

# easat

## surface movement radar



High Performance  
SMR System &  
Sensor Solutions

- Dual Redundant low cost Solid State Transceiver
- Superior system configuration and detection
- Optimised for extreme environmental conditions
- Optimal airside radar siting using Easat's Slimline Monotube Towers

[www.easat.com](http://www.easat.com)

# easat

Easat was established in 1987 as a specialist manufacturer of bespoke, high performance radar antennas aimed at the air traffic and coastal radar markets. Since then the company has established itself as market leader in the design and manufacture of antennas for all forms of primary and secondary radar detection including surface movement radar.

Our expertise has expanded into complete sensors for the SMR market. The Easat Solid State surface movement radar is designed to provide the highest levels of detection for airport ground surveillance. It forms the major sensor component in the airport Advanced Surface Movement Guidance and Control System (A-SMGCS).

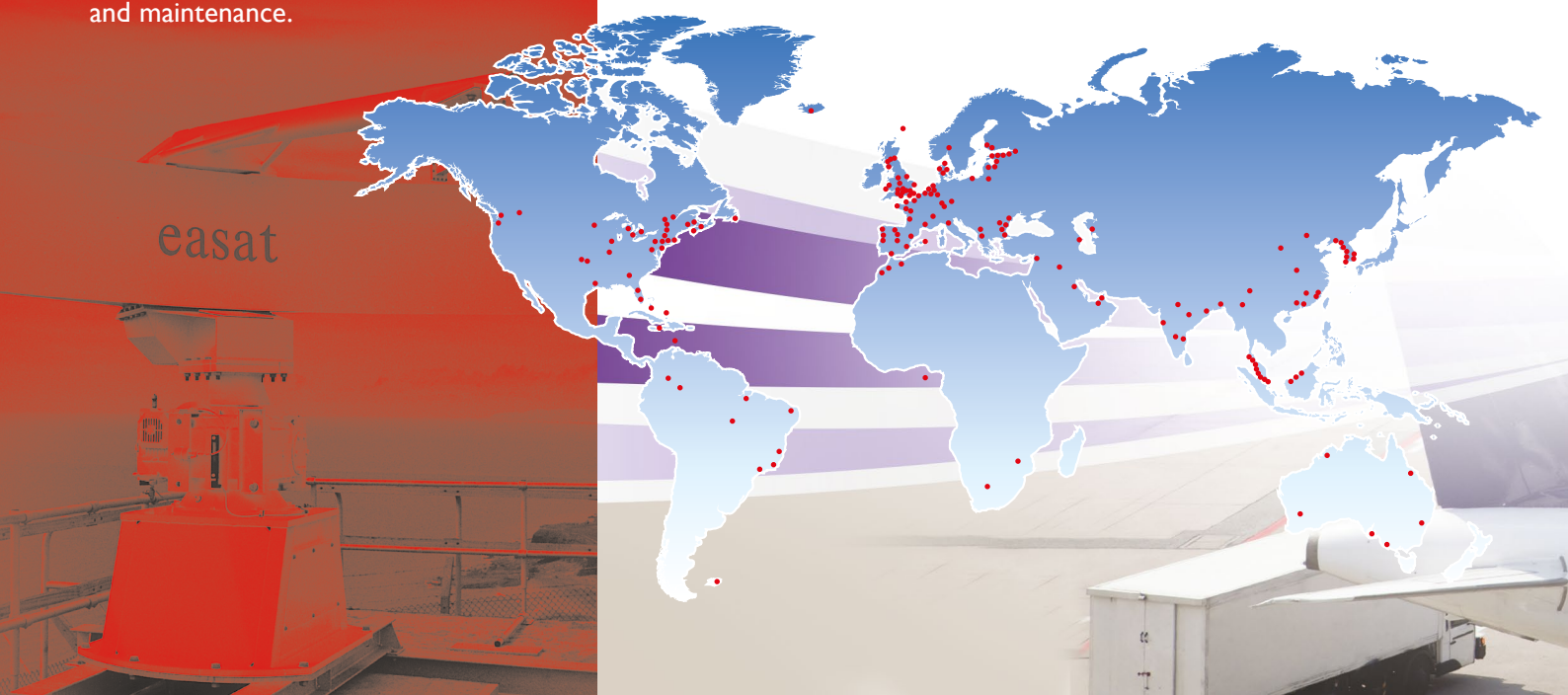
In contrast to other competitors, Easat can deliver a complete SMR turnkey package, from site survey to final safety case approval of the installed system. Our scope of supply includes all sensor equipment, civil engineering works, project management and long term equipment support, ensuring the highest level of through life support and maintenance.

## Surface Movement Radar Solutions

- Superior detection performance offerings to suit different environmental conditions through a choice of 3 antenna types
- Dual Redundant Solid State Transceiver providing enhanced performance resolution and detection
- Supply of complete radar sensor systems, replacement antennas or pedestals



- Full A-SMGCS compatible capability
- Frequency selection across 9.0 to 9.5GHz X-Band range for maximum flexibility
- Extremely high reliability and low life cycle cost compared to magnetron based system
- Compact design enables close location to the antenna to minimise waveguide runs and optimise detection range
- Frequency Diversity optimises probability of detection
- Fully compliant with EUROCAE and ICAO recommendations for surface movement radar





# X-Band Solid State Dual Redundant SMR Transceiver System

The system consists of 2 major units, the Dual Transceiver Unit and the Radar Distribution Unit.  
An optional Service Display can also be supplied.

## Dual Redundant Transceiver

The system will operate on a single transceiver basis; the redundant transceiver is configured in a hot standby functionality mode ready to transmit should a failure occur within the on-line transceiver.

Each transceiver has built in test equipment (BITE) that detects faults at an early stage and automatically allows the transmitter to transmit at reduced functionality. (Graceful degradation of power amplifier, dual receiver and processing cards)

The transceivers are designed either for installation within an equipment room down mast or housed in a self contained weather proof case for installation upmast to minimise waveguide losses.

## Radar Distribution Unit

The RDU with dual redundant DC power supplies provides automatic transceiver swap over in case of transceiver failure or periodically to maintain similar operating hours between the transceivers.

The RDU's asynchronous serial data link permits the external system to control the radar and receive status and BITE information.

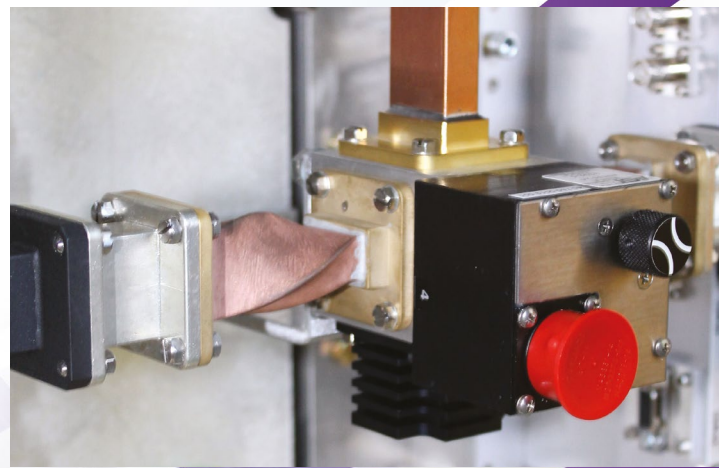
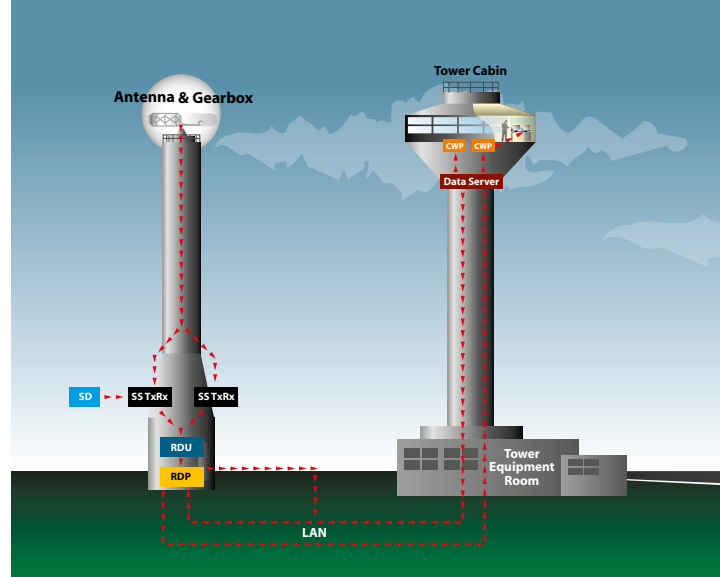
Analogue radar data is transmitted by the RDU to any external display system.

The RDU also has an integral display panel that allows local control of the attached radar, set up and BITE operation providing the following functionality:

- LOCAL/REMOTE control selection
- Local STANDBY/RUN control
- Status and BITE data display

## Service Display

In addition to the Radar Transceiver and the RDU, a Service Display can be provided. The Service Display enables local control, set up and monitoring of the radar system at the radar site, independently of the wider system.



### Radar Solutions Surpassing Expectations

Offering a choice of antennas and a Solid State X-Band Transceiver, Easat provides the most capable SMR package at an affordable price.

Easat's long term association with a number of respected A-SMCGS providers ensures that it can readily supply either a complete new system or integrate with existing airport systems.

Easat's high performance Linear Array Antenna provides standard features such as zero squint with frequency change, Ku band resolution with X-Band weather penetration and 40° lookdown capability without having to tilt the antenna.

Where longer range performance in poor weather is a requirement, Easat's Solid State X-Band Transceiver in combination with the EA3462 reflector with high gain (40dB) and low side lobes, provides unmatched performance.

When the SMR hardware is integrated into Easat's Slimline Monotube Tower the result is a unique, aesthetic, versatile, complete turnkey SMR Radar solution.



Description	Options	Description	Options
<b>Transceiver</b> Single Solid State TxRx Non-Redundant Unit Dual Redundant Solid State TxRx Power ≥ 180W Range Cell Size: 3m 8192 Azimuth Encoder Pulses Analogue Video Output Service Display Unit 16384 Azimuth Encoder Pulses Static Clutter Map and Blanking Map	● ● ● ● ● ● ● ●	<b>Turning Unit</b> EP0711 Cold Weather Kit (-50C) Tunable Anti-Vibration Mount Kit	● ● ●
<b>Antenna</b> EA7401M 7.4m Linear Array EA7401H 7.8m 'Anti-Icing' Linear Array EA3462 5.5m Reflector	● ● ●	<b>Towers</b> 20-40m Monotube Tower Integral Equipment Cabin Castell Interlock UPS Single or Dual Air Conditioning Security & Fire Detection System Additional Floors External Floodlighting	● ● ● ● ● ● ● ●
		<b>Other</b> 1-Year Warranty 2-Year Warranty Multi-Year Warranty	● ● ●

● Optional ● Standard