



Disaster or act of terrorism relief.
Extra ATC security during major events.
Perfect for Backup use.
Ideal for seasonally operated airfields.
Gap-filler Solution.

Advanced Monopulse Secondary Surveillance Radar

- Easy to transport and deploy.
- Customisation for different climates, roads and energy supply systems.
- 40ft ISO footprint with two built in equipment rooms one for the Mode-S MSSR interrogator and CMS and the other for the UPS, Generator and Hydraulic system.
- Mode 1, 2, 3/A, C and Mode-S up to level 5, 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 Radar Systems Ltd was founded in 1987 as an independent specialist company to design and build high performance radar antennas. Since then the Company, a subsidiary of Goodwin PLC, has established itself as market leader in the manufacture of complete high-performance radar systems. Easat has a range of full radar systems, antennas, pedestals, towers, installation and support services in over 60 countries with more than 500 installations worldwide.

Products include:

- Air traffic control using permanent or transportable radar systems, PSR & MSSR.
- Air defence ATC using permanent or transportable systems.
- Airport surface movement radar, SMR & A-SMGCS.
- ADS-B Systems.
- Precision Approach Radar upgrades (PAR).
- Offshore & coastal surveillance radar systems.

This Transportable secondary surveillance radar system, 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.

The system is built into a single 40ft ISO trailer format with hydraulic outriggers for stability and two built in equipment rooms one air-conditioned for the Mode-S MSSR interrogator and Control and monitoring system (CMS) and the other for the UPS, Generator and Hydraulic system.

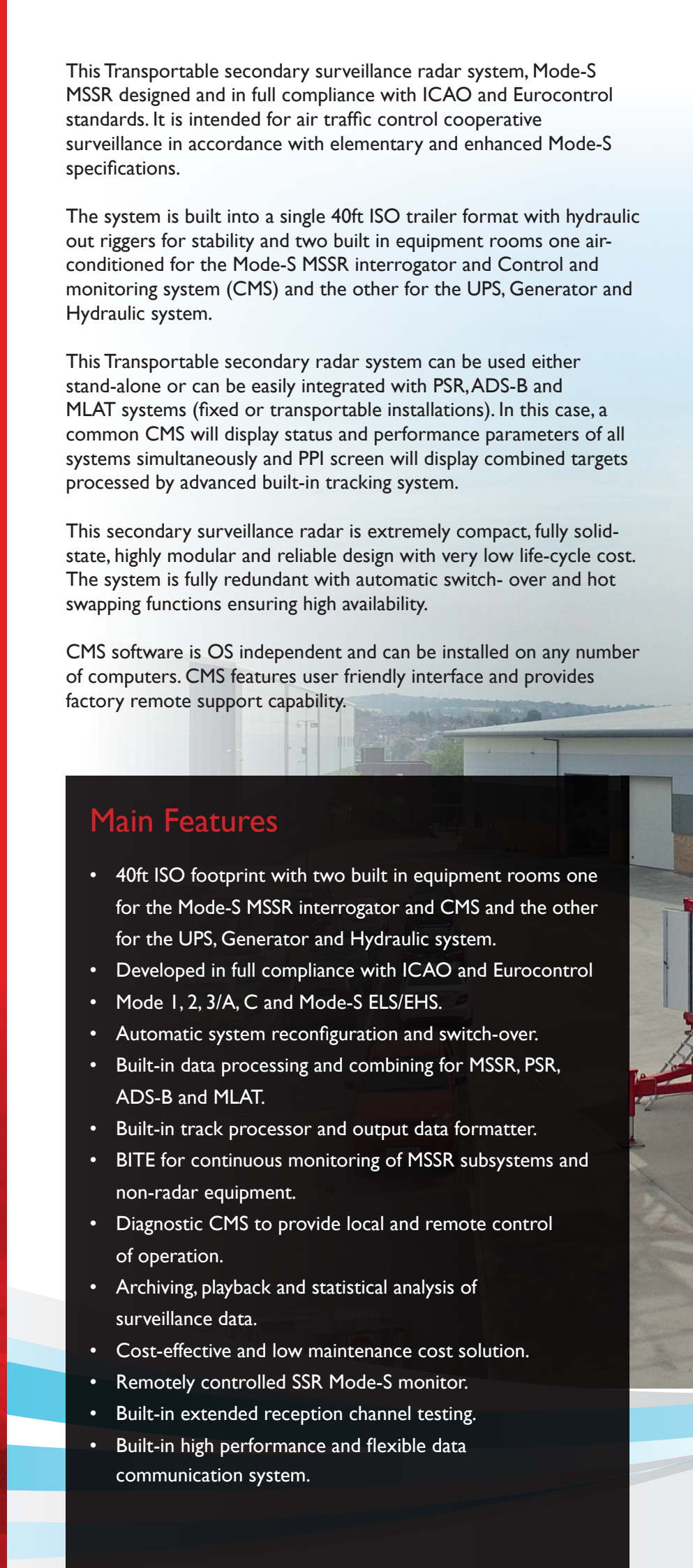
This Transportable secondary radar system can be used either stand-alone or can be easily integrated with PSR, ADS-B and MLAT systems (fixed or transportable installations). In this case, a common CMS will display status and performance parameters of all systems simultaneously and PPI screen will display combined targets processed by advanced built-in tracking system.

This 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

- 40ft ISO footprint with two built in equipment rooms one for the Mode-S MSSR interrogator and CMS and the other for the UPS, Generator and Hydraulic system.
- 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.
- Built-in high performance and flexible data communication system.



Transportable Monopulse Secondary Surveillance Radar



High Stability Scissor Lift



40ft Standard Trailer
& Container



Outrigger



Antenna



Equipment and Control &
Monitoring System (CMS)



Dual Redundant Mode-S
MSSR Interrogator



Diesel Generator



Air Conditioned

Advanced Monopulse Secondary Surveillance Radar



Interrogator

- Full EMS compatibility
- 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.

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.

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

- Compact SSR antennas with SUM, DIFF and OMNI channels for 150NM coverage.
- Superior RF performance.
- Shaped elevation patterns.
- Meets ICAO requirements.
- Dual motor antenna drive system.
- Dual azimuth encoder system.
- Antenna drive system includes comprehensive BITE with numerous sensors (oil level, vibration, temperature etc) displayed on CMS

Hydraulic and Power Generator equipment room

- Built-in Uninterruptible power supply (UPS) with KVA and battery back up options
- Diesel Generator back up power supply
- Hydraulic equipment for trailer stabilizer control and antenna deployment.

Operation Mode	1, 2, 3/A, C and S ELS/EHS
Antenna Drive	Dual Motor
Rotation Rates	6-15 RPM
Coverage	
Maximal range	150 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