



STANDARD
MIL-STD
810

STANDARD
MIL-STD
461

STANDARD
MIL-STD
188-164

Size:

1.80m

PXY-180-MIL

Ultra-Mobile X/Y Pedestal for Multi-Orbit Satellites

The PXY-180-MIL is an ultra-mobile, small-footprint X/Y pedestal engineered for rapid high-speed connectivity across LEO, MEO, GEO, and HEO satellite regimes. Fully compliant with MIL-STD-810 and MIL-STD-461, the system packs into compact transit cases for effortless tactical deployment and achieves a complete tool-free setup in less than 30 minutes.

Mission Agility & Target Acquisition

Designed for maximum operational flexibility, the terminal supports standby, manual, pointing, program, auto, and memory tracking modes. It autonomously acquires targets using modem SNR, beacon, or carrier signals without external equipment. Real-time spectrum monitoring is available through an intuitive web GUI or an ACU-connected tablet, while dual GPS receivers enable rapid multi-orbit acquisition.

Precision Tracking & Modular Architecture

A high-performance servo mechanism delivers smooth, zero-keyhole tracking during high-speed satellite passes. The modular architecture allows a single operator to quickly replace sub-components and switch frequency bands in the field. A single power source feeds all critical internal modules, while tool-less quick-release captive bolts simplify hardware replacement and firmware updates.

Key Features

- Precision Carbon Fiber Reflector
- Quickly Replaceable Feed and RF Chain
- Integrated Monitoring System on web GUI
- Modular Design
- 10MHz High Stability Reference
- TLE tracking
- Embedded Spectrum Analyzer Display (Optional)
- Auto Pointing on Beacon/DVB/Modem/SNR
- Overhead full tracking capability
- Easy to deploy



GENERAL SPECIFICATIONS

Reflector Diameter	1.8 m Carbon - Fiber
Reflector Type	Segmented
Tracking Method	Sun, TLE, Program Tracking
Power Supply	1 Phase 120-240 VAC 50/60 Hz
DC Power Input	24 to 48VDC

RF CHARACTERISTIC

	X-Band	Ku-Band	Ka-Band
Frequency (GHz) Tx	7.90 - 8.40	13.75 - 14.50	27.5 - 31.0
Frequency (GHz) Rx	7.25 - 7.75	10.70 - 12.75	17.7 - 21.2
Antenna Gain @ (±0.2 dBi) Tx	≥ 41.3	≥ 46.2	≥ 51.5
Antenna Gain (±0.2 dBi) Rx	≥ 40.5	≥ 45.2	≥ 48.0
RF interface	WR-112	WR-75	Tx WR-28, Rx WR-42
Polarization	Circular	Linear	Circular
Axial Ratio (dB)	≤1.2	≥35 (CPI)	≤ 1.2 (Rx) / ≤1.0 (Tx)
Antenna Pattern Compliance	Compliant with MIL-STD-188-164C, ITU-R S.580-6 & ITU-R S.465-6		

MECHANICAL SPECIFICATIONS

	X Axis	Y Axis	Polarization for Ku-Band
Antenna Motion Range	± 90°	± 90°	± 90°
Antenna Drive Rate	0.1° - 6° /s	0.1° - 6° /s	0.1° - 6° /s
Antenna Acceleration	5° / sec²	5° / sec²	3° / sec²
Motor	DC Brushless Servo with Brakes	DC Brushless Servo with Brakes	DC Brushless Servo with Brakes

ENVIRONMENTAL SPECIFICATIONS

	PXY-180-MIL
Temperature Range Operational	-30°C - +55°C
Temperature Range Survival	-40°C - +70°C
Wind Speed Operational	Gusting 72 km/h
Wind Speed Survival	Gusting 120 km/h
Protection Grade	IP65
Solar Radiation	1135W/m²
Relative Humidity	%100 Condensed

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Specifications are subject to change.