

Success Cases – Load Ring Sensor Unit

- **Function & Architecture**
 - Airborne equipment for measuring loads in a coupling system for fuel transfer
 - Measure the lateral (Fy) and vertical (Fz) Bending-Loads caused
 - Measure the fuel pressure to be used for the transfer regulation process
- **Main requirements**
 - 4 Fy & 4 Fz Loads, 4 Pressure Measurements
 - Limit Load $\pm 15000\text{N}$
 - 2 redundancy avionic busses communication
 - DAL A DO178 qualified
 - DO160 qualified : i) Environmental Requirements) , ii) Electromagnetic Compatibility
 - Temperature Operation -55°C to +85°C Altitude Operation 50.000 feet
- **Product Specificity & Achievements**
 - based on DAL A redundancy electronics architecture
 - Designed in the basis of customer's spec
 - Designed to and manufactured under aero and MIL standards.
 - Precision CNC machined parts
 - IPC600 – IPC610 PCA
 - MIL connectivity
- **Main skills involved & Value Added:**
 - Mechatronic approach as combining Electronic and Mechanical expertise
 - Complex Electronics and Critical Embedded Software
 - Safety & Reliability
 - Test Engineering
 - Customer Satisfaction regarding:
 - Qualification during the Design Phase
 - Performances and Robustness of the Build Standard
 - Series production since 2007

