies for smart city planning and infrastructure management.
- Launch of Indigenous 3D & Street Mapping Platform: Introduced Mappls RealView, an indigenous 360° street-level mapping and 3D geospatial platform, supporting digital mapping, navigation and location intelligence services.
- Geospatial Intelligence for Enterprise & Government: Provides location intelligence solutions supporting urban planning, disaster management, environmental monitoring, logistics optimisation and infrastructure planning.
- Expansion into AI-Driven Geospatial Analytics (2024): Through the founders' initiative ClarityX, advancing AI-powered geospatial data analytics and spatial intelligence services.

INVESTORS/PARTNERS:

- Zepto
- Chargeup
- Visit Health
- Nawgati
- CUSMAT
- ZUPPA
- KOGO
- Glasswing
- Indrones
- Inventa
- RoaDo
- SimDaaS Autonomy.
- PupilMesh

PARTNERS:

- Flipkart
- Nexus Venture Partners
- Lightbox Ventures
- Qualcomm Ventures
- Zenrin

KEY MANAGEMENT:

- Rakesh Kumar Verma
Co-Founder, Managing Director and Group Chairman
- Rashmi Verma
Co-Founder, Chief Technology Officer & Executive Director
- Rohan Verma
Non-Executive Director
- Nikhil Kumar
President- Geospatial



COMPANY PROFILE

L&T, or Larsen & Toubro, is a massive Indian multinational conglomerate known for its expertise in Engineering, Procurement and Construction (EPC), high-tech manufacturing and diversified services, building critical infrastructure in sectors like IT, defense, energy and finance, operating globally in over 50 countries as a "nation builder". It's India's largest construction firm, involved in everything from roads and power plants to aerospace, driven by innovation and a strong focus on sustainability and quality.

L&T has been a long-standing contributor to multiple ISRO missions, supporting:

- Launch vehicle hardware & subsystems (PSLV, GSLV, LVM3)
- Booster segments and motor casings
- Cryogenic and semi-cryogenic engine hardware
- Inter-stage structures and metallic assemblies
- Ground support equipment
- Precision aerospace fabrication

YEAR OF ESTABLISHMENT:

1938

NUMBER OF EMPLOYEES (APPROX.):

- Over 500,000 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue \$30.7B as on Mar 31, 2025

CORE DOMAIN:

- Launch vehicle and subsystems: launch vehicle Manufacturer
- Satellite and subsystems: Deployment mechanism
- Ground support and Auxiliary services: Ground station establishment

PRODUCTS AND SERVICES:

Launch Vehicle Systems

L&T has been a trusted partner to ISRO since the SLV programme (1975), supplying critical launch vehicle hardware and subsystems.

Key Deliverables:

- 300+ Rocket Motor Casings for PSLV, GSLV, LVM3 & SSLV
 - Solid stage motor casings made of maraging steel & 15CDV6
 - Now in serial production
- Light Alloy Interstage Structures for PSLV, GSLV, LVM3 & SSLV
- Payload Fairings (Metallic & Composite)
 - PSLV
 - GSLV Mk-II
 - LVM3
- Metallic & Composite Honeycomb Deck Panels
 - PSLV, GSLV Mk-II, LVM3
 - Gaganyaan
- Crew Escape System (Gaganyaan)
 - Supplied more than 70% of the system
- Launch Vehicle System Integration
- Last Mile Activities at SDSC SHAR

Satellite Subsystems

Over two decades of experience in manufacturing mission-critical satellite hardware.

Key Subsystems:

- Solar Array Deployment Mechanism (SADM)
- Reflector Deployment Mechanism (RDM)
- Propellant Titanium Gas Bottles
- Satellite Bus Structures
- Solar Panel Substrates



3. Navigation & Deep Space Systems

32-Metre Wheel-and-Track Antenna (IDSN, Byalalu)

- 32m parabolic reflector
- 180 stretch-formed panels
- 0.3 mm RMS overall accuracy
- Supports deep-space tracking & command for ISRO missions

Precision Monopulse Tracking Radars (PMTR)

- Installed at SDSC SHAR & ISRO Bengaluru
- Available in C-band & S-band
- Operational since 2009
- Used for satellite launch & re-entry tracking





SATCOM Infrastructure

GSAT-11, GSAT-20 & GSAT-29 Ground Systems

Complete Ground System Network delivery including:

- Gateway stations installation
- System engineering
- Design & development
- Hardware & software supply
- Integration & commissioning
- Testing & validation



Ground Testing Stations & Facilities

Hypersonic Wind Tunnel (VSSC)

- 1-metre test section
- Mach 6-12 capability
- 40-second runtime
- 1000+ blowdowns

Hypersonic Shock Tunnel

- Simulates high enthalpy re-entry conditions
- Large speciality forgings for shock systems

Engine Test Facility

- High-altitude testing for:
 - Liquid propulsion engines
 - Supersonic & hypersonic aero-engines



ACHIEVEMENTS:

- Built India's first fully industry-manufactured PSLV (Nov 2025) under ISRO technology transfer; HAL-L&T consortium responsible for end-to-end production of five PSLV-XL vehicles.
- Awarded ₹860 crore NSIL contract (2022) for production of five PSLVs, marking a major milestone in private-sector launch vehicle manufacturing.
- Key partner in GSLV-F16 / NISAR (ISRO-NASA) mission (July 2025); contributed system integration, launch support, Ogive Payload Fairing (OPLF), Solid Rocket Booster hardware, Honeycomb Deck Panels and Cryogenic Umbilical Plates.
- Major contributor to Aditya-L1 Solar Mission (Aug 2023); supplied middle segments, honeycomb deck panels, 32-m antenna systems, Precision Monopulse Tracking Radar and provided system integration & launch support.
- Supplied critical components for Chandrayaan-3 (July 2023), including middle segment, nozzle bucket flange and ground & flight umbilical plates.
- Installed 32-m antenna at Indian Deep Space Network (IDSN) and deployed Precision Monopulse Tracking Radars at SDSC SHAR & ISRO Bengaluru for launch tracking and deep space missions.
- Announced strategic expansion (2025) in advanced manufacturing for space, defence, electronics and semiconductor sectors, strengthening high-precision and IP-led manufacturing capabilities.
- Engaged in discussions with NASA and Blue Origin (2024) for participation in next-generation space station and orbital habitat supply chains.
- Maintains a five-decade legacy partnership with ISRO, supporting launch vehicles, satellite subsystems and deep space infrastructure.

KEY MANAGEMENT:

- Arun T Ramchandani
Senior Vice President &
Head, Precision
Engineering and Systems



- Ravishankar T
General Manager and
Head of Strategic Systems
VP & Head - Space Vertical



- Raghavendra BM
Joint General Manager &
Head Space Business



- Sarath Chandra Kumar
Nanduru
Asst. General Manager



COMPANY PROFILE

Nelco Limited is a leading Indian provider of satellite communication and integrated security solutions, focused on enabling enterprise and government customers to unlock operational potential across diverse industry verticals. The company offers comprehensive solutions in VSAT connectivity, satellite communication (Satcom) projects and integrated security and surveillance systems, supported by strong capabilities in consulting, customisation, system integration and end-to-end service management, underpinned by robust infrastructure and operational processes.

Nelco holds key licences issued by the Department of Telecommunications (DoT), Government of India, including VSAT, Internet Service Provider (ISP) and In-Flight and Maritime Connectivity (IFMC) licences. It is recognised as one of India's leading VSAT service providers, delivering reliable, flexible and cost-effective satellite connectivity to support pan-India and remote operations for businesses and government institutions.

In addition to satellite connectivity services, Nelco provides end-to-end networking solutions, including Satcom project execution and maintenance of private hubs and hybrid networks for customers across government and corporate sectors.

YEAR OF ESTABLISHMENT:

1940

NUMBER OF EMPLOYEES (APPROX.):

200-500 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: INR 305 crores (FY2025)

CORE DOMAIN:

- Satellite communication (Satcom) services and solutions

PRODUCTS AND SERVICES:

VSAT Connectivity: Through its wholly owned subsidiary Tatanet Services Ltd. (TNSL), Nelco provides satellite-based VSAT connectivity across India, including remote and rural areas. They have deployed over 50,000 VSAT terminals from two satellite hubs in Navi Mumbai (Mahape) and Dehradun. These are used in sectors such as banking (offsite ATMs, branches), renewable energy, enterprise networks, oil & gas, maritime

Bank ATM

VSAT solutions for ATMs in urban and rural India

- VSAT enables 24/7 high-uptime, low-bandwidth connectivity for ATMs.
- Cost-effective and reliable compared to terrestrial networks.
- Supports quick deployment, relocation and applications like broadcast advertising.

Bank

Primary and back-up connectivity for bank branches

- Provides primary and backup connectivity in remote areas.
- Ensures secure transactions, disaster recovery and business continuity

Renewable Energy

Specialized solutions for the renewable energy sector

- VSAT enables real-time monitoring and operations optimization.
- Reduces power output risks and downtime losses.
- Supports government/utility data visibility and energy efficiency.

Oil, Energy & Gas

End-to-end service for the oil, energy & gas industry

- Delivers connectivity in remote/offshore areas with poor telecom infrastructure.
- Supports applications like real-time monitoring, ERP, VoIP, video conferencing.
- Enables better safety, automation, crew welfare and faster decision-making.
- To improve rig on-board situational awareness
- To facilitate real-time control and enable faster decision making
- To increase automation and lower operating costs
- To create a safer working environment
- For crew welfare on these remote sites

Maritime Communication Services

- Offers seamless global satellite connectivity for vessels.
- Ensures consistent Quality of Service (QoS) across sailing regions.



SERVICES:

- With an installed base of 50,000+ VSATs on its network, Nelco is leading VSAT player in the country that offers satellite communication services to both government and enterprise customers across different industry segments. The VSAT service caters to Wide Area Networking requirements for B2B customers using satellite as the medium of transmission. The VSAT services are offered through two hubs located at Mahape (Navi Mumbai) and Dehradun.



INVESTORS/PARTNERS:

- BIG Capital
- Capital 2B
- IAN
- Capital A
- E2MC Ventures
- Riceberg Ventures

KEY MANAGEMENT:

- P J Nath
MD & CEO



- Malav Shah
CFO



- Jitendra Ahuja
Head - Product & Solutions



ACHIEVEMENTS:

- December 2025: Nelco, along with Tata Group, advanced plans to launch satellite broadband internet services in India by leveraging global satellite capacity and engaging with regulators for necessary approvals and spectrum allocation, targeting remote and underserved regions through non-terrestrial networks.
- October 2025: Received approval from the Department of Telecommunications (DoT), Government of India, for its Global Mobile Personal Communications by Satellite (GMPCS) / Virtual Network Operator (VNO) licence, enabling Nelco to commercially operate satellite communication services and expand enterprise and government satcom offerings.
- October 2025: Announced strategic focus on enterprise (B2B) and government (B2G) segments for next-generation satellite communication services, prioritising high-value applications such as telecom backhaul, defence, energy and critical infrastructure connectivity.
- August 2025: Signed an agreement with Intelsat, alongside Tata Group, to enable in-flight connectivity (IFC) services in India's airspace, combining satellite capacity with domestic ground network operations and regulatory enablement.
- August 2025: Partnered with Eutelsat OneWeb to deliver LEO satellite connectivity services across India, extending secure, high-speed, low-latency connectivity across remote regions, territorial waters and strategic sectors including defence, maritime, aviation and enterprise.
- May-April 2025: Engaged in discussions with Starlink (SpaceX) to explore potential collaborations for satellite broadband expansion in India, positioning Nelco as a strategic partner for satellite-based internet distribution models.
- June 2023: Invested in Piscis Networks (SD-WAN OEM) to strengthen its integrated satcom and enterprise networking capabilities.
- March 2023: Partnered with Omnispace to enable hybrid 5G satellite-terrestrial connectivity in India and South Asia, supporting next-generation 5G services in underserved regions.
- May 2022: Conducted a successful LEO satellite broadband trial in India in partnership with Telesat, demonstrating high-speed, low-latency satellite internet performance.
- October 2020: Entered into a cooperation agreement with Telesat to introduce advanced LEO satellite connectivity in India, including development of terrestrial facilities and commercial distribution frameworks.



COMPANY PROFILE

Eutelsat is a global leader in satellite communications, delivering connectivity and broadcast services worldwide. In 2023 Eutelsat merged with OneWeb to become the world's first integrated GEO-LEO satellite operator with a fleet of 35 Geostationary (GEO) satellites and a constellation of more than 600 Low Earth Orbit (LEO) satellites.

While OneWeb LEO services offer low-latency, high-throughput broadband connectivity designed to meet the mission-critical needs of governments, enterprises, telecom operators, aviation, maritime and remote communities. OneWeb's LEO architecture enables consistent global coverage, resilient network performance and enhanced security, particularly in underserved and hard-to-reach regions. Its 34 GEO satellites distribute around 6,300 television channels and the high-growth connectivity markets of Mobile Connectivity, Fixed Connectivity and Government Services.

The Company is headquartered in Paris. It has 1,600+ employees of 76 nationalities. The Company is listed on the Euronext Paris Stock Exchange (ticker: ETL) and the London Stock Exchange (ticker: ETL).

PRODUCTS AND SERVICES:

1. LEO Broadband Connectivity

Eutelsat OneWeb offers an affordable, deployable packaged community broadband service so more people can benefit from being able to use internet. Our flexible B2C WiFi hotspot model leverages a well-established platform and equipment adapted to each situation for fast roll-out. The service ensures consistent performance, high availability and secure global connectivity.

2. Enterprise Connectivity Solutions

Eutelsat OneWeb provides customised satellite connectivity for enterprises operating in remote or infrastructure-limited environments. Solutions support industries such as energy, mining, logistics, manufacturing and infrastructure by enabling secure corporate networking, operational communications, IoT connectivity and cloud access. Services are tailored to meet bandwidth, redundancy and security requirements. We adapt our unique satellite network infrastructure, plans and features to the specific enterprise-grade requirements of our customers.

3. Government & Defence Communications

Eutelsat OneWeb offers secure, resilient and sovereign-grade satellite connectivity for government and defence applications. Services support border security, emergency response, disaster recovery, public safety networks and military communications. The LEO architecture enhances redundancy and resilience while supporting encryption, controlled access and national security compliance.

4. Telecom Backhaul & Network Extension

Eutelsat OneWeb enables 4G/5G satellite backhaul services for telecom operators, extending mobile coverage into rural and hard-to-reach areas where fibre or microwave infrastructure is impractical. The network supports Non-Terrestrial Network (NTN) integration and enhances resilience for universal connectivity and emergency restoration. Services are tailored to unique requirements for mobile network operators, service providers, rural integrators or private networks.

5. Aviation Connectivity

Eutelsat is revolutionising airborne connectivity across the industry with seamless, tailored solutions for commercial airlines, business jet operators, government and special operations aircraft. The LEO-based system ensures high-speed, low-latency connectivity across global flight paths, including polar and remote regions. Applications include passenger internet access, crew communications, operational data transmission and airline digital services.

YEAR OF ESTABLISHMENT:

2012 (restructured 2020; Oneweb merged with Eutelsat in 2023)

NUMBER OF EMPLOYEES (APPROX.):

- 1,600 (approx.) (Group)

CURRENT REVENUE/FUNDING:

- Revenue: \$100M-\$500M range ~€1.24 billion (FY2024-25)

CORE DOMAIN:

- broadband satellite internet services via a low Earth orbit (LEO) constellation.

6. Maritime Connectivity

Eutelsat OneWeb delivers connectivity for commercial shipping, offshore energy platforms, cruise vessels, fishing fleets and naval operations. Services support vessel operations, navigation systems, safety communications, crew welfare and maritime digitalisation initiatives with reliable global coverage. Off-the-shelf and tailored maritime satellite connectivity for customers worldwide including digital tools to manage services in real-time. Ensuring consistent access to business applications for operations, safety and productivity. Optimising maritime satellite connectivity spend season to season, ship by ship.

7. Multi-Orbit (LEO-GEO) Hybrid Solutions

By integrating OneWeb's LEO network with Eutelsat's GEO satellites, the company offers hybrid connectivity solutions combining low latency (LEO) with high-capacity wide-area coverage (GEO). These solutions provide flexible, resilient network architectures for telecom operators, broadcasters, governments and enterprises. Multi-orbit solutions offer exceptional performance, security and redundancy.

8. Managed Network & End-to-End Services

The LEO network architecture is designed to support next-generation connectivity use cases, including:

- 5G Non-Terrestrial Networks (NTN)
- IoT and smart infrastructure connectivity
- Mission-critical digital services
- Secure connectivity for next-generation mobility platforms

The scalable design ensures a long-term adaptability to evolving communication and connectivity demands.

INVESTORS/PARTNERS:

- French State (via Agence des Participations de l'État) - ~29-30%
- Bharti Group - ~17-18%
- UK Government - ~10-11%
- CMA CGM - ~7-8%
- Fonds Stratégique de Participations (FSP) - ~5%
- SoftBank Group - ~12%

KEY MANAGEMENT:

- Neha Idnani
Regional Vice President -
Asia Pacific



- Rahul Vatts
Board of Directors -
OneWeb India



- Nishtha Kapoor
Head of Strategy &
Operation



ACHIEVEMENTS:

- Completion of First-Generation LEO Constellation (650 Satellites)
- Successfully deployed global LEO broadband constellation, including multiple launches with ISRO (LVM3), SpaceX and international partners.
- Strategic Capital Strengthening (Nov 2025) Approved nearly \$1 billion capital increase backed by French government, Bharti Space and institutional investors to fund Gen-2 expansion and strengthen balance sheet.
- Planned Gen-2 Constellation Expansion (Dec 2025) Announced deployment of up to 340 next-generation satellites to enhance capacity, latency and 5G integration.
- Contracted Airbus to build 100 Satellites (Dec 2024) with 5G ground integration upgrades for constellation expansion.
- World's First 5G Advanced NTN Over LEO (Nov 2025) Demonstrated 5G Advanced (Release-19) non-terrestrial network connectivity over the OneWeb LEO constellation in partnership with ESA, MediaTek, Airbus and others.
- Major Government & Defence Contracts
 - €1 billion contract with French Armed Forces for reserved LEO capacity (2025).
 - 10-year \$900 million p-LEO contract from U.S. Space Force (2023).
 - Connectivity services supporting UK Government global operations.
- Multi-Orbit & Hybrid Connectivity Demonstrations
 - Successfully Demonstrated GEO-LEO interoperability with NATO.
 - Successfully conducted hybrid inflight connectivity tests with Intelsat and Hughes.
 - Enabled multi-orbit maritime and mobility solutions globally.
- Launched "Astra" PNT service to address GPS jamming vulnerabilities. MoU with UK's National Physical Laboratory for next-gen PNT capabilities.
- Global Commercial Service Rollout
 - Expanded services across Europe, US, Africa, Australia, Southeast Asia and Antarctica.
 - Connected 1 million underserved people in Sub-Saharan Africa ahead of pledge timeline (2025).
- Advanced User Terminal Ecosystem
 - First flat-panel antennas approved for LEO (Kymeta, Intellian).
 - Military-grade portable terminals (FoldSat Leo Ku OW Mil, Manpack).
 - Aviation, maritime, mobility and enterprise terminals deployed globally.
- Support for Ukraine & European Connectivity Autonomy (2025) Engaged in discussions with EU to enhance satellite internet resilience and reduce reliance on non-European systems.
- India Market Authorization (2023-2025) Received regulatory approvals from IN-SPACe to provide commercial satellite broadband services in India.
- Established 2 Satellite Network Portals (SNPs) and 2 PoPs in India.
- Established as the preferred LEO partner for Indian Defence, enabling mission-critical connectivity during disaster relief operations such as the Sri Lanka floods, Myanmar earthquake, Harsil floods and INSV Kaundinya deployment.

COMPANY PROFILE

Walchandnagar Industries Limited (WIL) is an ISO 9001: 2015 certified Indian company with global presence and diversified business portfolio in Projects, Products and High-tech Manufacturing. Carrying a legacy of more than 100 years of Engineering Excellence, WIL has established its name as one of the best in its operational areas. WIL is known for pioneering achievements in Indian engineering industry and for its contribution to nation building activities. WIL is a listed company on the BSE and NSE stock exchanges in India.

WIL has a strong engineering, project management and manufacturing infrastructure to undertake projects and supply of machinery and equipments, in the fields of Nuclear Power, Aerospace, Missile, Defence, Oil & Gas, Steam generation plants, Independent power projects, Turnkey Cement and Sugar plants. WIL has a large proven reference list of satisfied customers across the world.

YEAR OF ESTABLISHMENT:

1908

NUMBER OF EMPLOYEES (APPROX.):

- 1200-1300 employees

CURRENT REVENUE/FUNDING:

- Revenue: ₹295Cr (\$34.9M) as on Mar 31, 2025

CORE DOMAIN:

- Launch Vehicle Hardware Manufacturing
- Space Structural Systems & Ground Support Equipment

PRODUCTS AND SERVICES:

Launch Vehicle Hardware & Structural Systems

Walchandnagar provides critical structural hardware and assemblies for space launch vehicles used by ISRO.

- Manufactures booster motor casings and nozzles for the ISRO space programs commencing from SLV-3, ASLV to PSLV & GSLV Mk II and Mk III programs.
- Equipment used in the launching of 'ROHINI', 'SROSS', 'IRS', 'G-SAT' and other satellites.
- Contributed key critical equipment in India's maiden mission to moon "Chandrayaan I" as well as India Mission to Mars "Mangalyaan".

CONTRIBUTIONS TILL DATE

141	134	16	And various other hardware like Nozzles, Tankages, End Rings etc.
Strap-on Boosters for PSLV/GSLV Mk II	Core Boosters for PSLV/GSLV Mk II	Core Boosters for GSLV Mk III	

Capacity to deliver hardware for:

– 12 PSLV Flights per year

– 4 GSLV Mk III Flights per year



1973: Association with ISRO commences with the SLV-3 program
1985: Manufacturing commences for PSLV program
2003: Manufacturing for 5 200 commences at WIL
2008: Hardware manufactured at WIL was part of Chandrayaan I mission
2014: S200 supplied by WIL was part of GSLV Mk III



Precision Fabricated Components

The company manufactures high-precision, aerospace-grade engineered parts using advanced metallurgy and machining.

Key offerings:

- Precision-machined parts from maraging steels and special alloys
- Large-scale fabricated structures
- Welded assemblies for aerospace applications
- High-reliability components for extreme environments



Propulsion & Mechanical Systems

Walchandnagar produces propulsion-related hardware and mechanical subassemblies for space launch applications.

Includes:

- Precision-engineered motor casings
- Thrust vector control structures
- Actuation and structural linkages
- Heat shields and protective launch segments

Heavy Engineering & Fabrication Services

Robust manufacturing capabilities for strategic and high-tech applications.

Capabilities:

- Heavy forging and casting
- CNC machining of large aerospace components
- Welding & fabrication of high-integrity assemblies
- Non-destructive testing & quality assurance

Ground Support & Space Infrastructure Equipment

Engineering delivery for mission-critical ground systems supporting space operations.

Examples:

- Launch infrastructure components
- Ground assembly fixtures
- Structural supports for testing and integration
- Space program tooling & fixtures

Engineering Design & Integration Support

Walchandnagar provides design and engineering services that complement its manufacturing strengths.

Services include:

- Detailed engineering and stress analysis
- CAD/CAM integration
- Manufacturing process design
- Assembly and quality planning



INVESTORS/PARTNERS:

Strategic Partners:

- ISRO
- DRDO

KEY MANAGEMENT:

- Chirag Doshi
MD & CEO



- Jagat Parikh
President - Strategy & Growth



ACHIEVEMENTS:

2008 - Chandrayaan-1 (India's First Lunar Mission)

- Supplied precision-engineered, space-grade hardware for the launch vehicle.
- Contributed critical structural and propulsion components.
- Supported successful launch on 22 October 2008.
- Marked WIL's participation in India's first deep-space exploration mission.

2011 - GSLV-D5 & Deep Space Capabilities

- Supplied mission-critical launch vehicle hardware for GSLV-D5.
- Contributed precision components supporting India's cryogenic propulsion missions.
- Strengthened role in high-reliability heavy launch systems.

2013 - Mars Orbiter Mission (Mangalyaan)

- Delivered precision-engineered launch vehicle hardware.
- Supported early mission phase reliability and lift-off performance.
- Contributed to India becoming the first nation to reach Mars orbit in its maiden attempt.

2022 - Major ISRO Order

- Secured a ₹77.20 crore order from ISRO.
- Reinforced leadership in manufacturing solid rocket motor segments and propulsion hardware.
- Expanded order pipeline in launch vehicle ecosystem.

2023 - Chandrayaan-3 Lunar Mission

- Manufactured:
 - First-stage booster components
 - Large flex nozzle control tanks (80 ft height, 12+ ft diameter)
- Contributed to India's historic soft landing on the Moon's south pole.
- Demonstrated advanced heavy fabrication capability for large aerospace structures.

2023 - Aditya-L1 Solar Mission (PSLV-C57)

- Manufactured:
 - S139 motor casings (Head End & Nozzle End segments)
 - PS0-XL strap-on motor hardware
- Played a critical role in India's first dedicated solar observatory mission.

2023 - Solid Rocket Motor Leadership

- Continued as sole manufacturer of key S139 motor segments (HES & NES).

Supplied over 200 S139 segments for PSLV & GSLV Mk II missions.

March 2025 - Strategic S139 Contract

- Secured ₹30.75 crore order from ISRO's Vikram Sarabhai Space Centre (VSSC).
- Contract for fabrication and supply of S139 segment hardware.
- Strengthened long-term role in India's launch vehicle production ecosystem.

COMPANY PROFILE

Ananth Technologies is a leading Indian Space and Defence company delivering mission-critical electronic systems for Satellites, Launch Vehicles and Missiles.

Ananth technologies have powered 107 Satellites and 87 Launch Vehicles of ISRO and form an integral part of every major missile program in India-including Akash and Astra. Its clients include ISRO, DRDO, the Indian Armed Forces and DPSUs. With 1000+ employees, spread across 3 locations, Ananth has built up robust design and manufacturing capabilities to serve the needs of space, defence and the civilian aviation industries.

Rooted in the ethos of “Make in India”, Ananth continues to invest heavily in R&D and advanced manufacturing infrastructure, expanding its product portfolio across both the Space and Defence sectors.

YEAR OF ESTABLISHMENT:

1992

NUMBER OF EMPLOYEES (APPROX.):

- 1200 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹275Cr (\$33.2M) as on Mar 31, 2024

CORE DOMAIN:

- Launch vehicle and subsystems: Avionics Manufacturing
- Satellite and subsystems: Satellite and subsystems Manufacturing
- Satellite applications: Geospatial Services

PRODUCTS AND SERVICES:

Aerospace Engineering Solutions

Ananth offers comprehensive engineering services for aerospace systems, including embedded hardware, software and system-level design for aircraft and space applications.

Capabilities include:

- Aero-structure design and engineering
- Aero-engine design support
- Avionics system development
- RF and microwave communication systems
- Telemetry systems and PCM encoders
- Power modules and DC-DC converters

These solutions support Aircraft OEMs, aerospace suppliers and space agencies with high-reliability aerospace electronics.



Digital Design & Embedded Systems Development

The company designs high-performance embedded systems used in aircraft, helicopters, UAVs and ground systems.

Key capabilities:

- Multi-core and multi-processor system design
- High-speed audio, video and image processing systems
- Radar receivers and signal processing systems
- Optical communication and digital radio systems
- Digital IF processors and waveform generators
- Embedded software development using RTOS for Guidance, Navigation & Control (GNC) systems
- Simulation and automatic checkout systems
- RTL coding using VHDL and Verilog
- Verification and validation services

RF & Microwave Communication Systems

Ananth develops advanced RF and microwave communication systems used across aerospace and defence platforms.

Solutions include:

- Airborne and ground radio communication systems
- Radar subsystems (TR modules and digital receivers)
- Electronic warfare simulators
- Satellite ground communication terminals (MSS terminals)
- Airborne, ground and space telemetry systems
- Underwater communication systems



Power Systems & Space Electronics

The company develops specialised power electronics for satellite and launch vehicle systems.

Products include:

- Telemetry and telecommand systems
- Core power systems and power distribution units
- Electronic Explosive Device (EED) systems
- DC-DC converters and voltage regulators
- Electronic Power Conditioners (EPC)
- EMI filters
- High-voltage power modules

These systems are designed for high reliability and space-grade operation.



Satellite & Launch Vehicle Systems

Ananth Technologies develops and supplies critical subsystems used in Indian space missions.

Satellite subsystems include:

- Telemetry and telecommand systems
- Power management systems
- Attitude and orbital control systems
- Communication systems
- Electro-optic sensors
- Satellite payload systems
- Mechanisms and integration support

ANANTH HAS BEEN A PART OF EVERY SINGLE INDIAN SPACE PROGRAM



Geospatial & Remote Sensing Solutions

Ananth provides geospatial services using GIS, remote sensing and photogrammetry technologies.

Capabilities include:

- GIS mapping and spatial data analysis
- Photogrammetry and LiDAR processing
- Remote sensing and environmental monitoring
- Topographical surveys and 3D modelling
- Infrastructure planning and route corridor analysis
- Natural resource management studies
- Disaster management and hazard mapping

These solutions support sectors such as government, telecom, utilities, energy, logistics and environmental monitoring.

Aerospace Manufacturing Services

Ananth provides complete electronic manufacturing solutions for aerospace and space systems.

Capabilities include:

- Surface Mount Technology (SMT) and Through-Hole PCB assembly
- BGA placement and fine-pitch component assembly
- Potting and conformal coating
- Radiation shielding for space electronics
- High-G electronics encapsulation
- Harnessing and packaging of flight cables

Facilities include ISRO-certified cleanrooms and AS9100-compliant production lines.



Environmental Testing & Qualification Services

The company operates advanced testing facilities to validate aerospace systems.

Testing capabilities include:

- Thermal cycling tests
- Humidity tests
- Vibration and shock testing
- Acceleration and bump testing
- Spin testing up to 20,000 rpm
- Pressure chamber testing

These facilities ensure space-grade reliability and mission qualification.

ACHIEVEMENTS:

- Long-standing Industrial Partner of ISRO: Ananth Technologies has been a key contributor to India's space programme for over two decades, supplying mission-critical avionics, satellite subsystems, telemetry systems and power electronics for multiple ISRO launch vehicles and satellites.
- Contribution to Chandrayaan-3 Lunar Mission (2023): Supplied telemetry, telecommand, power management systems and DC-DC converters used in the Chandrayaan-3 spacecraft, supporting India's successful lunar exploration mission.
- Support to Aditya-L1 Solar Mission (2023): Manufactured several avionics packages including onboard computers, star sensors, payload DC-DC converters and Modular EED systems, contributing to India's first solar observatory mission.
- PSLV Launch Vehicle Avionics & Integration: Delivered 48 subsystems including SARB, NGCP, Quad SBU, tracking transponders and interface units for PSLV-C57 and performed Assembly, Integration and Testing (AIT) support for the launch vehicle.
- Gaganyaan Human Spaceflight Programme: Supplied key systems for the Gaganyaan Test Vehicle-D1, including the Stage Processing System, Command Execution Module and Data Acquisition Unit, supporting India's human spaceflight programme.
- INSAT-3DS Meteorological Satellite Mission (2024): Manufactured 55 modules for the GSLV-F14 mission and delivered critical components for the INSAT-3DS weather satellite, strengthening India's meteorological observation and disaster warning capabilities.
- Space Docking Experiment Satellites (2024): Built and delivered two 400-kg satellites for ISRO's Space Docking Experiment (SpaDeX), which will support technologies required for future missions such as India's space station and Chandrayaan-4.
- Participation in LVM3-M6 Launch Mission (2025): Supplied avionics, power modules and data acquisition/control systems for ISRO's heavy-lift launch vehicle mission that deployed the BlueBird Block-2 communication satellite.
- Support to NISAR Mission (2025): Delivered 14 critical subsystems including telemetry transmitters, stage control electronics and power modules and executed complete electrical integration of the launch vehicle for the ISRO-NASA NISAR mission.
- Development of India's First Private GEO Communication Satellite: Selected by IN-SPACe to build and operate India's first privately developed geostationary communication satellite, with planned launch by 2028, marking a major milestone in India's private space sector.

- Expansion into Defence Surveillance Satellite Systems (2025): Undertaking international projects including work under the India-Australia MAITRI space cooperation programme, supporting advanced satellite systems for strategic and security applications.
- International Collaboration in Satellite Technology: Signed an MoU with Finnish satellite company ReOrbit to jointly explore development of next-generation GEO communication satellite systems.
- Industry-Academia Collaboration for Space Research: Partnered with NIT Calicut to establish a satellite research centre, supporting innovation and talent development in India's space ecosystem.

INVESTORS/PARTNERS:

Government & Agencies

- ISRO (Indian Space Research Organisation)
- IN-SPACe
- DRDO (Defence Research and Development Organisation)
- NSIL (NewSpace India Limited)
- BrahMos Aerospace, Bharat Dynamics Ltd, BHEL, HAL

Industry Partners

- Antaris, Space Machines Company (Australia), ReOrbit, GalaxyEye, TiHAN-IIT Hyderabad, Consortium, NITC (National Institute of Technology Calicut)

KEY MANAGEMENT:

- Dr. Subba Rao Pavuluri
Founder & Chairman



- Anurup Pavuluri
Managing Director



- Mr. Aravind Pavaluri
Director



ASTRA MICROWAVE PRODUCTS



Astra Microwave Products Limited

COMPANY PROFILE

Founded in 1991 by leading RF and microwave scientists, Astra Microwave Products Limited has grown into one of India's foremost developers of high-end RF, microwave and digital subsystems for strategic defence and space applications. Over three decades, the company has expanded to four production units and two R&D centers, including a space-qualified facility and built advanced capabilities such as automatic PCBA lines, Class 10K/100K clean rooms, EMI/EMC labs and India's first private Near Field Antenna Test Range (NFTR). AMPL delivers complete solutions from design to product realisation and has supplied flight-qualified modules for multiple ISRO satellites, radar and telemetry systems and critical electronics supporting the Atmanirbhar Bharat initiative.

YEAR OF ESTABLISHMENT:

1991

NUMBER OF EMPLOYEES (APPROX.):

- 2100 as on Jan 1, 2026

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹921Cr as on Mar 31, 2024

CORE DOMAIN:

- Satellite and subsystems: Avionics Manufacturing
- Ground support and Auxiliary Services: Ground station establishment

PRODUCTS AND SERVICES:

PRODUCTS:

- Defence
- Space
- Meteorology
- Homeland Security
- Systems
- Antenna
- GNSS Solutions
- Unmanned Ground Vehicles
- MMIC

Ground Application

- Sub-systems for Multi-Object Tracking Radar (MOTR)
- Coherent Frequency Generators
- Modulators
- 8x8 Switchable Routers
- V/UHF T/R Modules
- Ka-Band Indoor / Outdoor Units



Flight Model²

- Sub-Systems for SAR Payloads
- Sub-Systems for Geostationary Satellites
- Sub-Systems for Remote Sensing Satellites
- Fabrication of Flight Sub-Systems
- Screening of Components of FM



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ASTRA MICROWAVE PRODUCTS



Astra Microwave Products Limited

SERVICES:

- EMI-EMC Testing - provide EMI/EMC testing for the systems and subsystems developed for Defence and Space Applications.



- NFTR Facility - The NFTR system is a planar near field antenna test system. It is capable of testing the Near field (NF) and Far field (FF) characteristics of the Active & Passive Antenna/Array under test.



- FFTR Facility - The Indoor Far Field Test Range is capable of testing the Far Field (FF) characteristics of the Active & Passive Antenna/Array under test.
- OUTDOOR ANTENNA TEST RANGE
 - Elevated slant linear Open Test Range
 - Far Field Measurement
 - Reflection free zone
 - Test range 120 mtrs.
 - Azimuth over Elevation positioned
 - Test facility from 20 MHz to 20 GHz

ACHIEVEMENTS:

- Contributor to ISRO-NASA NISAR Mission (July 2025)
 - Supplied precision RF enabling products for the world's first dual-band (L-band & S-band) SAR Earth observation satellite capable of detecting centimeter-level surface changes.
- Aditya-L1 Mission Contribution (August 2023) - Delivered 4 critical RF modules:
 - X-Band SSPA 10W (Telemetry Transmitter) - 2 Units
 - X-Band SSPA 4W (Data Transmitter) - 2 Units
- ₹158 Crore Space & Radar Orders (August 2023) - Secured contracts from ISRO, DRDO and DPSUs for supply of satellite subsystems and radar-related space electronics.
- Strategic MoU with BEL (December 2025) - Collaboration for development of satellite/space electronics and high-end electronic modules for aerospace and space applications.
- Strong expertise in RF & Microwave subsystems, satellite payload electronics, SSPA modules and space-qualified radar systems supporting India's growing space ecosystem.

INVESTORS/PARTNERS:

- Janyu Technologies
- Canbank Venture Capital Fund
- Prestellar Ventures
- Frontline Strategy

KEY MANAGEMENT:

- Mr. S Gurunatha Reddy
Managing Director



- Dr. Maram Venkateshwar Reddy
Joint Managing Director



- Prakash Chitrakar
Founder & COO



- BM Chandrakanth
VP- Defence



- Upendra Kumar
Head Space Projects



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COMPANY PROFILE

Azista Space is a fully integrated satellite technology company, dedicated to advancing secure, reliable and mission-proven solutions for the global space ecosystem. Built on a strong heritage of successful satellite missions, including contributions to several flagship ISRO programs, Azista Space integrates next generation design, precision manufacturing and advanced payload engineering to deliver end-to-end capabilities with uncompromising quality. With a world-class 100,000 sq. ft. facility and an installed annual production capacity of up to 50 microsatellites, Azista Space brings together industrial-scale manufacturing and highly dependable engineering practices. This foundation enables the development of robust satellite platforms, high-performance imaging payloads and mission-critical subsystems that empowers governments, commercial operators and strategic partners to protect national interests, enhance Earth observation capabilities and enable resilient space-based infrastructure.

YEAR OF ESTABLISHMENT:

2014

NUMBER OF EMPLOYEES (APPROX.):

- 700 Employees

CURRENT REVENUE/FUNDING:

- Total Funding: USD 4.58 million (2020)

CORE DOMAIN:

- Satellite Buses, Subsystems and Electro-optical Payloads
- Satellite Applications: Earth Observation, In-orbit Demonstrations & Communication Payloads

CAPABILITIES, INFRASTRUCTURE & EXPERTISE

Proven Spaceflight Heritage.

Azista Space successfully launched its maiden satellite, ABA First Runner-1 (AFR-1), in June 2023 aboard SpaceX's Falcon 9 rocket as part of the Transporter- 8 mission. AFR, an 80 kg earth observation satellite, has been in operation for over 34 months, actively capturing imagery and validating the performance of Azista's modular spacecraft platform. This achievement positions Azista as one of the first private Indian companies to build and operate a high-resolution imaging satellite. The satellite continues to be the longest serving private satellite from India.

World-Class Manufacturing and Testing Infrastructure.

Azista Industries owns India's largest private satellite manufacturing and testing facility, located in Ahmedabad. Spanning over 50,000 square feet, the facility has the potential of producing up to 100 small satellites per year and supports full-cycle operations—from design and assembly to integration and qualification. The infrastructure includes NABL -certified labs, enabling precise and reliable environmental and performance testing across all spacecraft subsystems.

Experience and Expertise Rooted in Indian Space Research Organization (ISRO) Legacy

Azista's team includes a core group of Ex-ISRO scientists and engineers, who bring decades of mission-critical experience across multiple Indian satellite programs focusing on Navigation, Remote Sensing, Scientific exploration, Imaging and Communication. Their deep expertise significantly enhances Azista's spacecraft design and testing philosophy, ensuring robustness, efficiency and compliance with international standards. Azista has also provided components, subsystems and support to ISRO missions over the years, reinforcing its credibility and trustworthiness in space engineering.

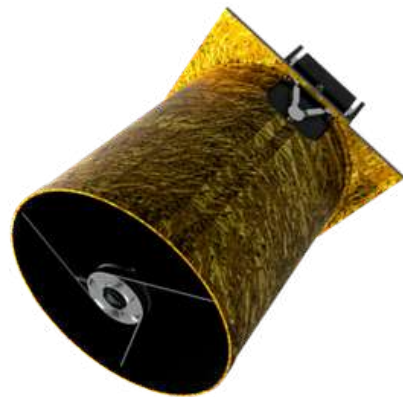
PRODUCTS AND SERVICES:

- Azista 100, Azista 100-HP, Azista 200 Modular Satellite Buses
- CubeSat Bus Platforms: 3U to 16U
- Fineview: Ultra High Resolution, Sub-meter Electro-optical Payload
- Subsystems: Reaction Wheels Assembly, X-Band Transmitter, X-Band Tx Antenna, Battery, S-Band TMTC Antenna, Power Control Unit (PCU), Command and Data Handling System (CDH), Baseband Data Handling & Storage Unit (BDH), Spacecraft Structures and Solar Panels.



The payload is tailored to support ISR (intelligence, surveillance and reconnaissance) constellations. This capability stems from Azista's inherent strengths in mass manufacturing with quick turnaround times. FineView undergoes rigorous on-ground and in orbit payload test and calibration processes to ensure precise image quality metrics.

- Resolution: 47 cm GSD (500 km Orbit)
- Swath: Up to 22.5 km
- Spectral Range: 400 - 900 nm; 2 PAN, 6 MS
- Radiometric Resolution: 12 bits
- SNR: Up to 240 (47.6 dB)
- Payload Mass: < 65 kg



Satellite Buses

Azista 100, 100-HP & 200 Bus Platforms:

Modular Satellite Buses for your Versatile Payloads

- Payload Mass: Up to 200 kg
- Power (Orbit Average Power): Up to 250 W
- Power (Peak Power): Up to 1.5 KW
- Mission Life: 5 years
- High Torque and High Slew Rate
- Cost Effective & Indigenous. Compatible with SSLV, PSLV & Space-X (Rideshare)



Payloads

FineView: Ultra-High Resolution, Electro-optical Payload

The Azista FineView is an optical earth-observation payload designed and produced in India. It is built for high-quality panchromatic (PAN) and multispectral data at submeter levels and is engineered for a lifespan of over five years in a Low-Earth Orbit. Initially created to meet Azista's own high-performance spaceborne imaging requirements, this payload is now offered as a next gen product.

TEST FACILITIES & INFRASTRUCTURE:

- Spacecraft Manufacturing, Assembly, Integration with 100,000 class cleanrooms
- Vibration Shaker: 1 Ton, 2.5 Ton and 6 Ton
- Thermo Vacuum Chamber: 0.5 m and 1m Class with temperature ranging from -100°C to +150°C
- EMI - EMC Semi Anechoic Chamber (MIL-STD-461G)
- Climatic Chamber, Helmholtz cage HILS Test Facility & Wheel Balancing Facility
- Cal-Val Facility for EO Payloads

ACHIEVEMENTS:

- Successfully built and launched AFR, an 80kg remote sensing satellite. AFR is operational for 3 years in orbit as part of its designated 5 years mission life.
- Winner of 3 iDEX grants from Ministry of Defence.
- Delivered 2 Satellites and 85 Subsystems to customers.

KEY MANAGEMENT:

- M. Srinivas Reddy
Managing Director



- Sunil Indurti
Director



- Brig Adarsh Bhardwaj
(Retd)
Executive Director



- Bharat Simha Reddy
Pappula
Assistant General
Manager



COMPANY PROFILE

Bharat Forge Limited is an India-based global provider of safety and critical components and solutions to various sectors including automotive, railways, defense, construction and mining, aerospace, marine and oil and gas. Its segments include Forgings, Defense and Other. The Forgings segment produces and sells forged products comprising forgings and machined components for automotive and industrial sectors.

The Defense segment produces and sells products which have an application in defense related activities. Forged components used in defense related activities and products are included as a part of the Forgings segment. It caters to both domestic and international markets. Its power products include thermal, such as shafts and gear boxes; hydro, such as rotor and others and wind, such as shafts and gear boxes.

Bharat Forge's aerospace business unit is a leading supplier of various components - airframe, structural and engine parts for the aviation sector. It is known to be one of the best aircraft compressor, turbine and aircraft fan blade manufacturers in India.

YEAR OF ESTABLISHMENT:

1961

NUMBER OF EMPLOYEES (APPROX.):

- 4132 employees (July 2024)

CURRENT REVENUE/FUNDING:

- Total Funding:
 - Rs 1,650 crores from qualified Institutional Placement (QIP) (December 2024)
 - Post IPO - USD 195 million (Dec 2024)
- Annual Revenue: INR 15,900 crore (March 2024)

CORE DOMAIN:

- Advanced engineering and precision manufacturing

PRODUCTS AND SERVICES:

1. Aircraft Engine Components

Bharat Forge manufactures critical aero-engine components with advanced materials and precision engineering.

Key components:

- Aircraft compressors
- Turbines
- Titanium fan blades
- Engine shafts and discs

Capabilities:

- Fully machined titanium fan blades for business jet programs
- Components for Hindustan Aeronautics Limited (HAL) turboshaft engines



2. Landing Gear Components

Manufacturing of forged and semi-machined landing gear components for aerospace applications.

Specifications:

- Weight range: 10 kg - 300 kg
- Materials: Steel, Titanium
- High-strength, precision-engineered structures

3. Structural Components

Production of titanium structural aerospace components.

Features:

- Weight range: 50 kg - 250 kg
- Forged and semi-machined parts
- High strength-to-weight ratio for aircraft structures

4. Transmission Components

Aircraft Mounted Accessory Gear Box (AMAGB)

- Multi-output gearbox driven by engine PTO shaft
- Supports:
 - Hydraulic pumps
 - Generator
 - Starter unit

Reduction Gear Box

- Developed for rotary wing aircraft applications
- Enables high-altitude operations and improved payload capacity



5. Gas Turbine Engines (KGT Series)

Bharat Forge develops indigenous small jet engines through its Gas Turbine Technology Development Centre (GTTDC).

Key product: KGT-45 Engine

- Thrust: 45 kgf
- Operational altitude: Up to 8 km
- Applications:
 - UAVs
 - Target drones
 - Cruise missiles
 - Range extenders

Features:

- Indigenous control system
- Optimized fuel consumption
- High thrust-to-weight ratio

6. Advanced Engine Technologies & Assemblies

- Hot-end aeroengine assemblies for fighter aircraft
- Concentric ring and cold flap assemblies
- Use of cobalt and nickel-based superalloys
- Indigenous solutions developed with Defence Research and Development Organisation (DRDO)

SERVICES

1. Research & Development - Kalyani Centre for Technology & Innovation (KCTI)

- Failure analysis and product development
- Advanced R&D in aerospace and engineering
- Technical training and innovation programs
- Development of new technologies and business avenues

2. Manufacturing Innovation - Kalyani Centre for Manufacturing Innovation (KCMI)

- Development of high-end engineered products
- Incubation of new manufacturing technologies

3. AI & Machine Learning Integration

- Use of AI/ML for digital transformation
- Enhanced operational efficiency and predictive analytics
- Data-driven manufacturing and quality control

4. Gas Turbine Design & Engineering Services (GTTDC)

Core capabilities include:

- Engine performance and thermodynamic cycle analysis
- Compressor, combustor and turbine design
- Mechanical design and structural integrity analysis
- Engine control system development (open-loop & closed-loop)
- Engine assembly, integration and testing

5. Testing & Validation Services

- Design and development of test rigs
- Sensor integration for pressure, temperature, thrust and speed
- Engine performance testing and validation

INVESTORS/PARTNERS:

Shareholder - individuals and institutions

- Liebherr-Aerospace & Transportation to set up aerospace plant in Pune[2]
- Kalyani Strategic Systems signed an agreement with US-based defence companies AM General and Mandus Group, to manufacture next-gen Howitzer.

KEY MANAGEMENT:

- Baba N. Kalyani
Chairman & MD



- Amit B. Kalyani
VC & Joint MD



- Rajinder Singh Bhatia
President & CEO, Defence and Aerospace



ACHIEVEMENTS:

2025

- December 2025: Bharat Forge is close to finalizing a Close Quarter Battle (CQB) systems deal with the Indian Ministry of Defence, strengthening indigenous defence manufacturing capabilities and supporting advanced systems relevant to aerospace and strategic sectors.
- October 2025: Bharat Forge announced the acquisition of AAM India Manufacturing Corporation (~₹54.45 crore), enhancing its precision manufacturing capabilities across aerospace, defence and high-end engineering sectors.
- September 2025: Through its subsidiary (Kalyani Strategic Systems), Bharat Forge signed an agreement with Andhra Pradesh Industrial Infrastructure Corporation (APIICL) to establish a large-scale defence energetics complex.
 - Future scope includes energetics for rockets, missile systems and space launch vehicles, marking a strategic move into propulsion-related technologies.
- September 2025: Entered a strategic UAV partnership with Windracers Aviation, expanding into autonomous aerial systems relevant to defence and aerospace operations.
- July 2025: Announced plans to set up an aerospace-grade ring mill, enabling production of high-precision forged components used in:
 - Aircraft systems
 - Aero-engines
 - Space launch vehicles
 - This strengthens India's indigenous aerospace supply chain.
- February 2025: Partnered with Liebherr Aerospace to co-develop advanced aerospace components, including landing gear and flight-critical systems, positioning Bharat Forge in global aerospace and space supply chains.
- February 2025: At Aero India 2025, Bharat Forge unveiled its first indigenous UAV engine, marking a milestone in aerospace propulsion systems development.
- February 2025: Signed an agreement with AM General to supply artillery systems for the U.S. market, reinforcing its position as a global defence manufacturing partner, with crossover capabilities in aerospace-grade manufacturing.

2024

- January 2024: Bharat Forge outlined a strategic growth vision to expand into high-technology sectors including aerospace and defence, targeting large-scale revenue growth and diversification.

- 2024 (Ongoing): Continued development of indigenous gas turbine engines (KGT series) for UAVs, cruise missiles and aerospace applications through its Gas Turbine Technology Development Centre.

2023

- December 2023: Published its Sustainability Report highlighting technology-driven manufacturing, including advanced engineering processes relevant to aerospace and high-performance materials.
- April 2023: Received the "Best Supplier on Sustainability 2023" award at Volvo Group India, recognizing excellence in advanced manufacturing processes.
- March 2023: Awarded "Best CSR Project of the Year 2023", reflecting strong organizational capabilities and operational excellence supporting large-scale industrial programs.
- 2023: Strengthened collaboration with Defence Research and Development Organisation (DRDO) and certification agencies to develop critical aeroengine components and hot-end assemblies for fighter aircraft.

2022-Earlier (Ongoing Developments)

- Established the Gas Turbine Technology Development Centre (GTTDC) in Bengaluru:
 - Development of small jet engines (40-200 kgf range)
 - Indigenous KGT-45 engine validated (45 kgf thrust)
 - Applications include UAVs, target drones, cruise missiles and potential space-related propulsion systems
- Developed advanced manufacturing capabilities such as:
 - Vacuum investment casting
 - Use of nickel and cobalt-based superalloys
 - High-precision aerospace forging technologies

COMPANY PROFILE

Centum Electronics Limited is a leading Indian technology enterprise delivering mission-critical electronics, systems and subsystems for Defence, Aerospace and Space applications. With over three decades of engineering excellence, Centum specializes in high-reliability electronic solutions across design, development, manufacturing, testing and lifecycle support. The company operates state-of-the-art facilities certified to global quality and space standards, serving premier agencies including ISRO, DRDO, global aerospace majors and emerging space startups. Centum is recognized for its ability to deliver ruggedized, space-qualified systems meeting stringent performance, reliability and environmental requirements.

YEAR OF ESTABLISHMENT:

1993

NUMBER OF EMPLOYEES (APPROX.):

- 1,900+ Employees, 500+ Design Engineers (as on December 31, 2025)

CURRENT REVENUE/FUNDING:

- Annual Revenue: Revenues grew by 18.5% to ₹7,498 million on a net accounting basis and profit after tax (PAT) surged by 45.63% to ₹528 million. Our standalone EBITDA margin is 13.6%.
- During the financial year 2024-25, the Company on March 13, raised ₹ 2,100 million through a Qualified Institutional Placement (QIP).

CORE DOMAIN:

- Space-Grade Electronics Design
- RF & Microwave Systems
- Power Systems

PRODUCTS AND SERVICES:

1. Space-Grade Electronics Design

- High-reliability analog, digital, RF & mixed-signal design
- FPGA/SoC-based payload electronics
- Power conditioning and distribution modules
- High-speed data acquisition and processing systems
- Radiation-aware design practices

2. RF & Microwave Systems

- RF subsystems for communication and payload applications
- Frequency converters, up/down converters
- High-stability oscillators and synthesizers
- EW-oriented space electronics (where applicable)

3. Power Systems

- Satellite power conditioning electronics
- High-efficiency DC-DC converters
- Battery management & protection electronics
- Redundant and fault-tolerant architectures

4. Environmental & Qualification Expertise

- Design for space qualification standards
- Vibration, thermal, EMI/EMC-compliant designs
- Screening and reliability engineering practices
- Support for qualification and flight model realization

5. Manufacturing & Quality

- Space-grade PCB assembly and integration
- Cleanroom assembly capabilities
- Traceability and configuration control
- Robust supply chain for high-reliability components

6. Emerging & Strategic Areas

- Space-borne EW electronics
- Secure communication subsystems
- Payload processing electronics
- Dual-use systems for satellites and UAV/HAPS platforms



RF FILTERS



BASE STATION EQUIPMENT



ACHIEVEMENTS:

- 25+ years of participation in ISRO & DRDO space programs, delivering high-reliability space-grade electronics.
- Supplied 200+ mission-critical modules for Chandrayaan-3 (LVM3-M4, 2023).
- Delivered 145 modules & subsystems for Aditya-L1 (2023) including ODHS electronics, IRU microcircuits and accelerometer electronics.
- Contributed 93 modules & subsystems for PSLV-C57 (2023) including telemetry and inertial navigation electronics.
- Supplied 350+ modules & subsystems for the NISAR (ISRO-NASA) mission (GSLV-F16, 2025).
- Secured ₹187 crore DRDO contract (2024) for space-based electronic warfare payloads.
- Selected under India's \$3B Space-Based Surveillance (SBS-3) program (2025) to accelerate satellite development.
- Strategic collaboration with Indra Sistemas (2022) for advanced space radar systems manufacturing in India.
- Partnered with Rafael Advanced Defense Systems (2025) for ISR and mission-critical defence electronics.
- Member of major private Earth Observation constellation consortium (2024) alongside L&T, Thales Alenia Space and others.
- Space division with 400+ engineers, compliant with ISRO, ESA, NASA and JAXA standards.
- Recognized as Best Electronics Manufacturing Company (A&D category) by IESA-NASSCOM Deftronics.
- Awarded Global Growth Company (2014) by the World Economic Forum.
- Expanded advanced manufacturing infrastructure in Bengaluru to scale aerospace & space production.

INVESTORS/PARTNERS:

- The Company went for public issue in 1994 and at present its shares are listed on the NSE and BSE.

KEY MANAGEMENT:

- Apparao V Mallavarapu
Chairman and Managing
Director



- Nikhil Mallavarapu
Joint Managing Director



- Vinod Chippalkatti
Chief Technology Officer



- Sandhya Thyagarajan
Vice President



COMPANY PROFILE

In July 2024, Godrej is owned, operated and managed as two distinct business groups: the Godrej Enterprises Group and the Godrej Industries Group.

The Godrej Enterprises Group (comprising Godrej & Boyce and its subsidiaries) includes industrial businesses such as Aerospace, Aviation, Defence, Engines and Motors, Energy, Locks & Security Solutions, Building Materials, Green Building Consulting, Construction and EPC Services, Heavy Engineering, Intralogistics, Tooling, Healthcare Equipment, Consumer Durables, Furniture, Interior Design, Architectural Fittings, IT solutions and Vending Machines.

Godrej Enterprises Space Vertical is the sole fabricator of liquid engines, in association with our consortium partners for ISRO's missions. Additionally, they provide state-of-the-art thrusters for satellites and complex cryogenic engine assemblies.

YEAR OF ESTABLISHMENT:

1897

NUMBER OF EMPLOYEES (APPROX.):

- 287 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: : Rs 450 crore annually, growing at 20-25% CAGR (Feb 2025)

CORE DOMAIN:

- Development and manufacturing of critical components for launch vehicles, satellites and cryogenic engines

PRODUCTS AND SERVICES:

1. Space & Satellite Systems

Godrej & Boyce is a key manufacturing partner for Indian Space Research Organisation (ISRO), delivering critical space hardware.

Key offerings:

- Liquid propulsion engine components (e.g., Vikas engine, L110 core stage)
- Cryogenic engine assemblies (CE20 thrust chamber)
- Satellite thrusters and propulsion systems
- Structural and antenna components for space missions



2. Aero Engine Components

Manufacturing of high-precision aircraft engine modules meeting global aviation standards.

Components include:

- Fans and compressors
- Intermediate casings
- Combustors and turbines
- Exhaust cones, bypass ducts and jet pipes



3. Hydraulic Systems (Actuators, Valves & Pumps)

Production of complex hydraulic aggregates for aerospace applications.

Capabilities:

- Precision machining and assembly
- Hydraulic, pneumatic and environmental testing
- Leak, shock, bump and climatic testing



4. Build-to-Spec Aerospace Systems

Development of custom-designed Line Replaceable Units (LRUs) such as actuators, valves and pumps.

Key strengths:

- End-to-end design-to-manufacture capability
- Custom engineering based on client specifications
- High-reliability aerospace systems

5. Fabricated Aerospace Structures

Manufacturing of complex fabricated components for aerospace and defence systems.

Processes include:

- Laser cutting, press forming and rolling
- Welding and brazing
- Heat treatment and non-destructive testing

Materials handled:

- Titanium, nickel alloys, Nimonic superalloys
- Stainless steel and aluminium



6. Tubing & Ducting Systems

Engineering and manufacturing of aircraft and engine tubing systems.

Capabilities:

- Tube bending, swaging and welding
- Orbital and manual welding
- High-precision ducting for aerospace applications



7. Composite Structures

Advanced composite manufacturing for aerospace systems.

Materials:

- Carbon fibre, glass fibre, aramid
- Epoxy, phenolic, polyamide resins
- Honeycomb cores and foam structures

Facilities:

- Cleanroom manufacturing
- Non-destructive testing
- Mechanical testing systems

8. Advanced Welding & Brazing Systems

Specialized welding and joining technologies for aerospace components.

Capabilities:

- TIG, MIG, resistance and friction welding
- High-temperature brazing for turbine blades
- Metallurgical expertise for high-performance alloys



9. Special Processes & Surface Engineering

Comprehensive in-house special processes for aerospace-grade manufacturing.

Includes:

- Surface treatment and heat treatment
- Non-destructive testing (NDT)
- NADCAP-certified processes
- Global OEM-approved manufacturing standards

INVESTORS/PARTNERS:

- ISRO and DRDO
- Rolls Royce
- Boeing
- Aeronautical Development Agency (ADA)
- General Electric
- Honeywell
- Safran

ACHIEVEMENTS:

2025

- November 2025: Godrej Aerospace contributed critical components for the human-rated L110 Vikas engine, supporting India's crewed space missions (Gaganyaan program). This marks a key step in human spaceflight capability with stringent reliability standards.
- September 2025: Secured a contract to manufacture LEAP engine components, strengthening India's position in the global aerospace supply chain and demonstrating capability in high-performance aero-engine manufacturing.
- July 2025: Entered a production agreement with Pratt & Whitney, expanding its role as a global supplier of precision aerospace components.
- April 2025: Partnered with EOS GmbH to deploy advanced metal additive manufacturing (3D printing) for aerospace components, enhancing next-generation manufacturing capabilities.
- April 2025: Announced readiness to manufacture components for 5th-generation fighter jet engines, marking a leap in high-end aerospace propulsion manufacturing.
- March 2025: Planned collaboration with Gas Turbine Research Establishment (GTRE) for indigenous aero-engine development (AMCA program), contributing to next-generation propulsion systems.

2024

- May 2024: Successfully developed high-temperature brazing technology for aero-engine components using superalloys, enabling indigenous production of critical engine hardware.
- 2024 (Ongoing): Continued strengthening of aerospace R&D and manufacturing infrastructure, supporting advanced propulsion and space-grade components.

2023

- August 2023: Contributed propulsion and structural components for Aditya-L1 mission, including Vikas engine elements and thrusters.
- July 2023: Played a major role in Chandrayaan-3 mission, manufacturing:
 - L110 engine (core stage)
 - CE20 cryogenic engine thrust chamber
 - for LVM3 (India's heaviest launch vehicle)
- February 2023: Became the first private Indian company to secure an order to manufacture modules of a DRDO turbojet engine, strengthening its aerospace propulsion capabilities.
- February 2023: Announced ₹500 crore investment to expand aerospace manufacturing capacity at Khalapur, Maharashtra.

2022-Earlier Contributions

- Chandrayaan-2: Supplied:
 - L110 and CE20 engines (GSLV Mk III)
 - Thrusters for orbiter and lander
 - Components for Deep Space Network (DSN) antenna
- Chandrayaan-1: Delivered:
 - Vikas engine components
 - Satellite thrusters
 - Antenna and ground system components

Long-term Role: Established as a key industrial partner of Indian Space Research Organisation (ISRO), contributing to multiple launch vehicles and space missions.

KEY MANAGEMENT:

- Anil G. Verma
CEO & Executive Director



- Maneck Behramkamdin
Senior Vice President and
Business Head for
Aerospace Business



- Paurush Bhesania
Head Business
Development



- S M Vaidya
Exe. VP & Business Head
- Ramesh Sankarannair
Assistant General Manager
Marketing

COMPANY PROFILE

Hughes Communications India Private Limited (HCI) is a pioneering force in satellite broadband and managed network services across India, backed by over 30 years of trusted presence in the country. A joint venture between Hughes Network Systems, LLC—a global innovator in broadband connectivity and Bharti Airtel, India's premier communications solutions provider, HCI brings unmatched scale and expertise to enterprises, government, defence, maritime, mobility and remote communities. Spanning critical sectors, the company has played a vital role in India's digital transformation and disaster preparedness efforts. HCI has also contributed significantly to the government's financial inclusion programme by enabling connectivity for remote government projects and connected villages, providing a major boost to banking growth across the nation.

With its multi-orbit GEO + managed LEO technology, HCI continues to deliver innovative, reliable and secure network solutions, making it a trusted partner for businesses and governments while shaping India's digital future. The company has supported several landmark projects that strengthen India's defence capabilities and has played a pivotal role in meeting defence communication needs through turnkey satellite system integration projects for the Indian Tri-services. HCI also holds a leadership position in the energy retail sector, supporting more than 50,000 sites by leveraging Hughes' expertise to automate oil retail networking nationwide.

YEAR OF ESTABLISHMENT:

1993

NUMBER OF EMPLOYEES (APPROX.):

175 employees

CURRENT REVENUE/FUNDING:

- Not publicly disclosed

PRODUCTS AND SERVICES:

HTS Broadband Services

Multi-Mbps broadband per site powered by ISRO's GSAT-11 and GSAT-29 High Throughput Satellites (HTS). Delivers high uptime and reliable connectivity to remote and underserved regions beyond terrestrial networks.

Managed & Satellite Bandwidth Services

Comprehensive VSAT and satellite bandwidth solutions for enterprise, government, maritime, mobility and IoT applications. End-to-end network design, deployment, integration and support.

Make in India Products

Aligned with Atmanirbhar Bharat, HCI develops indigenous networking solutions including:

- Routers, 4G/5G products, SD-WAN devices
- Outdoor LTE + satellite broadband device for schools
- Quick Deploy Antenna (QDA) - rugged, mobile antenna with Wi-Fi/private 5G capability, supplied to NDRF, BSNL, Ladakh Govt. and J&K Bank

SD-WAN Solutions

Software-defined wide area network architecture with:

- Centralized management & zero-touch provisioning
- Dynamic traffic management across hybrid networks
- Secure, high-capacity connectivity for banking, retail, oil & gas, insurance and manufacturing sectors

Managed Low Earth Orbit (LEO) Services

Enterprise-grade LEO connectivity leveraging OneWeb and multi-orbit capabilities for low-latency broadband.

Aviation - In-Flight Connectivity (IFC)

Multi-orbit (GEO + LEO + Hybrid) solutions including:

- Hughes LEO Antenna (ESA) - lightweight, no moving parts, up to 195 Mbps downlink
- Hughes Fusion™ - simultaneous GEO & LEO traffic routing

JUPITER™ In-Flight Solutions for Ka/Ku-band satellite networks



Provides high-speed connectivity for commercial and business aviation.

Hughes LEO Terminals (OneWeb Compatible)

- HL1100 (Single Panel) - up to 57 Mbps
- HL1120 (Dual Panel) - up to 195 Mbps
- Lightweight, low power, IP67-rated, Wi-Fi 6 enabled.



	Hughes Single Panel LEO Terminal (HL1100)	Hughes Dual Panel LEO Terminal (HL1120)
Peak Downlink Data Rate	up to 57 Mbps	up to 195 Mbps
Peak Uplink Data Rate	up to 10 Mbps	up to 32 Mbps
ESA Dimensions	23.5 in. x 15.8 in x 2.4 in	23.5 in. x 32.6 in. x 5.4 in.
ESA Weight	23.34 lb. (10.59 kg)	53.2 lbs. (24.13kg)
Operating Temp	-40°C to +55°C	-40°C to +55°C
Environmental Rating	IP67	IP67
Wi-Fi 6	Included	Included
RJ45 GigE Ports	2 included	2 included
Survival Temperature	-50°C to +85°C	-50°C to +85°C
Power Consumption (Typical)	130W	300W

Satellite IoT (Sat-IoT)

Enabling automation and monitoring in remote areas across:

- Utilities & energy
- Fisheries & maritime
- Mining
- SCADA systems

Features rugged terminals, always-on connectivity, low power consumption and nationwide coverage independent of cellular networks.



Value Added Services

- SATCOM system integration
- Network design & audit
- Hub & earth station installation
- Software upgrades & L2/L3 support
- Operator & advanced technical training
- Centralized monitoring via ProMonSys

INVESTORS/PARTNERS:

- Hughes Network Systems, LLC
- Bharti Airtel Limited

Strategic Technology & Service Partners

- OneWeb
- Thaicom / IPSTAR India

CORE DOMAIN:

- Managed LEO/Services
- In-Flight connectivity
- Maritime (GEO and LEO) services
- SD WAN services
- Satellite System Integration
- Digital Divide Programs
- Strategic Defence Networks

KEY MANAGEMENT:

- Shivaji Chatterjee
CEO, President & Managing Director



- Nipun Bansal
Chief Financial Officer



- Vidyut Kak
Chief Technology Officer



- Vinod Pandita
Director - regulatory affairs

ACHIEVEMENTS:

- June 2025: Hughes Communications India entered into partnerships with global LEO satellite broadband players Starlink (SpaceX) and Amazon's Project Kuiper, positioning itself as a key Indian partner for ground infrastructure, regulatory compliance, service delivery and customer onboarding ahead of LEO service rollouts in India.
- May 2025: Hughes initiated partnership discussions with Starlink to explore satellite internet service collaboration and potential reselling agreements in India, reinforcing its strategic role in next-generation satellite broadband.
- August 2024: Signed a capacity agreement with Thaicom (IPSTAR India) to enhance satellite broadband, mobile backhaul, maritime and satellite IoT services across India, strengthening India-focused satellite capacity.
- June 2024: Expanded into European defence and government sectors via collaboration with Telespazio, offering satellite network software, ISR terminals and secure 5G solutions.
- June 2024: Secured a major deal in Saudi Arabia, supplying a Jupiter System Gateway and 1,200 Jupiter terminals to enhance VSAT network capabilities.
- April 2024: Launched the HL1120W flat panel antenna for the Eutelsat OneWeb LEO network, enabling high-bandwidth, low-latency connectivity for enterprise and government applications.
- March 2024: Deployed the Jupiter System to connect over 200 remote villages in Kazakhstan under the "Digital Kazakhstan" program, expanding rural broadband and eGovernment services.
- December 2023: Completed the DISH-EchoStar merger, strengthening global telecom capabilities and operational scale.
- December 2023: Recognized by Frost & Sullivan as a top innovator in digital signage solutions.
- August 2023: Granted a five-year Indefinite Delivery Indefinite Quantity (IDIQ) contract by the US Space Force for LEO satellite-based services.
- August 2023: Announced plans for new investments aligned with India's updated space policy and Make-in-India initiatives.
- July 2023: Leadership transition with Shivaji Chatterjee assuming charge as President and Managing Director. Under former leadership, HCIPL pioneered India's first:
 - o Distance education satellite business
 - o Ku-band services over foreign satellites
 - o Flight and maritime satellite service licenses
- July 2022: Selected by Indian Oil Corporation Ltd for Managed Network Services, reinforcing its enterprise connectivity leadership.



COMPANY PROFILE

IPSTAR (India) Private Limited is the Indian subsidiary of Thaicom Public Company Limited, a leading Asian satellite operator. IPSTAR India has been authorised by IN-SPACe to provide satellite communication services in India using Thaicom's satellite fleet including THAICOM-4 and THAICOM-8 and the upcoming THAICOM-9 satellite. This authorisation enables the company to deliver broadband connectivity to enterprises, rural communities and underserved regions across the country under India's progressive space policy framework.

IPSTAR India focuses on satellite broadband solutions, leveraging high-capacity transponders and advanced technologies to support digital inclusion, enterprise networks and government connectivity initiatives. The company's services aim to bridge digital divides by providing reliable, high-speed internet where terrestrial infrastructure is limited or unavailable.

As part of the larger Thaicom Group, which has served the Indian market since the late 1990s, IPSTAR India combines global satellite expertise with local authorisation to drive long-term growth in India's satellite communications ecosystem.

YEAR OF ESTABLISHMENT:

2016

NUMBER OF EMPLOYEES (APPROX.):

- 20 employees

CURRENT REVENUE/FUNDING:

- ₹ 31 Cr (\$3.33M) as on Mar 31, 2025

CORE DOMAIN:

- Satellite Broadband Services
- Satellite Ground Segment

PRODUCTS AND SERVICES:

End-to-End Satellite Communication Solutions

We provide tailored satellite communications solutions on an end-to-end basis for broadcasters, the telecom industry and mobile network carriers, as well as businesses and governments operating in Asia-Pacific and Africa. By leveraging our growing fleet of satellites and leading innovations in satellite technology, we offer our customers the flexibility to deliver services that create value and help them thrive in the digital era.



Satellite Infrastructure & Capacity

THAICOM-4/9/10 - High-Throughput Satellite (HTS)

- Orbital Position: 119.5° East
- World's first High-Throughput Satellite (HTS)
- Two-way Ku-band spot beam architecture
- Designed to provide cost-effective broadband capacity
- Serves telecom, enterprise and government customers across Asia-Pacific

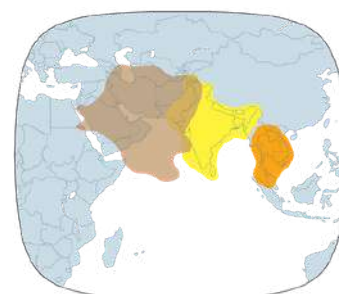
Enables connectivity in unserved and underserved regions

THAICOM STRENGTHENS ITS FLEET AT 119.5 DEGREES EAST WITH THAICOM-9, PROVIDED BY ASTRANIS (USA) THAICOM-10 SATELLITE TO BE LAUNCHED BY SPACEX (Thaicom's new generation, software-defined, high throughput satellite HTS)



STHAICOM-8

- Orbital Position: 78.5° East (co-located with THAICOM-6)
- 24 Ku-band transponders
- Covers South Asia, Southeast Asia and Africa
- Supports data, telecom and media distribution services



SERVICES

Broadband Services

High-speed satellite broadband connectivity using GEO satellite capacity.

Key Features:

- Always-on internet independent of fibre/mobile networks
- Coverage across remote, rural, coastal, island and mountainous areas
- Scalable bandwidth options

Enterprise Connectivity Solutions

Satellite networking solutions for geographically distributed enterprises.

Services Include:

- Secure connectivity for branch offices and field operations
- Support for banking, energy, mining, logistics and industrial sectors
- Voice, data, video and cloud application support

Government & Public Sector Connectivity

Satellite solutions aligned with digital inclusion and governance initiatives.

Use Cases:

- E-governance and public service delivery
- Connectivity for schools, healthcare centres and rural institutions
- Secure administrative and field communications

VSAT-Based Network Services

Deployment and management of VSAT networks for distributed operations.

Capabilities:

- VSAT terminal provisioning (via partner ecosystem)
- Network design and commissioning
- Continuous monitoring and maintenance

Managed Satellite Services

End-to-end managed connectivity across the service lifecycle.

Includes:

- Network planning and architecture design
- Installation and commissioning
- Performance monitoring and fault management
- SLA-based technical support

Hybrid Satellite-Terrestrial Connectivity

Integrated satellite and terrestrial network solutions.

Benefits:

- Automatic failover between networks
- Improved uptime and reliability
- Optimised bandwidth utilisation

Emergency & Disaster Communication Services

Satellite-based connectivity for emergency situations.

Applications:

- Rapid deployment during disasters or outages

ACHIEVEMENTS:

- Regulatory Authorisation from IN-SPACe (Dec 2024) - Secured official approval from the Indian National Space Promotion and Authorization Center (IN-SPACe) to provide satellite communication services in India using Thaicom satellite capacity. This milestone formally enables IPSTAR India to operate and deliver satcom services in the Indian market.
- Strategic Satellite Capacity Partnership with Hughes Communications India (Aug 2024) - Facilitated a major satellite capacity agreement between Thaicom and Hughes Communications India, strengthening broadband and data service delivery across India.
- Expansion of GEO & High-Throughput Satellite (HTS) Services in India - Enabled the utilisation of Thaicom's GEO and high-throughput satellite resources to support enterprise, government and underserved connectivity requirements.
- Support for Digital Inclusion & Remote Connectivity - Contributed to expanding reliable satellite broadband coverage in rural and infrastructure-limited regions, aligning with India's digital infrastructure and connectivity goals.
- Market Entry Enablement for Thaicom in India - Acted as the authorised Indian subsidiary enabling Thaicom's satellite operations and commercial footprint within India's regulated space and satcom ecosystem.

INVESTORS/PARTNERS:

- Thaicom Public Company Limited - Principal investor and parent company

KEY MANAGEMENT:

- Dr. G. P. Das
Director & Vice President-
Finance



- Mr. Amrit Pal Singh
Managing Director



COMPANY PROFILE

Viasat is a global communications company that believes everyone and everything in the world can be connected. With offices in 24 countries around the world, our mission shapes how consumers, businesses, governments and militaries around the world communicate and connect. Viasat is developing the ultimate global communications network to power high-quality, reliable, secure, affordable, fast connections to positively impact people's lives anywhere they are on the ground, in the air or at sea while building a sustainable future in space. In May 2023, Viasat completed its acquisition of Inmarsat, combining the teams, technologies and resources of the two companies to create a new global communications partner.

YEAR OF ESTABLISHMENT:

Viasat 1986 (2004 in India)

NUMBER OF EMPLOYEES (APPROX.):

- ~7,000 Employees

CURRENT REVENUE/FUNDING:

- Annual Revenue:
 - Viasat - Record FY2025 revenue of \$4.5 billion.
 - Record FY2025 new contract awards of \$4.7 billion.
- Funding: \$10B 145 Funding Rounds

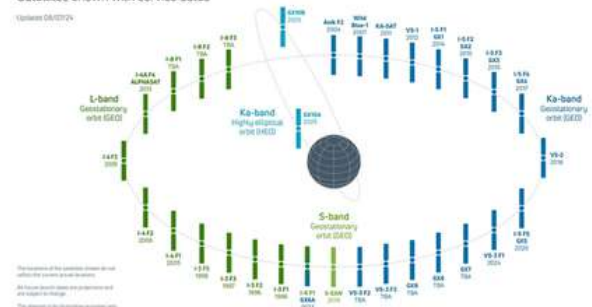
CORE DOMAIN:

- Global satellite communications and secure networking

PRODUCTS AND SERVICES:

- Viasat currently has 23 satellites in its combined fleet, including those acquired as part of the Inmarsat acquisition. This includes 14 Ka-band satellites already in space, with 5 more on the way. Additionally, the combined company has around 7,000 employees.
 - Viasat operates resources on four satellites: ViaSat-1, WildBlue1, Anik-F2 and ViaSat-2.
 - The acquisition of Inmarsat brought a new fleet of satellites into the Viasat fleet, including S-band, L-band and Ka-band satellites.
 - Viasat is also developing the ViaSat-3 constellation, which consists of three satellites. VS-3 F1 is in service. VS-3 F2 is expected to enter service in May 2026. VS-3 F3 is aimed to enter service in the second half of 2026.

Viasat current and future satellite fleet
Satellites shown with service dates



SERVICES

- **Consumer**
 - Home internet
 - Small business internet
- **Aviation**
 - Commercial aviation - Viasat AMARA
 - Business Aviation - JetXP
 - Flight operations and safety - Iris and SwiftBroadband-Safety (SB-S)
 - Advanced Air Mobility
 - Advertising
- **Maritime**
 - NexusWave
 - Safety - Inmarsat C
 - Fleet Xpress
 - Narrowband - Fleet Broadband and Fleet One
- **Enterprise**
 - Go-anywhere comms
 - IoT solutions
 - NB-NTN
 - Virtual Satellite Networks
 - Voice and Push-to-Talk
- **Government**
 - Missions
 - Security
 - Connectivity
 - Antenna Systems

ACHIEVEMENTS:

- Viasat and Bharat Sanchar Nigam Limited (BSNL) announced support for the next phase of the Indian Navy's SATCOM modernization program
- Announced plans for global multi-orbit capabilities on JetXP, Viasat's in-flight connectivity service for business aviation, with the integration of Telesat Lightspeed Low Earth Orbit (LEO) satellite capacity.
- Expanded partnership with Etihad Airways to deploy Viasat Amara, our next-generation multi-orbit connectivity solution, across its entire fleet as part of its ongoing commitment to deliver a world-class guest experience.
- Supporting recently announced full, fast and free in-flight connectivity initiatives to enhance the travel experience across American Airlines, Southwest Airlines and KLM Airlines
- Unveiled the next evolution of Maritime's NexusWave multi-orbit service
- Announced fleetwide rollout of NexusWave across Evergreen Marine's fleet subsequent to quarter end. Evergreen Marine, Taiwan's largest container line, plans to upgrade its fleet to NexusWave.

INVESTORS/PARTNERS:

Top Institutional Shareholders (as of Dec 31, 2025):

- BlackRock, Inc.
- The Vanguard Group, Inc.
- OCO Capital Partners LP
- Disciplined Growth Investors, Inc.
- State Street Global Advisors

Partners

- BSNL, IMO, Indian Navy, Etihad, European Space Agency, Space42, Deutsche Telekom, Lufthansa, Boeing, Airbus, Telespazio, Qualcomm and others.

KEY MANAGEMENT:

- Gautam Sharma
Managing Director



COMPANY PROFILE

AstroWorks Ventures LLC is a United States-based venture studio and investment company specializing in aerospace, space technology and commercial lunar ventures. The company supports early-stage space startups through strategic advisory, funding and partnership development. AstroWorks Ventures focuses on enabling sustainable human and robotic activities in space through technology incubation and venture capital engagement.

KEY MANAGEMENT:

- George Weinmann
Founder



YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

- 3 employees

CURRENT REVENUE/FUNDING:

- Not publicly available

CORE DOMAIN:

- Consultation services

COMPANY PROFILE

Apex is redefining how satellites are designed and manufactured, enabling customers to deploy critical national security missions and next-generation commercial constellations faster than ever before. By productizing and mass-producing satellite bus platforms, Apex is eliminating the satellite production bottleneck and bringing unprecedented speed, reliability and scale to the space industry – all while building a lasting cornerstone of the American and allied space industrial base.

YEAR OF ESTABLISHMENT:

2022

NUMBER OF EMPLOYEES (APPROX.):

- 300+ employees

CURRENT REVENUE/FUNDING:

- Funding: Raised \$200M Series D at a \$1B+ valuation in September 2025

CORE DOMAIN:

- Satellite Manufacturing

PRODUCTS AND SERVICES:

Aries (LEO & GEO Configurations Available)

- **LEO Aries** is a highly-configurable, mid-sized LEO platform with flight heritage that comes in multiple power, propulsion and GNC configurations. LEO Aries is currently in serial production.
 - Payload Mass: Up to 150 kg (100 kg on SpaceX rideshare)
 - Payload OAP: 175+ W (Base Power EOL @ 5 yrs.)
 - First Flight: Launched in 2024



- **GEO Aries** is a highly-maneuverable, multi-mission platform designed to support high delta-v GEO missions while maximizing payload volume in an ESPA-compliant form factor.
 - Payload Mass: Up to 120 kg (When Launched On A 15" ESPA Port)
 - Payload OAP: 125+ W (Base Power EOL @ 5 yrs.)
 - First Flight: 2027



Nova (LEO Configuration Available)

- Nova is an adaptable LEO constellation workhorse with additional layers of built-in redundancy to maximize reliability and meet the most demanding LEO mission requirements.
 - Payload Mass: Up to 300 kg (Additional Payload Capacity Available with Dedicated Launch Configurations)
 - Payload OAP: 1 kW (Base Power EOL @ 7 yrs.)
 - First Flight: 2026



Comet (Mini & XL Configurations Available)

- Comet Mini provides a high-power platform that can be deployed in multiple launch configurations to optimize constellation deployment on today's heavy launch vehicles. Comet Mini enters scaled production and launch readiness in 2028.
 - Payload Mass: See below
 - Payload OAP: 8 kW (Base Power EOL @ 5 yrs.)
 - First Flight: 2028
- **Comet Mini** will be offered in three core launch configurations, with custom, customer-defined launch configurations available to unlock additional payload capacity. Customers will work directly with Apex's Mission Services team to define the most efficient deployment method for their unique payload and mission requirements.
 - Stacked Configuration: Up to 450 kg of payload | Up to 16 Vehicles per Falcon 9 launch
 - Base Configuration: Up to 1,000 kg of payload | Up to 8 Vehicles per Falcon 9 launch
 - Custom Configuration: Up to 3,000 kg with Apex integration support



- **Comet XL** provides a high-power platform for 100 kW class missions, optimized for Starship and the super-heavy launchers of the future. More details on Comet XL configuration specs coming soon!

ACHIEVEMENTS:

Apex is the world's first mass-manufacturer of productized satellite bus platforms designed to meet the demands of the rapidly expanding space industrial base. Founded in 2022 by Ian Cinnamon and Max Benassi, Apex manufactures scalable spacecraft solutions for both commercial and government customers. The company set a world record with its first satellite bus as the fastest clean-sheet design to production spacecraft operating in space. Backed by some of the country's leading investors, Apex is committed to accelerating space innovation through high-rate manufacturing of productized, reliable satellite platforms that enable the next generation of critical constellations. Headquartered in Los Angeles, California, Apex was named one of Fast Company's most innovative space companies in 2025 and was named to Silicon Valley Defense Group's NatSec100—which recognizes the top venture-backed, dual-use and defense technology companies.

INVESTORS/PARTNERS:

- Andreessen Horowitz (A16z), Interlagos, Point72 Ventures, 8VC, XYZ Venture Capital, Toyota Ventures and more

KEY MANAGEMENT:

- Ian Cinnamon
Co-Founder & Chief
Executive Officer



- Max Benassi
Co-Founder & Chief
Technology Officer



- Adam Corey
Chief Business Officer



- Steve Good
Vice President, Sales &
Business Development



COMPANY PROFILE

Avantel Limited is a SEBI listed company incorporated in 1990, headquartered in Hyderabad, India. The company specialises in the design, development and manufacture of advanced communication and defence systems, serving both domestic and international markets.

Avantel's indigenous product portfolio includes wireless communication systems, satellite communication (SATCOM) equipment, software-defined radios, RF/microwave subsystems and embedded systems tailored for military, aerospace and strategic applications. It also develops solutions for network management, signal processing and secure communication used across land, air and maritime platforms.

With a strong focus on indigenous R&D and manufacturing, Avantel supports key government, defence and telecom customers, contributing to secure communications infrastructure and high-technology defence capabilities in India.

YEAR OF ESTABLISHMENT:

1993

NUMBER OF EMPLOYEES (APPROX.):

- 780 as on 07th Jan, 2026

CURRENT REVENUE/FUNDING:

- ₹251 Cr as on Mar 31, 2025

CORE DOMAIN:

- Satellite communication (Satcom)

PRODUCTS AND SERVICES:

1. Software Defined Radios (SDR)

Avantel has designed and developed fully indigenous HF Software Defined Radio (SDR) covering the frequency range of 1.5 to 30 MHz in compliance with Software Communication Architecture (SCA) 4.1. The HF SDR implements specified transceiver API at the top level, with hardware controlled through the SCA core framework and ORB layers running on a POSIX-compliant real-time operating system (Petalinux).

- Frequency range: 1.5-30 MHz (1 Hz steps)
- Supports simplex and half-duplex modes (SSB, AM, Digital modulation)
- 2G ALE (FED-STD 1045) & 3G ALE (STANAG 4538)
- Frequency hopping & customized waveform loading
- High-speed data & encrypted digital voice interface



2. Satellite Communications (SATCOM)

Avantel has developed customized GSAT-based Mobile Satellite Services (MSS) solutions with advanced microwave, digital wireless communication and signal processing technologies for military and commercial markets. SATCOM radios operate in S and UHF bands and provide full-duplex voice/data communications across ship, aircraft and base platforms. Solutions in X-Band and Ku-Band are under development.

- Full-duplex voice & data communications
- Ship-to-Ship, Aircraft-to-Ship, Ship-to-Base connectivity
- Multi-band capability (S, UHF; expanding to X & Ku)
- Platform-specific military-standard integration



3. HF Communication Systems

Avantel offers 1 KW and 5 KW HF solutions for static and shipborne applications. The systems utilize FPGA, DSP, Direct Digital Frequency Synthesis and support wideband (24 KHz) communication.

- Covers 1.6-30 MHz frequency range
- Supports SSB, AM & Digital modulation
- Automatic Link Establishment (2G/3G ALE)
- Secure encryption interface via external crypto devices



4. Radar Systems

Avantel's radar portfolio includes subsystems such as T/R modules, Exciters, DTC SG, MTC SG and Distribution Units across HF, UHF, L, S, C and X bands.

- Power output up to 7.5 KW
- Solid-state, fast-switching systems
- Active array-based architecture
- Local & remote operational capability



5. Network Management Systems (NMS) & Application Software

Avantel provides end-to-end application development and network management solutions adhering to AS 9115 standards, with airborne software certified by CEMILAC.

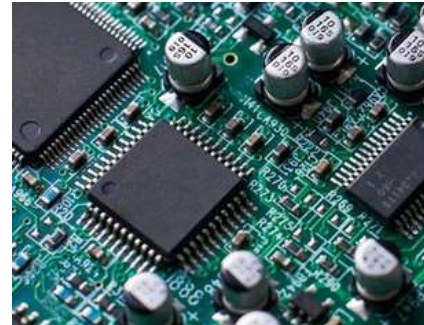
- NMS for MSS & UHF DAMA
- SATCOM terminal MMI (Aircraft, Ships, Submarines, Manpacks)
- HF Remote Control Software
- Radar controllers & Automated Test Equipment software
- Simulation software & airfield database generation
- ERP solutions for SMEs



6. Embedded Systems & Digital Signal Processing

Avantel undertakes full-stack design, development, verification and certification of embedded systems for communications and radar applications.

- SCA development environment
- 8/16/32-bit microcontrollers, DSP, FPGA platforms
- Tools: Keil, Code Composer Studio, Visual DSP++, MATLAB, Xilinx simulators



Operational & Sector-Specific Solutions

- 1. Mobile Satellite Services (MSS) Network** - Indian Navy Avantel has established the MSS network for the Indian Navy, enabling secure, real-time long-range (1000 nautical miles from shore) voice and data communications among ships, submarines, aircraft and bases.
- 2. UHF SATCOM Network** - The IN UHF network comprises SATCOM + LoS terminals for shipborne applications and SATCOM-only airborne terminals used for Beyond Line of Sight (BLoS) operations.
- 3. Wind Profiler Radars** - Avantel developed and deployed Wind Profiler Radars at ISRO (SHAR) and NARL, providing high-resolution 3D wind data crucial for launch operations.
- 4. Real-Time Train Information System (RTIS)** - Indian Railways - Avantel developed a real-time, cost-effective rolling stock tracking solution integrating GPS, GIS, Zigbee, MSS and 4G technologies.
- 5. Real-Time Train Information System (RTIS)** - Indian Railways - Avantel developed a real-time, cost-effective rolling stock tracking solution integrating GPS, GIS, Zigbee, MSS and 4G technologies.
- 6. ERM-SAT (Environmental Radiation Monitoring)** - Standalone solar-powered radiation monitoring system transmitting sensor data via satellite to centralized control centers.
- 7. Ocean & Tide Gauge Applications** - Avantel supplied MSS and UHF transmitters to INCOIS and NIOT for integration with wave rider buoys and tide gauges as part of India's Tsunami Early Warning System.



ACHIEVEMENTS:

- January 2026: Signed an MoU with Strategic Electronics R&D Centre (SLRDC), HAL's avionics R&D wing, at Wings India 2026 to collaborate on defence avionics and satellite communications systems, including HF systems, Satcom and avionics equipment.
- January 2026: Secured a ₹11.19 crore purchase order from NewSpace India Limited (NSIL) for the supply, installation and commissioning of advanced transponder systems, strengthening its position in India's space communications ecosystem.
- December 2025: Won the IEI Industry Excellence Award 2025 under the category Engineering Manufacturing & Processing for overall performance, recognizing Avantel's indigenous innovation in Satellite Communications (Satcom), HF/VHF/UHF Radios and Radar Systems and its contributions to "Make in India."
- September 2025: Received a ₹19.33 crore order from Larsen & Toubro (L&T) for the supply and servicing of satellite communication products, reinforcing its footprint in defence and aerospace Satcom solutions.
- June 2025: Secured two major defence contracts totaling ₹24.73 crore:
 - ₹13.67 crore from DRDO for development of Software Defined Radios (SDRs).
 - ₹11.06 crore from Mazagon Dock Shipbuilders Limited (MDL) for advanced naval communication systems.
- February 2025: Won a ₹43.25 crore order from NSIL (ISRO's commercial arm) to supply, install and commission 45,252 transponder devices for deployment on marine fishing vessels, enhancing coastal security through satellite-based communication systems.
- Operational Growth (2025): Secured multiple multi-crore contracts, including ₹10.11 crore from HAL and ₹13.82 crore from CRIS, demonstrating sustained growth and reliability in aerospace and defence electronics.
- IN-SPACe Authorization - Ground Stations & GSaaS: Received authorization from IN-SPACe to establish and operate multiple fixed and transportable ground stations supporting TT&C, payload data reception and ranging operations.
 - Initiated development of a Ground Segment as a Service (GSaaS) facility with multi-band antenna capabilities (VHF, UHF, S, C, X, Ka bands).

INVESTORS/PARTNERS:

- Key promoters include Dr. A. Vidyasagar, Abburi Siddhartha Sagar, Sailaja Abburi and Sarada Abburi.

KEY MANAGEMENT:

- Dr. A Vidyasagar
Founder & CEO



- Abburi Siddhartha Sagar
Director Strategy & Business Development



- Wg Cdr PRL Prakash (Retd)
Vice President - Tech Support



AXON INTERCONNECTORS AND WIRES



COMPANY PROFILE

Axon Interconnectors and Wires Pt. Ltd. is a Bangalore-based subsidiary of the French Axon Cable Group, specializing in the manufacture of insulated wires, cables, connectors and harnesses for aerospace, defense, medical and industrial applications. Incorporated in 2009, it operates as a private limited company with a strong focus on high-reliability interconnect solutions.

YEAR OF ESTABLISHMENT:

2009

NUMBER OF EMPLOYEES (APPROX.):

180 employees

CURRENT REVENUE/FUNDING:

- Revenue of INR 90 Crores

CORE DOMAIN:

- Manufacturing of high-performance insulated wires, cables, connectors and cable assemblies, primarily serving industries such as aerospace, defense, medical and space technology.

INVESTORS/PARTNERS:

- Axon India is 100% Subsidiary of Axon Cable SAS France

PRODUCTS AND SERVICES:

Manufacturing of Space Grade and ESA QPL Cables, Wires, Miniaturized Power and signal connectors also we are the manufacturers of below interconnect solutions for Space:-

1) Micro D & Nano D Connectors - Axon' rectangular micro-D connectors are designed for harsh environments. With 1.27 mm (.050") contact spacing, micro-D connectors, half the size of D-Sub connectors, represent an excellent solution to save both space and weight.

2) BUS 1553 Couplers, Cables and Triaxial Connectors

3) High Data Rate Interconnects up to 10Gbbs

4) Complete Satellite harnessing and 3D Modelling

ACHIEVEMENTS:

- High-Tech Manufacturing in India
- Defense, Aerospace and Space Contributions
- Certifications and Standards - Certified with AS9100, ISO 14001 (Environmental Management) and ISO 45001 (Occupational Health & Safety).

KEY MANAGEMENT:

- Mr. Stephane Watier
Global Manager



COMPANY PROFILE

BAE Systems is a British multinational defence, aerospace and security company and one of the world's largest defence contractors. Its operations span land, air, sea, cyber and intelligence domains and it has a long-standing engagement with the Indian defence ecosystem. BAE Systems has a strategic and enduring footprint in India, supporting the Indian defence forces and partnering on local manufacturing, technology transfer and services aligned with India's "Make in India" and self-reliance goals. The company's involvement spans decades and includes partnerships with Indian industry and support to Indian armed forces.

Key India Subsidiaries / Legal Entities

- BAE Systems India (Services) Private Limited - Active private company focused on defence support services and business activities in India (incorporated 2009).
- BAE Systems India (Technology) Private Limited - Subsidiary involved in technology and systems support (incorporated 2011).

YEAR OF ESTABLISHMENT:

2009

NUMBER OF EMPLOYEES (APPROX.):

- 42 employees

CURRENT REVENUE/FUNDING:

- Revenue: ₹36.1 crore as on March 31, 2025 (Services)

CORE DOMAIN:

- Defence & Aerospace Systems

PRODUCTS AND SERVICES:

1. Satellite Systems & Platforms

- Development of satellite platforms and spacecraft systems
- Support for satellite rideshare missions and deployment
- Azalea™ LEO Satellite System:
 - Multi-sensor, multi-role satellite with RF capabilities
 - Onboard AI/ML for in-orbit data processing
 - Enables Intelligence, Surveillance & Reconnaissance (ISR)



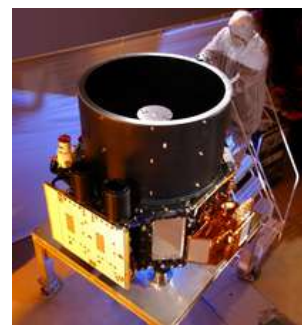
2. Earth Observation & Scientific Missions

Contribution to major global satellite programs, including:

- MethaneSAT - greenhouse gas monitoring
- GeoXO Sounder (GXS) - next-gen weather observation
- OMPS, DSCOVR, Suomi NPP, NOAA-20 - climate and atmospheric monitoring
- CloudSat & CALIPSO - cloud, aerosol and climate research
- SAGE III, QuikSCAT, GMI, CIRiS - environmental and weather data systems
- Landsat/OLI, GEMS / TEMPO - Earth observation and pollution tracking

3. Laser & LIDAR Instruments

- Advanced space-based LIDAR and laser instruments for:
 - Atmospheric profiling and climate research
 - Ocean and aerosol analysis
 - Wind measurement (e.g., OAWL Wind LIDAR)
- Contribution to missions like CALIPSO for 3D atmospheric modeling



4. Navigation & Space Electronics

- SABR™ GPS Receivers (M-Code capable) for secure, high-precision navigation
- Space-grade electronics and payload subsystems for satellite missions

5. Geospatial Intelligence Platforms

- Geospatial eXploitation Products™ (GXP®) for intelligence analysis
- Advanced geospatial intelligence (GEOINT) tools for:
 - Defence and security operations
 - Situational awareness and mission planning

SERVICES

1. End-to-End Space Mission Support

- Satellite design, development, integration and operations
- Launch coordination and mission lifecycle management
- Collaboration across global space ecosystems

2. Intelligence, Surveillance & Reconnaissance (ISR)

- Space-based ISR capabilities using multi-sensor satellites
- AI-driven data analysis for threat detection and monitoring
- Real-time intelligence delivery for defence applications

3. Geospatial & Data Analytics Services

- Advanced geospatial data processing and analytics
- Mapping, charting and Earth observation insights
- Decision-support systems for government and defence

4. Climate & Environmental Monitoring Solutions

- Satellite-based monitoring of:
 - Climate change and atmospheric conditions
 - Pollution, aerosols and greenhouse gases
- Data support for scientific research and policy-making

5. Secure Navigation & Positioning Services

- Deployment of secure GPS and navigation technologies
- Support for defence-grade positioning and timing systems

INVESTORS/PARTNERS:

Investors in Parent Company (BAE Systems plc):

- The Vanguard Group, Inc.
- WCM Investment Management, LLC
- FMR LLC (Fidelity)
- BAE Systems plc Employee Share Ownership Plan (ESOP)

PARTNERS:

- Larsen & Toubro (L&T)
- Kineco Kaman
- Mahindra Defence
- Hindustan Aeronautics Limited (HAL)
- PTC Industries

KEY MANAGEMENT:

- Tom Arseneault
President & Chief Executive Officer



- Pankaj Kaushik
VP (Govt)



ACHIEVEMENTS:

2025

- MoU with Hanwha Systems (South Korea) to co-develop a multi-sensor satellite system, integrating RF sensing with SAR technology for enhanced space-based ISR capabilities
- Advancement of AI-enabled, in-orbit data processing and edge analytics for next-generation satellite intelligence systems
- Strengthened global positioning and navigation capabilities through integration of anti-jamming GPS technologies for resilient operations in contested environments (dual-use for space and defence systems)

2023-2024

- Continued contributions to global Earth observation and climate missions, including payloads and instruments for satellites such as CALIPSO, NOAA-20, Suomi NPP and Landsat
- Expansion of geospatial intelligence (GEOINT) platforms and satellite data exploitation capabilities for defence and government applications
- Investment in advanced skills, R&D and digital engineering, supporting next-generation space and aerospace technologies

2020-2022

- Strengthened capabilities in space-based sensing technologies, including LIDAR, RF payloads and environmental monitoring instruments
- Enhanced role in satellite payload electronics and mission systems supporting climate, navigation and ISR applications
- Expansion of secure navigation systems (GPS M-Code) and resilient communication technologies applicable to space operations

Pre-2020 (Foundation & Global Contributions)

- Key contributor to landmark satellite missions such as CALIPSO and CloudSat, enabling advanced atmospheric and climate research
- Development of laser/LIDAR instruments and remote sensing technologies for space-based Earth observation
- Established leadership in space electronics, payload systems and geospatial intelligence solutions



COMPANY PROFILE

BEML Limited is a Government of India enterprise under the Ministry of Defence India, playing a significant role in India's aerospace and space-support ecosystem through its expertise in heavy engineering, mobility systems and precision manufacturing. While not directly involved in satellite or launch vehicle development, BEML contributes to the space vertical by providing critical ground support equipment, high-mobility vehicles and logistics platforms used in missile, radar and strategic aerospace operations. The company's Aerospace Manufacturing Division, established during Aero India 2009, is AS9100D-certified and equipped with advanced machining, fabrication and heat treatment capabilities, enabling the production of high-precision aerospace components. BEML has achieved high levels of indigenisation, including nearly 99% for aircraft towing tractors and continues to develop indigenous aggregates for ground handling systems. With a growing focus on unmanned aerial vehicles (UAVs) and advanced aerospace technologies, BEML is positioning itself as a key enabler of India's self-reliant space and defence infrastructure, supporting national initiatives such as Make in India and strengthening the domestic aerospace supply chain.

YEAR OF ESTABLISHMENT:

1964

NUMBER OF EMPLOYEES (APPROX.):

- 6,000 - 10,000 employees

CURRENT REVENUE/FUNDING:

- Revenue of ₹4,050Cr for the financial year ending on Mar 31, 2025

CORE DOMAIN:

- Engineering and manufacturing across three main verticals:
 - Defence & Aerospace
 - Mining & Construction
 - Rail & Metro

PRODUCTS AND SERVICES:

1. Missile Modules

BEML manufactures critical missile modules and structures with dedicated aerospace facilities.

Key offerings:

- Akash missile modules
- QRSAM missile modules and wings
- PSLV RRM (Rocket Motor) casings
- Airframes for SAAW (Smart Anti-Airfield Weapon)

Capabilities:

- Recognized by Defence Research and Development Organisation (DRDO) as a lead development partner
- Precision fabrication for defence and space-grade applications



2. Launch Vehicle Structures

BEML is a development partner to Vikram Sarabhai Space Centre (VSSC) under Indian Space Research Organisation (ISRO).

Key offerings:

- Light alloy structures for LVM3 (Gaganyaan-class launch vehicle)
- Structural assemblies for multiple launch vehicle segments

Capabilities:

- Dedicated assembly and tooling facilities
- High-precision aerospace-grade fabrication



3. Airborne Components & Structures

Manufacturing of aircraft structural components and assemblies.

Key offerings:

- Sheet metal and welded aerospace structures
- Components for Su-30 aircraft
- Structures for helicopters (LUH, ALH, Cheetah, Chetak) and LCA

Capabilities:

- NADCAP-accredited processes
- Expertise in aluminium alloy aerospace fabrication
- Supply to Hindustan Aeronautics Limited (HAL)



SERVICES

1. Aerospace Manufacturing & Assembly

- End-to-end manufacturing of launch vehicle and aircraft structures
- Structural assembly and tooling solutions
- High-precision fabrication and integration

2. Defence & Space System Integration Support

- Development partner for missile and launch vehicle programs
- Manufacturing support for DRDO and ISRO missions
- Integration of structural modules for strategic systems

3. Special Processes & Quality Assurance

- Heat treatment and surface engineering
- Non-destructive testing (NDT)
- NADCAP-certified aerospace processes

4. Indigenous Design & Development Support

- Development of indigenous aerospace structures
- Support for Make in India and self-reliance initiatives
- Engineering solutions for defence and space applications

INVESTORS/PARTNERS:

Strategic Partners & Collaborations

Aerospace & Defence

- Kineco Limited
- Bharat Forge & Data Patterns
- STX Engine (South Korea)

Research & Innovation

- Indian Institute of Science (IISc), Bengaluru
- Foundation for Science Innovation and Development (FSID)

Industrial & Technology Ecosystem

- Siemens India
- Dragflow (Italy)

KEY MANAGEMENT:

- Shri Shantanu Roy
Chairman & Managing Director



- Shri Anil Jerath
Director (Finance)



- Ritesh Kumar Tandekar
DGM (Aerospace & Defence)

ACHIEVEMENTS:

2025

- Supplied mission-critical Strap-On Base Shroud (SBS) structures for ISRO's LVM3-M6 mission, which successfully launched one of the heaviest satellites from India (~6,000+ kg class).
- Strengthened position as a key manufacturing partner to ISRO for next-generation launch vehicle structures. Demonstrated end-to-end aerospace manufacturing capability, including:
 - Precision machining of conical panels
 - Advanced light-alloy forming and conical rolling
 - Integration of jettison motors for booster separation
- Continued serial production of 7+ additional light-alloy airborne structures for LVM3, supporting:
 - Future commercial launches
 - India's Gaganyaan human spaceflight programme

2024

- Successfully delivered light alloy structures for LVM3 programme to Vikram Sarabhai Space Centre (VSSC).
- Established a state-of-the-art aerospace manufacturing hangar in Bengaluru with:
 - Advanced jigs, fixtures and metrology systems
 - Capability for large-scale structural fabrication
- Demonstrated expertise in iso-grid structures, rings and large aerospace assemblies for launch vehicles.

2023

- Continued contribution to ISRO programmes through fabrication of critical structural components for launch vehicles.
- Supported PSLV programme with retro rocket motor (RRM) casings and structural elements. Delivered ~60+ RS1 motor casings to VSSC over time, demonstrating production reliability and scale.

2018 & Earlier

- Delivered PSLV retro motor casings, marking early entry into India's launch vehicle supply chain.
- Established itself as a trusted industrial partner to ISRO for structural fabrication and aerospace manufacturing.

Ongoing / Strategic Position

- Recognized as a development partner to VSSC (ISRO) for 7+ types of light alloy structures used in LVM3.
- Plays a key role in India's heavy-lift launch ecosystem, including missions like Chandrayaan and Gaganyaan.
- Contributing to indigenisation of aerospace structures, supporting India's long-term space ambitions.



COMPANY PROFILE

Bharat Electronics Limited (BEL) is a Government of India-owned Navratna defence electronics company under the Ministry of Defence, established in 1954. It specializes in advanced electronic systems, communication technologies and strategic system integration and is a key player in India's defence and aerospace ecosystem.

In the space domain, BEL is a trusted partner to ISRO, contributing to multiple satellite and launch vehicle missions. The company develops space-grade systems including TT&C, SATCOM equipment, RF and microwave subsystems and ground segment infrastructure. It has also supported deep space networks, NavIC and flagship missions such as Chandrayaan and Gaganyaan.

Leveraging strengths in high-reliability electronics, radar and secure communications, BEL enables satellite operations, launch tracking and space-based communication systems. With a focus on innovation and indigenisation, the company is expanding into areas like space situational awareness, payload electronics and next-generation communication technologies, aligned with the vision of Atmanirbhar Bharat.

YEAR OF ESTABLISHMENT:

1954

NUMBER OF EMPLOYEES (APPROX.):

- 6,316 as on May 31, 2025

CURRENT REVENUE/FUNDING:

- Revenue: 24,500Cr INR as on Mar 31, 2025

CORE DOMAIN:

- Defence and space electronics, spanning radar, communication and mission-critical system integration

PRODUCTS AND SERVICES:

- **Satellite Communication Systems (SATCOM)**
 - GSAT terminals, satcom messaging terminals, handheld & mobile satcom units
 - Enables secure communication between satellites, ground stations and mobile platforms
- **Telemetry, Tracking & Command (TT&C) Systems**
 - Tracking radars and telemetry systems derived from BEL's radar expertise
 - Used for launch vehicle tracking and satellite control operations
- **Space-Grade RF & Microwave Systems**
 - High-frequency RF modules, transmitters, receivers
 - Core for satellite payload communication and signal processing
- **Navigation Systems (NavIC-based)**
 - Satellite navigation receivers and modules
 - Supports positioning, navigation and timing (PNT) services
- **Space Electronics & Subsystems**
 - Mission-critical onboard electronics
 - Control systems, signal processors and embedded electronics for space missions
 - BEL explicitly works in "Satellite Integration & Space Electronics"
- **Ground Segment Infrastructure**
 - Ground station electronics and control systems
 - Data reception, processing and mission control support

SERVICES

- **Satellite Integration & Ground Systems**
 - End-to-end integration of satellite communication and control systems
 - Setup of mission control centres and ground stations
- **Design & Development of Space Electronics**
 - Indigenous R&D for high-reliability and mission-critical electronics
 - Strong alignment with Make in India and strategic programs
- **Radar & Tracking Solutions for Space Applications**
 - Adaptation of BEL's radar systems for space object tracking and launch monitoring
 - Includes surveillance and tracking capabilities derived from defence radar expertise
- **Secure Communication Solutions**
 - High-reliability communication systems for space missions
 - Includes encrypted, multi-band communication technologies



- **Electronic Manufacturing Services (Space-grade)**
 - Production of high-reliability electronic components
 - Supports aerospace standards and mission-critical deployments
- **Lifecycle Support & Maintenance**
 - Maintenance and upgrades of ground systems
 - Long-term operational support for satellite communication infrastructure

ACHIEVEMENTS:

2025

- Signed MoU with Space Applications Centre (SAC), ISRO for productionisation of space-grade Travelling Wave Tube Amplifiers (TWTAs)
 - Represents a major milestone in indigenous satellite payload electronics manufacturing in India
 - Strengthens BEL's role in the ISRO supply chain for communication satellites
- Established Centre of Excellence for Artificial Intelligence
 - Supports development of AI-driven satellite data analytics, signal processing and autonomous systems relevant to future space missions
- Secured major defence electronics orders including:
 - ₹1,640 crore order for Air Defence Fire Control Radars (Atulya)
 - ₹2,210 crore order for Electronic Warfare Suite for the Indian Air Force
 - These systems enhance BEL's capabilities in radar, RF and signal processing technologies, which are directly applicable to space surveillance, tracking and communication systems
- Received multiple additional orders in the ₹500-₹1,100+ crore range across the year
 - Reinforces BEL's strength in high-reliability electronics manufacturing and system integration, including satellite communication infrastructure
- Achieved record turnover of ~₹23,000 crore
 - Indicates scale and financial capacity to expand into space electronics, satellite integration and advanced communication systems
- Strengthened technology ecosystem through collaborations and MoUs with industry and research institutions
 - Focus on indigenisation of advanced electronics and deep-tech capabilities, supporting India's space and defence ecosystem

2024

- Signed MoU with Space Applications Centre (SAC), ISRO for productionisation of space-grade TWTAs, marking entry into satellite payload electronics manufacturing
- Achieved record turnover of ~₹23,000 crore, enabling scale-up of advanced electronics including space-related systems
- Secured ₹1,640 crore order for Air Defence Fire Control Radars, strengthening tracking and surveillance capabilities
- Secured ₹2,210 crore order for Electronic Warfare systems, enhancing RF and signal-processing expertise relevant to space systems
- Established Centre of Excellence for Artificial Intelligence to support advanced analytics and data-driven systems

2023

- Signed MoU with CSIR-Central Electronics Engineering Research Institute for development of advanced electronic technologies
- Signed MoU with Centum Electronics to strengthen high-reliability electronic systems
- Signed MoU with Indian Institute of Technology Delhi for deep-tech R&D collaboration
- Achieved strong financial growth with ~39% increase in PAT (H1 FY 2024-25)
- Secured multiple large orders (₹2,000-₹5,900 crore range cumulatively), supporting expansion of mission-critical electronics

2022

- Signed MoU with Spacefaring Technologies Pvt Ltd, marking engagement with private space ecosystem
- Entered multiple technology collaborations with DRDO labs (DRDL, IRDE, CHES, ADA) for advanced RF, sensors and electronics
- Expanded capabilities in radar and counter-drone systems, forming a base for space surveillance and tracking technologies
- Strengthened AI and software ecosystem through partnerships with academic and industry stakeholders

2021 and Earlier

- Established core expertise in radar systems, RF and microwave electronics and secure communication systems
- Built long-term collaborations with DRDO, ISRO-linked institutions and global technology partners
- Developed foundational capabilities in strategic electronics that support satellite communication and space-related systems



INVESTORS/PARTNERS:

Strategic Partners & Collaborations

Space & ISRO Ecosystem

- Indian Space Research Organisation (ISRO)
- Space Applications Centre (SAC-ISRO)
- New Space & Private Sector (Emerging Space Partnerships)
- Bellatrix Aerospace

Defence-Space Convergence Partners

- Defence Research and Development Organisation (DRDO)
- Israel Aerospace Industries (IAI)
- Safran Electronics & Defense

Industrial & Technology Ecosystem

- Centum Electronics
- Thales Group
- General Electric

KEY MANAGEMENT:

- Mr. Manoj Jain
Chairman and Managing Director



- Rashmi Kathuria
General Manager & Unit Head (Satcom & Cellular Communication System)



- Abhinav Paharia
Sr. Dy. General Manager (Strategic Planning)
- Puneet Jain
DGM Marketing

COMPANY PROFILE

Broadcast Engineering Consultants India Limited (BECIL) is a Mini Ratna Central Public Sector Enterprise under the Ministry of Information and Broadcasting, established in 1995 and wholly owned by the Government of India. It is a multi-disciplinary engineering and consultancy organization with expertise in broadcasting, satellite communication and turnkey project execution, supported by certifications such as ISO 9001, ISO 27001, ISO 20000-1, ISO/IEC 17025 and CMMI Level 3.

In the space and satellite communication domain, BECIL plays a key role in designing, deploying and managing satellite-based broadcasting and communication infrastructure. It has developed strong capabilities in uplink/downlink systems, satellite networks and integrated broadcast infrastructure, supporting both domestic and international projects.

BECIL also specializes in system integration of critical information infrastructure, combining satellite communication with ICT, surveillance and secure networks. Through its involvement in initiatives like Digital India and Smart Cities and leveraging expertise from All India Radio and Doordarshan, the company supports large-scale, mission-critical communication systems and satellite-enabled digital ecosystems across India.

YEAR OF ESTABLISHMENT:

1995

NUMBER OF EMPLOYEES (APPROX.):

- 19,337 employees as on Oct 31, 2024

CURRENT REVENUE/FUNDING:

- Revenue: 985Cr INR as on Mar 31, 2025

CORE DOMAIN:

- Broadcast & Media Infrastructure
- Satellite Communication & Teleport Services
- Turnkey Solutions

PRODUCTS AND SERVICES:

1. Satellite Broadcast Networks

BECIL designs and deploys comprehensive satellite-based broadcasting infrastructure for large-scale communication and content delivery.

- Uplink and downlink system integration
- Satellite-based transmission networks
- Integration with terrestrial and cable broadcasting systems
- National and international broadcast coverage solutions

2. Satellite-Enabled Television Broadcast Systems

The company provides complete television broadcasting solutions leveraging satellite platforms.

- End-to-end television broadcast system setup
- Satellite signal transmission and reception systems
- Integration with DTH and cable distribution networks
- Content production and transmission infrastructure

3. Radio Broadcast Networks with Satellite Integration

BECIL develops radio broadcast systems integrated with satellite communication to expand coverage and reliability.

- Satellite-supported radio transmission networks
- Nationwide broadcast coverage solutions
- Integration with terrestrial radio systems

4. Digital Addressable Satellite Systems (DTH / HITS)

BECIL delivers digital satellite-based content distribution systems.

- Direct-to-Home (DTH) platforms
- Headend-in-the-Sky (HITS) systems
- Hybrid IPTV and satellite-based distribution systems

5. Integrated Broadcast Communication Infrastructure

The company establishes complete broadcast ecosystems combining multiple transmission technologies.

- Content production facilities
- Hybrid integration of satellite, terrestrial and cable systems
- End-to-end communication infrastructure development

6. Aerospace and Drone-Based Systems

BECIL undertakes projects involving aerospace-linked technologies relevant to surveillance and security.

- Electro-Optical (EO) drones
- Combat drones
- Counter-drone systems including detection, tracking and interception solutions



SERVICES

1. Satellite Communication System Integration

BECIL provides system integration services for satellite-based communication networks.

- Design and deployment of satellite communication systems
- Integration with ICT and surveillance infrastructure
- Development of end-to-end communication architectures

2. Turnkey Project Execution

The company delivers complete project execution across satellite and broadcast infrastructure.

- Supply, Installation, Testing and Commissioning (SITC)
- Engineering, Procurement and Construction (EPC)
- End-to-end implementation of communication systems

3. Operation and Maintenance

BECIL offers lifecycle support for satellite and broadcast systems.

- Operation and maintenance of satellite communication networks
- Performance monitoring and system optimization
- Annual Maintenance Contracts (AMC)

4. Consultancy and Technical Advisory

The company provides advisory services for satellite and broadcast engineering projects.

- Feasibility studies and system design
- Technical audits and compliance services
- Advisory for large-scale broadcast and communication systems

5. Drone and Aerospace Security Services

BECIL supports deployment and management of drone-based systems for security applications.

- Drone deployment and operations
- Counter-drone solutions for threat detection and mitigation
- Airspace monitoring support

6. Cyber Forensics and Security (Space-Linked Layer)

The Cyber Forensics Centre of Excellence provides services relevant to secure communication systems.

- Drone forensics and analysis
- CCTV and digital evidence analysis
- Cyber forensic consultancy for secure infrastructure

7. Training and Capacity Building

BECIL provides training programs to support technical and operational capabilities.

- Cyber forensic training and certification programs
- Skill development in UAV and digital systems

INVESTORS/PARTNERS:

Investors / Ownership

- Government of India - 100% equity ownership held by the President of India through the Ministry of Information and Broadcasting India
- BECIL is a Mini Ratna Central Public Sector Enterprise (CPSE)
- No private or venture investors (fully government-owned entity)

Strategic Partners

Infrastructure & Engineering

- Larsen & Toubro Limited
- Bharat Forge Limited
- Sterlite Technologies Limited
- MSA Global Technology
- Technology & Engineering Pvt Ltd

Technology & Data

- Yotta Infrastructure Solutions LLP
- Pravaig Dynamics

Strategic Collaborations

- Suhora
- Azista

KEY MANAGEMENT:

- Cmde D K Murali, IN (Retd)
Chairman and Managing
Director, BECIL



- Capt (IN) Saurav Chauhan
(Retd)
Director (O&M), BECIL



- Maj Gen RK Singh
Sr. Advisor (Defence &
Strategic Affairs)



ACHIEVEMENTS:

2026

- Continued execution of large-scale satellite-enabled communication and broadcast infrastructure projects integrating ICT, surveillance and digital systems under national initiatives
- Expanded deployment and operational support for satellite-based digital distribution systems including DTH, HITS and IPTV platforms
- Advanced deployment of drone and counter-drone systems for aerospace security and airspace monitoring applications

2025

- Collaborated with Azista on Earth station development projects to strengthen satellite ground segment infrastructure capabilities
- Partnered with Suhora for disaster management solutions leveraging satellite communication and geospatial technologies
- Operationalised Cyber Forensics Centre of Excellence with capabilities including drone forensics and digital investigation for secure communication ecosystems
- Conducted specialized training programs in cyber forensics and UAV analysis to build aerospace-linked technical capabilities

2024

- Operationalised Cyber Forensics Centre of Excellence (CFCoE) with capabilities including drone forensics and digital investigation, supporting secure aerospace and communication ecosystems
- Strengthened focus on cyber-secure communication infrastructure, critical for satellite-based networks and national security applications
- Conducted training programs such as UAS (drone) forensic analysis, contributing to capability building in aerospace-linked domains
- Advanced plans for indigenous development and manufacturing of forensic and security technologies, aligned with Atmanirbhar Bharat

2023

- Expanded portfolio in satellite-based broadcasting and digital distribution systems, including DTH and HITS platforms
- Delivered multiple broadcast and communication infrastructure projects, integrating satellite and terrestrial systems
- Strengthened presence in strategic surveillance and communication systems, supporting government and defence-related applications

2022

- Continued deployment of satellite broadcast networks and radio/TV infrastructure, strengthening national communication backbone
- Increased participation in Smart City and Safe City projects, integrating satellite communication with surveillance and ICT systems



COMPANY PROFILE

Capella Space is an American space tech company with data and satellite solutions for government and commercial use. A leader in the Earth observation industry, Capella is the first U.S. company to design, build and operate a global constellation of Synthetic Aperture Radar (SAR) satellites, delivering high quality, high resolution SAR imagery. Its market-leading SAR satellites are matched with a fully automated Tasking system and adaptable sensor technologies to quickly deliver reliable global insights that provide global transparency for our evolving planet. Capella is headquartered in San Francisco, California with additional locations in Denver, Colorado and Washington, D.C.

YEAR OF ESTABLISHMENT:

2016

NUMBER OF EMPLOYEES (APPROX.):

250 employees

CURRENT REVENUE/FUNDING:

- Not publicly disclosed

CORE DOMAIN:

- SAR Satellite manufacturing and SAR Imagery services

INVESTORS/PARTNERS:

- Operating without venture capital backing.

PRODUCTS AND SERVICES:

Amplify Intelligence™

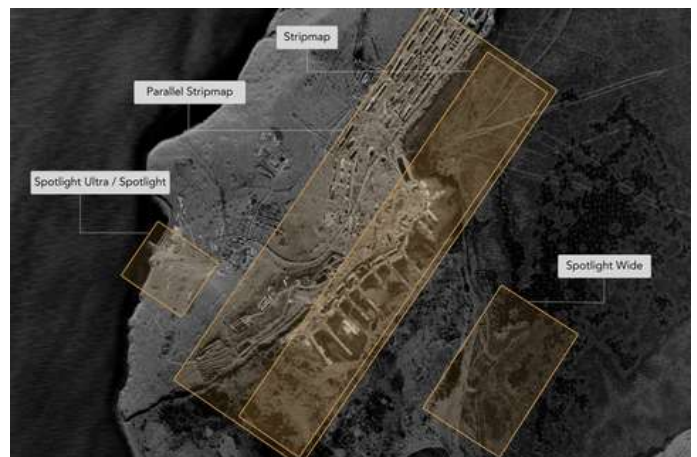
Capella Space's high-quality, high-resolution SAR data offers all weather, all night imagery and tasking a continuous view of the world with the power to explore your areas of interest for actionable information and more informed decision-making.

- Revisit & Capacity: High revisit from combined SSO + MIO, amplified by extended duty cycles (more imaging per pass).
- Automated & Global Tasking: Cloud-native, API-first platform with constellation-optimized coverage enabling reduced latency and more reliable collections worldwide.
- Security & Trust: US-based, cleared company with end-to-end encryption ensuring rigorous compliance and operational discipline.

SAR Collection Types

Capella's collection types are carefully curated to meet a variety of mission needs. We provide:

- Clarity: High resolution, low-noise imagery that reveals activity and change precisely.
- Speed: Automated tasking and 15-minute scheduling cycles for timely insights.
- Access: Seamless integration through Capella Console, API and AWS delivery.



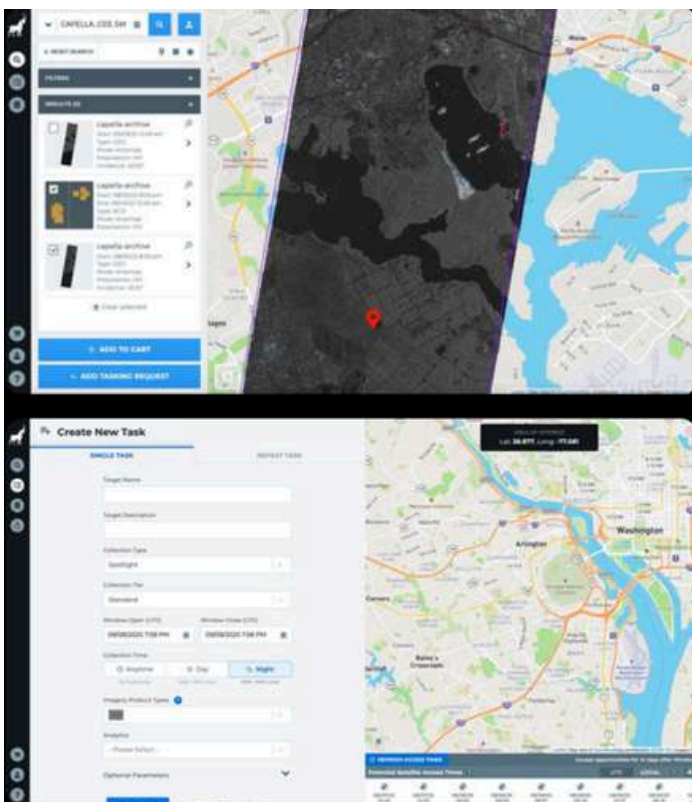
Technical Collection Specs

Each collection type has a predefined set of imaging acquisition parameters to provide the optimal performance of the Capella constellation.

Key Use Case	Spotlight Ultra	Spotlight	Spotlight Wide	Stripmap	Parallel Stripmap
	Fine-detail detection of small targets and man-made activity	High-resolution monitoring and change detection	Regional monitoring and environmental change	Broad-area coverage and baseline mapping	Ultra-broad, double coverage stripmap with uniform geometry for extended AOIs
Look Angle	15° - 50°				
Grazing Angle	73.5° - 33°				
Scene Size (km)	5 x 5		10 x 20	5, 10 x 20, 50, 100	20 x 20, 50, 100
Dwell (sec)	28 to 52	8 to 16	15 to 18	4 to 17	
Slant Range Resolution (m)	0.25		0.5	0.75	
Ground Range Resolution (m)	0.38 - 1.12		0.76 to 2.23	1.13 to 3.37	
Azimuth Resolution (m)	0.25	0.5	1.0	1.2	
Looks	5		3	1	
Squint Angle Range	+/- 30°		+/- 0°	+/- 35°	

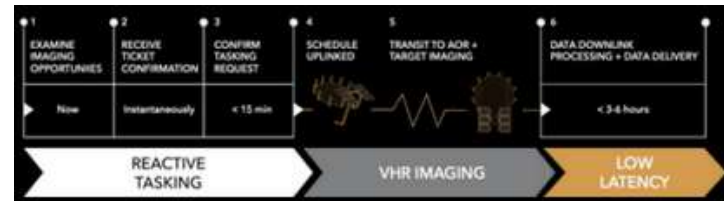
Capella Console & API

Search, order and download imagery through Capella's self-service platform for easy access to mission-critical information. View available satellite access for acquiring new images Submit tasking orders and receive automated status updates Request single, area, or repeat tasking Use AOI monitoring for more streamlined ingest of new data Leverage REST API to integrate with online platforms, enterprise systems and government architectures as needed You can push to AWS S3 and access options to configure the imagery product types (e.g. data format) which can lower latency and streamline delivery.



Capella Tasking System

- Near real-time tasking powered by communication with GEO relay satellites
- New task scheduling completed every 15 minutes
- End-to-end encryption based on U.S. NIST 800 - 171 requirements
- No bumping policy
- Constellation-optimized tasking ensures superior coverage and capture accuracy



Capella Archive

Capella Tasking System Optimize Your Orders with Tasking Tiers Single Area Tasking Search one of the largest collections of high-quality, high-resolution commercial SAR imagery. Leverage Capella's continuously growing archive for historical data and context alongside current data at mission-critical locations globally. Additionally:

- Access thousands of **feature-rich imagery** for baseline or time-series analysis
- Apply **advanced analytics Vessel Classification** and train models on historical imagery
- Leverage **subscription packages for continuous monitoring** of specific AOIs and machine learning model development



Access Capella's Open Datasets:
[capellaspace.com/opendata](https://www.capellaspace.com/opendata)

ACHIEVEMENTS:

- Capella Space: Pushing the Boundaries of SAR Innovation
- Capella Space continues to redefine what's possible with Synthetic Aperture Radar (SAR) delivering fast, secure and high-resolution Earth observation at global scale. Over the past year, Capella has achieved several major milestones that highlight our growth, innovation and leadership:
- Capella-17 "No Cloudy Days" Mission: On June 23, 2025, Capella-17 launched aboard SpaceX's Falcon 9 as part of the Transporter-14 mission from Vandenberg Space Force Base. This summer-themed mission added another Acadia-class satellite to Capella's growing SAR constellation, enhancing rapid, all-weather imaging capabilities. Capella-17 set a new company record establishing contact just 90 minutes after deployment and introduced Orbion's Hall-effect propulsion system, unlocking new precision for InSAR and Coherent Change Detection (CCD) applications.
- Rapid Dual Launches: In August 2024, Capella launched and commissioned Capella-13 and Capella-15 within a single week via Rocket Lab and SpaceX missions. This demonstrated Capella's industry-leading automated commissioning workflows and reinforced the scalability of its in-house satellite manufacturing.
- Advanced SAR Performance: Capella's Acadia-class platform introduced major upgrades, including 700MHz radar bandwidth, optical inter-satellite links and higher-resolution imagery enabling faster tasking-to-delivery cycles and more actionable data.
- "Low Drag Mode" Innovation: To counter elevated atmospheric drag, Capella deployed a novel low-drag operating mode that increased satellite lifespan by ~24% and reduced aerodynamic torque by 20-30%, underscoring our commitment to resilient operations.
- CSI Enhancement for Spotlight Ultra: Capella now delivers Colorized Sub-aperture Imagery (CSI) with every Spotlight Ultra collect unlocking deeper visibility into structural detail and motion. With no extra processing or added steps, CSI enhances man-made features and change detection with unprecedented clarity.
- Faster Tasking, Smarter Access: Continuous improvements to our automated tasking console now allow users to task imagery in under a minute dramatically simplifying access to mission-critical SAR data.
- InSAR and Advanced Analytics Demos: Capella has expanded customer capabilities with new InSAR demonstrations and advanced change detection workflows, supporting applications from infrastructure monitoring to defense and environmental resilience.
- Capella Officially Joins IonQ: In a transformational move, Capella was acquired by IonQ, the leader in quantum computing and networking. Together, we are building the world's first space-based quantum-secure communications network, anchored in Quantum Key Distribution (QKD). This will deliver rapid encrypted SAR data, enhance onboard analytics and support the future of secure, AI powered Earth observation.
- IonQ Completes Acquisition of Skyloom, Expanding Quantum Networking and Secure Communications Capabilities

KEY MANAGEMENT:

- Frank Backes
CEO



- Kalyan Boppinedi
Director of Business
Development



COMPANY PROFILE

Established in 1996, Esri India Technologies Pvt. Ltd. (Esri India), the market leader in geographic information system (GIS) software, location intelligence and mapping solutions in India, helps customers unlock the maximum potential of their data to improve operational and business decisions. It has delivered pioneering enterprise GIS technology, powered by ArcGIS, to more than 6,500 organizations in government, private, academia and non-profit sectors. The company also offers Indo ArcGIS, a unique GIS technology, solution products and data offering suited for government organizations.

Esri India collaborates with a rich ecosystem of partner organizations to deliver GIS and location intelligence-based solutions. Headquartered in Noida (Delhi NCR), the company serves close to 1.5 million users nationwide and is distinguished by a diverse workforce, with women comprising more than 40% of its employees.

YEAR OF ESTABLISHMENT:

1996

NUMBER OF EMPLOYEES (APPROX.):

700 employees

CURRENT REVENUE/FUNDING:

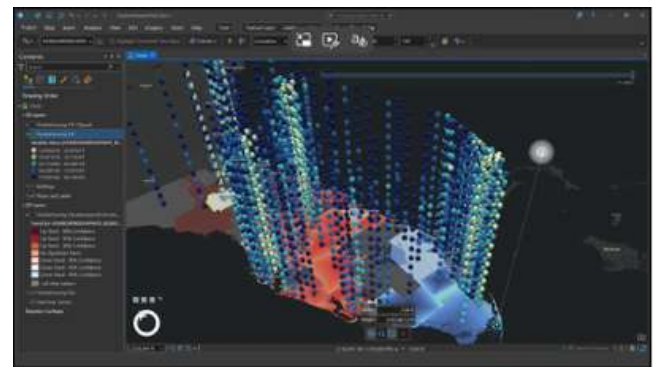
- Not publicly disclosed

CORE DOMAIN:

- Geographic Information System (GIS)

PRODUCTS AND SERVICES:

- **ArcGIS** is Esri's comprehensive geospatial platform for professionals and organizations. It is enterprise technology that integrates and connects data through the context of geography. ArcGIS is the world's leading GIS software on which systems are designed, built and sustained.



- **Indo ArcGIS** is the one-stop destination for all your GIS needs. Powered by industry leading ArcGIS technology, Indo ArcGIS offers out-of-the-box GIS solutions and data products developed by Esri India's engineers to solve some of the most challenging problems the country is facing today.



Esri India's portfolio of services includes:

- Consulting and Professional Services
- Managed Services
- Development Services
- Training
- Technical Support



ACHIEVEMENTS:

- Esri India provides GIS-powered technology solutions to:
 - o All major national programs
 - o Most of the mapping agencies
 - o 800+ Colleges and Universities
 - o 15+ State Forest Departments
 - o 20+ State Power Distribution Corporations
 - o 100+ Municipal Corporations, 500+ ULBs
- Esri India has curated Indo ArcGIS Living Atlas which contains 100+ categories of ready-to-use, authoritative geographic content for India
- In 2025, Esri India launched its GIS & AI Competency Centre in Delhi NCR, India, to scale innovation in GeoAI
- Esri India has been appraised at CMMI Maturity Level 5
- Some notable awards and accolades:
 - o 2025 - ASSOCHAM National Water Awards in the Innovative Water Product / Technology Category for OneMCGM Sewerage Operations Application
 - o 2025 - Geospatial Platform of the Year Award for Indo ArcGIS Living Atlas at GeoSmart India 2025
 - o 2023 - Global Water Technology of the Year 2023 at The EEF Global Water Award
 - o 2022 - World Geospatial Industry Council's award for advancing DEI (Diversity, Equity and Inclusion) within the geospatial community
 - o 2021 - Excellence in Innovative Technology Award by the Golden Star Awards
 - o 2020 - Excellence under Digital India Initiative for Urban Observatory at Elets Awards

INVESTORS/PARTNERS:

- No disclosed investors or partnerships

KEY MANAGEMENT:

- Agendra Kumar
Managing Director



- Anil Narang
CFO



- Vijay Kumar
CTO



- Rashmi Gupta
Head of Marketing



COMPANY PROFILE

Hindustan Aeronautics Limited (HAL) is India's leading aerospace and defence public sector enterprise under the Ministry of Defence India, established in 1940 by Walchand Hirachand. The company is engaged in the design, development, manufacturing and overhaul of aircraft, helicopters, aero engines, avionics and related systems and has been central to the growth of India's aeronautical ecosystem. HAL has developed several indigenous platforms such as LCA Tejas, ALH Dhruv, LCH and LUH, while also supporting licensed production and upgrades of major aircraft for the Indian Armed Forces. In the space vertical, HAL is a key industrial partner to the Indian Space Research Organisation (ISRO), supplying critical structures and assemblies for launch vehicles and satellites. Through its Aerospace Division, the company contributes to major missions including GSLV Mk III (LVM3), the Mars Orbiter Mission and human spaceflight programmes, along with supporting booster assembly and developing capabilities in cryogenic engine manufacturing. With strong R&D and manufacturing capabilities, HAL plays a vital role in advancing India's aerospace and space ambitions.

YEAR OF ESTABLISHMENT:

1940

NUMBER OF EMPLOYEES (APPROX.):

- 3,622 employees as on Nov 30, 2024

CURRENT REVENUE/FUNDING:

- Latest Revenue : 33,500Cr INR as on Mar 31, 2025

CORE DOMAIN:

- Launch Vehicle and subsystems: Launch Vehicle Manufacturing
- Satellite and Subsystems: Satellite structures

PRODUCTS AND SERVICES:

1. Aerospace Structures

- Aluminium alloy riveted structures for launch vehicles and satellites
- Key components include:
 - Heat Shield Assemblies
 - Nose Cone Assemblies
 - Satellite shrouds
 - Bulkheads, stiffeners, rings, brackets and panels
- Large structural assemblies with high-precision vertical assembly jigs (up to ~5 m diameter and ~10 m height)

2. Propellant Tanks & Tankages

- Welded propellant and water tanks (conical, cylindrical and complex geometries)
- Aluminium alloy tank structures for launch vehicles
- Tankages used in PSLV, GSLV Mk II and GSLV Mk III



3. Cryogenic Stage Structures & Hardware

- Structures and welded tanks for cryogenic upper stages of launch vehicles
- Components supporting high-performance cryogenic propulsion systems



4. Launch Vehicle Structural Systems

- Structural assemblies for major ISRO launch vehicles:
 - PSLV (Polar Satellite Launch Vehicle)
 - GSLV Mk II
 - GSLV Mk III (LVM3)
- Full equipping and integration of strap-on booster stages (L-40)

5. Satellite Structures

- Structural components for:
 - Indian Remote Sensing Satellites (IRS)
 - Indian National Satellites (INSAT)
- Hardware supporting communication, meteorology and earth observation missions

SERVICES

1. Assembly, Integration & Testing (AIT)

- High-precision structural assembly
- Integration of launch vehicle subsystems (including strap-on stages)
- Testing and validation of aerospace hardware

2. Manufacturing & Fabrication Services

- Precision machining (3-axis, 5-axis, EDM)
- Welding (TIG, MIG, Friction Stir Welding)
- Forming (stretch forming, hydraulic press, rolling, dome forming)
- Surface treatment and heat treatment

3. Engineering & Design Support

- Fabrication of complex aerospace structures from aluminium alloys
- Development of tooling, assembly jigs and weld fixtures
- Support for large-scale structural design and manufacturing

4. Quality Assurance & Certification

- Aerospace-grade quality systems (AS9100D, ISO 14001)
- Inspection and validation of space hardware
- Compliance with defence and aerospace quality standards

5. Supply Chain & Industrial Support

- Outsourcing and vendor ecosystem development for:
 - Precision machining components
 - Tooling and fixtures
 - Sheet metal and dome forming
- End-to-end support for aerospace manufacturing programs

KEY MANAGEMENT:

- Dr. D. K. Sunil
Chairman & Managing
Director



- Shri Ravi K
Director (Operations)



- Shri Balaji N
General Manager
(Aerospace)



INVESTORS/PARTNERS:

Major Shareholder Breakdown (as of December 2025):

- **Foreign Institutional Investors (FIIs):** 10.9%.
- **Domestic Institutional Investors (DIIs):** 9.8%.
- **Retail/Public:** 7.8%.
- **Mutual Funds:** 5.78%, with top holders including HDFC Asset Management and Nippon Life India.

Key Global Partners:

- Safran Aircraft Engines
- HENSOLDT
- Airbus - Aerospace structures and manufacturing
- Boeing - Supply chain and structural components
- Rolls-Royce - Engine and aerospace collaboration
- Israel Aerospace Industries (IAI)
- United Aircraft Corporation (UAC, Russia)

ACHIEVEMENTS:

2026

- Continued progress on LCA Mk1A deliveries and AMCA programme, strengthening advanced aerospace capabilities linked to future space technologies
- Participation in Wings India 2026, showcasing indigenous platforms and expanding into civil aviation ecosystem

2025

- Signed Technology Transfer Agreement for SSLV (Small Satellite Launch Vehicle) with ISRO, IN-SPACe and NewSpace India Limited, major milestone marking HAL's direct entry into small satellite launch vehicle ecosystem
- ISRO Chairman inaugurated HAL facilities supporting LVM3 (GSLV Mk III) strengthened HAL's role in heavy-lift launch vehicle manufacturing and infrastructure
- Signed MoU with BEML Limited - Collaboration in strategic sectors including aerospace manufacturing and infrastructure
- Strengthened R&D ecosystem through partnerships with:
 - Defence Institute of Advanced Technology (DIAT)
 - IIIT Dharwad
 - Focus on advanced aerospace technologies and future systems
- Entered long-term agreement with Safran Aircraft Engines - Development and supply of critical engine components, strengthening propulsion ecosystem
- Signed partnership with HENSOLDT (Dubai Air Show 2025) - Advanced avionics and sensing technologies relevant to aerospace and space systems
- Signed MoU with UAC (Russia) for production of SJ-100 aircraft - Enhances HAL's global manufacturing and system integration capabilities
- Conducted inaugural flight of Dhruv NG helicopter - Reflects advancement in indigenous aerospace platforms and design capabilities
- Strengthened R&D ecosystem through collaborations with DIAT and IIIT Dharwad, supporting advanced aerospace and deep-tech innovation

2024

- HAL facilities inaugurated to support LVM3 programme by ISRO leadership, reinforces HAL's role in launch vehicle structures and space hardware manufacturing
- Achieved record revenue of ₹29,810 crore (FY 2023-24) - Indicates strong growth and capacity expansion in aerospace manufacturing
- Successfully conducted first flight of LCA Mk1A, demonstrates advanced indigenous design and engineering capabilities
- Received 'Outstanding PSU of the Year' award Recognition of contribution to India's strategic sectors including aerospace and space

COMPANY PROFILE

ICEYE is a Finland-founded space technology company specializing in synthetic aperture radar (SAR) satellite systems and Earth observation data services. The company designs, manufactures and operates a constellation of small SAR satellites capable of capturing high-resolution imagery regardless of weather conditions or time of day. ICEYE provides near real-time monitoring and analytics for applications across defence, disaster response, insurance, maritime surveillance and infrastructure monitoring.

ICEYE operates a vertically integrated model covering satellite manufacturing, launch coordination, mission operations and data analytics services. The company serves government agencies, defence organizations and commercial customers globally, with a focus on ISR (intelligence, surveillance and reconnaissance) capabilities and data-driven situational awareness solutions.

YEAR OF ESTABLISHMENT:

2014

NUMBER OF EMPLOYEES (APPROX.):

- 1000+ employees

CURRENT REVENUE/FUNDING:

- Annual revenue: Over €250M in 2025

CORE DOMAIN:

- Sovereign Space-Based Intelligence, Surveillance and Reconnaissance (ISR) systems utilizing Synthetic Aperture Radar (SAR) technology, including satellite design and manufacturing, Earth observation data services and mission ground systems.

PRODUCTS AND SERVICES:

1. SAR Satellite Constellation

ICEYE designs, manufactures and operates small Synthetic Aperture Radar (SAR) satellites capable of imaging the Earth in all weather conditions and at any time of day.

Key capabilities

- Imaging resolution up to 25 cm
- Global coverage with sub-daily revisit
- Ability to image through clouds, smoke, darkness and fog
- Wide-area imaging up to 120,000 km² per scene

Applications

- Border monitoring
- Maritime surveillance
- Strategic site monitoring
- Environmental monitoring

2. Gen4 SAR Satellites

ICEYE's next-generation SAR satellites provide enhanced imaging performance and faster intelligence delivery.

Features

- Resolution up to 16 cm
- Imaging bandwidth 1,200 MHz
- Field of regard exceeding 400 km, enabling fast access and high revisit rates
- High-speed encrypted data downlink up to 700 Mbps
- Simultaneous imaging and downlink capability

These satellites enable rapid imaging, faster data delivery and improved situational awareness for defense and intelligence operations.



3. Mission Systems (Space-based ISR Systems)

ICEYE provides turnkey Intelligence, Surveillance and Reconnaissance (ISR) satellite systems for government and defense customers.

Components include

- SAR satellites
- Ground control systems
- Data processing platforms
- Intelligence analytics tools
- Launch services
- Global ground station access

These systems allow governments to own and operate sovereign space-based intelligence capabilities.

4. ISR Cell (Mobile Intelligence Unit)

A mobile container-based tactical ISR system enabling rapid analysis and dissemination of satellite intelligence.

Capabilities

- Satellite tasking and data collection
- On-site image processing
- AI-assisted analysis
- Integration with military command systems

This solution delivers near real-time satellite intelligence to tactical units in the field.



5. ICEYE Connect (Ground Segment Network)

A global ground-station connectivity service enabling secure satellite communications and data downlink.

Features

- Global network of satellite ground stations
- Secure command uplinks and encrypted data transfer
- Near real-time data delivery
- Up to 25x higher downlink capacity compared to single ground station operations



6. SAR API Platform

A cloud-based platform providing direct access to ICEYE's SAR satellite constellation and imagery archive.

Capabilities

- Automated satellite tasking
- Access to 60,000+ SAR images
- Data purchasing and download
- Integration with analytics platforms



SERVICES

1. SAR Data & Earth Observation Services

ICEYE delivers near real-time SAR imagery and geospatial intelligence for global monitoring.

Key services

- Persistent Earth monitoring
- Change detection analysis
- Disaster monitoring
- Environmental intelligence



2. Insurance Intelligence Solutions

Satellite-based analytics designed for the insurance and reinsurance sector.

Capabilities

- Disaster impact assessment
- Hurricane damage analysis
- Flood monitoring
- Wildfire damage detection
- Earthquake damage mapping

These insights enable faster claims assessment and improved catastrophe risk modelling.



3. Banking & Financial Risk Intelligence

ICEYE provides satellite-based flood intelligence for banks to assess climate risk and collateral exposure.

Services include

- Property flood risk monitoring
- Mortgage portfolio risk analysis
- Climate risk modelling
- Credit and capital risk assessment

4. Government & Disaster Management Solutions

Geospatial intelligence solutions supporting government disaster response and resilience planning.

Applications

- Flood monitoring
- Wildfire detection
- Hurricane damage assessment
- Deforestation monitoring

ACHIEVEMENTS:

2026

- Mar 2026: Radar satellite data from ICEYE contributed to a 30-year Antarctic ice loss study, providing insights into long-term glacier changes.
- Mar 2026: Launched SAR-based deforestation monitoring solution for detecting illegal tropical forest loss in near real time.
- Feb 2026: Entered Sri Lanka reseller partnership with Geo-Info Mapping to provide national flood monitoring intelligence.
- Jan 2026: Swedish Defence Materiel Administration (FMV) signed multi-year contract with ICEYE for sovereign SAR satellite systems, as part of Sweden's historic rearmament program.

2025

- Dec 2025: Won a multi-billion euro space reconnaissance contract with Rheinmetall for the German Armed Forces.
- Dec 2025: Closed EUR 150M Series E funding round led by General Catalyst, with EUR 50M secondary placement. Company valued at EUR 2.4B, with pan-European investor participation including Solidium, Bpifrance and A.P. Moller Holding.
- Dec 2025: Portuguese Air Force signed direct SAR satellite procurement contract with ICEYE, marking Portugal's first nationally-owned military satellite.
- Nov 2025: Expanded SAR constellation with five new satellites for commercial and government missions.
- Sep 2025:
 - Launched Gen4 SAR satellite with up to 16 cm resolution.
 - Introduced ISR Cell, a mobile system delivering tactical satellite intelligence to defense forces.
- Jul 2025: Introduced Flood Rapid Impact (FRI) product using machine learning for rapid disaster assessment.
- Jun 2025: Selected by Finland Ministry of Defense to provide SAR satellite intelligence capabilities.
- Jun 2025: Began providing satellite data to NATO Allied Command Operations under the Alliance Persistent Surveillance from Space initiative.
- May 2025: Partnered with Safran to integrate AI-powered geospatial intelligence solutions.

2024

- Dec 2024:
 - Extended growth funding round raising \$158M in 2024.
 - Total company funding surpassed \$500M.
- Oct 2024: Introduced Dwell Precise imaging mode achieving 25 cm radar resolution.
- Aug 2024: Launched four new SAR satellites, bringing the total number launched to 38 satellites.
- Mar 2024:
 - Introduced ICEYE Ocean Vision, a maritime intelligence platform using SAR.
 - Released Dwell Fine imaging mode for improved object detection.
 - Launched three additional SAR satellites including a 1200 MHz radar bandwidth technology demonstrator.

2023

- Nov 2023: Expanded constellation to 30+ SAR satellites launched.
- Jun 2023:
 - Launched four Generation-3 SAR satellites.
 - Introduced Spot Fine imaging mode (50 cm resolution).

- May 2023: Introduced world's first SAR satellite "Dwell" capability, enabling satellites to focus on a single ground target.
- Apr 2023: Released Wildfire Insights, enabling near real-time wildfire damage monitoring.

2022

- May 2022: Completed largest satellite launch, deploying five SAR satellites simultaneously.
- Feb 2022: Raised \$136M Series D funding, with investors including BAE Systems and Tokio Marine.
- Jan 2022: Launched 15th and 16th SAR satellites, including the first satellite built and operated by ICEYE US.

2021

- Jul 2021: Launch of four SAR satellites, expanding the constellation to 14 satellites.
- Jan 2021: Launch of three satellites, establishing the world's largest commercial SAR constellation.

2020

- Sep 2020: Raised \$87M Series C funding, bringing total financing to \$152M.
- Demonstrated 25 cm SAR imaging capability, one of the highest-resolution commercial radar images.

2019

- Oct 2019: Commercial launch of Spot SAR imaging mode providing high-resolution radar imagery.

Jul 2019: Successfully launched two SAR satellites on rideshare mission.

INVESTORS/PARTNERS:

Arturo, Nearmap, Carahsoft, CLS (Collecte Localisation Satellites), CoreLogic, DAS, Duck Creek Technologies, EigenRisk, Esri (Esri Partner Network Gold), Descartes Labs, Geospectrum Marketing Services, TechAlliances Growth, Insurtech Vanguard, KSAT (Kongsberg Satellite Services), UP42, Skymap Global, Juvare.

KEY MANAGEMENT:

- Partha Roy Chowdhury
Head-Missions India



- Abhishek Agrawal
Director, Business Development



COMPANY PROFILE

LeoLabs is an American space technology company focused on space situational awareness (SSA), orbital intelligence and space traffic management using a global network of ground-based radars. It provides real-time data and analytics to help governments, commercial operators and satellite owners detect, track and respond to objects in Low Earth Orbit (LEO) including satellites and space debris. LeoLabs builds and operates a global network of phased-array ground radars that continuously monitor objects in LEO tracking satellites and space debris down to about 2 cm in size, which is far smaller than most conventional tracking systems.

YEAR OF ESTABLISHMENT:

2016

NUMBER OF EMPLOYEES (APPROX.):

- 51 - 200 as on Jul 01, 2024

CURRENT REVENUE/FUNDING:

- Total Funding - \$129M in 5 rounds

CORE DOMAIN:

- Space Situational Awareness (SSA) / Space Domain Awareness (SDA)
- Orbital Intelligence & Space Traffic Management

PRODUCTS AND SERVICES:

1. Space Domain Awareness (SDA)

LeoLabs provides persistent orbital intelligence and space situational awareness capabilities that help defense, intelligence and commercial operators monitor activity in Low Earth Orbit (LEO).

Key capabilities include:

- High-interest object tracking
- Coplanar alerts for objects in similar orbital planes
- Multi-object detection and monitoring
- Object characterization and identification
- Patterns-of-life analysis of satellite behavior
- Proximity operations monitoring

These capabilities enable customers to detect, track and analyze potential threats in space, supporting national security and strategic decision-making.

2. Command, Control & Communications Support

LeoLabs provides data and insights that enhance command and control operations for spacecraft and satellite constellations.

Key services include:

- Launch coordination and orbital risk assessment
- Rapid identification of newly launched payloads
- Precision asset tracking
- Persistent threat custody and monitoring
- Conjunction alerts for potential collisions

High revisit rates from LeoLabs' radar network provide greater certainty in spacecraft positioning, improving mission efficiency.

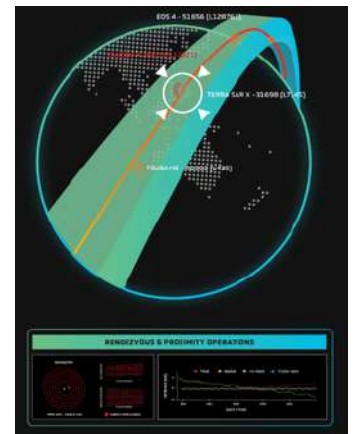
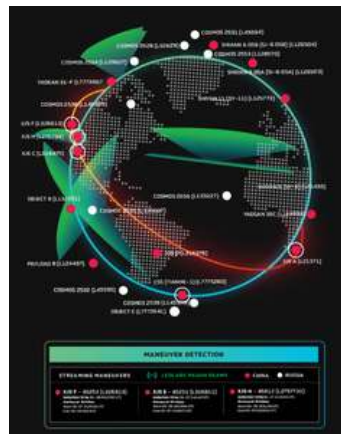
3. Training & Readiness Solutions

LeoLabs offers orbital data-driven training and simulation capabilities to prepare space operators for real-world mission scenarios.

Key applications include:

- Modeling and simulation of orbital events
- Training for space operations personnel
- Analysis of historical space events
- Development of operational tactics, techniques and procedures (TTPs)
- Mission planning and operational readiness exercises

These tools enable defense and commercial operators to improve preparedness and decision-making in space operations.



SPACE TRAFFIC MANAGEMENT (STM)

4. Orbital Traffic Monitoring & Collision Avoidance

Leolabs is a global provider of space traffic management solutions, delivering real-time tracking and monitoring of objects in Low Earth Orbit.

Core capabilities include:

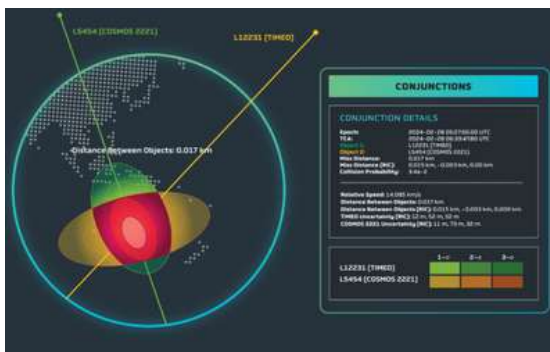
- Continuous object custody using a global radar network
- Real-time space object catalogs and dashboards
- Conjunction screening and collision risk reporting
- On-demand ephemeris screening for satellite operators

5. Conjunction Alert Services

Leolabs provides real-time collision avoidance alerts to protect satellites and ensure safe operations.

Key features:

- Automated conjunction alerts
- Risk assessment and maneuver recommendations
- Continuous monitoring throughout mission operations
- Safety-of-flight support for satellite missions

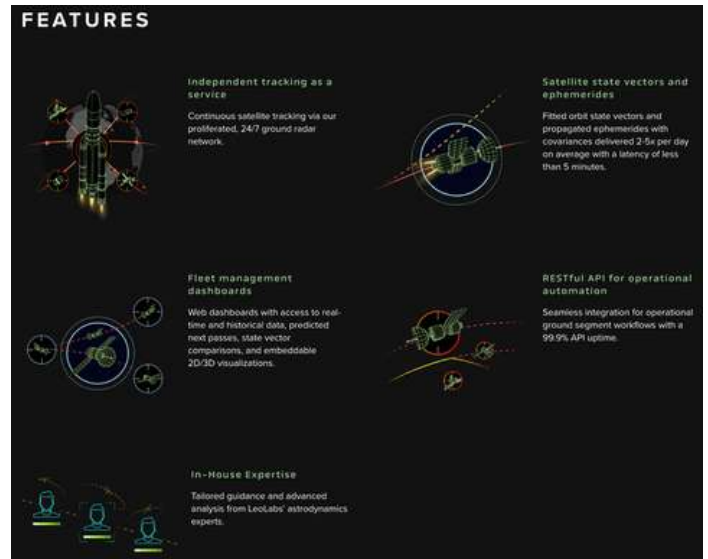


7. Satellite Tracking & Mission Monitoring

Leolabs provides automated platforms for continuous monitoring of satellites and constellations.

Key services include:

- Web-based satellite tracking platforms
- Automated monitoring for large satellite constellations
- Persistent orbital tracking throughout mission life cycles

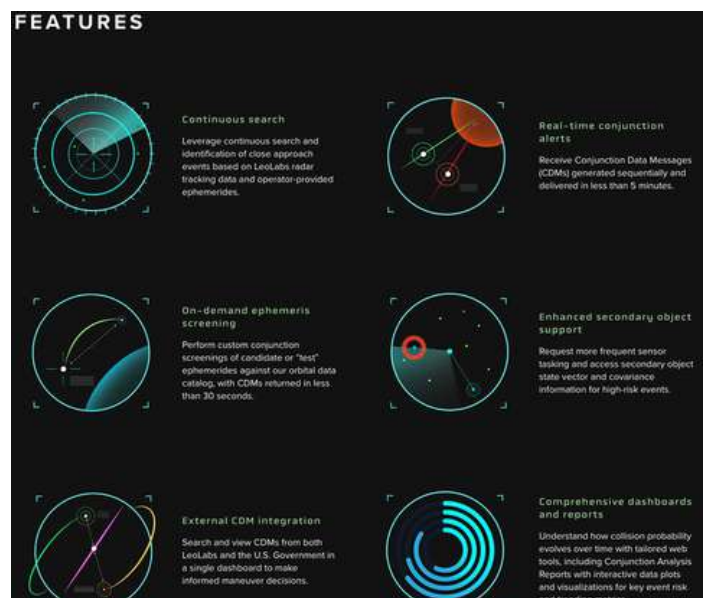


8. Mission Safety & Operational Support

Leolabs helps satellite operators maintain safe and efficient mission operations.

Operational support includes:

- Real-time data and orbital insights
- Automated collision avoidance workflows
- Operational guidance for satellite maneuvers
- Compliance with regulatory and safety standards



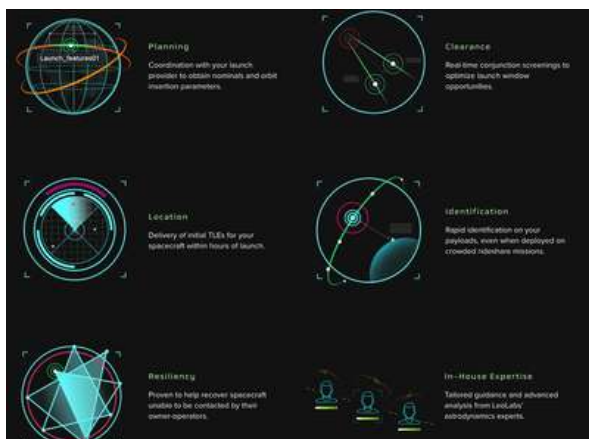
LAUNCH & MISSION OPERATIONS SUPPORT

6. Launch Tracking & Payload Identification

Leolabs supports satellite operators during launch by quickly identifying and tracking newly deployed satellites.

Capabilities include:

- Day-of-launch satellite identification
- Rapid detection of spacecraft on rideshare missions
- Orbital tracking within hours of deployment



ACHIEVEMENTS:

2025

- December 2025: LeoLabs secured a joint contract from the U.S. Department of Commerce Office of Space Commerce and the U.S. Space Force Joint Commercial Operations (JCO) to license its commercial Low Earth Orbit object catalog. The catalog tracks nearly 25,000 objects, supporting the TraCSS civil space traffic management system and enhancing orbital safety monitoring.
- September 2025: LeoLabs collaborated with Varda Space Industries and Anduril Industries to demonstrate hypersonic vehicle tracking capabilities, combining distributed radar networks and analytics tools to monitor high-speed objects traveling above Mach 5.
- August 2025: LeoLabs entered a NASA Space Act Agreement (SAA) to evaluate the use of its commercial orbital tracking data for collision-risk analysis and flight safety missions under NASA's Conjunction Assessment Risk Analysis (CARA) program.
- June 2025: Selected by the SpaceWERX innovation arm of the U.S. Space Force for a \$4 million Tactical Funding Increase (TACFI) to further develop its Scout-class radar, improving detection and tracking of launches, missiles and highly maneuverable objects.
- April 2025: LeoLabs unveiled the Scout expeditionary radar, a mobile, containerized S-band Direct Radiating Array radar designed to strengthen global space surveillance. The system can be rapidly deployed to monitor foreign launches and orbital activity.
- March 2025: Awarded a \$60 million Strategic Funding Increase (STRATFI) from SpaceWERX to develop and deploy a Seeker-class UHF radar in the Indo-Pacific region by 2027, expanding the company's Global Radar Network and filling a critical coverage gap in the western Pacific.
- January 2025: LeoLabs reported a major growth milestone with over \$50 million in new contracts, reinforcing its position as a leading provider of orbital intelligence, space domain awareness and space traffic management services

2024

- December 2024: LeoLabs successfully deployed its next-generation Seeker Ultra High Frequency (UHF) radar in Arizona, strengthening global monitoring of Low Earth Orbit (LEO) and Very Low Earth Orbit (VLEO) objects.
- August 2024: LeoLabs tracked and analyzed a major orbital debris event caused by the breakup of a Chinese rocket upper stage, identifying over 900 debris fragments threatening satellites in orbit.

2023

- LeoLabs expanded its global radar network and advanced its orbital analytics platforms, enabling improved tracking of satellites and space debris in low Earth orbit.

2022

- Continued deployment of advanced radar systems to support space traffic management and collision avoidance services for satellite operators and government agencies.

2021

- Expanded commercial services providing orbital tracking, collision risk analysis and conjunction alerts to satellite constellation operators.

2019-2020

- Deployed additional radar installations worldwide to build the LeoLabs Global Radar Network, significantly improving tracking coverage for objects in Low Earth Orbit.

INVESTORS/PARTNERS:

- GP Bullhound
- Insight Partners
- Velvet Sea Ventures
- WERU Investment Co
- Airbus Ventures
- Horizons Ventures
- Dolby Family Ventures

Strategic Partners / Collaborations

- U.S. Department of Commerce (Office of Space Commerce) & U.S. Space Force (JCO)
- ST Engineering Geo-Insights
- SpaceWERX / U.S. Space Force innovation arm
- NASA's Office of Space Commerce collaboration

KEY MANAGEMENT:

- Tony Frazier
Chief Executive Officer



- Daniel Ceperley
Founder & Chief Operating Officer



COMPANY PROFILE

NIBE Space Pvt Ltd (NSPL), a subsidiary of NIBE Limited. Founded in 2024, NIBE Space specializes in delivering on-demand satellite imagery through its pioneering "Image-as-a-Service" model. This service empowers industries and government agencies to access real-time, high-precision satellite data tailored to their specific needs, without the complexities of owning or operating satellite infrastructure.

It plans to develop India's first multi-sensor, all-weather Earth Observation Satellite Constellation, designed to provide high-resolution imagery and strategic intelligence to support defence, homeland security and commercial applications.

YEAR OF ESTABLISHMENT:

2024

NUMBER OF EMPLOYEES (APPROX.):

- under 10 employees

CURRENT REVENUE/FUNDING:

- Total Funding: self-funded
- Annual Revenue: unavailable

CORE DOMAIN:

- Earth Observation (EO) satellite and geospatial intelligence

PRODUCTS AND SERVICES:

1. Optical Imaging Satellites

High-resolution optical Earth observation satellites designed to capture detailed imagery of the Earth's surface.

Features

- Sub-0.5 meter spatial resolution imagery
- High clarity Earth observation data
- Suitable for urban monitoring, agriculture and defence surveillance

Enables identification of small objects and terrain changes



2. Optical + Infrared (IR) Satellites

Multi-sensor satellites integrating optical imaging and infrared detection capabilities.

Features

- Combination of optical imagery and infrared heat detection
- Detection of missile launches and thermal signatures
- Early-warning capability for strategic monitoring



3. Synthetic Aperture Radar (SAR) Satellites

Radar-based Earth observation satellites capable of capturing imagery in all weather and lighting conditions.

Features

- ~100 km swath width for large-area coverage
- Day-and-night observation capability
- Imaging through clouds, darkness and light vegetation



4. ELINT (Electronic Intelligence) Satellites

Signals intelligence satellites designed for interception and analysis of electronic emissions.

Features

- Detection of radar and communication signals
- Electronic signal classification and monitoring
- Integration with Earth observation data



1. High-Resolution Earth Observation Data Services

Provision of high-resolution satellite imagery for defence, security and development applications.

Capabilities

- Near-real-time geospatial data delivery
- Sub-meter resolution imagery
- Monitoring of strategic areas of interest

Use cases

- Border surveillance
- Infrastructure monitoring
- Natural resource assessment

2. Geospatial Intelligence & Image Analytics

Advanced analytics platforms that extract actionable insights from satellite imagery.

Capabilities

- Temporal image comparison
- Heatmap visualization
- Land cover classification
- Object detection in satellite imagery
- Automated change detection

Applications

- Defence monitoring
- Environmental monitoring
- Urban expansion analysis
- Disaster response and damage assessment

3. Defence & Strategic Monitoring Solutions

Specialised Earth observation services tailored for national security.

Capabilities

- Detection of infrastructure changes in sensitive regions
- Monitoring of airbases, ports and border zones
- Maritime activity tracking
- Strategic terrain monitoring

4. Satellite Data Visualization & Analytics Platforms

Interactive geospatial platforms designed to support decision-making through visual analytics.

Features

- Geospatial dashboards and analytics interfaces
- Satellite data visualisation tools
- Data filtering and trend analysis
- Cloud-based geospatial processing

5. Multi-Sensor Earth Observation Satellite Constellation

NIBE Space is developing a 36-42 satellite Low Earth Orbit (LEO) constellation designed for high revisit rates and continuous monitoring.

Key capabilities

- Sub-meter resolution imagery (<50 cm GSD)
- High revisit time (<21 minutes for primary areas of interest)
- Multi-sensor architecture combining optical, SAR and infrared systems
- All-weather surveillance capability



ACHIEVEMENTS:

- IN-SPACE Registration for Earth Observation Data Dissemination (April 2025): Nibe Space Private Limited received official approval from Indian National Space Promotion and Authorization Center (IN-SPACe) to operate as a Data Disseminator for Earth Observation (EO) data with Ground Sampling Distance (GSD) greater than 30 cm. This recognition enables the company to legally distribute satellite imagery over Indian territory while complying with national space data policies.
- International and Domestic Space Partnerships (September 2024): At its launch, Nibe Space signed strategic MoUs with key industry partners including Larsen & Toubro, Centum Electronics, Agnikul Cosmos, Skyroot Aerospace and Thales Alenia Space. These collaborations focus on satellite manufacturing, launch services and advanced space technologies.
- Integration into India's Defence-Space Industrial Ecosystem: Nibe Space operates as part of NIBE Limited, aligning its satellite and geospatial intelligence capabilities with India's strategic defence, surveillance and national security requirements.
- Advancing the Atmanirbhar Bharat Space Vision: By developing indigenous satellite technologies and collaborating with Indian launch providers and aerospace manufacturers, the company contributes to India's self-reliant space ecosystem and private-sector participation in national space infrastructure.

INVESTORS/PARTNERS:

- NIBE Limited

Strategic Partners

- Larsen & Toubro (L&T)
- Centum Electronics
- Agnikul Cosmos
- Skyroot Aerospace
- Thales Alenia Space

KEY MANAGEMENT:

- Ganesh Ramesh Nibe
Founder MD



- Mr. Dnyaneshwar Karbhari
Nibe
Director



- Rishi Siwach
Chief Strategy Officer



COMPANY PROFILE

NorthStar is the only commercial enterprise providing high-fidelity tracking and characterization of space objects using fused data from multiple, diverse sensor sources. NorthStar's commercial, space-based SSA service delivers "always on" continuous monitoring of resident space objects (RSO's) in near-Earth LEO, MEO and GEO.

NorthStar brings proven operational expertise, delivering 24/7 operational support to the U.S. Space Force through the Joint Commercial Operations (JCO) program, backed by subject-matter experts in astrodynamics and space domain awareness operations. Its sensor-agnostic, multi-source data integration pipeline ingests ground-based and space-based observation data to produce accurate, near-real-time orbit determination and tracking.

Beyond current state estimation, NorthStar applies advanced predictive analytics to anticipate the future behavior of space objects, leveraging astrodynamics, photometric analysis and pattern-of-life modeling. This enables early identification of potential threats to high-value allied and commercial space assets and supports informed operational decision-making in contested and congested space environments.

YEAR OF ESTABLISHMENT:

2015

NUMBER OF EMPLOYEES (APPROX.):

- 72 employees

CURRENT REVENUE/FUNDING:

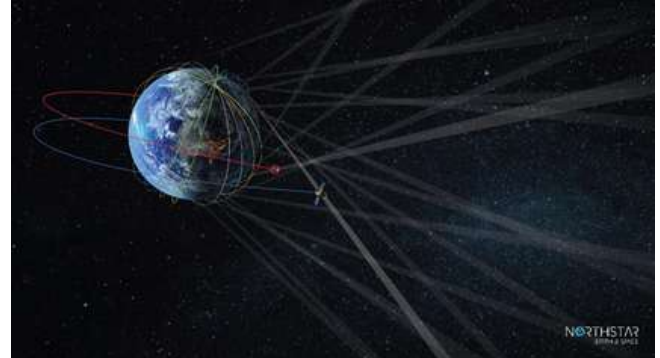
- Annual Revenue: >\$10M per year
- Funding: >\$100M

CORE DOMAIN:

- Space Situational Awareness / Space Domain Awareness

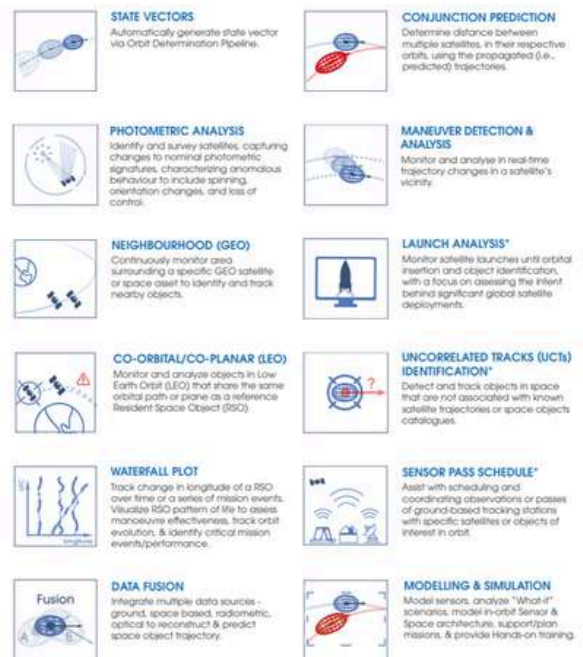
PRODUCTS AND SERVICES:

- NorthStar Space Based SSA constellation detecting a RPO event.



- NorthStar Space Domain Awareness services

NorthStar Space Domain Awareness (SDA) Services



ACHIEVEMENTS:

- 2023 - Initiation of operations support to US Space Force - space domain awareness program Joint Commercial Operations (JCO)
- Sept 2023 - NorthStar host the Sprint Advanced Concept Training (SACT) in Luxembourg
- Jan 2024 - Launch of 4 dedicated sensors for Space Based Space Situational Awareness.
- 2024 - NorthStar is a performer in DARPA-Space Watch program for space based SSA space object monitoring.
- Sept 2025 - Multi-source data integration pipeline capable of processing 80 million observations per day from different kind of sensors. Including data from star trackers from a mega constellation.

INVESTORS/PARTNERS:

- Telesystem
- Cartesian Capital Group
- The Space Alliance
- Luxembourg Future Fund
- Investissement Quebec
- Rogers Family Trust

KEY MANAGEMENT:

- Stewart Bain
Founder & CEO
- Ignacio Cires
Director of Business Development
- Yann Picard
Executive Director of Products



COMPANY PROFILE

Planet Labs, founded in 2010 and headquartered in San Francisco, California, is a leading Earth-imaging and geospatial analytics company. It operates one of the largest constellations of Earth-observation satellites, known as “Doves”, which capture daily global imagery at medium resolution. These data streams support decision-making across government, defense, agriculture, forestry, energy and environmental applications.

Planet’s platform delivers frequent revisits of the Earth’s surface, enabling users to monitor change over time, from crop health and natural disaster impacts to infrastructure development and maritime tracking. The company’s products include high-resolution imagery, analytics and insights tailored for real-time situational awareness.

YEAR OF ESTABLISHMENT:

2010

NUMBER OF EMPLOYEES (APPROX.):

- 1,180 as on Jan 31, 2024

CURRENT REVENUE/FUNDING:

- Funding: \$615M in 13 rounds

CORE DOMAIN:

- Earth Observation (EO) & Satellite Imagery
- Geospatial Intelligence & Analytics

PRODUCTS AND SERVICES:

Planet Monitoring (PlanetScope Constellation)

Near-daily, 3.7-meter resolution imagery covering all of Earth’s landmass.

Planet’s fleet of Dove satellites provides continuous global coverage, enabling users to observe geographic areas of interest, detect patterns, track infrastructure and monitor changes as they happen.

Key Features:

- Global daily coverage of entire Areas of Interest (AOI)
- Near-daily capture rate for current condition awareness
- Comprehensive multispectral datasets
- Access via APIs, web application and GIS integrations
- Subscription-based scalable model



Analysis-Ready PlanetScope (ARPS)

Pre-processed, harmonized imagery optimized for analytics and machine learning workflows.

- Calibrated for sensor and atmospheric consistency
- Harmonized with trusted third-party sources
- Ready for temporal analysis and AI models



2. Planet Basemaps

High-frequency, seamless mosaics built from recent global satellite imagery.

Planet Basemaps combine daily global imagery with advanced processing software to create visually consistent and scientifically accurate mosaics suitable for time-series analysis and broad-area monitoring.



Visual Basemaps

- Color-corrected, high-resolution imagery
- Minimizes cloud and haze effects
- Spatially accurate contextual mapping

Surface Reflectance Basemaps

- Reduced atmospheric distortion
- Four or eight spectral bands
- Optimized for scientific and analytical use



Global & Select Basemaps

- 1.5+ million scenes processed daily
- Annual global basemap covering Earth's entire landmass
- Customizable frequency and spectral options

3. Planet Tasking (High-Resolution Imagery - 50 cm)

On-demand, near-real-time high-resolution satellite imagery.

Planet Tasking provides sub-daily revisit capabilities, enabling mission-critical decision-making with 50 cm resolution imagery.

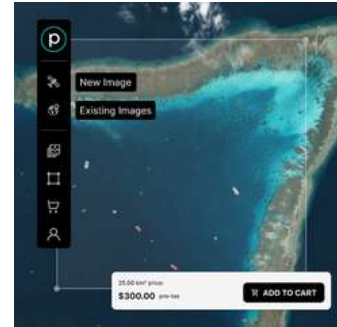
Capabilities:

- Intraday revisit frequency
- Stereo collection for 3D models and DEM generation
- Off-nadir imagery
- Satellite video capture
- Automated Tasking Dashboard



Planet Select

Pay-as-you-go imagery ordering platform powered by SkyFi for ad-hoc projects and rapid access.



4. Planet Analytic Feeds

Automated, cloud-based satellite imagery analytics powered by deep learning and computer vision.

Planet Analytics converts daily global imagery into structured insight, delivered in GeoJSON and GeoTIFF formats.



Building Detection

- Continuously updated building maps
- Urban growth monitoring
- Infrastructure planning and resource routing

Road Detection

- Weekly/monthly extraction of new and existing roads
- Fleet routing optimization
- Remote region monitoring

Automated Change Detection

- Country-wide monitoring
- Identification of new construction and activity
- Cost-efficient large-area surveillance

Vessel Detection

- Daily monitoring of ports and coastlines
- Maritime activity tracking

Aircraft Detection

- Daily detection across airports and airfields
- Monitoring departures, arrivals and fleet trends
- Economic activity assessment



Building Detection on Planet Basemaps, Cairo, Egypt

ACHIEVEMENTS:

- August 2025: Planet Labs successfully launched two high-resolution satellites, Pelican-3 and Pelican-4, aboard a SpaceX Falcon 9 rocket from Vandenberg Space Force Base in California. The Gen 1 Pelican satellites are designed to provide up to 40 cm class resolution imagery across six multispectral bands. Through a partnership with NVIDIA, the satellites are equipped with NVIDIA Jetson AI platforms for on-orbit computing capabilities.
- August 2025: Planet has partnered with Global Fishing Watch and will leverage its deep stack of satellite data to process more than 2 million square kilometers of imagery every day transforming how we see the ocean - to bring in transparency and sustainable use of oceans.
- December 2023: Planet Labs collaborates with the UAE Space Agency to initiate the development of a Loss and Damage Atlas, fostering data diplomacy. The partnership aims to empower climate-vulnerable nations by quantifying the national impacts of climate change, facilitating financial programs for effective climate adaptation efforts.
- July 2023: Planet Labs partners with the UAE Space Agency to Build Satellite Data driven Loss and Damage Atlas for Climate Resilience.
- July 2023: Planet Labs partners with artificial intelligence (AI) analytics providers Synthetiaic and SI Analytics. These companies' AI-powered analytics enable object detection and classification services on top of Planet's high-frequency, medium- and high-resolution satellite data.
- July 2023: Planet Labs organized the live webinar on Revolutionizing Land Use Intelligence for Urban and Natural Systems with High Resolution Satellite Imagery on 19th July 2023 to discuss about:
 - o The vital role of an accurate view of urban landscapes in efficient metropolitan systems
 - o Effective watershed management for potential drought and flood risks
 - o Assessing Forest health to aid conservation efforts

INVESTORS/PARTNERS:

Institutional & Major Shareholders (public company)

- Alphabet Inc. (Google)
- BlackRock, Inc.
- Vanguard Group, Inc.
- Driehaus Capital Management LLC
- Canada Pension Plan Investment Board

Strategic Partners & Collaborations

- Google / Google Cloud Platform
- VITO
- NASA
- Telesat

KEY MANAGEMENT:

- Benjamin Allard
Vice President of Sales,
Planet
- Satish Raju
APAC Lead - Insurance and
Banking



COMPANY PROFILE

Samtel Avionics is a leader in aerospace avionics and defence electronics with 50+ years of excellence, a pioneer in indigenous technologies for India's self-reliant defence economy. As an MSME specialising in aerospace/ avionics and defence systems, we have delivered critical systems for Indian defence. Samtel Avionics is actively developing into UAV, Optronics and Space domains.

With capabilities spanning built-to-spec, co-development and engineering services, Samtel is a key enabler of India's aerospace and space technology ecosystem.

YEAR OF ESTABLISHMENT:

1983

NUMBER OF EMPLOYEES (APPROX.):

- ~10 Employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹115Cr as on Mar 31, 2025
- Total Funding: \$891K in 4 rounds

CORE DOMAIN:

- Avionics & Defence Electronics Systems

PRODUCTS AND SERVICES:

PRODUCTS

LEO Satellite IoT Payloads

- Multi-band payloads (UHF, L-band, S-band) for low-power IoT connectivity
- Designed for Space IoT applications with high penetration in challenging environments
- Enables global Machine-to-Machine (M2M) and MSS interoperability

Data Relay Payload Systems (S-Band)

- Space-based data relay for real-time TMTC (Telemetry, Tracking & Command)
- Enables 24/7 connectivity and reduced latency for LEO satellites
- Improves operational efficiency of satellite constellations

Optical Inter-Satellite Link (ISL) Systems

- High-speed optical communication between satellites
- Enables real-time, low-latency constellation networking
- Supports scalable LEO satellite constellations

Space Debris Management Systems

- Innovative Orbital Transfer Vehicle (OTV) & Orbit Removal Vehicles (ORVs)
- Capable of removing multiple debris objects (15-20 per mission)
- Focused on space sustainability and orbital safety

Nano-Satellite Platforms (LEO Constellation)

- Development of 52 nano-satellite constellation (500-600 km LEO)
- Designed for 5-7 years mission life
- Includes proof-of-concept satellites for validation

SERVICES

End-to-End Satellite Payload Development

- Design, development, integration and testing of advanced payload systems
- Support for LEO constellation deployment and scaling

Space IoT & Connectivity Solutions

- Enabling global IoT networks via satellite infrastructure
- Integration of payloads with ground and enterprise systems

Space Communication & Networking Solutions

- Deployment of data relay and optical communication architectures
- Solutions for space-to-ground and inter-satellite connectivity

ACHIEVEMENTS:

2024-Present

- Advanced development of LEO satellite payloads for Space IoT, enabling seamless space-to-ground connectivity and global data relay
- Initiated plans for a 52 nano-satellite constellation (500-600 km LEO) with 5-7 year mission life, including proof-of-concept satellites
- Developed optical inter-satellite link (ISL) capabilities for high-speed, real-time satellite communication

2022-2023

- Built multi-band IoT payload systems (UHF, L-band, S-band) enabling low-power, high-penetration connectivity for Space IoT applications
- Developed S-band data relay systems for real-time TMTC, improving satellite operational efficiency and reducing latency
- Strengthened capabilities in space communication payloads and subsystem integration

2020-2021

- Initiated development of space debris management and removal solutions, including Orbital Transfer Vehicle (OTV) and Orbit Removal Vehicles (ORVs)
- Designed systems capable of removing multiple debris objects (15-20 per mission), contributing to space sustainability

Pre-2020 (Foundation & Capability Building)

- Established strong foundation in avionics, mission computers and high-reliability display systems for aerospace and defence
- Developed end-to-end capabilities across design, development, manufacturing, testing and lifecycle support for mission-critical electronic systems

INVESTORS/PARTNERS:

- **True North Private Credit:** Led the 2025 funding round, injecting ₹75 crore to bolster manufacturing in defence, aerospace and railways.
- **Institutional Investors:** Includes CEA Consultants and others.

KEY MANAGEMENT:

- Mr Puneet Kaura
MD & CEO



- Rakesh Bhan
CEO Space



COMPANY PROFILE

SES is the world's leading satellite operator with over 70 satellites in two different orbits: Geostationary (GEO) and Medium Earth Orbit (MEO). In India, SES has been a primary partner for the broadcasting industry for decades, hosting two of the country's major DTH platforms. Beyond media, SES is revolutionizing rural connectivity through its O3b mPOWER constellation, which provides fiber-like speeds to isolated geographies like the Northeast and the Andaman & Nicobar Islands. By integrating with terrestrial networks and partnering with local giants like Jio, SES is a cornerstone of the "Digital India" initiative.

YEAR OF ESTABLISHMENT:

2011

NUMBER OF EMPLOYEES (APPROX.):

- 50+ (India-specific team); 2,000+ globally.

CURRENT REVENUE/FUNDING:

- Part of SES (Global revenue ~\$2.1B); India unit reports healthy growth in DTH and Enterprise segments.

CORE DOMAIN:

- Multi-orbit Satellite Solutions
- High-Throughput Connectivity (HTS)
- Global Media Distribution

PRODUCTS AND SERVICES:

- **O3b mPOWER:** Next-generation MEO system providing low-latency, high-performance broadband for mobile backhaul and government networks.
- **JioSpaceFiber:** A collaborative gigabit-fiber-from-space service aimed at connecting the most remote parts of India.
- **Media & Broadcast Services:** Delivering over 10,000 channels globally, including specialized C-band and Ku-band capacity for Indian broadcasters.
- **Cloud Direct Connect:** Enabling seamless cloud adoption for Indian enterprises by connecting directly to providers like AWS and Microsoft Azure via satellite.
- **Maritime & Aero Connectivity:** Providing high-speed internet for cruise ships and commercial airlines navigating Indian waters and airspace.

ACHIEVEMENTS:

- 2025: Successfully integrated the satellite assets and operational team of Intelsat, creating the largest multi-orbit satellite player globally.
- 2024: Launched the first commercial JioSpaceFiber sites in remote Indian villages, demonstrating 1Gbps+ speeds via MEO satellites.
- 2023: Received first-of-its-kind approval from IN-SPACe to provide MEO-based high-throughput services in the Indian market.
- Milestone: Currently serves 5 of India's major VSAT providers and supports nearly 30 million satellite TV subscribers across the country.

INVESTORS/PARTNERS:

- Strategic partnership with Jio Platforms Limited (JioSpaceFiber) and a long-standing 20-year relationship with ISRO

KEY MANAGEMENT:

- Deepak Mathur
Executive Vice President
(Global Sales)



- Gaurav Kharod
Regional Vice President
(AP)



- Sandeep Jalan
Chief Financial Officer



COMPANY PROFILE

Tata Advanced Systems Limited (TASL), a wholly-owned subsidiary of Tata Sons, is the strategic Aerospace and Defence arm of the TATA Group. TASL is both an operating & a holding company.

Tata Advanced Systems Limited is one of the country's leading private players for aerospace and defence solutions and aspires to be the 'Partner of Choice', especially for the government's 'Make in India' programme and for global Original Equipment Manufacturers (OEMs). With the requisite capabilities, resources and scale, it is equipped to deliver end-to-end innovative solutions encompassing systems, hardware, software, technology and digital solutions, all of which can be fully integrated across the key platforms necessary to secure India's land, sea and skies.

Tata Advanced Systems Limited has a strong portfolio of partnerships and joint ventures with leading global aerospace and defence firms, making it an integral partner in the international supply chain and in some instances, a global single source provider for leading defence OEMs. Tata A&D offers a full range of integrated solutions across:

- Aerostructures & Aero-Engines
- Airborne Platforms & Systems
- Defence & Security
- Land Mobility

PRODUCTS AND SERVICES:

TSAT-1A Earth Observation Satellite

Tata Advanced Systems Limited (TASL) and Satellogic Inc. successfully built and launched India's first private space sub-metric high resolution EO satellite. Tata Advanced Systems Limited (TASL) has taken a significant step into the space sector by partnering with Satellogic Inc. to establish India's first fully integrated satellite manufacturing capability. This collaboration, signed in November 2023, positions TASL at the forefront of Earth Observation (EO) satellite development in India. The partnership's first milestone is the launch of TSAT-1A, an advanced sub-meter resolution Earth Observation satellite. Assembled and tested at TASL's state-of-the-art Satellite Assembly, Integration and Testing (AIT) facility in Vemagal, Karnataka. This also involved comprehensive training, knowledge transfer and local assembly, integration and testing of optical and critical electronics packages of satellites. TSAT-1A represents a major achievement for India's private sector. The satellite was successfully deployed aboard SpaceX's Falcon 9 rocket in April 2024.



YEAR OF ESTABLISHMENT:

2007

NUMBER OF EMPLOYEES (APPROX.):

- 9000 employees (50 for Space vertical)

CURRENT REVENUE/FUNDING:

- Not publicly disclosed

CORE DOMAIN:

- Aerospace and Defence

ACHIEVEMENTS:

- Launched India's first private sub-metric resolution Earth Observation satellite (TSAT-1A) with Multispectral and Hyperspectral payloads
- India's First Private Helicopter Final Assembly Line: Successfully inaugurated India's first private-sector Airbus H125 Final Assembly Line (FAL) at Vemagal, Karnataka, marking a major milestone in Indian aerospace manufacturing and Make in India. The facility was virtually inaugurated by the Prime Minister of India and the President of France, reinforcing global aerospace collaboration.
- Airbus C295 'Make in India' Production: Continued progress on the C295 programme with in-country structural build and final assembly, producing 85% of parts locally and scheduled delivery of the first aircraft.
- Rafale Fuselage Manufacturing Pact: In partnership with Dassault Aviation, signed Production Transfer Agreements to manufacture Rafale fighter aircraft fuselage sections in Hyderabad for India and global markets, significantly strengthening India's high-precision aerospace manufacturing base.
- C-130J MRO Facility Groundbreaking: Tata Advanced Systems and Lockheed Martin broke ground on a state-of-the-art C-130J Super Hercules Defence Maintenance, Repair & Overhaul (MRO) facility in Bengaluru, further deepening aerospace sustainment capabilities in India and supporting Indian Air Force operations. First C-130J is expected for MRO operations early 2027.
- 250th C-130J Empennage Delivered: Tata Lockheed Martin Aerostructures Limited (TLMAL) achieved a major production milestone by delivering the 250th made-in-India C-130J empennage (tail assembly), enhancing India's aerospace supply chain prominence.
- Precision Aero Components for Global Supply Chains: Tata Advanced Systems expanded capabilities in precision machining and fabrication of aerospace components, enabling integration into global OEM supply ecosystems.
- UAV & Autonomous Systems Progress: Tata Advanced Systems has strengthened its indigenous UAV and autonomous aerial systems portfolio, delivering combat-tested drones with advanced payload integration and autonomous capabilities, advancing India's strategic autonomy in unmanned aviation.
- International Aerospace Partnerships: Continued strategic collaboration with Airbus, Lockheed Martin and Dassault Aviation, positioning Tata Advanced Systems as a key global aerospace partner for assembly, manufacturing and sustainment.

INVESTORS/PARTNERS:

- Tata Sons

KEY MANAGEMENT:

- Sukaran Singh
CEO & MD



- S Kumar
CEO SED



- AVM Paramjit Singh Malhi (Retd.)
Principal Advisor



COMPANY PROFILE

Vantor is a global spatial intelligence company delivering AI-powered geospatial solutions that unify satellite, aerial and ground-based data into a living digital twin of Earth. Formerly operating as Maxar Intelligence, Vantor combines high-resolution Earth observation, advanced 3D terrain modeling, artificial intelligence and cloud-native platforms to provide mission-critical intelligence for defense, government and commercial customers worldwide.

Vantor's flagship Tensorglobe™ platform anchors all spatial data to an AI-ready "living globe," automating the entire intelligence cycle—from tasking and data ingestion to production, analysis and dissemination. The platform integrates multi-domain sensors across space, air and ground, enabling a unified intelligence picture deployable in any operational environment, including classified settings. By leveraging AI, computer vision and cloud infrastructure, Tensorglobe supports real-time situational awareness, predictive intelligence and integrated autonomy.

The company's key products and services include high-resolution satellite imagery, immersive 3D global terrain for mission rehearsal and simulation, AI-driven change detection and object detection analytics, persistent monitoring solutions such as Sentry™ and GPS-denied navigation software like Raptor, which enables autonomous systems to operate without reliance on GNSS signals.

YEAR OF ESTABLISHMENT:

01 October 2025 (Rebranded to Vantor from Maxar Intelligence Inc)

NUMBER OF EMPLOYEES (APPROX.):

- 1500 employees

CURRENT REVENUE/FUNDING:

- Not publicly disclosed

CORE DOMAIN:

- Spatial Intelligence

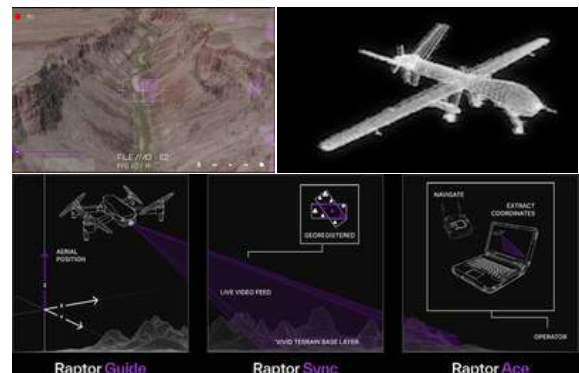
PRODUCTS AND SERVICES:

Raptor

A powerful vision-based software suite that unlocks maximum GPS resilience for autonomous systems

The Raptor™ advantage

- Extreme accuracy in GPS-denied areas, even at night
- Connect your sensors to the same spatial source of truth
- Power-efficient, easy-to-integrate software

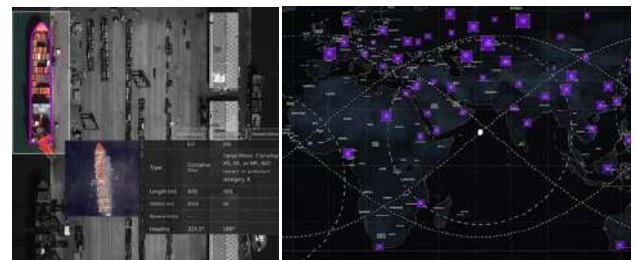


Sentry

First-of-its-kind persistent monitoring solution that delivers predictive threat intelligence at global scale

The Sentry™ advantage

- Automate your multi-domain ISR system
- Predictive intelligence tuned for your specific mission
- Accurate intelligence built on trusted data



Tensorglobe™

Spatial intelligence at global scale. Build your own spatial intelligence system, anchored to a real-world model of Earth

- A fully connected sensor ecosystem
- Spatial intelligence on autopilot
- Deployable anywhere, clarity everywhere

Tensorglobe product suite

Vantor's Tensorglobe platform includes three powerful software products that automate each part of the spatial intelligence cycle, as well as a subscription-based web portal that runs on top of the platform to give you on-demand access to Vantor's own spatial intelligence products.

- Cortex™ - Maximize every minute on orbit
- Forge™ - Put every pixel in its place
- Nexus™ - Your gateway to the living globe

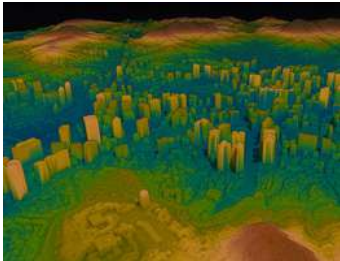
Vivid™

A digital twin of the physical world Vantor™

Vivid products serve as a uniquely accurate, global-scale spatial foundation that's kept up to date with AI-powered change detection.

Use cases:

- Understand the battlespace
- Rehearse in the operational terrain
- Put mapmaking on autopilot
- Give autonomous systems true spatial awareness
- Supercharge intelligence with AI-ready data



Vivid Mosaic - Precision for every mission

- Vivid Mosaic products include visually stunning 15 cm and 30 cm global imagery basemaps at the highest accuracy available in the industry.
 - More than 135 million sq km of 30 cm HD imagery (99%+ of Earth's landmass)
 - More than 6 million sq km of 15 cm HD imagery (covering the most populous and fast-changing areas of the globe)
 - 5 m CE90 absolute accuracy globally



Vivid Terrain - Bringing maps into the third dimension

- Vivid Terrain is deeply immersive, mission-grade terrain that represents the most accurate digital 3D representation of Earth.
 - More than 100 million sq km of 50 cm high-resolution 3D data available off the shelf, with more being produced every week
 - Proprietary AI-powered 3D reconstruction engine
 - 3 m SE90 globally without control points



Vivid Features - Powering dynamic vector maps of every place on Earth

- Vivid Features is the most accurate 2D and 3D vector product offered at global scale.
 - 3 m CE90 absolute accuracy
 - 2 m CE90 co-registration accuracy
 - 95% geometric accuracy standard

WorldView tasking suite

Unified tasking access to the highest-quality satellite imagery With near real-time access to the most accurate, highest-resolution imagery including more revisits of the same location at 30 cm than from any other provider, you can easily collect detailed views of Earth and orbital space at low latency and with industry-leading reliability. Powered by AI, Worldview products automate much of the tasking and collection workflow, creating one unified system across the Vantor™ virtual constellation.

Tasking capabilities to support any mission

- National security
- Digital mapping
- Commercial asset monitoring
- Disaster recovery
- Space domain awareness



ACHIEVEMENTS:

Major Contracts & Government Wins

- \$217M U.S. Army OWT Contract (Feb 2026): Awarded follow-on production contract to deliver immersive global 3D terrain for training and mission rehearsal.
- NGA Luno B Contract (2026): Secured AI-powered global change detection contract with the National Geospatial-Intelligence Agency.
- U.S. Space Force SDA Contract (2025): Awarded contract for continuous tracking of high-interest space objects using non-Earth imaging (NEI).
- \$205M Strategic Contracts (2025): Advanced sovereign intelligence capabilities across Middle East & Africa.
- \$14M+ Netherlands MoD Contract (Jan 2025): Multi-year access to Vantor Hub intelligence platform.
- NGA \$290M Luno A IDIQ Contract (2024): Selected for five-year global intelligence program.

Satellite & Space Milestones

- WorldView Legion Completion (2024-Feb 2025):
 - Six-satellite constellation fully deployed.
 - Up to 6 million sq km daily coverage.
 - 30 cm-class high-resolution imagery capability.
- Implemented Virtual Constellation Strategy, integrating own satellites with partners (e.g., Umbra, Satellogic) to enhance revisit rates.

AI & Platform Innovations

- TensorGlobe (Oct 2025): AI-powered spatial intelligence platform creating a "living 3D globe" integrating space, air and ground data.
- Sentry™ Monitoring Suite (2025): Persistent predictive intelligence platform at global scale.
- Raptor Software (2025): GPS-denied navigation solution enabling autonomous drone operations using 3D terrain data.
- Google Earth AI Integration (2026): Integrated AI imagery models into TensorGlobe.
- Demonstrated sub-4m accurate 3D mapping of strategic sites within 10 hours from a single satellite pass.
- Advanced AI-powered change detection and object detection services for global monitoring.

Strategic Partnerships

- Partnered with AIDC (Taiwan) to strengthen UAV resilience against GPS interference.
- Collaborated with Anduril on mixed-reality combat systems.
- Strategic partnership with Saab for multi-domain C5ISR solutions.
- Expanded collaborations with Lockheed Martin, HERE, TomTom, Ecopia AI, Satellogic, Array Labs and others.
- Strengthened sovereign intelligence platforms for South Asian and global governments.

Cloud & Digital Transformation

- Migrated massive geospatial data infrastructure to AWS cloud environment.
- Enhanced AI-ready spatial intelligence architecture for scalable analytics.

Awards & Recognition

- Built In Best Places to Work (2025 & 2026):
 - Best Places to Work - Colorado
 - Best Large Places to Work - Colorado
 - Best Places to Work - Washington D.C.
- Fast Company (2025): Ranked #34 Best Workplaces for Innovators.
- Recognized by Tampa Bay Business Journal (2024) and Arlington Magazine (2022) as Best Workplace.

INVESTORS/PARTNERS:

- Antrix Corporation Limited
- Japan Space Imaging Corporation (JSI)
- South African National Space Agency (SANSA)
- European Space Imaging
- Space Imaging Middle East
- Space Imaging Brasil
- Turksat
- KT SAT

KEY MANAGEMENT:

- Rakesh Verma
Sr Manager (D&I)



- Pritish Bisoyi
Sr Manager (Channels)



- Vinod Menon
Cust Sp Engr



COMPANY PROFILE

Virat Exim, part of the Virat Group of Companies, is a leading supplier and stockist of niche metals, with roots dating back to 1973 and formal establishment in 1999. The company specializes in aerospace-grade and specialty alloys, including aluminium, titanium, nickel, stainless steel and copper alloys, serving industries such as aerospace, defence, railways and manufacturing.

With a strong global sourcing network and an inventory exceeding 2000 MT, Virat ensures high-quality, fully traceable materials compliant with international standards such as AMS, ASTM and MIL-SPEC. Supported by an AS9120-certified quality system and value-added processing capabilities, the company delivers reliable, precision-driven solutions for mission-critical applications.

YEAR OF ESTABLISHMENT:

1999

NUMBER OF EMPLOYEES (APPROX.):

- 50+ employees

CURRENT REVENUE/FUNDING:

- Group Annual Turnover: 150 Cr +
- Funding: No External Funding

CORE DOMAIN:

- Representation of globally certified mills for aerospace-grade specialty metals, enabling compliant sourcing within India
- Integrated stocking and distribution of end-to-end specialty metal solutions for mission-critical aerospace applications
- Pan-India supply network supporting OEMs, Tier-1 and Tier-2 aerospace and defence manufacturers

PRODUCTS AND SERVICES:

Metals & Specialty Alloys

Virat Exim supplies a wide range of high-performance, aerospace-grade materials, including:

- Aluminium Alloys (2xxx, 5xxx, 6xxx, 7xxx series)
- Titanium Alloys (Ti-6Al-4V, Ti-6Al-4V ELI)
- Nickel-Based Alloys (Inconel, Monel)
- Stainless Steel (15-5pH, 17-4pH, 13-8 Mo)
- Copper Alloys & Aluminium Bronze
- Other Specialty Metals

Type	Grades / Alloys	Size ranges
Wires, rods and bars	Al. alloy - 2011, 2014, 2017, 2024, 2124, 2219, 2618, 5052, 5083, 5086, 5754, 6005, 6060, 6061, 6082, 6262, 7050, 7075, 7475	Rounds - 3 to 700mm Hex - 6.35 to 50.8mm Squares - 5 to 508mm Flats - 3.2 to 127mm
	Ti - 6Al-4V, Ti - 6Al-4V - ELI	Rods - 10 to 200mm
Sheets and Plates	Al. alloy - 2014, 2017, 2024, 2124, 2219, 2618, 5052, 5083, 5086, 5754, 6061, 6082, 7050, 7075, 7475	Thickness - 0.4 to 500mm
	Ti - 6Al - 4V	Thickness - 1 to 100mm
Profiles and Tubes	Al. alloy - 2011, 2014, 2017, 2024, 2124, 2219, 2618, 5052, 5083, 5086, 5754, 6005, 6060, 6061, 6082, 6262, 7050, 7075, 7475	Outside Dia: 3.2 - 406 mm Wall Thickness: 0.5 - 50.8 mm
Specialty Metals	Al. Bronze (C63000, C63200, C95400), Be-Cu (C17200), Cu Alloy (C11000), Stainless Steel (15-5pH, 17-4pH), Mg Alloys (AZ31B, AZ80, ZK60A), Monel 400, Inconel (625, 718, 825)	Various sizes

SERVICES

Global Sourcing & Supply Chain

- Procurement from certified global mills across Europe, USA and Asia
- Inventory management with ready stock availability (2000+ MT)
- Compliance with international standards (AMS, ASTM, MIL-SPEC, EN)

Processing & Value-Added Services

- Precision sawing and cutting
- Water jet and laser cutting
- Customized packaging solutions
- Material inspection and laboratory testing

Technical & Application Support

- Assistance in material selection and specification compliance
- Guidance on mechanical properties and application suitability
- End-to-end support for aerospace and industrial requirements

ACHIEVEMENTS:

2020-Present

Certification, Scale & Global Alignment

- Achieved AS9120 certification (2020), strengthening quality systems aligned with aerospace and defence supply chain requirements
- Expanded approved vendor base to include leading global OEM ecosystems such as:
 - Collins Aerospace
 - Honeywell
 - BAE Systems
- Broadened material portfolio to include titanium alloys, beryllium copper, aluminium bronze and specialized steels
- Strengthened supply chain capabilities with increased inventory depth and enhanced processing support for precision applications
- Continued participation in advanced defence programs, including L&T TEER Aerial Target (2026)
- Expanded engagement with emerging private space companies, including Dhruva Space, Skyroot Aerospace and Nibe Space.
- Providing sustained material supply support to Skyroot Aerospace over the past three years, contributing to the development and realization of indigenous launch vehicle programs.
- Supported Alpha Design Technologies in collaboration with Elbit Systems for Mi 70 upgradation project for the Indian Air Force.

2010-2019

Integration into Aerospace & Space Ecosystem

- Supporting ISRO programs since 2010 across key centres:
 - Liquid Propulsion Systems Centre (LPSC) - LVM3
 - Vikram Sarabhai Space Centre (VSSC) - PSLV
 - Space Applications Centre (SAC) - GSLV
- Associated with Hindustan Aeronautics Limited (HAL) since 2012, supplying materials for multiple fixed-wing and defence aviation platforms in compliance with global aerospace standards
- Approved and established a supply chain network in all approximately ALL PSUs in India
- Established a supply chain relationship for all pan India L&T units, contributing to major Aerospace and Defence programs.
- Contribution across major defence and aerospace programs:
 - BDL: Aakash Missile System, Astra Weapon System, Nag ATGM, Konkurs ATGM
 - BEL: Radar and electronic warfare systems
 - BHEL: Super Rapid Gun Mount (SRGM) - Indian Navy (76/62)
 - RCI (DRDO): Long-Range Guided Bomb (LRGB)
 - MDL: Fast Patrol Vessels
 - HAL Engine Division: Shakti Engine (Ardiden 1H1)

- Established relationships and approvals with global aerospace and defence organizations, including:
 - Rafael advanced defense systems (2015)
 - Elbit Systems (2019)
 - Israel Aerospace Industries (IAI) (2019)

2000s - Early Defence Engagements

- Initiated engagement with Bharat Dynamics Limited (BDL) in 2004.
- Expanded presence with Bharat Electronics Limited (BEL) in 2008, supporting radar and electronic system programs.
- Established foundational capabilities in supplying aerospace-grade and defence-compliant materials.
- Started engagement with L&T through their Talegaon unit in 2005.

INVESTORS/PARTNERS:

- Capital Investment in Virat Exim by Proprietor, Jitendrakumar Sanghvi - 24.75 Cr INR Company wholly invested by and operated within family without external financing and stakeholders

KEY MANAGEMENT:

- Neel Sanghvi
Head - Aerospace and Defence



COMPANY PROFILE

Agnikul Cosmos Private Limited is an Indian private aerospace company focused on designing, manufacturing, testing and launching orbital-class small launch vehicles, especially for micro- and nano-satellites. The company is building capabilities similar to global small-satellite launch providers but from India. Provider of customized orbital launch vehicles and private space missions. They offer dedicated launches tailored to payload size, ensuring cost-effectiveness. The company utilizes single-piece 3D-printed semi cryogenic engines and a mobile launchpad for deployment from optimal geographic locations. Clusterable configurations allow for customized rocket designs to fit specific mission requirements. An in-house autopilot and avionics architecture ensure adaptability and seamless software-hardware integration. Propulsion components are designed to meet exact mission needs.

YEAR OF ESTABLISHMENT:

2017

NUMBER OF EMPLOYEES (APPROX.):

- 288 employees as on Aug 31, 2025

CURRENT REVENUE/FUNDING:

- Revenue: ₹7.8Cr as on Mar 31, 2025

CORE DOMAIN:

- Launch Vehicle Development
- Additive Manufacturing (3D Printing)
- Launch Infrastructure Development



PRODUCTS AND SERVICES:

Launch Vehicles

Agnibaan Orbital Launch Vehicle

Agnibaan is a fully indigenous orbital-class launch vehicle designed to deliver small satellites to Low Earth Orbit (LEO) with customizable mission configurations.

Key Characteristics

- Payload capacity: up to ~100 kg to 700 km LEO
- Height: ~18 m
- Diameter: ~1.3 m
- Lift-off mass: ~14,000 kg
- Configurable rocket architecture
- Supports multiple launch ports globally

Technical Features

- Powered by clustered Agnite engines
- Electric pump-fed propulsion architecture
- Fully 3D-printed combustion chamber assemblies
- Optional Baby Stage for mission flexibility
- Payload envelope: 2 m × 1.5 m
- Designed for dedicated and rideshare satellite launches

Stages

- Stage 1: Cluster of 7 Agnite engines (~25 kN thrust each)
- Stage 2: Vacuum-optimized Agnite engine with ~355 s Isp
- Optional Baby Stage: Payload delivery stage for small satellites.

Agnibaan SORTeD (Sub-Orbital Demonstrator)

Agnibaan SORTeD is a sub-orbital launch vehicle used for technology validation and near-space missions.

Capabilities

- Payload capacity: ~30 kg
- Altitude: ~100 km (Kármán Line)
- Single-stage rocket powered by Agnilet engine
- Vertical launch profile with autonomous guidance
- Used for:
 - Technology demonstrations
 - Near-space experimentation
 - Propulsion and avionics testing

Mission Milestone

- SORTeD Mission-01 launched from Agnikul Launchpad-01, Sriharikota, marking India's first launch from a private launchpad.



Propulsion Systems

Agnilet Rocket Engine

Agnilet

- World's first single-piece fully 3D-printed semi-cryogenic rocket engine
- Manufactured entirely in-house
- Sea-level thrust: ~3-6 kN
- Uses Liquid Oxygen (LOX) and Aviation Turbine Fuel (ATF)
- Combines thousands of parts into a single printed structure
- Enables rapid manufacturing and reduced engine complexity.



Agnite Rocket Engine

- Electric pump-fed rocket engine used in Agnibaan first and second stages
- Sea-level thrust: ~25 kN
- Vacuum ISP: ~355 seconds
- Designed for engine clustering architectures
- Fully 3D printed combustion chamber

Engineering Products & Space Hardware

1. Pressure Vessels

- Composite-overwrapped pressure vessels (COPVs)
- Store propellants and pressurants at high pressures
- Designed with advanced materials and fibre wrapping technology.

2. 3D Printed Rocket Components

- Extensive use of additive manufacturing for:
 - Rocket engines
 - Pumps
 - Motor casings
 - Structural components
 - Package housings

Manufactured at Agnikul Rocket Factory-1, capable of producing:

- 2 rocket engines per week
- 1 launch vehicle per month.

3. Avionics Systems

- In-house developed onboard computers and flight avionics
- Supports:
 - Guidance, navigation and control
 - Autopilot systems
 - Engine gimbaling and thrust vector control
 - Flight telemetry and mission management.

Launch Infrastructure

1. Dhanush Mobile Launch Pedestal

Dhanush

A transportable launch pedestal designed for rapid deployment and multi-location launch capability.

Features

- Supports all Agnibaan configurations
- Road-transportable launch infrastructure
- Enables launches from multiple global spaceports

2. Private Launchpad Infrastructure

Agnikul Launchpad-01

- India's first private launchpad
- Located at Satish Dhawan Space Centre
- Supports small satellite launches and technology missions.

INVESTORS:

- Mayfield India
- PI Ventures
- Speciale Invest
- Beenext
- Arth Venture Fund
- Let's Venture
- CIIE
- Globevestor
- LionRock (Srihari Kumar)

PARTNERS:

- ISRO
- IIT Madras
- CIIE, IIM-Ahmedabad
- Murugappa Polytechnic
- Airbus Bizlab
- Kerala Startup Mission

KEY MANAGEMENT:

- Srinath Ravichandran
Co-founder & CEO



- Moin SPM
Co-founder & COO



ACHIEVEMENTS:

- September 2025: Commissioned India's first large-format additive manufacturing facility for aerospace and rocket systems, integrating design, simulation, 3D printing, post-processing and testing to accelerate rocket hardware production and reduce development timelines.
- September 2025: Announced plans for a next-generation reusable launch vehicle, comparable to Falcon-9 class systems, at the International Astronautical Congress 2025, alongside securing multiple propulsion and aerospace technology patents across the United States, Europe and India.
- August 2025: Unveiled the world's largest single-piece 3D-printed Inconel rocket engine, representing a major milestone in additive manufacturing and propulsion engineering, with the design patented internationally.
- May 2025: Successfully launched Agnibaan SOrTeD, powered by the Agnilet, marking the world's first rocket flight using a fully single-piece 3D-printed engine built entirely in-house.
- June 2024: Achieved India's first launch of a rocket powered by an indigenously designed semi-cryogenic 3D-printed engine from a private launchpad, demonstrating end-to-end private launch capability in the country.
- May 2024: Conducted the maiden flight of Agnibaan SOrTeD from Agnikul Launchpad-01, establishing a major milestone for India's private launch vehicle ecosystem.
- November 2023: Raised \$26.7 million in Series-B funding from investors including Celesta Capital, Rocketship.vc, Artha Venture Fund, Artha Select Fund and Mayfield India to accelerate launch vehicle development and commercialization.
- November 2022: Built India's first private launchpad and mission control centre at Satish Dhawan Space Centre, enabling dedicated small satellite launch operations.
- October 2022: Successfully test-fired the patented Agnilet engine at ISRO Vikram Sarabhai Space Centre, validating the performance of its single-piece 3D-printed semi-cryogenic propulsion technology.
- July 2022: Established India's first private rocket engine manufacturing facility in Chennai, capable of producing multiple engines per week using advanced additive manufacturing.
- Industry Recognition: Agnikul has been showcased at national space and satellite events such as India SatCom 2022 and Startup Champions 2.0, highlighting its role in advancing India's private launch vehicle ecosystem.

COMPANY PROFILE

Aidin Technologies Pvt. Ltd. is an AS9100 Rev D certified Defence, Aerospace and Space systems engineering company specializing in RF & Microwave systems, Electronic Warfare solutions, Custom Power Systems and Spacecraft Assembly, Integration & Testing (AIT). Headquartered in Bengaluru, India, Aidin operates ISRO-certified Class 10,000 cleanroom facilities and delivers mission-critical hardware and subsystems for strategic applications.

YEAR OF ESTABLISHMENT:

2008

NUMBER OF EMPLOYEES (APPROX.):

80+ Highly Skilled Engineers & Technicians

CURRENT REVENUE/FUNDING:

- ₹74 crore during the Financial Year (FY) 2024-25

CORE DOMAIN:

- RF & Microwave Subsystems Development
- Electronic Warfare & Counter-UAS Systems
- Spacecraft Assembly, Integration & Testing (AIT)
- Custom Power Systems for Strategic Platforms

PRODUCTS AND SERVICES:

1.Space

- Fabrication assembly and testing: Aidin holds a State of the Art Class 10000 clean room that is equipped with production equipment including conformal coating.
- Assembly integration and testing of spacecraft
- End to end services
- Mechanical design services
- Space Systems (Bio Vest Electronics & Avionics Interface Unit, Magnetic Torquer Rod, Four Pi Sun Sensor, GNSS Rx, telecommand decoder, ATE etc



2.Aerospace & defence

- Counter unmanned aerial system (c-uas)
- Electronic warfare range test systemsRf and microwave
- Mixed signal and embedded design
- Cable assembly and harnessing
- Offset management
- Obsolesce mitigation



3. Commercial products & services

- RF & Microwave (GaN SSPA, SDR based transceivers)
- Electronic Warfare (Anti-drone systems, jammers, portable EW test systems)
- Avionic Systems (UHF/VHF transceivers, TX RX control units)
- Power Supply for Naval Radar systems (PDU, PSIF, RPPS, GaN SSPA)



SERVICES:

- Space Hardware Services: Wiring, fabrication & testing of Space flight packages
- Reflow services for PCB fabrication
- Solar cell Simulation Services testing of solar cells,
- Thermal Cycling testing activities
- Li-ion cell testing
- PCB design services
- Reliability analysis like FMECA, Thermal & Structural

ACHIEVEMENTS:

- Aidin operates under a robust Quality Management System compliant with AS9100 Rev D standards and follows ISRO workmanship standards (PAX-300).
 - AS9100 Rev D Certified
 - ISRO Certified Facility
 - VSSC Certification for SMT & RF Cable Assembly
 - RQEG Audited Cleanroom Facility
 - Strict Documentation & Traceability Protocols
- Their new facility Class 10000 Clean room is audited and approved by RQEG to work on Space Electronics.
- Certified by VSSC to perform RF cable assembly and SMT Reflow soldering to fabricate SMT components. This is done in at partner facility CEM solutions
- Supports Assembly, Integration & Testing (AIT) activities for space missions, including:
 - Flight package fabrication
 - RF cable assemblies
 - Avionics interface systems
 - Environmental qualification coordination (Thermovac, Vibration, EMI/EMC)

- Demonstrated readiness to manufacture and integrate space electronics under certified environmental controls, positioning the company as a reliable Tier-2/Subsystem partner in the Indian space ecosystem.
- Developed and delivered RF & Microwave subsystems including:
 - GaN-based Solid State Power Amplifiers (SSPA)
 - Transceivers and Up/Down converters
 - Radar power systems

INVESTORS/PARTNERS:

- Global Defence OEM Partnerships
- Primary Sourcing Partner for Major US Defence Contractor
- Collaboration with Certified Mechanical & PCB Manufacturing Partners
- Industry Associations & Aerospace Consortium Participation

KEY MANAGEMENT:

- Harish H. Viswamurthy
Founder & Chairman



- Vinay Chandran
Co-founder & Executive Director



COMPANY PROFILE

Altz Technologies is an India-based space and geospatial technology company founded in 2020 and headquartered in Gurugram, Haryana, India. The company focuses on developing downstream space applications and geospatial intelligence platforms, using satellite data, location analytics and artificial intelligence to generate actionable insights. Its solutions integrate Earth observation data, geospatial deep learning and digital twin technologies to analyze assets, infrastructure, environmental conditions and behavioral data at scale. Through these capabilities, Altz Technologies supports sectors such as defence and intelligence, climate and environmental monitoring, urban planning, utilities and infrastructure management, enabling organizations to make data-driven decisions using spatial analytics and location intelligence.

YEAR OF ESTABLISHMENT:

2020

NUMBER OF EMPLOYEES (APPROX.):

- 10-50 employees

CURRENT REVENUE/FUNDING:

- Revenue: ₹85L (\$101K) as on Mar 31, 2025

CORE DOMAIN:

- Geospatial Intelligence and Location Analytics

PRODUCTS AND SERVICES:

GeoSpace+

Cloud Native Application for Big Geospatial Data Management and Intuitive Visualization on 3D Platform by leveraging AI/ML technologies for actionable analytics.

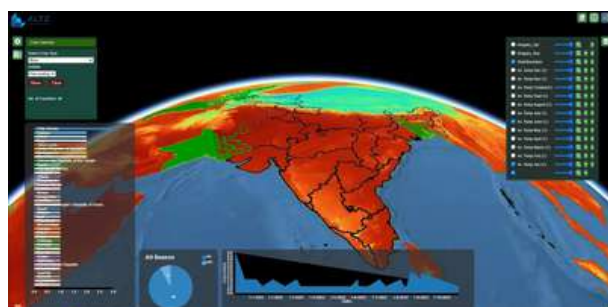
- Simplify Data Complexities - Effective translation and visualization of spatio-temporal and behavioral data for compelling insights and informed decision making
- Consolidate Business Requirements - Portability and use of information for bringing in tactical and operational efficiency across a distributed workforce.
- Develop Application Ecosystem - Framework to develop customer-specific needs integrating Imagery, Sensors, Spatio-temporal data, location & behavioral data and workflows for making sense of "where"



Insights+

The Platform is designed for collaboration across dispersed data sources and formats such as sensors, location data, documents, reports, excel, scanned information, combining location analytics with AI, ML and NLP, to deliver Insights.

- Consolidate Information - Allows you to visualize real-time or archived data seamlessly over a time-series which is then integrated to AI tool to identify occurrences and patterns
- Gain Data Insights - Dashboards, Trend Analysis, Time Series, Fly through, etc., on 3D platform designed for Geospatial Intelligence which can Interpret, Structure, Process and Pinpoint Satellite Imagery, Drone Data etc.
- Act Decisively - Combining geospatial and business data with AI on a single 3D platform to transform unstructured data into structured information to extract meaningful insights and make data-driven decisions.



3D Analyst+

An application to view the Digital Elevation Model (DEM) data on a 3D viewer to provide visualization of contour lines from raster data. Allow users multidimensional analyses of geospatial information. This will enable users to derive insightful outputs from complex spatial datasets that are contextual and easy to understand.

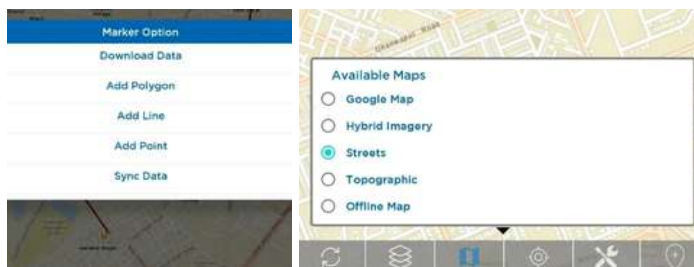
- **Understand Your Terrain** - Provides visible indicators and abnormalities for an increased efficiency of work by blending shaded relief with topographic map for better visualization
- **Analyze Your Visibility** - Allows you to generate on-the-fly hill shading effect. Based on the elevation, aspect and slope
- **Create Fly-through** - Create detailed flythrough of geographical areas, including Terrain, Vegetation, Settlements and other features.



FieldApp+

A mobile app developed for field workforce to perform computation and visualization of field surveys, Update, O&M, etc working on both online and offline mode. This platform agnostic App integrates with any industry standard GIS Server and has a user-friendly interface that is intuitive and adaptive for surveyors to use.

- **Efficient Data Collection** - App allows surveyors to input and access data in real-time, which can greatly improve the efficiency of their work
- **Better Accuracy** - App includes features such as GPS tracking and data entry validation, which can help to improve the accuracy of survey data
- **Authoritative Information** - Update information, upload image, create red-line, comment while on the move both in online and offline mode. Auto-Sync information. Validate data while surveying



ACHIEVEMENTS:

- **2021: Product Launch & Defense Focus**
 - **GeoSpace+ Launch:** Introduced **GeoSpace+**, a 3D geospatial data management platform designed for high-resolution visualization and analytics.
 - **Strategic Alignment:** Focused on defense applications including border management, surveillance and IMINT (Image Intelligence).
- **2022: Expansion into Open Data & Biodiversity**
 - **IBIS Project:** Launched the **Indian Biodiversity Information System (IBIS)**, a free, open-reserve platform providing location-based biodiversity data across the Indian subcontinent.
- **2023: Global Partnership & Advanced Analytics**
 - **Strategic Partnership:** Became the India partner for xyzt.ai, a visual analytics platform that enhances real-time tracking and dynamic decision-making capabilities.
 - **Enterprise Insights:** Developed **altz.enterprise.insights**, enabling the fusion of satellite imagery with drone data and IoT sensors for cross-sector intelligence.
- **2024-2025: Scaling & Financial Growth**
 - **Revenue Milestone:** Achieved an annual revenue of **₹85 Lakhs** for FY25 with a 25% CAGR, reflecting increased adoption of its space-tech solutions in the public and private sectors.
 - **Sustainable Development:** Aligned core services with UN Sustainable Development Goals (SDGs), particularly in climate action (SDG 13) and sustainable cities (SDG 11) using satellite-based monitoring.

INVESTORS/PARTNERS:

- IDEX (Innovations for Defence Excellence)
- Indian Navy / Defence Innovation Organisation (DIO)
- Academic partners - Institutions such as IIT Bombay and RV University

KEY MANAGEMENT:

- Atanu Sinha
CEO



- Anup Sharma
Strategic Communications
Consultant





COMPANY PROFILE

Ānvīkshikī Sarvajnā (OPC) Private Limited is a research-driven advisory firm established on 15 October 2021, focused on delivering holistic enterprise risk solutions across business cycles and geographies. The organization adopts a multi-disciplinary approach, combining modern risk analytics with insights derived from traditional sciences such as Ayurveda, Sowa Rigpa, Ganita, Hora and Arthashastra.

The company specializes in Enterprise Risk Management, with key focus areas including financial risk, cyber risk and sustainability-driven business resilience. It provides advisory services aimed at predicting risks, protecting value and ensuring long-term business continuity, supported by tools such as scenario analysis, stress testing and actuarial-based insurance structuring.

Ānvīkshikī Sarvajnā also delivers cyber risk consulting, integrating technological, human and ecosystem factors to design robust and adaptive security frameworks. As part of its solutions, the firm develops bespoke insurance programs tailored to emerging and complex risks.

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- 2-10 employees

CURRENT REVENUE/FUNDING:

- Revenue: ₹24L (\$32.1K)
- Funding: No publicly reported funding

CORE DOMAIN:

- Enterprise Risk Advisory and Research

PRODUCTS AND SERVICES:

1. Enterprise Risk Advisory Services

- Risk Prediction & Scenario Analysis - Identification of worst-case scenarios, interdependencies and systemic risks across business cycles and geographies.
- Risk Mitigation & Value Protection - Advisory on restructuring, governance improvements, fraud prevention and operational safeguards.
- Business Sustainability Consulting - Ensuring long-term resilience by protecting people, assets, reputation and operations.

2. Financial Risk Solutions

- Portfolio allocation analysis using Pareto principles
- Stress testing and scenario modelling
- Credit risk assessment and revenue leakage analysis
- Risk quantification and pricing for better financial decision-making

3. Cyber Risk & Security Advisory

- Holistic, vendor-neutral cybersecurity frameworks
- Integration of technology, human behavior and supply chain risks
- Cyber risk assessment, architecture design and resilience planning
- Development of cyber risk mitigation strategies and controls

4. Risk-Based Insurance Solutions

- Bespoke insurance program design based on predictive risk analysis
- Use of actuarial science for pricing and structuring policies
- Coverage for emerging and complex enterprise risks
- Focus on prevention while enabling value creation and sustainability

5. Research & Advisory Services

- Multi-disciplinary research combining modern risk analytics and traditional sciences
- Advisory for organizations, investors, boards and policymakers
- Support for strategic decision-making and crisis preparedness

6. Knowledge & Traditional Sciences Integration

- Research and learning initiatives based on:
 - Ayurveda (arboreal, dietetics, culinary)
 - Sowa Rigpa
 - Ganita (mathematics)
 - Hora (predictive sciences)
 - Arthashastra (economics and governance)
- Promoting holistic, sustainable thinking in business and society



7. Pro Bono & Social Impact Services

- Advisory support in:
 - Nature conservation
 - Sustainable agriculture
 - Healthcare and education
 - Community-driven research initiatives

ACHIEVEMENTS:

2026

- Strengthened its positioning as a multi-disciplinary enterprise risk advisory firm, integrating financial, cyber and sustainability risks into a unified framework.
- Continued expansion of advisory engagement across India, Bhutan and Qatar, supporting cross-border risk analysis and governance.

2025

- Established a differentiated approach by integrating traditional sciences (Arthashastra, Ayurveda, etc.) with modern enterprise risk management practices.
- Expanded advisory services to institutional stakeholders, including family offices, investors and board-level leadership (CxOs and audit/risk committees).

2024

- Strengthened offerings in enterprise risk prediction, scenario modelling and value protection strategies.
- Built a network of experienced professionals and researchers, supporting multidisciplinary advisory and research initiatives.

2023

- Expanded into financial risk modelling, stress testing and portfolio risk analysis.
- Initiated development of customized, risk-driven insurance solutions.

2022

- Consolidated capabilities in enterprise risk, financial risk and cyber risk advisory.

2021

- Incorporated on 15 October 2021 as a research-driven advisory entity.
- Defined its core vision of combining traditional knowledge systems with modern enterprise risk frameworks.
- Initiated operations in enterprise risk advisory and research domains.

INVESTORS/PARTNERS:

- No publicly listed external investors

KEY MANAGEMENT:

- Smt Thulasi Jonnalagadda
Director
- Gopalakrishna Jonnalagadda
Aerospace & Defence - Advisory Consultant



COMPANY PROFILE

Astrobase is an emerging Indian space technology company focused on developing advanced, reusable launch systems to support the growing global demand for satellite deployment and space access. The company is working on a medium-lift orbital launch vehicle designed to deliver cost-effective, reliable and responsive launch services for commercial and government missions. By addressing key industry challenges such as high launch costs, limited availability and long wait times, Astrobase aims to enable faster deployment of satellite constellations and space infrastructure. With a strong emphasis on next-generation propulsion technologies and vertical integration, Astrobase is building in-house capabilities across design, manufacturing and testing of critical rocket systems. Backed by dedicated infrastructure and a scalable approach, the company seeks to position itself as a competitive launch provider from India, contributing to the country's expanding role in the global space economy and future space exploration initiatives.

YEAR OF ESTABLISHMENT:

2024

NUMBER OF EMPLOYEES (APPROX.):

- 48 employees (as of April 2026)

CURRENT REVENUE/FUNDING:

- \$10 Million (as of May 2025)

CORE DOMAIN:

- Launch Vehicles
- Propulsion Systems

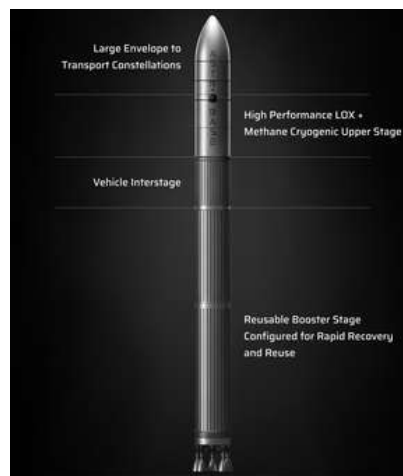
PRODUCTS AND SERVICES:

Reusable Medium-Lift Launch Vehicle

A two-stage orbital launch vehicle powered by LOX-Methane propulsion and Full-Flow Staged Combustion (FFSC) engines. Designed for rapid reusability and return-to-launch-site recovery, the vehicle can deliver payloads of up to 700kg to 4200kg to Low Earth Orbit (500 km).

Key Specifications

- Architecture - Two-stage Launch Vehicle
- Propellant - LOX + Methane
- Engine Cycle - Full-Flow Staged Combustion (FFSC)
- Payload to LEO (500 KM) - 700kg to 4200kg
- Recovery - Return to Launch Site
- Thrust (Vacuum) - 800 kN/engine
- Fairing Diameter - 4 meters



High-Thrust FFSC Rocket Engine

An advanced 800 kN-class liquid rocket engine utilizing a Full-Flow Staged Combustion cycle for high performance and efficiency. Built with 3D-printed core components, the engine is designed for multiple reuse cycles, deep throttling capability and high reliability, making it suitable for both orbital launch and future scalable configurations.

Engine Performance

Propellant - LOX + Methane

Cycle - Full-Flow Staged Combustion

Reusability - Designed for multiple cycles

Thrust (Vacuum) - 800 kN

Throttle Capable - Yes

Manufacturing - 3D-printed core components



ACHIEVEMENTS:

2026

- Advanced development of methane-based Full-Flow Staged Combustion (FFSC) engine
- Progress toward full-scale engine testing and validation
- Expansion of in-house manufacturing and propulsion testing infrastructure

2025

- Raised ~\$10 million in seed funding, enabling acceleration of launch vehicle and propulsion development
- Achieved key milestones in subscale engine testing and turbopump validation
- Received approval for India's first private high-thrust cryogenic rocket engine test facility

2024

- Founded with a vision to develop reusable medium-lift launch vehicles
- Initiated design of FFSC-based propulsion systems and reusable launch architecture

2023 (Pre-Founding Stage)

- Core team built expertise across propulsion, launch vehicle design and space systems
- Established technical foundation for future launch vehicle and engine development

INVESTORS/PARTNERS:

Lead Investor: Banyan Capital Advisors (also referred to as BanyanCo)

Institutional & Government Collaboration

- **IN-SPACE:** The company operates under the regulatory framework of the Indian National Space Promotion and Authorization Centre (IN-SPACe), which facilitates private participation in space.

KEY MANAGEMENT:

- Neeraj Khandelwal
Co-Founder



- Devakumar Thammisetty
Co-Founder



- Capt Puneet Balasubramaniam
Head of Business and Strategy



COMPANY PROFILE

Astrogate Labs is an Indian space-tech startup developing high-speed optical communication systems for satellites. The company focuses on providing advanced laser communication systems across terrestrial, air & space environments. Built on our proprietary optical communication technology stack, our laser-comm terminals deliver over 100x bandwidth than conventional radio frequency systems, thus enabling high-speed, secure data transmission for terrestrial mobile, space-to-ground & space-to-space use-cases that powers the next generation of all-time connected network for space and strategic communication.

YEAR OF ESTABLISHMENT:

2017

NUMBER OF EMPLOYEES (APPROX.):

- 17 employees as of August 31, 2025

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹77.5L (\$93.6K) as on Mar 31, 2024

CORE DOMAIN:

- Laser communication systems

PRODUCTS AND SERVICES:

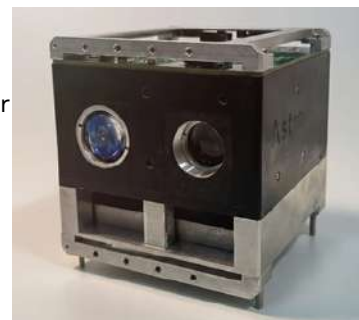
Advanced Optical Communication Solutions

Low SWaP (Size, Weight & Power) terminals powering connectivity across terrestrial, air & space applications.

AstroLink - Nano

Compact lasercomm downlink terminal designed for cubesat platforms in low earth orbits. The terminal has integrated fine tracking system to maintain links with optical ground stations and provide downlink speeds upto 2.5 Gbps.

- Downlink speed up to 2.5 Gbps
- Integrated coarse and fine tracking system for optical ground station links
- Operates at 1550 nm transmission wavelength
- Compact size (<1U), weight <1.3 kg



AstroLink - Micro

Industry's smallest lasercomm downlink terminal designed for Microsat platforms in low earth orbits. The terminal has integrated coarse & fine tracking stages to maintain links with optical ground stations without host assisted pointing. Ideal for Earth Observation constellations looking at secure and high-speed communication links at the lowest cost per bit.

- Data transmission speeds up to 10 Gbps
- Integrated coarse and fine pointing, acquisition and tracking (PAT) system
- Enables secure and cost-efficient communication for Earth observation satellite constellations
- Designed for high-bandwidth satellite data downlink



Terrestrial Mobile Terminals

Laser communication terminals designed for mobile terrestrial platforms, including maritime applications.

- Bidirectional data transfer up to 10 Gbps
- Enables ship-to-ship and ship-to-shore high-speed communication
- Integrated stabilization and tracking systems
- Compatible with existing Ethernet-based networks



Optical Intersatellite Terminals (Under Development)

Optical communication systems designed for satellite-to-satellite links in orbit.

- Expected data rates 10-100 Gbps
- Link range up to 5000 km
- Supports telecommunications, Earth observation constellations and space situational awareness (SSA/SDA) networks
- Planned flight model readiness around 2027

ACHIEVEMENTS:

- 2025: Raised \$1.3 million Pre-Series A funding led by Piper Serica Angel Fund to scale its laser communication terminals for space, terrestrial and airborne applications.
- 2025 (Planned milestone): Preparing to place its laser communication technology in orbit to achieve flight heritage and demonstrate high-speed satellite-to-ground optical communication.
- 2023: Graduated from the Seraphim Space Accelerator APAC program, a major global accelerator for space-technology startups.
- 2023: Recognized among NASSCOM Emerge 50 winners, highlighting innovative deep-tech startups in India.
- 2023: Participated in the ITRI TACC+ Taiwan Space-Tech Startup Support Program, supporting international collaboration and commercialization of space technologies.
- 2022-2025: Validated optical communication solutions with Indian defence and space organisations including Indian Space Research Organisation, DRDO and Indian Navy (WESEE) for secure satellite and airborne communication links.
- 2022: Demonstrated India's first free-space optical communication via a high-altitude balloon, validating laser communication technology for satellite applications.

- 2022: Recognized among the Top 5 Innovators at the Economic Times Startup Awards, acknowledging its work in optical satellite communication technology.
- 2021-2023: Developed the AstroLink laser communication terminal capable of gigabit-speed satellite-to-ground data transmission, addressing the growing data-downlink bottleneck for small satellite constellations.
- 2019: Winner of the India Innovation Growth Program 2.0, a technology commercialization initiative supported by the Department of Science and Technology, Lockheed Martin and Tata Trusts.
- 2019: Winner of the Elevate 2019 startup program by the Government of Karnataka, supporting deep-tech innovation in India.

INVESTORS/PARTNERS:

Lead Institutional Investors:

- Piper Serica Angel Fund
- Speciale Invest
- Anicut Capital

Working With Industry Leaders:

- ISRO
- DRDO
- WESEE
- Durham University
- the university of western australia
- TeraNet Space

KEY MANAGEMENT:

- Nitish Singh
CEO



- Subhajit Chakroborty
COO



COMPANY PROFILE

Astrome Technologies, founded at the Indian Institute of Science in 2015, is a pioneering deep-tech company specializing in next-generation wireless and satellite communications products and solutions. The company has developed a patented flat-panel antenna, a fully customizable software-defined modem and automatic beamsteering and other smart algorithms that enable resilient connectivity solutions across Ground, Space (LEO/MEO/GEO) and Ocean. Leveraging advanced millimeter-wave and phased array technologies, Astrome empowers both rural and urban broadband infrastructure with high-speed 5G backhaul and fiber-like wireless solutions using its proven E-Band radios, extending coverage quickly and cost-effectively even in challenging environments. Astrome has also developed a range of satellite communication products, ranging from S-band to V/W-band, to provide seamless connectivity from Space-to-Ground, Ground-to-Space and Space-to-Space.

YEAR OF ESTABLISHMENT:

2015

NUMBER OF EMPLOYEES (APPROX.):

106 employees

CURRENT REVENUE/FUNDING:

- Annual Revenues: INR 8.25 crore
- Total Funding: USD 15 million

CORE DOMAIN:

Terrestrial and Space Communications

PRODUCTS AND SERVICES:

- **GigaMesh** (E-Band Backhaul Radio) - GigaMesh is the world's first auto-aligned, multi-beam E-band radio featuring an integrated advanced phased array antenna, redefining cost-effective, high-speed wireless backhaul. Through sophisticated electronic beam steering and dynamic link alignment, it delivers gigabit-class throughput and serves as a powerful complement to fiber especially in regions where deploying cable is difficult, expensive, or impractical.
- **GigaSat** (Flat Panel Satellite Antenna Terminal) - GigaSat is an advanced Flat Panel Satellite Antenna (FPSA) terminal compatible with mobility applications, including maritime and land-mobile services. Its software-driven beam forming and beam-steering technology enables steerable beams and dynamic frequency selection for seamless satellite connectivity. GigaSat delivers high-performance satellite ground connectivity, providing secure, low-latency and high-speed links globally as a comprehensive end-to-end solution.
- **Astream** (Satellite Communication System) - Astream by Astrome Technologies is a versatile, multiband satellite solution offering high data rates and adaptability for satellites of all sizes. Designed to meet the needs of modern satellite communications, Astream delivers reliable performance across multiple frequency bands.
- **OrbiThru** (Software-defined Customisable Modem) - OrbiThru, developed by Astrome Technologies, is a secure, software-defined satellite modem that can be configured as a hub or user terminal. It features user-configurable encryption for enhanced security and its flexible FPGA-based design enables customization to meet diverse operational requirements, delivering high performance and reliable communication.
- **SpaceNet** (Payloads for Satellite Communication Network) - SpaceNet is a fully software-defined satellite payload platform operating in the V/W-band frequency spectrum, designed to enable high-speed, flexible and autonomous satellite communications.
- **Astralink** (S/V Band Inter-Satellite Links (ISL)) - Astralink is Astrome's advanced Inter-Satellite Link (ISL) solution, enabling high-throughput, secure communication between LEO-LEO satellites or LEO-GEO satellites. Its scalable, modular architecture ensures seamless cross-linking across multiple orbits while providing reliable, low-latency data transfer.



ACHIEVEMENTS:

- 2019: Won the 1ST iDEX Challenge
- 2020: Won the 2nd iDEX Challenge
- 2020: ITU Virtual Digital World Award
- 2020: 1st Patent for 'System and method for two-way ground and satellite-based communication using millimeter waves' Granted
- 2022: Award for Women Transforming India (WTI)
- 2022: Astrome was featured on the 90th edition of PM Modi's Mann Ki Baat
- 2023: Won 3rd iDEX Challenge
- 2023: 2nd Patent for 'System and method for integrated optimization of design and performance of satellite constellations' Granted
- 2023: Signing the contract with the Indian Army for Tac LAN Radio
- 2024: Ministry of Telecommunications Award for Telecom Excellence
- 2025: Won the Indigenous Solution Award at Aero India by the Raksha Mantri
- 2025: Innovation Icon Award by Marico Foundation
- 2025: Won the Startup World Cup - India at India Mobile Congress 2025
- 2025: Opening of Clean Room for Satellite AIT and payload development
- 2025: Astrome completes 10 years and achieves MSME status
- 2025: Space products deployed to various customers
- 2025: Woman Leader of the Year Award by The Fast Mode

INVESTORS/PARTNERS:

- Apollo Fund
- Indian Angel Network Fund
- Urania Ventures
- IISc
- ArtPark

KEY MANAGEMENT:

- NEHA SATAK, PHD
Co-Founder & CEO
- PRASAD BHAT, PHD
Co-founder, Chairman & CTO
- ARVIND IYER, PHD
Director of Engineering
- VENKATESH KUMARAN
President



COMPANY PROFILE

Aule Space is building autonomous “jetpack” satellites that can dock with existing GEO satellites and provide stationkeeping support, extending their operational life by up to 6 years. The company is developing core Rendezvous, Proximity Operations and Docking (RPOD) technologies for autonomous docking, satellite life extension and broader in-orbit servicing applications. Its technical focus includes satellite-agnostic docking systems and autonomous guidance, navigation and control capabilities for reliable close-range operations in space.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

15 employees

CURRENT REVENUE/FUNDING:

- \$2,000,000 Million

CORE DOMAIN:

- In-Orbit Servicing

PRODUCTS AND SERVICES:

- **Life Extension:** Our jetpack can dock with commercial satellites running low on fuel and extend their operational life by 5+ years.



- **Space Domain Awareness:** Our satellites deliver close-proximity intelligence and rapid response capabilities, essential for safeguarding orbital assets.



- **Active Debris Removal:** Our satellites can capture and deorbit satellites to maintain a sustainable space environment.



ACHIEVEMENTS:

- Aule Space has been awarded non-dilutive funding under the ELEVATE Program by Startup Karnataka
- Aule Space has been awarded grant funding by IN-SPACE, under the Department of Space (DoS), Government of India for development of autonomous guidance, navigation and control systems (GNC) for rendezvous and docking applications.

INVESTORS/PARTNERS:

- Pi Ventures

KEY MANAGEMENT:

- Jay Rameshbhai Panchal
CEO



- Nithyaa Shree Giridharan
CTO



- Hrishit Tambi
COO





COMPANY PROFILE

Augsense Lab, based in Thiruvananthapuram, India, is a deep-tech company creating atomic-physics-based sensing solutions for climate sensing, aerospace and defence. Its core platform, the Atomic Receiver™, enables wideband, high-sensitivity RF sensing with atomic-level calibration across ground, airborne and CubeSat-class platforms.

YEAR OF ESTABLISHMENT:

2019

NUMBER OF EMPLOYEES (APPROX.):

- 2-10 employees

CURRENT REVENUE/FUNDING:

- Revenue of INR 3,10,780 as of 31.03.2025 (From Audited Financials 2024-25)
- Cumulative Funding of USD 5,00,000.

CORE DOMAIN:

- Core platform Atomic Receiver™ enables wideband, high-sensitivity RF detection with atomic-level calibration
- Focus on space-based RF radiometry, atmospheric sensing and RF situational awareness
- Supports software-reconfigurable sensing across multiple frequencies and use cases
- Designed for deployment across ground, airborne and CubeSat-class space platforms

PRODUCTS AND SERVICES:

1. Atomic Receiver Platform - core quantum-sensing engine adaptable across communication, radar and environmental domains.

- **Quantum-Enhanced ELINT, Ground Penetrating Radar (GPR) and Radiometer Payloads** - scalable sensing solutions for defence, space and climate intelligence applications.





ACHIEVEMENTS:

- Selected under the iDEX (Indian Air Force) program for the development and validation of quantum-enhanced sensing technologies in the Financial Year 2025-26.
- Awarded a collaborative project with the Kerala Development and Innovation Strategic Council (K-DISC) and the Kerala State Disaster Management Authority (KSDMA) to develop an N-Sonde GNSS-tomography-based hyper-local weather sensing system for early warning and landslide risk assessment in the Western Ghats.

INVESTORS/PARTNERS:

- Emul Tek Private Limited, a subsidiary of Solar Industries Private Limited.

KEY MANAGEMENT:

- Kannan Kesavapillai
Managing Director & CEO



- Sudheer Krishnankutty
Nair
Director & COO



- Naveen Francis Chittilapilly
Director & CTO



COMPANY PROFILE

Bellatrix Aerospace develops and manufactures advanced propulsion technologies for a wide range of missions, from deploying and phasing nano and micro satellite constellations to ferrying multi-ton communication satellites to geo-stationary orbit. Their cutting-edge technologies offer solutions for satellite engines that are better performing, long lasting, reliable and cost-effective compared to conventional alternatives. The company has been supplying to ISRO and DRDO for the last 5 years. They were first in testing privately built plasma thruster that uses water as a fuel to create a green high-performance alternative to hydrazine-based chemical propulsion systems. Their focus is to build highly agile and modular orbital transfer vehicles that can greatly disrupt the cost of access to space.

YEAR OF ESTABLISHMENT:

2015

NUMBER OF EMPLOYEES (APPROX.):

80 employees (Feb 2025)

CURRENT REVENUE/FUNDING:

- Annual Revenue: INR 2.1 crores as on Mar 31, 2024
- Total Funding (in 5 rounds): USD12.6M

CORE DOMAIN:

Satellite and subsystems: Propulsion Systems

PRODUCTS AND SERVICES:

- Arka: Advanced Hall Effect Thruster series offering higher performance, longer life and reduced cost and weight.



- Rudra: Green propulsion systems (1, 5 & 100) delivering better performance than hydrazine with safer handling.



- Pushpak: Multi-mission platform for CubeSats & small satellites (up to 750 kg) with hybrid propulsion and ΔV up to 7 km/s.



- Fingernail: Ultra-compact nano-thruster enabling collision avoidance and deorbiting with single-piece fabrication.



- Jal: Water-powered Microwave Plasma Thrusters with high thrust efficiency and 4× higher specific impulse ideal for GEO missions.



- Project 200: Ultra-low Earth orbit demonstrator offering 2× lower latency, 9× better imagery, reduced costs and minimal radiation exposure.



ACHIEVEMENTS:

- In May 2025, Bellatrix Aerospace signed an MoU with Japanese Astroscale to collaborate on space sustainability initiatives, including debris removal and satellite servicing. This partnership facilitates Bellatrix's entry into the Japanese market and supports Astroscale's expansion within India's growing space sector.
- In April 2025, Bellatrix announced its expansion in the USA with the establishment of a new subsidiary. This move marks a strategic step in its mission to deliver world-class propulsion systems to the rapidly growing U.S. commercial space market.
- In March 2025, Bellatrix signed an MoU with Astroscale Japan, the market leader in satellite servicing and long-term orbital sustainability across all orbits for its cutting-edge propulsion solutions.
- In October 2024, Bellatrix Aerospace's orbital transfer vehicle, Pushpak, will be integrated into NSIL missions. An MoU was signed at the Bangalore Space Expo between NSIL and Bellatrix. Pushpak enables precise in-orbit manoeuvring and multi-orbit satellite deployments. The partnership supports complex missions, including geostationary transfers and future deep space projects.
- In September 2024, Bellatrix Aerospace, a Bengaluru-based startup, unveiled Project 200, an ultra-low Earth orbit (ULEO) satellite, at the Bengaluru Space Expo 2024. Designed to operate between 180 km and 250 km, Project 200 aims to revolutionize satellite capabilities with its innovative propulsion system. This technology demonstration mission will support high-resolution earth observation, telecommunications and scientific research, offering transformative connectivity and imaging applications at ultra-low altitudes.

INVESTORS/PARTNERS:

- BASF
- KARSEMVEN Fund
- Pavestone Capital
- IDFC Parampara Early State Opportunities Fund - Series 1
- Ka Enterprises
- Inflexor
- IIT Bombay SINE business incubators
- Survam Partners
- Startup X seeds
- Grow X
- Society for Innovation and Development
- Indian Institute of Science
- Centre for Innovation, Incubation and Entrepreneurship (CIIE), IIM Ahmedabad

KEY MANAGEMENT:

- Rohan Ganapathy
Co-Founder, CEO & CTO



- Yashas Karanam
Co-Founder & COO



COMPANY PROFILE

BES Space Systems Private Limited is a deep-technology company focused on space data analytics, space weather intelligence and AI-driven predictive systems for satellite and space-enabled infrastructure resilience.

The company operates with an India-United States technology and research alignment, leveraging its Indian entity for execution and ecosystem development and its U.S. affiliate for advanced research, architecture and international engagement.

BES Space builds analytical systems that integrate historical and real-time space weather data to anticipate satellite anomalies, mission degradation and operational risk. These systems are informed by scientific models and datasets used by NOAA/SWPC, NASA, ESA and other global space science organizations.

The company enables satellite operators, downstream service providers and research institutions to transition from reactive anomaly response to predictive, intelligence-led mission operations.

PRODUCTS AND SERVICES:

SAFER - Space Anomaly Forensics & Environment Resolution

SAFER is an AI-driven platform designed to:

- Predict satellite anomalies using historical space weather patterns
- Progress toward near-real-time anomaly forecasting using live space weather feeds
- Provide early warnings, diagnostics and decision support
- Improve mission resilience and operational continuity

CORE SERVICES & CAPABILITIES:

- AI & Machine Learning Systems
- Predictive Analytics & Decision Intelligence
- Space Weather & Space Data Analytics
- Cloud & Data Infrastructure
- Technical Consulting & Program Support

STRATEGIC INITIATIVE:

Gagan Vihar - Space City of India

BES Space is the concept originator and technology anchor for Gagan Vihar - Space City of India, a phased, capability-driven space ecosystem envisioned in Andhra Pradesh. The initiative integrates space R&D, space weather analytics, academia-industry collaboration, incubation, training and public outreach. It is positioned as a strategic national space capability ecosystem, not a real-estate project.

YEAR OF ESTABLISHMENT:

2022 (India)

NUMBER OF EMPLOYEES (APPROX.):

- Fewer than 50 employees (highly specialized technical and research team)

CURRENT REVENUE/FUNDING:

- Bootstrapped + Non-Dilutive Funding
- Total Non-Dilutive Funding Secured: Over USD 3 million

CORE DOMAIN:

- Spatial Data Analytics



ACHIEVEMENTS:

- Selected for AWS Space Accelerator: APJ 2025 (among 67 startups; 42 from India)
- Received up to USD 100,000 in AWS credits
- Recognized for the SAFER platform and AI-based satellite anomaly prediction
- Focused on platform maturation, strategic partnerships and national ecosystem development

INVESTORS/PARTNERS:

- Bootstrapped (No external funding)**

KEY MANAGEMENT:

- Srikanth Kodeboyina
Managing Director



- Kumar Vadapalli
Director



COMPANY PROFILE

BosonQ Psi (BQP) Private Limited is a deep-tech company founded in 2020 that develops quantum-inspired simulation software for aerospace and advanced engineering applications. The company builds high-performance computational platforms that combine quantum-inspired algorithms with classical high-performance computing (HPC) to accelerate complex aerospace simulations. Its flagship product, BQPhy®, enables faster computational fluid dynamics (CFD), aerodynamics modeling, multiphysics simulations and design optimization for aircraft, spacecraft and propulsion systems. By significantly reducing simulation time and improving computational efficiency, BQP's technology supports aerospace organizations in optimizing designs, improving performance analysis and accelerating research and development for next-generation aerospace system.

YEAR OF ESTABLISHMENT:

2020

NUMBER OF EMPLOYEES (APPROX.):

- 48 employees total as of early 2026

CURRENT REVENUE/FUNDING:

- Annual Revenue (FY25): Reported at approximately ₹6.3 Crore (~\$750,000) for the financial year ending March 31, 2025.
- Total Funding: \$8.62 million

CORE DOMAIN:

- Quantum-Powered Engineering Simulation

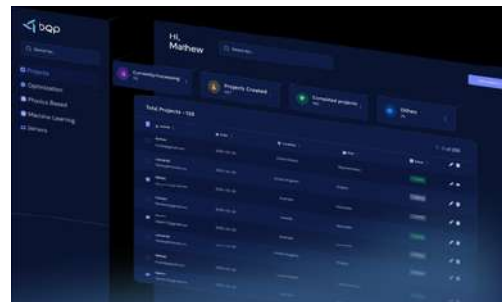
PRODUCTS AND SERVICES:

BQPhy®

Solve complex, mission-critical problems that are intractable with traditional approaches. Traditional simulation algorithms, often developed decades ago, may not be optimized for the intricate challenges of modern engineering. By harnessing the power of quantum mechanics, BQPhy® unlocks the full compute power of today's High-Performance Computing (HPC) infrastructure, allowing you to achieve more with less.

10x faster results on current HPC

- Accelerate simulations for faster decision-making
- Achieve higher accuracy, do more with less
- Hybrid quantum-classical algorithms for precision and efficiency at scale



BQPhy® Optimization Solver

Quantum-inspired optimization software designed to solve complex mission-critical aerospace engineering problems. It uses Quantum-Inspired Optimization (QIO) algorithms to accelerate system-level design optimization, mission scheduling, structural optimization and design space exploration for spacecraft and aerospace systems.

- System Level Design Optimization
- DME Optimization
- Mission Scheduling
- Placement Optimization
- Load Optimization

BQPhy® Physics Solver

A hybrid quantum-classical physics simulation platform that enhances large-scale aerospace simulations such as computational fluid dynamics (CFD), multiphysics modeling and system simulations. The solver enables faster and more accurate modeling of aerodynamics, propulsion systems and spacecraft structural performance.

BQPhy® Data Driven Solver

Advanced AI and hybrid quantum machine-learning solver designed for aerospace and defence applications such as object detection, anomaly detection, target tracking and computer vision analysis using satellite and mission data.

ACHIEVEMENTS:

- March 2026: BosonQ Psi was highlighted in a defence-technology discussion on how future geopolitical competition and military innovation will increasingly rely on software, algorithms and advanced computing capabilities, underscoring the growing importance of quantum-inspired computational technologies.
- February 2026: The company was featured in global startup trend predictions for 2026, recognizing BosonQ Psi's role in advancing quantum-inspired computing, digital engineering and high-performance simulation technologies.
- January 2026: BosonQ Psi was recognized for its work in hybrid quantum-classical computing, highlighting the company's efforts to develop computational frameworks that combine quantum algorithms with classical HPC systems for complex engineering simulations.
- December 2025: BosonQ Psi collaborated with NVIDIA and Classiq to demonstrate a hybrid quantum-classical workflow for digital twin and computational fluid dynamics (CFD) simulations, showcasing how quantum-accelerated algorithms can improve large-scale engineering simulations.
- December 2025: The company launched BQPhy® integration for MathWorks MATLAB, enabling engineers to access quantum-accelerated optimization capabilities directly within MATLAB workflows, bridging classical engineering tools with quantum-inspired computing.
- December 2025: BosonQ Psi's leadership and technology developments were highlighted in industry discussions on AI, quantum computing and data governance trends shaping enterprise technology in 2026.
- July 2025: BosonQ Psi raised an oversubscribed \$5 million seed funding round following a pilot agreement with the Air Force Research Laboratory to develop a quantum-accelerated digital twin platform for aerospace and defense simulations.
- February 2025: The company achieved a breakthrough in quantum-accelerated computational fluid dynamics (CFD) simulations, demonstrating complex fluid-dynamics modeling using only 30 logical qubits, highlighting the feasibility of quantum approaches for aerospace simulations.
- 2025: BosonQ Psi was listed among the Top Quantum Computing Startups to Watch, recognizing its innovations in quantum-inspired engineering simulation and optimization platforms for aerospace, defense and high-performance computing applications.

INVESTORS/PARTNERS:

Lead Institutional Investors:

- Monta Vista Capital
- New York Ventures
- 3to1 Capital

Other Institutional Backers:

- Global Firms: Emergent Ventures, Alumni Ventures, Arc Ventures and Armory Square Ventures.
- Accelerators & Specialized Funds: Arka Venture Labs, Griffiss Institute (via the Mojave Aerospace Accelerator Fund), Paradigm Shift Capital and Transpose Platform.

KEY MANAGEMENT:

• ABHISHEK CHOPRA

Founder, Chief Executive
and Scientific Officer



• RUT LINESWALA

Founder, Chief Technology
Officer



• JASH MINOCHA

Founder, Chief Operating
Officer



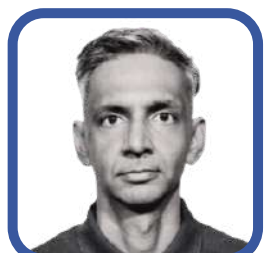
• ADITYA SINGH

Founding Member, VP of
Business



• VIJAY VISHWANATHAN

Head of Marketing



COMPANY PROFILE

Caliche was founded in 2018 in Northeast India as a petroleum biotechnology startup with a clear mission: to develop scalable, science-driven solutions for some of the world's most complex industrial and environmental challenges.

Beginning with innovations in petroleum and energy-sector biotechnology, Caliche focused on process-level interventions to improve efficiency, reduce emissions and enable sustainable operations across oil & gas, mining and heavy industries. Over the years, the company has evolved into a deep-tech industrial platform, integrating biotechnology, advanced materials and data-driven engineering. Caliche is the most awarded startup in the oil and gas sector, backed by a strong intellectual property portfolio of over 50 patents and an extensive collaboration network comprising more than 30 academic, research and industrial institutions across three countries.

Today, Caliche is actively working at the intersection of industrial and space biotechnology, developing next-generation biological systems designed to operate in extreme environments both on Earth and beyond. Caliche stands for science that scales, sustainability by design and biotechnology built for the extremes.

PRODUCTS AND SERVICES:

- Industrial biotechnology solutions for oil & gas, mining, power and critical industries
- Petroleum biotechnology solutions
- Microbial Carbon Capture (MCC) - With advancements in biotechnology, at Caliche, we are deploying a biological method for carbon capture from flue gas and converting it to speciality chemicals. We deploy a modular unit for the selected specification at the site and establish the efficacy of the carbon capture technology. We specialize in leveraging the unique capabilities of extreme-environment, naturally occurring microbes, specifically CPLPB1 and CPLPB2, to capture carbon dioxide efficiently.
- Space biotechnology platforms for extreme and closed-loop environments.
- Space-adapted microbial consortia
- Custom technology development and biotechnology system design, as well as Industrial deployment and integration with existing infrastructure.
- Joint R&D, technology transfer and institutional collaboration programs

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

54 employees

CURRENT REVENUE/FUNDING:

- 11 Cr for India business

CORE DOMAIN:

- Industrial biotechnology



ACHIEVEMENTS:

- Recognized as the most awarded startup in the oil and gas sector
- Largest repository of extreme environment microbes
- Recipient of prestigious industry recognitions including KPMG, India Energy Week (IEW) - Best Startup, Federation of Indian Petroleum Industry (FIPI) Awards, along with multiple other industry-specific honors
- Built a strong intellectual property portfolio with 50+ patents filed
- Established collaborations with 30+ academic, research and industrial institutions
- Active technology development and partnerships across 3 countries
- Successfully developed and piloted industrial-scale petroleum biotechnology solutions
- Demonstrated microbial carbon capture technologies for industrial emissions
- Expanded from petroleum biotechnology into industrial and space biotechnology domains
- Trusted technology partner for government bodies, PSUs and large industrial operators
- Positioned as a deep-tech industrial biotechnology platform, beyond single-product offerings

INVESTORS/PARTNERS:

- Operating without venture capital backing.

KEY MANAGEMENT:

- Amit Priyadarshan
Co-founder and CEO
- Anandh Mathew
Co-founder and COO



COMPANY PROFILE

CI Metrics uses satellite data and AI to provide actionable insights for industries such as mobility, logistics, agriculture and insurance. The company leverages over 25 years of satellite data to predict road accidents, traffic blockages, crop performance and supply chain risks. By transforming raw satellite data into standardized models, CI Metrics delivers accurate historical and forecasted insights through machine learning. The company operates on a SaaS model, with a focus on B2B and B2G clients, achieving significant revenue growth and aiming for ₹4 crore ARR in FY25. Recognized for its innovation, CI Metrics is positioned as a key player in India's growing space economy.

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- <50 employees

CURRENT REVENUE/FUNDING:

- Bootstrapped and operating at the revenue stage

CORE DOMAIN:

- Satellite and AI enabled Tech

PRODUCTS AND SERVICES:

1. Climate Risk Intelligence Platform

An AI-driven platform combining satellite imagery and geospatial analytics to assess and predict climate risks.

Key capabilities:

- Extreme rainfall prediction and early warning
- Heatwave and cold wave risk assessment
- Real-time flood monitoring and forecasting
- Climate risk indices for resilience planning

2. Risk Index & ESG Analytics Platform

A data-driven system for quantifying, verifying and scoring risks across assets and enterprises.

Core functions:

- Quantification of asset-level risk and performance
- ESG risk scoring for investment decisions
- Compliance verification against standards
- Tabulated insights and benchmarking dashboards
- Real-time alerting for critical events

3. Satellite & AI Intelligence Engine

A proprietary engine leveraging satellite, drone imagery and deep learning models.

Features:

- Multi-source data fusion (satellite + UAV + IoT)
- User-defined predictive risk inputs
- Cloud-native scalable backend
- Rapid AI model deployment (PoC in ~15 days)

4. Geospatial Predictive Analytics Suite

Advanced analytics platform delivering high-accuracy forecasting and decision intelligence.

Includes:

- Imagery-led predictive AI models
- Time-series geospatial analytics
- Real-time monitoring dashboards
- Automated alert systems

SERVICES

1. Climate & Disaster Risk Management

- Early warning systems for floods, rainfall and extreme weather
- Natural catastrophe (NATCAT) assessment and response
- Risk mitigation and resilience planning

2. Agriculture Intelligence Services

- Daily trade recommendations with price forecasts
- Crop monitoring using satellite data
- Procurement optimization and cost savings
- Market intelligence using geospatial signals

3. Mobility & Logistics Intelligence

- Real-time weather alerts for transport systems
- Route optimization using satellite data
- Fleet risk forecasting and operational planning

4. Carbon & ESG Monitoring Services

- Forest carbon validation (biomass and sequestration tracking)
- Agricultural carbon offset verification
- Industry-level carbon footprint indexing
- ESG compliance monitoring

5. Defence & Security Intelligence

- Continuous monitoring of strategic assets
- AI-powered threat detection from satellite imagery
- Fusion of satellite + UAV + SIGINT/ELINT data
- User-annotated intelligence alerts

6. Energy & Upstream Monitoring

- Pipeline monitoring (oil & gas) using satellite imagery
- Leak detection and environmental risk assessment
- Multi-sensor fusion (MS/HS/SAR data)

7. Geospatial Intelligence for Commercial Applications

- Commodity market intelligence
- Real estate analysis and land-use monitoring
- Urban planning and infrastructure analytics
- Quantitative geospatial data solutions

8. Custom AI & Product Development Services

- Build-to-spec geospatial AI solutions
- On-premise or cloud deployment options
- Full IP ownership for clients
- Rapid prototyping and proof-of-concept development

ACHIEVEMENTS:

2025

- 2025 (Ongoing): Continued expansion of multi-sector satellite intelligence applications across defence, agriculture, climate and mobility domains using data ontology and predictive AI frameworks.

2024

- October 2024: Partnered with Allianz Partners India to integrate satellite-based weather prediction and AI models into mobility solutions.
 - Enabled predictive roadside assistance using climate intelligence, demonstrating real-world deployment of satellite analytics.
- 2024: Demonstrated advanced capability in data fusion (satellite + drone + AI) to achieve high prediction accuracy for extreme weather events, strengthening climate-risk intelligence systems.
- April 2024: Participated in Startup Mahakumbh 2024, showcasing innovations in satellite-powered predictive analytics and climate intelligence platforms.

- 2024: Developed predictive climate intelligence models leveraging satellite imagery for sectors like mobility, agriculture and ESG, positioning itself as an R&D-driven geospatial intelligence company.

2023-2022

- 2023 (Ongoing): Built proprietary AI-driven geospatial models combining:
 - Satellite imagery
 - Weather data
 - Human-induced risk factors
 - to generate climate risk indices and forecasting tools.
- 2022-2023: Established satellite-based predictive analytics capabilities for:
 - Agriculture forecasting
 - Logistics and supply chain optimization
 - Insurance risk modeling

INVESTORS/PARTNERS:

- Indian Space Research Organisation, NewGen IEDC, NSR Analysis, Snapdeal, Ayoconnect, Pixxel, Allianz Partners, OmniActive Health Technologies, National Commodity and Derivatives Exchange Farmers' Association (NCFC), Ministry of Agriculture and Farmers Welfare India, PwC, XELP, Mach33 Aerospace, Space and Satellite Professionals International (SSPI), Indo Wings Private Limited.

KEY MANAGEMENT:

- Abhishek Patil
Co-Founder & CTO



- Gagan Agarwal
Co-Founder & Investor Advisor



- Manoj Mudugala
Head Sales



COMPANY PROFILE

CYRAN AI Solutions is at the forefront of technological innovation building enterprise-grade hardware-software AI solutions for sectors such as GeoSpatial, Industry 4.0 and EdTech. CYRAN is a spinoff of the NVM & Neuromorphic Hardware Research Group, a cutting-edge laboratory from India's premiere technology & innovation institution IIT Delhi. CYRAN's vision & mission are to empower industries through deep tech R&D driven innovation. CYRAN's values are grit, transparency & excellence.

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

50 employees

CURRENT REVENUE/FUNDING:

- Bootstrapped and operating at the revenue stage

CORE DOMAIN:

- AI for Geospatial and Industry 4.0 Solutions

PRODUCTS AND SERVICES:

- CYRAN GIS Standard - Desktop GIS Software
- CYRAN GIS AI Plus - AI Enabled Desktop GIS Software
- CYRAN GIS AI Pro - AI Enabled Desktop GIS with advanced capabilities
- CYRAN Web-GIS Standard - Web based GIS Software
- CYRAN Web-GIS 3D - Web based GIS Software with 3D capabilities
- CYRAN Web-GIS AI Plus - AI Enabled Web-based GIS Software
- CYRAN Web-GIS 3D AI Plus - AI Enabled Web-based GIS Software with 3D capabilities

AI For Remote Sensing/Geospatial Data Processing

1. Defence and Homeland Security

- AI-based EO, SAR, Multi-spectral, Hyperspectral Data Processing
- Automated Target Detection, Classification, Recognition
- Custom Analytics, Alerts & Reports
- User Customizable AI Reports
- ISR, Persistent Monitoring
- Shorter OODA Loop



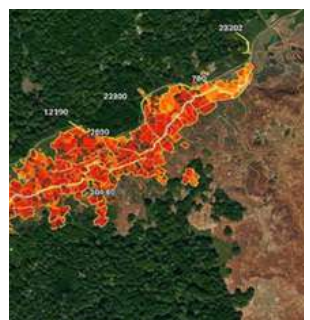
2. Maritime Domain Awareness

- Rapid AI-based Maritime Activity Monitoring
- Automated Vessel Detection & Classification
- Analytics on EO and SAR



3. Disaster Response & Environmental Monitoring

- AI-based Natural Disaster Assessment and Environmental Monitoring
- Automated Change Detection, Classification, Recognition
- Custom Analytics, Alerts & Reports
- User Customizable AI Reports



4. Infrastructure Monitoring

- Large Scale Automated Mapping, Survey and Digitization.
- Multi Modal EO and Drone Data Processing
- Advanced 2D & 3D Analysis
- Enterprise Grade GIS Application
- Ready for Mixed Reality (AR/VR)
- Man-made Feature Extraction



5. High Quality Data Products

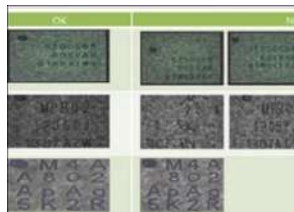
- On-demand VHR imagery
- On-demand VHR DEM, DSM, DTM
- On-demand 3D tiles
- On-demand Basemap
- On-demand specialized vector layers



AI For Industry 4.0

1. Automated Defect Inspection

- On-demand VHR imagery
- On-demand VHR DEM, DSM, DTM
- On-demand 3D tiles
- On-demand Basemap
- On-demand specialized vector layers



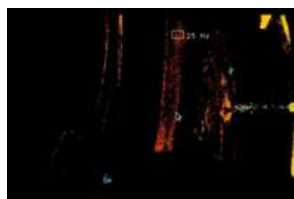
2. LLMs for Industrial Data Management

- On-demand VHR imagery
- On-demand VHR DEM, DSM, DTM
- On-demand 3D tiles
- On-demand Basemap
- On-demand specialized vector layers



3. Advanced Contact Less Machine Monitoring

- Higher accuracy compared to conventional sensing
- Exploit for diagnostics, monitoring & optimization
- Fine grain resolution, unparalleled detail



AI For EdTech

BUDDHI AI DIY Kit represents a groundbreaking innovation developed by CYRAN AI Solutions. One of the first interactive, user friendly Do-It-Yourself educational toolkit of its kind. This comprehensive kit and its accompanying course material enables users to rapidly understand AI's potential, grasp fundamental concepts and develop practical AI-powered projects, all without previous technical expertise or domain knowledge.

ACHIEVEMENTS:

- Recipient of RM's Award for Excellence in Aerospace and Defence Sectors
- Class-1 OEM on GEM for made in India GeoAI products
- Recipient of National Technology Startup Award by DST
- Recipient of DRDO Dare to Dream Award
- Recipient of ISPA Award for Excellence in Defence & Geospatial Intelligence Sector
- Capability and Contribution recognized by COAS
- Recipient of DST Mission Dronagiri Award
- Winner of NCIIPC AI Grand Challenge 2 Geospatial AI Problem Statements
- Among the few IDEX projects to be showcased to PM
- Winner of IDEX DISC-IV Award
- Winner of IDEX ADITI 1.0 Award
- Top Indian startups showcased by MoD at India Pavilion - UAE NAVDEX
- Top Indian startups showcased by MoD at Indo-US INDUSX Summit

INVESTORS/PARTNERS:

- Bootstrapped (No external funding)**

KEY MANAGEMENT:

- Prof Manan Suri
Founder



- Mr Pramod Suri
CEO



COMPANY PROFILE

Cosmoserve Space develops Active Debris Removal (ADR) technology, providing end-of-life satellite services and commercial space debris removal. Cosmoserve Space brings the capability to capture anything, anytime, anywhere in space. Its bio-inspired soft robotic capture technology has reached TRL 7. Cosmoserve Space has raised \$3.17M in pre-seed funding—the highest ever for space tech at the ideation stage. The company has gained momentum through collaborations and interest from global space operators. Its team includes former ISRO personnel and researchers from premier institutes in India and abroad.

PRODUCTS:

Cosmoserve Space develops Active Debris Removal (ADR) technology and provides commercial ADR services to remove orbital debris and non operational satellites. Our space debris removal solutions advance space sustainability, protect crowded Earth orbits and ensure orbital safety for satellite operators, human space flights and scientific missions.



YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

15 employees

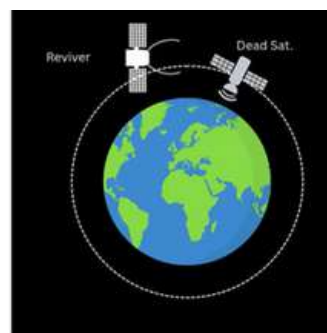
CURRENT REVENUE/FUNDING:

- Funding: \$3.17 Mn (Pre-seed)

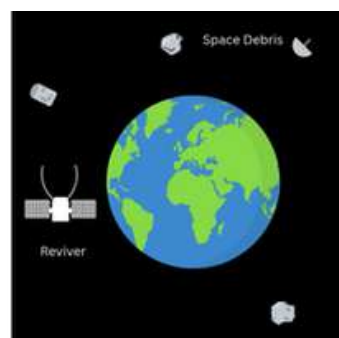
CORE DOMAIN:

- Active Debris Removal, In-orbit Servicing

SERVICES:



End-of-Life Satellite Services helping satellite operators to comply with regulations



Space Debris Removal Solutions supporting governments and agencies in achieving space sustainability

ACHIEVEMENTS:

- Highest pre-seed funding at ideation stage
- Technology maturity from concept (TRL1) to flight ready (TRL8) in 4 months
- Received multiple awards including,
 - Recognised as one among the emerging Tech30 companies in India by YourStory Media. Felicitated by Minister - IT, Karnataka and Union Minister - Aviation, Govt. of India during Tech Sparks 2025.
 - Recognised as one among the Telangana's 50 most promising startups by TiE Hyderabad.
 - Recognised as one among the "30 Startups to Watch: Startups that caught our eye in September 2025" by Inc42 Media
 - Listed in top 10 rising early-stage startups in India to watch in 2025 by Startup Today.
 - Top 3 during Galactic pitches during Demo Day of AWS Space Accelerator.

INVESTORS/PARTNERS:

- AVCF
- AUM Ventures
- Shakti VC
- Sherpalo
- SISF
- HDFC
- AWS
- THub

KEY MANAGEMENT:

- Dr. Chiranjeevi Phanindra B
Founder and CEO



- Pawan Kumar Chandana
Founding Partner



COMPANY PROFILE

CodiMaths is pioneering space and aerospace e-learning organisation dedicated to promoting space education with pre modern education like Vedic mathematics and ancient Indian knowledge across the globe. Our courses are stem accredited.

At its core, CodiMaths draws inspiration from Vedic Mathematics, a system popularized by Swami Bharathi Krishna Tirtha, which is based on 16 fundamental sutras rooted in Indian philosophical traditions. By leveraging these techniques, the organization seeks to enhance students' mental agility, problem-solving skills and numerical confidence.

CodiMaths focuses on educating, training and empowering learners, addressing challenges in mathematics and science education caused by mechanical teaching approaches and gaps in conceptual understanding. Through its innovative methodology, the company bridges traditional wisdom and modern education, enabling students to approach mathematics with creativity and clarity.

Driven by a vision to inspire future innovators, CodiMaths aims to make quality knowledge accessible to all and contribute to building a generation equipped with strong analytical and cognitive skills.

PRODUCTS AND SERVICES:

1. Educational Programs (Core Offering)

- Vedic Mathematics Training - Programs based on the 16 sutras to enhance speed, accuracy and mental calculation skills.
- Mathematics Skill Development Courses - Designed to improve conceptual understanding and problem-solving ability in mathematics and science.

2. Student Empowerment Solutions

- Cognitive Skill Enhancement - Techniques to boost memory, logical thinking and analytical abilities.
- Confidence Building in Mathematics - Helping students overcome fear of math through intuitive and simplified methods.

3. Curriculum & Learning Solutions

- Ancient + Modern Integrated Learning - Blending traditional Vedic mathematics with contemporary education systems.
- Concept-Based Learning Modules - Moving beyond rote learning to conceptual clarity and application-driven learning.

4. Training & Workshops

- School & Institutional Workshops - Programs for students, teachers and institutions to adopt innovative math learning techniques.
- Teacher Training Programs - Enabling educators to incorporate Vedic math methodologies into classrooms.

YEAR OF ESTABLISHMENT:

2022

NUMBER OF EMPLOYEES (APPROX.):

- 11-50 employees

CURRENT REVENUE/FUNDING:

- Revenue: ₹3.99L (\$4.82K) as on Mar 31, 2024
- Funding: bootstrapped startup

CORE DOMAIN:

- EdTech



ACHIEVEMENTS:

2026

- Continued expansion of global space education initiatives, including student engagement through competitions and experiential learning programs.
- Strengthened international collaboration pipeline with agencies such as SANSA (South African National Space Agency) and CNES (French Space Agency) (under discussion phase).

2025

- Selected as a member of the International Astronautical Federation (IAF), marking a key milestone in global recognition within the space ecosystem.
- Built partnerships with organizations including:
 - ZINGSA
 - Indian Space Association (ISpA)
 - Kenya Space Agency
- Conducted flagship programs such as:
 - International Space Science Olympiad (ISSO)
 - Space Hackathons for innovation in space education

2024

- Launched and scaled International Space Science Olympiad, hosted at IN-SPACE headquarters, strengthening credibility in India's space ecosystem.
- Expanded outreach in space science and STEM education programs for students.

2023

- Entered into a strategic collaboration with Institute of Electrical and Electronics Engineers (IEEE) to promote space education and scientific literacy.
- Strengthened positioning in space-focused education and student innovation initiatives.

2022

- Founded as an edtech startup focused on Vedic mathematics and STEM learning.
- Initiated programs combining traditional mathematics with modern science education.

INVESTORS/PARTNERS:

Global Collaborators

- SPACE TUTOR - ISRO
- NASA STEM Gateway
- IN-SPACE
- Google Education
- SANSA (South African National Space Agency)
- ZINGSA
- MS Education Consultants, Dubai
- KSA (Kenya Space Agency)

Education Collaborators

- European Space Agency (ESA)
- STEM - USA
- UNICEF

Till dates we signed MOU with Uttarakhand Council of Science And Technology , Indian space association , Space application centre and are currently having our foot prints in Zimbabwe, Kenya , South Africa and Dubai.

KEY MANAGEMENT:

- Shubham Parashar
CEO & Founder



COMPANY PROFILE

Founded in 2012 with the intention to lead the privatisation of the Indian Space sector, Dhruva Space Private Limited is a National Award-winning Space technology company focused on building full-stack Space engineering solutions. Dhruva Space, based out of Hyderabad, offers Satellites coupled with Earth Stations and Launch Services as an integrated solution or individually as a technology solution to power Space-based applications, on Earth and beyond.

The whole team sees more than 200 members, from a variety of backgrounds: Engineering, Business Development & Sales, Finance, Public Relations & Marketing, Space Regulatory, Legal & Compliance, Project Management and more. The company works out of a 28,000 square-foot facility in Hyderabad, in the anticipation of a 280,000 square-foot manufacturing facility in Shamshabad catering to spacecrafts of up to 500 kg.

YEAR OF ESTABLISHMENT:

2012

NUMBER OF EMPLOYEES (APPROX.):

- 200 employees

CURRENT REVENUE/FUNDING:

- Post Money Valuation - \$212M as on Dec 10, 2025
- Annual Revenue - \$1.64M as on Mar 31, 2024
- Total Equity Funding (USD) - \$21.4M in 7 rounds
- Latest Funding Round - \$5.34M, Series A Nov 10, 2025

CORE DOMAIN:

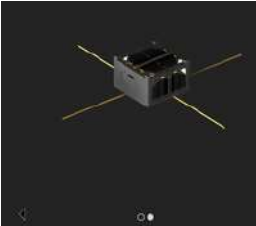
- Full-stack Space engineering solutions
- Small Satellite Platforms & Manufacturing
- Space-Grade Subsystems & Components

PRODUCTS AND SERVICES:

Satellite Platforms P-DoT

CubeSat

- TRL 9
- LEO-Optimised
- Body-Mounted and Deployable Solar Arrays
- Scalable for Earth Observation Constellations
- Multi-Payload Configurations
- 3 axis-stabilised for advanced missions
- Suitable for M2M, IoT and technology demonstration applications



Satellite Bus	0.5U to 12U
Platform Mass	1 - 24 kg
Payload Power	Available on request
Nominal Mission Lifetime	Up to 5 years
Pointing Accuracy	Up to 0.1°

P-30

NanoSat

- TRL 9
- LEO-Optimised
- Scalable for Earth Observation Constellations
- Multi-Payload Configurations
- Body-Mounted and Deployable Solar Arrays
- 3 axis-stabilised for advanced missions
- Suitable for M2M, IoT and technology demonstration applications



Satellite Bus	Available on request
Platform Mass	20 - 50 kg
Payload Power	Available on request
Nominal Mission Lifetime	Up to 5 years
Pointing Accuracy	Up to 0.1°

P-Nu

MicroSat

- LEO-Optimised
- Scalable for Earth Observation Constellations
- Multi-Payload Configurations
- 3 axis-stabilised for advanced missions
- Suitable for M2M, IoT and technology demonstration applications
- Propulsion: Orbit station keeping



Satellite Bus	Available on request
Platform Mass	Up to 500 kg
Payload Power	Available on request
Nominal Mission Lifetime	Up to 5 years
Pointing Accuracy	Available on request

Hosted Payload Solutions

Dhruva Space's LEAP series of Space missions is a full-fledged hosted payload solution. Developed on Dhruva Space's flagship P-30 Satellite Bus, LEAP is suitable for In-Orbit Validation (IOV) / In-Orbit Demonstration (IOD) for a wide range of Payloads up to 12U. LEAP offers faster, cost-effective and reliable access to Space.

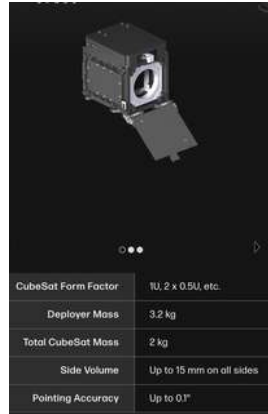
Launch Solutions

Satellite Orbital Deployers

DSOD-1U

Dhruva Space Satellite Orbital Deployer 1U

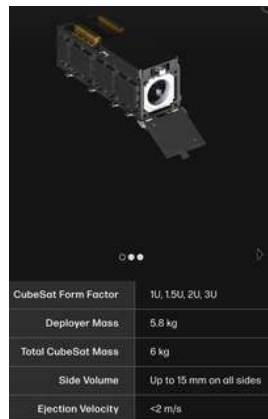
- TRL 9
- Multiple CubeSat configurations
- Space-Qualified, pre-qualified, assembled (Mechanical and Electrical) and ready for payload integration
- Non-Pyrotechnic Hold-Down and Release Mechanism (HDRM)



DSOD-3U

Dhruva Space Satellite Orbital Deployer 3U

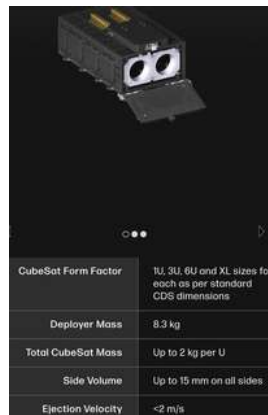
- TRL 9
- Multiple CubeSat configurations
- Space-Qualified, pre-qualified, assembled (Mechanical and Electrical) and ready for payload integration
- Non-Pyrotechnic Hold-Down and Release Mechanism (HDRM)



DSOD-6U

Dhruva Space Satellite Orbital Deployer 6U

- TRL 9
- Multiple CubeSat configurations
- Space-Qualified, pre-qualified, assembled (Mechanical and Electrical) and ready for payload integration
- Non-Pyrotechnic Hold-Down and Release Mechanism (HDRM)



DSOD-12U Composite

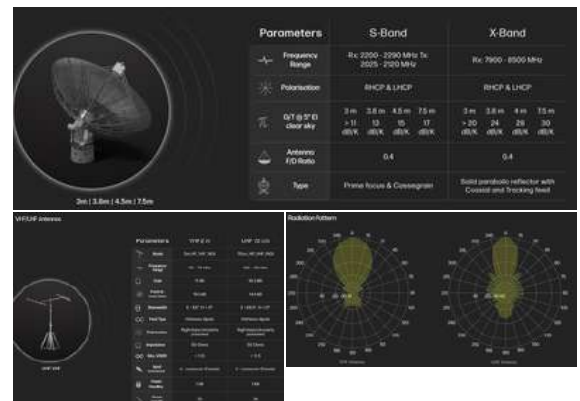
Dhruva Space Satellite Orbital Deployer 12U Composite

- Multiple CubeSat configurations
- Pre-Qualified, assembled (Mechanical and Electrical) and ready for payload integration
- Non-Pyrotechnic Hold-Down and Release Mechanism (HDRM)
- Reconfigurable design to accommodate Hosted Payload



Ground Segment Infrastructure & Ground Stations

- LEO Tracking Station Solutions
 - Ground stations designed for Telemetry, Tracking & Command (TT&C) of satellites in LEO, MEO and GEO.
 - Supports simultaneous satellite access with automated tracking and mission control capabilities.
- Satellite Antenna Systems
 - High-gain S-band and X-band antennas for payload downlink and TT&C operations.
 - Antenna configurations include 3 m, 3.8 m, 4.5 m and 7.5 m tracking antennas, with customisable options.
- Global Ground Station Network
 - Integration of partner ground stations worldwide enabling continuous satellite communication and mission operations.



SABER - Software Defined Radio (SDR) System

- Multi-channel full-duplex transceiver supporting 70 MHz-6 GHz frequency range.
- Supports VHF, UHF and S-band communication with up to 50 W RF output power.
- Enables telemetry, tracking, command operations and payload data transmission.

Integrated Space Operations Command Suite (ISOCs)

- Mission operations software platform integrating:
- Real-time satellite tracking
- Orbital path prediction

ACHIEVEMENTS:

- November 2022: Successfully launched Thybolt-1 and Thybolt-2 nanosatellites aboard PSLV-C54, marking Dhruva Space's first satellite mission and validating the P-DoT CubeSat platform for in-orbit technology demonstrations and communication experiments.
- April 2023: Successfully space-qualified the 3U and 6U Dhruva Space Satellite Orbital Deployers (DSOD) during the PSLV-C55 mission, demonstrating indigenous satellite deployment systems.
- August 2023: Received IMS-1 satellite bus technology transfer from Indian Space Research Organisation, strengthening Dhruva Space's capabilities in small satellite platform development.
- January 2024: Successfully launched the LEAP-TD technology demonstrator mission aboard PSLV-C58, validating the P-30 nanosatellite platform and onboard subsystems including the OBC, TT&C module, attitude control system and power distribution board.
- June 2024: Dhruva Space's Thybolt-1 and Thybolt-2 satellites completed over 15,000 orbits before safely deorbiting, demonstrating mission reliability and operational capability of its satellite platforms.
- July 2024: Received authorisation from IN-SPACe to offer Ground Station as a Service (GSaaS), enabling satellite telemetry, tracking, command operations and ground-segment support for global satellite missions.
- August 2025: Successfully launched LEAP-1, Dhruva Space's first commercial satellite mission, aboard Falcon 9, marking the company's entry into commercial nano and micro-satellite deployment.
- August 2025: Selected under India's Earth Observation Public-Private Partnership (EO-PPP) programme led by IN-SPACe, alongside Pixxel, SatSure and PierSight, to develop an indigenous private Earth observation satellite constellation.
- June 2025: Partnered with SatSure to deliver Earth Observation-as-a-Service (EOaaS) solutions integrating satellites, launch services, ground infrastructure and analytics platforms.
- July 2025: Collaborated with Pixxel to develop and integrate high-efficiency Solis+ satellite solar panels for hyperspectral Earth observation satellite missions.
- September 2025: Signed an MoU with Esri India to integrate AstraView satellite imagery services with ArcGIS, enabling geospatial intelligence solutions using Earth observation satellite data.
- January 2026: Satellite payload deployments involving Dhruva Space faced delays due to the PSLV-C62 launch anomaly, impacting some upcoming experimental satellite missions and technology validations.

INVESTORS/PARTNERS:

SIDBI, Technology Development Board, Blume Venture Aditum, Arcs Enterprise, Cosme Matias Menezes, Arohi Holdings, Aranya Holding, Blue Ashva Capital, HAF, MNR Projects, IvyCap Ventures Advisors, Big Invest Group, Mumbai Angels Network, IvyCapVentures, SilverneedleVentures, BITEXCO GROUP, Blue Ashva Capital, Indian Angel Network

Strategic Partners:

ISRO (Indian Space Research Organisation), IN-SPACe, DRDO, European Space Agency, SSC, Lockheed Martin, GoI, Mohammed Bin Rashid Space Centre Skyroot Aerospace, kineis, sodern Ariane group, manastu space, satsure, cnes, safran, Larsen & Toubro, comat, redwire, Capella Space, Axel Space, WYVERN, unseenlabs, SIIS, Satellogic, Planet Zero, Maxar, GeoSat

KEY MANAGEMENT:

- Sanjay Nekkanti
Chief Executive Officer



- Krishna Teja Penamakuru
Chief Operating Officer



- Abhay Egoor
Chief Technology Officer



- Chaitanya Dora
Surapureddy
Chief Financial Officer



COMPANY PROFILE

Digantara Industries is a space surveillance and intelligence company dedicated to protecting and defending sovereign and allied interests across operational domains from emerging threats while ensuring safety, security and long-term sustainability. By integrating advanced space-based sensors, proprietary optics and AI-driven analytics into a unified space-intelligence infrastructure, Digantara delivers the comprehensive domain awareness required to safeguard critical assets and maintain strategic superiority.

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

125 employees

CURRENT REVENUE/FUNDING:

- USD 64 Million

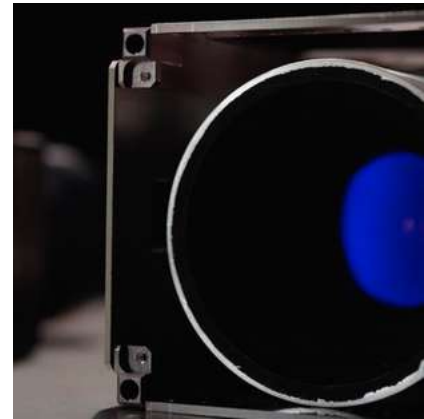
CORE DOMAIN:

- Space Domain Awareness and Space Situational Awareness

PRODUCTS AND SERVICES:

1. Hardware

- PRISM: Flight proven, electro-optical payload for precision space observation



- PULSE: LiDAR-based imaging payload for dynamic tracking and spatial intelligence

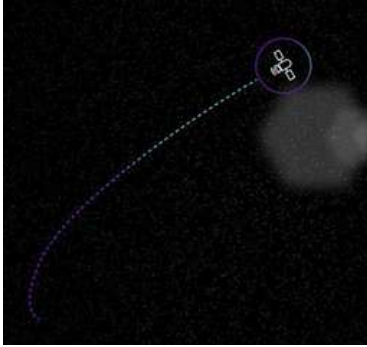


- SKYGATE: Ground-based telescope system for persistent orbital imaging & surveillance



2. Data

- LOCUS: High-precision RSO tracking & orbit propagation in real-time

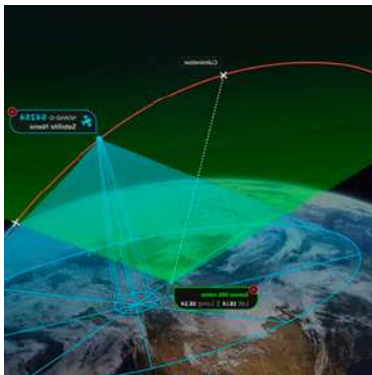


- IRIS: Persistent non-earth imaging and RSO characterization

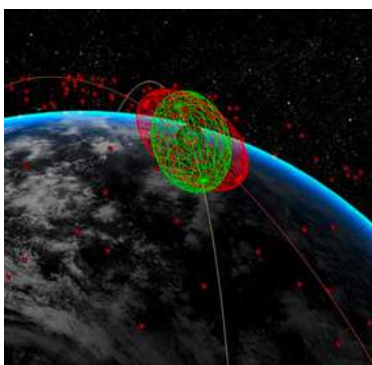


3. Analytics

- STARS: Predictive analytics & modelling platform for space intelligence, surveillance and reconnaissance



- MAP: Decision-ready analytics & modelling platform for mission assurance, planning, & operations



ACHIEVEMENTS:

- Forbes 30 Under 30 Asia 2025 - All founders
- Forbes 30 Under 30 India 2025 - Anirudh Sharma
- Digantara was selected as WEF Technology Pioneer 2025
- Anirudh Sharma was selected for Motwani Jadeja Global Leaders Cohort at World Economic Forum Davos 2025
- Anirudh Sharma sits on the UNOOSA's Space Traffic Coordination committee as an expert member (only 3 commercial companies are a part of it). He was a panellist at the UNOOSA's Space Bridge Dialogue in 2024 and 2025.
- Digantara was featured on Forbes Asia 100 to Watch 2024
- Digantara was selected for a joint India-Australia space mission, Space-MAITRI (Mission for Australia-India's Technology, Research and Innovation), which received a grant of INR 46 cr from the Australian Space Agency. [May 2024]
- Winners of the National Startup Awards held [2023]
- Winners of the ET Startup Awards [Sep 2023]

INVESTORS/PARTNERS:

- 360 ONE Asset
- Kalaari Capital
- Peak XV Partners

KEY MANAGEMENT:

- Anirudh Sharma
Founder & CEO



- Rahul Rawat
Director & COO



- Tanveer Ahmed
Director & CTO



COMPANY PROFILE

Elena Geo Systems is an Indian deep-tech company specializing in indigenous NavIC-based (Navigation with Indian Constellation) navigation and monitoring solutions. The company works with satellite imagery, GIS platforms and AI-driven analytics to support applications across sectors such as defence, infrastructure, environmental monitoring, agriculture and urban planning.

Founded in 2012 by Lt Col V.S. Velan (retd.) and incubated at IIT Kharagpur, the firm is a leader in developing the entire downstream ecosystem for India's regional satellite navigation system.

YEAR OF ESTABLISHMENT:

2012

NUMBER OF EMPLOYEES (APPROX.):

- 39 employees as of January 31, 2025

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹147L (\$174K) as on Mar 31, 2025

CORE DOMAIN:

- NavIC based Multi GNSS solutions
- PNT

PRODUCTS AND SERVICES:

Multi-GNSS Processor (NavIC Enabled)

Processor integrating signals from NavIC, GPS and GLONASS to deliver highly accurate positioning and navigation across diverse applications such as surveying, agriculture and vehicle navigation.



Multi-GNSS Modules

NavIC-enabled positioning modules designed for precision agriculture, surveying, asset tracking and vehicle navigation, providing reliable and resilient location data.



GNSS Antennas

Advanced multi-GNSS antennas capable of receiving signals from multiple satellite constellations to ensure accurate positioning even in challenging environments such as urban canyons or dense forests.

GNSS Receivers

High-precision receivers combining NavIC, GPS, GLONASS, Galileo and BeiDou signals for reliable global navigation and location-based applications.



Drone Navigation Unit

NavIC-enabled navigation system designed for drones and UAVs, enabling precise flight control for applications such as surveying, infrastructure inspection, agriculture monitoring and disaster management.



NavIC Clock

Precision timing device based on atomic clock technology used for synchronization of satellite navigation systems and accurate positioning services.



NavIC Timing Server

Indigenous timing solution leveraging NavIC signals for precise time synchronization, supporting applications such as NTP services, telecom networks, SCADA systems and critical infrastructure operations.



Map Display Systems

GIS-enabled visualization platforms that provide interactive geospatial mapping, spatial data analysis and navigation capabilities.



NavIC-enabled Tracking Devices

Real-time tracking devices used for vehicle monitoring, asset tracking, logistics management and personal safety applications.



Grid Converter

Advanced positioning equipment based on Elena's multi-GNSS processor delivering high-accuracy location data (up to ~1 meter accuracy)



NavIC Handheld Navigator (ELNHHN)

Portable navigation device with high-precision positioning, large display and long operational life, designed for field navigation and tactical applications.

Services / Solutions

Tracking and Fleet Management Solutions

- Real-time vehicle tracking systems enabling route optimization, location monitoring and fleet efficiency management.

School Bus Management System

- Navigation and tracking platform designed to improve safety, monitoring and operational efficiency of school transportation systems.

Transport and Logistics Tracking Solutions

- Location-based monitoring systems supporting logistics operations, fleet tracking and cargo movement management.

Mining Operations Tracking

- Positioning and monitoring solutions supporting mining operations, equipment tracking and resource management.

Ambulance Management System

- Emergency response tracking platform enabling efficient ambulance deployment and real-time monitoring of medical transport services.

Passenger Transit Monitoring

- Geospatial solutions for tracking and managing public transport systems including buses, rail and passenger mobility networks.

Construction Monitoring Solutions

- Location-based monitoring and mapping tools supporting construction site operations, asset tracking and infrastructure planning.

Vehicle Monitoring System

- GPS-based platform providing real-time vehicle tracking, speed monitoring, fuel analysis and driver behavior insights.

Personal Tracking Systems

- Technology solutions designed for monitoring individuals or assets using GNSS, sensors and communication networks.

Geospatial Data Analytics & Reporting

- Platforms providing route analysis, performance insights, operational analytics and data-driven decision support.

Geofencing and Security Monitoring

- Virtual boundary systems that generate alerts when vehicles or assets enter or exit predefined geographic zones.

ACHIEVEMENTS:

1. Major Projects:

- Handheld Navigator (DCIS Project - 2022)
- NavIC Atomic Clock (DCIS Project - 2023)
- DGNS Station (DGLL - 2022)
- Buoy Monitoring System (DGLL - 2023)
- Map Display System to Indian Army (Through BEL - 2023)
- Marine Receiver to Indian Army Patrolling boats (Through GSL - 2022)

2. Awards and Recognition:

- ELCINA - Best Startup of the year award (2023)
- Pandit Deendayal Upadhyaya Telecom Excellence Award (2023)

3. Industry Firsts: 12 nm Indigenous Multi-GNSS NavIC chip

4. Key Milestones: April 2023, Launch of 12 nm Indigenous Multi-GNSS NavIC chip.

5. Major Inventions: Elena NavIC Handheld Navigator with 5G technology

INVESTORS/PARTNERS:

1. Industry Partnerships: ISpA, SIA, MSME, SIDM, MCCIA

2. Academic Collaborations:

- IIT- Tirupati
- Christ University
- MS Ramiah Institute
- Rajagiri School of Engineering & Technology
- Kristu Jayanthi College
- Burdwan University
- SRM University

3. Government Collaborations: ISRO, TCOE, CDOT

4. International Tie-ups: PSN (Indonesia)

KEY MANAGEMENT:

- Lt Col V Shanmuga Velan
CTO & Founder



COMPANY PROFILE

GalaxEye (legal name: Galaxeye Space Solutions Private Limited) is a Bengaluru-based Indian space-tech startup developing advanced Earth observation and satellite imaging technologies. It was founded in 2021 by a team of engineers and IIT Madras alumni emerging from Team Avishkar Hyperloop and has quickly become one of India's most prominent new space ventures.

GalaxEye's mission is to redefine Earth observation (EO) data by building satellites that deliver high-resolution, all-weather, day-and-night imagery for real-time analytics with its proprietary SyncFused OptoSAR Technology, this technology integrates both Synthetic Aperture Radar (SAR) and multispectral (MSI) optical imaging sensors on a single satellite which eliminates the need for separate data fusion and delivers inherently aligned, richer datasets for customers.

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

105 as on December 2025

CURRENT REVENUE/FUNDING:

- Raised Funding amounting to USD 14.5 Mn

CORE DOMAIN:

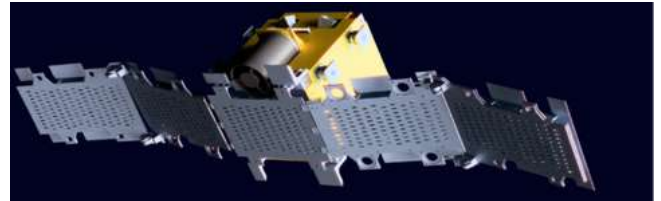
- Earth Observation (EO)

INVESTORS/PARTNERS:

- Infosys
- MountTech Growth Fund (Kavachh)
- Speciale Invest
- Mela Ventures
- ideaForge
- Rainmatter
- Ors

PRODUCTS AND SERVICES:

- **Mission Drishti:** indigenously developed IP synchronizes both these sensors onto the same platform. This ensures all-time all-weather intuitive imagery - a comprehensive dataset, providing the best of both worlds.



Mission Drishti Enables:

- **Assured Mission Reliability** - Never let cloud cover or darkness dictate your operational timeline. Our SyncFused OptoSAR sensor approach guarantees you can acquire critical imagery when you need it most, providing an uninterrupted stream of intelligence for time-sensitive missions.
- **Unparalleled Contextual Intelligence** - Move beyond pixels to true understanding. SyncFused OptoSAR images allow you to identify objects and detect changes with a level of confidence that a single sensor cannot provide.
- **Accelerated and Simplified AI Training** - Training AI models on SAR alone is tough. Our fused imagery offers intuitive visual clarity that speeds up dataset labeling and slashes model development time and cost for ATR and change detection.



The SyncFused OptoSAR™ Technology Stack

SyncFused OptoSAR™ is more than just a sensor; it's an end-to-end system of hardware and software designed to work in perfect harmony.

We engineered a proprietary payload that houses both an X-Band SAR sensor and a 7-band multispectral imager on a single, thermally-stable optical bench. This physical co-location is the first step in eliminating parallax error at the source.



AI-Powered Fusion Algorithms

Our onboard edge computer and ground-based software uses AI models for sub-pixel co-registration and jitter correction. These algorithms ensure that every single data point from both sensors is captured and processed as part of a single, unified dataset.



SyncFused OptoSAR™ Advantage: Two Sensors, One Platform

Mission Drishti's primary innovation is its SyncFused OptoSAR™ payload, which co-locates a high-resolution SAR sensor and a 7-band multispectral imager on a single satellite. This is the world's first commercial multi-sensor satellite combining SAR and MSI.

By capturing both data streams in a single pass, we eliminate the need for data fusion from separate sources, delivering an inherently aligned, analysis-ready product with three times more information than a standalone sensor.

SERVICES:

Defence & Intelligence

- Real Time Monitoring at Strategic Areas of Interest
- Unambiguous Target Verification
- Change Detection & Localization

Agriculture

- Crop Health Tracking
- Monitor Vast Farms At Scale
- Accurate Yield Predictions

Infrastructure Monitoring

- Critical Infrastructure & Asset Monitoring
- Early Detection of Disruptions
- Supply Chain & Commodity Intelligence

Disaster Management

- Rapid Damage Mapping in Disaster Zones
- Damage & Infrastructure Risk Assessment
- Faster Relief, Recovery & Insurance Settlements

KEY MANAGEMENT:

- Suyash Singh
CEO & Co-Founder



- Denil Chawda
CTO & Co-Founder



- Pranit Mehta
VP - Sales Ops & Co-Founder



- Kishan Thakkar
VP - Engineering & Co-Founder



- Rakshit Bhatt
VP - Product & Co-Founder



- Dr. Deb Jyoti Pal
Sr. VP - Business Development (Commercial & Civil Governments)



ACHIEVEMENTS:

- Q1 2026: GalaxEye will be launching its maiden satellite “Mission Drishti” with SpaceX onboard Transporter 16. This will mark it to be the world’s first Multi-sensor earth imaging satellite and India’s largest private satellite.
- December 2024: Successfully deployed and tested its GLX-SQ payload aboard ISRO’s PSLV Orbital Experimental Module (POEM-4), validating its SyncFusion Imaging System and SAR-optical integration capabilities in orbit, including operations in the South Atlantic Anomaly.
- November 2024: Raised \$10 million in Series A funding, backed by Mela Ventures, Speciale Invest, Samarthya Investment Advisors, ideaForge and Infosys.
- September 2024: Infosys invested up to ₹17 crore (~\$2 million) through its Innovation Fund, acquiring a minority stake and collaborating on satellite data fusion and AI-driven analytics.
- August 2024: Secured \$6.5 million in early funding to advance its multi-sensor payload technology and satellite launch roadmap.
- May 2024: Signed an MoU with IN-SPACe, becoming the first beneficiary of its co-working and testing facilities; successfully tested SAR-based aerial surveillance technology.
- September 2023: Partnered with ideaForge to develop UAV-based Foliage Penetration (FOPEN) radar systems for security applications.
- December 2022: Raised \$3.5 million in Seed funding, led by Speciale Invest.

COMPANY PROFILE

Geo Solutions India is a geospatial technology company founded in 2023, focused on delivering advanced GIS, remote sensing and spatial analytics solutions for government, defence and commercial clients. The company is led by Mr. Khushpal Dahiya (CEO), who guides its mission to integrate geospatial intelligence with real-world decision-making.

Geo Solutions India specialises in geospatial data integration, mapping platforms, analytics dashboards and custom software development that enable enhanced situational awareness, infrastructure planning, environmental monitoring and mission support. Its services leverage modern GIS tools, satellite imagery and data engineering to support spatial decision workflows across sectors.

YEAR OF ESTABLISHMENT:

2023

NUMBER OF EMPLOYEES (APPROX.):

- 8 employees

CURRENT REVENUE/FUNDING:

- ₹25 Lakh

CORE DOMAIN:

- Geospatial Data Services & GIS Solutions
- Remote Sensing & Spatial Analytics

PRODUCTS AND SERVICES:

1. GIS Enterprise Solutions

Deployment & Customization of GIS platforms including:

- Desktop Customization & Modelling
- Machine Learning & AI (Raster & Vector)
- Full & Semi-Automation of Workflows
- Server-based Spatial Interaction of Objects
- Alert Systems with Pre-Defined Parameters
- Web Portal with API Integration
- Info-graphs & Information Filtering
- Thematic Mapping
- Mobile Applications with:
 - On-the-Go Digitization
 - Online & Offline Mode
 - Live Field Updates
 - Geo-Tagged Photographs

2. Surveying & Data Capturing

Coverage across:

On Surface:

- Topography
- Revenue Mapping
- Base Maps

Sub-Surface:

- Utilities - Water, Sewage, Power, Communication

Above Surface:

- 3D Buildings
- Power Utilities

Technologies Used:

- Drone (Normal & Stereo)
- LiDAR (Normal + RGB)
- Aerial Photography (Planimetry)
- Ground Penetrating Radar (GPR)

3. Data Generation & Processing

- LiDAR Data Processing
- Stereo Satellite Data Processing
- CAD/SCAN to BIM
- 2D & 3D Data Capturing
- Utility Mapping
- GIS Basemaps
- Topography & Hydrology
- Catchment Area Mapping
- Drainage Network Analysis
- Accumulation & Pondage Area Mapping

4. Analytics & Mapping

- Topographic Mapping
- Utility Mapping
- Surface Hydrology
- Analytics with Info-graphs
- Customized Maps & Reports

5. Project Management Consultancies

- Agile & SCRUM Framework Based Project Management
- System Integration Approach
- Monitoring, Assessment & Analytics Systems
- Stakeholder Integration
- ROI-driven Delivery Model

6. Integrated GIS Platform

Supports:

- Asset Management
- Operations
- Monitoring
- Analytics
- Governance
- Policy Implementation

Enables:

- Mobile App Data Sync
- Primary & Secondary Data Ingestion
- Customized Reporting & Mapping

ACHIEVEMENTS:

- Successfully delivered geospatial analytics and GIS solutions to multiple government and private sector clients within the first two years of operations.
- Built and deployed custom spatial platforms for infrastructure planning and environmental monitoring projects across India.
- Recognized for rapid growth in revenue since inception and expanding service delivery across key sectors.
- Developed advanced remote sensing and mapping tools that support real-time decision support and spatial intelligence workflows.
- Established collaborations with defence, urban planning and resource management agencies, enhancing national and regional geospatial capabilities.
- Recognized under Startup India (DIPP Registered) and MSME (UDYAM Registered), strengthening its innovation and compliance credentials.
- Achieved major quality and process certifications:
 - CMMI L3 Certification
 - ISO/ICE 27001:2022
 - ISO 9001:2015

INVESTORS/PARTNERS:

- ESRI
- TCIL
- Almondz
- Whiteland
- Ministry of Panchayati Raj
- M3M
- Godrej Properties
- DLF
- Ministry of Science and Technology
- CSIR
- CISF
- HUDCO
- Govt Of Haryana, etc.

KEY MANAGEMENT:

- Kushpal Dhaiya
CEO



- Narender Kumar
COO & CTO - Organization
Operations/Technical
Marketing & Planning



- Dr. Mamta
Chief Advisor Research &
Development



- Amit (Military Veteran
Chief Mentoring Officer
(CMO)



COMPANY PROFILE

GarudaUAV is a leading platform based drone survey & inspection company in India. We automate manual processes to make your operations and maintenance tasks efficient, expedient and economical.

Our services include drone surveying, mapping, visual and thermal inspection to solar plants, transmission lines & utilities, wind turbines, thermal plants, factories, dams and hydro power projects, telecom towers, coal & mine. We also offer construction progress monitoring services, post-disaster surveys and videography services for highways, rail and metro projects, oil and gas pipelines and plants, construction sites and general insurance assets.

YEAR OF ESTABLISHMENT:

2017

NUMBER OF EMPLOYEES (APPROX.):

- 237 employees as on Aug 31, 2025

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹71.3Cr as on Mar 31, 2025
- Funding: raised over \$31 million (~₹250+ crore)

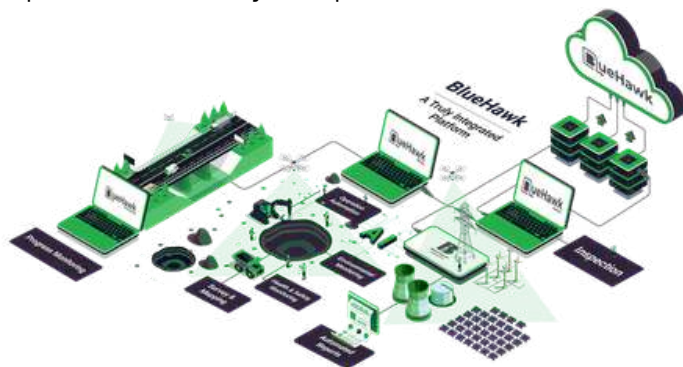
CORE DOMAIN:

- Unmanned Aerial Vehicles (UAVs) / Drone Technology
- Drone-as-a-Service (DaaS)

PRODUCTS AND SERVICES:

BlueHawk Enterprise Business Suite

Bluehawk is the integration of various feature applications, services and AI technology into a cohesive system that works seamlessly together. It involves connecting various software components, including artificial intelligence algorithms, to create a fully functional application that meets specific business needs. This approach can provide numerous benefits, including AI-powered digitization, streamlined workflows, improved data accuracy through machine learning and an enhanced user experience driven by AI capabilities.



BlueHawk Core

Bluehawk Core is the combination of different feature applications and services into a cohesive system that works seamlessly together. It involves connecting various software components to create a fully functional application that meets specific business needs. This approach can provide numerous benefits, including digitization, streamlined workflows, improved data accuracy and enhanced user experience.



BlueHawk Mines

Introducing BlueHawk Mines Redefining industry standards; our holistic solution to ensure environmental responsibility, efficiency and safety.

A specialized solution for the mining sector, enabling:

- Surveying, mapping and inspection
- Environmental monitoring (air, water, noise, gas)
- LiDAR-based volume measurement and payload tracking
- Vehicle tracking, weighbridge and RFID integration
- Health, safety and incident management systems
- Real-time analytics and command center operations





BlueHawk Inspection

The BlueHawk Inspection is a cutting-edge AI enabled cloud based digital platform designed to streamline and enhance the process of inspecting and maintaining Transmission and Distribution towers, Poles, Chimney, Building in the utility industry. This comprehensive web application combines data storage capabilities with AI-enabled problem identification & automated report generation to reduce manual effects to ensure efficient inspection management and improved decision-making.



INVESTORS/PARTNERS:

- Venture Catalysts
- Ocgrow Ventures
- Nagarajan Seyyadurai
- Narotam Sekhsaria Family Office

Major partners include:

- Lockheed Martin
- Airbus Helicopters
- Cognizant
- HAL

KEY MANAGEMENT:

- Atanu Sinha
CEO



- Sudhir Menon
Chairman



- Subodh Menon
Managing Director



ACHIEVEMENTS:

2025

- Expanded into advanced aerospace and defence-grade drone systems with launch of indigenous UAV platforms supporting strategic and high-altitude operations
- Strengthened design and certification capabilities through partnership with Tata Elxsi for aerospace-grade engineering and validation
- Initiated large-scale investment (~₹100 Cr) to build India's first Drone City, aimed at creating a hub for aerospace R&D and innovation

2023-2024

- Secured 20+ patents (including global patents) in drone and aerospace technologies, strengthening IP portfolio in advanced aerial systems
- Expanded collaborations with key aerospace and research institutions including DRDO, HAL, IITs and global tech partners, enabling deeper integration into India's aerospace ecosystem
- Continued development of autonomous and AI-enabled aerial platforms for advanced applications including surveillance and high-end operations

2022

- Drone manufacturing facilities inaugurated under India's Make in India initiative, strengthening indigenous aerospace manufacturing capabilities
- Established position as a certified aerospace-grade UAV manufacturer with DGCA approvals and quality certifications

2021

- Collaborated with ISRO for experimental drone-based delivery of medicines and essentials, demonstrating integration of UAVs in space-agency operational environments
- Supported national disaster response operations (e.g., Uttarakhand rescue missions), showcasing capability in critical aerial operations aligned with strategic sectors

2015-2020 (Foundation Phase)

- Founded in 2015 with a focus on developing indigenous UAV technologies for defence, surveillance and strategic applications
- Built early capabilities in aerial systems, data intelligence and mission-critical drone operations, laying groundwork for entry into aerospace and strategic domains



COMPANY PROFILE

ICE Aero, the aerospace division of Inder Enterprises, specializes in the design and manufacturing of high-precision ground support equipment (GSE) and tooling for satellite assembly, integration and testing (AIT). The company provides solutions such as integration fixtures, satellite transport containers, AIT trolleys and zero-gravity simulation systems, ensuring safe and efficient handling of space hardware.

With strong capabilities in aerospace tooling and in-house machining, ICE Aero supports end-to-end project execution and is AS9100D Certified. Backed by collaborations with European partners, the company delivers advanced precision systems, contributing to India's growing space ecosystem under the Make in India initiative.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

- 28 employees

CURRENT REVENUE/FUNDING:

- Revenue: Not publicly disclosed / Not available
- External funding: No publicly disclosed funding rounds or investors

CORE DOMAIN:

- Mechanical Ground Support Equipment for Satellite

PRODUCTS AND SERVICES:

Ground Support Equipment for Satellites Assembly and Integration Fixtures

- Designed for safety and ease of use.
- Key Use Cases
 - Panel Integration Fixtures
 - Vertical Integration Fixtures
 - Manual 6 DOF integration Fixtures
 - Lifting Fixtures
- Custom designed as per requirement.



Satellite Transport Container (STC)

- Designed to keep your Space equipment safe on Earth.
- Key Features
 - Up to IP67 Rated
 - Small to large Payloads
 - Gaseous N2 purging
 - Drop Tested
 - Vibration Isolator
 - ESD Protections
 - Road and Air Shipping Compatible
- Custom designed as per requirement.



Zero G Simulation Jig For Solar Panels

- Designed to simulate Zero G conditions for Solar Panel Deployment mechanism testing.
- Near Friction-less motion
- Custom designed as per requirement.



From Our European Partners

- Imported and supported by ICE Aero.
- Micron Accuracy 6 DOF Hexapod Tables.
- Extra Large Satellite Transport Containers.
- ATEX Compatible (explosives) MGSES.
- Precision Optical MGSES / OGSES.
- High Precision Hexapod Table
- ATEX (explosives) Compatible MGSES
- High Precision Optical Alignment jigs



INVESTORS/PARTNERS:

- No publicly disclosed external investors or funding rounds

KEY MANAGEMENT:

- Chiranjeev Singh Rao
Director



Satellite Multi-purpose Trolley (AIT Trolley)

- Designed for easy Assembly, Integration and Testing (AIT) Activities.
- Key Features
 - Rugged and Safe Design
 - FOS >2 (Yield) and >3 (Ultimate)
 - Up-Down and Rotation Freedom
 - Air skates for Ease of movement
 - Payload - 100 kg to 5000 kg
- Custom designed as per requirement.



ACHIEVEMENTS:

- Awarded Productivity Championship Award By Indian Machine Tool Manufacturing Association (IMTMA)
- Expertise in Aerospace Tooling and Fixture Manufacturing
- AS9100D Certified
- In-House Machining Capacity up to 8m x 4m
- Project Management team that can managed complete end-to-end supply chain



COMPANY PROFILE

Inbound Aerospace was established in 2025 by Dr Aravind I B, Vishal Reddy and Capt Abhijit Bhutey with the vision of developing a Low Earth Orbit-based autonomous, unmanned, free-flying, recoverable spacecraft for customers who want to conduct in-orbit technology demonstrations, microgravity research, or in-space manufacturing of products that have use cases back on Earth. Once the spacecraft is injected into the Low Earth Orbit, it facilitates the operation on the customer's payload. On completion of the orbital experiments the spacecraft de-orbits and lands autonomously on a runway to return the finished products to customers. This allows for post-flight inspection, analysis and further development strategies. The spacecraft has multiple use cases especially in the life science and material science domains for producing low volume high value products.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

24 employees

CURRENT REVENUE/FUNDING:

- 9 Cr INR

CORE DOMAIN:

- Recoverable and Reusable Spacecraft

INVESTORS/PARTNERS:

- Speciale Invest
- Piper Serica

PRODUCTS AND SERVICES:

Recoverable Spacecraft, Precision Aerial Delivery Systems



Figure 1- Spacecraft.



Figure 2 - PADS

Our lifting-body spaceplane delivers:

- Extended Microgravity - Weeks of uninterrupted microgravity time for comprehensive research and experiments
- Autonomous Operation - No human interference - fully automated systems ensure consistent conditions
- Smooth Re-entry -Gentle 2G re-entry versus 5G+ in traditional capsules, protecting sensitive experiments
- Precision Landing - Runway landing capability anywhere on Earth with pinpoint accuracy
- Rapid Turnaround - Quick processing for time-sensitive experiments and reduced mission delays
- Cost-Effective Access - Affordable space-based research platform with reusable technology

ACHIEVEMENTS:

- Finalists at S-Booster 2024 contest at Tokyo
- September 27, 2024: Recognized as the Pitch Fest Runner-Up at the NIRMAAN IITM Demo Day held at the Sudha & Shankar Innovation Hub, IIT Madras, for its impactful innovation in space technology.
- July 11, 2025: Presented the concept of a fully autonomous, reusable re-entry vehicle to the Hon'ble National Security Advisor of India, Shri Ajit Doval, KC. The discussion highlighted autonomous microgravity experiments and future-forward orbital platforms beyond the Kármán line.
- 2025: Raised over \$1 million in pre-seed funding, led by Speciale Invest with participation from Piper Serica, to develop autonomous, reusable re-entry vehicles for in-orbit experiments, microgravity research and commercial space manufacturing.
- Technology Development Milestone: Developing spacecraft designed for cost-effective, repeatable and safe return of payloads conducting in-orbit experiments and manufacturing, addressing the growing demand for microgravity research platforms amid the planned ISS decommissioning by 2030.

KEY MANAGEMENT:

- Dr Aravind I B
CEO, CTO



- Vishal Reddy
COO



- Abhijit Bhutey
CSO, CBO



COMPANY PROFILE

The Indian Technology Congress Association (ITCA) is a Bengaluru-based, not-for-profit professional society advancing India's NewSpace ecosystem by enabling large-scale collaboration between industry, academia and research institutions. ITCA is nationally recognized for pioneering student-centric satellite missions and democratizing access to space engineering. ITCA provides end-to-end mission support from conceptual design and subsystem development to integration, testing, launch facilitation and ground-station operations. ITCA ensures students gain hands-on experience across the "Space Port to Ground Station" lifecycle. Through its flagship initiatives, ITCA has built one of the world's largest distributed student satellite development ecosystems, empowering thousands of young engineers and strengthening India's future space workforce.

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

17 core team members, supported by a national network of experts from ISRO, DRDO, academia and allied industries

CURRENT REVENUE/FUNDING:

- Funded through memberships, corporate R&D, institutional satellite projects, satellite products and capacity-building programs.

CORE DOMAIN:

- Space Technology Capacity Building
- Student Satellite Design & Development- CubeSats
- Ground Control Stations
- International Technology Transfer

PRODUCTS AND SERVICES:

75 Student Satellites Mission (75SSM)

A national movement to launch 75 student-built satellites (2022-2027), creating distributed satellite design capability across India.

Indo-Israeli Nanosatellite Programme

Strategic collaboration with Israeli aerospace experts to provide world-class nanosatellite design mentorship.

Institutional Space Labs & Ground Stations

Deployment of Small Satellite Ground Stations and SpaceLabs enabling real-time tracking, telemetry and data reception.

Capacity Building Workshops

Training programs on Systems Engineering, Mission Design and CubeSat development



ACHIEVEMENTS:

2021

- UNITYSat constellation (3 Nos. 0.3U Satellites) launched on PSLV-C51 on 28 February 2021.

2019

- Landmark Indo-Israeli MoU enabling high-performance nanosatellite design for Indian academia.

Major Milestones

- Consortium of 40+ Indian universities, forming a globally significant student-driven space research cluster.
- 15 satellites under development across 15 institutions.
- 3 satellites launched
- 10,000+ students directly trained; 300,000+ students reached through outreach.

INVESTORS/PARTNERS:

National:

- State government
- IN-SPACe
- ISRO
- NSIL
- Space industry
- leading Indian Engineering Educational Institutions

International:

- Global Space industries
- TMISat-Israel
- University Space Engineering Consortium (UNISEC)
- World CanSat / Rocketry Consortium (WCRC)

KEY MANAGEMENT:

- Dr. L. V. Muralikrishna Reddy
President



- Dr. K. Gopalakrishnan
Secretary General



COMPANY PROFILE

InspeCity Space Labs is a space technology company focused on enabling a sustainable orbital ecosystem through advanced in-orbit servicing solutions. The company is developing next-generation technologies to support satellite systems, ensuring their longevity, efficiency and environmental sustainability in an increasingly congested space environment. Its mission is aligned with global efforts to build a cleaner, safer and more resilient space infrastructure that supports communication, navigation and security applications.

InspeCity's core focus lies in satellite life extension and in-orbit services, leveraging capabilities in propulsion, robotics and autonomous operations. The company is developing eco-friendly propulsion systems aimed at reducing space debris and minimizing environmental impact, along with robotics-based servicing technologies that enable inspection, repair and operational support of satellites. A key area of innovation is in Rendezvous, Proximity Operations and Docking (RPOD), which allows for precise tracking, navigation and docking of spacecraft to perform in-orbit servicing tasks such as refueling and maintenance.

YEAR OF ESTABLISHMENT:

2022

NUMBER OF EMPLOYEES (APPROX.):

- 47 as on Aug 31, 2025

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹59.5L as on Mar 31, 2025
- Total Funding: \$7.21M in 5 rounds

CORE DOMAIN:

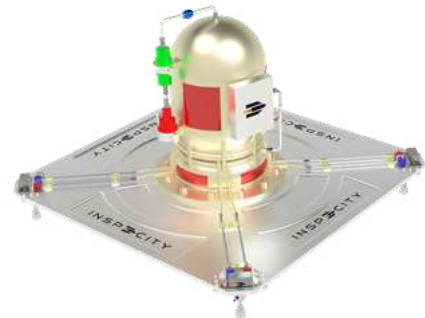
- Satellite and Subsystems: Propulsion systems, Inorbit servicing

PRODUCTS AND SERVICES:

GITA | Green Impulse Transmitter

GITA's eco-friendly propulsion system drives VEDA and other systems, ensuring efficient satellite servicing with minimal environmental impact, paving the way for a sustainable space future.

- Refuellable, easy to source propellants
- High Thrust, Higher Impulse
- Instant response capabilities



RAMA | Remotely Actuated Motorized Arm

RAMA, with its multi-degree-of-freedom design, performs targeted repairs and diagnostics on satellites, reducing costly replacements and enhancing lifespan.

- Multi-DOF design for flexibility
- Integrated sensors for enhanced functionality
- Seamless integration with RIG and VEDA



CHAKSU | CompreHensive Artificial intelligence enhanced Satellite Tracking Sensor Unit

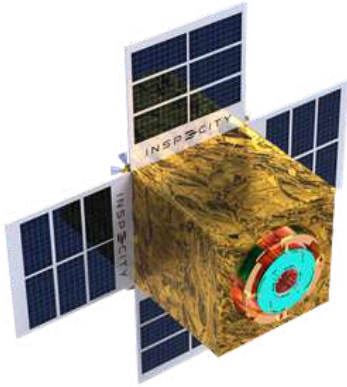
- CHAKSU's real-time tracking and AI-enhanced navigation guide RIG and VEDA with precision, ensuring accurate docking and successful satellite servicing.
- Real-time tracking capabilities
- AI-enhanced navigation
- Seamless unification with servicing systems



RIG | Robotically Inserted Guidance System

RIG autonomously attaches to satellites, performing critical repairs and upgrades with high-precision docking and real-time tracking, ensuring satellites operate longer and more efficiently.

- Autonomous operation
- High-precision docking
- Compatibility with various satellite models



VEDA | Vehicle for Life Extension and De-orbiting Activities

VEDA transports RIG and RAMA to their destinations, powered by the eco-friendly GITA propulsion, ensuring reliable satellite maintenance and life-extension.

- Specialized design for satellite servicing
- Advanced propulsion systems
- Robust navigation capabilities



SERVICES

1. Satellite Life-Extension Services

- In-orbit repair, upgrades and maintenance of satellites
- Extends operational lifespan and reduces replacement costs

2. In-Orbit Servicing & Maintenance

- Robotic servicing using RIG and RAMA
- Autonomous docking, inspection and intervention

3. Satellite Refueling Services

- Refueling support using eco-friendly propulsion systems
- Enhances mission duration and operational efficiency

4. Rendezvous, Proximity Operations & Docking (RPOD)

- Precision navigation and docking using CHAKSU and RIG
- Safe and efficient satellite approach and interaction

5. Orbital Transportation Services

- Deployment of servicing systems via VEDA vehicle
- Transport of tools and systems for in-orbit operations

6. Space Sustainability & Debris Reduction

- De-orbiting capabilities through VEDA
- Reduction of space debris and optimization of orbital resources

ACHIEVEMENTS:

2025

- Secured \$5.6 million seed funding, strengthening capabilities in in-orbit satellite servicing and sustainability technologies
- Published a joint white paper with Orbital Lasers on integrated space laser and robotics technologies, advancing ISAM (In-Space Assembly, Servicing and Manufacturing) capabilities
- Expanded focus on robotics, propulsion and RPOD technologies, positioning itself in the global in-orbit servicing ecosystem

2024

- Signed MoU with Orbital Lasers to develop laser-mounted satellite systems for ISAM applications, marking entry into advanced in-space servicing technologies
- Selected as winner in iDEX Prime X Challenge, validating its innovation in defence and space technologies
- Advanced development of space-grade robotic arm, LiDAR and EO sensor systems, strengthening autonomous servicing and tracking capabilities

2023

- Raised \$1.5 million in early funding, enabling initial development of in-orbit servicing technologies
- Signed the 250th contract under iDEX (Innovations for Defence Excellence), marking a major milestone in India's defence-space innovation ecosystem
- Selected in TACC+ (Technology Acceleration Programme), supporting growth in deep-tech and space innovation
- Recognized among leading Indian spacetechn startups by industry platforms, highlighting its role in emerging ISAM and sustainability domain

INVESTORS/PARTNERS:

International Technology Partner

- Orbital Lasers
 - Collaboration on laser-mounted satellite systems and ISAM technologies

Government & Defence Ecosystem

- Innovations for Defence Excellence (iDEX)
 - Contract support and innovation funding
- Indian defence innovation ecosystem (via iDEX challenges and Prime X program)

Technology & Research Ecosystem

Collaboration through accelerator programs such as:

- TACC+ / ISTSSP (Technology Acceleration Programs)

KEY MANAGEMENT:

- Arindrajit Chowdhury
CEO



COMPANY PROFILE

KaleidEO Space Systems is satellite asset operating startup owned by SatSure Analytics India and is one of the few private Indian companies to design and develop a high-resolution optical earth observation payload from scratch, which was successfully aerial tested.

KaleidEO focuses on demand-driven vertical integration, providing tailored innovation across hardware, data infrastructure and insights generation based on last mile demands. It creates innovative EO Infrastructure-as-a-Service (EO-IaaS) model, to design payloads, builds and delivers data and insights infrastructure, while manufacturing, mission operations and downlinking through strategic ecosystem partnerships.

KaleidEO is owned by SatSure which is a Deep-Tech, Decision Intelligence company that leverages satellite imagery and AI, providing valuable insights into industries such as agriculture, banking, insurance and infrastructure. Their solutions empower clients to make data-driven decisions and drive sustainable development.

YEAR OF ESTABLISHMENT:

2022

NUMBER OF EMPLOYEES (APPROX.):

- not available

CURRENT REVENUE/FUNDING:

- Annual Revenue: INR 9.65 crore (March 2024)

CORE DOMAIN:

- Earth Observation (EO)

PRODUCTS AND SERVICES:

OPT 100

A 1 meters multispectral, wide 65 kms swath imager to cover large area with 6 bands



Specifications for KaleidEO OPT-100	
Images Specs	
Resolution at 575 km orbit	1 m GSD in PAN (Super resolved by Half-pixel shift at hardware level) 2.5 m in MS bands 4.3 m in Red Edge
Swath	65 km
Image size	Snapshot - 65 x 65 km Strip - Custom strip length
Spectral Bands	9 Bands (Red, Green, Blue, PAN, Red Edge-1, Red Edge-2, NIR, NIR2)
SWR at Sentinel-2 reference radiance	> 85.1 in PAN > 100.1 in MS bands > 75.1 in Red Edge
Physical Specs	
Mass and Volume of Optical Tube Assembly	< 50kg < 400x400x1000mm
Mass and Volume of the electronics module	< 4 kg < 100 x 375 x 200
Electronics	
Detector resolution	3.2 μ m
Storage capacity	1Tb
Bit Depth	10-bit
FPS	28
Image Compression	Lossless
Interfaces	Command Interface, CAN Data Interface, Space Wire
Power Supply	Power < 65W
Power Consumption	Average power in snapshot mode: < 65 W Peak power in snapshot mode: < 80 W

OPT 50:

A 0.5 meters high resolution submeter imager

- Designed for High Resolution Object Identification
- 11 km Swath
- 6 bands (R, G, B, NIR, RedEdge and PAN)
- Currently at TRL 3



Specifications for KaleidEO OPT-50		
Images Specs		
Hadir GSD (at 500 km)	PAN	0.5 m (Super resolved by Half- pixel shift at hardware level)
	Multispectral	2 m (option to PAN sharpen)
Spectral bands	6 bands (R, G, B, NIR, RedEdge and PAN)	
Swath	11 km	
Bit Depth	12 Bit	
External volume	500 x 850 mm	
Mass	35 kg	
Power	50 W	

ACHIEVEMENTS:

- August 2023: KaleidEO, a subsidiary of SatSure Analytics India, became the first Indian company to demonstrate edge computing in space, generating actionable insights directly from satellite imagery in orbit.
- September 2023: SatSure announced an investment plan of \$35 million to develop and launch four Earth observation satellites (~150 kg each) under the KaleidEO programme to build an indigenous imaging constellation.
- March 2024: KaleidEO partnered with ReOrbit to integrate advanced satellite networking and mission operations technologies for Earth observation constellations.
- April 2024: Successfully aerial-tested a high-resolution optical Earth Observation payload, validating imaging performance and stability at 22,000 feet, becoming one of the first Indian private companies to test such technology.
- May 2024: Developed an indigenously designed high-resolution EO payload capable of near 1-metre ground sampling distance (GSD) with wide-area coverage, marking a milestone in private-sector satellite payload development.
- September 2024: Introduced a next-generation Earth observation payload capable of capturing ~1 m resolution imagery with a 65 km swath, designed to support scalable analytics and large-area monitoring.
- January 2025: KaleidEO was selected as part of the Indo-US Defence Acceleration Ecosystem (INDUS-X) programme, strengthening collaboration in space and defence technologies.
- May 2025: KaleidEO's satellite imaging capabilities supported geospatial intelligence analysis during Operation Sindoor, demonstrating the role of commercial EO data in national security and strategic situational awareness.
- August 2025: KaleidEO joined the consortium with Pixxel, Dhruva Space and PierSight under IN-SPACe's ₹1,200-crore Earth Observation Public-Private Partnership (EO-PPP) programme to develop India's first privately operated EO satellite constellation.
- July 2024 - 2026 (Planned): KaleidEO is developing a constellation of four edge-computing Earth observation satellites, scheduled for launch in 2026, capable of delivering daily revisit imagery and on-orbit analytics.
- September 2025: KaleidEO leadership represented SatSure at the International Astronautical Congress 2025, engaging global space stakeholders on Earth observation and sustainability solutions.

INVESTORS/PARTNERS:

- Kotak
- ABD Ventures
- Force Ventures
- Baring Private Equity Partners India
- Nurturing Ventures

KEY MANAGEMENT:

- Pradeep Basu
CEO, SatSure



- Rashmit Sukhmani
CTO, SatSure



- Arpan Sahoo
CEO, KaleidEO



- Akash Yalagach
CTO, KaleidEO



- Sarvesh Kurane
Head of Marketing



- Col V Ramanathan
VP - Strategic Liaison



COMPANY PROFILE

Kawa Space is an Indian space technology company focused on building satellite-based intelligence infrastructure, geospatial data platforms and radio-frequency geospatial intelligence (RF GEOINT) solutions for defence, national security and strategic decision-making. Kawa Space develops software-driven geospatial intelligence platforms that combine satellite imagery, radio-frequency sensing and AI analytics to provide actionable intelligence for governments, defence agencies and enterprises.

YEAR OF ESTABLISHMENT:

2019

NUMBER OF EMPLOYEES (APPROX.):

- 97 employees (March 2025)

CURRENT REVENUE/FUNDING:

- Annual Revenue: unavailable
- Total Funding: USD 1.87 million in 4 rounds

CORE DOMAIN:

- Intelligence, Surveillance and Reconnaissance (ISR)

PRODUCTS AND SERVICES:

Maritime Domain Awareness (MDA) Platforms

Kawa Space provides advanced maritime intelligence solutions through platforms such as Battle.fish, built on the Overwatch Intelligence MDA platform. These tools help security agencies analyse grey-zone maritime activities using satellite data, AI analytics and intelligence tools. The platform enables analysts to monitor maritime traffic, detect suspicious vessels and integrate intelligence from multiple sources including SAR imagery and RF signals.

SIGINT (Signals Intelligence) Solutions

Kawa Space develops systems that capture and analyse radio communication signals from space. These capabilities allow defence and intelligence agencies to monitor communication transmissions, identify signal patterns and support strategic surveillance operations. The company integrates satellite data, sensors and machine-learning analytics to extract actionable intelligence from signal sources.

ELINT (Electronic Intelligence) Solutions

The company provides electronic intelligence solutions that detect and analyse non-communication electronic emissions, such as radar signals or electronic systems. These solutions are used for defence monitoring, electronic warfare analysis and situational awareness by identifying the location and behaviour of electronic emitters.

Mission-as-a-Service (MaaS)

Kawa Space offers end-to-end mission services that include satellite tasking, data acquisition, analytics and intelligence delivery. Through its software platforms and satellite networks, organisations can access geospatial intelligence without operating their own satellites.

RF GEOINT-as-a-Service

Kawa Space provides Radio Frequency Geospatial Intelligence (RF GEOINT) services through satellite constellations capable of collecting RF signals up to 18 GHz. These signals are processed to geolocate emitters, monitor spectrum usage and track activities such as ships or communication infrastructure from space.

Satellite Data Fusion & Analytics Platforms

The company builds software platforms that integrate RF intelligence, satellite imagery and geospatial analytics to generate real-time intelligence insights for defence, government and commercial customers. These platforms enable users to task satellites and convert space-based data into actionable intelligence.

ACHIEVEMENTS:

- April 2023: Kawa Space was selected among 14 global startups for the Amazon Web Services Space Accelerator 2023 programme, gaining access to cloud infrastructure, mentorship and technical support to scale satellite data analytics and RF geospatial intelligence capabilities.
- 2023: Expanded development of RF GEOINT and satellite intelligence platforms, enabling the collection and analysis of radio-frequency signals from space to detect communication emitters and monitor spectrum activity for defence and strategic intelligence applications.
- 2023-2024: Developed and deployed Overwatch Intelligence, a satellite-powered maritime intelligence platform designed to support maritime domain awareness (MDA) by integrating satellite imagery, RF data and AI-driven analytics.
- 2024: Launched Battle.fish, an investigative maritime intelligence platform built on Overwatch Intelligence that enables analysts to monitor grey-zone maritime activities and detect suspicious vessels using satellite and RF-based geospatial intelligence.
- 2024-2025: Expanded capabilities in RF GEOINT-as-a-Service, enabling data collection from satellite constellations capable of detecting radio frequency emissions up to 18 GHz for geolocation and electronic intelligence applications.
- May 2025: Kawa Space's satellite imagery and geospatial intelligence tools supported analysis during Operation Sindoor, helping verify the impact of precision airstrikes on Pakistani airbases and demonstrating the operational role of commercial satellite intelligence in modern conflict monitoring.

INVESTORS/PARTNERS:

- Kawa Space has 18 institutional and 35 Angel Investors.
- Wellfound
- LetsVenture
- Astir Ventures

KEY MANAGEMENT:

- Kris Nair
CEO



COMPANY PROFILE

Kerala Spacepark (KSPACE) is a strategic initiative of the Government of Kerala, established in 2023 under the Department of Electronics & IT to promote the establishment of industries in the space technology sector and allied domains of aviation and defence. KSPACE is positioned as a key driver of high-value, manufacturing-led growth, leveraging Kerala's strong ISRO ecosystem and enabling industry participation, innovation, and commercialization in the space sector.

YEAR OF ESTABLISHMENT:

2023

NUMBER OF EMPLOYEES (APPROX.):

- 11-50 employees

CURRENT REVENUE/FUNDING:

KSPACE has enabled the development of a strong industrial ecosystem. The cumulative impact of affiliated companies includes approximately:

- ₹1400+ Cr capital investment
- ₹875+ Cr turnover
- 6000+ employment

CORE DOMAIN:

- Space Ecosystem Development

PRODUCTS AND SERVICES:

1. Space Infrastructure Ecosystem

- Development of space parks and industrial clusters
- Facilities for manufacturing, assembly and testing of space systems

2. Innovation & Incubation Platform

- Support for startups and early-stage companies
- Access to infrastructure, mentorship and technical ecosystem

3. Talent & Skill Development Programs

- Training and workforce development in collaboration with leading institutions
- Creation of a skilled talent pipeline for the space sector

SERVICES

1. Industry Facilitation & Collaboration

- Enabling partnerships with ISRO, IN-SPACe and NSIL
- Acting as a bridge between government, academia and private industry

2. Business & Investment Facilitation

- Support for companies establishing operations in the space sector
- Assistance with policy, approvals and ecosystem access

3. R&D and Technology Enablement

- Promoting research and development in space technologies
- Encouraging academia-industry collaboration

4. Cluster Development & Ecosystem Building

- Creation of aerospace and space-tech industrial clusters
- Attracting domestic and global players into the ecosystem

ACHIEVEMENTS:

2025

- Advanced collaboration plans with Indian Space Research Organisation (ISRO), IN-SPACe, and NewSpace India Limited (NSIL) to strengthen industry participation in India's space sector
- Continued development of Kerala as a leading space industry hub, leveraging the strong ISRO ecosystem in Thiruvananthapuram
- Progress on Kerala Aerospace Industrial Policy 2025 (under development)
- Expansion of Advanced Drone & UAV R&D initiatives
- Strengthening strategic partnerships with ISRO, IN-SPACe, and NSIL
- Development underway of a 20-acre SpaceTech Cluster at Technopark Phase IV, including Common Facility Centre (CFC) and R&D Centre (~₹240 Cr)
- Allocation of ₹600 Cr KIIFB funding for the Veli Aerospace Complex

2024

- Strengthened ecosystem development initiatives to attract private space companies and startups following sector liberalisation
- Promoted collaboration between academia (including Indian Institute of Space Science and Technology) and industry to build a skilled workforce
- Expansion of multi-location aerospace clusters across Kerala (Pallippuram, Veli, Valiamala, Thonnakkal, Kochi, and Integrated Defence Industrial Park)
- Growth of a strong ecosystem comprising 70+ affiliated companies and 29 academic partners
- Formation of industry consortia to enable participation in high-value space and aerospace projects

2023

- Accelerated efforts to position Kerala as a key node in India's emerging private space ecosystem
- Leveraged proximity to ISRO centres (VSSC, LPSC, IISU) to strengthen industry linkages
- Initiated strategic MoUs with ISRO centres and national institutions
- Strengthened foundation for a large-scale project pipeline (~₹2,630 Cr investment potential)

INVESTORS/PARTNERS:

Principal Funding & Investment Bodies

- **Government of Kerala:** The primary stakeholder providing direct budgetary support, including **₹57.5 crore** in the 2026 State Budget.
- **KIIFB (Kerala Infrastructure Investment Fund Board):** Sanctioned **₹600 crore** for land acquisition to establish the Aerospace Control Systems Centre.
- **NABARD:** Provided a **₹241-244 crore loan** to finance the construction of the R&D and Common Facility Centres at Pallippuram.

Private Industry Partners

- Ananth Technologies (ATL)
- Vinvish Technologies
- Aeroprecision
- CoreEL Technologies
- MathWorks
- Siemens

Government & Institutional Partners

- IN-SPACe
- NSIL
- ISRO
- Indian Institute of Space Science and Technology
- KELTRON
- STPI (Software Technology Parks of India)

KEY MANAGEMENT:

- Shri. G. Levin
Chief Executive Officer



- Smt. Gayathri K
Chief Finance Officer



- Shri. Dhanesh K
Manager (PMO/PRO)



COMPANY PROFILE

Kepler Aerospace was incorporated in 2018, dedicated to small satellite development, defense systems design, manufacturing and management. Its focus areas include small satellite configurations, R&D work, defense and biomedical sectors, manufacturing of space and mil-grade systems. EW systems for Next-Gen warfare. Consultancy services - on customer feedback looped sat-ops. Parallel incremental concept- hardware/software realization. Integration management for flexible customer based Cubesat systems. Systemized, Synchronized and modular subsystem designs. Total monitored contingency framework for 24x7 Backend support for Satellite operations.

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

- 2 employees as on Jul 01, 2024

CURRENT REVENUE/FUNDING:

- Annual Revenue: 6.45Cr as on Mar 31, 2025
- Government Grants: The company has received approximately ₹20 crore (~\$2.4M) in grants through the iDEX (Innovations for Defence Excellence) initiative.

CORE DOMAIN:

- Small Satellite Development
- Ground Station as a Service (GSaaS)

PRODUCTS AND SERVICES:

1. Satellite Platforms

- 1U-12U Modular Satellite Bus (MBS) - Scalable CubeSat platform supporting multiple payload configurations for Earth observation, communication and technology demonstration missions.

2. Satellite Subsystems

- Onboard Computer (OBC) - Space-grade computing system for satellite command, telemetry processing and mission control.
- Satellite Positioning Sensors - Sensors used for attitude determination and navigation in orbit.
- MEMS IMU Systems - Inertial measurement units used for spacecraft navigation and stabilization.
- Reaction Wheels - Precision actuators enabling three-axis satellite attitude control.
- Magnetic Torquers - Attitude control devices that use Earth's magnetic field for spacecraft orientation.
- AOCS Module (Attitude & Orbit Control System) - Integrated system for satellite stabilization and orbital control.
- Power Module - Power conditioning and distribution systems for spacecraft subsystems.
- Solar Panels - Satellite solar arrays for onboard power generation.

3. Satellite Communication Systems

- S-Band Transmitter/Receiver (TxRx) - Communication systems for telemetry, tracking and command (TT&C).
- X-Band Data Link - High-speed payload data downlink system for Earth observation missions.
- Proof-of-Life Transmitter - Low-power communication transmitter confirming satellite health after deployment.
- Inter-Satellite Communication Systems - Communication links enabling data exchange within satellite constellations.

4. Ground Segment Solutions

- Portable / Suitcase Ground Stations - Mobile ground station systems for satellite telemetry, tracking and command operations.

5. Satellite Constellation Solutions

- AIS CubeSat Constellations - Satellite systems for maritime vessel tracking using Automatic Identification System signals.
- ADS-B CubeSat Constellations - Satellite-based aircraft tracking using Automatic Dependent Surveillance-Broadcast signals.

ACHIEVEMENTS:

- November 2022: Installed Kepler ground station transceivers and TTC software systems to support new Indian Space Research Organisation ground stations in Bangalore, Port Blair and Jodhpur and enabled ground station telemetry, tracking and command operations at an ISRO partner facility in Mauritius.
- May 2025: Along with Kawa Space, Kepler Aerospace contributed satellite imagery intelligence supporting analysis during Operation Sindoor, providing independent verification of the impact of India's precision airstrikes on Pakistani airbases.
- July 2025: Signed a strategic MoU with Astrome to develop high-throughput multi-orbit satellite communication systems aimed at defence, disaster response and remote connectivity applications.
- July 2025: Announced plans for a six-satellite ISR constellation, designed as an autonomous swarm capable of detecting radio signals, thermal signatures and suspicious activities from orbit with rapid revisit times.
- September 2025: Signed a partnership agreement with Lets Comm (Taiwan) to integrate global ground station infrastructure through Kepler's Unified Command Center, enabling seamless satellite command, data downlink and remote sensing operations worldwide.
- September 2025: Under the same collaboration, Kepler Aerospace and Lets Comm agreed to co-develop Earth Observation (EO) and Intelligence, Surveillance and Reconnaissance (ISR) services and establish a national ground station facility in Taiwan to support sovereign satellite communications and intelligence services.

INVESTORS/PARTNERS:

- Indian Space Research Organisation (ISRO)
- Astrome
- Lets Comm (Taiwan)
- Kawa Space

KEY MANAGEMENT:

- Navneet Singh
CEO
- Kiran V Sharma
Chief Strategy Officer



COMPANY PROFILE

Kristellar Aerospace & Defense is an Indian innovator at the intersection of space technology, defense systems and advanced intelligence. Founded in 2021, the company aims to reduce entry barriers to space and strengthen national security through indigenous capabilities, delivering solutions across satellite systems, cognitive electronic warfare, counter-drone technologies, secure communications, data encryption and next-generation propulsion. Its flagship products-DNN Lab, TRINETRA, Satellite Systems, Secure Communication, Data Encryptor, Human-in-the-Loop AI-enabled UAV systems and Propulsion (HEAT/MEAT) enable defense forces, space agencies and strategic partners to address emerging threats such as stealth platforms, UAV swarms and contested electromagnetic environments.

Built on systems engineering, modular software-defined architectures and aligned with Atmanirbhar Bharat, the company focuses on indigenous development, rapid innovation and independence from foreign dependencies. With facilities including Odisha's first Deep Neural Network Lab (ORION, Bhubaneswar, June 2025), Kristellar integrates AI-driven autonomy and resilient systems to strengthen capabilities across air, space and cyber domains.

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- 11-50 employees

CURRENT REVENUE/FUNDING:

- Revenue: 6.07Cr INR as on Mar 31, 2025

CORE DOMAIN:

- Small satellite and CubeSat technology

PRODUCTS AND SERVICES:

Mission Control Software for Cubesat

Mission Control Software (MCS) provides an easy-to-use monitoring and control access to any space mission. Harnessing the power of AI, the application supervises automation and unattended operations, significantly improving the efficiency and scalability of the mission.

CALISTO Platform

CALISTO is a powerful cloud-based AI mission control software suite designed to control a single satellite or a complete constellation through a user-friendly, fully customizable control web interface.

- Telemetry & Control
- 3D Visualization
- Security

Technical Capabilities

- Easy-to-use monitoring and control access
- Telecommands generation and management
- Non-Destructive Testing
- Aerospace Polymers and Plastics Testing
- Cloud-based AI mission control



Software-Defined Radios for CubeSat Applications

Sensing and Communication Applications using powerful and advanced FPGA Technology CubeSats have revolutionized the way scientific community perceive space. The majority of CubeSat communication is greatly limited by the AX.25 standards, the small communication window, the available transmission power and the available bandwidth at VHF/UHF band.

The iBLINK SDR platform is utilized for a high-speed S- or K band in a highly miniaturized radio system for long distance communication and inter-satellite links. The FPGA module can be used for other advanced processing requirements such as image processing etc. utilizing the high capacity of the system.

Technical Capabilities

- Innovative ARM® + FPGA architecture for differentiation, analytics & control
- Extensive OS, middleware, stacks, accelerators and IP ecosystem
- Multiple levels of hardware and software security

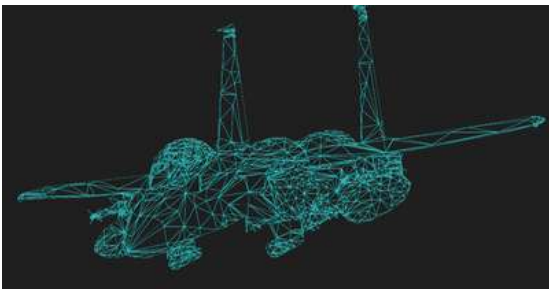
Mission Control Software for UCAV

Kristellar offers secured, end-to-end solutions for the drone and robotics industries. We support a diverse range of applications and operations in the most challenging and inaccessible urban and rural environments.

Autonomous Defense

Kristellar iRiGEL ECI module is an AI-based 360° software cybersecurity system for drones, robotics and autonomous platforms consists of Encryption, Crypto Key and Immunity, (ECI) as the first-of-its-kind multi-faceted and multi-tiers suite that autonomously protects the platform, safeguards communication channels and encrypts collected and transmitted data. The ECI module can defend against more than 9 different types of cyber breaches and malicious attacks, including jamming, man in the middle, CPU, Servers attacks and more in real-time without requiring intervention by an operator.

- Upgradeable Protection
- Multi-Tier Security
- Industrial-Grade Reliability



Agastya: A DNN robot

Agastya will revolutionize space security at a scale greater than the self-driving cars. Developed on over decade research on DNN, Agastya is an AI Robot can enable swarms of drones and aircraft to operate autonomously without GPS, communications, or a pilot.

Autonomous Intelligence

While AGASTYA engaged as pilot it analyses, reads and reacts to the mission environment, it can perform task in non-GPS environment. It has 8 integrated AI modules to executes missions autonomously.

- Cutting-Edge Hardware
- Real-Time Awareness
- Holistic ISR Capabilities



Autonomous Small Satellite Platforms

- **Project ORION β** - AI-Enabled LEO Satellite Platform
 - Autonomous satellite platform designed for Low Earth Orbit (LEO) missions.
 - Integrates AI-driven onboard systems for autonomous mission execution and satellite operations.
 - Supports inter-satellite communication enabling high-speed data transfer between satellite constellations.
 - Compatible with multiple payloads including Earth Observation (EO), Infrared (IR), Synthetic Aperture Radar (SAR) and hyperspectral imaging sensors.
 - Enables satellite-based IoT connectivity and machine-to-machine (M2M) communication via CubeSat backhaul networks.
- **TRINETRA-CS** - Cognitive Counter-Stealth Radar & EW System
 - A multi-band radar and electronic warfare system for modern air defense.
 - Detection of low-RCS stealth targets
 - Multi-band RF operations with adaptive signal processing
 - Passive EW, emitter identification and cognitive threat analysis
 - FPGA-based architecture with real-time processing

ISR and Autonomous Defence Platforms

- **RiGEL UCAV (Unmanned Combat Aerial Vehicle)** - SWaP Optimized Platform
 - ISR-focused autonomous aerial system designed for intelligence, surveillance and reconnaissance missions.
 - Integrates machine learning and deep learning algorithms for sensor data processing and decision support.
 - Optimised for Size, Weight and Power (SWaP) efficiency to maximise payload capability on airborne platforms.

Key capabilities include:

- AI-enabled ISR data analysis
- Real-time sensor processing
- Autonomous mission control and surveillance operations.

ACHIEVEMENTS:

- 2022: The company initiated development of AI-enabled mission control and satellite communication technologies, including the CALISTO cloud-based mission control platform designed for CubeSat and satellite constellation operations.
- 2023: Kristellar Aerospace developed the iBLINK Software Defined Radio (SDR) platform, enabling high-speed S-band and K-band satellite communication and inter-satellite data links for CubeSat missions.
- 2023: The company advanced Project ORION β, an autonomous CubeSat platform designed for Low Earth Orbit (LEO) missions with AI-driven onboard processing, inter-satellite communication capabilities and support for multi-payload Earth observation systems.
- 2023: Kristellar Aerospace began development of iRIGEL ECI, an AI-based cybersecurity protection system for drones and autonomous platforms capable of defending against cyber threats such as jamming, interception and data manipulation.
- 2024: The company continued development of AGASTYA, a deep neural network-based autonomous robotics platform capable of operating drones and aerial systems in GPS-denied environments for intelligence, surveillance and reconnaissance (ISR) missions.
- 2024: Kristellar Aerospace expanded its work on autonomous ISR and UAV platforms, including the RiGEL UCAV platform, designed to optimise Size, Weight and Power (SWaP) performance for long-endurance surveillance missions.
- 2024: Kristellar Aerospace signed a research collaboration with Silicon Institute of Technology, Bhubaneswar, to jointly develop CubeSat technologies for cyclone tracking, coastal monitoring and maritime security applications.

INVESTORS/PARTNERS:

- Silicon Institute of Technology

KEY MANAGEMENT:

- Uday Bhanu Das
Co-Founder & CEO



- Dipika Jena
COO
- Tanusmita Jena
Engineer Avionics

COMPANY PROFILE

Founded in 2016, LuminASIC Pvt Ltd is India's first imaging semiconductor company, designing advanced imaging ROICs (Read-out Integrated Circuits) and ASICS for Defense, Space and Commercial applications, proudly driving the 'Make in India' vision forward. We're the first and only Indian company designing and building customized imaging solutions for critical industries. Our mission is to create world-class technology right here at home that makes a global splash.

Our team of experts, skilled in mixed-signal chip design and sensor development, takes your needs and transforms them into cutting-edge, high-performance chips. We partner with top foundries to deliver innovative, reliable solutions that don't break the bank. At LuminASIC, we're not just advancing India's tech prowess; we're redefining what's possible in imaging, one breakthrough at a time. Let's build the future together.

YEAR OF ESTABLISHMENT:

2016

NUMBER OF EMPLOYEES (APPROX.):

- 15 employees (as on Aug 31, 2025)

CURRENT REVENUE/FUNDING:

- Bootstrapped incubated & at FITT (IIT-Delhi)

CORE DOMAIN:

- Advanced Sensor Technologies
 - ROICs for SWIR, MWIR and LWIR cooled and uncooled sensors
 - High swath linear CMOS TDI visible sensors for PAN and MUX imaging
 - Event-based area array sensor with 2D stitchable design
 - Large format visible sensors
 - Multi-channel ADC solutions
 - EMMWIR IDCA - Electronics development, integration and testing
 - CCD wafer post processing through specialty fabs for BSI and QE improvement
 - Test electronics and test system development for ASICS and imaging sensors
 - FLASH LIDAR Receivers

PRODUCTS AND SERVICES:

Services / Technology Capabilities

Visible & Infrared Image Sensors

Development of high-performance sensors capable of capturing thermal and visible spectrum data, enabling applications in environmental monitoring, diagnostics and security.

Space-Grade Imaging Solutions

Design and delivery of space-qualified imaging payloads for Earth observation satellites and deep-space missions, ensuring high-resolution imaging under extreme space conditions.

Defense & Military Imaging Systems

Low SWaP-C (Size, Weight, Power and Cost) imaging sensors engineered for reliability in hostile environments, supporting defense and tactical operations.

ISR (Intelligence, Surveillance & Reconnaissance)

Advanced sensors optimized for low-light and real-time imaging, enabling precision surveillance, tracking and reconnaissance missions.

LiDAR & Automotive Imaging Integration

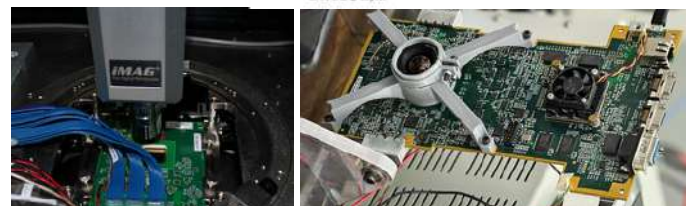
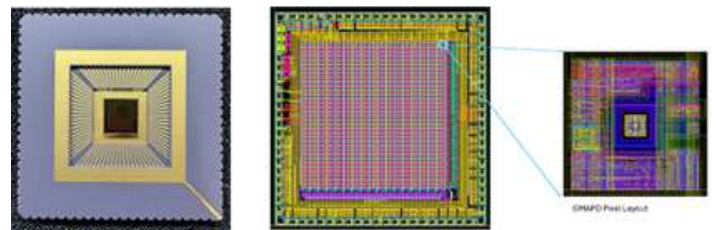
Imaging solutions integrated with LiDAR technologies for 3D mapping, navigation and autonomous systems.

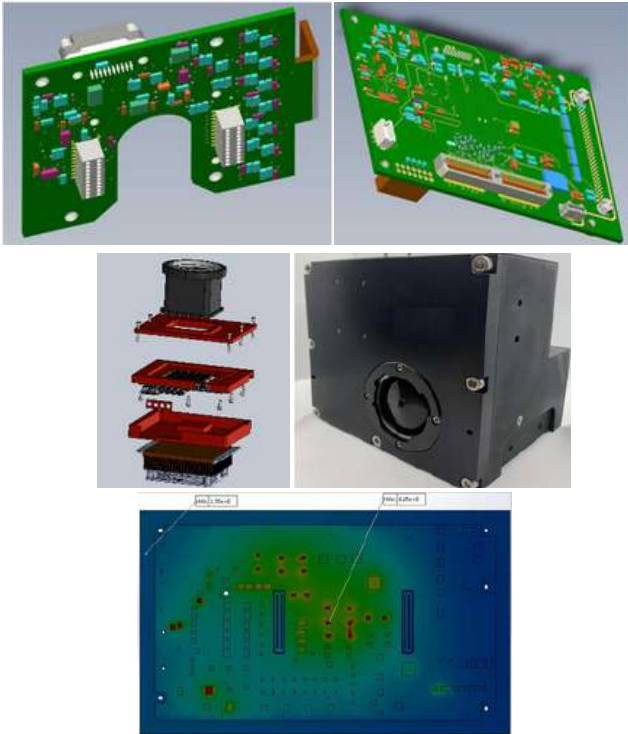
Machine Vision & AI-Integrated Imaging

Sensors designed for seamless integration with AI algorithms, enabling intelligent image processing, automation and analytics.

Solutions & Engineering Systems

- Test Electronics
 - Active Probe Cards
 - Automated Test Systems
 - Miniature Validation Systems
- Mechanical & Structural Solutions
 - Mechanical Structures and Assembly
 - Thermal Analysis for sensor and system optimization
- Advanced Sensor Modules
 - MWIR IDCA (FIRST) systems for infrared detection and imaging





Core Products (ASICs / ROICs / Sensors)

- Infrared & Thermal Sensors
 - Uncooled VGA Bolometer ROIC
 - LWIR & MWIR ROICs (Python series, Viper, Mantis)
- Visible Imaging Sensors
 - Large Format Visible CMOS Sensors (e.g., Eagle - 4500×3000 resolution)
 - Linear CMOS TDI Sensors for high-speed imaging
- Event-Based & AI Sensors
 - Event-based visible sensor dies for real-time motion detection
- Specialized Detection Systems
 - Quadrant detector frontend ROIC for tracking applications
 - BSI-ARC post-processed CCD wafers

Key Chips Developed

- Salmon - SWIR ROIC (1280×1024, 60 FPS)
- Viper - MWIR ROIC (320×256, 320 FPS)
- Python I & III - LWIR ROICs (thermal imaging, up to 120 FPS, digital output)
- Eagle - High-resolution visible CMOS sensor (4500×3000, 13-bit digital)
- Chameleon - Linear CMOS TDI sensor for high-speed scanning
- Dragonfly - Event-based sensor for high-frequency detection
- Mantis - 3D IC layer for MWIR ROIC with in-pixel digitization
- Hawk - Seek-and-track quadrant detector frontend
- Quanta - High-speed pipeline ADC (14-bit, 20MSPS)

INVESTORS/PARTNERS:

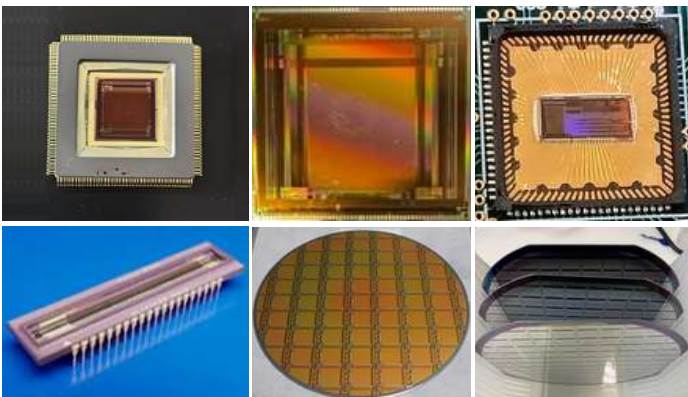
Key Investor

- FITT (IIT Delhi)

Strategic Customers

Space & Government Ecosystem

- ISRO (Indian Space Research Organisation)
- DRDO (Defence Research and Development Organisation)
- Other National & International Space & Defence customers



ACHIEVEMENTS:

2026

- Strengthened position in space-grade imaging and infrared sensor development, with continued focus on advanced ROICs (Read-Out Integrated Circuits) for satellite payloads.
- Progressed towards scaling deployment of high-performance SWIR, MWIR and LWIR sensors for space and defense applications.
- Expanded capabilities in AI-integrated imaging and machine vision systems, supporting next-generation space-based ISR and Earth observation missions
- LuminASIC has developed the Noctule Flash LiDAR ROIC (32×32 SPAD, 50K FPS)..

2025

- Advanced development and validation of space-qualified imaging payloads, targeting high-resolution Earth observation and satellite servicing missions.
- Demonstrated strong portfolio of indigenous sensor chips (Eagle, Python III, Mantis, etc.), supporting self-reliance in semiconductor technologies for space applications.
- Expanded applications of imaging sensors into LiDAR-integrated systems and autonomous platforms, contributing to dual-use (space +terrestrial) technologies.

2024

- Achieved major milestones in design and prototyping of infrared ROICs and visible CMOS sensors for space and defense use cases.
- Established strong capabilities in test electronics and validation systems, ensuring reliability of space-grade semiconductor devices.

2023

- Built foundational technology stack in infrared imaging (SWIR, MWIR, LWIR) and visible spectrum sensors.
- Developed event-based sensors and high-speed imaging chips, enabling real-time data capture for space surveillance and tracking.

2022 & Earlier (Early Phase)

- Focused on core semiconductor R&D and IP development in imaging ASICs and ROICs, laying groundwork for space and defense applications.
- Developed initial prototypes of high-resolution CMOS sensors and thermal imaging solutions.
- Established positioning as a deep-tech imaging semiconductor company targeting space, defense and AI applications.

KEY MANAGEMENT:

- Basant K Joshi
Director



- Vinod K Sharma
COO



- Aashish Kumar
Market & Liaison Officer



COMPANY PROFILE

MAAN Defence Pvt Ltd offers products designed, engineered and manufactured for Indian Defence Forces including innovative products and services such as Inflatable Shelters for Offices, Command Posts, Barracks, Field Hospitals, Aircraft and Vehicle Shelters etc. Personal Protective gears for CBRN Protection, or respiratory protection for CBRN or Pandemics etc besides Anti-Radiation Suits etc. Maan Defence has over 500 customers.

Their Principal Company 'Sure Safety' products are serving customers through its 2200+ range of head - to - toe protection products, 20+ services, 15+ Safety, Health & Fire training programs.

Maan Defence specialization includes products for Human Space flight program like IVA Space Suit, Emergency survival kit, Multi Shock Shield Hyper Velocity Impact (MVI) Test coupons etc to name a few.

PRODUCTS AND SERVICES:

1. Inflatable Shelters / Tents / Hangars etc.
2. Inflatable Decoys
3. CBRN Evacuation bags (Half and Full)
4. Impermeable CBRN Protection Suits
5. Radiation Protection Suits
6. CBRN Protection Gear
7. Surface Inflatable Targets for Indian Navy Inflatable Boats
8. Fire Retardant Pilot & Tank Crew Clothing
9. Cooling Jackets
10. Fire Proximity Suits - Both 3 Layered and Aluminized
11. Powered Air Protection Hood
12. Powered Air Protection System



YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- 51 to 200 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: 4.5 Cr

CORE DOMAIN:

- Human Space Flight Program
- IVA Space Suits
- Emergency Survival Kit
- Multi Shock Shield Hyper Velocity Impact (MVI) Test Coupons



ACHIEVEMENTS:

- Made India's first Engineering Model of Astronaut Crew Escape space suit.
- Supplied India's First and Largest Mass consignment of Decontamination unit for CBRN to Para Military Forces.
- Manufactured India's First Aircraft Inflatable Decoy for IAF and DLJ, DRDO.
- Development of Advanced Protective Systems for Aerospace Environments: Designed specialised thermal protection clothing, radiation protection suits and CBRN protective equipment applicable for aerospace missions, launch operations and hazardous environments.
- Contribution to Space Safety and Hazard Protection Technologies: Developed impermeable CBRN suits, powered air protection systems and evacuation chambers that can support astronaut safety, ground crew protection and contamination control during space missions.
- Innovation in High-Temperature Protection Gear: Manufactured fire-retardant pilot clothing, aluminized fire proximity suits and cooling jackets, which are relevant for rocket launch operations, aerospace crew safety and high-temperature mission environments.
- Research & Development in Aerospace Safety Equipment: Established in-house R&D capabilities for advanced protective materials and inflatable technologies, supporting the development of safety equipment used in aerospace and defence applications.
- Development of Inflatable Mission Support Infrastructure: Designed inflatable shelters and rapid deployment structures, conceptually applicable for extreme environments, field mission infrastructure and potential space habitat research and testing scenarios.
- Collaboration with Indian Strategic Organizations: Worked with organizations such as DRDO and ISRO related ecosystems to support indigenous development of safety systems and protective technologies for strategic sectors including aerospace

INVESTORS/PARTNERS:

- RESPIREX International Limited, Surrey UK- for Impermeable Chemical Splash protection and CBRN Suits.
- MFC International Limited-UK- For Inflatable Boats, Shelters & Decontamination Chambers
- Defence Research and Development Organization (DRDO) – DLJ (Defence Lab Jodhpur)- For PCM Jackets, Inflatable Decoy of LCA Tejas
- DRDO - DEBEL- For Isolation Shelters, Evacuation Suits and Bags, Hapo Chamber, Emergency Survival Kits, Individual Under water Breathing Chamber for Tank Crew(IUWBA)
- DRDO-R&DE – Inflatable Aramid Tubes and OTS
- DRDO- ADRDE -For Inflatable Tubes and Hangars.
- DRDO – DRDE- For Biochemical Protective Suits, Isolation Suits, A Level Suits etc.
- Central Institute of Mining and Fuel Research under Council of Scientific and Industrial Research of Govt. of India (CIMFR-CSIR)- Self Contained Self Rescuer-SCSR.

KEY MANAGEMENT:

- Nitish Dand
Managing Director



- Shakti Naidu
Manager R & D
- Sanjay Kapadiya
Sales & Marketing
Executive

- Veteran Col D B Tingre
Advisor- Defence Business



COMPANY PROFILE

Maargin Research and Innovation Pvt. Ltd. is a research-driven technology company working at the intersection of Space Technology and Telecommunications.

At Maargin, we are on a mission to build a space network based on LEO constellation of communication satellites for providing communication services to enterprises, aircrafts and maritime businesses, terrestrial telecom providers and other space & deep space entities.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

- 5 Employees

CURRENT REVENUE/FUNDING:

- Pre-funding; Promotor funded

CORE DOMAIN:

- Satellite communications, AI Computing in Space

PRODUCTS AND SERVICES:

Currently, in-line with our mission goal, we are designing and building in-house

- A Space network architecture to provide communications services with global coverage with enhanced focus on Indian latitudes.
- SDR based RF communications modules in Ka and Ku Bands for payloads for satellites as well as ground terminals and user modules – To be available for licensing
- Low SWaP optical communications module for both terrestrial and inter-satellite links – to be available for licensing
- A highly connected micro data centre grid in Space with AI processing capability on satellites – running an AI stack for data centre workload management, intelligent data routing, station keeping, collision management and anomaly detection and handling.



ACHIEVEMENTS:

2025 (Establishment & Early Milestones)

- Founded with a vision to build a multi-technology space network integrating satellites, HAPS and UAVs for global connectivity
- Developed initial architecture for multi-orbit communication networks supporting users, enterprises and space-based assets
- Initiated work on inter-satellite link (ISL) technology to enable low-latency, global communication
- Designed solutions aligned with 3GPP Non-Terrestrial Network (NTN) standards, enabling compatibility with broadband, cellular and IoT services

2025-Present

- Conceptualized connectivity solutions for aviation, maritime, enterprise and direct-to-user applications
- Positioned as an emerging player in next-generation space communications and hybrid network infrastructure
- Building capabilities for space-to-space communication, including connectivity for satellites, space stations and deep-space entities

INVESTORS/PARTNERS:

Currently in early-stage development; Partnered with DeployNxt Pvt. Ltd. for deployable solar panel, deployable antennas; Partnering with Azista Space for Satellite bus and integration. Open to strategic partnerships and collaborations with research institutions, startups, and government organizations.

KEY MANAGEMENT:

- Aniruddh Rao Kabbinala
Founder & CEO



- Dr Arjuna Sathiaselan
Advisor



COMPANY PROFILE

Manastu Space is an Indian deep-tech space company developing high-performance green propulsion systems for satellites, focused on improving in-orbit safety, reliability and mission agility. The company designs and manufactures non-toxic monopropellant propulsion solutions that provide a safer, higher-performance alternative to hydrazine, addressing the operational and handling risks associated with conventional chemical propulsion.

Manastu's product portfolio spans micro-propulsion systems for CubeSats to high-thrust propulsion systems for 100-500 kg class satellites, enabling orbit raising, station keeping, collision avoidance and controlled deorbiting.

By combining proprietary propellant chemistry, advanced thruster design and system-level integration, Manastu Space is enabling a new generation of safer, scalable and mission-ready propulsion systems for commercial, defense and institutional satellite missions.

YEAR OF ESTABLISHMENT:

2017

NUMBER OF EMPLOYEES (APPROX.):

- 95 employees (Jan 2026)

CURRENT REVENUE/FUNDING:

- Total Funding: USD 6 million in 2 rounds
- Annual Revenue: INR 2.26 Crore (March 2024)

CORE DOMAIN:

- Green Propulsion System (I-Booster)
- Satellite Life Extension
- Debris Collision Avoidance
- Propulsion Components

PRODUCTS AND SERVICES:

Manastu Space develops the world's safest and most efficient green propulsion systems to replace highly toxic and inefficient satellite propellants. Built around the proprietary MS-289 monopropellant, an in-house blend of hydrogen peroxide and additives and a novel high-temperature catalyst, Manastu's propulsion products deliver high performance, reliable ignition and safe handling across satellite classes.

1. I-Booster (for >100 kg satellites):

- Thrust Class: 0.5N, 1N
- Specific Impulse: ~250 s
- Total Impulse: 20,000 N-s
- Mass Dry/Wet: 11 kg / 20 kg
- Dimensions: 350 * 450 mm



2. Vyom 2U (for 5U to 24U+ satellites):

- Thrust: 0.5N, 1N
- Specific Impulse: ~250 s
- Total Impulse: 1700 N-s
- Mass Dry/Wet: 1.98 Kg / 2.75 Kg
- Dimensions: 200 * 96 * 96 mm



3. Sharang (for 3U to 10U+ satellites):

- Thrust: 1 to 10 mN
- Specific Impulse: >120 s
- Total Impulse: ~500 N-s
- Mass Dry/Wet: 1.05 Kg (Dry), 1.45 Kg (Wet)
- Dimensions: 96 * 96 * 113 mm

4. GP-LAM (For OTVs, Upper stages of LV, GEO satellites)

- Thrust: 300 N
- Specific Impulse: 250 s
- Total Impulse: 150,000 N-s
- Mass: 1.1 Kg

ACHIEVEMENTS:

1. MCCIA- Brig SB Ghorpade Award, 2025
2. 'Top 10 startups' at Maharashtra Startup Week 2025
3. Emerging Space Startup at the Indian Space Conclave 2024
4. 'League of 10' winner at the Emerge 50 Awards, NASSCOM 2024
5. Top 5 startups in the world at Hello Tomorrow Paris 2020
6. Dare to dream award by DRDO 2019
7. S-Booster Award by Japanese Govt and JAXA 2019
8. ILGP Award by Lockheed Martin and DST 2018

August 2025: Manastu Space raised a \$3 million bridge round, led by venture capital firm Capital-A, marking its first investment in the space sector. The round included participation from existing investors such as Capital 2B, Indian Angel Network (IAN), E2MC Ventures, the Bhagnani Family Office and Jeet Chandan.

March 2025: Vyom 2U completed 1099 orbits and 1656+ hours in space! On March 10, VYOM 2U finishes the complete test in space with 700-second cumulative firing, including a record 360-second continuous burn and more than 20 restarts pushing limits of green propulsion.

December 2024: Manastu Space successfully test-fired its VYOM 2U- Green Propulsion System in orbit aboard Indian Space Research Organisation's PSLV-C60 on December 31, 2024, validating performance in a real space environment.

Manastu Space handed over its I-Booster green propulsion technology to Defence Research and Development Organisation (DRDO). The system, designed for 100-500 kg satellites, supports orbit raising, station-keeping and controlled deorbiting.

September 2023: Manastu Space announced the successful closure of \$3 million pre-series A funding round led by Capital 2B, BIG Capital, Indian Angel Network (IAN), E2MC Ventures, Riceberg Ventures.

INVESTORS/PARTNERS:

- BIG Capital
- Capital 2B
- IAN
- Capital A
- E2MC Ventures
- Riceberg Ventures

KEY MANAGEMENT:

- Tushar Jadhav
Co-founder & CEO



- Ashtesh Kumar
Co-founder & CTO



COMPANY PROFILE

Micronet Solutions is a GIS & RS services company that is the 'authorized distributor' of Airbus Defence & Space and MDA Space in India. They provide satellite data, products and solutions to civil, paramilitary, special forces, military and the defence forces in India. They bring the highest resolution satellite imagery commercially available, including 30 cm GSD and 50 cm. Other ranges include 1.5 m and 1 m.

The company has been at the forefront of providing geospatial solutions in India for more than two decades. The aim is to cater to users in diverse industries with high-resolution data, both in optical and radar imagery space.

The Micronet Solutions, is working to unlock the full potential of satellite-based information and bridge the gap between technology and applications, facilitate access and affordability, ease of buying, use and understanding and provide value added services.

YEAR OF ESTABLISHMENT:

2001

NUMBER OF EMPLOYEES (APPROX.):

- under 50 employees

CURRENT REVENUE/FUNDING:

- Not publicly disclosed

CORE DOMAIN:

- GIS Mapping
- Geo-Processing
- Satellite Image Processing

PRODUCTS AND SERVICES:

2. Pléiades Neo (30 cm GSD High-Resolution Constellation)

Next-generation optical remote sensing constellation.

Key Features:

- 30 cm Ground Sample Distance (GSD)
- Two agile satellites in sun-synchronous orbit
- Coverage up to 2 million km²/day
- Mono, stereo & tri-stereo acquisitions
- Cloud-based ground segment for rapid production
- Advanced analytics & automatic object detection

Applications:

Defence intelligence, maritime monitoring, urban planning, mapping.



1. Pléiades (50 cm Very-High Resolution Constellation)

Very-high resolution optical imagery designed for civil and military users.

Key Features:

- 50 cm multispectral resolution
- Twin satellite constellation (Pléiades 1A & 1B)
- Daily global revisit capability
- Maximum acquisition capacity: 700,000 km²/day
- Stereo & Tri-stereo imaging
- Agile collection modes: Target, Strip Mapping, Corridor, Persistent

Applications:

Defence, public safety, hazard management, urban mapping, precision agriculture, infrastructure monitoring.



3. SPOT 6/7 (1.5 m Resolution)

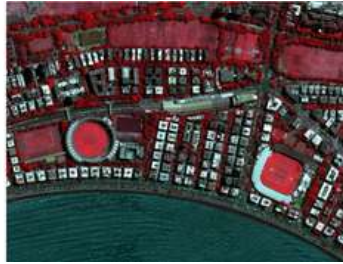
Designed for efficient large-area coverage.

Key Features:

- 1.5 m resolution imagery
- Daily revisit capability
- Acquisition capacity: 3 million km²/day per satellite
- Stereo & tri-stereo imaging
- Ideal for 1:25,000 scale topographic mapping
- Historical archive spanning decades

Applications:

Cartography, national mapping, terrain modeling, monitoring.



SERVICES:

1. Geo Processing Services

- GIS Mapping & Remote Sensing Services
- Image Processing & Data Analysis
- Cartographic & Thematic Mapping
- Government-focused geospatial solutions

2. Satellite-Based Monitoring

- Multi-temporal monitoring solutions
- Infrastructure & asset monitoring
- Defence and security applications
- Environmental and disaster response analysis

3. Software Solutions - Pixel Factory

- Advanced image processing software
- Large-scale satellite data production
- Automated photogrammetry workflows

ACHIEVEMENTS:

- Longstanding Geospatial Presence - Micronet Solutions has been a leading geospatial and remote sensing services provider in India for over two decades, delivering GIS and satellite data solutions across government and enterprise sectors.
- Authorized Distributor of Global EO Data - The company is an authorized distributor of major global satellite imagery providers - including Airbus Defence & Space, Planet Labs and MDA - bringing world-class Earth observation data to Indian users. Geospatial Resource Platform
- Support for Critical National Projects - Micronet has contributed to important initiatives such as the National Watershed Information System (WARIS) and other water resources management projects by providing satellite-based insights.
- Advanced Monitoring Services - The firm offers Surface Movement Monitoring (SMM) with millimetre-level precision and high-resolution satellite data across sectors like defence, maritime, infrastructure and environmental management.
- Contribution to Urban & Smart City Solutions - Micronet uses very high-resolution imagery (e.g., Airbus Pleiades NEO 30 cm) for 3D terrain modelling, urban mapping and smart city planning, enabling data-driven infrastructure decisions.

INVESTORS/PARTNERS:

Satellite Data Partners: They are authorized distributors/partners for major global providers, including:

- Airbus Defence & Space
- MDA Space

KEY MANAGEMENT:

- Dheeraj Mehra
Founder CEO



- Dhananjay Kedar
Chief Operating Officer

COMPANY PROFILE

Nav Wireless Technologies Pvt. Ltd. (NavTech) is a global provider of advanced wireless communication solutions, specializing in optical wireless technologies. With strong in-house R&D, manufacturing and service capabilities, the company delivers high-performance, secure and RF-free connectivity solutions for mission-critical applications.

Its key innovations include OpticSpectra, an adaptive Free Space Optics (FSO) solution for resilient high-speed connectivity and NavOcular, an infrared-based system using Visible Light Communication (VLC) for secure, low-latency networks.

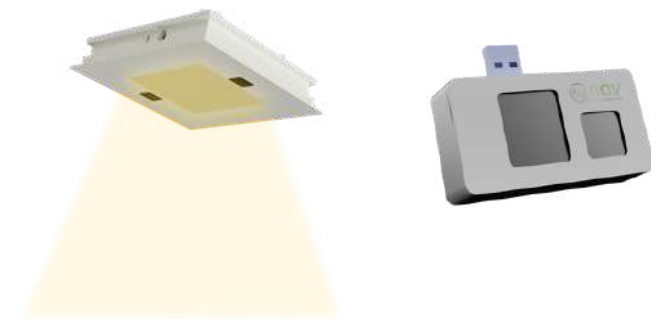
Serving sectors such as government, defence, healthcare and smart infrastructure, NavTech focuses on enabling reliable, interference-free communication for next-generation digital ecosystems.

PRODUCTS AND SERVICES:

NavOcular

Nav Ocular leverages Visible Light Communication (VLC) using invisible infrared (IR) light to enable secure, high-speed wireless communication without relying on traditional RF spectrum. Designed with a mesh network topology, Nav Ocular allows multiple IR nodes to seamlessly connect, route data intelligently and self-heal in case of link disruption, ensuring reliable and scalable connectivity across complex environments.

- Performance: ~75-80 Mbps bandwidth, ~4m range, 60° transmission angle
- Use Cases: Smart buildings, industrial environments, healthcare, 5G offloading, 6G-ready optical networks



OPTICSPECTRA

Intelligent Optical Links for Dynamic Network Demands

Nav Wireless Technologies offers Free Space Optics (FSO) solutions with adaptive bandwidth capabilities, enabling optical links to automatically adjust data rates in response to changing environmental conditions such as fog, rain, or signal degradation. This ensures continuous, optimized performance without compromising link stability or security.

- Performance: Up to 1 Gbps bandwidth, up to 10 km range
- Use Cases: Smart cities, defence networks, disaster recovery, enterprise backhaul, rail connectivity



YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

- ~51-200 employees

CURRENT REVENUE/FUNDING:

- Revenue: 86.1L INR as on Mar 31, 2025

CORE DOMAIN:

- Optical Wireless Communication Systems

SERVICES

Optical Wireless Network Deployment

- Design and deployment of FSO and VLC-based communication networks
- Integration into enterprise, defence and smart infrastructure systems

Secure RF-Free Communication Solutions

- Implementation of interference-free communication systems for sensitive environments
- Suitable for defence, healthcare, industrial and EMI-restricted zones

Smart Infrastructure & Next-Gen Connectivity Enablement

- Support for 5G offloading, edge connectivity and 6G-ready optical layers
- Deployment in smart cities, buildings and high-density indoor environments

ACHIEVEMENTS:

2024-Present

- Advanced development of optical wireless communication systems (FSO & VLC) for next-generation, RF-free connectivity
- Positioned NavOcular as a secure, interference-free communication solution for EMI-sensitive and mission-critical environments, relevant for defence and space applications
- Enabled 6G-ready optical communication layers, contributing to future space-ground and high-frequency communication architectures

2022-2023

- Developed OpticSpectra (Adaptive FSO systems) capable of dynamic bandwidth adjustment under environmental conditions (fog, rain, interference)
- Achieved TEC (Telecommunication Engineering Centre) certification for optical communication devices, validating telecom-grade reliability
- Strengthened capabilities in high-speed (up to 1 Gbps), long-distance (up to 10 km) optical links, suitable for space communication backhaul and ground infrastructure

2020-2021

- Built proprietary expertise in infrared-based VLC communication systems, enabling secure, spectrum-independent wireless networks
- Introduced mesh-based optical networking architecture with self-healing and intelligent routing capabilities

2018-2019 (Foundation Phase)

- Developed in-house R&D and manufacturing capabilities for advanced wireless and communication subsystems

INVESTORS/PARTNERS:

Key Partners and Collaborations

- JESCO Venture Labs (USA)
- IIT Delhi (Indian Institute of Technology)
- C-DAC (Centre for Development of Advanced Computing)

KEY MANAGEMENT:

- Hardik Soni
Chief Technology Officer (CTO) & Director



- Narendra Jain
Head of Sales.



- Raj Patel
Head of Operations



- Chirag Chauhan
Sr. Hardware Engineer



OMSPACE ROCKET AND EXPLORATION

OMSPAC 
ROCKET AND EXPLORATION PVT. LTD.

COMPANY PROFILE

Omspace Rocket and Exploration Pvt. Ltd. is working in the Aeronautical/Aerospace & Defense Industry. Omspace Rocket and Exploration is building a rocket named Infinity - One capable of launching nano & small satellites in Lower Earth Orbit (LEO) at altitude of 800Kms. It is a reusable electric rocket with a payload into Lower Earth Orbit by adopting advanced technology like Advanced Material Composite, Metal 3D printing, Cryogenic Engine, Nano Avionics and More. By providing an affordable reliable and efficient launch, we will make Space available for everyone Exploration.

YEAR OF ESTABLISHMENT:

2020

NUMBER OF EMPLOYEES (APPROX.):

- under 50 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: Rs. 30.7 lakh (March 2024)

CORE DOMAIN:

- Reusable Launch Vehicles

PRODUCTS AND SERVICES:

Infinity One

It is a reusable rocket meticulously designed for deploying small and nano satellites. This high-tech marvel marks a new era in space exploration, merging state-of-the-art technology with a commitment to eco-friendliness. Reusability with a quick 24-hour turnaround post-launch. The Rocket Infinity One is the integration of cutting-edge components such as Nano Avionics, advanced Guidance, Navigation and Control (GNC) system and 3D printed components. Payload capacity of 10Kgs.

- For Small & Nano Satellites
- Payload Capacity of 10k Kgs
- Reach upto 800 kms
- Advanced Composite Material Structure
- Reusable First Stage & Capable for Relaunch within 24Hrs.
- Liquid Cryogenic Engine

SERVICES:

1.Rocket Factory: Revolutionizing space access with reusable rockets for small satellites, promising cost-efficiency and sustainability.

2.Engineering Solution: Turning ideas into reality using advanced technology, pushing boundaries with creative designs and efficient manufacturing.

3.Satellite Solutions: Setting new standards for reliability in satellite technology, prioritizing innovation to meet evolving market demands.

4.Skill Development: Empowering space enthusiasts through training programs and community-building initiatives, shaping the future of space exploration.



OMSPACE ROCKET AND EXPLORATION

OMSPACE
ROCKET AND EXPLORATION PVT. LTD.

ACHIEVEMENTS:

- \$3 Million Pre-Seed Funding (July 2025)- Raised \$3 million to develop its indigenous small satellite launch vehicle, Infinity One, marking a major step in scaling India's private launch capabilities.
- Successful Infinity Engine Hot-Fire Test (Sept 2024) - Conducted a successful hot-fire test of the Infinity rocket engine, validating propulsion performance and advancing toward full vehicle integration.
- Development of "Infinity One" Small Satellite Launch Vehicle - Building an indigenous launch vehicle designed to place up to 350 kg payloads into Low Earth Orbit (LEO), targeting the growing small satellite market.
- Environmentally Friendly Propulsion Architecture - Developing a reusable electric rocket system using environmentally friendly fuel, aiming to reduce operational costs and improve sustainability.
- Rapid 24-Hour Relaunch Capability - Designing launch systems with quick turnaround time to enable rapid relaunch operations for responsive space missions.
- Advanced Manufacturing & Engineering Innovations Incorporates:
 - Metal 3D printing
 - Composite materials
 - Miniaturised avionics package
 - Cost-optimised structural design
- Targeting 800 km LEO Deployment - Infinity vehicle designed to deploy nanosatellites and microsatellites to orbits up to 800 km altitude, supporting Earth observation and commercial missions.

INVESTORS/PARTNERS:

- StartupIndia
- IN-Space
- Ministry of Corporate Affairs, GoI
- NSTEDB, Dept of Science & Technology, GoI
- AICraft, Australia
- ResearchSat, Adelaide, Australia
- Prometheus, UK
- CrAdLE, India
- Spacecom
- Spaced Ventures
- SOW
- Space Impulse

KEY MANAGEMENT:

- Ravindra Raj Binod Mistri
Founder Director



- Maulik Mota
Chief Technical Officer



- Stutika Padmashali
Program Director



COMPANY PROFILE

SpaceTS is an Indian space technology company focused on advancing autonomous spacecraft systems, space operations technologies and resilient space architectures with applications in defence, commercial and sustainability domains. With a strong emphasis on research and innovation, SpaceTS combines academic insight, deep-tech engineering and strategic thought leadership to address key challenges in modern space missions.

YEAR OF ESTABLISHMENT:

2024

NUMBER OF EMPLOYEES (APPROX.):

- 15-25 employees

CURRENT REVENUE/FUNDING:

- Not publicly disclosed

CORE DOMAIN:

- Space Systems and AI for Space Systems

PRODUCTS AND SERVICES:

M4V - Multi-Mission Modular Maneuverable Vehicle.

Robotics Arm and Nav System

Our M4V platform is designed to support a wide range of missions across LEO and MEO, including:

- Orbital Debris Removal using an advanced Robotic Arm and specialized tools
- Rendezvous, Proximity Operations and Docking (RPOD) enabled by our precision Navigation System
- On-orbit Life Extension Missions utilizing Robotic Arm and Navigation System capabilities
- Satellite Deployment in Low Earth Orbit (LEO) and Medium Earth Orbit (MEO)
- Hosted Payload Missions in LEO and MEO with PQE, supporting:
 - Earth Observation (EO)
 - Synthetic Aperture Radar (SAR)
 - Electronic Intelligence (ELINT)
 - Communications

M3GV GEO Mission Capabilities

Our M3GV platform is optimized for Geostationary Orbit (GEO) missions, including:

- Data Relay Services
- Communications Missions
- Intelligence, Surveillance and Reconnaissance (ISR) Payload Hosting



ACHIEVEMENTS:

- **AWS Space Accelerator Selection:** SpaceTS was selected to participate in the Amazon Web Services (AWS) Space Accelerator program, competing alongside startups from Japan, Australia and India. This participation recognises the company's potential to scale transformative space solutions and provides mentorship, tools and technical resources to support growth.
- **AI-Powered Space Vehicle Development:** SpaceTS is developing the M4V (Multi-Mission Modular Maneuverable Vehicle) an AI-driven spacecraft platform designed for autonomous space operations, including rendezvous, proximity operations (RPOD), collision avoidance and precision docking, pointing to advanced capabilities in operational spacecraft autonomy.
- **Thought Leadership & Research Publication:** SpaceTS has published multiple research articles on foundational space technologies, defence space resilience and responsible space behaviour, demonstrating the company's research depth and intellectual contributions to the broader space ecosystem.
- **Focus on Defence-Grade Architectures:** Led by experienced space professionals, SpaceTS is building resilient, defence-grade system architectures intended for national and strategic applications, positioning the company as a contributor to India's defence space capabilities.

INVESTORS/PARTNERS:

- **Partners** - Several companies who have worked for over 20 years for ISRO, DRDO, are publicly listed and have overseas operations.

KEY MANAGEMENT:

- **Ashok Saxena**
CEO



COMPANY PROFILE

Omnipresent Robot Tech is an Indian deep-tech robotics startup focused on developing advanced unmanned systems and robotic technologies for defence, industrial and strategic applications. The company works at the intersection of robotics, artificial intelligence and autonomous systems, enabling next-generation solutions for surveillance, logistics and hazardous environments.

YEAR OF ESTABLISHMENT:

2010

NUMBER OF EMPLOYEES (APPROX.):

- 11-50 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹59.5L (\$70.4K) as on Mar 31, 2025
- Total Funding - \$652K over 2 funding rounds

CORE DOMAIN:

- Autonomous Unmanned Aerial Vehicles (UAVs)

PRODUCTS AND SERVICES:

1. OmniSAR3D - Space-Based SAR Mapping System

An advanced interferometry-based Synthetic Aperture Radar (SAR) satellite solution designed for ultra high-resolution 3D mapping.

Key features:

- Generation of high-precision 3D Digital Elevation Models (DEMs)
- Accurate X, Y, Z positional data
- Operates effectively in challenging terrains (e.g., mountains)
- Space-based remote sensing capability



2. OmniEye - AI-Based Multisensor Surveillance System

An on-board edge computing module for satellites enabling real-time geospatial intelligence.

Capabilities:

- Fusion of optical, multispectral, SAR and hyperspectral data
- Near real-time change detection and surveillance
- AI-driven analytics for actionable insights
- Supports commercial and strategic applications



3. OmniBirdX - AI Bird Strike Prevention System

A multi-sensor AI system for airports designed to prevent bird strikes.

Key features:

- Combines radar, vision and acoustic sensors
- Real-time and historical data analysis
- Predictive threat scoring for bird density
- Migration and environmental pattern analysis
- Decision support for mitigation strategies



4. OmniAgent - AI Decision Support System

A standalone AI agent for real-time decision-making in mission-critical environments.

Capabilities:

- Multimodal input processing
- Real-time threat perception and scoring
- Decision support for combat and non-combat scenarios
- Handles large-scale data (80M+ parameters)

5. OmniNavX - GPS-Denied Navigation System

A navigation system designed for drones and aircraft operating in GNSS-denied environments.

Key features:

- Resistant to GPS jamming and spoofing
- Lightweight camera-GPU module
- Enables navigation in challenging and contested environments
- Supports mission-critical operations



6. OmniChandraEye - Lunar Navigation & Mapping Payload

A stereo vision-based perception and navigation module developed for lunar missions.

Applications:

- Payload for Chandrayaan missions
- High-resolution lunar surface mapping
- Navigation under extreme space conditions



7. Garun Mini V4 - Tactical Drone Platform

A lightweight tactical drone for specialized missions.

Key features:

- Portable (<2 kg) drone system
- Designed for high-altitude operations
- NLOS (Non-Line-of-Sight) capability
- Obstacle avoidance system
- Qualified under rigorous RPAS trials



8. OmniHansaMapper - High-Accuracy Mapping Drone System

A drone-based mapping solution deployed for large-scale national geospatial programs.

Capabilities:

- Surveyed 10,000+ villages under PM Swamitva Scheme
- High-resolution mapping (GSD up to 2 cm)
- Positional accuracy up to 5 cm
- Proven high-altitude performance (4500m AMSL)
- Long-range autonomous flight (up to 50 km)



ACHIEVEMENTS:

2025

- September 2025: Won TSATS Award for developing an AI Decision-Making Engine for the Indian Navy, in collaboration with University of Petroleum and Energy Studies (UPES), Dehradun, showcasing advanced capabilities in defence AI and operational intelligence.

2024

- October 2024: Awarded iDEX ADITI 1 Challenge (Challenge 1) for developing a high-resolution elevation model using space-based Synthetic Aperture Radar (SAR), highlighting leadership in satellite-based geospatial intelligence.
- October 2024: Engaged in high-level discussions with Rajnath Singh, Defence Minister of India, on the role of space technology, robotics and AI in defence applications.
- September 2024: The company's OmniEye satellite project received recognition from Amar Preet Singh, Chief of the Air Staff (Indian Air Force) at the DefConnect event, validating its innovation in space-based multisensor intelligence systems.

2023

- October 2023: Won iDEX DISC 8 Award (Challenge 6.5) for AI/ML-based change detection using multi-payload fused imagery, strengthening its position in AI-driven space analytics and satellite intelligence.
- 2023: Recognized as a leading defence and space-tech startup working on distributed AI, sensor fusion and data analytics, with applications across satellite intelligence and autonomous systems.

INVESTORS/PARTNERS:

Investors / Funding Support

- Innovations for Defence Excellence (iDEX) - Defence innovation funding and challenge grants (DISC, ADITI)
- DST NIDHI (Department of Science & Technology, India) - Early-stage innovation funding support
- Startup India Seed Fund Scheme - Government-backed startup funding
- MeitY Startup Hub - Support for deep-tech and AI startups

Strategic Partners & Collaborations

Defence & Government Ecosystem

- Indian Navy - AI decision-making engine collaboration (TSATS project)
- Indian Air Force - Engagement through OmniEye satellite recognition
- Ministry of Defence India

KEY MANAGEMENT:

- Aakash Sinha
Founder & CEO



- Jyoti Sinha
CTO



COMPANY PROFILE

OrbitAID Aerospace Private Limited is developing satellite life extension solutions enabling longer mission duration, reduced space debris generation and enhanced operational flexibility. OrbitAID is working towards a holistic approach towards sustainable spacecraft operations beginning with refueling, then expanding in other on-orbit servicing operations like repairs, upgradation, de-orbiting and debris removal. OrbitAID is developing an orbital propellant supply chain through our constellation of Tanker satellites, which will reduce overall operational costs and enhance operational flexibility

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- <50 employees

CURRENT REVENUE/FUNDING:

- Annual revenue: ₹6 Crore as on Mar 31, 2025
- Funding: \$2.04M in 2 rounds

CORE DOMAIN:

- On-orbit Servicing and Refueling
- Spacecraft Subsystems and Components (Upstream)
- Space Exploration Technologies (Upstream)

PRODUCTS AND SERVICES:

1. Tanker Satellites

OrbitAID's refuelling vehicle leverages advanced autonomous systems specifically designed for in-orbit propellant transfer. High-resolution sensors and ultra-precise thruster controls enable accurate approach and docking maneuvers, ensuring safe and efficient refuelling operations. Integrated robotics manage fuel-line connections, while onboard diagnostics continuously monitor system integrity and environmental conditions.

Key Features:

- Highly maneuverable satellite capable of docking and robotic manipulation in all orbits
- Real-time visual recognition for docking and alignment
- Advanced AI algorithms for autonomous movement and positioning
- Diverse proximity sensors for intelligence, rendezvous and docking



Standard Interface for Docking and Refueling Port (SIDRP)

A precision-engineered docking interface designed for seamless and secure in-orbit servicing connections. It utilizes mechanical alignment systems and real-time sensor feedback to achieve flawless engagement in dynamic orbital conditions. Sophisticated algorithms manage approach and capture sequences to ensure safe propellant transfer.

Technical Highlights:

- TRL 9 cooperative docking interface
- Secure and efficient fluid transfer maintaining optimal pressure and flow rates
- Fail-safe mechanisms for secure operation
- Compatible with international passive interface standards

Specifications:

- Mass: 350 g
- MEOP: 35 bar
- Bidirectional fluid transfer
- Capable of transferring more than 10 propellants



Soft Capture Robotic Arm

A flexible, multi-jointed robotic arm designed for zero-gravity operations, capable of delicate manipulation and robust handling. Equipped with advanced sensor arrays and machine vision for real-time adaptive control.

Key Features:

- Advanced computer vision for load-point interaction
- High-strength grip for stable handling
- Optimized for compact storage and extended reach
- Adaptive force control for delicate operations



4. Adaptive Propulsion and Docking Suite (Turnkey Propulsion System)

A fully refuelable propulsion system designed for seamless integration and long-term serviceability. Eliminates traditional sealed-tank designs to enable multiple missions and extended spacecraft lifespan.

System Capabilities:

- Fully refuelable propulsion system
- Integrated valves in tank to reduce leak points
- Lower propulsion system volume for increased payload capacity



On-Orbit Services

1. On-Orbit Life Extension

- Extend spacecraft life through reliable in-space refuelling
- Transfer chemical, green and electric-propulsion consumables
- Powered by patented SIDRP interface for universal compatibility
- Maximize asset utilization and reduce early replacement costs
- Lower orbital debris by extending functional spacecraft life



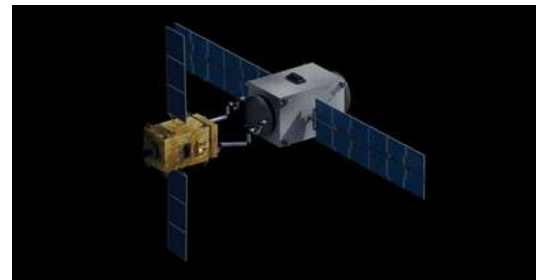
2. Active Debris Removal

- Remove high-risk debris objects
- Stabilize or capture defunct satellites using precision RPO and docking
- Enable controlled deorbiting or safe orbital relocation
- Reduce congestion in critical orbital regions
- Support long-term orbital sustainability



3. On-Demand Mobility

- Provide auxiliary propulsion for precise orbital maneuvers
- Enable inclination, altitude and RAAN adjustments
- Reduce dependence on onboard propellant reserves
- Enhance operational agility for commercial and national missions
- Support rapid maneuvering to avoid hazards



4. Satellite Inspection

- Conduct extended RPO missions
- Monitor satellite health in real time
- Assess structural integrity through proximity inspections
- Detect anomalies including thermal hotspots and attitude deviations
- Provide insurers with mission-validated health assessments



ACHIEVEMENTS:

- January 2026: Raised \$1.5 million (pre-seed) led by Unicorn India Ventures to advance SIDRP and accelerate in-space demonstration missions for on-orbit servicing.
- January 2026: Developed AyulSAT, a 25-kg tanker satellite launching onboard ISRO's PSLV-C62, to demonstrate in-orbit refuelling, power/data transfer and docking readiness for satellite life extension.
- October 2025: Awarded the Indo-Australian Space MAITRI Grant to support deployment of India's first in-orbit refuelling interface.
- September 2025: Inaugurated India's largest commercial 6,500 sq. ft. on-orbit servicing R&D facility, featuring an RPOD testbed and advanced fuel transfer lab.
- May 2025 - Zero-G2: Validated autonomous docking and fluid-transfer mechanisms under microgravity, demonstrating advanced CNN-based pose estimation and full SIDRP functionality.
- January 2025: Raised \$1.5 million (pre-seed) and achieved TRL-7 validation for docking and refuelling systems.
- December 2024: Successfully tested patented SIDRP in a zero-gravity flight, validating docking and propellant transfer capabilities.
- November 2024 - Zero-G1: Conducted India's first Zero-G mission for RPO and propellant transfer, qualifying SIDRP for flight-like operations and demonstrating precision refuelling and pose-estimation algorithms.
- May 2024: Recognised as India's first dedicated on-orbit servicing (OOS) company, pioneering tanker satellites and space-based refuelling systems.
- March 2024: Secured ₹4.5 crore pre-seed funding from StartupTN and TANSIM to advance satellite refuelling technologies.

INVESTORS/PARTNERS:

- StartupTN, Government of Tamil Nadu
- Unicorn India Ventures

PARTNERS:

- Indian Institute of Science
- NSIL
- STARBURST
- Liftero
- Dhurva Space
- Takeme2Space

KEY MANAGEMENT:

- Sakthikumar R
Founder & CEO
- Nikhil Balasubramanian
Co-founder & COO
- Mano Balaji K
Co-founder & CSO
- Gandhiprabu
Ramachandran
Director & CAO



COMPANY PROFILE

Orbitt Space is developing advanced propulsion systems and spacecraft subsystems designed for next generation satellites operating in Very Low Earth Orbit (VLEO). Design & developing VLEO satellite bus platform based on our proprietary Air Breathing Electric Propulsion (ABEP) technology. The company focuses on building scalable propulsion systems that enable sustained operations in very low earth orbits. With VLEO being very strategic, Orbitt Space aims to be a part of commercial and defense space missions.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

- 16 Employees

CURRENT REVENUE/FUNDING:

- 1M USD from pi-ventures with participation from IIM-A ventures. Additional 1Cr grant from IN-SPACE for developing mission virtualization software for Very Low Earth Orbit (VLEO) satellites.

CORE DOMAIN:

- VLEO specific propulsion & satellite bus platforms.

PRODUCTS AND SERVICES:

A Satellite Bus Engineered For Very Low Orbit

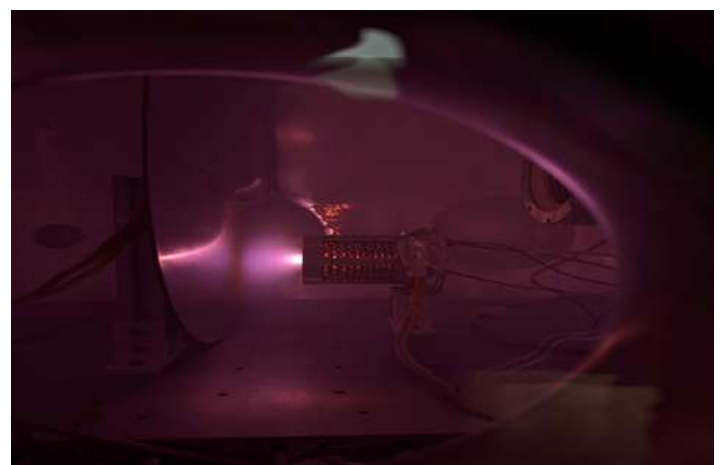
Our aerodynamic bus and proprietary air-breathing electric propulsion engine (ABEP) uses the sparse atmosphere as propellant for continuous station-keeping, eliminating the need for onboard propellant.



- Firing of our 1st ion thruster within 7 months of incorporation.



- Recent cathode testing successfully done at IN-SPACE March'25.





ACHIEVEMENTS:

- January 2026: Orbitt Space wins IN-SPACE seed fund of 1Cr for development of VLEO specific mission control software for autonomous constellation management under Department of Space's program to advance autonomous spacecraft operations and smart computing.
- August 2025: Orbitt Space was nominated as one of the top 5 companies for the ETtech Top Innovator Award.
- June 2025: Orbitt Space raised USD 1M in pre-seed funding led by pi Ventures with participation from IIM A ventures.

INVESTORS/PARTNERS:

- Pi Ventures with participation from IIM-A ventures.

KEY MANAGEMENT:

- Christopher Parmar
CEO & Co-Founder



- Anupam Kumar
CTO & Co-Founder



COMPANY PROFILE

OrbiX Global (under Gritly Analytics Private Limited) is a space-risk intelligence and sustainability analytics company. We develop mission-level Orbital ESG, Insurance Readiness and Investment Readiness indices that translate technical mission data into decision-ready signals for insurers, investors, regulators and operators. Our proprietary Risk42™ engine and R-Sentinel™ monitoring layer support orbital sustainability assessment, underwriting analytics, capital allocation and policy design across the Indian and global space ecosystem.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

- 2-10 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: Not publicly disclosed (startup stage)
- Funding Status: Unfunded / early-stage space sustainability intelligence company

CORE DOMAIN:

- Orbital ESG (Environmental, Social & Governance) Intelligence
- Satellite Risk Assessment & Monitoring

PRODUCTS AND SERVICES:

Risk42™ - Risk Intelligence Engine (Core Platform Layer) Risk42 is OrbiX Global's proprietary risk intelligence engine powering all indices and analytics frameworks. It provides:

- Mission-level scoring logic
- Dataset strength & confidence band signaling
- Data provenance tagging
- Evidence-tier classification
- Audit-ready structured outputs
- API-based integration capability

Risk42 enables standardized translation from technical mission data into underwriting, regulatory and investment decision signals.

R-Sentinel™ - Continuous Compliance & Risk Monitoring R-Sentinel™ is OrbiX's mission monitoring and assurance layer. It provides:

- Continuous mission risk posture tracking
- Compliance drift detection
- Anomaly and risk signal alerts
- Audit & governance dashboards
- Regulator-ready reporting support

In simple terms: "Score once. Monitor continuously."

Core Intelligence Frameworks OSG™

Orbital Sustainability & Governance Index Mission-level sustainability and governance scoring framework covering: Orbital congestion exposure Debris mitigation & end-of-life planning Maneuverability & collision avoidance readiness Long-term orbital burden assessment Governance transparency Designed for regulators, policymakers, ESG investors and space agencies.

IRI™ - Insurance Readiness Index

Underwriting-focused risk intelligence framework covering: Launch vehicle heritage Manufacturing quality & component pedigree Mission architecture complexity Software & integration risk Historical dataset strength & confidence levels IRI enables insurers and brokers to move from flat heuristics to mission-specific risk differentiation.

InvRI™ - Investment Readiness Index

Capital allocation and financial comparability framework covering: Mission durability & economic sustainability Risk-adjusted deployment profile Regulatory exposure Longterm asset viability Cross-mission comparability scoring Designed for VCs, PE funds, banks, sovereign funds and institutional capital.

OMR™ - Orbital Macroeconomic Risk

Macro-layer analysis assessing systemic orbital congestion, policy shifts, insurance market capacity and capital sensitivity to orbital instability.

Relevant to: Policy institutions Multilateral agencies
Global financial institutions

Extended Risk Domains (In-Development)

1. OrbiX is expanding the Risk42 engine to adjacent frontier domains:
2. Air Mobility Risk Intelligence (UAM/eVTOL readiness scoring)
3. Drone Ecosystem Risk & Compliance Scoring
4. Autonomous Systems Risk Evaluation
5. Frontier Infrastructure Risk Analytics

Services Offered

- Mission-level risk scoring (OSG, IRI, InvRI)
- Continuous compliance monitoring (R-Sentinel)
- Regulatory advisory & sustainability intelligence
- Insurance underwriting support
- Investment screening & capital advisory
- Orbital risk research & whitepapers
- Policy advisory for national & international space frameworks
- Data integration & risk analytics API solutions

ACHIEVEMENTS:

- Recipient - Blue Ocean Strategy-based recognition for early-stage market creation in the space industry
- "Finalist - Dubai Airshow Vista Stage (Space Innovation)
- Engaged with global insurers on Insurance Readiness Index pilot discussions
- Engaging institutional stakeholders on Investment Readiness frameworks
- Whitepapers & Research: Published foundational research on space sustainability, including the "Orbital ESG Framework 2024" and guides for fund managers on integrating orbital assets into sustainable investing.
- Patents: Has registered 3 patents related to its orbital intelligence technology as of early 2026.

INVESTORS/PARTNERS:

- Not publicly disclosed / Early-stage

KEY MANAGEMENT:

- Madhankumar Chockalingam
Founder & CEO

COMPANY PROFILE

PierSight is a deep-tech company building a constellation of satellites, designed for round-the-clock ocean monitoring in all weather conditions. The fused Synthetic Aperture Radar (SAR) and Automatic Identification System (AIS) data generated at 30-minute intervals supports a wide range of applications whether used directly by partners or analyzed through PierSight's platform for insights in sectors like insurance, energy, finance and defense.

YEAR OF ESTABLISHMENT:

2023

NUMBER OF EMPLOYEES (APPROX.):

50 employees

CURRENT REVENUE/FUNDING:

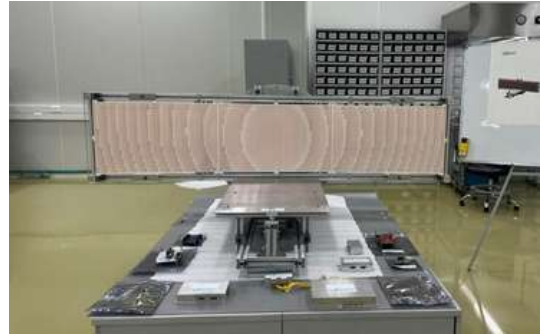
- \$8 Mn

CORE DOMAIN:

- Space-tech/ Deep-tech

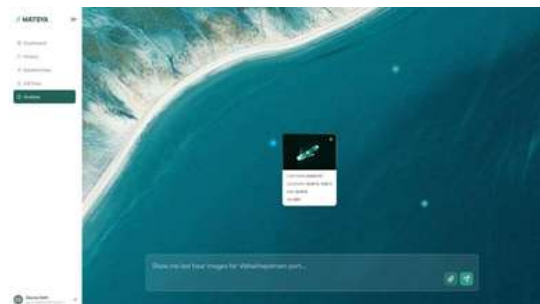
PRODUCTS AND SERVICES:

1. SAR + AIS Satellite Constellation: Constellation of 32 satellites purpose-built for maritime monitoring.



Varuna 2.0 - our first commercial satellite

2. MATSYA: Maritime Intelligence Software: Actionable insights for end users. Data source agnostic - combines data from Earth Observation (EO) satellites (including PierSight's)



MATSYA Dashboard

3. DRONE SAR Program: Drone based Synthetic Aperture Radar mission is built for various applications such as Foliage penetration, Interferometric SAR, Polarimetry, etc.



PierSight's Drone SAR

ACHIEVEMENTS:

- PierSight has successfully designed, developed and tested an in-orbit SAR+AIS technology demonstrator, Varuna - launched on 30th December 2024 aboard a PSLV on ISRO's POEM platform. The payload was built in just 6 months and launched within 9 months. First commercial SAR & AIS satellite set for launch in 2026.
- PierSight has won a landmark government contract to provide the sovereign SAR backbone for India's first Public Private Partnership (PPP) Earth Observation (EO) constellation of satellites for next 12 years, with guaranteed annual demand of \$25M.
- Designed and developed India's first deployable flat panel reflect array antenna by a private company.
- Won first India-US Defence Challenge(INDUS-X) for Maritime ISR (Oil Spill Detection), demonstrating strong commercial value in maritime environmental monitoring - followed by POC contracts from both the Indian and US Coast Guard.
- Raised India's largest deep-tech seed round, raised cumulative \$8M since inception.
- PierSight has been part of prestigious accelerator programs like Techstars Space Accelerator and Creative Destruction Lab.
- Selected for mentorship under IN-SPACE Seed Fund Scheme: Disaster Management & Urban Development.
- Selected for mentorship support under IN-SPACE's Seed Fund Scheme for the Marine Sector using Space Technology.
- Selected as one of the 8 finalists in the NSIN-NGA Global Fishing Forecast Challenge.
- Finalists in CMA CGM Startup Awards. (CMA CGM is the third largest container shipping company in the world.)

INVESTORS/PARTNERS:

- Alpha Wave Global
- Elevation Capital
- All In Capital
- Sustainable Ocean Alliance
- Seabird Ventures
- Crescent Enterprises Ventures
- IIMA Ventures, Techstars
- MeitY Startup Hub
- Natasha Malpani Oswal (Investor, Boundless Ventures)
- Andreas Klinger (Prototype Capital)
- Nandan Reddy
- Sahil Lavingia
- Vismay Agrawal
- Nikunj Jalan

KEY MANAGEMENT:

- Gaurav Seth
CEO and Founder



COMPANY PROFILE

Pixxel is a space data company and spacecraft manufacturer building the next generation of Earth intelligence. Starting with the world's highest-resolution commercial hyperspectral satellites, Pixxel is now expanding its vision toward planetary intelligence, creating a full-stack intelligence and infrastructure layer that can serve as a health monitor for the planet.

Following the successful launch of six commercial hyperspectral satellites, Fireflies, Pixxel is scaling toward a constellation of 18-24 satellites designed for daily global revisit. These satellites deliver high-resolution hyperspectral data that helps industries detect, monitor and predict change across agriculture, energy, mining, the environment and infrastructure.

Aurora by Pixxel, the company's Earth Observation Studio, turns satellite data into usable intelligence through integrated analytics and workflows, making complex imagery more accessible, interpretable and actionable. Alongside data and software, Pixxel also designs and manufactures advanced small satellites, building end-to-end space systems for various applications.

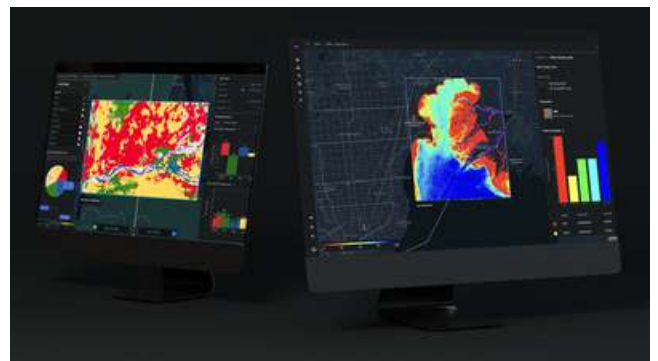
Pixxel has raised \$95 million from M&G Catalyst, Glade Brook Capital Partners, Aditya Birla Ventures, Google, Lightspeed, Radical Ventures and others.

PRODUCTS AND SERVICES:

- **Firefly constellation:** 5-metre resolution hyperspectral satellite imagery across 135+ spectral bands



- **Aurora:** Earth observation analytics platform for accessing, visualising and analysing satellite data



- Satellite manufacturing and mission services for government and commercial partners



YEAR OF ESTABLISHMENT:

2019

NUMBER OF EMPLOYEES (APPROX.):

- 250 employees

CURRENT REVENUE/FUNDING:

- Funding: \$95M, Venture-backed private company

CORE DOMAIN:

- Earth Observation data analysis
- Hyperspectral imaging satellites
- Satellite manufacturing



contact@pixxel.space



<https://www.pixxel.space/>

ACHIEVEMENTS:

- Founded in 2019, with early backing from leading global venture investors and raised a total of USD 95M to date
- Recognised among the Top Innovative Space Companies by Fast Company and named one of Via Satellite's Top 10 satellite companies and TIME's Best Inventions
- Awais and Kshitij named in Forbes 30u30, Entrepreneur 35u35, with Awais additionally being recognised in the MIT Innovators under 35 list, Forbes 40u40 and as a UN Next Generation Fellow.
- Selected for multiple strategic programs and partnerships with U.S. government agencies, including the National Reconnaissance Office and NASA
- Awarded IDEX and DIU grants for satellite manufacturing and advanced payload development for Indian government applications
- Successfully launched and commissioned six Firefly hyperspectral satellites across two missions, establishing one of the world's highest-resolution commercial hyperspectral constellations
- Leading India's first privately led national Earth Observation constellation under a Public-Private Partnership framework with IN-SPACe

INVESTORS:

- Lightspeed
- Blume
- Radical Ventures
- Google
- Aditya Birla Ventures and others.

PARTNERS:

- NASA
- IAF
- UP42
- KSAT
- SIIS
- 4EI
- Geospatial Insight
- global commercial and government customers.

KEY MANAGEMENT:

- Awais Ahmed
Founder and CEO



- Kshitij Khandelwal
Founder and CTO



COMPANY PROFILE

As part of the Tata Group, Tejas Networks has expanded beyond its global leadership in optical, wireline and wireless networking to include cutting-edge satellite communication (Satcom) and Non-Terrestrial Networks (NTN) capabilities. The Satcom division builds on Saankhya Labs' deep heritage in Software Defined Radios (SDR), indigenous chipsets and satellite broadband technologies.

Tejas now offers end-to-end satellite communication solutions spanning terminals, modems, gateways, broadcast systems, chipsets and advanced edge-processing technologies for NTN and D2M (Direct-to-Mobile) use cases.

YEAR OF ESTABLISHMENT:

2000

NUMBER OF EMPLOYEES (APPROX.):

- 3000 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: INR 87.9 crores Mar 2023
- Total Funding: USD 27.9 million in 9 rounds
- Acquired by Tejas Networks Ltd. on March 31, 2022, for INR 283.94 crore in cash

CORE DOMAIN:

- Software Defined Radio (SDR) & Communication Chipsets
- Satellite Communications & Non-Terrestrial Networks (NTN)

PRODUCTS AND SERVICES:

Software Defined Radio (SDR) Platforms

Saankhya Labs designs and develops advanced Software Defined Radio (SDR) hardware and software solutions for flexible, programmable communication systems.

Products include:

- SDR platforms for satellite communication
- SDR solutions for 4G/5G and NTN integration
- Reconfigurable radio modules for broadcast, wireless and defence applications

Benefits:

- Multi-band support
- Field upgradable firmware
- Support for diverse communication standards

Wireless Communication Systems & Semiconductor Products

The company provides complete satellite communication solutions leveraging its SDR and chipset technologies.

Offerings:

- Satellite broadband modem and gateway solutions
- Direct-to-Mobile (D2M) broadcast systems
- GEO/LEO integrated satellite connectivity
- High-speed satellite uplink/downlink systems

Applications:

- Broadband connectivity
- Remote IoT data links
- Enterprise satellite networks
- Mobile and broadcast distribution

ACHIEVEMENTS:

- Pioneer in India's Software Defined Radio (SDR) revolution with indigenous chipsets and reconfigurable communication systems powering Satcom, Broadcast and strategic applications.
- Successfully demonstrated India's first satellite-based Direct-to-Mobile (D2M) broadcast system, that enables content delivery directly to mobile devices without dependence on terrestrial networks.
- Developed comprehensive 5G Cellular, Broadcast and NTN-compliant technologies, strengthening India's satellite-terrestrial convergence and advancing global NTN readiness.
- Trusted technology partner of ISRO's Space Applications Centre (SAC), delivering S-band MSS terminals, Satellite Phones (SAMRAT), over 2,700 two-way MSS terminals deployed across Indian Railways' electro-locomotives and more than 45,000 two-way MSS terminals deployed for coastal and deep-sea vessels, along with portable satellite broadcast receivers and hub-side equipment including Burst Demodulators, TDM Modulators and Gateways.
- Designed India's first fully indigenous baseband processor for satellite and broadcast communication, reducing dependence on imported chipsets.
- Strengthened by integration into the Tata Group through Tejas Networks' acquisition, gaining scale, advanced manufacturing capability and deeper alignment with India's Atmanirbhar Bharat vision.

INVESTORS/PARTNERS:

- Tejas Networks Limited : Public Listed Organisation (TEJASNET)

KEY MANAGEMENT:

- Vinay K Prasad
Associate Vice President -
Satcom
- Vivek Kimbahunne
Vice President - Business
Development



COMPANY PROFILE

Robinsons Cargo & Logistics Pvt. Ltd., established in 1954, is a leading global logistics and freight forwarding company offering end-to-end supply chain solutions. A member of the Indian Space Association (ISpA), Robinsons supports the space and aerospace sector through specialized logistics services for the safe and efficient movement of high-value, time-sensitive cargo.

The company provides air and ocean freight, project logistics, customs clearance and multi-origin consolidation services tailored for space hardware, including satellites, subsystems and critical components. With in-house customs expertise, AEO-LO certification and temperature-controlled storage capabilities, Robinsons ensures compliance and reliability across international operations.

Robinsons serves a wide range of aerospace and space-tech clients, including leading Indian startups and defence organizations, supported by a strong domestic presence and a global partner network. Its integrated approach and industry expertise position it as a key enabler of India's growing space ecosystem.

YEAR OF ESTABLISHMENT:

1954

NUMBER OF EMPLOYEES (APPROX.):

- < 500 employees

CURRENT REVENUE/FUNDING:

- Total Funding: unfunded
- Revenue: ₹152Cr (\$18M)

CORE DOMAIN:

- Supply Chain Management

PRODUCTS AND SERVICES:

Aviation & Defense

- AOG Solution - Domestic & International
- Spare Parts Management, including Repair & Return
- Specialised Warehousing Solution
- Domestic & International Transportation
- EXIM Compliance & Documentation
- Specialised Clearance - ATA & Exhibition Equipment
- Specialised Handling of OOG, ODC, DG Explosives & Valuables
- Courier Services - Hand Carry & Special Deliveries



Value-Added Services

- 24/7 Operations Hub
- Expedited Night Clearance
- Temperature Controlled Storage
- Packaging, Fumigation & Lashing
- Integrated Milk Run Services
- End-to-end Co-ordination with Bases, Units, MOD Suppliers & Handling Agencies
- On-Site Operations Implant



ACHIEVEMENTS:

2024-Present

- Achieved ISO 14001 (Environmental Management System) certification, strengthening sustainable logistics practices aligned with global standards
- Continued expansion of end-to-end logistics capabilities supporting high-value and mission-critical sectors, including aerospace and space technology

2021-2023

- Strengthened role in aerospace, space tech and defence logistics, supporting companies such as Skyroot Aerospace, Pixxel, Dhruva Space and Digantara (as showcased in client portfolio)
- Expanded global partnerships with 120+ international logistics networks, enabling cross-border support for space and high-tech supply chains
- Developed AOG (Aircraft on Ground) logistics capabilities, enabling rapid domestic and international movement of critical aerospace spare parts

2017-2020

- Awarded GDP (Good Distribution Practice) and AEO-LO certifications, enhancing capabilities for secure, compliant and sensitive cargo handling
- Built expertise in handling out-of-gauge (OOG), dangerous goods (DG) and high-value aerospace cargo, including specialized packaging and documentation
- Implemented end-to-end EXIM compliance and documentation services for international aerospace and defence logistics

2000-2016

- Established organized warehousing and cold chain infrastructure, supporting complex logistics requirements across industries including high-tech and engineering
- Expanded national footprint with multiple offices and operational hubs across India

Pre-2000 (Foundation & Growth)

- Entered air cargo and freight forwarding (1972), building foundational expertise in global logistics
- Established legacy in stevedoring and international cargo handling (since 1954), forming the base for future expansion into advanced sectors

INVESTORS/PARTNERS:

- Air Cargo Agents Association of India (since 1978)
- Association of Multimodal Transport Operators of India
- Indo American Chamber of Commerce
- Indo Australian Chamber of Commerce
- Indo French Chamber of Commerce
- Indian Space Association (since 2021)
- Micro, Small and Medium Enterprises (India)
- The Federation of Indian Chambers of Commerce & Industry
- WCA Interglobal (Since 2022) (ID: 98952)
- World Air Cargo Organisation (Since 1996)

KEY MANAGEMENT:

- Anil Mohanlal Vazirani
Chairman



- Rhea A VAZIRANI
Director MSc Supply
Chain, MSc International
Development

COMPANY PROFILE

SAMKALPA Systems is a premier technology solutions provider catering to the Indian Aerospace and Defense (A&D) ecosystem. The company specializes in high-fidelity simulation and analysis software, most notably the Systems Tool Kit (STK) and Orbit Determination Tool Kit (ODTK), which are industry standards for modelling complex space missions. Through its "Centre of Excellence" in Bangalore, SAMKALPA provides end-to-end support for Space Situational Awareness (SSA) and Space Traffic Management (STM), helping mission planners reduce risk and optimize satellite operations.

YEAR OF ESTABLISHMENT:

2017

NUMBER OF EMPLOYEES (APPROX.):

- 18 employees

CURRENT REVENUE/FUNDING:

- Authorized Capital: ₹2.0 Cr
- Paid-up Capital: ₹97.59 Lac

CORE DOMAIN:

- Space Domain Awareness (SDA/SSA)
- Mission Simulation & Modelling software
- Space-Grade Hardware
- Persistent Surveillance

PRODUCTS AND SERVICES:

- SSA/SDA Solutions: Comprehensive suite for global space tracking, automated orbit estimation and collision avoidance through the VEDCOMSPOC joint venture.
- Simulation & Modelling: Distribution and local support for Ansys STK for trajectory simulation, sensor modelling and 3D mission visualization.
- Space-Grade Hardware: Supply of high-reliability components, including DC-DC converters, EMI filters and microwave/RF assemblies for space and MIL applications.
- UAS Traffic Management (UTM): Advanced flight safety analysis and risk assessment tools for unmanned operations in national airspace.

ACHIEVEMENTS:

- Supplied DC-DC converters & EMI Filters for HUD (Head-Up Display) and Data acquisition system to HAL for LCA Tejas
- Supplying DC-DC converters to ISRO for Spaceborne 3D LiDAR development and Laser Doppler Velocimeter
- Supplied ARINC 818 Video Cables for interfacing Digital video for LCA Tejas.
- 2025: Supplied welding filler inserts to Human Space Fight Centre-ISRO for Gaganyaan Mission
- 2023: Participated in the ISRO/IN-SPACE Workshop on SSA & STM, demonstrating real-time space object detection capabilities.
- 2023: Collaborated with ISpA for a high-level deep-tech seminar on Space Domain Awareness advancements.
- 2021: Formed VEDCOMSPOC, a joint venture with US-based COMSPOC, to establish a local commercial space operations center for India and friendly nations.

INVESTORS/PARTNERS:

- Samkalpa Systems has a JV partnership in India with COMSPOC Corp. (USA) namely: VEDCOMSPOC Pvt. Ltd.

KEY MANAGEMENT:

- Ravnish Luthra
CEO



COMPANY PROFILE

We are building LEO based multi-mission, software-defined satellite constellation for Precision Positioning, Navigation and Timing (PNT) and secure Communication (M2M/IoT) to enable secure, hyper-connected and autonomous world. We are integrating Navigation and Communication into a single satellite and increasing the business value while utilising our unique satellite architecture. We are targeting defence and commercial applications and foreseeing the technological integration to meet the demands of autonomous systems.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

- 16 Full-time Employees + 4 Interns

CURRENT REVENUE/FUNDING:

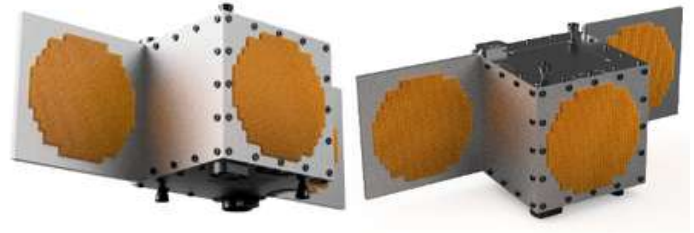
- Overall investment of 18 Crores 35 Lakhs confirmed with Venture Capitalists and individual investors

CORE DOMAIN:

- Satellite-based Navigation and Communication(M2M/IoT) services
- Navigation and Communication Satellite Manufacturing
- Precision Navigation Services and 5G NTN Services

PRODUCTS AND SERVICES:

- **Product:** Currently, we are building satellites for delivering precision PNT and Secure communications from LEO, for the technology demonstration launch.



Sanyark's Commercial satellite images

Services:

Strategic + Civilian/Commercial:

1.High Accuracy Service (HAS): Correction service to improve the accuracy of positioning from traditional 3-5m to $\leq 30\text{cm}$ through a technique called PPP-RTK.

2.Timing Service: Service to provide precise timing information with calibrated traceability to IST/UTC with an accuracy better than 20ns.

3.Independent PNT Service: An independent PNT service in C band which can provide high power signals ($\sim 20\text{dB}$) to augment existing GNSS services like those from NavIC and support semi-indoor positioning.

4.Authentication and Integrity as a Service: Service to provide authentication capability to the HAS, Timing and Independent PNT services. In addition, will also provide a near-real time ($\sim 2-3$ sec) integrity information of the traditional satellites like NavIC, GPS, etc. to protect standalone GNSS users.

5.GNSS Spoofing/Jamming Monitoring: Capability to monitor L band spoofing / jamming signals coming from the Earth's surface to localize Jamming sources reusing the on-board Orbit Determination hardware

6.Communications - NTN (Non-Terrestrial Network): On-board transceiver to support NTN bands as defined by 3GPP to support secure M2M communication and IOT applications.

ACHIEVEMENTS:

- Out of 68 startups applied for Seed Fund Grant Support for Full-mission virtualisation for smart computing and control scheme, we secured Mentorship and Technical Support from IN-SPACE for our project proposal on Satellite precise orbit determination for LEO satellites. ([Link](#)).
- Got selected for AUM - India Deep Spark Program and the same will be announced soon (in few days)

INVESTORS/PARTNERS:

- Avaana Capital
- AUM Ventures

KEY MANAGEMENT:

- Raghava Kundrapu
Founder and CEO
- Akhileshwar Reddy Peseke
Co-Founder and CTO



COMPANY PROFILE

SatLeo Labs Private Limited is an Indian space technology startup developing a microsatellite constellation that captures high-resolution thermal and visible imaging data from Low Earth Orbit (LEO) to provide real-time insights about Earth's surface temperature patterns using AI, edge computing and advanced analytics.

YEAR OF ESTABLISHMENT:

2023

NUMBER OF EMPLOYEES (APPROX.):

- under 25 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: Rs. 27.9 lakh (March 2024)
- Total funding: USD 3.3 million (in 1 round)

CORE DOMAIN:

- Thermal Infrared Satellite Imaging
- Earth Observation (EO) & Geospatial Intelligence
- AI/ML & Edge Computing in Space
- Climate & Infrastructure Intelligence

PRODUCTS AND SERVICES:

1. **Micro-satellite Constellation:** Low Earth Orbit (LEO) satellites for continuous thermal monitoring
2. **Cutting-edge Thermal Imaging Sensors:** Capturing temperature variations with an accuracy of one kelvin, through the fusion of MWIR, LWIR and multispectral bands, revealing critical insights
3. **AI-Powered Analytics:** Leveraging Machine Learning, Deep Learning and Object-Based Image Capture for advanced insights
4. **Cloud-based Data Platform:** Seamless access to real-time, AI-enhanced thermal intelligence
5. **Space Edge Computing:** Onboard processing for real-time decision- making with reduced latency

APPLICATIONS:

- Securing National Borders
- Agriculture
- Archaeology & Geology
- Climate Modelling
- Weather Forecasting
- Disaster Management
- Urban Planning
- Environmental Conservation



ACHIEVEMENTS:

- November 2025: SatLeo Labs has been selected as one of YourStory's Tech30 startups of 2025, spotlighting it among India's most promising deep-tech and space-tech innovators at the TechSparks Bengaluru summit. This recognition highlights the company's progress in developing high-resolution thermal imaging satellites and its mission to bring precise temperature intelligence from space to solve real-world challenges.
- Selected by Sber Bank (Russia) among the Worlds Top 10 technology startups to showcase SatLeo's capabilities on an international platform.
- Selected by Dassault Systèmes to showcase SatLeo's solutions in Paris, France.
- September 2025: SatLeo Labs, an Ahmedabad-based space-tech startup, has marked a significant achievement by advancing the development of thermal Earth-observation satellites that deliver high-resolution temperature intelligence from Low Earth Orbit. The company is pioneering the use of dual-band infrared sensing combined with onboard AI and edge computing, enabling near-real-time insights that conventional optical satellites cannot provide.
- May 2025: Indian space-tech startup SatLeo Labs has successfully raised \$3.3 million in a pre-seed funding round, led by Merak Ventures with participation from Huddle Ventures, GVFL, Java Capital, IIMA Ventures, PointOne Capital and notable angel investors. The capital will be used to accelerate development of SatLeo's advanced thermal and visible imaging technology from space, enhance its proprietary payload systems, secure regulatory approvals, expand the engineering team in Ahmedabad and build infrastructure for future satellite deployment.

INVESTORS:

- Merak Ventures
- PointOne Capital
- Huddle Ventures
- GVFL
- Java Capital
- IIMA Ventures

PARTNERS:

- CropIn
- Eartheye Space
- Aereo
- BSPL
- Ponidcherry Municipality
- GlobalTech
- Airotor
- IN-SPACE
- Shapoorji Pallonji
- AWS
- Google

KEY MANAGEMENT:

- Shravan Bhati
Founder CEO



- Urmil Bakhai
CSO



- Ranendu Ghosh
Founder, Retired Scientist,
ISRO



COMPANY PROFILE

SatSure is a leading Earth Intelligence company delivering analytics-ready data products for contextual, industry-specific solutions at global scale. By combining Earth Observation (EO) data-satellite imagery, LiDAR and aerial imagery with remote sensing, machine learning and artificial intelligence, SatSure transforms raw data into decision intelligence-actionable insights that address real-world challenges.

SatSure is building a Digital Dictionary of the Living Earth, an end-to-end EO data refinery platform that converts EO data into decision intelligence to support agriculture, climate resilience and sustainable development.

With a mission to make Earth data understandable at unprecedented scale and resolution, SatSure enables high-precision observation of land and water to address critical challenges in climate resilience, financial inclusion and sustainable development. Through its Earth Observation as a Service (EOaaS) model and vertically integrated technology stack, the company bridges the gap between data analytics and decision intelligence, delivering near real-time insights for agriculture, disaster response, infrastructure and utilities.

YEAR OF ESTABLISHMENT:

2017

NUMBER OF EMPLOYEES (APPROX.):

- ~150 employees

CURRENT REVENUE/FUNDING:

- Total Funding: \$27.7M

CORE DOMAIN:

- Earth Observation (EO) Analytics and Decision Intelligence
- SatSure provides AI-powered geospatial analytics using Earth Observation data to help governments, enterprises and financial institutions make data-driven decisions.

PRODUCTS AND SERVICES:

From sourcing EO data to developing industry-specific solutions, SatSure's data product helps address unique challenges faced by sectors such as BFSI, agriculture, aviation, infrastructure and utilities. SatSure is one of the world's leading Earth Observation (EO) data refinery ecosystem designed to deliver analytics-ready data products that offer contextual, industry-specific solutions. Here's list of sectors we cater to:

SatSure Creating an Impact Across Sectors

From sourcing EO data to developing industry-specific solutions, SatSure's data product helps address unique challenges faced by sectors such as BFSI, agriculture, aviation, infrastructure, and utilities



Agri-Business

- Ag-Input: Seeds, Chemicals
- Agri-Commodities: Procurement Planning
- Carbon Credit: Plantation Mapping
- Multi-Lateral & FPOs



Agri-Banking

- Collection Insights: Monitoring & Collection, Insights Weather
- Climate Impact: Evapotranspiration (ET), Air Quality Indicators (AQI)
- Risk & Policy: SatSure Report, Annual Review & Renewal
- Sourcing Intelligence: Cluster Ranking, Location Intelligence, Portfolio Monitoring & Farm Lead Generation



Agri-Insurance

- CCE Optimisation
- Climate Data: ET, AQI
- Crop Insurance - Claim Settlement
- Crop Monitoring
- Crop Damage Assessment
- Crop Yield Estimation



Infrastructure & Urban Planning

- Digitization of Aerial Data
- Planning & Monitoring
- Asset Detection & Counting
- Land Use / Land Cover Classification
- High-Resolution Digital Elevation Models (DEM & DSM)
- Geocoding
- Building Footprint Identification



Utilities

- Linear Assets - Transmission Lines, Roads, Railway Lines
- Route Optimisation
- Route Monitoring
- Vegetation Management

SatSure Creating an Impact Across Sectors

SatSure is one of the world's leading Earth Observation (EO) data refinery ecosystem designed to deliver analytics-ready data products that offer contextual, industry-specific solutions



Reinsurance

- Insurtech: Product development & claim validation
- Parameters Based Insurance: Extreme weather events, floods, drought for insurance providers



Water Resource Management

- Irrigation Automation: Precise Water Application
- Site Suitability for Water Management: Consumption & Usage Analysis, Watershed & Rainwater Harvesting
- Sustainable Water Resources: Efficiency & Scarcity Analysis



Forestry

- Deforestation Mapping
- Forest Health Monitoring
- Forest Cover & Quality Monitoring
- Project Activity Tracking
- Ecosystem Health Monitoring
- Socio-Economic Assessment



Climate Risk

- Risk Identification & Mitigation
- Weather monitoring
- Predictive analysis for drought & flood prediction
- Climate Hazard
- Modeling Air Quality Indicators
- Surface & Ground Water Quality Assessment
- Agroforestry
- Fire Vulnerability Risk

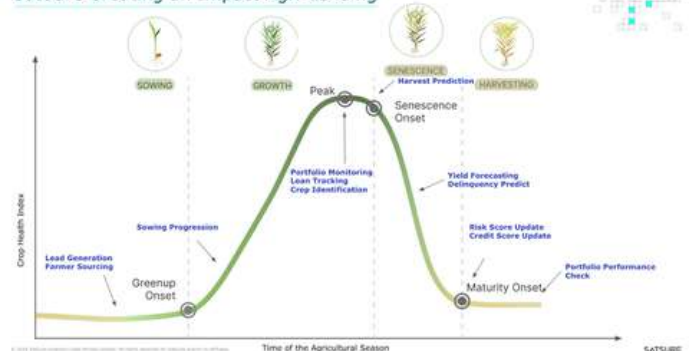


Disaster Management

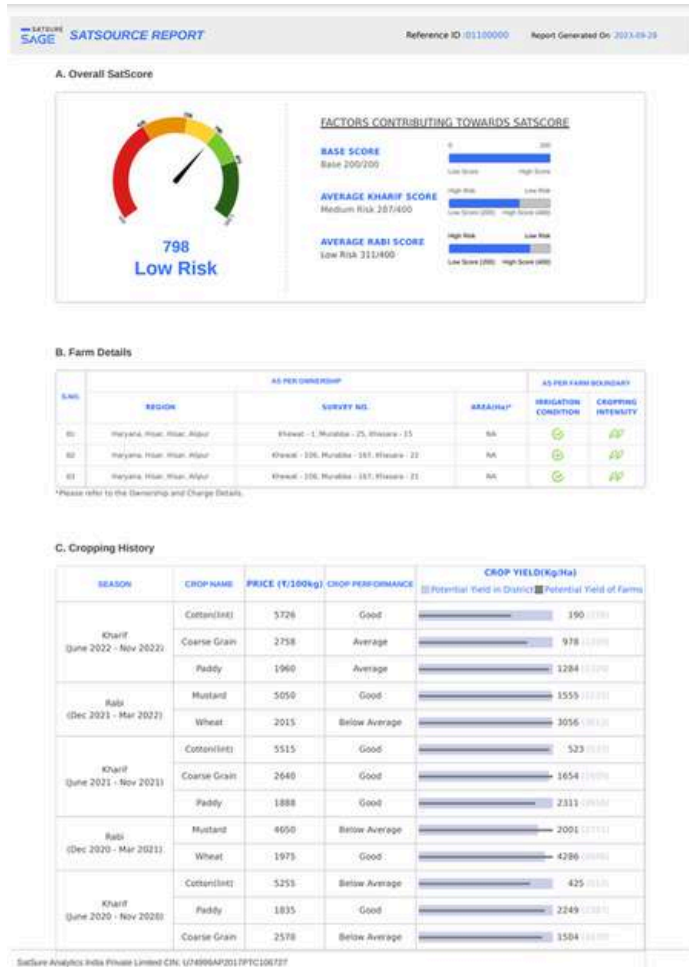
- Damage Detection for Roads & Buildings
- Asset detection & counting
- Land use detection
- Damage calculation of the assets

Agri-Banking: Enabling Financial Inclusion for Smallholder Farmers with Satellite Remote Sensing

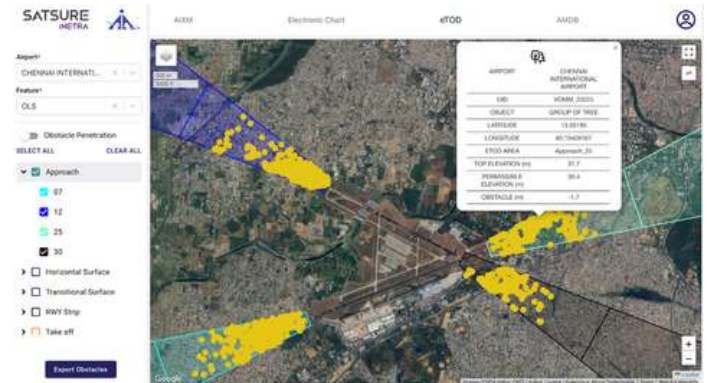
SatSure Creating an Impact Agri-Lending



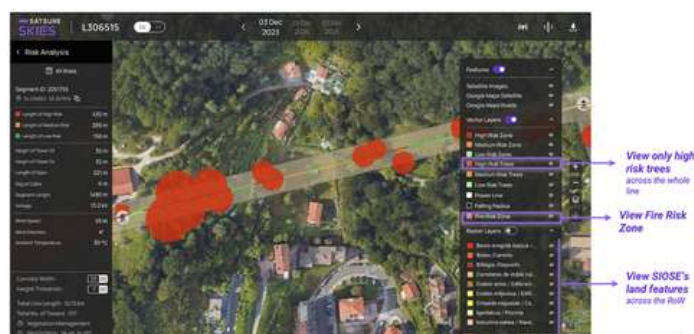
SatSource Reports: Enabling Financial Inclusion in Indian Agriculture with Satellite Imagery based Spatial Crop Intelligence. Our vision is to create a future where access to credit is not a privilege but a universal right for every farmer regardless of location or scale.



SatSure Skies: A Multi module aeronautical information management (AIM) platform that forms a nerve center for critical decision making and digital data management. SatSure Skies was developed with the vision of optimizing for safer and efficient processes in Air Traffic Management and to enable operational efficiencies of Airspace and Airport Management.



Critical Infrastructure Solutions: SatSure's satellite-based construction monitoring system is transforming the way infrastructure projects are managed, offering a smart, scalable and cost-effective solution for the construction industry. SatSure's solution provides a smart model for monitoring infrastructure construction progress using satellite imagery.



ACHIEVEMENTS:

2026

- Selected among Top 10 Global Innovators (AI for ALL) at the India AI Impact Summit 2026, receiving a ₹25 lakh grant for Farm Score for Climate-Smart Lending
- Led thought leadership on GeoAI and planet-scale intelligence systems, advancing the concept of full-stack Earth intelligence infrastructure
- Contributed to national discourse on AI adoption and multilingual, voice-first systems for large-scale impact

2025

- Selected under IN-SPACe EO-PPP program (₹1,200 Cr) as part of a consortium with Pixxel, PierSight and Dhruva Space to build India's first indigenous commercial EO satellite constellation (KaleidEO)
- Hosted Karman Week 2025 in Bengaluru, bringing together global space leaders from 13+ countries
- Awarded GeoSmart India Leadership Award 2025 - Emerging Geospatial Company of the Year
- Won AEC Excellence Award (Technology Innovation) for SatSure Skies in aviation intelligence
- Recognized as Top Solver - Thryve Open Innovation Challenge 2025 for AI-driven satellite-based farm boundary mapping
- Certified as Best Firm for Data Scientists to Work For at Cypher 2025
- Selected among Top 10 Global Innovators - DPI for People & Planet Challenge for Digital Water Stack (DWS)
- Honored with Times of India Social Impact Award for Tech & AI Innovation in Sustainability
- Participated in global forums including IAC 2025 (Sydney), AWS re:Invent 2025, OGC Innovation Days (Frankfurt) and Biban Forum (Riyadh)
- Showcased AI + EO innovations at SAAW 2025, GeoSmart India and LTFS RAISE 2025

2024-2025 (Strategic Partnerships & Launches)

- Partnered with Perfios.ai to digitize agri-lending workflows targeting 100M+ smallholder farmers
- Collaborated with HydroFarm for plantation monitoring under Saudi Arabia's Vision 2030
- Formed alliance with Wyvern (Canada) to build hyperspectral imagery-to-analytics ecosystem
- Partnered with KALRO (Kenya) to enable EO-driven climate-smart agriculture
- Launched SatSource UP Report, delivering parcel-level intelligence across 75 districts of Uttar Pradesh

INVESTORS/PARTNERS:

- Baring Private Equity India
- Promus Ventures
- Force Ventures
- Luckbox Ventures
- IndigoEdge

KEY MANAGEMENT:

- Prateep Basu
Chief Executive Officer



- Rashmit Singh Sukhmani
Chief Technology Officer



- Arpan Sahoo
CEO, KaleidEO



- Akash Yalagach
CTO, KaleidEO



- Himanshu Khanna (POC)
Product Marketing Manager



COMPANY PROFILE

Sisir Radar is a deep-tech aerospace OEM specialising in low-frequency radar systems (L and P bands) that "see" where optical and X-band sensors fail. Led by the former Director of ISRO's Space Applications Centre, the company has developed proprietary IP that achieves sub-metric resolution in bands typically known for low clarity. Their technology is specifically engineered for the Indian context capable of penetrating heavy monsoon clouds, dense tropical foliage and even the earth's surface to detect hidden structures and underground networks.

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- 25-50 employees

CURRENT REVENUE/FUNDING:

- Secured \$7 million Series A (Dec 2025) led by 360 ONE Asset and Shastra VC.
- Total funding to date: ~\$8.5M

CORE DOMAIN:

- Synthetic Aperture Radar (SAR)
- Ground Penetrating Radar (GPR)
- Hyperspectral Imaging

PRODUCTS AND SERVICES:

- **Spaceborne SAR Payloads:** India's first privately developed world's highest-resolution L-band (0.75 m) and P-band (2.5 m) Synthetic Aperture Radar (SAR) payloads designed for small satellite constellations. These systems enable all-weather, day-night Earth observation, with deep penetration capability for applications such as foliage mapping, subsurface sensing, disaster monitoring and strategic surveillance. The payloads are optimised for low SWaP (Size, Weight and Power), making them ideal for next-generation commercial and defence satellite missions.
- **Airborne SAR Systems:** Sisir Radar develops advanced airborne Synthetic Aperture Radar (SAR) systems delivering world-class, sub-metric resolution imaging from manned and unmanned aerial platforms. These systems are engineered for high mobility, rapid deployment and operation in contested and GPS-denied environments, enabling reliable intelligence under all-weather, day-night conditions. The airborne SAR solutions support high-resolution stripmap and spotlight modes, along with change detection, moving target indication (MTI), DEM and terrain mapping. With optimised SWaP (Size, Weight and Power) and modular architectures, the systems are compatible with UAVs, fixed-wing aircraft, fighter aircrafts and rotary platforms.

Key Applications

- Battlefield and border surveillance
- Persistent ISR and reconnaissance
- Track and analyse disaster response
- Precision agriculture and forestry monitoring
- Infrastructure inspection and terrain analysis

Key Differentiators

- Indigenous, end-to-end SAR design and development
- Sub-metric imaging capability
- Operates through clouds, smoke, foliage and darkness
- High-mobility platforms with rapid mission readiness
- AI-ready data products and on-board processing
- Ground Penetrating Radar (GPR): Ultra-high bandwidth systems capable of detecting underground tunnels, bunkers and utilities at depths up to 20m.
- Hyperspectral Imaging: Specialised drone-based sensors for rapid environmental and mineral analysis across 50+ spectral bands.

ACHIEVEMENTS:

- 2026 (Planned): Launch of India's first private L-band SAR satellite in collaboration with XDLINX Space Labs.
- 2025: Secured \$7 million in Series A funding to scale from prototypes to a full-scale orbital constellation.
- 2024-2025: Winner of two iDEX Challenges for the Indian Air Force to develop:
 1. L/P Band Continuous Wave SAR payloads for LEO small satellites.
 2. Unfurlable, Electronically Steering Antennas for small satellite SAR payloads.
- 2024: Successfully tested the world's highest resolution drone-borne L-band SAR, achieving 0.2m resolution.

INVESTORS/PARTNERS:

- 360 ONE Asset
- Shastra VC
- Riverwalk Holdings
- INVSTT

STRATEGIC PARTNER

- XDLINX Space Labs

KEY MANAGEMENT:

- Dr. Tapan Misra
Founder & Chief Scientist



- Soumya Misra
Co-Founder & CEO



- Urmi Bhambhani
Co-Founder & CTO



- Prakul Sardana
Chief of Staff & SVP
Operations



- Naren Sadhwani
SVP Space Systems



COMPANY PROFILE

Siliconia Technologies Pvt. Ltd. is a leading innovator in strategic technology sectors, specializing in space systems, advanced radar solutions and cutting-edge technologies for unmanned aerial systems. Backed by deep industry expertise and a strong legacy of innovation, we are dedicated to advancing critical technologies that address some of the most complex and high-impact challenges in today's defence and aerospace domains.

YEAR OF ESTABLISHMENT:

2016

NUMBER OF EMPLOYEES (APPROX.):

- <200 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: INR 18.1 crore (March 2023)

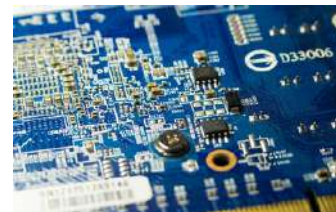
CORE DOMAIN:

- Defence Electronics & Advanced Communication Systems.

PRODUCTS AND SERVICES:

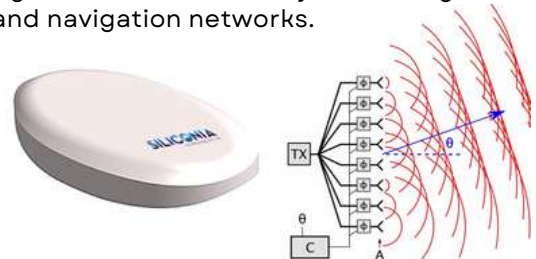
1. AESA Radar Systems (X-Band)

Siliconia Technologies develops Active Electronically Scanned Array (AESA) radar systems built using independent solid-state transmit/receive (T/R) modules. These radars generate coherent microwave signals that enable high-precision detection, tracking and imaging of targets. Operating in the X-band frequency range, the system provides excellent resolution for detecting small or low-flying objects such as drones, vessels and aircraft. Applications include naval surveillance, coastal monitoring, fire-control systems, collision avoidance and maritime surface search.



2. Phased Array Antenna Systems

The company designs advanced phased-array antenna solutions capable of electronically steering signals without mechanical movement. These antennas provide precision beamforming, adaptive beam steering and electronic scanning, enabling dynamic control of communication and sensing signals. The systems are designed for maritime vessels, land installations and mobile platforms, delivering reliable connectivity and integration with sensor and navigation networks.



3. Flat Panel Antennas for SATCOM and Radar

Siliconia produces low-profile flat panel antennas designed for maritime and mobile platforms. These antennas support multi-band satellite communication and radar operations across C-band, Ku-band, Ka-band and X-band frequencies. Their electronically steered architecture eliminates mechanical gimbals, enabling stable, high-speed communication links even in dynamic sea conditions.

4. Kiran-Netra Beamforming AESA Antenna

The Kiran-Netra (किरण-नेत्र) antenna is a beamforming AESA antenna platform designed for advanced radar, satellite communication and electronic warfare applications. It supports multiple frequency bands including C, X, Ku and Ka bands and enables rapid electronic beam steering through phase and amplitude control of antenna elements. The system offers multi-beam capability, superior signal quality and high reliability.

RF Antenna Product Portfolio

- C-Band Antenna & Array - Designed for long-range communication and wide-area coverage in maritime and terrestrial environments, supporting strategic communication networks.
- Ku/Ka-Band Antenna - High-frequency narrow-beam antennas that enable high-throughput satellite communication for naval and airborne platforms.
- X-Band Radar Antenna - Operates in the 8-12 GHz range and is optimized for precise target detection, rapid tracking and high-resolution radar imaging in naval and coastal defense.
- X-Band MIMO Radar Antenna - Multi-input multi-output radar antenna providing high spatial resolution and improved multi-target detection for surveillance systems.
- GPS Antenna - Multi-band antennas supporting L1, L2 and L5 signals for precise positioning, navigation and timing (PNT).
- Flexible Antennas - Conformal antennas designed for aircraft, missiles and vehicles, ensuring aerodynamic efficiency, stealth compatibility and multi-band RF capability.
- Log-Periodic Antennas - Wideband antennas used for electronic warfare, spectrum monitoring and tactical communications across a broad frequency range.



SATCOM System Solutions

Siliconia provides end-to-end satellite communication solutions for defense, aerospace, maritime and mobile platforms. These systems support connectivity through LEO, MEO and GEO satellite networks and include antenna systems, RF front-end units, modems and network management platforms. The solutions deliver secure, low-latency, high-bandwidth communication for mission-critical applications such as maritime broadband, defense communications, remote infrastructure monitoring and aviation connectivity.



ACHIEVEMENTS:

- March 2026: Siliconia Technologies strengthened its presence in India's space ecosystem by signing a strategic collaboration MoU with IN-SPACe and inaugurating a new R&D and prototype development facility in Pune, aimed at advancing indigenous aerospace, satellite communication and defence technologies.
- October 2024: Siliconia Technologies and Artemon Aerospace showcased advanced radar systems, satellite communication technologies and unmanned platform solutions at Swavlamban 2024, highlighting innovations supporting India's self-reliant defence and space ecosystem.
- May 2023: Siliconia Technologies secured the 100th SPRINT (Navy) contract under the Innovations for Defence Excellence (iDEX) initiative of the Ministry of Defence, Government of India, for developing a lightweight ASIC-based satellite communication system prototype using software-defined antennas capable of supporting LEO, MEO and GEO satellite communication.
- Multiple Years: Siliconia Technologies has won multiple research and development challenges under the iDEX programme, contributing to indigenous innovations in satellite communication, radar systems and advanced aerospace technologies for India's defence and space sectors.

INVESTORS/PARTNERS:

Key Partners & Strategic Collaborations

- **Indian Navy & iDEX:** Siliconia secured the **100th SPRINT (Navy) contract** under the Innovations for Defence Excellence (iDEX) initiative
- **IN-SPACe:** The company signed a **Memorandum of Understanding (MoU)** with the Indian National Space Promotion and Authorization Center (IN-SPACe) to strengthen the domestic space ecosystem.
- **Artemon Aerospace:** Siliconia maintains a close partnership with **Artemon Aerospace & Infra Pvt Ltd**, recently inaugurating a joint R&D and prototype facility in Pune.

KEY MANAGEMENT:

- Sushil Eknath Ghule
Co-founder



COMPANY PROFILE

SkyMap Global is a geospatial technology and Earth observation analytics company specializing in satellite imagery, remote sensing and location-based data intelligence solutions. Founded in 2013 and headquartered in Singapore, the company provides advanced geospatial analytics platforms and services to support decision-making for governments and businesses worldwide.

The company leverages satellite data, geographic information systems (GIS), artificial intelligence (AI) and machine learning technologies to transform large volumes of geospatial data into actionable insights across multiple industries.

YEAR OF ESTABLISHMENT:

2013

NUMBER OF EMPLOYEES (APPROX.):

- 51-200 Employees

CURRENT REVENUE/FUNDING:

- Revenue: ₹6.31Cr (\$746K) as on Mar 31, 2025

CORE DOMAIN:

- Geospatial Intelligence and Earth Observation Analytics

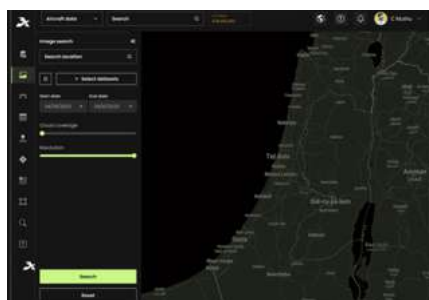
PRODUCTS AND SERVICES:

1. Skymap Browser - Secure Intelligence Aggregation

A multi-satellite tasking and intelligence platform designed for real-time situational awareness and threat detection.

Key capabilities:

- Multi-satellite tasking and data fusion
- Real-time threat detection and monitoring
- Secure intelligence aggregation platform
- Archive-first tasking and rapid data access
- Real-time intelligence delivery for decision-makers



2. Skymap Cube - Geospatial Data Infrastructure

A scalable geospatial data infrastructure platform enabling storage, processing and analysis of large geospatial datasets.

Key features:

- Petabyte-scale geospatial data storage
- Time-series analysis and geospatial indexing
- API-first cloud-native architecture
- Multi-source data integration including satellite, drone and IoT data



3. Skymap AI - AI-Powered GEOINT Analytics

An artificial intelligence platform for automated geospatial intelligence generation and mission analysis.

Capabilities include:

- No-code AI model training and deployment
- Automated change detection and anomaly detection
- Real-time intelligence analysis
- Custom detector workflows for mission applications

4. Skymap Lab - Geospatial Research Platform

A collaborative environment designed for researchers and data scientists working with geospatial datasets.

Features:

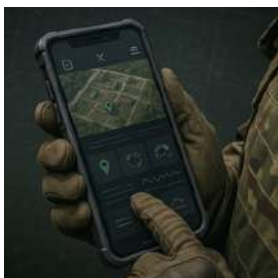
- Jupyter-based research environment
- Advanced geospatial analytics tools
- Collaborative data science workflows
- One-click model deployment

5. Skymap GO - Mobile GEOINT Operations

A mobile platform designed for field operations in low-connectivity environments.

Key capabilities:

- Offline-capable mobile operations
- Real-time field data validation
- Secure communication protocols
- Collaborative field task management



6. Skymap Canvas - Intelligence Visualization Platform

A geospatial visualization system designed for rapid interpretation of complex data.

Key tools include:

- Interactive intelligence dashboards
- Real-time geospatial visualization
- Drag-and-drop dashboard creation
- Multi-source data integration

7. Skymap Core - Enterprise GEOINT Architecture

The backbone platform enabling integration of all Skymap products.

Key features:

- Microservices-based architecture
- API-first platform integration
- Enterprise security compliance
- Auto-scaling infrastructure with high availability

SERVICES

1. Sovereign LLM Platform

An AI-powered large language model designed specifically for defense and intelligence applications.

Capabilities include:

- Natural language mission queries
- Intelligence extraction from geospatial data
- Integration across ISR (Intelligence, Surveillance, Reconnaissance) operations
- Air-gapped deployment for classified environments

2. AI/ML Model Development

Development of mission-specific artificial intelligence models for operational and strategic use.

Applications include:

- Ship and vessel detection
- Border activity monitoring
- Airfield and runway analysis
- Urban infrastructure monitoring
- Road damage assessment

3. Data Procurement & Curation

Sensor-agnostic data sourcing and integration from multiple intelligence streams.

Data sources include:

- High-resolution satellite imagery (EO/SAR)
- UAV and drone data
- IoT sensor networks
- AIS and RF signals
- Historical geospatial archives

4. Advanced Processing & Analytics

Mission-ready geospatial analytics services transforming data into actionable intelligence.

Capabilities include:

- Threat heatmap generation
- Anomaly pattern detection
- Battle scenario simulations
- Infrastructure predictive maintenance
- Environmental and ESG analytics

5. Managed GEOINT Services & Operational Support

Comprehensive support services ensuring mission-critical systems operate continuously and securely.

Key offerings:

- 24/7 system monitoring
- Performance optimization and infrastructure management
- Security and compliance management
- Disaster recovery and backup systems
- User training and operational support

ACHIEVEMENTS:

2024-2025

- In August 2025, it signed a Memorandum of Understanding (MOU) with SI Analytics to strengthen AI-driven satellite imagery solutions for government and defense clients in the Philippine market.
- Launched an advanced GEOINT ecosystem of AI-powered products, including Skymap Browser, Skymap Cube, Skymap AI, Skymap GO, Skymap Canvas and Skymap Core, designed for mission-critical geospatial intelligence operations.
- Introduced OODA Loop-based geospatial intelligence architecture (Observe-Orient-Decide-Act) to accelerate mission response cycles for defence and strategic operations.

2023

- Expanded AI-powered geospatial intelligence capabilities with automated change detection, threat monitoring and satellite imagery analysis tools.
- Enhanced multi-source satellite data fusion platforms combining EO imagery, SAR data, UAV inputs and IoT sensor networks for real-time situational awareness.

2022

- Strengthened Earth observation analytics platforms supporting infrastructure monitoring, environmental analysis and geospatial intelligence applications.
- Expanded use of machine learning and AI models for satellite imagery interpretation, improving automated detection of objects, infrastructure changes and environmental patterns.

2021

- Advanced satellite data integration capabilities through partnerships with global Earth observation providers, enabling access to multi-sensor imagery including optical and radar satellites.
- Introduced enhanced geospatial analytics tools for urban planning, agriculture monitoring and infrastructure management.

2019-2020

- Developed AI-driven remote sensing analytics platforms for governments and enterprises.
- Expanded satellite imagery analytics services supporting sectors such as telecommunications, disaster management and natural resource monitoring.

2016-2018

- Best Global Reseller Award (2017): The company was honored by Twenty First Century Aerospace Technology (21AT) as their Best Global Reseller.

INVESTORS/PARTNERS:

SkyMap Global has established strategic partnerships with major technology and satellite firms to deliver its services:

- Google Maps Premier Partner
- Planet Labs
- SI Analytics
- Stesalit Systems Ltd

KEY MANAGEMENT:

- Abhay Swarup Mittal
CEO



- Sujan Thakur
Sales Associate Director



COMPANY PROFILE

Skyroot is a pioneer in Indian space-tech, Opening Space for All with our precisionengineered Vikram-series launch vehicles. The first Indian private firm to successfully launch a rocket into space, we specialize in affordable, on-demand and reliable launch services. Our team of 320+ rocket scientists and engineers bring 2000+ years of combined rocketry experience to every mission. At our state-of-the-art facilities located in Hyderabad, Telangana - spread over 250,000 square feet - we design, develop, manufacture and test high-quality aerospace components leveraging advanced materials and techniques, including carbon fiber structures, miniaturized avionics and 3D printed engines.

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

- 537 as on Aug 31, 2025

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹32Cr as on Mar 31, 2025
- Total Funding: \$99.8M in 9 rounds

CORE DOMAIN:

- Launch Vehicle and Subsystems: Launch Services

PRODUCTS AND SERVICES:

Small Satellite Launch Vehicles

Vikram Series Launch Vehicles

- Vikram-S (Suborbital Launch Vehicle)
 - Technology demonstrator designed for suborbital missions and microgravity experiments.
 - Successfully launched on 18 November 2022 during Mission Prarambh, becoming India's first privately developed rocket to launch from a national spaceport.
 - Used to validate key technologies including solid propulsion, avionics, carbon-composite structures and telemetry systems.
- Vikram-1 (Orbital Launch Vehicle)
 - Skyroot's first commercial orbital rocket designed to deploy small satellites into Low Earth Orbit (LEO).
 - Capable of launching multiple satellites in a single mission.
 - Designed for responsive, on-demand launch services for commercial and government customers.
- Vikram-2 and Vikram-3 (Future Launch Vehicles)
 - Advanced variants planned with higher payload capacity and improved mission flexibility.
 - Intended for multi-orbit deployment and larger satellite clusters.



Satellite Launch Services

Skyroot Aerospace provides end-to-end launch services for small satellites and constellations.

Key capabilities include:

- Dedicated launches for individual satellites
- Rideshare missions for multiple small satellites
- Deployment into multiple orbital inclinations
- Rapid and responsive launch scheduling

Rocket Propulsion Systems

Skyroot has publicly demonstrated and announced multiple in-house rocket engines, including:

- Raman engines - liquid engines for Vikram rockets
- Dhawan engines - cryogenic upper-stage engine
- Kalam engines - solid rocket motors for Vikram series



3D-Printed Rocket Engines

Skyroot has confirmed the use of additive manufacturing for engines and components.

Example:

- Raman-1 engine was 3D printed and successfully test-fired.
- Additive manufacturing is used to reduce manufacturing time and cost.



Carbon Composite Rocket Structures

Skyroot has publicly stated that carbon composite structures are used in the Vikram launch vehicles, including:

- Motor casings
- Structural elements of the rocket
- Lightweight composite materials for improved payload capacity

INVESTORS/PARTNERS:

- GIC
- Temasek
- MerakiLabs
- Founders (Creenco Group)
- Solar Group (SOLAR)
- Afkam Ventures
- Sherpalo
- Graph Ventures

KEY MANAGEMENT:

- Pawan Kumar Chandana
Co-Founder & CEO



- Naga Bharath Daka
Co-Founder & COO



ACHIEVEMENTS:

- October 2022: Skyroot Aerospace announced its maiden mission “Prarambh”, preparing to launch the Vikram-S rocket carrying three customer payloads from Satish Dhawan Space Centre, Sriharikota.
- November 2022: Skyroot Aerospace successfully launched Vikram-S, India’s first privately developed rocket, during Mission Prarambh. The suborbital rocket reached 88 km altitude, validating solid propulsion, avionics, telemetry and carbon-composite structures for the Vikram launch vehicle series.
- December 2022: Skyroot Aerospace was felicitated at India SatCom 2022, recognising its contribution to India’s emerging private space ecosystem.
- January 2023: Skyroot Aerospace was recognised at a SpaceTech event organised by NASI, NGRI, ISRO-NRSC, ASTC and SpaceFed, highlighting its pioneering role in private launch vehicle development.
- March 2023: The company received the Platinum Award for Best Start-Up at the Telangana State Industry Awards for its innovations in space technology.
- April 2023: Skyroot successfully completed a 200-second endurance test of the fully 3D-printed Dhawan-II cryogenic engine, designed for the upper stage of future Vikram launch vehicles.
- June 2023:
- Skyroot conducted a flight qualification test of the Raman-I engine at ISRO’s Liquid Propulsion Systems Centre, becoming the first private company to test an engine at the facility.
- The company also won the SpaceTech category at the Mint Digital Innovation Summit 2023.
- July 2023: Skyroot successfully tested the Raman-II engine, further advancing propulsion capabilities for the Vikram-1 orbital launch vehicle.
- October 2023:
- Skyroot unveiled its Vikram-1 orbital launch vehicle and inaugurated the MAX-Q Campus, a 60,000-sq-ft private rocket development facility in Hyderabad.
- The company signed launch agreements with Prométhée Earth Intelligence and ConnectSAT for deploying satellites on the Vikram rockets.
- December 2023: Skyroot successfully conducted a proof pressure test of the carbon composite first stage ‘Kalam-1200’, demonstrating the structural integrity of the Vikram-1 rocket’s primary stage.
- February 2024: Skyroot began testing the carbon composite payload fairing of Vikram-1 and initiated final preparations for its maiden orbital launch vehicle.
- March 2024: The company successfully test-fired the Kalam-250 second stage of the Vikram-1 rocket at Sriharikota, producing 186 kN sea-level thrust and validating stage-2 propulsion performance.
- April 2024: ISRO Chairman S. Somanath visited Skyroot’s MAX-Q facility to review progress on Vikram-1, highlighting growing collaboration between India’s public and private space sectors.
- October 2024: Skyroot successfully tested the Reaction Control System (RCS) of Vikram-1 using four Raman engines, completing 65 pulses to validate roll-control capability.
- March 2025: Skyroot conducted another successful static fire test of the Kalam-250 second stage, marking a major milestone toward India’s first private orbital launch.
- April 2025: The company completed propulsion tests of the Kalam-100 solid stage and a 3D-printed cryogenic engine, demonstrating in-house capabilities across solid, liquid and cryogenic propulsion systems.
- May 2025: Skyroot successfully demonstrated an indigenously developed carbon composite stage separation mechanism, enabling lightweight and reliable separation between rocket stages in the Vikram series.
- June 2025: Skyroot Aerospace signed a strategic MoU with Axiom Space to explore collaboration on integrated launch and in-orbit services. Former ISRO Chairman S. Somanath joined the company as Honorary Chief Technical Advisor.
- August 2025: Skyroot successfully conducted a static fire test of the Kalam-1200 stage, India’s largest privately developed solid rocket motor, generating nearly 1200 kN of peak vacuum thrust ahead of the Vikram-1 mission.
- September 2025: The Government of Andhra Pradesh allotted 300 acres in Tirupati district to Skyroot Aerospace to establish an integrated rocket manufacturing, assembly, testing and storage facility with an investment of ₹400 crore, supporting India’s growing private launch vehicle ecosystem.
- October 2025: Skyroot Aerospace signed a strategic partnership agreement with Exolaunch, a global launch integration and mission management company, to support payload integration, rideshare missions and satellite deployment services for upcoming Vikram rocket launches.
- November 2025: Narendra Modi, Prime Minister of India, inaugurated Skyroot’s “Infinity Campus”, a major facility dedicated to rocket engineering, manufacturing and mission development. During the same event, the Prime Minister unveiled the Vikram-I orbital launch vehicle



COMPANY PROFILE

SpaceFields Private Limited is an Indian defence and space technology startup specializing in advanced solid rocket propulsion systems for aerospace, defence and commercial space applications. Founded in 2021 and headquartered in Bengaluru, the company focuses on developing next-generation, mission-critical propulsion technologies to power rockets, UAVs and tactical systems.

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- 45 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: ₹14L (\$16.9K) as on Mar 31, 2024
- Total Funding - \$6.4MN

CORE DOMAIN:

- Aerospace & UAVs
- Defense & Tactical systems
- Commercial Spaceflight

PRODUCTS AND SERVICES:

PRODUCTS

1. High-Performance Solid Composite Propellants

SpaceFields develops proprietary solid composite propellants engineered for high energy density and optimized burn efficiency.

Key features:

- High thrust-to-weight performance
- Enhanced combustion efficiency
- Optimized for aerospace and defence applications
- Improved reliability for mission-critical propulsion

2. Integrated Propulsion Systems & Rocket Motors

The company designs and delivers next-generation propulsion systems and solid rocket motors for advanced aerospace platforms.

Capabilities include:

- End-to-end propulsion system integration
- High-efficiency rocket motors
- Modular and scalable propulsion architectures
- Adaptability for diverse mission profiles (space & defence)

3. Advanced Energetics & Propulsion Materials

SpaceFields develops next-generation energetic materials and chemical formulations that form the foundation of high-performance propulsion systems.

Focus areas:

- Energetic material innovation
- Advanced chemical process engineering
- Performance optimization of propellant compositions
- Development of next-gen propulsion chemistry

SERVICES

1. Custom Propulsion Engineering

SpaceFields provides tailored propulsion solutions designed to meet specific mission requirements.

Services include:

- Custom rocket motor design
- Application-specific propulsion system development
- Performance optimization for unique mission profiles
- Engineering support for aerospace and defence projects

2. Research & Development (R&D) in Energetics

The company offers deep R&D capabilities in propulsion chemistry and energetics, enabling next-generation system development.

Key offerings:

- Experimental propellant development
- Chemical process innovation
- Testing and validation of propulsion materials
- Rapid prototyping through iterative design cycles

3. Rapid Design-Build-Test Engineering

SpaceFields follows a first-principles, agile engineering approach to accelerate product development.

Approach includes:

- Fast iteration cycles (design → build → test)
- Reduced development timelines
- Flexible engineering workflows
- Cost-efficient system development

4. End-to-End Propulsion Solutions

The company delivers complete propulsion solutions, from concept to deployment.

Scope includes:

- System design and engineering
- Integration and testing
- Performance validation
- Deployment-ready propulsion systems

ACHIEVEMENTS:

2024

- September 2024: SpaceFields achieved a major technological milestone by successfully hot-testing India's first aerospike rocket engine, marking a breakthrough in advanced propulsion systems and cost-efficient launch technologies.
- September 2024: Multiple validations and demonstrations confirmed the operational capability of aerospike propulsion, positioning SpaceFields among a select group globally working on this technology.
- July 2024: SpaceFields featured in national discussions around Union Budget 2024, highlighting the role of startups in India's growing space economy and benefiting from policy focus such as the ₹1,000 crore space-focused VC fund.
- March 2024: Recognized among emerging deep-tech startups from Indian Institute of Science (IISc) contributing to India's advancement in high-end space technologies.
- February 2024: SpaceFields successfully raised ~₹6.5 crore (\$800K) seed funding, marking its first institutional funding round and enabling further development of propulsion technologies.
- February 2024: Participated in IISc Open Day, showcasing innovations in propulsion systems and space technologies to the public and research community.

2023

- July 2023: Collaborated with TSAW Drones to develop solid propellant-based drone propulsion systems for defence applications, demonstrating dual-use capabilities.

- February 2023: Selected among winners of the Boeing University Innovation Leadership Development Program (2022-23), highlighting its innovation potential in aerospace technologies.

INVESTORS/PARTNERS:

Globaz Technologies, Venture Catalysts, Rockstud Capital, Rainmatter (by Zerodha), Burla Angel Investor Network, FAAD Network, SIDBI (Small Industries Development Bank of India), O2 Angels Network, HVB 88 Angels, Jamwant Ventures, Samarthya Investment Advisors LLP, Venture (entity unclear), Mercatus Center - Emergent Ventures, MeitY Startup Hub, Startup India Seed Fund Scheme, DST NIDHI, Foundation for Science Innovation and Development (FSID).

Partners

SMU IIE, Make in India, IISc, Startup Odisha, GUSEC, KIIT-TBI, G20, Startup India, MSME, Startup Karnataka, Boeing, NVIDIA Inception, IDEX, DISC, BDL, UPDIC, ISpA, UPEIDA, NIBE, IN-SPACE, AIC-BIMTECH, MeitY Startup Hub.

KEY MANAGEMENT:

- Apurwa Masook
Founder & CEO



- Sudarshan Samal
Founder & CTO



- Rounak Agrawal
Founder & COO



COMPANY PROFILE

Space Machines Company is an Australian-founded space technology company with operations across Australia, India, the UK and the US. The company focuses on protecting and servicing critical space infrastructure through rapid-response, distributed systems. Its India operations support R&D, integration and mission execution, contributing to long-term Australia-India collaboration in space.

YEAR OF ESTABLISHMENT:

2021

NUMBER OF EMPLOYEES (APPROX.):

- 10 employees

CURRENT REVENUE/FUNDING:

- Venture-backed; revenue-generating through government and strategic programs (details confidential)

CORE DOMAIN:

- In-space servicing
- space security
- orbital resilience
- space sustainability

PRODUCTS AND SERVICES:

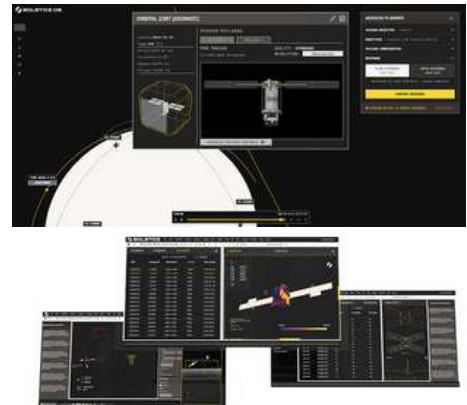
1. In-space inspection and servicing
2. Satellite protection and rapid response solutions
3. Orbital debris assessment and mitigation
4. Space domain awareness support

- **Optimus Viper** - Mass-produced rapid response systems that deliver close-proximity intelligence and protection across all orbits.

- Delta-V - 600 m/s
- Power > 500 W
- Orbits - LEO-GEO



- **SolsticeOS** - An AI-driven command and control platform that transforms distributed space assets into coordinated rapid response capabilities.
 - Threat Detection in hours
 - Resolution - 1cm at 1km
 - Operations - Autonomous



- **Scintilla: Redefining Propulsion Economics for Rapid Response** - High-performance, cost-efficient bi-propellant propulsion enabling the Optimus Viper Rapid Response Vehicle to deliver unmatched dollar-per-delta-V value.
 - > 100 ignition cycles without performance degradation
 - Specific impulse of 270 seconds
 - Thermal stability confirmed throughout long duration burns
 - Scalable design architecture supporting multiple thrust configurations



ACHIEVEMENTS:

2021

- Establishment of Space Machines Company India operations in Bengaluru

2022

- Launch of Space MAITRI mission framework
- Expansion of Australia - India space collaboration

2023

- First Satellite “Optimus Rollout” built and progresses through testing
- Strengthened bilateral partnerships with government and industry stakeholders

2024

- “Optimus Rollout” launched on SpaceX Transporter-10
- Awarded India ISI grant supporting Space MAITRI
- Progressed in-space servicing and orbital security capabilities
- Signed partnership agreement with NSIL, Ananth and Digantara

2025

- Signed partnership agreement with Orbit Aid

INVESTORS/PARTNERS:

- Australian Space Agency
- ISRO
- NSIL
- Government of India (ISI Program)

KEY MANAGEMENT:

- Rajat Kulshrestha
Director



COMPANY PROFILE

Suhora Technologies is an Indian space analytics and geospatial intelligence company delivering Earth Observation (EO) analytics and AI-enabled Geo-Intelligence solutions for defence, disaster management, mining, renewable energy, port management, infrastructure and other forestry and other applications. Suhora specializes in multi-sensor data processing, imagery analysis & analytics, satellite tasking and real-time Earth intelligence. By fusing multiresolution satellite data with AI-driven analytics, Suhora converts near real-time Earth data into actionable intelligence for national security, disaster response and mitigation, climate risk, insurance and strategic monitoring. Since its inception, Suhora has been at the forefront of space analytics, collaborating with satellite providers across the globe to support India's strategic and disaster management needs. By seamlessly integrating multi sensors data such as Synthetic Aperture Radar (SAR), optical and thermal, AIS, RF and hyperspectral imagery, Suhora delivers a multidimensional intelligence framework, providing near real-time insights crucial for defense strategists, emergency responders and commercial enterprises.

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

65 employees (January 2026)

CURRENT REVENUE/FUNDING:

- Current Revenue: INR 41 Cr.

CORE DOMAIN:

Earth observation and geospatial intelligence with a focus on defence, disaster management, renewable energy, mining and infrastructure

PRODUCTS AND SERVICES:

Suhora's flagship solutions SPADE, MIRKA and SID are designed to address complex geospatial challenges.

- **SPADE** is Suhora's enterprise-grade Earth Observation data access and analysis platform, delivering secure, scalable and mission-ready EO data. It is a subscription-based platform which revamps satellite tasking, data access and analysis, harnessing the capabilities of 15+ satellite constellation equipped with 250+ sensors, supporting key areas like national security, disaster management and environmental protection.
- **MIRKA** is Suhora's defence-grade ISR and strategic intelligence platform, delivering continuous, AI-enabled situational awareness across land borders, maritime zones and sensitive regions. Powered by high-definition sensors and smart algorithms, it cuts through complex data to deliver near real-time insights, ensuring critical targets are never missed. MIRKA enhances operational effectiveness with multi-sensor tasking, near real-time data delivery, ML-based target detection, proactive change mapping and cross-sensor integration, providing a comprehensive and continuous monitoring framework. By offering a holistic view of any scenario, MIRKA serves as an essential tool for national security.
- **SID** is Suhora's enterprise-grade Disaster & Insurance Intelligence platform, designed to strengthen national disaster preparedness, climate resilience and financial risk management. Using high-resolution satellite imagery, the platform identifies hazard zones, monitors water levels, assesses damage from floods and landslides and analyzes surface area changes for proactive disaster management. Leveraging multi-view photogrammetry for flood risk assessment, SID enhances hydrological monitoring and resilience planning. Its key beneficiaries include Space Application Centers, National and State Disaster Management Agencies, Disaster Management Institutes and Agricultural Insurance Companies, ensuring data-driven decision-making for disaster preparedness and response.

By pioneering advancements in geospatial intelligence, Suhora Technologies is redefining how industries leverage space-based insights, driving innovation in EO analytics for a smarter, more resilient future.



ACHIEVEMENTS:

2025:

- Secured IN-SPACe Seed Fund Grant-in-Aid under the 'Announcement of Opportunity for the Marine Sector using Space Technology.
- Signed MoU with IIIT Delhi to strengthen industry academia ties by providing students, industry standard skillsets and exposing them to real world problems.
- Suhora Technologies, Orbital Sidekick ink deal to bring hyperspectral satellite imagery to India

2024:

- Launched SPADE, a cloud-native AI-driven multisensor EO intelligence platform for global applications
- Recognized as the Emerging Company of the Year by Geospatial World.
- Conceptualized SID, a satellite-based risk analytics platform for insurance and disaster management
- Formed a multi-year strategic alliance with SatVu to provide Spaceborne High Resolution Thermal Sensing and analytics.
- Signed MoU with Thiagarajar College of Engineering, Madurai to strengthen industry academia ties by providing students, industry standard skillsets and exposing them to real world problems.
- Renewed SAR imaging and analytics contract with a Strategic Customer

2023:

- Signed agreement with Argentina's VENG to commercialize SAOCOM satellites.
- Secured one of the largest radar satellite imagery contracts in Asia
- Suhora expanded into a strategic partnership with Finland-based ICEYE for one of the largest SAR deals in Asia.
- Rolled out MIRKA, an AI-powered ISR solution for real-time defense monitoring.
- Partnered with SatVu, the world's highest-resolution commercial thermal data provider.
- Partnered with Axelspace, a global leader in microsatellite technology.

2022:

- Partnered with Satellogic, a leading provider of high-resolution satellite imagery.

2021:

- Expanded into the defense and security sector, integrating ISR capabilities into geospatial analytics.
- Partnered with ICEYE, the global leader in SAR satellite technology and operator of the world's largest SAR satellite constellation.
- Formed a partnership with the Remote Sensing Technology Center of Japan (RESTEC).
- Executed one of the largest elevation model projects for J&K.
- Secured Renewable Energy Deals in the Middle East.

2020:

- Partnered with Planet Labs, a leading provider of daily multispectral data.

2019:

- Developed the first prototype of AI-based AgriTech Application and deployed into Maharashtra for Agriculture monitoring.

INVESTORS/PARTNERS:

Bootstrapped

PARTNERS:

- Planet
- ICEYE
- Satellogic
- GEOSAT
- UMBRA
- JAXA
- VENG
- AxelSpace
- OSK
- Vantor
- Unseenlabs

KEY MANAGEMENT:

- Krishanu Acharya
CEO



- Amit Kumar
COO



- Rupesh Kumar
CTO



- R. Adm Vishwanathan K
Ganpathi
Director



COMPANY PROFILE

ThrustWorks Dynetics is a Pune-based aerospace propulsion firm incubated at SINE-IIT Bombay. The company is dedicated to solving the space industry's "propulsion bottleneck" by offering modular, reliable and reusable liquid rocket engines. Utilizing an "Engine-as-a-Service" (EaaS) business model, ThrustWorks leverages indigenous high-precision manufacturing and proprietary Machine learning-design software to reduce development timelines from years to months. The company operates a Non-ITAR restricted supply chain, positioning itself as a key partner for global commercial space and defense applications

YEAR OF ESTABLISHMENT:

2023 (Incorporated Feb 22, 2023)

NUMBER OF EMPLOYEES (APPROX.):

- 25 employees

CURRENT REVENUE/FUNDING:

- Pre-revenue- ₹10 Crore in Seed Round (Oct 2025)

CORE DOMAIN:

- Aerospace and Defence

PRODUCTS AND SERVICES:

Resonance Igniter: A reusable, non-pyrotechnic ignition system using thermoacoustic resonance for high-reliability starts (TRL 4 validated).



Subsystems: Coaxial Swirler Injectors, Single Shaft Turbopumps and High-Temperature Seals.



Injectors



ACHIEVEMENTS:

- India's First Mobile rocket engine test rig.
- February 2026: Successfully test-fired India's first resonance-based rocket ignition system, enabling infinite restarts in vacuum through a geometry-driven ignition mechanism, replacing traditional single-use igniters.
- Developed the ANYA Liquid Rocket Engine Platform, a modular, 3D-printed liquid rocket engine with ~20 kN thrust capacity designed for scalable propulsion applications.
- Built India's first Mobile Rocket Engine Test Bed, enabling rapid and flexible hot-fire engine testing with reduced infrastructure dependency.
- Created proprietary in-house propulsion software tools for combustion modelling, acoustic stability analysis and performance validation.
- 2026: Inaugurated India's first Integrated Rocket Facility (IRF) integrating engine design, manufacturing, assembly and testing under one roof.
- Late 2025: Raised ₹7 crore (~\$800,000) in seed funding, led by Jamwant Ventures with participation from Piper Serica and SINE-IIT Bombay.
- Incubated at SINE, IIT Bombay and signed an MoU with IN-SPACE, collaborating with key stakeholders including ISRO, Bharat Forge Aerospace and Godrej Aerospace.
- Transitioned from a 2021 R&D initiative supported by Bharat Forge Aerospace into a commercial propulsion technology company.

INVESTORS/PARTNERS:

- Jamwant Ventures
- Piper Serica
- SINE-IIT Bombay

Strategic Partners:

- IN-SPACE (MoU signed),
- ISRO (Technology Transfer & Support)
- Bharat Forge (Advisory/Support)
- Godrej Aerospace
- Softinway
- INOX

KEY MANAGEMENT:

- Manan Joshi
CEO
- Kalyani Shinde
CTO
- Vinith Shenoy
COO



COMPANY PROFILE

ULOOK is a Bengaluru based space technology company focused on building sovereign RF sensing capability from space. The company is developing clusters of small satellites for ELINT and RF Geointelligence, complemented by airborne TDOA and FDOA trials to validate algorithms prior to orbital deployment. The founding team brings heritage of 15+ LEO satellite missions, UAV swarm deployments & HAPS demonstrators.

YEAR OF ESTABLISHMENT:

2024

NUMBER OF EMPLOYEES (APPROX.):

- 15 employees

CURRENT REVENUE/FUNDING:

- \$2.3 Mn Seed Round

CORE DOMAIN:

- Space based RF Intelligence
- ELINT payloads for Satellite Clusters, UAVs & HAPS platforms

PRODUCTS AND SERVICES:

- **Space based ELINT Satellite Clusters**
- **RF Geointelligence Data as a Service**
- **ELINT Payloads for Drones, UAVs and HAPS Platforms**

Applications:

Government & Defense

Integrated signal intelligence for mission planning, threat detection and strategic awareness.

Commercial Operators

Track fleets, safeguard trade routes and secure global logistics chains.

Environmental Protection

Expose illegal fishing and protect critical habitats with orbital surveillance.

Disaster Response

Locate distress signals, reconnect responders and restore communication lifelines.



ACHIEVEMENTS:

- First private team in India to demonstrate TDOA based RF geolocation using coordinated Swarm Drones
- Selected for the SDA TAP Lab Catalyst Campus Mini Accelerator, backed by the United States Space Force
- Major Seed Funding: In November 2025, ULOOK secured ₹19 crore (approximately \$2.3 million) in a seed funding round co-led by growX Ventures and Info Edge Ventures.
- Space-Qualified Hardware: The company has already built and validated space-qualified hardware, a rare achievement for a startup at the seed stage.
- Proprietary Technology: Developed the PulseTrack payload suite, which enables real-time RF situational awareness and "RF fingerprinting" to identify specific radio emitters from space.
- Autonomous Swarm Development: Successful R&D into autonomous satellite swarms that can detect and track activity such as "dark ships" or hidden radio markers in environments where traditional optical or radar systems fail.

INVESTORS/PARTNERS:

- InfoEdge Ventures
- GrowX Ventures

KEY MANAGEMENT:

- Siddhesh Naik
CEO
- Adheesh Boratkar
CTO



COMPANY PROFILE

Upgraha Space Technologies (UST) was incorporated in with a vision of pioneering products and developing technologies towards operationally responsive space such as VLEO & Fractionated Satellites. UST is developing a NanoSatellite Swarm for Remote Sensing using Autonomy and Swarm Technology. Development of such a system will be a precursor to next generation missions & technologies in space.

YEAR OF ESTABLISHMENT:

2023

NUMBER OF EMPLOYEES (APPROX.):

- 12 employees

CURRENT REVENUE/FUNDING:

- Revenue: INR 30,000 as of 31 March 2025
- Funded by parent company

CORE DOMAIN:

- Space-tech startup incorporated specializing in next generation missions and technologies using decentralised autonomy. [Space Technology, Defence, Aerospace]

INVESTORS/PARTNERS:

- NewSpace Research & Technologies Pvt Ltd

KEY MANAGEMENT:

- Dilip Chabria
Director
- Rajinder Rana
Director

PRODUCTS AND SERVICES:

- **NGMT (Next Generation Missions & Technologies):** Strategic shift toward defence-centric autonomous, quantum-secured swarm collectives that replace vulnerable monolithic platforms with resilient, distributed intelligence architectures for contested space operations.
- **Turnkey Satellite Solutions:** Design, development and integration of small satellite platforms tailored for specific mission requirements.
- **Mission Design & Sovereign Hardening:** End-to-end development of indigenous mission playbooks, fault-tolerant GNC stacks and production-grade sovereign IP to eliminate foreign strategic dependency.
- **Earth Observation (EO) Data Services:** Providing high-quality, time-sensitive imagery and data for critical defence applications.
- **Space Data Analytics:** Leveraging AI/ML to process raw satellite data into consolidated intelligence for critical defence and civil applications.
- **Ground Segment Support:** Support in setting up and managing ground stations for satellite communication and data downlink.

ACHIEVEMENTS:

- **Strategic Subsidiary Status:** Successfully established as the dedicated space-tech vertical for NewSpace Research and Technologies (NRT), a company known for winning multiple iDEX (Innovations for Defence Excellence) contracts and pioneering swarm drone technology for the Indian Armed Forces.
- **Industry Integration:** Active participant in national space policy discussions and symposia, including the India International Space Conclave and Indian DefSpace Symposium.

COMPANY PROFILE

Vihaan Spacetechnology Pvt Ltd is an emerging deep-tech space Industry leader dedicated to making space access both reliable and commercially viable. Founded by a team of Armed Forces veterans and Pioneering Private Space Entrepreneurs, Rocket Engineers with extensive international experience, the company is a pivotal force in accelerating India's burgeoning private space sector. We bridge the gap between complex rocket engineering and commercial scalability.

Core expertise in System Engineering and Lifecycle development of Mid-Heavy Launch Vehicles for diverse orbital profiles and provide flight-proven Hall-Effect Plasma Propulsion for the satellite Propulsion market. With a foundation built on international expertise in solid and bi-propellant systems, our capabilities extend into defense armament, rocket complexes and cutting-edge VLEO (Very Low Earth Orbit) mission design.

Beyond launch Vehicle Segment, we specialize in high-efficiency Xenon-based Hall-Effect Plasma Propulsion Systems, providing matured station-keeping and primary propulsion solutions for micro-satellite constellations.

YEAR OF ESTABLISHMENT:

2023 (Rebranded/Incorporated in India; legacy operations dating back to 2012 in high-power rocketry)

NUMBER OF EMPLOYEES (APPROX.):

- 10 employees

CURRENT REVENUE/FUNDING:

- Bootstrapped/Privately Funded; Paid-up Capital: ₹1,000,000.

CORE DOMAIN:

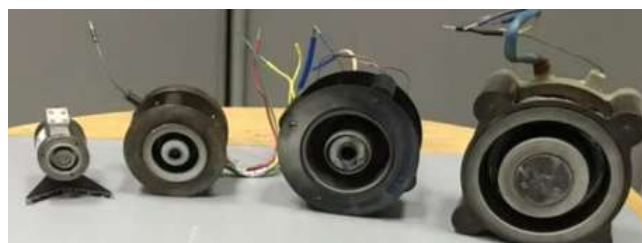
- Rocket Propulsion Systems
- Space Launch Vehicles (SLV)
- Hall Effect Plasma Thrusters
- 70 mm Armament Rocket
- Sub-orbital Sounding Rockets

PRODUCTS AND SERVICES:

- Launch Vehicles: Development of next-gen medium-lift launch vehicles for Sustainable and Regular Space Access in Asian Region and tech-demonstrators for small satellite deployment.
- CanSat Launchers: Sports rockets for delivery systems for educational and experimental payloads up to 10 km Altitude



- Innovative Orbit Insertion System: Hall Effect Plasma thrusters-based Kick-Stage for Low-cost spacecraft deployment.
- Electro Plasma Thrusters - Our plasma thrusters are lighter, thus reducing the total weight of the spacecraft while increasing its reliability. They also have a 1.5x longer lifetime compared to others in the market, thus executing the tasks of orbiting and positioning with a small reserve. The unique technology of cathodes cold start significantly improves the dynamic characteristics of EPS.



Thruster	M100	M70	M40	M20
Power, W	1350	600	220	100
Thrust, mN	70...100	30...50	8...33	2...6
Efficiency, %	63	60	47	40
Specific impulse, s	1400....	1400.....	1100.....	1000.....
	1800	1800	1700	1600
Mass, kg	2.0	1.35	0.4	0.2
Lifetime, h	9000	5000	4000	3600



- Propulsion Systems: Design and Development of Armament Rocket, Solid Rocket motors for High Altitude and Sounding Rocket Application and advanced
- Space Propulsion Systems: Hall Effect Plasma Thrusters for satellite's Orbit station-keeping.
- Sounding Rockets: High-altitude rockets for meteorological research, student payload launches and microgravity experiments.
- Remote Sensing Solutions: Precision aerospace structures and data services for agriculture and urban development.
- Commercial Rocket KITS: M, N and O - Class Rockets for Education and Atmospheric Research Applications

ACHIEVEMENTS:

- 2026: Published "Fundamentals of Model Rocketry" for the emerging space rocket experimenters and rocket community in India. The book serves as a guidebook enabling the readers and experimenters for fundamental ballistics, Rocket propulsion and Aerodynamics in building rockets and successful launches.
- 2025: Signed MoU with InSpAce and LPSC/ISRO for test Performance validation testing of Vihaan's 20 mN & 70 mN thrust class Plasma Thrusters
- 2025: Filed patent for "Dual-Burn Indigenous Rocket Propulsion System for Air-Ground and Ground-Air Rocket Counter UAV Rocket Systems."
- 2024: Published "Rockets - Its Evolution for Space Exploration," a comprehensive technical guide to propulsion.
- 2023: Successfully demonstrated the Cansat Launcher Rocket at Dholera, Ahmedabad, in collaboration with IN-SPACe (Department of Space).
- 2022: Officially transitioned and established Indian operations as Vihaan SpaceTech to support the "Atmanirbhar Bharat" initiative in space.
- 2012-2022 (Legacy): Pioneered High-Power Rocketry in India; completed over 80 successful launches across various Indian terrains and collaborated on international tech transfers for bi-propellant engines.
- Recognition: Recognized by the Aero-Club of India as a pioneer in private sector high-power rocketry.

INVESTORS/PARTNERS:

- Primarily founder-led; collaborations with Ukrainian aerospace OEMs (legacy) and active participation with IN-SPACe and ISpA.

KEY MANAGEMENT:

- Rajesh Muneshwar
Co-Founder & CTO



COMPANY PROFILE

VyomIC, derived from “Vyom” (Sanskrit for space) and “IC” (Indian Constellation), is building Bharat’s first and largest private Global PNT Satellite Constellation in Low Earth Orbit. The constellation is designed to deliver extremely precise, resilient and secure positioning, navigation and timing services to users across Bharat and the Globe. It targets mission-critical applications that demand assured PNT, combining scalable architecture, strong cyber-resilience and performance suitable for commercial and strategic use.

VyomIC’s constellation operates in Low Earth Orbit (700-1000 km), enabling stronger signal strength, faster convergence (cm-level accuracy in under 30 seconds), reduced satellite count and enhanced coverage compared to traditional GNSS systems in MEO/GEO. The architecture is optimized for minimal ground station dependence, high angular velocity advantages and Synthetic Data Positioning (SDP) models leveraging Doppler-based ranging and AI-driven predictive algorithms.

YEAR OF ESTABLISHMENT:

2025

NUMBER OF EMPLOYEES (APPROX.):

- 14 (as of Feb 2026); expanding to 20+ by April 2026.

CURRENT REVENUE/FUNDING:

- Pre-revenue (technology development stage); raised \$1.6M in Pre-Seed funding from Speciale Invest, BYT Capital and DeVC.

CORE DOMAIN:

- Low Earth Orbit (LEO)-based Positioning, Navigation & Timing (PNT) infrastructure and satellite systems.

PRODUCTS AND SERVICES:

1. LEO-Based PNT Satellite Constellation

VyomIC is building Bharat’s first private Global LEO-based Positioning, Navigation & Timing (PNT) constellation designed to deliver:

- 5 cm-level positioning accuracy
- ± 5 nanosecond timing precision
- Rapid convergence (cm-level accuracy in under 30 seconds)
- Global coverage with optimized satellite count
- Minimal dependence on ground stations
- Fully autonomous constellation operation

2. LEO-PNT Satellite Payload

A. Atomic Clock System

- CSAC + OCXO-based architecture
- In-house oscillator simulations completed
- Designed for onboard timing stability and drift correction

B. Onboard Precise Orbit Determination (POD) Module

- AI/ML-assisted orbit correction
- Version 2 algorithm completed
- Computation time reduced from 37 minutes to 24 seconds

C. Signal Generation Unit (NSGU)

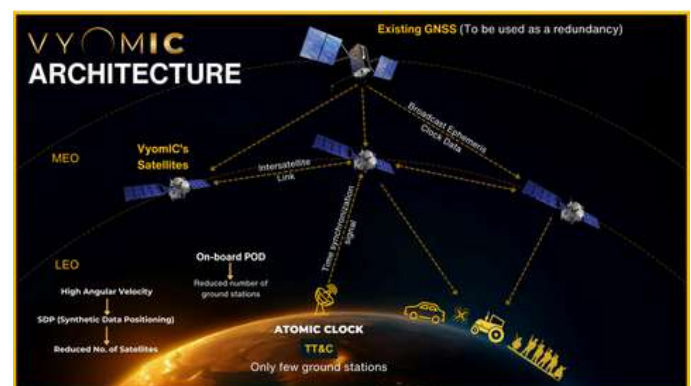
- Navigation signal architecture completed
- PRN code under development
- Hardware realization initiated

D. Inter-Satellite Link (ISL) System

- Enables clock synchronization across satellites
- Supports autonomous constellation operation

3. Secure & Defence-Centric Navigation Services

- Designed for GPS/GNSS-denied environments
- Beamforming technology (100× normal mode, up to 1000× in defence mode)
- Encrypted Restricted Service (RS) signals
- Anti-jamming & anti-spoofing architecture
- Future-ready for Quantum Key Distribution (QKD) exploration



4. Ground Segment Services

- Atomic clock-based ground synchronization
- Orbit validation via DORIS & Satellite Laser Ranging (SLR)
- Clock correction & health monitoring support

5. User Segment & Receiver Ecosystem

- Multi-tier signal services (civilian, commercial, defence)
- Encrypted and authenticated receiver access
- Customized service codes for varying accuracy & security levels

ACHIEVEMENTS:

- Ex-heads of Avishkar Hyperloop, IIT Madras' competition team, until 2022.
- Raised ₹10.5 Cr+ in funding from Railway Minister Shri Ashwini Vaishnaw and top corporates.
- Filed 3 international patents, with 2 granted in Hyperloop technology.
- Represented India on the global stage at European Hyperloop Week.
- Started as a drone swarm technology company, with swarm drones as its first application.
- Successfully executed 3 high-profile commercial swarms, each featuring 50 drones.
- Developed RTK (Precise positioning system) that delivers cm-level relative accuracy for drones.
- Gained first-hand experience in solving navigation challenges and implementing reliable, small-scale solutions.
- Developed Precise Orbit Determination (POD) Algorithm Version 2, reducing computation time from 37 minutes to 24 seconds
- Secured \$1.6 million Pre-Seed funding from Speciale Invest, BYT Capital and DeVC

INVESTORS/PARTNERS:

- Speciale Invest
- BYT Capital
- DeVC (Pre-seed arm of Z47, formerly Matrix Partners India)

KEY MANAGEMENT:

- Vibhor Jain
Co-Founder and CBO



- Lokesh Kabdal
Co-Founder and CEO



- Anurag Patil
Co-Founder and CTO



COMPANY PROFILE

Founded in 2022, XDLINX Space Labs is an India-based, indigenously built satellite company delivering end-to-end, mission-ready solutions for global commercial and defence ISR missions. With operations in Hyderabad and offices in the USA and UK, we enable rapid, sovereign access to space. As a Small Satellite-as-a-Service (SSaaS) provider, XDLINX manages the full mission lifecycle and delivers advanced capabilities across Surveillance, Intelligence, Secure Communications and Deep Space Exploration, empowering governments and institutions to build resilient, sovereign and self-reliant space infrastructure.

YEAR OF ESTABLISHMENT:

2022

NUMBER OF EMPLOYEES (APPROX.):

- 155 Employees

CURRENT REVENUE/FUNDING:

- Revenue: 108 Cr

CORE DOMAIN:

- Satellite Manufacturing

PRODUCTS AND SERVICES:

XDLINX offers a portfolio of mission-ready Earth Observation and Intelligence satellites, engineered for sovereign deployment and scalable from single missions to full constellations. Our platforms support high-precision monitoring, on-demand tasking and multi-domain intelligence across land, sea, air and space.

1. Surveillance Optical EO Mission: Sub-1.5m GSD | Multispectral Imaging (MSI)
2. Tasking-Based Optical EO Mission: Sub-0.7m GSD | High-resolution MSI
3. Optical Stereo-3D EO Mission: Sub-1.5m GSD | Systematic & task-based operations
4. Tasking-Based Hyperspectral Mission: Sub-6m GSD | Advanced spectral intelligence
5. Tasking-Based SAR EO Mission: Spot: sub-1m | Stripmap: sub-2m
6. Space-Based RF GEOINT & ELINT Mission: Wide-area signal intelligence and electronic surveillance
 - Nano and Micro Satellite Platform Design and Manufacturing (ranging from 10 kg to 200 kg)
 - Ready-to-launch satellites with payload technology
 - Optical imaging capabilities (0.7 m, 1.5 m, 3 m)
 - Signal intelligence capabilities (80 MHz to 18 GHz)
 - End-to-end mission support from design through in-orbit operations



ACHIEVEMENTS:

- Janus-1: A software-defined 6U small satellite designed and developed in a record time of 10 months and launched on February 10, 2023. Janus-1 achieved a cost reduction of approximately 75% compared to traditional satellites.
- Elevation-1: Launched on January 14, 2025, aboard SpaceX's Transporter12, Elevation-1 featured the world's first miniaturised space-grade E-band payload.
- Successfully tested India's first privately developed high-resolution multispectral payload.
- Startup of the Year 2025 - ET Now Machinist Editorial Choice Award

INVESTORS/PARTNERS:

- Mr Ashish Ramesh Kacholia

KEY MANAGEMENT:

- Rupesh Gandupalli
CEO, CO-FOUNDER
- Karthik Govindhasamy
Co-Founder & Executive Chairman
- Rajasekhar Kallepalli
COO
- Dr Sudheer Kumar N
Global Strategy,
Manufacturing & Supply
Chain Operations



COMPANY PROFILE

Xovian Aerospace Private Limited is a Bengaluru-based spacetechnology startup developing AI-native RF satellite infrastructure for real-time signal intelligence from space. Founded in 2018, the company is building a constellation of RF-based nanosatellites that capture and analyse radio-frequency signals to deliver low-latency, decision-grade insights for defence, maritime, aviation and critical infrastructure applications. Xovian has raised USD 2.5 million in pre-seed funding to advance payload validation and constellation development.

YEAR OF ESTABLISHMENT:

2018

NUMBER OF EMPLOYEES (APPROX.):

- 2-10 employees

CURRENT REVENUE/FUNDING:

- Annual Revenue: Rs 12.5 Crore (March 2024)
- Total Funding: USD 60.8K in 3 rounds

CORE DOMAIN:

- AI-Native RF Satellites

PRODUCTS AND SERVICES:

RADIO SATELLITES

Xovian Aerospace's low-latency RF satellite infrastructure is purpose-built for continuous, global coverage designed to capture dynamic radio signals across all domains and deliver real-time, actionable intelligence at planetary scale.



Xovian Aerospace's AI-native RF infrastructure continuously scans Earth's radio spectrum, revealing patterns, intent and disruptions in real-time. Purpose-built for global coverage, our independently operated satellites unlock a new layer of persistent, signal-based intelligence. From monitoring high-value assets to enabling situational awareness in complex environments, we provide critical visibility where legacy systems fall short. Fully integrated from space to cloud, Xovian Aerospace delivers contextual, decision-grade insights, powering safer, faster outcomes across defence, maritime, climate and commercial sectors.

ACHIEVEMENTS:

- 2024: Began development of a radio frequency (RF) satellite constellation designed to capture and analyse RF signals from space, enabling applications such as maritime monitoring, defence intelligence, spectrum monitoring and geolocation services.
- August 2025: Xovian Aerospace raised \$2.5 million in a pre-seed funding round led by Piper Serica and Turbostart, with participation from Inflection Point Ventures and Eaglewings Ventures. The funding supports development of its RF satellite infrastructure, expansion of engineering teams and preparation for the launch of its first spacecraft.
- Late 2025: Initiated pilot programmes with enterprise and government clients to demonstrate RF-based space intelligence solutions for sectors including maritime security, defence surveillance and communications monitoring.

INVESTORS/PARTNERS:

- Inflection point ventures
- Turbo start
- Piper serica
- Startup Karnataka
- Eaglewings Ventures
- IIM Udaipur Incubation Center
- Venture Studio
- Chitkara University

KEY MANAGEMENT:

- Ankit Bhateja
Founder Director



- Raghav Sharma
Co-Founder



COMPANY PROFILE

Space Kidz India is an aerospace research and education organization focused on democratizing access to space science and inspiring young minds through hands-on learning and real satellite missions. The organization has successfully developed and launched student-led satellites such as KalamSat and AzaadiSAT, fostering innovation and practical exposure in space technology.

With capabilities spanning satellite development, launch support, ground systems and space education, Space Kidz India has trained over 100 million students and completed 15+ projects. Through its initiatives, the organization continues to play a key role in building India's future space workforce and promoting global participation in aerospace innovation.

YEAR OF ESTABLISHMENT:

2012

NUMBER OF EMPLOYEES (APPROX.):

- 27 Employees

CURRENT REVENUE/FUNDING:

- Revenue: Not publicly disclosed
- Funding: Bootstrapped organisation

CORE DOMAIN:

- Space Education

PRODUCTS AND SERVICES:

Student Satellite Programs

Design and development of student-built satellites (picosat/nanosat), enabling real launch opportunities and hands-on participation in space missions.

Educational Kits & Learning Modules

STEM-based kits and structured learning modules focused on satellite technology, rocketry and space science fundamentals.

SERVICES

SPACE SCIENCE WORKSHOPS

3-Day Space Science Workshop

- Day 1: Astronomy
- Day 2: Satellite Technology
- Day 3: Rocket Science
- Target Group: Classes VII-IX
- Conducted at school/institution premises

5-Day Advanced Space Science Workshop

- Day 1-2: Astronomy
- Day 3-4: Satellite Technology
- Day 5: Rocket Science
- Target Group: Classes VIII-IX
- Extended, in-depth learning format

Space Education & Training Programs

- Workshops, bootcamps and certification programs in aerospace and satellite technology
- Hands-on training in satellite design, payload development and mission concepts

Experiential Learning & Projects

- Real-world project-based learning through live satellite missions and experiments
- Student engagement in end-to-end mission lifecycle

STEM Outreach Initiatives

- Large-scale programs to promote space science awareness among school and college students
- National and international student engagement initiatives

Mentorship & Skill Development

- Guidance by industry experts for aerospace careers and research
- Development of technical, analytical and innovation-driven skills

ACHIEVEMENTS:

2024-2025

- Recipient of multiple recognitions including Devi Award 2024 and Women Leaders in Electronics 2025, highlighting leadership in space education and innovation
- Continued expansion of student satellite missions and national STEM outreach programs, impacting millions of students

2023-2024

- Successful launch and participation in AzaadiSAT-2 aboard SSLV-D2, strengthening India's student satellite ecosystem
- Expanded international collaborations including Mission Payanke (Seychelles) for global student engagement

2022

- Landmark achievement with AzaadiSAT satellite launch in collaboration with ISRO, involving participation of students across India
- Strengthened collaboration with ISRO / IN-SPACe, enabling student-led space missions

2019-2021

- Recognized as Best Social Entrepreneur (2019) for impact in space education
- Conducted Zero Gravity Flight experiments, providing students exposure to microgravity environments

2016-2018

- Achieved early recognition through Pride of India Award (2016) and Woman Icon Award (2017)

PARTNERS:

- ISRO
- IN-SPACe
- SIA India
- Alpha Impulsion
- Zoho Learn
- Azadi Ka Amrit Mahotsav
- Women's Aerospace Network
- STEM Queens

KEY MANAGEMENT:

- Dr Srimathy Kesan
Founder, CEO



- Yagna Sai
COO



About ISpA

The **Indian Space Association (ISpA)** is an apex non-profit industry body established to support the successful and collaborative development of India's private space sector.

ISpA serves as the single voice of the private space industry and acts as a bridge between the Government and industry. The association undertakes policy advocacy and engages with stakeholders across the Indian space ecosystem to facilitate business opportunities and enable its members to contribute effectively to national space ambitions.

ISpA facilitates strategic dialogue, professional networking and knowledge exchange, fostering collaborative partnerships among policymakers, government agencies, industry stakeholders, academia, the user community and resource providers. The association also promotes international engagement and collaboration with global space agencies, industry bodies and partners to strengthen India's participation in the global space economy and advance avenues for cooperation and growth.

Echoing the Hon'ble Prime Minister's vision of "**Atmanirbhar Bharat**", ISpA works with all stakeholders to create an enabling environment for strengthening the private sector in India's space ecosystem, positioning India at the forefront of the global space industry.

Disclaimer

This booklet has been curated based on publicly available information and open-source data. The content has been compiled from credible secondary sources and, wherever applicable, has been verified with the respective companies and stakeholders.

While due care has been taken to ensure the accuracy and relevance of the information presented, the Indian Space Association (ISpA) does not guarantee the completeness or absolute accuracy of the data. The information provided is intended for informational purposes only and should not be construed as official policy or endorsement.

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