MPT™ – Multi-Purpose Terminal

Airborne Stabilized VSAT System

Versatile Solutions for Airborne Platforms

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

Built to fulfill the "anytime, anywhere" coverage requirements of the military and government airborne satcom markets, MPT supports Ku, Ka and X frequency bands. By providing outstanding RF performance and dynamic response under the harshest environmental conditions, it meets the critical, high-speed communications needs of ISR platforms, mission aircraft, Unmanned Aerial Systems (UAS), helicopters and more.

Today's defense industries are not only demanding optimized Size, Weight and Power consumption (SWaP) characteristics for their broadband communications systems, but also superior reliability and endurance. Orbit is a market leader in providing agile and compliant solutions suitable for any airborne application and integration requirement.

With more than 1,600 airborne systems operating around the world, Orbit's customers include fixed- and rotary-wing, High- and Medium-Altitude Long-Endurance (HALE/MALE), aircraft manufacturers, airborne systems integrators, communications service providers, government agencies, armed forces, and Maintenance, Repair and Overhaul (MRO) companies.

Orbit offers a complete range of airborne building blocks, including airborne 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 and complies with military standards and/or RTCA DO-160 F/G.

Key Features

- Multiband support
- Optimized Size Weight and Power (SWaP)
- Stabilization using various types of aircraft INS
- Signal RF tracking with either built-in receiver or third-party RSSI source
- Redundant communication ports supporting Ethernet/ Serial/ARINC429 interfaces
- Continuous cable-less polarization compensation for Ku-band
- Low to no BUC-to-Antenna Insertion Loss
- Mil-STD and/or RTCA DO160 F/G certification

Parabolic Solution

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

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MPT 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
G/T (Typical, at mid-range, at 30° elevation, without radome) at 35,000 ft	Ku-band: 10.3 dB/°K Ka-band: 11.7 dB/°K	Ku-band: 13.7 dB/°K Ka-band: 15.2 dB/°K	Ku-band: 16.0 dB/°K Ka-band: 17.2 dB/°K	Ku-band: 18.0 dB/°K Ka-band: 20.1 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 Airborne RTCA DO-160G/MIL-STD			

Note:
Orbit's flight-tested building blocks, 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.

orbit
Connectivity in Motion

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