



Automatic Dependant Surveillance Broadcast System

- Mode S Extended Squitter (1090 ES)
- Multilateration function available
- Indoor and outdoor versions
- Fully redundant or single-channel
- Very easy start-up procedure
- Several antenna systems (sector, omni) depending on required coverage

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.

Automatic Dependant Surveillance Broadcast System

M10AL is the latest generation ADS-B station designed and manufactured under ISO 9001:2008 certified quality system.

The system complies with all ICAO requirements and it has been designed using the latest, best-known technological improvements. The system is highly modular and can be either fully redundant with automatic switch-over or single-channel for N-1 architecture.

M10AL can be used either separately or as a complement to existing PSR/MSSR radars while using only one data processing centre. Several stations can be easily extended to the MLAT network (airport or WAM).

Continued Main Features

- No moving parts such as fan or HDD
- Dual Precise GPS sensors
- Comprehensive BITE; CMS with SNMP and remote access
- Data archiving, playback and analysis
- Low power consumption, commercial AC or DC (solar panel, wind power generator)
- Built-in site monitor

Antenna System

- Variable number of input antenna channels (1-4)
- M10AL can be used with several antenna type depending on required coverage:
 - Three 120° degree 17 dBi gain sector antennas
 - One omni-directional 11.5 dBi antenna
 - One omni-directional 9 dBi antenna
 - One omni-directional 5 dBi antenna

Data Processing

- Mode A/C, Mode S ES, Mode S ELS/EHS processing and 3D position calculation
- Tracking and data combining with PSR/MSSR
- Existing PSR Morava 10 / MSSR M10S radar data processor is upgradable to MLAT processing capability



Coverage	
Maximum range	250 NM
Altitude	66,000 ft
Target Load	>2000
Data refresh interval	0.5 - 4 seconds
Input data channels	1- 4
Antenna system	17,1 1.5, 9, 5dBi
Probability of detection	99%
Automatic failure control	90%
MTBF	217012 h
MTTR	5m
Full redundancy	Yes
BITE system	Yes
Maximum power consumption	<100 W
Input power	Commercial AC/DC
Output format	ASTERIX CAT021, CAT023
Climatic conditions indoor	
operating temperature	+5°...+65°C
Humidity	≤ 80% at +25°C
Climatic conditions outdoor	
operating temperature	-50°C..+65°C
Humidity	≤98% at +25°C
Max operating altitude	10,000ft
Operational wind speed	100 kts
Survival wind speed	120 kts



Control and Monitoring System

- Fully redundant system
- Any number of local and remote CMS terminals
- Highly adaptable to local communication lines such as serial, optic, LAN, radio link etc.
- Non-radar equipment control can be easily implemented in CMS displaying all available data
- Real-time performance calculation
- Information archiving, replay and analysis SNMP support
- Factory remote support capability

Radar Data Display

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





ML AT System Features

- Consists of several M10AL stations and one or several interrogators
- M10AL can be either redundant or single-channel providing an extra degree of reliability
- Using Mode A/C, Mode S ES, Mode S ELS/EHS for interrogation
- Can be used either separately or as a complement to existing PSR/MSSR radars while using only one data processing system
- Enhanced coverage calculation
- Redundant central data processing system

Output format	ASTERIX CAT010, CAT019, CAT020, CAT21, CAT23
Output data filter	Geographic, altitude, range, identity/address
Position accuracy	50m
Update rate	1-10 sec.
Interrogation type	Mode A/C, Mode S ES, Mode S ELS/EHS
Interrogation frequency	1030 MHz
Transmit power	Up to 2000W
Target load	1000
Dynamic transmit power	Yes
Sector-based interrogation	Yes

