



# MPT™ – Multi-Purpose Terminal

Submarine Stabilized VSAT System

## Versatile Solutions for Submarines

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 submarines 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 submarine 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 are strong emissions from submarine 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.



### 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, MIL-STD-461G F/G certification

### Advantages

- Fast Antenna lock on the desired satellite, reduce the exposure time of the submarine
- Antenna high spectral efficiency, resulting best performance in the market
- Easy installation, 3 LRUs solution (Antenna, KPSU, Modem)
- Silent Operation VSAT Terminal to support stealth submarine, ensuring secure and undetectable communications with minimal noise

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## Parabolic Solution

30- to 46-cm circular antenna terminals supporting Ku or Ka bands.

## T System Specifications

	MPT30Ku	MPT46Ku	MPT30Ka	MPT46Ka
Dish Size	30cm / 12"	46cm / 18"	30cm / 12"	46cm / 18"
Frequency Range	Tx: 13.75–14.5 GHz Rx: 10.95–12.75 GHz		Tx: 29.0–31.0 GHz Rx: 19.2–21.2 GHz	
Polarization	Linear V/H or H/V electrically selectable		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	9.0 dB/°K	12.0 dB/°K	10.0 dB/°K	13.7 dB/°K
EIRP (without radome), Psat	45.8 dBW	50.4 dBW	52.0 dBW	56.7 dBW
Pedestal Type	Elevation Over Azimuth			

Note: Orbit offers a 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.

