



KOMOLINE
AEROSPACE LIMITED



Komoline Aerospace Limited

Innovating Aerospace and Meteorology

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About Komoline Aerospace Limited

Established in 1991, Komoline Aerospace Limited (KAL) has been at the forefront of innovation in the fields of Aerospace, Defence and Hydro-Meteorology.

With over three decades of experience, we bring our core expertise in Design, Development, Fabrication and Test- Evaluation of Hi-Rel Space Grade Electronic Subsystems and Systems for Satellite Applications & critical ground systems; and Design & Fabrication of Cables / Wire Harnesses and Payload Integration of Mechanical Units for space Applications.

We also spearhead Design, Development and Manufacturing of High-End Remote Sensing Instruments, Real Time Data Acquisition Systems and Satellite Telemetry Systems for Hydrometeorology, Upper Air Sounding, Oceanography and Defence Applications.

Our company is equipped with state-of-the-art facilities for Electronic Manufacturing, Test & Measurement, Reliability testing, Calibration and Validation.

As part of the "Make-in-India" program envisioned by the Prime Minister of India, we are providing effective, satisfactory and reliable solutions in the field of Design & Engineering, Electronic Manufacturing and Reliability testing.

As Electronic industry leader, we are specialized in delivering high-quality, customizable solutions including Built to Print (BTP) solution, to meet the diverse needs of our clients across various industries and Government entity. We also support R&D activities of new start-ups and researchers.

Mindset

- Customer-centric approach with innovation and creativity.
- Ethical standards for win-win-win.
- Zero defect with skill up-keeping and continuous quality improvement.
- Sustainability and social responsibility with effective leadership and vision.
- Collaboration and teamwork with a focus on core competencies.

Vision

With a focus on quality, reliability, and customer satisfaction, we are dedicated to shaping the future with innovation, one innovative solution at a time. Together, we envision a world where the boundaries of possibility are constantly being redefined, and where Komoline Aerospace Limited stands as a beacon of innovation and progress in various sectors including Space, Defence, Hydro-Meteorology, Oceanography, Disaster Management and Design and Engineering.

Values



Integrity



Accountability



Responsibility



Excellence



Customer Relations



Innovation

KAL at a Glance



50+

Payloads



1000+

Subsystems



1000+

Automatic

Weather Stations



50+

Clients

Sectors

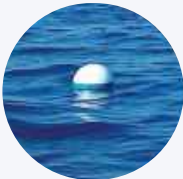
At Komoline Aerospace, we excel in delivering innovative solutions across six distinct sectors, each representing our dedication to pushing the boundaries of technology and meeting the evolving needs of our clients.

- Space
- Oceanography
- Defence
- Disaster Management
- Hydro-Meteorology
- Design and Engineering



Defence

Advanced technologies for national security and defence systems.



Oceanography

Cutting-edge sensors and instruments for comprehensive data acquisition.



Space

Satellite systems and payload integration for space and ground applications.



Hydro-Meteorology

Intelligent weather systems for accurate hydro-meteorology data.



Disaster Management

Critical solutions for effective disaster preparedness and response.



Design and Engineering

Precision engineering from design to advanced manufacturing for Hi-Rel industries.



Team Definition

| Shaunak Shah



Shaunak Shah, Chairman of Group Automation, is a visionary leader with over two decades of experience in the technology sector. He heads several prominent organizations, including Automation System Engineers Pvt Ltd, Komoline Aerospace Ltd, Kyoritsu KEW INDIA Instruments Pvt Ltd, and Test & Measurement Solutions Pvt Ltd. Known for his strategic expertise in space technology, Mr. Shah adeptly handles complex challenges and achieves exceptional results.

In the startup world, he serves as a mentor and advisor, offering invaluable insights. As a Founder Trustee of the Gujarat Innovation Society and a key figure in the GTU Innovation Cell, he champions innovation. His active roles with the Ahmedabad Management Association and the FICCI National Committee on Space Policies reflect his dedication to transformative change. Currently, Mr. Shah is researching his forthcoming book, designed to inspire future aerospace entrepreneurs.

| Priyanka Shah

Priyanka Shah has a proven track record of driving digital transformation and strategic growth in small businesses across industries like automation, electronics, aerospace, and semiconductors. Her leadership emphasizes strategic planning, where she has streamlined operations and enhanced customer engagement. Priyanka has developed strong business relationships, fostering innovation and creating systems that support sustainable growth.

Her ability to transform traditional business processes into efficient, modern systems has consistently positioned businesses for long-term success and global collaboration. Priyanka's focus on innovation and strategic development ensures that companies are not just meeting current demands but are also well-prepared for future challenges.



| Suneel Kapoor



Suneel Kapoor has over 30 years of expertise in business development, strategic planning, and execution across Medical Devices, Telecom Test, and Industrial & Power Electronics sectors.

He has played a key role in establishing new go-to-market strategies for a major global T&M multinational in India and has been instrumental in driving significant revenue growth by expanding into retail, defense, and utility sectors. Suneel excels in channel management, profit center management, and market-based pricing strategies. He holds a Bachelor's in Engineering and continually enhances his expertise through executive education programs.

Team Definition

| Abhiraj Shah



Abhiraj Shah's role as the Director at Komoline Aerospace Limited has been pivotal in steering the company's strategic direction, managing resources effectively, and driving significant business growth. At KAL, Abhiraj leads a multidisciplinary team, overseeing production and project management, supply chain establishment and resource allocation to ensure timely and cost-effective project delivery.

His leadership has fostered a culture of continuous improvement, enhancing productivity and reducing costs. In addition, his efforts in implementing strategic initiatives have resulted in timely and successful project completions, consistently meeting business objectives. He has also been instrumental in building and maintaining strong relationships with key stakeholders, including clients, suppliers, and regulatory bodies, ensuring compliance with industry standards while upholding the highest quality and safety measures.

| Rameshchandra M. Parmar

Rameshchandra M. Parmar's career at SAC/ISRO is distinguished by over 37 years of service, including post-retirement ISRO-Professorships. With an M.Tech in Instrumentation from IIT Bombay, he has expertise in instrumentation, R&QA, EMI/EMC, VLSI, and miniaturization of electronics hardware. He has played key roles as DD of Sensors Development Area, Systems Reliability Area, and APD of OceanSat-2.

Parmar has contributed to over 50 remote sensing payloads, alongside QA for about 25 communication, navigation and remote-sensing payloads. As He has impacted ISRO technical standards. Hi-Rel certifications, as a mentor for realisation of payloads. He is a life member of several professional societies, authored over 56 technical papers and received multiple ISRO Team Excellence Awards.



| Rakeshkumar S. Sharma



Rakeshkumar S. Sharma has 36 years of distinguished service at SAC/ISRO, retiring as Group Director of EFMG/ESSA. A gold medalist with an M.Sc. in Physics, his expertise spans electronic fabrication processes, reliability, quality assurance, and micro-electronics packaging technology.

Sharma played pivotal roles as Project Manager and Deputy Project Director in product assurance for various payloads. He established a state-of-the-art LTCC facility, guided the realization of over 45 payloads, developed more than 50 fabrication processes, and led indigenization efforts. He has contributed to ISRO technical standards, training and certifications; and has authored numerous technical papers and received multiple ISRO Team Excellence Awards.

Our Expertise

Komoline Aerospace is equipped to provide comprehensive turn-key solutions across a variety of specialized services through our experienced, skilled and ISRO certified team, ensuring the highest standards of quality and reliability. Our capabilities include:

| BTP /STS - Electronic Manufacturing

PCB Design and Fabrication

At Komoline, we offer comprehensive PCB (Printed Circuit Board) manufacturing services, including design, fabrication, and assembly, to meet the diverse needs of our clients.

Enclosure Fabrication

Our expertise in enclosure fabrication ensures the development of durable and rugged enclosures tailored to the specific requirements of each project.

| Hi-Rel Electronic Fabrication, Assembly and Packaging

PCB Wiring and Assembly

- SMT, Through-Hole & mixed technology component Assembly
- Coil Winding & Wiring
- Thermal Management
- Encapsulation of Fine pitch component
- Potting and conformal coating
- Radiation shielding for space systems

Micro-Integrated Circuits (MIC) Assembly and Packaging

- Substrate Attachment
- Component Attachment by Reflow
- MMIC assembly by reflow
- Bonding/Welding
- MIC Packaging, Tuning and Testing
- Microwave absorber – attachment

| Hi-Rel RF and DC Harness Fabrication

RF Cable

- RF Cable design, modelling and simulation
- RF Cable templates and cable bending
- RF Cable assembly using various types of connectors & RF Characterisation

Hi-Rel DC Harness

- DC Harness design & routing
- DC Harness Fabrication with the use of various types of multipin connectors and wire types
- Wet-probe testing of DC Harness

| Testing

Bench Testing

Bench testing services to assess the performance and functionality of space grade electronic components, subsystems and systems.

Reliability Testing

We are capable to conduct following reliability test including the performance evaluation of electronic components / systems:

- Vibration Testing: Random and Sine
- Burn-in Testing
- Thermo-vacuum Testing
- Environmental Testing

Life Testing

We also offer life testing services to assess the durability and longevity of electronic products.

| Assembly and Integration Activity

Provides panel level assembly and integration activities for space payloads.

Infrastructure

At Komoline Aerospace, we provide state-of-the-art infrastructure to support cutting-edge aerospace and electronics fabrication operations as per the clients' requirements. Our facilities are equipped with advanced state-of-art technologies and adhere to strict quality standards to ensure the highest levels of reliability and performance in every project.

| Payload Fabrication (Wiring and Assembly) Facility

Our dedicated payload subsystem/system fabrication facility features a Class-100000 cleanroom with state-of-art process equipments & tools. Entire facility is complying with the ESD safe operation and providing optimal conditions for precision manufacturing and assembly of payload subsystems/systems with ISRO certified operators.

| Micro Integrated Circuits (MIC) Assembly Facility

Our Micro Integrated Circuits Assembly Facility is equipped with a ESD safe Class-10000 cleanroom with state-of-art MIC process equipments & tools enabling the precise assembly and integration of MIC providing exceptional reliability and performance with ISRO certified operator.

| Environmental Test Setup

Thermo-vacuum Chambers: Thermo-vacuum chambers facility is very useful for simulating extreme temperature and vacuum conditions to evaluate the performance and reliability of electronics components / subsystems /systems for the aerospace and defence applications.

Climatic Chambers: Climatic chambers are utilised to subject components and subsystems/ systems for the varying temperature and humidity conditions, ensuring their resilience in diverse environmental conditions to meet aerospace and defence requirements.

Ovens: Our ovens are utilized for heat testing and curing processes as part of Hi-Rel electronic fabrication, ensuring the durability and reliability of materials and components used in aerospace and defence electronics applications.

Vibration Shaker: Our vibration shaker system enables precise vibration testing to evaluate the structural integrity and performance of electronics components / subsystems /systems to be utilised for aerospace and defence applications.

| Electrical Testing

Our Electrical Test facility is well equipped with the following mentioned state-of-art test instrumentations for various testing needed to ensure the performance and reliability of electronic components and subsystems/ systems.

- **PNA-X:** High-frequency signal analysis and characterization.
- **EXG:** Comprehensive signal generation and analysis.
- **EXA:** Spectrum analysis and signal measurement.
- **Power Supplies:** With programmable voltage & current requirements.

| Calibration Facility

We are also equipped with a specialized calibration lab for the calibration of various Hydromet instruments manufactured in-house. All our calibration process is traceable to IMD/National /International standards. Hydromet instruments are calibrated for the following parameters.

- Temperature
- Humidity
- Pressure
- Wind speed
- Wind direction

Climatic Chamber



Lifecycle Chamber



MIC Facility



Class 10000

Bonder & Tester



Microscope



Thermo-Vacuum Test Facility



PCB Facility



Class 100000

Vibration Test



Spectrum Analyzer & Signal Generator



PNA-X Network Analyzer

Major Milestones and Achievements



KAL is providing excellent services to ISRO-SAC for more than 2 decades.



Komoline has been associated with ISRO-SAC for the realisation of 100+ payloads, including the Chandrayaan and Mars mission.



KAL manufactured 1000+ Automatic Weather Stations (AWS) are functional across India.



Komoline holds more than 10+ TOT from ISRO-SAC to support Indian space activities.



Our Clients



Get in touch with us to learn how we can support your projects.

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