PALS® | Communications & Technology

Your Gateway to the Q/V Band

Size: 1.8m

PQV-180

Gateway Application for LEO/MEO

PALS new 1.8m Q/V-Band earth station antenna designed for communication with LEO and MEO satellite constellations. It has a cassegrain optics and high-speed slewing making it suitable for tracking faster targets. Serves as gateway terminal for feeder and gateway links. A-E-C axis positioner eliminates zenith keyhole effect, enabling uninterrupted tracking during overhead passes.

RF & Mechanical Design

Carbon-fiber composite construction prevents thermal distortion and defocusing. Ultra-precise surface accuracy delivers RF efficiency across standard Ka-band and high-capacity Q/V-band millimeter-wave frequencies, maximizing data capacity of feeder and gateway links. Integrated hub monopulse tracking, embedded controller, and high-precision beacon receiver. Rugged radome with dedicated environmental control system.

Deployment & Integration

Software-guided calibration removes manual field alignment. Reflector installation completed within one day. All electronics, accessories, and RF components are fully integrated within the same hub unit. Modular design enables easy upgrades for future network architectures and frequency expansions.

Key Features

- Superior Performance at Ka and Q/V Band
- Embedded controller and beacon receiver
- Program, Monopulse TLE Tracking
- No Zenith keyhole, zero signal loss on overhead passes
- Continuous remote status reporting
- Integrated AC in the radome
- Automated fault analyses
- Controlled remotely by HTML, Web GUI, SNMP
- Optional dual or tri-band feed; S/X C/Ku, X/Ku, Ku/Ka, Ka/Q/V etc.
- Optional de-ice system

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TECHNICAL SPECIFICATIONS / PQV-180

Scan the QR code for more information.

GENERAL SPECIFICATIONS	PQV-180
Reflector Diameter	1.8 m, Carbon-Fiber
Reflector Type	Cassegrain
Antenna Mount	A-E-C architecture
Power Supply	AC 220V +/-10%

RF CHARACTERISTIC	QV-Band
Frequency (GHz) Tx	47.20 - 49.80
Frequency (GHz) Rx	37.50 - 40.50
EIRP (With 60W BUC) (dBW)	>69
G/T (dB/K)	>25
Tracking Accuracy	0.03° (R.M.S)
Polarization	Tx: LHCP Rx: RHCP
Antenna Pattern Compliance	ITU-R S.580-6 & ITU-R S.465-6

MECHANICAL SPECIFICATIONS	Azimuth	Elevation	Roll
Antenna Motion Range	0 - 666°	± 90°	± 12°
External Interfaces	Power In, SFP Optical, RJ45		
Radome (DxH)	2.3m x 2.5m		
Weight	400kg with Radome		

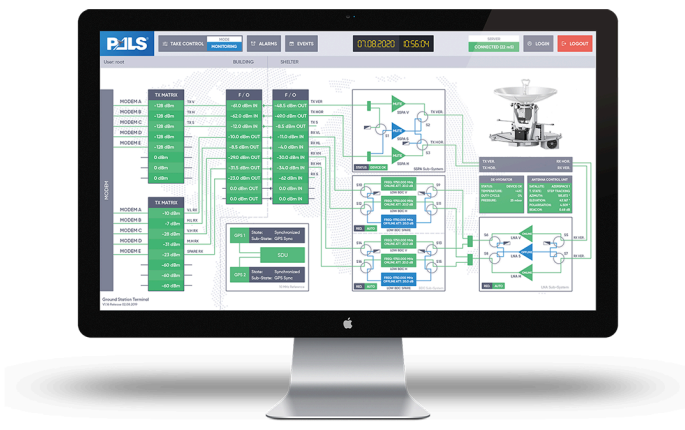
ENVIRONMENTAL SPECIFICATIONS	PQV-180
Temperature Range Operational	-40°C - +60°C
Temperature Range Survival	-60°C - +70°C
Wind Speed Operational	112 km/h
Wind Speed Survival	200 km/h
Humidity (Relative)	100%

M&C Interface

Ethernet interface for M&C and user interface.

Full remote operation and monitoring with multiple tracking options.

The antenna can be controlled via the provided computer software application or via a customer interface.



Specifications are subject to change.

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