TTM Technologies
Time-To-Market Interconnect Solutions

M5OAS System

Mode 5 Operational Autonomous Surveillance (M5OAS) System

Leveraging our industry expertise in the development of Identification Friend or Foe (IFF) technologies, TTM introduces our Transportable Autonomous Mode 5/Mode S IFF solution called M5OAS. The M5OAS is a standalone, fully operational All-Mode IFF/Air Traffic Control (ATC) interrogator surveillance solution that can operate in conjunction with or independent of existing primary radar systems.

The TTM Technologies Advantage

With over 50 years of experience in IFF and Air Traffic Control (ATC) systems, TTM Technologies (TTM) is a trusted, reliable partner in providing technically advanced IFF systems. We were the first to introduce an All-Mode, AIMS certified interrogator to the marketplace and the first to fully integrate active and passive IFF/ATC surveillance solutions into a single shelter configuration.

Our latest All-Mode active and passive advanced IFF solution, the M5OAS, provides a low cost, quick set-up situational awareness system solution that offers active long-range MK XIIA, Mode S surveillance and passive ADS-B, UAT, Mode 5 Level 2/Level 2 Bravo integration for ground-fixed and transportable radar systems. The M5OAS system is capable of performing IFF mission requirements of today's fully-integrated solutions and is ideally suited for Mode 5 and Mode S upgrades of legacy radar systems meeting the new and emerging IFF standalone surveillance requirements.

Key Features

Designed to bridge the operational gap for existing surveillance systems beginning or undergoing the transition to Mode 5 due to Mode 4 sunset, M5OAS provides a secure surveillance feed to existing systems to continue Military Operations. The system may also be used as a standalone complete active/passive IFF system. M5OAS utilizes our Passive Detection and Reporting System (PDRS) to passively acquire and report targets to the active interrogation system reducing active interrogations allowing for lowered transponder occupancy and an improved IFF/ATC system performance. It also improves detection and false target performance.

- Input Power: 120/208 V, 3 Phase, 5-Wire, 47-63Hz
- Dimensions: 12 (L) x 8 (W) x 8 (H) Feet
- Weight: 6350 lbs

M5OAS System

Active IFF

- Selection of an Extended Range Surveillance (AN/UPX-44A) active interrogator or Low, Medium or Long Range SFF-44 active interrogator systems
- SFF-44 Supports Mode 5 KIV-77 or SIT-2010 crypto
- AN/UPX-44A Supports Mode 5 KIV-78 crypto
- Provides All-Mode Capability (Mode 1, 2, 3/A, C, 4, 5 L1/L2, Mode S ELS/EHS)
- 3-Channel (SUM/DIFFERENCE/OMNI) Monopulse LVA Antenna
- 3-Channel (SUM/DIFFERENCE/OMNI) Monopulse Receive with All-Mode Two Channel (SUM/SLS) Transmitter
- Multi-Speed Antenna Pedestal and Control Unit
- Active interrogators are fully integrated with PDRS for passive target queuing to lower or eliminate active Mode S All-Calls
- Extensive Built-in-Test Capability
- IFF interrogator instrumented range greater than 250 NM
- Fully compliant to DoD AIMS 17-1000, STANAG 4193 and ICAO Annex 10

Passive IFF

- PDRS passive detection capability provides no interference to civil airspace or military IFF systems and is non-observable to hostile forces when in EMCON conditions
- Detects and reports Mode S 1090ES ADS-B, UAT and Mode 5 Level 2/Level 2 Bravo squitters
- Multi-Band/Multi-Channel Receive Capability
- Supports Mode 5 KIV-77 or SIT-2010 crypto
- Internal or External GPS interfaces for accurate time and position
- Integrated internal SAASM GPS available
- Extensive Built-in-Test and system monitoring
- PDRS instrumented range greater than 200 NM
- Fully compliant to DoD AIMS 17-1000, STANAG 4193, RTCA/DO-260B and ICAO Annex 10

Shelter

- Self-Contained ISO Transportable Shelter with Environmental Control Unit (ECU)
- Telescoping Rotating Antenna and Pedestal
- Secure Copper & Fiber Ethernet Interfaces
- Active and Passive Sensors fully integrated with Local and Secure Remote Command and Control Systems
- Lightning Protection System

Additional Benefits:

- All-Mode DoD AIMS Certified
- Simplified integration (when required) with standard Ethernet ASTERIX interface
- Provides secure IP interface via High Assurance Internet Protocol Encryption (HAIPE)
- Ability to integrate into numerous C2 systems
- Transportable shelter ISO configuration
- Mode 5 Level 2B capable
- Health monitoring application for all on-board electronics

Optional Items

- Dolly Set Mobilizer
- Diesel Generator
- AeroTrac® Multi-Sensor Radar Data Processor and Display
- GPS Denial Detection and Reporting

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Visit www.ttm.com for more information.

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Inspiring Innovation