GLIMPSES OF INDIAN SPACE INDUSTRIES

Indian National Space Promotion and Authorization Centre
Department of Space, Government of India
Bopal, Ahmedabad-380058

ROLE OF IN-SPACe

IN-SPACe, established as a single-window agency for all space sector activities of Non-Government Entities (NGEs), plays an important role in boosting the private space sector economy in India.

MESSAGE

Dr. Pawan Kumar Goenka
Chairman, IN-SPACe

India is today well on its way to emerge as a dominant global force in space exploration and innovation. Our nation's space economy is flourishing, thanks to the visionary leadership and collaborative spirit that has fuelled the remarkable progress over the last few years. IN-SPACe is pleased to play a role in this transformation, nurturing and mentoring a thriving ecosystem where private enterprises, start-ups, and academic institutions collaborate to drive ground-breaking advances in the space sector.

The Indian space-tech sector is evolving rapidly. Breakthroughs in propulsion systems, satellite manufacturing, and launch vehicle development are driving significant developments. A new generation of companies is pushing the boundaries of innovation in areas such as electric propulsion, semi-cryogenic engines, and satellite deployment technologies. These are not only elevating India's standing in space exploration but are also directly contributing to vital national space missions, supported by world-class manufacturing infrastructure and testing facilities.

IN-SPACe is committed to fostering entrepreneurship, guiding start-ups from concept to commercialization, and championing cutting-edge innovation. This unwavering support, coupled with our emphasis on international collaboration and partnerships, lays the foundation for India's leadership role in the global space arena. The future is full of promise, and together, we will continue to explore new horizons as we harness the vast potential of space for the betterment of all humankind.

Dr. Pawan Kumar Goenka

FOREWORD

Dr. Vinod Kumar
Director, Promotions, IN-SPACe

A new era of space exploration and commercialization begins with India standing on the cusp of unprecedented growth in the sector. The global space economy is projected to surpass $1 trillion by 2040, and India is well positioned to make a significant contribution as it grows to $44 billion over the next decade from its current size of $8.4 billion. This remarkable progress will be driven by technological advancements, forward-thinking policies, and a strategic vision that has empowered both public and private entities to collaborate and innovate. The Government of India's supportive policies, such as the space reforms initiated in 2020, have paved the way for private sector participation in space activities. These reforms have unlocked immense potential by removing barriers to entry and providing clear regulatory frameworks. Driving change in the space sector is the Indian National Space Promotion and Authorization Centre (IN-SPACe).

At IN-SPACe, we facilitate start-ups and private companies to access testing facilities, technology transfer, and collaboration opportunities with established institutions like the Indian Space Research Organisation (ISRO). Our focus is to empower these entities to move from ideation to commercialization seamlessly, ensuring that innovation thrives at every stage of development. With a mandate to democratize the Indian space sector and foster greater participation from non-government entities (NGEs), including private enterprises, start-ups, and academic institutions, IN-SPACe acts as a catalyst for these stakeholders providing all the support necessary to ensure their successful contribution to India's space vision.

IN-SPACe's role is especially critical in nurturing space-tech start-ups, which are key to driving innovation in satellite manufacturing, launch services, and space-based applications. With over 200 space start-ups, the sector is undergoing a revolution with path breaking work on the development of cutting-edge technologies such as electric propulsion systems, advanced launch vehicles, and high-performance satellite subsystems. The innovative solutions that will emerge will not only address national needs but also cater to the growing demand for space services globally, ranging from communications and navigation to Earth observation and scientific exploration.

In addition to fostering domestic innovation, IN-SPACe is deeply committed to strengthening international collaborations. India's space ambitions are global, and we recognize that partnerships with international space agencies, private companies, and academic institutions are vital for the continued success of our sector. These collaborations help us bring cutting-edge technologies to India, facilitate knowledge exchange, and open new markets for Indian space-tech companies. Our aim is to position India as a global hub for space services, capable of meeting the diverse needs of countries across the world.

The foundation of our work at IN-SPACe is built on the belief that space is not just the domain of a select few but a resource that can benefit all of humanity. Through our efforts, we are committed to making space more accessible, affordable, and inclusive. The socio-economic benefits of space technology, whether through improved communications, disaster management, or environmental monitoring, are immense. Our goal is to ensure that these benefits reach all corners of society, contributing to India's broader development aspirations.

The space-tech ecosystem in India is poised to play a transformative role in the global space economy. I invite all stakeholders-government agencies, private enterprises, academic institutions, and international partners-to join us as we build a future that transcends borders and unlocks the full potential of space for the benefit of all.

Happy Reading!

Dr. Vinod Kumar

CONTENTS

Agnikul Cosmos	6
Alpha Design Technologies Pvt. Ltd.	8
Ananth Technologies Pvt. Ltd.	10
ARMS 4 AI	12
Astra Microwave Products Ltd.	14
Astrome Technologies Pvt. Ltd.	16
Augtual Reality Labs Pvt. Ltd. (Fabrik)	18
Avantel Ltd.	20
Avasarala Technologies Ltd.	22
Azista Industries Pvt. Ltd.	24
Bellatrix Aerospace Pvt. Ltd.	26
Bharat Heavy Electricals Ltd.	28
Centum Electronics Ltd.	30
Data Patterns India Ltd.	32
Dhruva Space Pvt. Ltd.	34
Digantara	36
Economic Explosives Ltd.	38
Elena Geo Tech Pvt. Ltd.	40
Ethereal Exploration Guild Pvt. Ltd.	42
GalaxEye Space Solutions Pvt. Ltd.	44
Godrej and Boyce Mfg Co. Ltd.	46
Hindustan Aeronautics Ltd.	48
INOX Air Products	50
InspeCity Space Labs	52
KaleidEO A SatSure Company	54
Keltron	56
Kepler Aerospace	58
Lakshmi Machine Works Ltd.	60
Larsen and Toubro	62
mistEO	64
PierSight Space	66
Pixxel	68
Premier Explosives Ltd.	70
Saankhya labs pvt. Ltd.	72
Sanghvi aerospace Pvt. Ltd.	74
Skyroot Aerospace	76
SkyServe (Hyspace Technologies Pvt. Ltd.)	78
Space Kidz India	80
Tata Advanced Systems Ltd.	82
Tathya.Earth	84
Walchandnagar Industries Ltd.	86
Xovian Aerospace	88

Agnikul Cosmos

Company Profile

Agnikul Cosmos is an Indian space technology startup, incubated by the IIT-Madras and is headquartered in Chennai. It has achieved a significant milestone by launching India's first semi-cryogenic Launch Vehicle Agnibaan SOrTeD with the world's first and only single-piece 3D-printed rocket engine, for which it holds a patent. The vision of Agnikul is to bring space within everyone's reach, aiming to enable launches from Anywhere, Anytime, Affordably. Agnikul is committed to developing launch vehicles that are both affordable and customizable according to customer needs. The Agnikul team consists of over 200 engineers and is associated with the National Centre for Combustion Research and Development (NCCRD) at the Indian Institute of Technology (IIT), Madras.

Core Business/Domain of Operation

Launch Vehicle and Subsystems: Launch Services

Test Facilities and Infrastructure

- Engine test rigs for Agnite and Agnilet engines
- Vehicle avionics testing lab, Motor and pump test rig
- Stage qualification test rig

Achievements and Awards

Agnibaan SOrTeD (Sub-Orbital Tech Demonstrator) Mission :

- First-ever semi-cryo engine launch in India
- First-ever launch from a private launchpad in India
- First flight with aviation-grade jet fuel and industrial-grade Liquid oxygen
- World's First flight with a single piece 3D printed engine
- Startup India Recognition - DIPP13283
- National Startup Award 2022 - Winner in space sector
- Received DSIR certification

Organization Type : Startup

- Year of Incorporation : 2017
- Number of Employees : 247

Details of the Key Management

Srinath Ravichandran
Co-Founder & CEO
srinath@agnikul.in

List of Key Customers

- Satellite service providers, Satellite manufacturers

Products and Services

Agnibaana two-stage Launch Vehicle that focuses on providing customizable launch services for Lower Earth Orbit (LEO) using semi-cryogenic technology.

Business Contact

Syed Peer Mohamed Shah Khadri
Co-Founder & COO
moin@agnikul.in

www.agnikul.in

Alpha Design Technologies Pvt. Ltd.

ALPHA DESIGN TECHNOLOGIES PVT LTD

Company Profile

ADTL has expertise in Research & Development, Defence and Space manufacturing, Quality Assurance, evaluation and system integration for various Defence products, Satellite Communication products, for Space as well as Ground segments. The Company also has AS9001 as well as CEMILAC Certification for quality manufacturing of Airborne and Space products. ADTL has executed contracts from ISRO for Assembly Integration and Testing (AIT) of 2 Nos of IRNSS Series Satellites, the third major satellite GSAT 30(Communication Satellite) and Radar Imaging satellite (RISAT-1A) under ISROs guidance. ADTL is also active in establishment of Earth stations for TTC, TeleEducation Telemedicine networks in India and SAARC countries. ADTL has established a fully owned Joint Venture close to VSSC Trivandrum for manufacture of launcher parts and other critical items for PSLV/GSLV/SSLV program of ISRO.

Core Business/Domain of Operation

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

Test Facilities and Infrastructure

- Cleanrooms
- Test and measuring instruments
- Accredited ESS Test Facilities
- Instruments And Gauges (Mechanical)

Achievements and Awards

- ELCINA Awards for excellence in Electronics for 2021-22; 2nd prize under exports SME category
- Export Excellence Awards 2022 under Best Exporter Special in the Gold Category - Award received from Minister of Large and Medium Scale Industries, Karnataka
- Export Performance of Defence & Aerospace Products - Award received from Hon'ble Defence Minister (Raksha Mantri) of India
- Best Exporter in Special Category Award - Award received from Minister of Large and Medium Scale Industries, Karnataka

List of Key Customers

- ISRO, DRDO, DPSUs, Indian Armed Forces, and Global OEMs

Organization Type : Large Enterprises

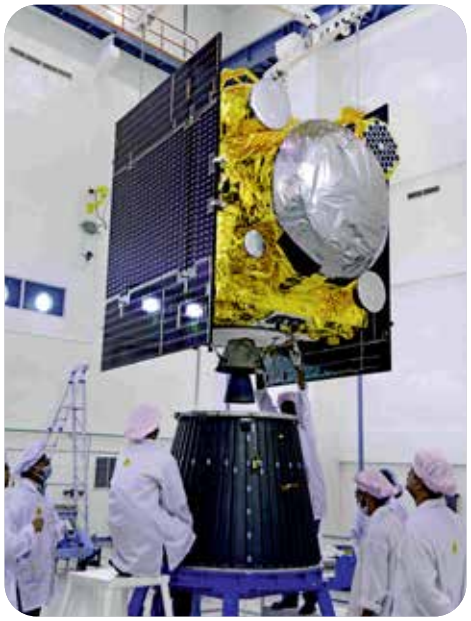
- Year of Incorporation : 2003
- Number of Employees : 759

Details of the Key Management

Mr Hari Prasad H S
CEO
alphacorp@adtl.co.in

Products and Services

- Assembly Integration and Testing of Satellites
- Establishment of Earth stations for Satellite Tracking and Data Reception
- Tele-Education, Telemedicine networks
- Manufacture of Launch Vehicle Parts



Business Contact

Ms. Sujatha Deepak
General Manager
sujatha.deepak@adtl.co.in

www.adtl.co.in

Ananth Technologies Pvt. Ltd.

Company Profile

ANANTH is into realization of Satellite sub-systems like Digital (TMTC), Controls (AOCE, OBC, BMU), Power (Power control, Shunt, Distribution and DC-DC), Sensors (Star Sensors, Sun Sensors and Earth Sensors), Payload (EPC and TR modules), Solar panels, Mechanism (SADM & DPM) and Harness systems.ANANTH is providing services of spacecraft activities like, AIT (Assembly, Integration and Testing), Alignment, Ground checkout etc. ANANTH has been into realization of launch vehicle on-board systems from past 30 years and successfully delivering various mission critical systems viz. NGC packages, Power modules, Mission computers, Control Electronics, Wheel drivers Electronics, Inertial sensors for Navigation, etc. So far ANANTH has contributed to 99 satellites and 79 Launch vehicles to ISRO.

Core Business/Domain of Operation

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

Test Facilities and Infrastructure

- Assembly, Integration and Testing (AIT) facilities with Class 10K and 100K Clean rooms for Satellite integration
- EGSEs for Spacecraft testing, viz. Data Acquisition Systems, DC Power supplies, Digital Storage Oscilloscopes, Voltage Calibrators, RF & Microwave Test Facilities, RF Power meter, Spectrum Analyzer
- Mechanical fitting lab with Bench drilling machine, Milling machine, Heli coil tool for reworks
- Environmental Test Facilities like Vibration facility, Thermo cycling, Thermo-Vac
- MIC Facilities and Automated SMT production line

Achievements and Awards

- Contributed towards realization of ISRO's Launch vehicles along with Harnessing and stage integration of complete PSLV sub-assemblies & GSLV sub assemblies
- Offered Quality inspection services in electrical and mechanical inspection areas
- Contributed to 99 satellites and 79 Launch vehicles of ISRO

Organization Type : Medium Enterprises

- Year of Incorporation : 1992
- Number of Employees : >1600

Details of the Key Management

Dr. Subba Rao Pavuluri
Chairman & Managing Director (CMD)

List of Key Customers

- ISRO, DRDO, ASL, ADE, ARDE and Defence establishment

Products and Services

- On-Board Computers & Control Systems
- Laser & Electro-Optical Systems
- Data Acquisition & Signal Processing Systems
- RF SYSTEMS (Telemetry Transmitters/ Receivers and other systems)
- Customized Power Supply Packages
- Mechanical Systems Integration

Business Contact

S. Sagar
Vice President-Marketing, BD and Strategy
ssagar@ananthtech.com

www.ananthtech.com

ARMS 4 AI

Company Profile

"ARMS4AI" has developed a One-click Geospatial-AI platform that uses space technology and customised AI/ML models for use cases in various sectors like Agriculture, Infrastructure, Environment and Defence. Our platform aims to offer important decision-making insights for beneficiaries in B2B and B2G sector offering an on ground accuracy of 90 percent and saving 70 percent of time and effort of our clients. We have a commercial product in place for Agro, Infra and Enviro sector already and we are serving our clients in India and central asian regions as well.

Core Business/Domain of Operation

Satellite Application: EO Services

Test Facilities and Infrastructure

IT infrastructure for data analytics

Achievements and Awards

- IN-SPACe Seed Fund Grantee
- AMRUT 2.0 Winners: Ministry of Housing and Urban Affairs
- Winner of ANIC 2.0 challenge by Atal Innovation Mission
- Winner of NGIS 2.0 Scheme
- Startup India Seed Fund Scheme Awardee
- Best Exports Performance Award on number of occasions from Govt. of India and various Chambers of Commerce, Export Promotion Councils

List of Key Customers

- DCM Sriram Pvt Ltd
- Raipur Nagar Nigam
- British American Tobacco
- Bayer India
- Institute of Ionosphere, Kazakhstan

Organization Type : Startup

- Year of Incorporation : 2019
- Number of Employees : 8

Details of the Key Management

Dr Jagriti Dabas
CEO & Founder
jagriti@arms4ai.com

Products and Services

- AGRO – AI
- INFRA AI

Business Contact

Dr Jagriti Dabas
CEO & Founder
jagriti@arms4ai.com

https://arms4ai.com

Astra Microwave Products Ltd.

Astra Microwave Products Ltd.
On a Winning Wavelength

Company Profile

Astra Microwave Products Limited (AMPL) is a leader in RF and microwave technologies, specializing in the design, development, and production of advanced systems, subsystems, and components for Space, Defense, Aerospace, and Meteorology sectors. With extensive expertise in MMIC technology and cutting-edge clean room facilities across Hyderabad and Bangalore, including a dedicated facility for complete satellite assembly and testing, we serve clients like DRDO, ISRO, BEL, and international customers. Our experienced team is driving innovation as we aim to launch our own communication satellite by 2027, reinforcing AMPL's commitment to excellence in the Space sector and maintaining our leadership in the RF and microwave industry.

Core Business/Domain of Operation

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

Test Facilities and Infrastructure

- RF System test and Measurement equipment, e.g. VNA, Signal Generators, Spectrum Analyser, Etc.
- MMIC assembly facility, class 10K, Class 100K clean room facilities
- Hermetic laser welding, IR reflow soldering facility
- Environmental testing with chambers for temperature, humidity, ThermoVac, EMI/EMC, NFTR and vibration

Achievements and Awards

- Established a state-of-the-art MMIC assembly facility
- Developed an advanced automated assembly division
- Supplied key electronics like C band TRIMS and the Integration block for RISAT 1A for Synthetic Aperture Radar
- Designed, developed, supplied, and commissioned five X band Doppler Weather Radars (DWR) for the India Meteorological Department (IMD)
- Delivered the Multi Mission Meteorological Data Receiving and Processing System (MMDRPS)
- Aerospace & Defence Award for Excellence in Innovation, Design, and Technology for R&D in both 2017 and 2021

Organization Type : Large Enterprises

- Year of Incorporation : 1991
- Number of Employees : 1600

Details of the Key Management

Dr. M.V.Reddy
Joint Managing Director
mktg@astramwp.com

List of Key Customers

- ISRO, DRDO, PSU(BEL, HAL, BDL, ECIL, BHEL), IMD, TASL, L&T, Godrej Aerospace, ADTL, Adani Defence and Aerospace, Reliance Defence Limited, Data Pattern, Centum Electronics Limited

Products and Services

C Band TRIMs, Ka X Ka Down Converter for GSAT20, Ku-Band Receiver for GSAT series, X-SSPA for RISAT 2BR Series, Ku-SSPA for GISAT, X-Feeder SSPA for RISAT 2A, C-Band SSPA GSAT12R, IRS-S-Band Receiver, IRS-S-Band Transmitter, Ku-Band Channel Amplifier GSAT 24, Ku-Band Driver Amplifier (Ku-DA) for GISAT, 0.5-18 GHz Quad Superhet Receiver For EMISAT, Switch Matrix for GSAT 4

Business Contact

Upendra Kumar
General Manager
upendra@astramwp.com

https://astramwp.com

Astrome Technologies Pvt. Ltd.

Company Profile

Astrome Technologies is a pioneer in millimeter-wave wireless technology, specializing in phased array antennas and advanced beamforming. With a deep-rooted expertise in satellite constellation design, we are dedicated to revolutionizing digital infrastructure. Our vision is to deliver seamless, high-bandwidth connectivity across various terrains. By combining hardware and software innovation, we offer end-to-end solutions, from design to manufacturing. Our flagship product, Gigasat, is a groundbreaking ground user terminal operating across multiple frequency bands. Additionally, we are developing cutting-edge payloads for satellite constellations. Astrome seeks strategic partnerships to shape the future of wireless communication.

Core Business/Domain of Operation

Ground systems and Auxiliary Services: Ground station and Antenna

Test Facilities and Infrastructure

- 2000 sq.ft of lab for design and testing of RF systems.

Achievements and Awards

- Successfully achieved a high throughput link of 20km distance in E-Band through the gigamesh terrestrial radio
- IESA-NASSCOM Most Promising A&D Start-Up of the Year 2016
- International Telecommunications Union Most Promising Innovative Solution in Connectivity 2020 ITU Equals Delegation 2020
- Ministry of Telecommunication, Government of India Pandit Deendayal Upadhyaya Award for Telecom Excellence

List of Key Customers

- Indian Armed Forces, BSNL

Organization Type : Startup

- Year of Incorporation : 2017
- Number of Employees : 63

Details of the Key Management

Neha Satak
CEO
neha@astrome.co

Products and Services

- Ground User Terminal: Multi-orbit support functions on Ku, Ka, W, V Bands
- Flat Panel Antenna - Intelligent Beam Steering

Business Contact

Venkatesh Kumaran
President
venki@astrome.co

www.astrome.co

Augtual Reality Labs Pvt. Ltd. (Fabrik)

Company Profile

Fabrik makes 3D digital twins for critical infrastructure accessible, affordable, and easy-to-use. These infrastructure include road network, hydrology maps, smart city infrastructure, oil refineries, mining infrastructure, and aircrafts. Fabrik makes the digital twins and distributes them at scale accessed through smartphones, tablets, laptops, and wearables AR/VR headsets for use-cases like design review, commissioning, operations and maintenance, upgrades, simulations, training, and decommissioning areas.

Core Business/Domain of Operation

Satellite Application: EO Services (3D digital twins)

Test Facilities and Infrastructure

- IT infrastructure for data analytics

Achievements and Awards

- IN-SPACe seed fund Grantee
- https://youtube.com/shorts/_5XB47t8it0?feature=share,

List of Key Customers

- Yokogawa Technology Solutions
- Mercedes Benz R&D
- Adani Natural Resources
- Punjab Road Safety and Traffic Research Center
- ICWaR, IISc

Organization Type : Startup

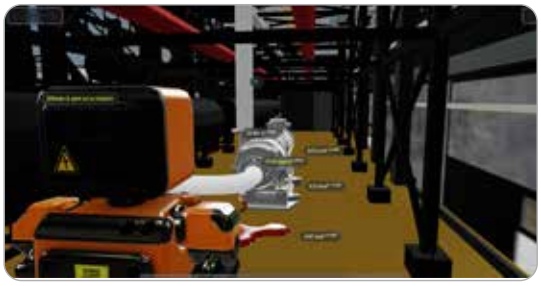
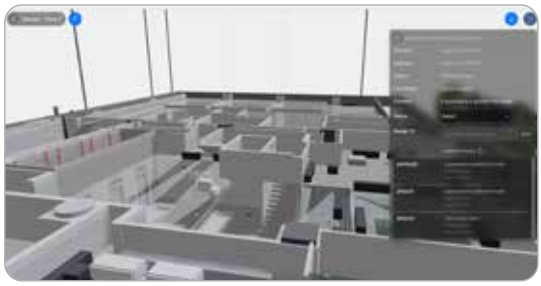
- Year of Incorporation : 2018
- Number of Employees : 9

Details of the Key Management

Puneet Badrinath
Founder and CEO
puneet@fabrik.space

Products and Services

- 3D Digital twins

Business Contact

Puneet Badrinath
Founder and CEO
puneet@fabrik.space

puneet@fabrik.space
https://fabrik.space

Avantel Ltd.

avantel

Company Profile

M/S Avantel Limited, is a technology driven AS9100D, ISO 9001:2015, ISO 14001:2015, ISO 45001:2008, ISO/IEC 17025:2017 & ISO 27001:2013 & CEMILAC certified MSME company in India with a legacy of more than 30 years in Indian Aerospace & Defence Industry. The company is well known for its capabilities in Design, Development, Manufacturing, Installation & Commissioning, System Integration, Testing & Evaluation of Defence Electronics, Satellite Communication Systems, Software Defined Radios, HF Communication Systems, Radars and Embedded Systems and Application Software.

Core Business/Domain of Operation

Ground support and Auxiliary services: Communication Ground systems, Ground stations

Test Facilities and Infrastructure

- Environmental and Vibration Test facility
- RF System test and Measurement equipment, e.g. VNA, Signal Generators, Spectrum Analyser, Etc
- Radio Communication test Set
- Digital Microscope
- Anechoic Chamber
- Automatic SMT line

Achievements and Awards

- Contributed for enhancement of "Net Centric Communications" of Indian Navy with its fully indigenous SATCOM solutions
- First Company to prove Airborne SATCOM solutions for Military Helicopters & Aircraft.
- Executed the second phase of Real-time Information Systems (RTIS) project for Satcom connectivity with Locomotives while on transit
- Awarded "IEI Industry Excellence Awards" for the Years 2015, 2018, 2021, 2022 & 2023
- Awarded "TOP 25 Innovative Company by CII Industrial Innovation Awards 2019 & 2022"
- DGQA (Navy), MoD has issued "Self-Certification Status" for Avantel MSS & UHF SATCOM Products
- Awarded "National CSR Award 2020" under MSME category for Aspirational Districts / Difficult Terrain – Southern India

Organization Type : Medium Enterprises

- Year of Incorporation : 1990
- Number of Employees : 534

Details of the Key Management

Vidyasagar Abburi
Chairman and Managing Director
sagar@avantel.in

List of Key Customers

- ISRO-SAC, SDSC, Indian Navy, L&T Defence, NSIL, Indian Coast Guard, BEL, Lockheed Martin-USA

Products and Services

- MSS Shipborne & Airborne Systems
- UHF SATCOM Shipborne & Airborne systems
- Real Time Information System (RTIS) for Indian Railways
- Xponders for Fishing boats
- ERMSAT
- Wind Profiler Radar
- Earth Station Antenna & Electronics

Business Contact

Wg Cdr PRL Prakash retd.
VP SBD
prlprakash@avantel.in

www.avantel.in

Avasarala Technologies Ltd.

Company Profile

Avasarala is established 37 years back, headquartered in Bangalore and having facilities at multiple locations. Avasarala mainly caters critical needs of India and World. Major customers are Indian Space Research Organization (ISRO), Nuclear Power Corporation of India Ltd. (NPCIL), besides international customers such as CERN Switzerland, ITER France, Thirty Meter Telescope Hawai Island USA etc catering to R&D for the future generations.

Core Business/Domain of Operation

Satellite and subsystems: Manufacturing subsystems

Test Facilities and Infrastructure

- Test facility for realisation and qualification of deployment mechanism, i.e. UTM, CMM, Torsion springs and Hinge characterization
- Heat pipe and Wave guide manufacturing facility
- Environmental chamber
- X-Ray facility
- MoS2 and Dicronite (WS2) coating facility

Achievements and Awards

- Indigenised many equipments and products used in satellite, i.e.
  - Perforating Machine for Mylar sheet,
  - Ion beam polishing Machine for Mirrors
  - Heat pipes for thermal management
  - Wave guides
- ELCINA Award for Indigenisation of Capital Machinery 1987 & 1996
- President of India for R & D efforts in Tungsten manufacturing during 1998
- SIATI award for Excellence in Aerospace Indigenisation during 2001
- Industrial Excellence Award from Indian Nuclear Society during 2005

List of Key Customers

- ISRO, NPCIL, Defence Labs

Organization Type : Medium Enterprises

- Year of Incorporation : 1987
- Number of Employees : 153

Details of the Key Management

Mani T T
Managing Director
mani@avasarala.com

Products and Services

- Heat Pipes for Satellites
- Wave Guides for Satellites
- Solar Array Deployment Mechanism for Satellites
- Ion Beam Polishing Systems for Polishing Mirrors to 10 nm Surface Finish

Business Contact

Priteesh Mahajan
Chief Executive Officer
priteesh@avasarala.com
info@avasarala.com
www.avasarala.com

Azista Industries Pvt. Ltd.

Company Profile

Azista Industries Pvt Ltd (AIPL) is a research-driven company offering products across the Aerospace, Composites, and Satellite sectors. As India's largest space systems company, Azista boasts an impressive annual production capacity of 100 satellites and operates a 50,000-square-foot facility equipped with state-of-the-art infrastructure for the development and manufacturing of highly reliable space systems. Azista's significant contributions to various ISRO missions highlight its capability and commitment to excellence. The company has provided high-reliability electronics for prestigious projects such as Cartosat-3, NISAR, RISAT, and many more. The Azista group currently operates AFR, a remote sensing satellite built by Azista, which was launched on June 13th, 2023.
Azista provides vertically integrated solutions for the design, development, manufacturing, testing, and qualification of Satellites, Satellite buses, Sub-systems, Payloads, Data Processing, Data Analytics and Satcom products.

Core Business/Domain of Operation

Satellite and subsystem: Satellite and Systems manufacturer
Satellite Application: EO Services

Test Facilities and Infrastructure

- Spacecraft Manufacturing, Assembly, Integration with 10K class cleanrooms
- EMI-EMC test facility (Semi-Anechoic Chamber)
- Thermovacuum test facility
- Vibration Shaker
- Thermal Chambers
- Helmholtz Cage

Achievements and Awards

- Successfully built and launched AFR, an 80kg remote sensing satellite. AFR is operational with completion of 1 year in orbit as part of its designated 5 years mission life
- Winners of 2 IDEX grants from Ministry of Defence

Organization Type : Medium Enterprises

- Year of Incorporation : 2014
- Number of Employees : 400

Details of the Key Management

Sunil Indurti
Director
contactus@azistaindustries.com

List of Key Customers

- ISRO, MoD, ilaunch (Australia), EU Countries & USA

Products and Services

- AZISTA-50 and AZISTA-100 modular Satellite Buses
- Fineview: Sub-meter Electro-Optical Payload
- Subsystems such as Reaction Wheels Assembly; X-Band Transmitter, Battery and Power Control Unit (PCU)

Business Contact

Bharath Simha Reddy Pappula
Business Development Manager
contactus@azistaindustries.com

https://azistaaerospace.com

Bellatrix Aerospace Pvt. Ltd.

Company Profile

Bellatrix is a vertically integrated space transportation company offering next generation engines to propel satellites in space. We use cutting edge technologies to offer satellite engines that are better performing, long lasting, more reliable and cost effective compared to conventional alternatives in the global market. The company has been supplying to ISRO and DRDO for the last 5 years. Our latest endeavor is to build highly agile and modular orbital transfer vehicles that can greatly disrupt the cost of access to space.

Core Business/Domain of Operation

Satellite and subsystems: Propulsion Systems

Test Facilities and Infrastructure

- Ultra High Vacuum Test Facilities
- CNC Manufacturing Facilities
- Metal 3D printer
- Class 10,000 cleanroom
- Electronics Testing and Production Lab
- High Performance Computing Facility

Achievements and Awards

- Space Qualified India's first Hall Effect Thruster
- Space qualified India's first high performance green propulsion system
- Space qualified world's first heaterless hollow cathode
- Developed world's first microwave plasma thruster
- TDB National Award
- National Startup Award
- Forbes Emerging Innovator
- ET Best on Campus

List of Key Customers

- ISRO, DRDO

Organization Type : Startup

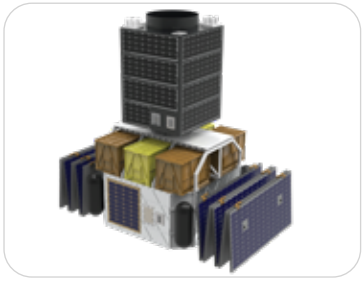
- Year of Incorporation : 2015
- Number of Employees : 103

Details of The Key Management

Rohan M Ganapathy
CEO & CTO
rohan@bellatrix.aero

Products and Services

- Green Thruster
- Nano Thruster
- Hall Thruster
- Microwave Thruster
- OTV : Satellite as a Service



Business Contact

Yashas Karanam
Director & COO
yashas@bellatrix.aero

www.bellatrix.aero

Bharat Heavy Electricals Ltd.

Company Profile

Bharat Heavy Electricals Limited (BHEL) is India's premier state-owned public sector enterprise and flagship engineering and manufacturing MAHARATNA company. Company's business spans across several core sectors of economy including transportation, defense, aerospace, oil and gas, power, transmission and renewables. It has 4 regional offices, 8 service centers and 15 regional marketing centers. The Electronics Systems division (ESD) in Bangalore caters to Indian Space requirement with three major products for satellite and Launch Vehicle.

Core Business/Domain of Operation

Satellite and Subsystem: Solar Panel and Batteries

Test Facilities and Infrastructure

- Moisture Analyser
- Conductivity meter
- X-RAY Radiography
- Helium Leak Detector
- Particle Counter
- climatic chambers
- cell testing system
- Battery testing system
- IR meter
- Viscometer
- Pull tester

Achievements and Awards

- Qualification of 5Ah Li-ion Cells by VSSC, ISRO
- Fabrication of more than 650 sq. m Solar Panels
- Supply of 112 Space Batteries
- Testing of more than 80,000 space grade solar cells
- Contribution towards Chandrayaan-3 & Aditya-L1 Mission

List of Key Customers

- ISRO (URSC, VSSC)

Organization Type : PSU

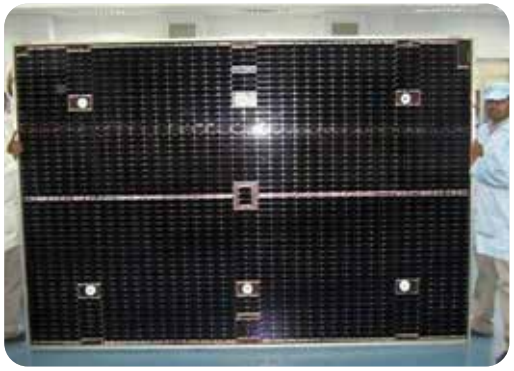
- Year of Incorporation : 1964
- Number of Employees : 30000

Details of the Key Management

Koppu Sadashiv Murthy
CMD
cmd@bhel.in

Products and Services

- Fabrication & Assembly Space Grade Solar Panels
- Fabrication & Assembly of Li-ion Batteries for Satellites
- Fabrication of Li ion cells for Launch vehicles



Business Contact

Dr. LN Satapathy
AGM
lnsatpathy@bhel.in

https://www.bhel.com

Centum Electronics Ltd.

Company Profile

Centum design develop and manufacture customized products for Defence and Space customers in India. Centum is a leading industry partner for Indian Space Research Organization (ISRO) as well as DRDO labs Defence PSUs having delivered mission critical electronics on major missile radar electronic warfare and satellite applications. Strong Design and Engineering Team with relevant domain experience in Product Design by Cross Functional Team (CFT) approach including Failure Mode Effect Analysis (FMEA) for all the products designed. At Centum, we have over two decades of design and manufacturing capabilities with all infrastructure, technical resources, and flight heritage in the realization of various sub systems, systems, payloads for satellites, launch vehicles and in building of satellites.

Core Business/Domain of Operation

Satellite and subsystem: Electronic system design Manufacturing
Launch vechicle and subsystem: Electronic system design Manufacturing

Test Facilities and Infrastructure

- AIT Facility with clean room
- Vibration Test system
- Thermo-Vacuum Test System
- Burn-in Chambers
- Temperature & Humidity Chambers
- Component screening facility
- RF test systems

Achievements and Awards

- Contributions to Chandrayaan-3, Aditya, Gaganyaan-TD
- World Economic Forum- Recognize Centum as Global Growth Company
- Best Under a Billions- Centum in Forbes Asia's 200
- ELCINA - Electronics Man of the Year
- STPI- Centum as Highest Growth – Electronic Hardware Exporter
- Best Electronics Manufacturing Company In A&D Category
- Best Electronic System Design Company Award

Organization Type : Medium Enterprises

- Year of Incorporation : 1994
- Number of Employees : 2200

Details of the Key Management

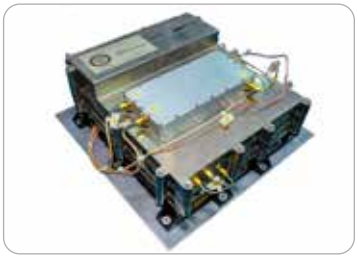
Mallavarapu Apparao
Chairman & Managing Director
apparao@centumelectronics.com

List of Key Customers

- ISRO (URSC, SAC, VSSC, LEOS, IISU, LPSC, ISTRAC), DRDO, DPSU (BEL, BDL)
- Global Customers (Thales, AIRBUS, SAFRAN, HITACHI, SIEMENS, RAFAEL, GE, ABB)

Products and Services

- Satellite Payload-EW:Digital Receiver, ELINT Controller
- Satellite On Board Computer (OBC)
- Hyper Spectral Imaging Payload
- RF MODULES: Various kinds of RF Modules like UP/Down Converters, LTCC Based TR Modules, Driver Amplifiers, C to Ka Bond Receivers
- DC-DC Converters



Business Contact

Vijay S P
Director
vijaysp@centumelectronics.com

https://www.centumelectronics.com

Data Patterns India Ltd.

Company Profile

Established in 1985, Data Patterns (India) Limited is a reputed public listed Defence & Aerospace Electronic Systems Company with 100% In-house Design capabilities with state of the art Manufacturing & testing infrastructure located in Chennai. It has a team size of 1500 with about 700+ are in design & engineering engaged in delivering world class high reliable electronic systems. Data Patterns has rich expertise in Satellites, Radar, Electronic Warfare (EW), Communications, Avionics, Launch vehicle & Missile electronics, Automatic Test Equipment (ATE) etc and its products are designed for use in Space, Air, Land and Sea Platforms. Only Indian Company in Defence and Aerospace offering "Building Blocks to End Systems" with design capabilities over the entire spectrum of electronics including Processors, Power, RF and Microwave, Embedded Software and Firmware. It has a certified infrastructure with diversified customer base in both defence & aerospace market to address Large Scale Turnkey project.

Core Business/Domain of Operation

Satellite and subsystems: System and Test systems manufacturing
Launch Vehicle and Subsystems: Test systems manufacturing
Ground systems and Auxiliary Services: Ground station and Antenna

Test Facilities and Infrastructure

- 100,000 Sqft manufacturing facilities with automated pick n place
- Environmental test facilities
- Vibration Shaker
- LCR Meters, Signal Generators, Logic Analyser
- HALT, HASS test setup
- optical inspection equipment
- X Ray, BGA Assembly setup

Achievements and Awards

- Launch pad count down systems at sriharikota working without any failure for the last 22 years
- Best industry partner award in 2014
- Raksha mantri's award for excellence in 2022 for innovation under msme
- Award by SIATI the in 2017 for outstanding contribution and achievements in the defence and aerospace sector
- Project leader award for successful design development and installation of the world's first 205 mhz stratosphere troposphere wind profile radar in 2018
- Institute of directors' professional excellence award in 2019
- Tiecon made in india award in 2016
- IESA and NASSCOM deftronics award in 2016
- The institute of engineers award for eminence and contribution to the profession of aerospace engineering in 2014

Organization Type : Medium Enterprises

- Year of Incorporation : 1985
- Number of Employees : 1480

Details of the Key Management

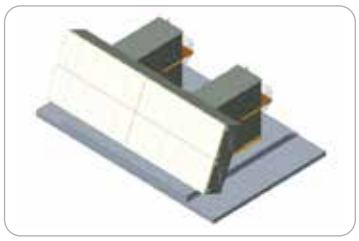
Mr. S. Rangarajan
Chairman & Managing Director
ceo@datapatterns.co.in

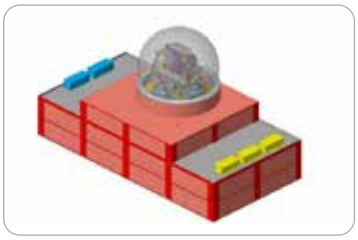
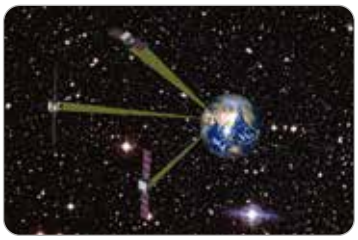
List of Key Customers

- ISRO, DRDO, BRAHMOS, BEL, IGCAR, LRDE, HAL, LEONARDO, BDL, NIOT

Products and Services

- THAPARSAT and NUISAT
- UHF Radar For Space Object Tracking
- S Band Radar For Space Object Tracking
- Launchpad Countdown System
- ELINT
- SAR, Antenna
- Checkout System Imaging Rf Seeker
- Waveform Generator
- Frequency Response Analyser
- Tracking Radar Checkout Systems
- Data Acquisition System



Business Contact

Mr Kuppuswamy G
Vice President Business Development
kuppu@datapatterns.co.in

www.datapatternsindia.com

Dhruva Space Pvt. Ltd.

Company Profile

Dhruva Space Private Limited is a full-stack Space Engineering solutions provider based in Hyderabad, India. Dhruva Space is active across Space, Launch, and Ground segments and supports Civilian and Defense clients worldwide. Dhruva Space offers Satellite/s coupled with Earth Station/s and Launch Service/s as an integrated solution or individually as technology solutions to power Space-based applications on Earth and beyond.

Core Business/Domain of Operation

Satellite and Subsystems: Satellite manufacturer and solar panel
Launch vehicle and subsystems: Deployer
Ground support and Auxiliary services: Ground station services

Test Facilities and Infrastructure

- Class 10,000 Cleanroom satellite AIT
- Helmholtz Cage testing of Satellite AOCS
- Thermo-Vacuum Chamber
- Mission Control Centre to manage Space mission operation

Achievements and Awards

- First private entity to receive end-to-end design and development order for Space-grade Solar Panels
- Receive first authorisation from IN-SPACe for DSOD-1U Mission and for Ground Station as a Service (GSaaS)
- Partnered with Kinéis for Dhruva Space to introduce IoT connectivity in India and launch IoT payload on Dhruva Space P-30 satellite
- Launched two amateur radio communication satellites, Thybolt-1 and Thybolt-2
- Qualified its P-30 Satellite platform launched as 'LEAP - Technology Demonstrator
- Winner of National Startup Award, Qualcomm Design in India Challenge, 'Business' Innovation for India, Vocational Service Excellence Award 2022-23 , Pandit Deendayal Upadhyaya Telecom Skill Excellence Award 2022,'Best Breakthrough Technology in Aerospace, Pride of Telangana 2024 Awards
- Founders featured in Fortune India's '40 Under 40

List of Key Customers

- TU Wien University, Austria, Defense Client (Unnamed)

Organization Type : Small Enterprises

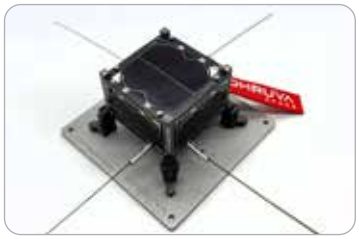
- Year of Incorporation : 2012
- Number of Employees : 140

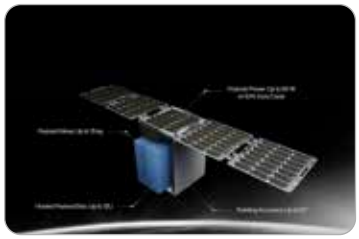
Details of the Key Management

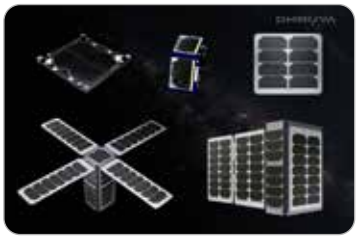
Sanjay Nekkanti
Chief Executive Officer & Co-founder
sanjay@dhruvaspace.com

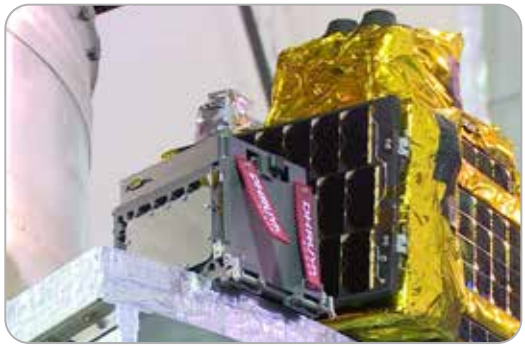
Products and Services

- Satellite Bus (P30 and P DoT)
- Hosted Payload Solutions For Secondary Payloads
- Solar Arrays for Smallsats, Cubesats, Nanosats
- Satellite Deployer (1U, 3U and 6U)
- Dhruva Space Integrated Space Operations and Command Suite (ISOCS)









Business Contact

Krishna Teja Penamakuru
Chief Operations Officer & Co-founder
krishnateja@dhruvaspace.com

https://www.dhruvaspace.com

Digantara

Company Profile

Digantara is a space situational awareness company that is building end – to – end infrastructure to ease space operations and space traffic management. The infrastructure is underscored by the core situational awareness tenets of perception, comprehension, and prediction, enabling users to leverage a persistent sensing network that can identify, track and predict the behaviour of all Resident Space Objects to achieve comprehensive Space Domain Awareness.

Core Business/Domain of Operation

Ground support and Auxiliary Services: Space Situational Services

Test Facilities and Infrastructure

- 25000 Sq Ft facility for satellite and payload integration, mission control center
- Optical payload assembly characterization facility
- Orbital dynamics, flight dynamics and SSA analysis facility

Achievements and Awards

- Established Asia's one of a kind space domain awareness centre
- Global presence with offices in India, Singapore, and the United States
- Launched two missions to orbit for measuring space weather
- key contributors to the U.S.-India initiative on Critical and Emerging Technology
- National Startup Award 2022/23
- ASI Award for Spacecraft and Related Technologies
- ISRO: ANIC ARISE Award
- ET Startup Award

List of Key Customers

- Across strategic and commercial sector

Organization Type : Startup

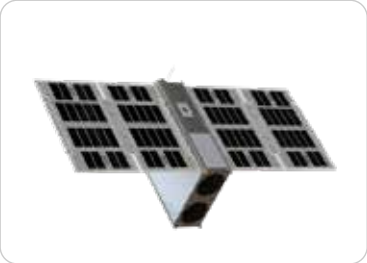
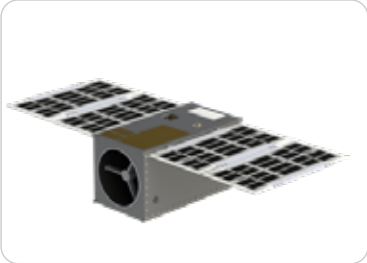
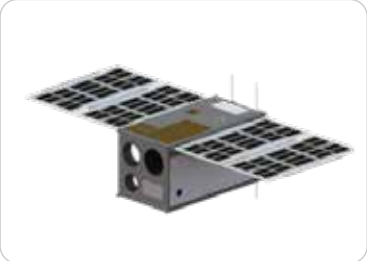
- Year of Incorporation : 2018
- Number of Employees : 60

Details of the Key Management

Anirudh Sharma
Chief Executive Officer
founders@digantara.co.in

Products and Services

- Flight Dynamics as a Service
- Launch and Early Operation Services
- Spacecraft Insurance
- Space Threat Assessment and Response Suite
- Advanced 40 Satellite Space Surveillance Constellation & Complimentary Ground Sensors

Business Contact

Tanveer Ahmed
Chief Technology Officer
founders@digantara.co.in

https://www.digantara.co.in

Economic Explosives Ltd.

SOLAR

शक्तिः शान्तिः प्रतिष्ठिता

Company Profile

Economic Explosives Limited has been incorporated on 16th August 1995. The company is into manufacturing ammunition and allied products for the Space sector and defense establishments. The company during its almost two decades of operation has established itself as one of the leading ammunition manufacturers, globally. The progress made by the company has established it as a sustainable player within the challenging economic and business environment.

Core Business/Domain of Operation

Launch Vehicle and subsystems: Propulsion Systems

Test Facilities and Infrastructure

- Testing Hangar, Cable harness, Cable harness manpower
- Mechanical Workshop
- Electrical measurement equipment
- Assembly of Rocket Motors
- Calibration and Test Facilities
- Environmental test Facility
- Vibration Shaker
- ESS Chamber
- Combined Altitude Temperature
- Humidity Chamber (CATH)

Achievements and Awards

- Manufacturing propellant for PSLV motors of VSSC, ISRO
- First private company in India to produce complete ammunition.
- Supplied 10 lac MMHG with a reliability of 99.82% against GSQR requirement of 95%
- DGQA Registration Certificate - Manufacturing Capacity/Capability for defence items
- DGNAI Certificate as established vendor Manufacturing and supply of 30mm Ammunition

List of Key Customers

- ISRO(VSSC, SDSC), DRDO, Indian Armed Forces, BDL, Skyroot

Organization Type : Medium Enterprises

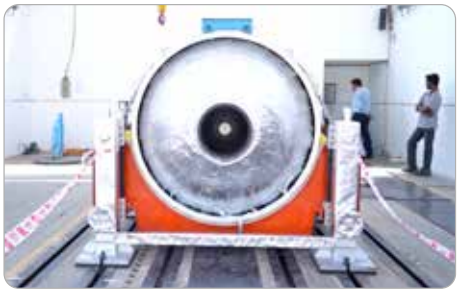
- Year of Incorporation : 1995
- Number of Employees : 2500

Details of the Key Management

Satyanarayan Nandlal Nuwal
Whole Time Director
eel.defence@solargroup.com

Products and Services

- PSOM - XL MOTOR
- MPBX (Moulded Polymer Bonded Explosives)
- ROCASIN SHEET



Business Contact

Vasudhesh Arya
Executive Director
vasudhesh.arya@solargroup.com

www.solargroup.com

Elena Geo Tech Pvt. Ltd.

Company Profile

In 2012, Col Velan founded Elena Geo Systems within IIT Kharagpur's Technology Business Incubator, focusing exclusively on indigenous NavIC solutions. Under his leadership, the company has become a pioneer in multi-GNSS devices, emphasizing NavIC as its core technology. Elena demonstrated its first NavIC module on April 6, 2019, and its first GNSS processor on April 13, 2023. Elena Geo Systems offers a comprehensive range of products, including NavIC-based antennas, drone navigation units, atomic clocks, tracking devices, and servers, all developed in line with the Make in India initiative. The company collaborates with Bengaluru's Ramaiah Institute of Technology and IIT Tirupati. In recognition of his contributions, Col Velan was appointed as a technology development advisor at IIT-Tirupati's Navavishkar Innovation Hub Foundation in July 2023, further solidifying his impact on the field of satellite navigation.

Core Business/Domain of Operation

Ground support and Auxiliary services: Hardware for Multi GNSS Solutions with focus on NavIC / IRNSS
Satellite applications: Navigation services

Test Facilities and Infrastructure

- GNSS Test facilities
- GNSS Monitoring
- Reference System

Achievements and Awards

- Most promising startup by ELCINA
- Excellence award by Indian Space Conclave, 2023
- Proud recipient of "Pandit Deendayal Upadhyaya Telecom Excellence Award", 2023
- 10 Most promising vehicle tracking solution providers 2020 by CIO Review India

List of Key Customers

- Bharath Electronics
- Larsen & Toubro
- Indian Army

Organization Type : Small Enterprises

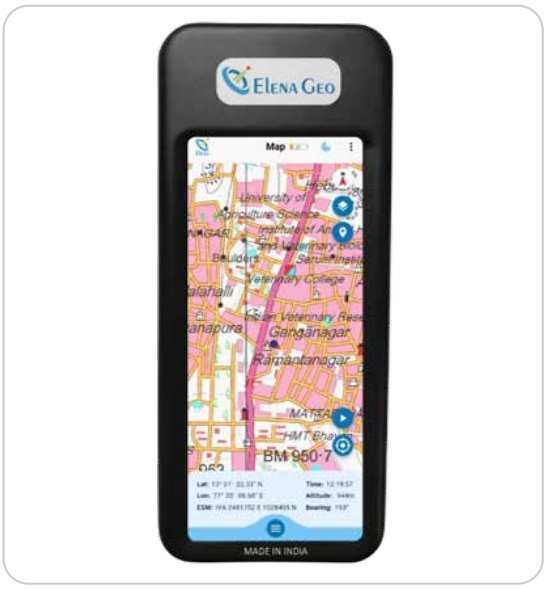
- Year of Incorporation : 2012
- Number of Employees : >75

Details of the Key Management

Lt Col V Shanmuga Velan
CTO
velan@elenageosystems.com

Products and Services

- NavIC Atomic Clock
- NavIC Drone Navigation Unit
- Handheld Navigator
- Intelligent Vehicle Tracking System



Business Contact

Mrs Naveena R Velan
CoFounder, Chief Financial Officer
elenageotech@gmail.com
naveena@elenageosystems.com

https://elenageosystems.com

Ethereal Exploration Guild Pvt. Ltd.

ETHEREAL X

Company Profile

The Ethereal Exploration Guild is building the world's first fully reusable medium-lift launch vehicle yet, Razor Crest Mk-1. With this rocket, offering launch prices as low as $350-$2000 per kg (1/35th the current global launch price average range, which is at $12500-$15000 per kg) the Guild is set to become the most accessible and economical choice for 'earth-to-orbit and back' transportation. The Company was founded in 2022 with the vision of bringing access to space, to emerging space nations, enabling rapid technological growth and fostering civilizational progress.

Core Business/Domain of Operation

Launch Vehicle and Subsystem: Launch Services

Test Facilities and Infrastructure

- Establishing Rocket Engine Test Facility

Achievements and Awards

- Raised a $5M USD Seed Round, marking the largest seed round
- Winner at the 14th Aegis Graham Bell Award for Innovation in Space Tech awarded by Ministry of Electronics and Information Technology
- First start-up outside of US and Europe to be invited to Beyond Gravity's Launchpad Program
- Completed the hardware qualification testing of single element injector designed centric to reusability
- Developed a proprietary in-house tool for Propulsion System Design with better datapoints and accuracy
- Featured as launch vehicle company based out of India in the Forbes India D Globalists Select 200 Companies

List of Key Customers

- Satellite Manufacturers & service providers
- In-orbit/In-space service providers
- International/Global De-Orbiting Services
- Commercial Cargo/Resupply Missions
- Nationalised Space Agencies
- Global Nationalised Cargo Supply Missions
- Human Spaceflight, among others

Organization Type : Startup

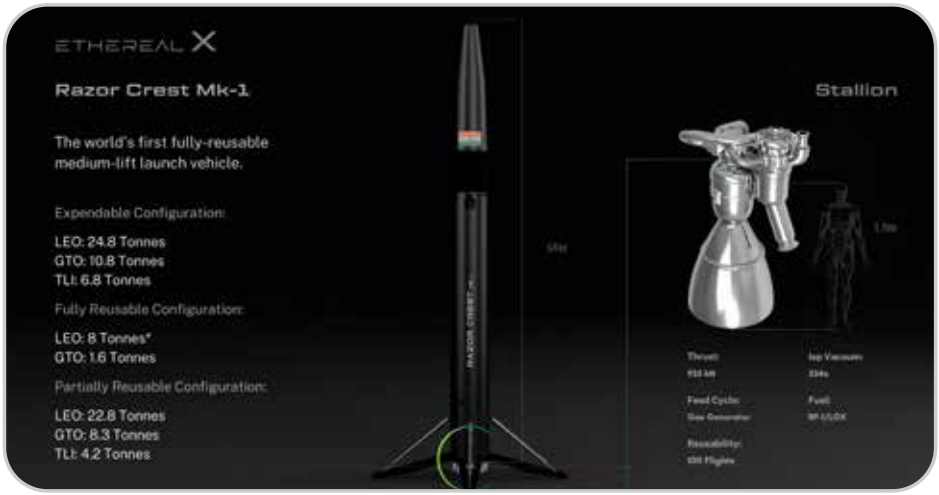
- Year of Incorporation : 2022
- Number of Employees : 24

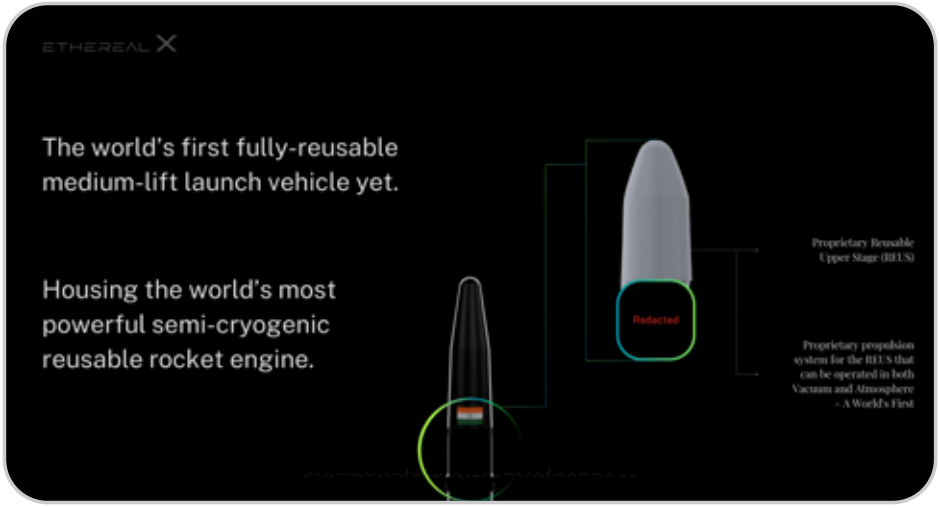
Details of the Key Management

Manu J Nair
Co-Founder and CEO
manu.nair@etherealx.space

Products and Services

The Razor Crest Mk-1





Business Contact

Gautham Mayur N
Founders Office
gauthammayur.n@etherealx.in
hello@etherealx.space
www.etherealx.space

GalaxEye Space Solutions Pvt. Ltd.

Company Profile

GalaxEye Space is a deep-tech Space start-up incubated under the aegis of IIT-Madras and are currently based in Bengaluru, Karnataka. We specialise in developing a constellation of miniaturised, multi-sensor SAR plus EO satellites. Our new age technology enables all-time, all-weather imaging, this with leveraging advanced processing and AI capabilities, we ensure near real-time data delivery and are glad to highlight that we have successfully demonstrated these imaging capabilities, the first of its kind in the world, across various platforms such as drones as well as HAPS (High-Altitude Pseudo Satellites). Recognised with an iDEX award and backed by Seed investments, our dedicated team of 60 (and growing) is thrilled to announce the upcoming launch of our first SAR (X-band) and PAN plus 6 MS-Bands satellite, offering less than 2 m resolution in the year 2025. In partnership with ISRO, Antaris and SSTL, we aim to enhance Earth Observation for Defence and Commercial applications.

Core Business/Domain of Operation

Satellite and Subsystem: EO and SAR payload

Satellite applications: EO Services

Test Facilities and Infrastructure

- 350 Sq ft Payload Assembly, Integration & Testing Facility
- Linear Rail Test Bed for Radar Testing
- Simulation Lab for Mission Design, Structural Design
- Embedded Lab with VNA, Oscilloscopes and Spectrum Analyse

Achievements and Awards

- IDEX - High speed on board data processing for LEO satellites
- Part of Google accelerator programme for AI startups
- Startup Award at Defence Tech Expo TN

Organization Type : Startup

- Year of Incorporation : 2021
- Number of Employees : 60

Details of the Key Management

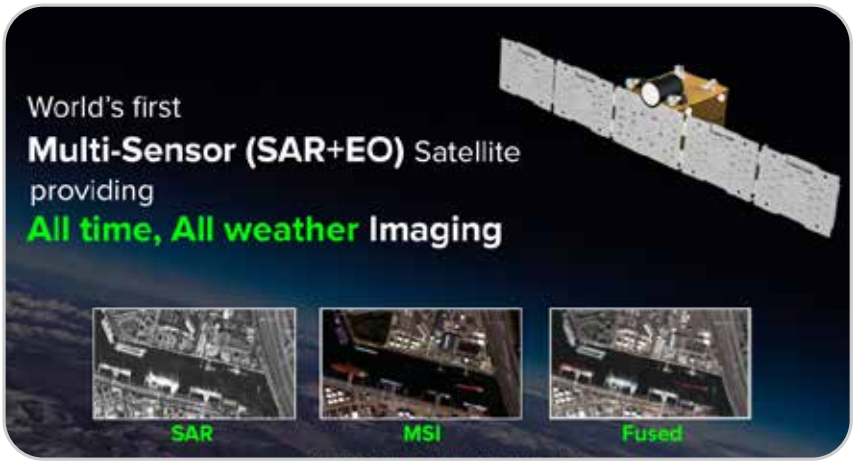
Suyash Singh
CEO
suyash@galaxeye.space

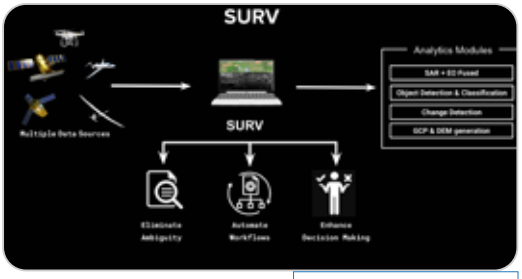
List of Key Customers

- ITC
- Godrej Agrovet
- Devi Seafoods
- DRDO (LRDE)

Products and Services

- Hybrid sensor smart satellite constellation
- Satellite Data Sales
- Galaxeye SURV
- GalaxEye Blue





Business Contact

Dr. Deb Jyoti
Senior VP of Business Development
deb.jyoti@galaxeye.space

https://www.galaxeye.space

Godrej and Boyce Mfg Co. Ltd.

Company Profile

Godrej & Boyce Mfg. Co. Ltd. (G&B), has been driven by engineering excellence and a pioneering spirit since 1897. G&B has contributed significantly to India's economic growth, creating value for stakeholders across 10 industries. From bespoke engineering solutions to consumer goods like appliances and furniture, G&B's diverse portfolio impacts one-third of India's population. With international subsidiaries and joint ventures, G&B's products have established a strong presence across 5 continents, demonstrating its commitment to innovation and sustainability. Godrej Aerospace was established in 1985 with a vision to strengthen India's indigenous space program. We began by developing high-precision components for Indian Space Research Organisation spacecraft. Over the years, we have become an integral contributor to India's successful space missions, including the esteemed Mangalyaan and Chandrayaan projects. Our expertise extends to precision machining, fabrication, welding, and assembly of complex systems. We have successfully developed liquid propulsion engines, satellite components, and dish antennas with feed systems. Godrej Aerospace has executed numerous global aerospace projects, partnering with renowned companies like Honeywell, GE, Rolls-Royce, and Boeing. Our commitment to quality and innovation has earned us a reputation as a trusted Tier One manufacturer in the aerospace industry.

Core Business/Domain of Operation

Satellite and subsystem: Precision Manufacturing

Launch Vehicle and Subsystems: Liquid Engine and Precision Manufacturing

Test Facilities and Infrastructure

- Flow Facility: Max 70 kg per sec flow at 35 bar inlet pressure
- Hydro Test Facility: 1000 bar
- Pneumo test facility: 800 bar
- Helium Leak testing: leak rate detection upto10-8 millibar litre per second

Achievements and Awards

- Suppled more than 175 Vikas engines, 9 Thrust Chambers for CE20 engine, 600 Satellite Thruster Component Sets, 30 Thrust chambers for Cryogenic main engine and 50 Thrust Chambers for Steering Engine
- Supported for Chandrayaan -1, 2, 3; Mangalyaan, Aditya mission by supplying Liquid engines for the launch vehicle, orbiter and lander
- Defence Technology Absorption Award
- CII-Exim Bank -EFQM Business Excellence Award in the year 2020, 2021, 2022, 2023, 2024

Organization Type : Large Enterprises

- Year of Incorporation : 1932
- Number of Employees : 14600

Details of the Key Management

Maneck Behramkamdin
Executive Vice President and Business Head
meb@godrej.com

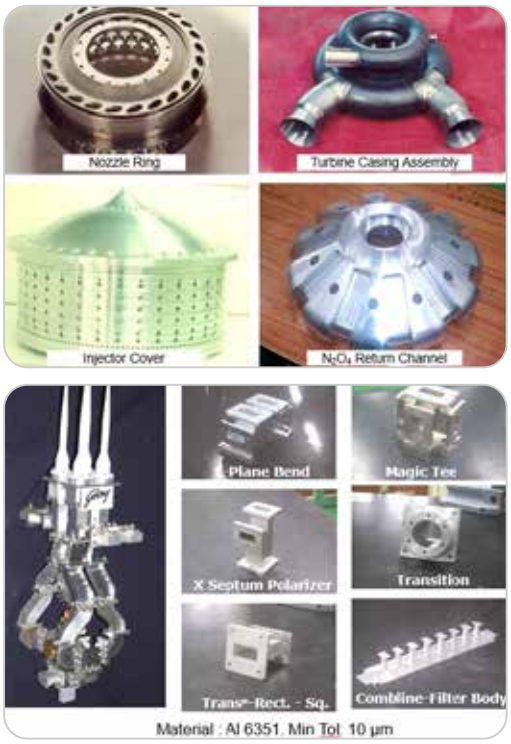
- Platinum Award from Quality Council of India
- TPM Champions Award
- CII Greenco Award 2019, 2024

List of Key Customers

- ISRO(LPSC, NRSC), Honeywell, GE, Rolls-Royce, and Boeing

Products and Services

- Liquid propulsion engines: Built to Print Vikas engine, Thrust Chamber for Cryogenic Engine, Semi-Cryogenic Engine, Satellite Thrusters, Full motion Antenna



Business Contact

Ramesh Kumar Sankaran
Deputy General Manager
srkn@godrej.com

https://www.godrejenterprises.com/godrej-aerospace

Hindustan Aeronautics Ltd.

Company Profile

Hindustan Aeronautics Limited (HAL) is a premier aeronautical company of South East Asia, with 20 production divisions and 11 R&D centres. HAL is a Navratna Public Sector Undertaking (PSU) functioning under India's Ministry of Defence. HAL's expertise encompasses design, production, repair, overhaul and upgrade of Aircraft, Helicopters, Aero-engines, Accessories, Avionics and Systems. HAL is the largest defence PSU of India and positioned at the 29th place among top 100 global defence companies. The R & D centres and production divisions of HAL are equipped with modern infrastructure for Design, Development and production of fighter aircraft, trainer aircraft, transport aircraft and helicopters (both in utility and combat role). The current workforce of HAL is around 24,000. It has also diversified into manufacture and repair/overhaul of Industrial & Marine Gas Turbine engines and manufacture of structures for Space Vehicles. HAL is a major partner of ISRO for Space programmes (PSLV, GSLV-Mk II/III, Chandrayaan, Mangalyaan, Gaganyaan). It has also diversified into the Industrial & Marine Gas Turbine business. Apart from the platform development, HAL also undertakes indigenisation of various high value systems and equipment of foreign origin fitted on HAL platforms to reduce dependence on imports and manage obsolescence, thus fostering self-reliance. HAL also extends the support for maintenance of aircraft & helicopters directly procured & used by defence services i.e., AN-32, Mirage-2000, UAV etc.

Core Business/Domain of Operation

Launch Vehicle and subsystems: Launch Vehicle Manufacturing

Satellite and Subsystems: Satellite structures

Test Facilities and Infrastructure

https://hal-india.co.in/hals-test-facilities-for-private-sectors

Achievements and Awards

https://hal-india.co.in/media-details/honble-vice-president-of-india-confers-outstanding-psu-of-the-year-award-on-hal%2F

Organization Type : PSU

- Year of Incorporation : 1940
- Number of Employees : 24457

Details of the Key Management

Dr. D. K. Sunil
Chairman and Managing Director
cmd@hal-india.co.in

List of Key Customers

- ISRO, NSIL, Indian Armed forces, Indian Coast Guard

Products and Services

- Aerospace Division (ASD): Launch Vehicles Sub-systems for PSLV, GSLV, LVM3, Gaganyaan
- Foundry and Forge: Castings, forging and rolled rings
- Aerospace Composite Division (ACD): Composite panels for payload fairing and Satellite Bus structures

Business Contact

Mr. Balaji N
General Manager
gm.aerospace@hal-india.co.in

https://hal-india.co.in

INOX Air Products

Company Profile

INOX Air Products is the largest manufacturer of Industrial & Medical Gases in India. The company offers a unique portfolio of gases, equipment and services through a massive manufacturing capacity of 4500 TPD of liquid gases delivered from 48 operating locations. INOXAP continues to play a crucial role in supporting the Indian Space Industry through the supply of cryogenic and specialty gases such as Oxygen, Nitrogen, Argon, and Helium, among others. Besides supplies of critical gases, INOXAP also offers critical expertise in areas like Space Launches: Reliable liquid oxygen and hydrogen supply for engine testing and launch, In-Space Propulsion: Rare gases (xenon, krypton) for electric propulsion, Manufacturing spacecraft components: Gases for 3D printing and carbon-fiber composites, Component Testing: Thermal vacuum chambers with liquid nitrogen and helium, Engine Testing & Launch fuels: Flexible supply of liquid oxygen and hydrogen.
With our extensive network of operations, INOX Air Products empowers more than 1800 small, medium and large manufacturing organizations across dozens of sectors, enabling and empowering them on their way to achieve their vision. We take pride in our 1400 strong workforce, working tirelessly across the country, unleashing the virtues of integrity and innovativeness, well complemented by their ready-to-serve spirit.

Core Business/Domain of Operation

Ground systems and Auxiliary Services: Industrial Gases

Test Facilities and Infrastructure

- Production and supply facilities for cryogenic gases, i.e. nitrogen, argon, oxygen, specialty gases i.e. helium, hydrogen

Achievements and Awards

- Contributed to the Aditya L1 and Chandrayaan-3 missions, and appreciated by URSC, ISRO
- Leading manufacturer of Industrial & Medical Gases in India

List of Key Customers

- ISRO, Industries (Healthcare, Oil and Gas, Automobile, Engineering, F&B), PSU

Organization Type : Large Enterprises

- Year of Incorporation : 1963
- Number of Employees : >1400

Details of the Key Management

Siddharth Jain
Promoter and Managing Director
info@inoxap.com

Products and Services

- Industrial Gases (Oxygen, Nitrogen, Argon, Hydrogen)
- Speciality Gases (Silane, Ammonia, R-116, R-14, SF6, Helium, Methane, Calibration Gas Mixtures)
- Rare Gases Neon, Xenon, Krypton, Mixtures
- Medical Gases (Medical Oxygen, Nitrous Oxide)

Business Contact

Diganta Sarma
Regional Business Head - South
diganta.sarma@inoxap.com

www.inoxairproducts.com

InspeCity Space Labs

Company Profile

InspeCity, a NewSpace company based in Thane, India, was founded in 2022 by a professor-student duo from IIT Bombay, along with an industry veteran with a background in international space companies. With a vision to develop a space city and pioneer the ISAM (In-Space Assembly and Manufacturing) segment, the company offers cutting-edge products and services for satellite propulsion, in-space servicing, and space debris management. InspeCity is the first winner of the Indian Government's IDEX challenge for its cubesat propulsion and has established international partnerships for further development. The team, composed of 30 specialists with deep academic and industry expertise, is driving the company's mission forward.

Core Business/Domain of Operation

Satellite and Subsystems: Propulsion systems, Inorbit servicing

Test Facilities and Infrastructure

- Microgravity Test Bed

Achievements and Awards

- First company to win iDEX challenge for the Cubesat Propulsion System
- Showcased Robotic Arm at National Space Day celebrations at DRDO HQ
- Propulsion system (Spacegrade) built in record 3 months from start to integration to PSLV for testing
- Entrepreneur India Magazine: Spacetech startup of the year 2023
- Taiwan Accelerator Plus Cohort, selected as one of the top 16 Space startups from around the world

List of Key Customers

- Axiom Space, XDLINX Labs, Pixxel

Organization Type : Startup

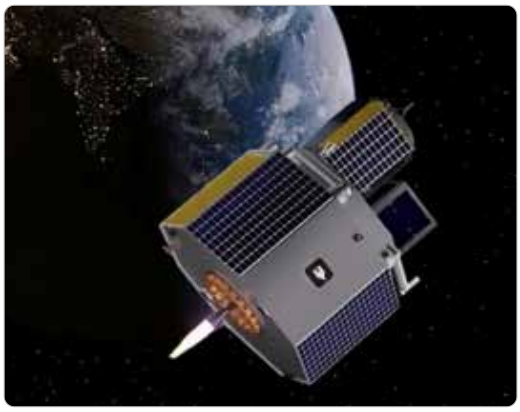
- Year of Incorporation : 2022
- Number of Employees : 30

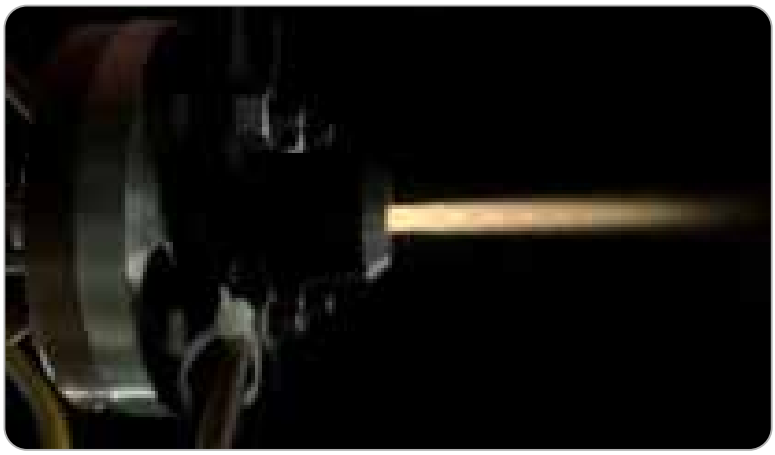
Details of the Key Management

Dr. Tausif Shaikh
CTO
tausif@inspecity.com

Products and Services

- GITA Propulsion System: Green chemical propulsion system
- RAMA: Robotic Arm for Inspace servicing





Business Contact

Dr. Arindrajit Chowdhury
CEO
arindra@inspecity.com

https://www.inspecity.com/

KaleidEO A SatSure Company

Company Profile

SatSure is a leading Earth Observation (EO) data refinery ecosytem, providing analytics-ready products with industry-specific solutions. Leveraging advances in satellite remote sensing, machine learning, and AI, SatSure develops solutions for decision intelligence, addressing challenges in sectors like BFSI, agriculture, aviation, infrastructure, and utilities.

KaleidEO, a subsidiary of SatSure, is a space tech company that operates as an architect of the Earth Observation Infrastructure-as-a-Service (EO-IaaS) model. Through its offerings in hardware, software, and data analytics, KaleidEO aims to maximize the value generated from Earth Observation for the entire value chain.

Core Business/Domain of Operation

Satellite Applications: EO Services
Satellite and Subsystems: EO payload

Test Facilities and Infrastructure

- Simulation Lab For Mission Design, Structural Design
- Embedded and RF Lab with VNA, Oscilloscopes and Spectrum Analyser

Achievements and Awards

- Winner of AAI Startup Initiative,Agriculture Grand Challenge, ADB Ventures Grant Award
- Top 3 in Asia for MIT Inclusive Innovation Challenge
- Best Enabling Fintech, PICUP Fintech Conference and Awards, 2024
- KaleidEO, First Indian spacetech company to demonstrate edge processing in space and demonstrated aerial testing

List of Key Customers

- Banks and Insurance Companies
- TransUnion CIBIL
- Airports Authority of India
- ReOrbit, Reliance General Insurance
- Rabo Partnerships
- Government of Telangana

Organization Type : Startup

- Year of Incorporation : 2017
- Number of Employees : 150

Details of the Key Management

Prateep Basu
CEO and Co-Founder, SatSure
prateep@satsure.co

Products and Services

- Agriculture: Insurance Risk, Market Potential, Estimate, Procurement Planning, Crop Damage, Assessment
- BFSI: SatSource, SatCollect, Farm Leads, Climate Crop Riskage
- Infra and Utilites: Route Optimisation, RoW Monitoring, Vegetation Management, Damage Assessment, Energy
- Aviation: AIXM, eTOD, AMDB, eAIP, AUP, eCharting, FPD Tool

Business Contact

Arpan Sahoo
COO, and Co-Founder
arpan@kaleideo.co

https:www.satsure.co
https://kaleideo.co/

Keltron

KELTRON
A Government of Kerala Undertaking

Company Profile

Over the years KELTRON pioneered new concepts in industry and management, and created many products for the first time in the country. KELTRON has not only changed the industrial profile of the State but has even transformed the lifestyles of its people. Today, KELTRON products remain as icons of technology brought to benefit the people. As diverse as its products and their uses are, they are unified by its pivotal strength as a solutions provider. Continuing in its quest to bring the benefits of frontier technology to its customers, KELTRON has forged strategic alliances with world leaders in the trade. It's focus today is in adapting technology to fulfil the needs of customers and to emerge as a provider of better solutions for the future. Keltron is a technology driven enterprise that manufacturers and markets electronic components, equipment and systems for communications, defence, industrial and home applications.

Core Business/Domain of Operation

Satellite and Subsystems: Avionics manufacturing

Launch Vehicle and Subsystems: Avionics manufacturing

Ground systems and allied Services: Marine Systems

Test Facilities and Infrastructure

- Environmental / Climatic Chambers, Hot and Cold Chamber, Vibration facility
- 1 Lakh clean room for the production of satellite and space packages
- ISRO accredited SMT Reflow facility
- Soldering Academy for Avionics Fabrication Facility - High Reliability Soldering, Interconnection and electronics fabrication techniques
- Production facility for various sensors and transducers used for Launch Vehicles

Achievements and Awards

- Contributed towards development of Satellite Launch Vehicles, i.e. SSLV, PSLV, GSLV, ASLV
- Partnered on LVM3 / GSLV Mark III missions
- Avionics and Interface packages provided for the CHANDRAYAAN, and Aditya-L1 Mission
- CERT- Empaneled Information Security Auditing
- Software division has been appraised to CMMI Maturity Level 3

Organization Type : PSU

- Year of Incorporation : 1972
- Number of Employees : 1245

Details of the Key Management

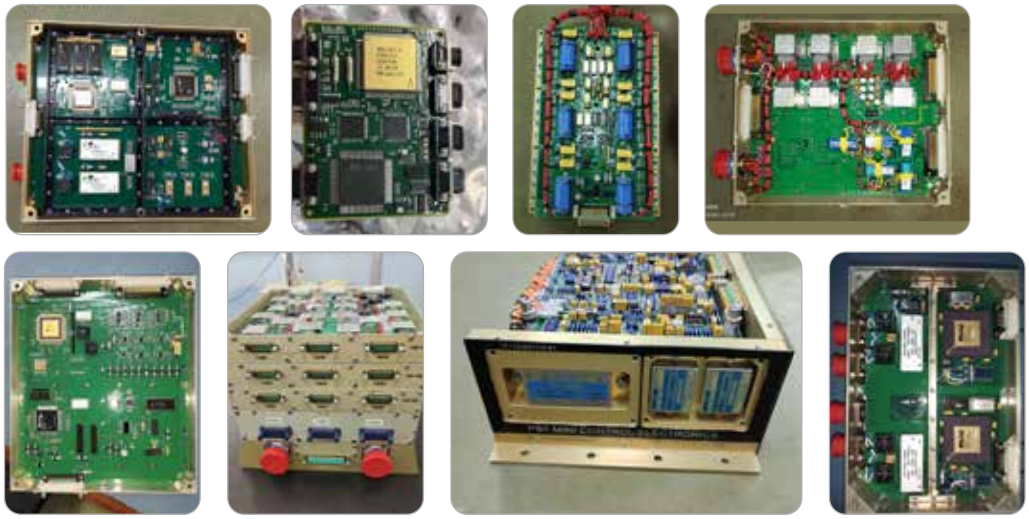
N. Narayanamoorthy
Chairman
chairman@keltron.org

List of Key Customers

- ISRO (VSSC, LPSC, MVIT, IISU, IPRC), DRDO, BHEL, DPSU, Indian Navy and Shipyards, NPCIL, NTPC, L&T

Products and Services

- Avionics Packages, Interface Packages, NGC, TTCP, Power packages



Business Contact

Sreekumar Nair
Managing Director
md@keltron.org

www.keltron.org

Kepler Aerospace

Company Profile

Kepler Aerospace, founded in 2018, is a Bangalore-based startup focused on developing and manufacturing small satellite configurations and defense systems. The company collaborates closely with premier organizations like ISRO and DRDO, offering a range of space-tech products, including onboard computers, satellite positioning sensors, and power modules. Kepler Aerospace is known for its AS9100 Rev D certification and ISRO PAX-300 workmanship standards, reflecting its commitment to high-quality and reliable products. The startup's vision aligns with India's "Make in India" initiative, emphasizing innovation, skill development, and intellectual property generation. With a bootstrapped foundation, Kepler has received significant grants from the Indian Ministry of Defense, supporting its mission to contribute to India's defense and space technology landscape.

Core Business/Domain of Operation

Satellite and Subsystems: Satellite Manufacturer

Ground systems and allied Services: Communication systems

Test Facilities and Infrastructure

Class 10,000 Clean Room, RF R&D lab, Solar Simulator setup for photovoltaic testing, Battery Lab, Thermal Chamber

Achievements and Awards

- Design and implementation of DEBEL/DRDO/ISRO Human Spaceflight programme Astronaut Health Monitoring Avionics system
- Design and implement long range encrypted HF TTC system for Abhyas Drone
- Developed indigenous IRNSS-based GNSS solution for DRDO Drone swarms, LCA Naval Tejas Datalink, GNSS Receivers for CubeSats
- Grant Received from Defence Space Agency and Ministry of Défense
- Ground station support using proprietary transceivers and network software from overseas ground stations

List of Key Customers

- ISRO, DRDO, ADE, ITCA

Organization Type : Startup

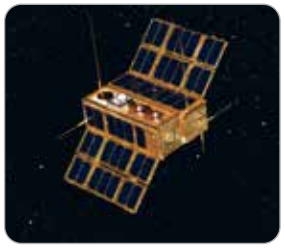
- Year of Incorporation : 2018
- Number of Employees : 03

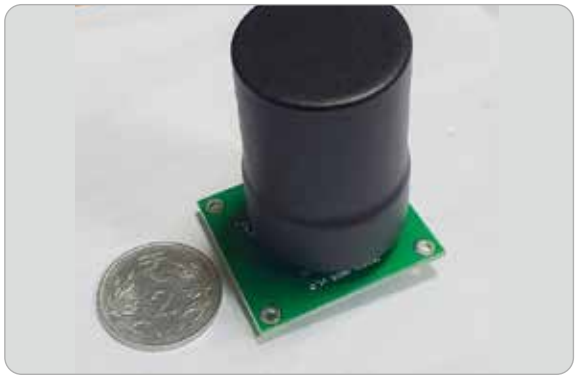
Details of the Key Management

Navneet Singh
Chief Executive Officer
ceo@kepleraero.com

Products and Services

- Satcom Transceiver compatible with wideband frequency hopping transceivers SATCOM ground segment
- Micro-Spacegrade GNSS for smallsats applications
- 3U and 16U Satellite for EW Application
- Onboard computers
- Satellite positioning sensors
- SDR-based transceivers
- Long Range Encrypted UHF TTC
- Kepler United Satellite Command Center
- GNSS Jammer





Business Contact

Kiran Sharma
Founder and CSO
bdo@kepleraero.com

www.kepleraero.space

Lakshmi Machine Works Ltd.

Company Profile

Lakshmi Machine Works established the Advanced Technology Centre (ATC) in 2010 to cater to Aerospace & Defence Industries. ATC is a one stop solution to Aerospace customers manufacturing high complex parts of hard and soft metals. ATC has world class facilities for precision machining, Sheet Metal, Composites, special processes, sub-assemblies and assemblies with Quality Assurance aligned to AS9100 D. NADCAP certification for Composites and special process viz Chemical Process, NDT, Welding and Heat treatment totaling more than 22 special processes. ATC has created a Centre of Excellence for Payload Fairing by manufacturing a variety of Heat Shield to various customers. The metallic facility accommodates 45 CNC machines with 10 5-Axis machines, 4 CMM to manufacture large complex structural & critical engine parts. The composites facility manufactures large structural assemblies & complex engine parts through clean room of 12 Mt height and 600 Sqm, Autoclave size of Dia 4 and 6 Mts in length and 22m high assembly bay of 1870 Sqm area. NDT such as A-Scan & C-scan ensure to provision of high-quality products.

Core Business/Domain of Operation

Launch vehicle and subsystem: Precision Manufacturing

Test Facilities and Infrastructure

- Mechanical testing facility for Material Characterization
- C Scan for Ultrasonic Testing of Composite Parts
- Metallic facility consists of CNC machines with 5-Axis machines, CMM to manufacture large complex structural & critical engine parts
- Composites facility to manufacture large structural assemblies & complex engine parts
- Clean room of 12 Mt height and 600 Sqm
- Autoclave size of Dia 4 and 6 Mts in length
- High assembly bay of 22m height

Achievements and Awards

- Realized successfully 5 Interstage structures for SSLV Program
- First private industry in India to realize and assemble the Payload fairing for GSLV MKIII
- Realized flight heritage EB Shroud - One Web Mission
- Realised payload Adaptor - GSLV F12 and F14 Mission

Organization Type : Medium Enterprises

- Year of Incorporation : 2010
- Number of Employees : 500

Details of the Key Management

Mr. Krishna Kumar N
President
krishnakumar.n@lmw.co.in

List of Key Customers

- **Domestic**: ISRO, DRDO, HAL, Agnikul, Skyroot
- **Foreign**: Boeing, Dassault Aviation, Honeywell, Pratt and Whitney, Collins, Thales Alenia Space, Ariane, GKN- Fokker

Products and Services

Payload Fairing for GSLV MKIII, Payload Adaptor, for GSLV MKII, EB Shroud for GSLV MKIII, Interstage structure for SSLV

Business Contact

Chanabasappa Shirkoli
Deputy General Manager
chana.shirkoli@lmw.co.in

www.lmwatc.com

Larsen and Toubro

Company Profile

India's leading technology, engineering, construction and manufacturing conglomerate – has been closely associated with India's space programme for almost five decades. In collaboration with the Indian Space Research Organisation (ISRO), L&T has successfully realized several systems and sub-systems for launch vehicles and satellites such as rocket motor casings, interstages, nozzles, heat shields, solar array deployment mechanisms and reflector deployment mechanisms. Our manufacturing track record extends to the handling of exotic materials and alloys, including aluminium alloys, nickel alloys, titanium and advanced composites. L&T achieved a significant milestone in consortium with HAL was by winning the contract for industrialisation for 5 PSLVs in 2022.

We have developed and built navigation and exploration systems like 32m wheel and track antenna at Byalalu, PMTR Radar at SDSC SHAR, Sriharikota and Commissioned 22 Ka-Band Ground System Network. L&T has also developed and built critical aerodynamic test facilities for ISRO like hypersonic wind tunnel, shock tunnels – many for the first time in India - and have few precedents worldwide.

Core Business/Domain of Operation

Launch vehicle and subsystems: launch vehicle Manufacturer

Satellite and subsystems: Deployment mechanism

Ground support and Auxiliary services: Ground station establishment

Test Facilities and Infrastructure

- Vibration Test Facilities
- Hydro-pneumatic Test Facilities
- NDT Facilities
- Proof Pressure Testing Facilities
- Anechoic Chamber
- RF testing Facility
- Climatic chambers
- Hardware in loop simulation
- Centrifuge 100 G

Achievements and Awards

- Manufactured more than 350 Rocket motor casings for PSLV and GSLV programmes and several light alloy structures
- Manufactured more than 70% of Crew Escape System in Gaganyaan
- Emerged from subsystems to a system integrator
- Established one-metre hypersonic wind tunnel – one of the world's largest - at the VSSC
- National award for manufacturing competitiveness

Organization Type : Large Enterprise

- Year of Incorporation : 1938
- Number of Employees : 143000

Details of the Key Management

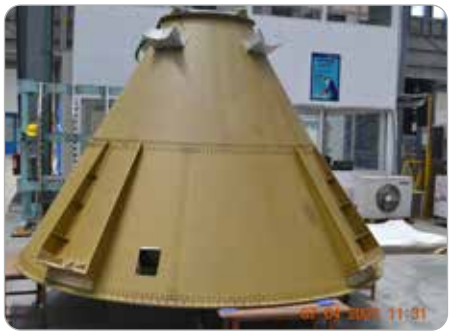
Laxmesh B H
VP & Head Aerospace Systems Business
laxmesh.bh@larsentoubro.com

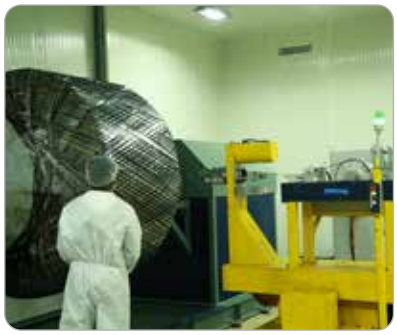
List of Key Customers

- ISRO, HAL, NSIL

Products and Services

- Rocket motor casings, Interstages, Nozzles, Heat shields, Solar array and Reflector deployment mechanisms
- Navigation systems and exploration systems, satcom infrastructure, ground testing stations for ISRO thirty meter telescope
- Avionics for Lunar Exploration, Multi Element Integrated Testing, Regenerative Hydrogen Fuel Cell – Lunar Night Survival & Cloud based Mission Control Systems.





Business Contact

Shri Raghavendra BM
Sr DGM –Marketing and Business Development
bm.raghavendra@larsentoubro.com

www.larsentoubro.com

mistEO

Company Profile

mistEO is a climate fintech company helping our customers with adaptation expertise to mitigate the financial impacts of climate change. We are on a mission to build a climate-resilient future for businesses, communities, and governments with innovative solutions that navigate the challenges of a changing climate.

Core Business/Domain of Operation

Satellite Application: EO Services and Insurance

Test Facilities and Infrastructure

IT infrastructure for data analytics

Achievements and Awards

- Agritech4Uzbekistan Second Place - Selected to deploy Parametric Insurance in Central Asia
- Top 15 Sustainable Finance Solutions at COP 28, Dubai
- Winner - Insurance Category. INDIA FINTECH AWARDS, Year: 2021
- IN-SPACe Seed fund Grantee, Year: 2024

List of Key Customers

- United Nations Development Program
- National Bank of Agriculture and Rural Development (NABARD)

Organization Type : Startup

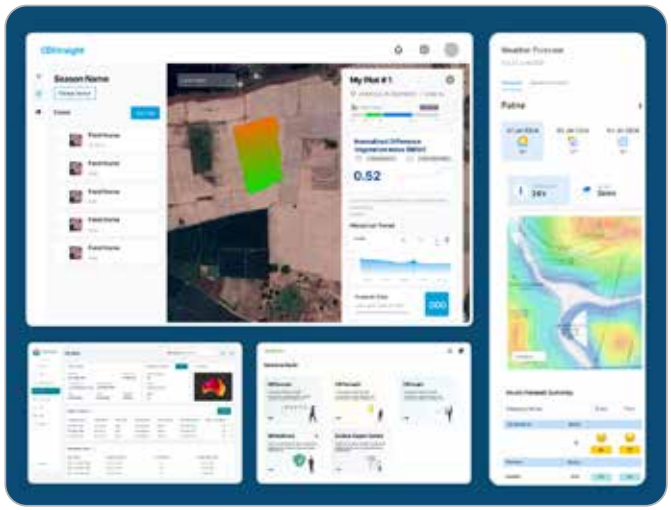
- Year of Incorporation : 2017
- Number of Employees : 17

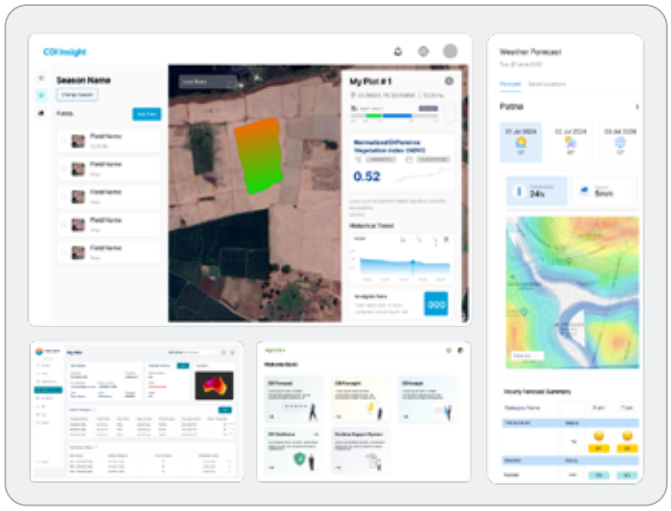
Details of the Key Management

Samuel John
Founder
samuel@misteo.co

Products and Services

Agrilytics: Platform aimed at enhancing climate-resilient agriculture





Business Contact

Samuel John
Founder
samuel@misteo.co

info@misteo.co
www.misteo.co

PierSight Space

Company Profile

Oceans cover 70% of the Earth's surface area. Yet, we have very limited visibility of what happens out there causing significant challenges to various entities. Governments are tasked with protecting their Exclusive Economic Zones (EEZs), ensuring national security, and addressing issues like illegal fishing and oil spills. Shipping companies navigate international waters, contending with threats such as piracy and attacks, while striving to optimize operations. For insurance firms and hedge funds, the lack of easily accessible, reliable data complicates decision-making. Currently, the industry relies heavily on Automatic Identification System (AIS) data, which is vulnerable to being turned off or spoofed, leading to a critical visibility gap. This lack of persistent satellite monitoring underscores the industry's vulnerability. PierSight is positioned to address this gap, with the SAR market alone valued at $6 billion. The Total Addressable Market (TAM) for ocean surveillance is even larger, with the naval intelligence market at $16 billion and the Coast Guard market at $5 billion. These figures demonstrate the vast potential for PierSight in revolutionizing maritime security and surveillance through advanced technology and comprehensive ocean monitoring.

Core Business/Domain of Operation

- Satellite Applications: Maritime EO Services
- Satellite and Subsystems: SAR satellite Constellation

Achievements and Awards

- Designed, Developed and Tested First Satellite Payload with SAR & AIS sensors
- Designed and developed India's first deployable flat panel reflect array antenna
- LOIs for our data from world's biggest organizations working in Maritime sector
- Won first India-US Defence Challenge(INDUS-X) for Maritime ISR (Oil Spill Detection)
- Special Prize in Ocean Pitch Challenge
- Special Prize in AI for the Oceans Award- Hamburg

List of Key Customers

- Coastguards, Governments and Navy, Insurance Companies, Hedge Funds, NGOs, Intelligence Community

Organization Type : Startup

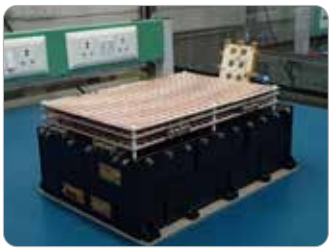
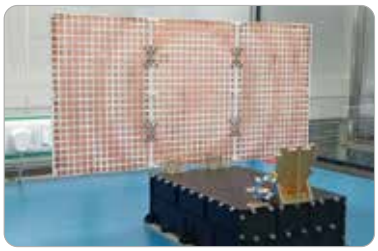
- Year of Incorporation : 2023
- Number of Employees : 25

Details of the Key Management

Gaurav Seth
CEO
gaurav@piersight.space

Products and Services

- A constellation of 32 SAR & AIS satellites for Persistent Ocean Surveillance
- Synthetic Aperture Radar and AIS Data for Vessel Tracking and Classification
- Maritime Monitoring Solutions: (software)
- Database of all vessels in ocean semantically labelled for human language queries which would be useful for the various use cases

Business Contact

Vinit Kumar Bansal
CTO
vinit@piersight.space
info@piersight.space

https://piersight.space/

Pixxel

Company Profile

Pixxel is a space technology company based out of Bengaluru experienced in the domain of building cutting-edge small satellites and constellations. Pixxel has three operational hyperspectral imaging satellites in space that regularly beam down high-resolution high-quality hyperspectral images. A leader in designing, manufacturing and operating electro-optical payloads and satellites, Pixxel is the first and the only Indian company ever to launch and operate its own commercial imaging satellites. Pixxel has the in-house capability to design, build and integrate high performing imaging satellites in multiple compact small-satellite configurations in a short span of time depending on the resolution and type of remote sensing data that needs to be captured.

Core Business/Domain of Operation

Satellite and subsystems: Satellite Manufacturing
Satellite Applications: EO Hyperspectral data

Test Facilities and Infrastructure

MegaPixxel - Pixxel's In-house Satellite Manufacturing Facility

Awards and Achievements

- Successfully launched and operated 3 demo hyperspectral satellites of 10-30 meter spatial resolution
- Raised ~290 Crores INR in its four years of existence for the manufacturing of Pixxel's own hyperspectral imaging satellites
- Selected as the winner of IDEX DefSpace Prime challenge for a miniaturised multi-payload modular satellite for the IAF
- Inaugurated MegaPixxel, a 30,000 sq ft Spacecraft Assembly, Integration, and Testing (AIT) facility
- Awarded a contract by IDEX under the DefSpace Prime challenge to develop a miniaturised multi-payload modular satellite for the IAF

List of Key Customers

- 50+ customers across industries, including the global mining company Rio Tinto and the Agritech company DataFarming
- 90+ resellers across all major geographies

Organization Type : Startup

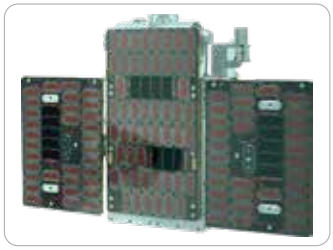
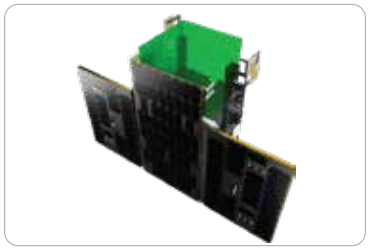
- Year of Incorporation : 2018
- Number of Employees : 200

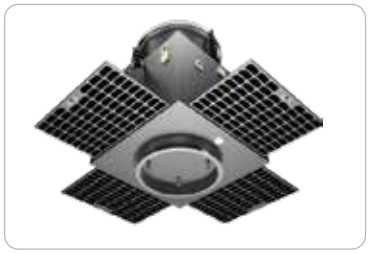
Details of the Key Management

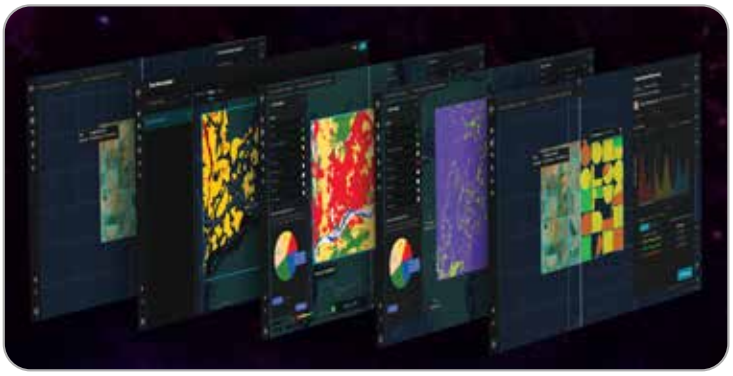
Awais Ahmed
Director
awais@pixxel.co.in

Products and Services

- Satellite Missions: Payload and Satellite Platform Off-the-Shelf Offerings
- Hyperspectral Data: Aurora- EO Studio





Business Contact

Kshitij Khandelwal
Director
kshitij@pixxel.co.in

www.pixxel.space

Premier Explosives Ltd.

Company Profile

Premier Explosives Limited(PEL) is a company established in 1980. Since inception it has been a research and innovation oriented company by manufacturing explosives and detonators with totally indigenous technology. In 2013 PEL started commercial-scale manufacture of detonators with Nickel Hydrazine Nitrate as primary charge. Extending its research forte to defense products, in 2003 PEL forayed into development of solid propellants and today it is the major private entity in India manufacturing and supplying solid propellants for prestigious missiles like Akash, Astra, LRSAM, etc. and rocket motors for satellite launch vehicles. PEL is also producing all types of initiators, pyro devices and pyrogen igniters. PELs R and D facility is recognized by the Department of Scientific and Industrial Research, Government of India, as an established research center. PEL laboratory is accredited by the National Accreditation Board for Testing and Calibration Laboratories NABL.

Core Business/Domain of Operation

Launch vehicle and subsystem: Propulsion and Separation Systems

Test Facilities and Infrastructure

- NDT and UTM for Solid Rocket Motors
- Strand Burner
- Particle Size Analyzer
- Karl Fisher
- Climate Controlled Conditioning Chamber
- Static Test Bed
- Brookfield Viscometer

Achievements and Awards

- Development of Low smoke propellant composition for LRSAM, MRSAM, QRSAM, ASTRA etc.,
- Establishing production facility and supplying of PSOM-XL Rocket motors
- 1st company in the world to produce safer and greener NHN detonators
- 1st company in India to manufacture explosives and detonating fuses with completely indigenous technology
- Best Greenery Development Award from Andhra Pradesh Pollution Control Board for the years 2004,2005,2006 and 2007
- Best Technology development for R&D achievements award from FAPCCI
- Best R&D Effort award from AIMO
- Defense technology absorption award by DRDO
- Industry Appreciation award by NSTL
- Innovative 100 for Plant Scale Manufacture of NHN Detonators award from INC

Organization Type : Medium Enterprises

- Year of Incorporation : 1980
- Number of Employees : 1100

Details of the Key Management

A N Gupta
Chairman
ang@pelgel.com

List of Key Customers

- ISRO, DRDO, Indian Armed forces

Products and Services

- Strap on motor for satellite launch vehicle
- Pyrotechnic Igniters
- Smoke Markers
- GAN PELLETS
- Solid propellant casting of solid rocket motors
- Gas generators
- High explosive charges

Business Contact

T V Chowdary
Managing Director
tvc@pelgel.com

www.pelgel.com

Saankhya labs pvt. Ltd.

Company Profile

Saankhya Labs, Subsidiary of Tejas Network Limited designed and developed a full spectrum of next-gen communication solutions for the present and the future. Established in 2006, Saankhya Labs is India's first fabless semiconductor solutions company. With over 70 patents and many awards to its credit, Saankhya Labs provides accessible and future ready communication solutions that enable connectivity and bridge the digital divide across the world. Saankhya Labs world's first production Software Defined Radios (SDR) chipsets. Our products and solutions are for broadband, satellite and broadcast applications including 5G NR, Direct To Mobile _D2M_ Broadcast, rural broadband connectivity, satellite communication modems for IoT applications and multi-standard DTV modulators and demodulators.

Core Business/Domain of Operation

Ground support and Auxiliary Services: Communication Systems

Test Facilities and Infrastructure

Ground Terminals Test Equipment, with RF test equipments such as Real Time Spectrum Analyzer RTSA, Arbitrary Signal Generator, Signal Generator, Broadcast Test System

Awards and Achievements

- CII Industrial Innovation Award 2021, Manufacturing Medium Enterprises in year 2021
- Defence Award in 'Gold' Category for Navdoot Vessel Monitoring System Skoch Group in year 2020

List of Key Customers

- ISRO(SAC), NSIL, BEL
- Bharat Electronics Limited
- NewSpace India Limited (NSIL)

Organization Type : Medium Enterprises

- Year of Incorporation : 2006
- Number of Employees : 160

Details of the Key Management

Parag Naik
Managing Director & CEO
parag@saankhyalabs.com

Products and Services

- Navdoot - 2-Way MSS Terminal & Vessel Monitoring System
- Navrail - Locomotive Tracking Terminal
- SAMRAT - S-Band Satellite Phone

Business Contact

Vivek Kimbahune
Executive Vice President - Sales & Business Development
vivek@saankhyalabs.com

www.saankhyalabs.com

Sanghvi aerospace Pvt. Ltd.

Company Profile

Sanghvi aerospace Pvt ltd is an AS9100D and ISO 9001:2015 accredited company. Pioneer and Exclusive Aerospace grade electrical wire and cable manufacturing unit. We possess the Capability to design & develop wires and cables as per customer's need for Space use. We are a recognized vendor to Indian Aviation Industry and its R & D labs / institutions for Airframe wires and cables for defence and Civil Aircraft and Helicopter. Wires & cables manufactured by us have been used in all the Satellites, launch vehicles and interplanetary missions of ISRO like INSAT, IRS, GSAT, COMSAT, EDUSAT, SAR etc. and ASLV, PSLV, GSLV, SSLV etc.

Core Business/Domain of Operation

Satellite and subsystems: Wires and Cables
Launch Vehicles and subsystems: Wires and Cables

Test Facilities and Infrastructure

- In house incoming Raw material test facility, process test facility, acceptance test facility, approval test facility
- Myriad Test facilities for general, mechanical, electrical, environmental and conductivity qualification available
- Manufacturing equipment and processes beginning from conductor to finished multicore Shielded jacketed cables realization

Achievements and Awards

- Contributed to Interplanetary mission like "Chandrayaan" & "Mangal Yaan" (2023)
- Developed electrical wires & cables for Gaganyaan mission
- Award For Outstanding Contribution Towards Indigenisation of Aircraft Cables by Society of Aerospace Industries And Technologies
- Design & Development of Air-Frame Wire & Cable By Center For Military Aircraft of Indian Aviation Industry
- Certificate for Best Quality Supplier By HAL in 2013 and BEL in 2015

Organization Type : Small Enterprises

- Year of Incorporation : 1992
- Number of Employees : >80

Details of the Key Management

Bhushan Sanghvi
Managing Director
bhushan@sanghviaerospace.com

List of Key Customers

- ISRO (SAC, URSC, VSCC, HSFC, LPSC, PRL), IIAP, Skyroot Aerospace, Centum, Amphenol

Products and Services

- Polyimide (Kapton(R)) Insulated Wire
- Polyimide and PTFE (Hybrid) Insulated Wire
- Fire Resistant, Flight Critical wires
- Cables and Harness of specified Wires
- Thermocouple Extension Cable
- Aromatic Polyimide Lacquered "Magnet Wire"
- Russian Wires & Cables
- DOLN Type cable

Business Contact

Ketan Sanghvi
Director
ketan@sanghviaerospace.com

sales@sanghviaerospace.com
www.sanghviaerospace.com

Skyroot Aerospace

Company Profile

Skyroot is a pioneer in Indian space-tech, Opening Space for All with our precision-engineered 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.

Core Business/Domain of Operation

Launch Vehicle and Subsystems: Launch Services

Test Facilities and Infrastructure

- State-of-the-art facilities spread over 250,000 square feet
- Pressure chamber for flex seal qualification,
- Trial actuation setup for flex nozzle qualification
- 3-axis rate table for testing
- Environmental testing lab
- Liquid, and cryogenic engine test setup,
- Laser tracker for measurements
- Filament winding machine for composite rocket motor casing
- Class ISO 7&8 Clean Room
- Fiber cutting machine
- Autoclave and oven for curing composite structures
- Rubber roll mill for thermal insulation material manufacturing
- Avionics testing in ESD labs
- Test stands for hot firing of 3D-printed components

Achievements and Awards

- Scaled to a team of over 300 talented space professionals
- Established 5 state-of-the-art manufacturing facilities spread
- Secured approximately $100 million in funding, the largest capital raise for any Indian space startup to date
- Awarded Technology Startup Award 2022
- National Startup Award 2020

Organization Type : Startup

- Year of Incorporation : 2018
- Number of Employees : >300

Details of the Key Management

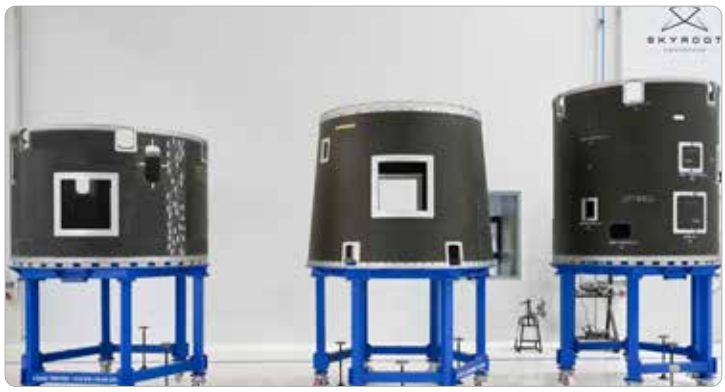
Pawan Kumar Chandana
Co-Founder and CEO
pawan@skyroot.in

List of Key Customers

- Satellite manufacturers with high frequency launch services

Products and Services

- Stage-1 CRMC, 3D printed liquid/cryogenic engines, interstage structures, avionics modules



Business Contact

Sireesh Pallikonda
VP, Business Development Launch Services.
sireesh@skyroot.in

https://skyroot.in/

SkyServe (Hyspace Technologies Pvt. Ltd.)

Company Profile

SkyServe is an AI & edge computing technology company for satellite and airborne platforms, allowing analytics providers and core industries to deploy applications for earth observation and other space-based solutions onboard these platforms for rapid and real-time insights. SkyServe's expertise lies in making conventional space-based assets smarter by enabling them with AI-powered onboard data processing capabilities, paving a path for sustainable space operations and further downstream value chains. SkyServe has built an ecosystem of products for earth observation, which empowers the stakeholders including satellite operators, geospatial developers and end-users for seamless integration of systems and adaption of the technologies.

Core Business/Domain of Operation

Satellite Application: EO Services, Edge Computing

Test Facilities and Infrastructure

- Dedicated edge computing and AI lab: 100sq.ft temperature and humidity-controlled lab with GPUs and Servers with UPS support, hosts flight-qualified hardware
- Testing Hardware & Rigs, including carrier cards, engineering models, and voltage meters

Achievements and Awards

- ESA PhiSat-2 #OrbitalAI Challenge Winners
- "Startup of the Year" award by Geospatial World at Geospatial ArthaSubmit 2024
- Geoawesomenes "Global Top 100 Geospatial Companies" 2024 edition
- 14th Annual Aegis Graham Bell Awards, Top3- Innovation in AI
- Executed maiden mission, Mission Matterhorn deploying SkyServe STORM onboard D-Orbit's ION SCV-OO4 in April 2024

Organization Type : Startup

- Year of Incorporation : 2020
- Number of Employees : 25

Details of the Key Management

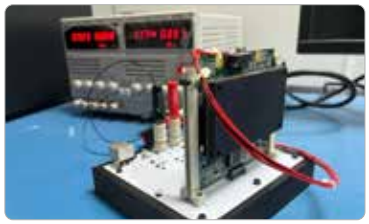
Vinay Simha
Chief Product Officer
vinay@skyserve.ai

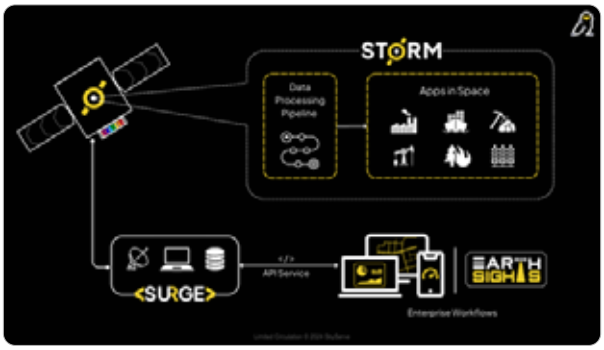
List of Key Customers

- ISRO
- NASA JPL
- Indian Defense
- D-Orbit
- Loft Orbital
- SatRev
- SatSure
- Vasundharaa

Products and Services

- **STORM**: Sensor-agnostic edge computing platform
- **SURGE**: A software suite, acting like a simulated environment of STORM
- **EarthSights**: An interactive dashboard to visualise satellite-based insights





Business Contact

Goutam Naik
Founder's Office Executive
goutam@skyserve.ai
partner@skyserve.ai

skyserve.ai

Space Kidz India

Company Profile

Space Kidz India specializes in designing, building, and launching various aerospace components, including satellites and spacecraft. The company focuses on creating innovative satellite solutions for various purposes, such as research, communication, and Earth observation. Space Kidz India is committed to promoting space exploration and inspiring the next generation of scientists and engineers. They offer educational programs, workshops, and camps to engage students in hands-on space projects. The company is actively involved in conducting research and exploring new frontiers in space exploration. We have achieved significant milestones, including collaborating with NASA on the KALAMSAT project.

Core Business/Domain of Operation

Satellite and Subsystem: Satellite design and manufacturer

Space education and exploration

Test Facilities and Infrastructure

- Space hardware Manufacturing facility of 10k Sq Ft
- Shared clean room for satellite integration and testing
- RF test equipment

Achievements and Awards

- Launched satellites by high school students
- Developed and launched Balloon Satellites
- Conducted all-girls space missions
- Committed to education and outreach to inspire and train the next generation for space exploration

List of Key Customers

- Indian and Foreign Universities &Schools
- State Government Departments

Organization Type : Startup

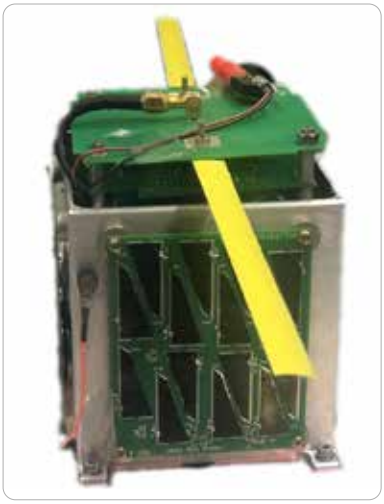
- Year of Incorporation : 2016
- Number of Employees : 12

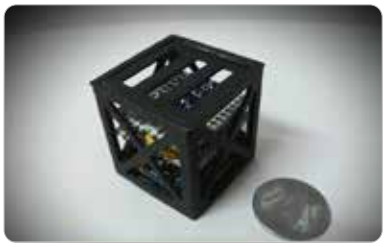
Details of the Key Management

Dr. Srimathy Kesan
CEO
spacekidzindia@gmail.com

Products and Services

- **Satellite Development:**
  - Balloon satellites
  - Student satellites
- **Space Education and Outreach:**
  - STEM workshops and camps
  - Online courses
  - Space exploration and research





Business Contact

Dr. Srimathy Kesan
CEO
spacekidzindia@gmail.com
www.spacekidzindia.in

Tata Advanced Systems Ltd.

TATA
TATA ADVANCED SYSTEMS

Company Profile

Tata Advanced Systems Ltd. (TASL) is one of the leading private players for aerospace and defence platforms in India. With the requisite capabilities, resources and scale, TASL 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. TASLs full range of solutions includes: Space Solutions- EO Satellites, Tasking, Scheduling, Imagery products, Advanced data processing, Data Analytics AI ML, Data Dissemination, Satellite Mission control center. In addition to these TASL has solutions for Aerostructures and Aeroengines, Airborne Platforms and Systems, Land Mobility Solutions, Weapons, Sensors and C4I Solutions, Physical and Cyber Security Solutions.

Core Business/Domain of Operation

- Launch vehicle and subsystems: Structural and mechanical systems
- Satellite and subsystems: Manufacturing Services
- Ground support and Auxiliary services; Mission services
- Satellite applications: EO Services

Test Facilities and Infrastructure

- EMI/EMC, Dynamic and Climatic Test facility
- Cyclic Salt Corrosion test facility
- Electro Dynamic Test System
- AIT with Clean room 10k and 1L Class
- Optical Collimator Setup with pneumatic optical bench
- Centre Of Gravity Measurement Machine
- Multi-sensor Electo-Optical Test Systems
- CFRP and metallic fabrication facility
- Electro-chemical process, thermal painting facility
- Machine shop CNC / Drilling / milling/ Lathe/engraving/welding etc

Achievements and Awards

- "TSAT-1A" Earth Observation satellite launched by TASL on 7th Apr'24
- SIDM Champion Award for HMV 12x12 Vehicle & ALS 50 (Loitering Munition)
- "Raksha Mantri Award in Innovation" for ALS 50 (Loitering Munition) in 2022
- "Boeing Supplier of the Year 2022"
- "Project of the Year" for Medical Oxygen Plant on a Global Level from Project Mgmt. Institute in 2022

Organization Type : Large Enterprises

- Year of Incorporation : 2006
- Number of Employees : >10000

Details of the Key Management

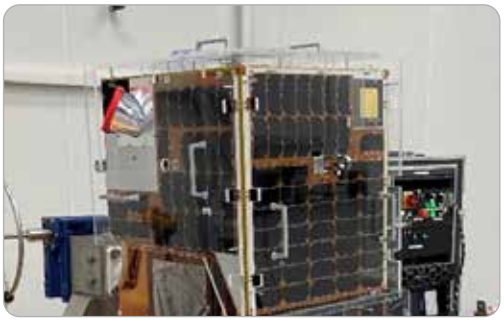
Mr Sukaran Singh
CEO and MD TASL
ssingh@tata.com

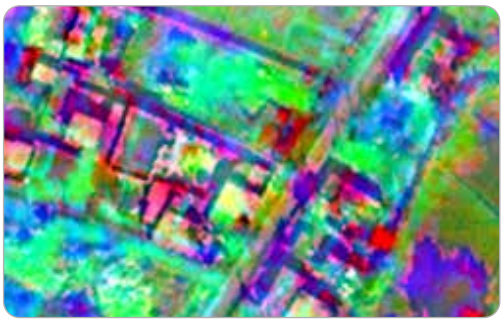
List of Key Customers

- ISRO(URSC), MoD, MHA, Boeing, Lockheed Martin, GE, Airbus

Products and Services

- Satellite - Assembly Integration and Testing
- Optical satellite Imager and products
- Hyperspectral Imager Satellite and Products
- SATCOM Ground Stations -Mobile and Static HUB Stations
- Software applications and development
- Satellite Mission Control Centre





Business Contact

Rakesh Bhan
Technical Head and VP Space
satellite@tataadvancedsystems.com

https://www.tataadvancedsystems.com/

Tathya.Earth

Company Profile

Tathya.Earth is building an AI powered commodity market intelligence platform enabling efficiency in commodity procurement, trading, demand planning, hedging and shipping of commodities. They are primarily focused on the metals and mining i.e. Iron ore, Steel, Coal, Copper, Zinc and Aluminium. Tathya leverages various alternative data sets like Satellite images, Vessel AIS signals along with traditional data like news, weather , company declared reports data and proprietary ground level information to monitor the important nodes of the commodity supply chain i.e.Industrial units such as steel mills and smelters, Mines and Ports. Tathya's products cater to the various stakeholders in the commodity value chain such as traders, miners, metal producers, financial institutes, shipping companies and downstream companies who buy commodities by providing real-time economic and environmental insights on the various important assets of the commodity supply chain.

Core Business/Domain of Operation

Satellite Application: EO Services (commodity market)

Test Facilities and Infrastructure

- IT infrastructure for data analytics

Achievements and Awards

- MOU with InSpace, ABG Group, Dow Jones

List of Key Customers

- Mitsubishi, Cargill, ArcelorMittal, TataSteel, Vale, Balyasny, BNP Paribas

Organization Type : Startup

- Year of Incorporation : 2019
- Number of Employees : 8

Details of the Key Management

Naresh Palaiya,
CTO
naresh@tathya.earth

Products and Services

- Product sets for monitoring the important nodes of supply chain of commodities i.e. Mines, Ports, Industrial Units(Steel plant, Zinc smelters).

Business Contact

Gujan Thakuria
CEO
hello@tathya.earth

https://tathya.earth/

Walchandnagar Industries Ltd.

Company Profile

Walchandnagar Industries Ltd (WIL) is a Heavy Engineering Company with 115 years of engineering excellence and high-tech manufacturing. WIL has played an indispensable role in numerous programs of national significance in Indian Space Programs, Missile programs, and Strategic Platforms for Defense and Nuclear Power plants. WIL also has a presence in Industrial Products like Gears, Centrifugal, Castings, Gauges, Oil and Gas, Railways, and specialized products for Crushing and Grinding Solutions and Process Equipment. WIL is a trusted partner for various strategic and critical components of ISRO, contributing to all space programs since SLV to ASLV, PSLV, GSLV MKI & MKII,LVMIII, including missions like Chandrayaan 1, 2, and 3, Mangalyaan, Aditya L1, and the upcoming Gaganyaan Mission. In 2022, WIL expanded its DAM component manufacturing business with an exclusive facility for composites namely Walchand Sun Advanced Composites Private Limited, in Hyderabad. This state-of-the-art facility is equipped to manufacture structural composite parts, sub-assemblies, and assemblies for Aerospace and Defense applications.

WIL also offers various other hardware like Nozzles, Flex Nozzle Control Tankages, End Rings etc for Launch Vehicles for the Indian Space Program & has expertise in handling aerospace-grade materials like 15CDV6, high-strength maraging steel, titanium and its alloys, and aluminum alloys.

Core Business/Domain of Operation

Launch vehicle and subsystem: Launch Vehicle components and precision manufacturing

Test Facilities and Infrastructure

- Proof Pessure Testing for verifying pressure ratings and evaluating the integrity of booster segments with solid propellant
- NABL Accredited Material Testing Lab equipped with state of art test equipments
- Ultra-sonic, Radiography, Leak detection & Fracture Toughness Testing facility NDE

Achievements and Awards

- Successfully Manufactured, 200 numbers S139 solid rocket booster segments, 100 + PS0 XL -strap-on motor cases, First Crew Escape System Jettisoning Motor (CJM)
- Technology Absorption Award from Ministry of Defence, Govt. of India
- Indian Nuclear Society " Industrial Excellence Award"
- Performance Award for "Best Equipment (Centrifugal machines) Supply Partner" (2014) Best Exports Performance Award on number of occasions from Govt. of India and various Chambers of Commerce, Export Promotion Councils

Organization Type : Medium Enterprises

- Year of Incorporation : 1908
- Number of Employees : 1060

Details of the Key Management

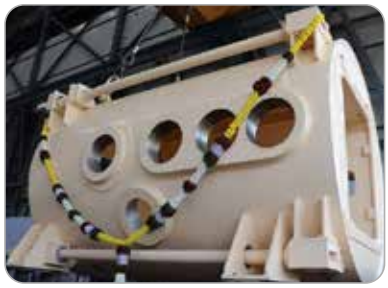
Mr Chirag C Doshi
MD & CEO
ccdoshi@walchand.com

List of Key Customers

- ISRO, DRDO, DPSU(HAL, BDL), NPCIL, Indian Navy-Naval Dockyard

Products and Services

Core Boosters for PSLV/GSLV Mk II, Core Boosters for LVMIII, Core Boosters for SSLV, Strap-on Boosters for PSLV, Crew Escape System Jettisoning Motor (CJM) assembly



Business Contact

Mr Dhiraj V Keskar
Business Head (Defence & Aerospace)
dhiraj.keskar@walchand.com

www.walchand.com

Xovian Aerospace

Company Profile

Xovian Aerospace is a SpaceTech startup based out of Bangalore. The startup aims at cutting down the human and economic toll across industries through its innovation in space-based GIS & situational awareness technologies. The startup is developing a Radio Based Geospatial & Signal Intelligence Satellite Infrastructure for providing high accuracy & low latency 24x7 real-time asset monitoring & situational awareness services through its decision intelligence platform 'Skylobe'. Startup's Team is comprised of Ex-ISRO personnel & Industry Experts with vast Experience in Satellite Missions and have won several awards for their work in the development of space technologies.

Core Business/Domain of Operation

Satellite and Subsystems: Satellite Infrastructure and Services

Satellite Applications: Decision Intelligence platform

Test Facilities and Infrastructure

- Clean Room Facility
- Satellite Integration Facility
- Ground Station
- ESD Labs
- Hot & Cold Chamber

Achievements and Awards

- Winners of IN-SPACe AOOP2 scheme
- Winners of ASSOCHAM ICT Startup award for IP creation in RF based remote sensing
- Winners of DST Nidhi Prayas Scheme
- Winners of DOT DCIS scheme

List of Key Customers

- Industries from Maritime, BFSI, Aviation, Defense, Agriculture, Disaster Management sector

Organization Type : Startup

- Year of Incorporation : 2018
- Number of Employees : 7

Details of the Key Management

Ankit Bhateja
Co-Founder
ankit@xovian.co.in

Products and Services

- Skylobe' – Decision Intelligence Platform
- Asset Monitoring – Detection & Tasking service
- Situational Awareness – Weather Forecasting & Earth Surface Parameters

Business Contact

Raghav Sharma
Co-Founder
raghav@xovian.co.in

https://xovian.co.in/

IN-SPACe

प्राधिकृतक
AUTHORISER

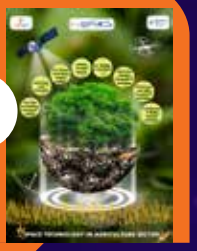
- Authorise space activities of Non-Government Entities (NGEs) as guided by the Indian Space Policy
- Act as a single-window agency for the private sectors engagement in space

संवर्धक
PROMOTER

- Strategic vision for the Indian space sector
- Industry outreach
- International outreach
- Public outreach
- Position India as a spaceport for the world

SHORT TERM SKILL DEVELOPMENT COURSES

1. Essentials of Space Technology for Agriculture Sector



2. Fundamentals of Orbital Mechanics, Attitude Dynamics and Control, Space-Based Navigation and Mission Planning

3. A2Z of Satellite Technology

4. Foundation of Mission Design and Avionics development for Launch Vehicle

5. Essentials of Space Data Products and Services

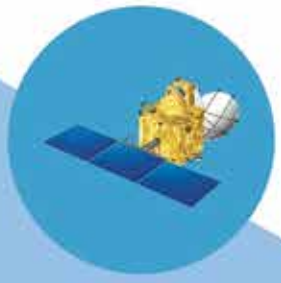
6. Introduction to Advances in Propulsion System for Launch Vehicles, Satellites and Landing Missions

7. Essentials of Space based Communication and Navigation Systems

8. Rocket Modelling for Students & Academia

9. Fundamentals of Launch Vehicle Technology

10. Space Economics, Law & Benefits



IN-SPACe Headquarters
Department of Space,
Government of India,
Bopal-Shilaj Road,
Bopal, Ahmedabad, Gujarat, 380058

www.inspace.gov.in

Available @

General Enquiry:
contact-us@inspace.gov.in

The information in this booklet is provided by Indian space industry/startups, IN-SPACe has not verfied its accuracy.

Updated on September, 2024