

COBRA 1M X/Ka TRIBAND MARITIME SATELLITE TERMINAL

- Inmarsat GX certified
- WGS Phase 3 certified
 - Ka-Band only or simultaneous X- and Ka-Band options

Acquires and tracks
satellites in
GPS denied environments



EM Solutions Model No:
COBRA-M3-K25-X50

COBRA-M3-K25-X50

X/Ka Triband 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 simultaneous operation in X-and military Ka-band, with the option to automatically switch to commercial Ka-band in the event of congestion.

● 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	X-BAND	Ka-BAND MILITARY	Ka-BAND COMMERCIAL
Antenna Size	1m		
RF Frequency	Rx 7.25 to 7.75 GHz Tx 7.9 to 8.4 GHz	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
	Simultaneous operation possible with Ka Band	Switchable between Commercial and Military operating bands via Ethernet User Interface	
G/T mid band	>13dB/K	>20dBK	
Antenna Gain	Rx 36dB Tx 36dB	Rx 42dB min Tx 48dB min	
EIRP (linear)	49dBW (@P1dB) *with EMS 50W GaN BUC	60dBW min (linear power) (fitted with EM Solutions O1-360A 25W Ka Multiband Diamond Series BUC; supports Inmarsat GX power specification)	
Polarisation	Circular		
Sidelobes	Mil-Std-188-164		
Pointing Error	<0.2deg		
Height (radome)	1500mm		
Base Footprint	850mm diameter		
Weight	225kg		
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 ±35°		
Tracking Type	Monopulse on X- or 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 Phase 3 complete		Inmarsat GX
Regulatory	IEC 60945 IEC 60950 C tick Compliant to Inmarsat GX Requirements		

COBRA-M3-K25-X50

X/Ka Triband 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
-