



Advanced Monopulse Secondary Surveillance Radar

- Built-in data processing and combining for MSSR, PSR, ADS-B and MLAT
- Mode 1, 2, 3/A and Mode-S ELS/EHS
- Remotely controlled SSR Mode-S monitor
- Built-in extended reception channel testing
- Cost-effective and low maintenance cost solution

easat

RADAR SYSTEMS

Easat was established in 1987 as a specialist independent company to design and build antennas and complete radar systems. Since then the Company, a subsidiary of Goodwin PLC, has established itself as market leader in the manufacture of bespoke high-performance commercial radar antennas.

Easat design and build antennas and complete radar sensor systems for a wide range of applications.

Easat high-gain radar antennas provide enhanced protection of high-value offshore production facilities in challenging security environments.

Easat's surveillance systems are in use globally for long-range detection of maritime vessels and for the identification of potential threats from pirates and militants.

This new generation Mode-S MSSR designed and in full compliance with ICAO and Eurocontrol standards. It is intended for air traffic control cooperative surveillance in accordance with elementary and enhanced Mode-S specifications.

This secondary radar system can be used either stand-alone or can be easily integrated with PSR, ADS-B and MLAT systems. In this case, a common CMS will display status and performance parameters of all systems simultaneously and PPI screen will display combined targets processed by advanced built-in tracking system. This system is highly flexible, high performance turnkey solution with open architecture easily adaptable to customer requirements and needs of different sites, such as communication and maintenance facilities.

This secondary surveillance radar is extremely compact, fully solid-state, highly modular and reliable design with very low life-cycle cost. The system is fully redundant with automatic switch-over and hot swapping functions ensuring high availability. CMS software is OS independent and can be installed on any number of computers. CMS features user friendly interface and provides factory remote support capability.

Main Features

- Developed in full compliance with ICAO and Eurocontrol.
- Mode 1, 2, 3/A, C and Mode-S ELS/EHS.
- Automatic system reconfiguration and switch-over.
- Built-in data processing and combining for MSSR, PSR, ADS-B and MLAT.
- Built-in track processor and output data formatter.
- BITE for continuous monitoring of MSSR subsystems and non-radar equipment.
- Diagnostic CMS to provide local and remote control of operation.
- Archiving, playback and statistical analysis of surveillance data.
- Cost-effective and low maintenance cost solution.
- Remotely controlled SSR Mode-S monitor.
- Built-in extended reception channel testing.
- Transportable version is also available.



Interrogator

- Dual channel fully redundant system.
- Interrogation, detection and acquisition of Modes 1, 2, 3/A, C and S.
- Mode-S Addressed Elementary Surveillance.
 - ICAO aircraft address.
 - Flight identity.
 - Transponder capability report.
 - Altitude reporting to 25 ft.
 - Flight status.
- Mode-S Addressed Enhanced Surveillance.
 - Lockout protocols.
 - Basic data protocols.
 - Standard length communication protocols.
 - Extended length communication transactions.
 - Aircraft identification protocol.
- Interlace with up to 4 modes.
- Programmable interrogation strategy based on target position.
- Adaptive parameter adjustment including advanced anti-reflector.
- Multiple input tracking and data combining.

Radar Data Display

- Multiple data (plots and/or tracks) input display including PSR, MSSR, ADS-B and MLAT.
- Display all enhanced Mode-S data.
- Geographical maps and air navigation charts.
- Surveillance data archiving and replay.

Antenna System

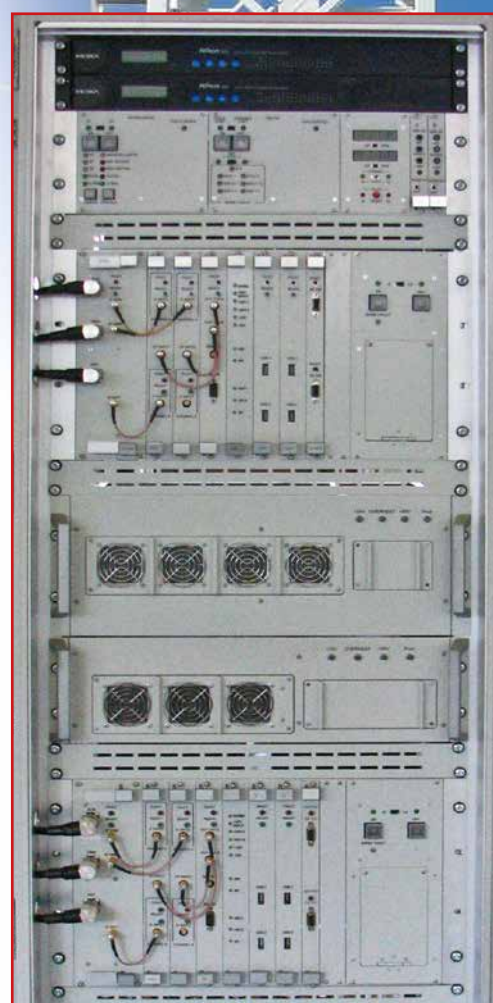
- Large vertical aperture (LVA) antenna with SUM, DIFF and OMNI channels.
- Compact SSR antennas can be used as an option.
- Encapsulated weatherproof dipole columns.
- Superior RF performance.
- Shaped elevation patterns.
- Meets ICAO requirements.
- Dual motor antenna drive.
- Dual azimuth encoder.
- Antenna drive system includes comprehensive BITE with numerous sensors (oil level, vibration, temperature etc) displayed on CMS.

Control and Monitoring System (CMS)

- Fully redundant system.
- Any number of local and remote CMS terminals.
- Supports communication such as serial, optic, LAN, radio links etc.
- Information archiving, replay and analysis.
- Factory remote service support capability.



Advanced Monopulse Secondary Surveillance Radar



Operation Mode	I, 2, 3/A, C and S ELS/EHS
Antenna Drive	Dual Motor
Rotation Rates	6-15 RPM
Coverage	
Maximal range	256 NM
Minimal range	0.25 NM
Height	66,000 ft
Elevation	0.3° – 45.0°
Maximum number of Aircrafts	1000
Accuracy (random errors)	
Azimuth	0.068°
Range, mode A/C	30 m
Range, Mode-S	15 m
Detection Probability	≥ 0.99
Code Detection Probability	≥ 0.99
Probability of Combining	≥ 0.95
Output Format	ASTERIX
Output Data Link Type	Serial/LAN/optic