4.0M LEO/MEO GATEWAY TERMINALS

Antenna Technologies

Overview

CPI®'s new 4.0m gateway terminals are designed to establish robust connections with modern LEO and MEO satellite constellations.

These terminals feature premium materials such as carbon-fiber composites resulting in a stiff and efficient design and eliminating the need for radomes.

With an embedded controller and beacon receiver, coupled with integrated CPI RF electronics, these terminals are upgradable to accommodate any future networks.

The gateway terminals' software-guided commissioning and calibration routine supports hassle-free set up and deployment. The design also eliminates the need for costly and time-consuming field alignment.

These gateways terminals perform exceptionally at Ka- and Q/V-band frequencies. The innovative positioner design features no zenith keyhole for uninterrupted overhead passes.

With one-day installation and operation-readiness, CPI's gateway terminals are tailored to meet the high-volume demands of modern LEO and MEO satellite constellations.

FEATURES:

- Designed for superior performance at Ka- and Q/V-band
- Fully integrated with CPI RF electronics and upgradable to future networks
- Embedded controller and beacon receiver for robust acquisition and tracking of all orbits
- Engineered for easy installation and set up with minimal training
- State-of-the-art calibration and commissioning software
- Robust atmospheric tolerance of conditions encountered in coastal regions or heavily industrialized areas
- Controlled remotely by HTML5 Web GUI, SNMPv3 or standard CLI
- Compliant with FCC and CE regulations. Intelsat, FCC, ITU and Eutelsat sidelobe compliant
- Superior packaging to withstand shock and vibration conditions encountered during shipment

OPTIONS:

- Anti-ice and radome options available
- 2.4m gateway terminals also available

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Specifications

RF PERFORMANCE [1]	Ka-band 4-port Circular polarized		Q/V-band 4-port Circular polarized	
	Receive	Transmit	Receive	Transmit
Frequency (GHz)	17.7 - 20.2	27.5- 30.0	37.5 - 42.5	47.2 - 52.4
Gain, midband (dBi)	55.2	58.8	61.1	62.7
Axial ratio (dB)	0.75	0.75	0.5	0.5
Beamwidth @ -3 dB @ midband	0.26	0.17	0.12	0.10
G/T @ midband, 20° EL (dB/K)	31.7 (120 K LNB)	-	35.1 (250 K LNB)	-
Linear EIRP (dBW) [2]	-	77.3 (160 W SSPB)	-	81.2 (250 W TWTA)
Sidelobes compliance	ITU-R S.580-6, 47CFR25.209		ITU-R S.580-6, 47CFR25.209	
Return loss	17.7		17.7	
Port-to-port isolation (dB)				
Rx/Tx. Tx/Rx	85		85	
Tx/Tx, Rx/Rx	16		16	
Power handling per port (W)	500		250	
MECHANICAL [1]				
Reflector material / Antenna optics	Seven-piece carbon fiber composite / Axisymmetric dual reflector			
Azimuth travel / Elevation travel	Continuous / 5° above horizon at any azimuth angle			
Axis velocities	>5°/sec			
AUTO-ACQUISITION CONTROL SYSTEM [1]				
System interface	CLI, SNMPv3, HTML5 web-based GUI (Ethernet TCP/IP, copper or fiber)			
Power				
Installation	Single phase, 100-240 VAC~, 47-63 Hz			
Operation	Single or split phase, 200-240 VAC~, 47-63 Hz			
ENVIRONMENTAL [1]				
Wind				
Operational without radome	45 mph (72 km/h) gusting to 60 mph (97 km/h)			
Survival any position (no radome)	80 mph (129 km/h)			
Survival at stow position (no radome)	125 mph (201 km/h)			
Temperature (operation / storage)	-40° to 122° F (-40° to 50° C) / -40° to 158° F (-40° to 70° C)			
Solar radiation	360 BTU/hr/ft^2 (1136 W/m^2)			
Relative humidity	100% condensing			
Operational rain (with RF degradation)	4 in/h (10 cm/h)			

[1] Some specifications may vary based on the combination of equipment, options and/or upgrades ordered.
[2] 40 W and 80 W Ka-band SSPBs and 550 W, 650 W and 750 W Ka-band TWTAs also available.

Contact CPI at CustomerCareSAT@cpii.com or at +1 770-689-2040

This data should be used for basic information only.
Formal, controlled specifications may be obtained from CPI for use in equipment design.

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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.