The Safran Data Systems XMA-ROTOR proposes high performance XMA modules technology built in a mechanical housing dedicated to helicopter rotor head instrumentation. The XMA-ROTOR replaces legacy slip ring technology offering a full wireless/contactless link between the rotor and the stator. Power is transferred via inductive coupling. Acquired data, health monitoring information, configuration data and synchronization signals are transferred over a bi-directional radio link.

The XMA-ROTOR, as a standard XMA stack, is scalable and can host from 2 to 16 XMA wireless modules of various kinds: analog, digital, discrete, video...

The XMA-ROTOR is designed to cope with environmental conditions of civil and military rotorcraft.

Designed to operate seamlessly with existing flight test systems, the XMA-ROTOR is configured and managed as standard XMA stack and is fully compatible with Safran Data Systems architecture.

**FULLY WIRELESS**
No slip ring, low intrusive and maintenance-free technology

**SCALABLE**
Up to 120 strain gages or accelerometers, or 240 temperatures or any combinations

**EASY TO CONFIGURE**
Configured and managed remotely by the eZ Software Suite

**DESIGNED FOR HARSH ENVIRONMENT**
Built to sustain up to 2500 rpm without additional bracket

**HIGH ACCURACY**
Low uncertainty down to 200ppm Typical and high synchronization lower than 100ns

**HIGH EFFICIENCY INDUCTIVE POWERING**
Low EMI pollution and permanent health monitoring
TECHNICAL SPECIFICATIONS

The XMA-BOX is a standard stack that can host from 2 to 16 modules.

MECHANICAL CHARACTERISTICS
(for the 9-acquisition modules unit displayed on the picture)

- Dimensions: 127 mm x 126 mm x 88 mm
- Weight: 2 kg
- Mounting: 8 x M6 screws
- Max. Power: 100 W

INTERFACE

- Power Supply: Induction
- Applications modules:
  - Any module from the XMA catalog, especially:
    - XMA-ANA: 8 Universal Analog ch.
    - XMA-ABC: 8 Quarter/Half Bridge ch.
    - XMA-THC: 8 Thermocouple ch.
    - XMA-HDA: 16 Single/Diff Analog ch.
    - XMA-VDA: 2 SD-Video + 2 audio ch.
    - XMA-RSD: 4 RS-X – 16 Discrete ch.

ENVIRONMENTAL CONDITIONS

Test procedure DO160G

- Temperature Operating: -40°C to +85°C
- Humidity: DO160G – Section 6 cat C
- Altitude: 25,000 ft
- Decompression: 8000ft to 25000ft in 15s
- Vibrations: MIL-STD-810 G Table 514.6D-III – Category 14
- Shocks: DO160G – sec ADU – Cat. D : 6g/20ms 3 shocks per axis
- Crash safety: DO160G – Sect7 – Cat D : 20g/20ms shocks
- Water proofness: DO 160G Section 10 Cat R : spray test...
- EMC:
  - CS DO160G – Section 20 Cat R 30mA
  - RA DO160G – Section 20 Cat R 0.1-0.4 GHz: 20V/m
  - RP DO160G – Section 20 Cat R 0.4-8GHz: 150V/m
  - Power Voltage spike DO160G – Section 17 Cat A
  - RF Emission DO160G – Section 21 Cat P extended

GLOBAL SALES

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