VIASAT GLOBAL MARITIME TERMINAL 6514

Ku/Ka Multiband Terminal with Electronic Band Select

The Viasat Global Maritime Terminal - 6514 (GMT-6514) is a Ku/Ka-band maritime SATCOM terminal that enables connectivity for ships, small to large, on the world's highest-capacity satellite networks. In collaboration with Cobham, Viasat developed a 70 cm antenna to allow maritime users to roam across Viasat's Hybrid Adaptive Network (HAN) — composed of high-capacity Ka-band networks and Viasat's global Ku-band network — to support their real-time communication needs. Whether it is sending an email or partaking in more data-intensive applications such as streaming media, the GMT-6514 and Viasat's HAN enables seamless connectivity for all operations and to everyone on board.

This dual-band terminal is a low SWaP (size, weight, and power) solution that can operate on a stand-alone network, or interoperate with existing networks, no longer limiting the users on board to the legacy technology. Paired with Viasat's Ka and Ku-band HAN, the Viasat GMT-6514 provides a consistent roaming experience. The launch of ViaSat-2 expands Ka-band coverage across North and Central America, Caribbean, and trans-Atlantic routes, and the ViaSat-3 constellation of 1 Tbps Ka-band satellites (projected launch in 2022) will provide users with a global, broadband-at-sea internet service.

Staying connected should not stop at sea. Viasat enhances the on-board experience by bringing commercial TV content, broadcast and video on demand, to an end-user device. Partnering with a content management system, Viasat delivers locally hosted content including training, periodicals/publications, documents/forms, MWR services, daily messaging/notifications, and more to those on board.

Viasat innovations available to maritime users:

› Viasat's HAN enables high-speed internet and video streaming

› Transmit bandwidth-intensive, media-rich applications, from MWR services and entertainment to real-time transfer of ships' operational data

› Bandwidth assurance from our high-capacity satellites enables 4k and HD video streaming to thousands of electronic devices simultaneously

› With Viasat Mobile Dynamic Defense (MDD) software, sailors have the ability to remotely or locally (without live networks access) provision and configure mobile devices

› Real-time, active cyber defense that monitors, correlates, and attributes threats with real-time visualization, analysis, management and response

Viasat GMT-6514 At-a-Glance

› Viasat & Cobham partnered to deliver the next generation of dual-band maritime antennas

› Supports internet browsing, email, VPN access, teleconferencing, streaming media, and more

› Certifications compliant with CE (Maritime), ETSI, FCC

› Automatic antenna stabilization

› Advanced cybersecurity with Policy Enforcement for OPSEC

› Operating over Viasat high-capacity Ka-band satellite networks allows those on board to experience high-quality personal and ship/command content at significantly lower subscription costs

› Leveraging our commercial airlines innovation — streaming subscriptions services to 300+ passengers — for our maritime users

› Extended Ku-band and full ITU Ka-band allows worldwide coverage on commercial or government satellite networks and supports operations on the HAN

› 24/7 Network Operations Center support

Viasat GMT-6514

SYSTEM SPECIFICATIONS

Frequency band	Ku-Band and Ka-Band
Reflector size	27.5 in. (70 cm)
Type approvals	Viasat
Certification	Compliant with CE (Maritime), ETSI, FCC
Vibration, operational and survival	IEC 60945 (8.7.2) with proper dynamic designed mount
Shock	MIL-STD-901D, Grade B, Class I, Cat A
Temperature (ambient)	Operational: –25°C to 50°C Storage: –40°C to 85°C
No transmit zone	Programmable; 8 zones with azimuth and elevation per antenna; dual antenna support to mitigate superstructure blockages
Navigation interfaces	1 x NMEA 0183 (RS-422 or RS-232) for Gyro/GPS compass input (future NMEA2000)

ANTENNA SPECIFICATIONS

ANTENNA SPECIFICATIONS	Ku-band	Ka-band
Transmit	13.75 to 14.5 GHz	27.5 to 31.0 GHz
Receive	10.7 to 12.75 GHz	17.7 to 21.2 GHz
G/T at altitude, mid-band, with radome losses, 40°	14.5 dB/K	16.7 dB/K
EIRP at altitude, mid-band with radome losses	49.9 dBW	57.7 dBW
SSPA	20W	10 and 20 W modes
Antenna patterns	FCC 25.218 ETSI EN 302340	FCC 25.218, ETSI EN 303978
Antenna/motion control	Brushless DC servomotors with embedded ACU and motion sensors, below deck Media Access Point (MXP)	
Antenna type, pedestal	3-axis stabilized tracking antenna with integrated GNSS	
Antenna type, reflector system	Viasat Ku/Ka dual band patent pending	
Antenna system tracking	Modem RSSI/Optional tracking receiver	
Ku polarization	Ku V/H or H/V Tx/Rx linear polarization, electronically commutated	
Ka polarization	Ka circular co-pol or cross-pol electronically selectable and reversible.	
Elevation range	–15° to +115°	
Cross elevation	±35°	

Terminal can be WGS certified with customer sponsorship.

ANTENNA SPECIFICATIONS (CONTINUED)

Frequency Band Change (Ku to Ka or Ka to Ku)	› Electronically from MXP GUI › Selectable Ku or Ka (no manual feed or RF electronic swapping)
Azimuth range	Unlimited (Rotary Joint)
Ship motion, angular	Roll ±25°/S, Pitch ±15°/S, Yaw ±10°/S
Ship, turning rate and acceleration	15°/S and 15°/S2
Ant. motion, linear	Linear accelerations ±2.5 g max any direction
Satellite acquisition	Automatic — with or without Gyro/GPS Compass input
Humidity	95%, condensing
Rain / IP class	EN60945 Exposed / IPX6
Wind	125 mph (200 km/h) operational
Ice, survival	1 in. (25mm)
Solar radiation	1120 W/m2
Maintenance	Major subassemblies are accessible at sea with radome removed
Built-in test	Power on self test
Power supply range	100 to 240 VAC, 50/60 HZ
Antenna power consumption	250W typical, 410W peak
Weight	146 lb (66.2 gk)
Height	41.0 in. (1.04 m)
Diameter	33.5 in (0.85 m)

BELOW DECK EQUIPMENT

Ku/Ka-band	Viasat and 3rd party modem support
Baseband interfaces	› Data: 1000 BASE-T Ethernet › Control: 1000 BASE-T Ethernet
Third party modem support	› Transmit Frequency: 950 to 1700 MHz › Receive Frequency: 950 to 2150 MHz
M&C, below deck	IP based TCP console with configuration GUI
Temperature	› Operational: 0°C to 40°C › Storage: –40°C to 85°C
Power supply range	100 to 240 VAC, 50/60 Hz
Power consumption	500 W typical, 640 W peak
Size	7 RU (19" Rack)
Weight	20 - 30 lb. (9.1 - 13.6 kg)

Global headquarters
6155 El Camino Real, Carlsbad, CA 92009-1699, USA

Inside Sales
TEL   888 842 7281 (US Toll Free)
EMAIL   insidesales@viasat.com