

# VIASAT GLOBAL MARITIME TERMINAL 6524

## Ku/Ka Multiband Terminal with Electronic Band Select

The Viasat Global Maritime Terminal - 6524 (GMT-6524) is a Ku/Ka-band maritime SATCOM terminal that enables connectivity for ships, small to large, on the world's highest-capacity satellite networks. Viasat, in collaboration with Cobham, developed a 1 meter 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 accessing mission critical systems or relying on data-intensive applications such as streaming media, the GMT-6524 and Viasat's HAN enables seamless connectivity for all operations and to everyone on board.

This dual-band terminal 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-6524 provides a consistent roaming experience. The recent 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 2021) 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. Utilizing 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 to everyone on board
- › 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
- › Mission and route planning, secure web-based monitoring, and visibility into communication assets & services through Viasat Network Operations Center (NOC) and Unified Portal



## Viasat GMT-6524 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 any commercial or government satellite networks and supports operations on the HAN
- › 24/7 Network Operations Center support

# Viasat GMT-6524

## SYSTEM SPECIFICATIONS

<b>Frequency band</b>	Ku-Band and Ka-Band
<b>Reflector size</b>	39.3 in (1 m)
<b>Type approvals</b>	Viasat
<b>Certification</b>	CE (Maritime), ETSI, FCC
<b>Vibration, operational</b>	IEC 60945 (8.7.2)
<b>Vibration, survival</b>	IEC 60945 (8.7.2)
<b>Shock</b>	MIL-S-901D, Grade B, Class I, Type A
<b>No transmit zone</b>	Programmable; 8 zones with azimuth and elevation per antenna; dual antenna support to mitigate superstructure blockages
<b>Navigation interfaces</b>	1 x NMEA 0183 (RS-422 or RS-232) for Gyro/GPS compass input (future NMEA2000)

ANTENNA SPECIFICATIONS	Ku-band	Ka-band
<b>Transmit</b>	13.75 to 14.5 GHz	27.5 to 31.0 GHz
<b>Receive</b>	10.7 to 12.75 GHz	17.7 to 21.2 GHz
<b>G/T mid-band, with radome losses, 45°</b>	18.5 dB/K	18.2 dB/K
<b>EIRP mid-band with radome losses</b>	51.8 dBW	58 dBW
<b>SSPA</b>	16 W Std. 40 W Opt.	10 and 20 W modes
<b>Antenna patterns</b>	FCC25.138/25.222 ETSI EN 302 340	MIL-STD-188-164B and FCC25.209 ETSI EN 303 978
<b>Antenna/motion control</b>	Brushless DC servomotors with embedded ACU and motion sensors, below deck Media Access Point (MXP)	
<b>Antenna type, pedestal</b>	3-axis stabilized tracking antenna with integrated GNSS	
<b>Antenna type, reflector system</b>	Reflector/sub-reflector, ring focus	
<b>Analogue tracking receiver/modem RSSI</b>		
<b>Ku polarization</b>	Ku linear, dual LNB for Co or X-pol, electronically selectable and reversible with skew control	
<b>Ka polarization</b>	Ka circular co-pol or cross-pol electronically selectable and reversible.	
<b>Elevation range</b>	-15° to +115°	
<b>Cross elevation</b>	±35°	

Terminal can be ARSTRAT certified with customer sponsorship.

## ANTENNA SPECIFICATIONS (CONTINUED)

<b>Frequency Band Change (Ku to Ka or Ka to Ku)</b>	<ul style="list-style-type: none"> <li>› Electronically from MXP GUI</li> <li>› Selectable Ku or Ka (no manual feed or RF electronic swapping)</li> </ul>
<b>Azimuth range</b>	Unlimited (Rotary Joint)
<b>Ship motion, angular</b>	Roll ±25°, Pitch ±15°, Yaw ±8°
<b>Ship, turning rate and acceleration</b>	12°/s and 15°/s <sup>2</sup>
<b>Ant. motion, linear</b>	Linear accelerations ±2.5 g max any direction
<b>Satellite acquisition</b>	Automatic — with or without Gyro/GPS Compass input
<b>Humidity</b>	100%, condensing
<b>Rain / IP class</b>	EN60945 Exposed / IPX6
<b>Wind</b>	125 mph (200 km/h) operational
<b>Ice, survival</b>	1 in. (25mm)
<b>Solar radiation</b>	1120 W/m <sup>2</sup>
<b>Maintenance</b>	Major assemblies are replaceable through service hatch
<b>Built-in test</b>	Power On Self Test
<b>Temperature (ambient)</b>	Operational: -25°C to 50°C * Optional heater: -40°C * Optional air conditioner: 55°C Storage: -40°C to 85°C
<b>Power supply range</b>	100 to 240 VAC, 50/60 Hz
<b>Antenna power consumption</b>	200 W typical, 410 W peak
<b>Weight</b>	350 lb (159 kg)
<b>Height</b>	59 in. (150 cm)
<b>Diameter</b>	53.5 in. (136 cm)

## BELOW DECK EQUIPMENT

<b>Ku/Ka-band</b>	Viasat and 3rd party modem support
<b>Baseband interfaces</b>	<ul style="list-style-type: none"> <li>› Data: 1000 BASE-T Ethernet</li> <li>› Control: 1000 BASE-T Ethernet</li> </ul>
<b>Third party modem support</b>	<ul style="list-style-type: none"> <li>› Transmit Frequency: 950 to 1450 MHz</li> <li>› Receive Frequency: 950 to 2150 MHz</li> </ul>
<b>M&amp;C, below deck</b>	IP based TCP console with configuration GUI
<b>Temperature</b>	Operational: 0°C to 40°C Storage: -40°C to 85°C
<b>Power supply range</b>	100 to 240 VAC, 50/60 Hz
<b>Power consumption</b>	500 W typical, 640 W peak
<b>Size</b>	10 RU (19" Rack)
<b>Weight</b>	21.6 - 26.6 lb (9.8 - 12.1 kg)

### Global headquarters

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