



PRODUCT INFORMATION & SPECIFICATIONS

COBRA 1M KA MULTIBAND MARITIME SATELLITE TERMINAL

- Certified for Inmarsat GX operation
- WGS Certification in progress



Acquires and tracks
satellites in GPS denied
environments

EM Solutions Model No:
COBRA-100-M2-Ka25-W-GX



COBRA-100-M2-KA25-W-GX

Ka Multiband Satellite Terminal

Cobra Maritime Terminal Family

Designed initially for the Australian Defence Force to operate at Ka-band on WGS satellites, and subsequently tailored for civilian use in emergency services applications, EM Solutions' Cobra satellite terminals affordably combine robust, resilient design and MIL-STD quality with a state of the art antenna feed for operation on either military or commercial Ka-band.

Increased System Availability

Increased system availability due to best-in-class pointing accuracy, a result of using closed-loop beacon signal processing and tracking. The terminal's proprietary monopulse pointing system minimises the pointing error to near-zero, which preserves the link budget and improves performance on marginal links.

Quickest re-acquire time

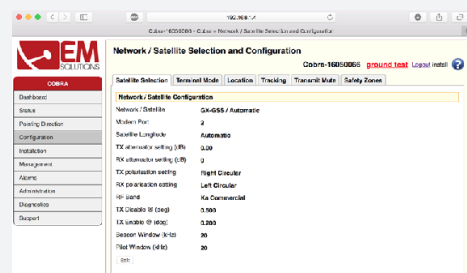
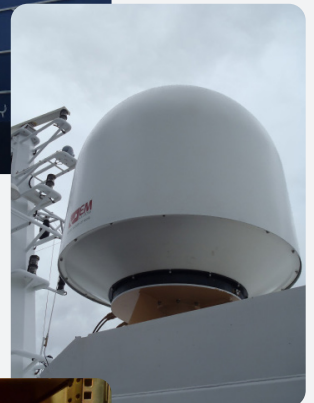
Quickest re-acquire time after obstruction, due to use of an innovative gyro-lock mode that predicts satellite direction during signal loss and readies the unit for immediate operation after the antenna clears the obstruction.

Continuous coverage over all ranges of motion

The terminal has a three-axis gimbal mount system, eliminating keyhole effect and sync losses when the satellite is close to overhead. Other systems struggle to rotate quickly enough to maintain pointing.

Reduced maintenance and power consumption

Reduced maintenance and power consumption due to the use of high life, sealed brushless motors, and the balanced inertial system mass that minimises internal movement of the antenna and reduces power consumption to a mere few watts over the Block Up Converter(s) fitted.



SPECIFICATIONS

SPECIFICATIONS	Ka-BAND MILITARY	Ka-BAND COMMERCIAL
Antenna Size	1m (nom)	
RF Frequency	Rx: 20.2 to 21.2 GHz Tx: 30.0 to 31.0 GHz	Rx: 19.2 to 20.20 GHz Tx: 29.0 to 30.0 GHz
	Switchable between Commercial and Military operating bands via Ethernet User Interface	
G/T (10° elevation)	>20.1 dBK	
Antenna Gain (mid band)	Rx 42dB min Tx 48dB min	
EIRP (linear) (fitted with EM Solutions 01-360A 25W Ka Multiband Diamond Series BUC; supports Inmarsat GX power specification)	>60dBW	55.0dBW (for GX Operation)
Polarisation	Circular (electronically switchable)	
Sidelobes	Mil-Std-188-164	
Pointing Error	<0.2deg	
Height (radome)	1500mm	
Base Footprint	850mm diameter	
Weight	<170kg	
Power Consumption	<750W	
Environmental	Tested in accordance to MIL-STD-810G CN1 and IEC 60945:2002 Compliant to Inmarsat GX Requirements	
Supply Voltage	90-264V AC	
Pedestal Type	3 axis, Az 360° continuous, EL -20° to +110°, XEL ±25°	
Tracking Type	Monopulse tracking on Ka-band Beacon or User Defined Carrier	
INU & Gyros	Embedded	
Modem Support (three modem ports available)	Compatible with Viasat EBEM MD-1366 modem or equivalent	Integrated Inmarsat GX modem or switchable to Customer supplied modem
Satellite Operator Certifications	WGS (pending late 2016)	Inmarsat GX
Regulatory	IEC 60945 IEC 60950 C tick Compliant to Inmarsat GX Requirements	
EM Solutions Part Number	01-368A	

COBRA-100-M2-KA25-W-GX

Ka Multiband Satellite Terminal

Environmental Specification Summary

Temperature

High Temperature IEC 60068-2-2

Low Temperature IEC 60068-2-1

Solar Radiation

IEC 60945 Annex B

Rain Spray

IP X6 IEC 60529

Humidity

IEC 60068-2-30 Test Db Variant 1

Salt Fog / Corrosion

IEC 60945 (Exposed)

Sand and Dust

ID 5X IEC 60529

Mechanical Vibration of Shipboard Equipment

Functional IEC 60945

Survival IEC 60721-3-6 Class 6M3

Shock / Bump

Functional IEC 60945

Survival IEC 60721-3-6 Class 6M3

Electromagnetic / Radiofrequency Interference (EMI / RFI)

IEC60945:2002 (Section9.2 Conducted Emissions-Protected, Section9.3 Radiated Emissions-Protected)

Electromagnetic Immunity

IEC 60945:2002 :

- Section 10.3 Immunity to conducted radio frequency disturbance
- Section 10.4 Immunity to radiated radio frequencies
- Section 10.5 Immunity to fast transients on AC power, signal and control lines
- Section 10.6 Immunity to surges on AC power lines
- Section 10.7 Immunity to power supply short-term variation
- Section 10.8 Immunity to power supply failure.
- Section 10.9 Immunity to electrostatic discharge.