



Easier End-to-End Space development

Flight solutions
Mission Control tools
Testing tools and support

More Focus, Less Burden

Ideal tools for payload developers
Satellite integrators life easier



Evoleo's flight solutions are mainly targeted to payloads fast development, either scientific or commercial, interfacing the spacecraft power and control management units in a reliable, safe and easier way.

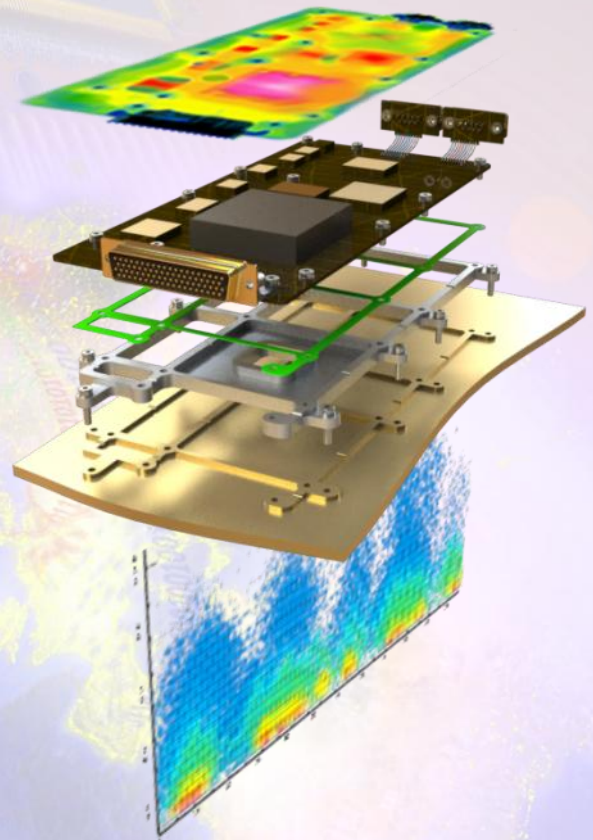
OBSW - On Board Software

- Near ready-to-go Baseline solution over RT Operating System
- Management functions available (e.g. FDIR, HK, Sci, PWR)
- Spacecraft side transparent I/F protocol (over 1553 bus)
- Internal side simple I/F protocol (over CAN, I2C, RS422, etc)
- Easily customizable to specific payload/experiment needs



DHPU - Data Handling & Processing Unit

- RadHard Processing board (over 1553 bus)
- Fault tolerant LEON3FT processor (dual core)
- Internal analogue and digital I/O capabilities
- Suited for High-Rel applications (instruments or payloads)



PDU - Power Distribution Unit

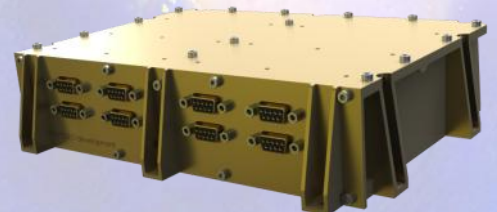
- RadHard Power Distribution board (up to 16 load lines)
- Internal Latching Current Limiter and ON/OFF capability
- Internal ADC for load power measurement
- Suited for payloads low power distribution and protection

Engineering and System Integration

- Electronics, Mechanical, Thermal and Radiation analysis
- Overall system integration

Payload Integrated System

- Single or redundant Control Unit (DHPU, PDU, PSU)
- Internal room for easy integration of user-specific boards
- Complete payload baseline for internal small experiments or simplified external payloads



SPACE SOLUTIONS



Mission Control solutions aim to support and simplify payloads definition of flight mission parameters and procedures definition, from development stage, commissioning and throughout the lifetime of the system.

FSP - Flight Support Package

- IOT & Commissioning documentation baselines
- Flight Database definition supporting tool
- Engineering support in flight procedures definition

FOPS - Flight Operations Support

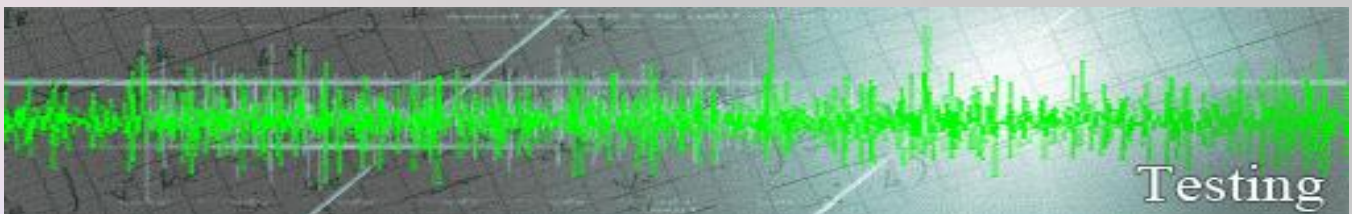
- Flight operations procedures definition tool
- Pre-validation of flight procedures
- Time saving, mission parameters update

SDC - Scientific Data Centre

- In-flight Data Analysis software tool
- Customizable to specific data needs
- Suitable for Principal Investigators

FMS - Flight Monitoring System

- Software tool for monitoring in-flight parameters
- Commissioning and exploitation supporting tool
- Customizable to specific parameters



Testing solutions provide developers with equipments and tools to debug, verify and validate the entire development , from the Electrical subsystems, up to the SW design and Environmental tests.

EGSE - Electrical Ground Support

- Independent Engines (Log, Automatic Test, MSG creation, packetize, RT Visualizer, Report)
- Test databases storage and comparison
- Mission simulation (full test & flight procedures)

SCOE - System Check-Out

- RT Visualizer, TM database, Reporting
- Analysis/comparison of integration test data
- SW Support to payload satellite integration

Environmental Testing Support

- Procedures setup and testing support on EMC, Vibration and Thermal Vacuum

SW Testing Framework

- OBSW testing and simulation package
- Test samples, Simulation and documentation
- Able to simulate without HW or test with HW

KEY COMPETENCES

Design and Implementation of Analogue HW

- Project, CAD, WCA, PSA, FMEA/FMECA

Design and Implementation of Digital HW

- Project, CAD, FPGA, $\mu\text{C}/\mu\text{P}$ 8-32 bit (simple and multi-core), VHDL and C

SW Implementation for Embedded Systems

- Real time operating systems, LabView platform, Windows or Linux environment

Instrumentation, Automation and Control

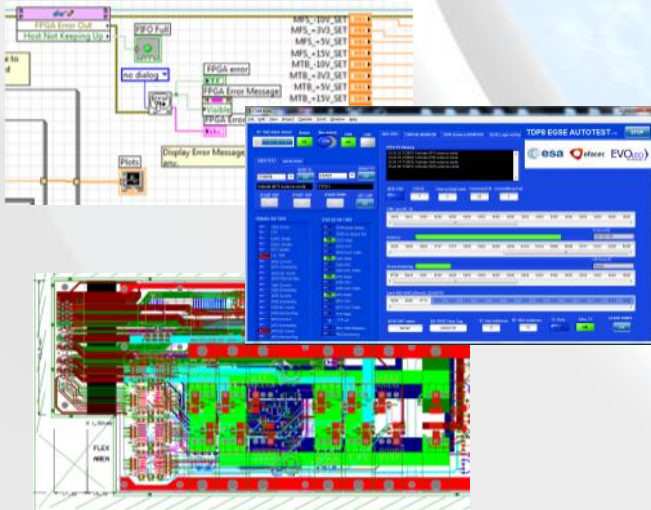
- PLCs, National Instruments technology

Systems Engineering

- Support to systems integration, testing & validation
- Mechanical, Thermal and Radiation analysis

Quality and Development Process

- Support to ESA-ECSS standards



COMPANY

EVOLEO is a SME holding a multidisciplinary engineering team investing in skills related to the design of critical and complex electronic systems, embracing four areas of activity: **Space, Transportation, Energy and Health.**

EVOLEO searches and promotes partnerships and networking with centers of knowledge and industry players, in line with its mission of providing **high-end and differentiated electronic engineering solutions**, seeking continuous **improvement, flexibility, quality and customer oriented innovation.** We aim international recognition as a **technological company** for leveraging **partnerships, added value enhancement** and sustainable **growth.**

FIELDS OF EXPERTISE

On-Board Data Systems

- Payload Data Processing, On Board Data Management, Microelectronics for digital and analogue applications

Space System Software

- Space Segment Software, Ground Segment Software, Ground Data Processing

Spacecraft Electrical Power

- Power conditioning and distribution

System Design & Verification

- Collaborative and Concurrent Engineering, System Analysis and Design, Verification & AIT

Quality, Dependability and Safety

- System Dependability and Safety