

# AUTO-EXPLORER 1.2M Ka-Band



## Ka-Band Satellite Communications Terminals

Globecomm's Auto Explorer Product family now includes a Ka-band variant specifically tailored for the WGS constellation of satellites. With the first satellite now operational in the Pacific region and a second one scheduled for IOT this summer, demand for small, lightweight Ka-band VSAT products is ever increasing. Globecomm recently was awarded a contract from the US Government to deliver a 1.2 meter system in May 2009 with ARSTRAT/WGS certification. Pre-certification test data is complete and fully compliant with the mandatory requirements. Some of the notable features of this product include:

- ARSTRAT/WGS Certification (in-process, completion May 2009)
- Full MIL-STD-188-164A Compliance including
  - $\pm 2$  db Amplitude Response over 1 GHz bandwidth
  - Carrier Frequency Accuracy
  - Receive Chain Absolute Gain supports  $-95$  dBm/Hz
  - Pointing Accuracy
- Internal or External 10 MHz Reference Capable, Auto Switching
- 12 watt Block Up Converter/Solid State Power Amplifier
- L-band Modem Agnostic (e.g. MIL-STD-188-165A compliant unit)
- Automatic Satellite Acquisition, One Button Deploy and Stow
- Set-up in less than 15 minutes, No tools required
- 50 or 100 foot IFL Cable Reel
- Ruggedized Design and Case Packout for military/tactical users
- Dual Band Capable (Ka/Ku or Ka/X)
- Terminal Management Software (TMS) Graphical User Interface for simple operation

**Globecomm unveils new  
Product at the Satellite  
2009 Conference:  
Ka-band Auto Explorer  
terminal designed for  
WGS operation.**

## Product Description

Globecomm Systems' Auto Explorer Satellite Communications terminals provide high bandwidth, two-way transmission designed to meet the challenging demands of military and government agency users with Globecomm's proven performance, quality and reliability. This cost effective platform extends your network reach to remote locations where traditional telecommunication infrastructure is either inadequate or non-existent. Several applications are ideally suited for this platform- Voice, Data, VTC, Internet Access, VPN, LAN-to-LAN, VoIP, Military Command and Control.

**System Performance**

G/T	23.0 dB/K at 20.7 GHz, 30 Deg Elevation
Maximum EIRP	60.3 dBW at 30.5 GHz
Maximum Linear EIRP	57.3 dBW at 30.5 GHz
Transmit to Receive Isolation	<0.1 dB
Antenna Pointing Accuracy	Per MIL-STD-188-164A
Thermal Noise EIRP	Per MIL-STD-188-164A
Extraneous Emissions	Per MIL-STD-188-164A
Downlink Output Noise Power	-95 dBm/Hz

**Antenna Performance**

	<b>Specification (Receive)</b>	<b>Specification (Transmit)</b>
Frequency	20.2-21.2 GHz	30.0-31.0 GHz
Gain (Mid-band)	46.4 dBi	49.6 dBi
VSWR	1.30:1	1.30:1
Axial Ratio	<1.5 dB	<1.0 dB
Beamwidth (degrees)		
-3 dB	0.9	0.6
-10 dB	1.5	1.1
Radiation Pattern Compliance	FCC and MIL-STD-188-164A	
Polarization	Circular, convertible to either RHCP or LHCP	
Tx-Rx / Rx-Tx Isolation	85 dB	
Azimuth and Elevation Drive System	Patented Roto-Lok® Cable Drive System	
Travel	Azimuth: 180° Elevation: 8 to 90° [True elevation readout from calibrated inclinometer]	
Speed	Slewing/Deploying 8°/sec in Azimuth, 5°/sec in Elevation Peaking 0.2°/second	
Motors	24V DC Variable Speed with Optical Encoders	
Waveguide	Receive Port: WR 42 Transmit Port: WR-28	
Manual Drive	Hand-crank on Azimuth and Elevation Axes	

**General Performance**

Input Power	90-260 VAC 47-63Hz auto-ranging, 275 watts typical
Temperature	-30 to 55° C (Operational) -40 to 70° C (Storage)
Humidity	Up to 100% condensing
Wind	30 mph gusting to 45 mph (Operational)
Altitude	10,000 ft / 3,048 meters (Operational) 40,000 ft / 12,192 meters (Storage)
Sand/Dust	Method 510.4 per MIL-STD-810F
Transportation	Method 514.5 per MIL-STD-810F

**Case Packaging (Transport)\***

	<b>Weight (lbs)</b>	<b>Dimensions (inches)</b>	<b>Volume (ft3)</b>
Pedestal Case	110	20" x 20" x 20"	4.6
Reflector/Legs Case	125	52" x 28" x 28"	23.6
Electronics/IFL Case	160	48" x 35" x 26"	25.3
Modem/Laptop Case	105	35" x 27" x 18"	9.8

\*Alternate packout configurations available – consult the factory.  
Specifications are subject to change without notice.



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