Company Profile
In 1972 LEAT (Electronic Laboratory for Technical Assistance) started its activity in overhaul, maintenance and upgrade of communication equipment, instrumentation and audio recorders for military avionics applications.

Since the beginning, LEAT core business was focused on maintenance, repair and overhaul of avionics components and navigation systems in compliance with Aviation Regulations, today EASA Part 145 for civil aircrafts and EMAR 145 for military aircrafts.

Keeping a strong focus on its original activity, LEAT current business is represented by design, qualification and manufacturing of avionics equipment and/or systems, new product technology insertion, upgrading or replacement of obsolete equipment, product enhancement, logistics.
MAIN LINES OF BUSINESS

- **R&D and Engineering**
  - Design, Development, Qualification and Manufacturing of avionic equipment and/or systems

- **Production of Avionic Components**
  - Production of Proprietary Components or on “build to print” base by Third Parties

- **MRO**
  - Maintenance, repair and overhaul of avionics components and navigation systems in compliance with EASA Part 145, EMAR 145 and AERQ-2120

- **Logistics, Products Distribution & Representation**
  - New product technology insertion
  - Upgrading or replacement of obsolete equipment
  - Dealer of the major Companies in the Avionic Market
  - Dealing with all the tasks related to the logistics of Aeronautical parts
LEAT FACILITY

- Via di Saponara 614 – 00125 Rome Italy
- Plant of 3000 sqm totally owned by the Company
- Dedicated areas for
  - Offices
  - Laboratories
  - Mechanical and painting shops
  - Test equipment
  - Warehouse with dedicated space to stock sensible material (TULPS ex art. 28)
LEAT CERTIFICATIONS
Main Technical Skills

- Main Capabilities & Expertise of LEAT Personnel:
  - Mechanical, Electrical and Electronic Design
  - Integration of Avionic Systems
  - Test and Validation
  - Environmental Qualification
  - Quality Assurance and Quality Control
  - Mechanical Assembly
  - Electrical and Electronic Assembly / Repair
  - Radio Frequency Applications
  - HF / VHF / UHF Radio Systems Repair
  - Radio Navigation Systems Repair
  - Navigation & Attitude Indicators Repair
  - Pneumatic Components Repair
  - Gyroscope Instruments Repair
  - Termo Cameras Repairs
  - Searchlights Repairs
  - Avionic Wirings Design, Test, Validation & Production

- All Engineers and Technicians are directly qualified by Aeronautical Authorities and/or OEMs for their capabilities
LINE OF BUSINESS
R&D AND ENGINEERING
R&D AND ENGINEERING

- LEAT R&D and Engineering Team is able to perform the overall design activities starting from the Customer’s requirements up to the equipment verification, qualification and certifications and to the in-series production release.

- Mechanical Design (Solidworks)
- Electronic Design (Altium)
- SW/FW Design and Verifications i.a.w. DO178C and DO254 (Vectorcast)
- Reliability and Safety
- Configuration and Documents Management
- Verification and testing activities
- Engineering for Manufacturing
- EMI and Environmental Qualifications i.a.w. DO160
- Automatic Test Equipment Design, Validation and Production
LEAT PRODUCTS

• **Universal Adapter**
  - NTSC/PAL – Digital Video SMPTE 292M/424M
  - Arinc 407- Arinc 429
  - AC/DC Voltage – Arinc 429
  - RS232/485 – Arinc 429
  - NMEA(0183) RS232 – Arinc 419
  - Technical specifications and physical dimensions can be customized depending on Customer’s needs.

• **Data and Video Signal Converters**
  - Synchro to ARINC419 Converter for AW109/119
  - ARINC 429 to Analog Converter
LEAT PRODUCTS

• Nacelle DownStop Sensor (NDSS) for the **AW609 Tiltrotor**
  • (2 NDSSs per A/C) measurement of mechanical stress on the AW609 Nacelles.

• **Wiring Integration Assemblies for AW609 Tiltrotor**
  • 11 WIAs per A/C to concentrate relays, diodes, fuses, busses, etc. required for the Electrical and Avionic systems installation, simplifying the A/C harness and its modification and maintenance.
LEAT PRODUCTS

**Avionic Computer**
- Core i7 processor
- Dedicated frame grabber for video processing
- Video input: 2 Analog RGsB input (FULLHD), 2 x PAL/NTSC Composite input (576i@50Hz) 1 x HD-SDI input (FULLHD)
- Video output: 2 VGA@1080p, 2DVI@1080p, DVR H.264,
- SSD (Fast Erase / Encrypted)
- ARINC: 4TX and 4RX
- 4 RS232/422/485 Ports, Ethernet ports, 4 Discrete IN/OUT, Audio line Out, USB and PS/2
- DO-160 Compliant
- Operating System: Windows or Linux

**Video Management Unit**
- Integrated system, managed by A429 commands.
- High video 2D performance for real time video processing.
- H264/5 algorithms for video coding for high quality image Video recording in HD and data storage.
- ARINC 818 Video Output
- Software for unit configuration, mission preparation and debriefing.
LEAT PRODUCTS

MIL-DAR sensor for IED (Improvised Explosive Devices)
- Detection using different sensors as Optical Radar (i.e. LIDAR), infrared and visible cameras.
- High definition 3D Mapping and an induced fluorescent emission analysis.

MISSION COMPUTER
Dedicated to Search & Rescue Missions, capable to perform advanced and powerful image processing (as alpha blending, image overlap, etc.) of input video from FLIR, Weather Radar, Map Generator, etc. displaying them on output terminals as Monitors, MFD, etc...
LINE OF BUSINESS
PRODUCTION OF
AVIONIC
COMPONENTS
PRODUCTION LINE

LEAT is certified EN 9100:2018 for design, production & maintenance of avionic components.
LEAT is already fully qualified and produces its own products.

- Dedicated spaces for production, equipped with tools and instruments
- Skilled technicians
- Dedicated production warehouse
- Company Qualified by customers to produce components in line with specific airworthiness regulations/standards (e.g. FAA regulation)
- Capability to follow all the production process from design, qualification, series production and post production activities (customization, design change, maintenance, training, customer support)
- Dedicated ERP to manage configuration management, incoming of parts, design changes, material requirement planning, production planning, etc.
- Capability to produce components on behalf of third party specification (build to print)
QUALIFICATION TESTs

- Capability to perform Qualification Tests in line with DO160 Regulations:
  - Temperature
  - Vibrations
  - Electrical Continuity
  - Isolation
  - Accelerations
LEAT PRODUCTS

Wiring Integration Assembly
(Production on Behalf of Leonardo Helicopters Division)

Synchro to ARINC429 Converter
ARINC 429 to Analog Converter
(LEAT Product)
LEAT PRODUCTS

Nacelle Downstop Sensor
(Production on Behalf of Leonardo Helicopters Division)

LEAT is certified by RAFAEL to Manufacture, Assemble and Test specific RAFAEL components
Line of Business
Maintenance, Repair & Overhaul (MRO)
MAINTENANCE, REPAIR AND OVERHAUL

• LEAT is certified to maintain and repair several avionic equipment for both civilian (EASA Part 145) and military (AERQ-2120 & EMAR 145) applications.

• The Capability List of LEAT’s MRO encompasses hundreds of Part Numbers for different equipment typologies such as:
  • Communications and Navigations (cat. C3)
  • Electrical Powers and Lights (cat. C5)
  • Recording Systems (cat. C13)
  • Radar/Surveillance (cat. C52)
MRO – MAIN CATEGORIES

- ATC Transponders
- Automatic Direction Finder (ADF)
- VHF Omnidirectional Range (VOR)
- Distance Measuring Equipment (DME)
- Instrumental Landing Systems (ILS)
- Radars
- Radios & Intercomm Systems
- Flight Computers
- Control Panels
- Horizontal Situation Indicators (HSI)
- Attitude Director Indicators (ADI)
- Radio Magnetic Indicators (RMI)
- Accelerometers
- Altimeter
- Variometer
- Vertical/Attitude/Horizonal Gyros
- Compass Indicators
- Turn & Bank Indicators
- Inverters, DC Control Units
- Torque Indicators
- Anti collision Lights
- Searchlights
- FLIRs
MAIN CUSTOMERS

AIRBUS HELICOPTERS
LEONARDO
MECAER AVIATION GROUP
PIAGGIO AEROSPACE

NETMA
NATO
AERONAUTICA MILITARE
MARINA MILITARE

Polizia di Stato
Capitaneria di Porto
Guardia Costiera
VIGILI DEL FUOCO
CORPO NAZIONALE
Corpo Forestale dello Stato
GUARDIA DI FINANZA
CARABINIERI
MRO – MAIN FIX WINGS PLATFORMS SUPPORTED

TORNADO
C130-J
ATR42
SF260
AM-X
C27J
ATR72
P168
MB339
M346
P166
P180

MRO – MAIN ROTOR WINGS PLATFORMS SUPPORTED

HH3F

NH500

AW109

AB412

AW189

A129

AW169

AW139

CH-47

AB212

AB206
MRO – DEALER/REPAIR AGREEMENTS
Line of Business
Logistics, Products Distribution & Representation
Main Concept

LEAT is certified **EN 9120:2018** for Distribution and Logistics of avionics and mission systems

In this frame LEAT can deal with all the logistics related to the management of aeronautical products, such as:

- Purchasing;
- Shipment Management / Delivery on site;
- Exchange;
- Dealing with Italian Regulation for import/export of sensitive material;
- Management of ITAR products;
- Stock monitoring and management;
- Storage;
- AOG.
MAIN PARTNERS

CEF - AEROSPACE SOLUTIONS

TELEDYNE FLIR - Everywhere you look

Bendix King

Collins Aerospace

Honeywell

TRAKKA SYSTEMS

Howell Instruments, Inc.

Astronautics Corporation of America
CONCLUSIONS

With its capabilities LEAT can support the Customer with a complete set of services in terms of:

• Maintenance, Repair & Overhaul
• Design, Develop & Production of Specific Avionic Components
• Procurement of spare parts/components
• Logistic Management
LEAT is constantly committed to efficiency in design and production.

Whatever the project, we deliver and support innovative technologies and systems that enable air operations to be completed effectively and safely.

Thanks to a solid experience and perfect understanding of client’s needs, LEAT can respond to the customers with tailored and timely solutions.

Our products and services contribute to give us prestige and recognition in Italy and abroad.
Performing excellence to deliver best products and services