



easat[®]
RADAR SYSTEMS

7.4M PRINTED LINEAR ARRAY

COASTAL SURVEILLANCE RADAR SYSTEMS

The EA740IM is the latest offering from Easat and offers excellent RF performance.

The EA740IM printed linear array employs design and production techniques developed for mobile telecommunications applications to provide excellent RF performance.

The antenna is designed for very short pulse operation, consistent with a short minimum range requirement for surface movement radars and has been used with both solid state and magnetron based systems.

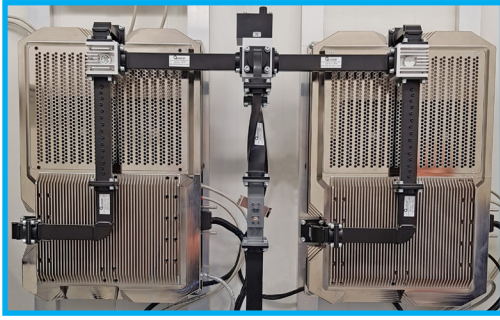
The antenna offers $\leq 0.32^\circ$ azimuth 3dB beam-width giving excellent range and azimuth resolution and provides operation with 25ns pulse width without pulse distortion. The antenna also offers zero squint with frequency, making it particularly suitable for use with frequency agile and frequency diverse systems.

Offering a high standard specification, the antenna includes circular polarisation for weather penetration and inverse cosec² beam shaping to minimise effects of rain clutter. Additionally, wide angle coverage, low weight and low noise make the EA740IM ideal for mounting on top of Visual Control Rooms.

- Parallel Feed Array – No Squint With Frequency
- $\leq 0.32^\circ$ Azimuth Beam-Width
- Circular Polarisation and Inverse Cosec² Beam-Shape
- Low Wind Resistance
- Wide Beam-Width



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Easat Solid-State, Dual Redundant 350 Watt X-Band Transceiver

General & Mechanical*

Type	Printed Linear Array
Nominal Dimensions (m)	7.4 x 0.25 x 0.5
Total Weight inc. Turning Gear & Motor (kg)	350
Stand Weight (kg)	100
Height inc. Pedestal & Stand (m)	1.35
Max. Swept Radius	3.7
Rotation Rate	Up to 22 RPM

Environmental*

Maximum Wind Speed	180 KPH (110 MPH) Operational 222 KPH (137 MPH) Survival
Temperature	-30°C to +70°C (-22°F to + 158°F) inc. Solar Gain
Humidity	Up to 100%
Altitude	Sea Level to 2,500m
Protection	Suitable for Coastal & Marine Environments
Design Life	20 Years
Rotation Rate	Up to 20 RPM

System Electrical Specification*

Beam Characteristics	X-Band, Squintless, Operating between 9.0 and 9.5 GHz	
Gain	35.5 dBi at 9.5 GHz	
VSWR at Transceiver	≤ 1.5:1	
Azimuth 3dB Beam-Width	≤ 0.32°	
Azimuth Side-Lobes (Peak)	Within ±10° ≤ -26 dB	Back-Lobes ≤ -40 dB
Elevation Beam-Shape	Inverse Cos ² to -40° below the Horizon	
ICR	≤ -15 dB in Azimuth and Elevation Planes	
Polarisation	Circular	

Options:

Single or Dual 4,096 or 8,192 Count Encoders, Gearbox Heaters, PC Interface