



MPT™ – Multi-Purpose Terminal

Shipborne Stabilized VSAT System

Versatile Solutions for USVs & Small Vessels

Orbit's Multi-Purpose Terminal is an innovative family of stabilized VSAT systems, delivering high-quality broadband communications via satellite.

Built to fulfill the "anytime, anywhere" coverage requirements of the military and government airborne satcom markets, MPT supports Ku or Ka frequency bands.

The compact systems are suitable for installation on USVs & small ships to enable reliable and fast broadband communication, even in the middle of the sea, while withstanding harsh environmental conditions. The low-size, low-weight and low-power (SWaP) user terminals don't compromise the ship's stability. They can deliver more than 126 Mbps forward link and 29 Mbps return link, while maintaining uninterrupted connectivity during all mission phases – even where there is strong emissions from ship's sensor systems, the MPT continues to operate without interruption.

The terminals comply with industry standards, Federal Communications Commission (FCC) and European Telecommunications Standards Institute (ETSI), and are compatible with military satellite systems, making them an ideal choice for Intelligence, Reconnaissance, and Surveillance (ISR) naval applications, as well as meeting the 'everywhere, all-the-time' coverage requirements of military users.

Orbit offers a complete range of shipborne building blocks, including modems, BUCs, RF tracking functionality and ground stations, that maximize flexibility and enable future scalability. Its MPT series adheres to the most stringent worldwide satcom and environmental regulations. The MPT series is also available with Roll-On/Roll-Off functionality, allowing for straightforward installation or removal from a vessel.

Key Features

- Multiband support
- Optimized Size Weight and Power (SWaP)
- Various types of INS are supported
- Signal RF tracking with either built-in receiver or third-party RSSI source
- Redundant communication ports supporting Ethernet/Serial interfaces
- Continuous cable-less polarization compensation for Ku-band
- Low to no BUC-to-Antenna Insertion Loss
- MIL-STD-188-164C, RTCA DO-160G, MIL-STD-810G, MILD-STD-461G F/G certification



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Parabolic Solution

30- to 90-cm circular antenna terminals supporting Ku or Ka bands.

T System Specifications

	MPT 30	MPT 46	MPT 60	MPT 87
Parameters				
Frequency Range	Ku-band - Tx: 13.75-14.5 GHz, Rx: 10.95-12.75 GHz Ka-band - Tx: 29.0-31.0 GHz, Rx: 19.2-21.2 GHz			
Antenna Size	30 cm	46 cm	60 cm	87 cm
Polarization	Ku-band: Linear V/H or H/V electrically selectable Ka-band: Circular RH/RH, RH/LH, LH/RH or LH/LH electrically selectable			
G/T (Typical, at mid-range, at 30° elevation, without radome) at ground level	Ku-band: 9.0 dB/°K Ka-band: 10.0 dB/°K	Ku-band: 12.4 dB/°K Ka-band: 13.7 dB/°K	Ku-band: 14.5 dB/°K Ka-band: 15.9 dB/°K	Ku-band: 17.0 dB/°K Ka-band: 18.8 dB/°K
EIRP (without radome) using 50W BUC (both Ku and Ka)	Ku-band: 45.8 dBW Ka-band: 52.0 dBW	Ku-band: 50.4 dBW Ka-band: 56.7 dBW	Ku-band: 52.7 dBW Ka-band: 59.0 dBW	Ku-band: 56.0 dBW Ka-band: 62.0 dBW
Pedestal Type	Elevation Over Azimuth			
Azimuth Range	Continuous 360°			
Elevation Range (mechanical)	0° to 90°			
Signal Tracking Accuracy	Better than 0.15 dB RMS			
Weight (w/o radome & BUC)	~ 10 Kg	~ 12 Kg	~ 15 Kg	~ 28 Kg
Environmental Conditions	According to RTCA DO-160G/MIL-STD			

Note: Orbit offers variety of frequency-band configurations (Ka-band, ITU range) and turnkey solutions (including modem, RF tracking, ground station, etc.) ensure fast delivery and timely in-service dates.

