



MACS - Missile Approach Confirmation Sensor

MACS Sensor - Eliminating False Alarms

The patented Missile Approach Confirmation Sensor (MACS) performs confirmation of suspected incoming missile threats and reduces False Alarm Rates (FAR) to practically zero.

The MACS sensor is activated after the initial incoming missile alert has already been received from the system's electro-optical sensors. It immediately pivots in the direction of the incoming threat and, using a proprietary technology, verifies the threat's validity using HPRF Doppler radar.

Concurrently, MACS collects relevant data on the target (velocity and distance) and calculates its time-to-impact, enabling the most effective countermeasure response to the incoming missile.

MACS provides an all aspect coverage along with a very short transmission time, narrow antenna beam width and a high frequency band that guarantee high accuracy in validating the target whilst also making it nearly impossible to locate by standard ELINT systems.

The validation process between the electro-optical sensors and the MACS provides the most effective filtering of all known nature and man made types of false alarms that are typically detected by electro-optical sensors. As such, MACS ensures that only real missiles will be declared by the system and reacted upon.

By delivering practically zero FAR, MACS complies with the EASA/FAA civil aviation regulations and provides protection to civil and commercial aircraft against the threat of MANPADS.



MACS



Technical Specifications

Basic Dimensions	35 cm Height & 30 cm diameter
Weight	8.5 kg
Frequency	Ka Band
Coverage	360° in Azimuth, (+35°) to -90° in Elevation
Power Consumption	70W steady state
Communication Interfaces	RS-422 Operational Interface, Ethernet Maintenance Interface
Power Interface	28V DC compatible with MIL-STD 704A & RTCA/DO-160E
Cooling	Passive
Reliability	8,000 hours minimum MTBF
FAR	Better than 1:5,000 flight hours scenario dependent
System Configuration	Single sensor full coverage (installation dependent) Dual Sensor configuration supported for enhanced coverage
Safety	Compatible with IEEE C95.2003 RF Safety Standard, low power mode for ground maintenance
Qualification (MIL and CIVIL)	MIL-STD: 810G, 461F, 704A RTCA/DO: 160E, 178B, 254

Stimulator

Size	32X18X14 cm
Weight	5.5 Kg
Power Interfaces	Battery with operating time of up to 2 hours and 110/220V 50/60 Hz AC interface
Operational Range (automatically adjusted)	5-2,000m



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