

PTP 25600

Motorola 2.5 GHz Point-to-Point Bridges



Cost-Effective Connectivity for 2.5 GHz Applications

Operating in the 2.5 GHz band at data rates up to 300 Mbps, the Motorola Fixed PTP 25600 2.5 GHz Point-to-Point Wireless Ethernet Bridges offer carrier-class wireless broadband solutions for license-holders in the 2.5 GHz Educational Broadband Service (EBS) spectrum. The cost-effective PTP 25600 systems outperform comparable wireless systems by delivering high performance, low latency and secure connectivity in non-line-of-sight environments, across long-distance line-of-sight paths, over water and open terrain, even through extreme weather conditions.

As part of Motorola's Wireless Broadband portfolio of innovative solutions, the PTP 25600 bridges can form a stand-alone network or integrate easily with Motorola's Fixed, WiMAX, Mesh or Indoor systems to meet a wide variety of requirements, including:

- Backhaul and broadcast communications
- Last-mile access
- Distance-learning connectivity
- Backbone operations
- Internet access and email
- Voice-over-IP and multimedia communications
- Camera-to-LAN connectivity for video surveillance

With a small footprint, the light-weight PTP 25600 radios are easy to install. Audio and graphical assistance features help you obtain the maximum signal strength and throughput. Plus Motorola's LINKPlanner lets you perform path calculations and project link performance prior to purchase.

Motorola PTP 25600 Bridges 2.5 GHz Part Numbers

- WB2782 PTP 25600 Integrated – 5 MHz Channel
- WB2783 PTP 25600 Connectorized – 5 MHz Channel
- WB2786 Upgrade Key – 10 MHz Channel
- WB2787 Upgrade Key – 15 MHz Channel
- WB2789 Upgrade Key – 30 MHz Channel*

* Not FCC compliant.

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Radio Technology	Remarks
RF band	2.496 – 2.690 GHz*
Channel size	Configurable to 5, 10, 15 or 30 MHz (30 MHz is not FCC compliant)
Channel selection	Fixed Frequency (US BRS/EBS Band Plan) Lower Band – 2496 MHz to 2572 MHz Middle Band – 2572 MHz to 2614 MHz Upper Band – 2614 MHz to 2690 MHz
Transmit power	Varies with modulation mode and settings from 0 to 23 dBm
System gain	Integrated: Varies with modulation mode; up to 154 dB using 18 dBi integrated antenna** Connectorized: Varies with modulation mode and antenna type**
Receiver sensitivity	Adaptive; varying between -95 and -59 dBm
Modulation	Dynamic, adapting between BPSK and 256 QAM
Error correction	FEC
Duplex scheme	Time Division Duplex (TDD) and Half Duplex Frequency Division Duplex (HD-FDD), Dynamic or Fixed ratio
Antenna	Integrated: Integrated flat plate 18 dBi, 20 degree beam width Connectorized: Can operate with a selection of separately-purchased single and dual polar antennas through 2 x N-type female connectors (local regulations should be checked prior to purchase)
Range	Up to 124 miles (200 km)***
Security and encryption	Proprietary scrambling mechanism; optional FIPS-197 compliant 128/256-bit AES Encryption * Regulatory conditions for RF bands should be confirmed prior to system purchase ** Gain, maximum transmit power and effective radiated power may vary based on regulatory domain *** In all cases the range limit is set by the latest software release

Ethernet Bridging & T1/E1

Protocol	IEEE 802.3
User data throughput	Dynamically variable up to 300 Mbps at the Ethernet (aggregate): 5 MHz Channel: Up to 48 Mbps 10 MHz Channel: Up to 100 Mbps 15 MHz Channel: Up to 151 Mbps 30 MHz Channel: Up to 300 Mbps (not FCC compliant)
Latency one way	<1 ms typical in 30 MHz channels <1.5 ms typical in 10 MHz channels <1.2 ms typical in 15 MHz channels <2 ms typical in 5 MHz channels
Packet prioritization	IEEE 802.1p, single priority level
Ethernet interface	10 / 100 / 1000 Base T (RJ-45), auto MDI/MDIX, optional 1000 Base SX
T1/E1 Interface	G703 / G823 and G704 / G824 Single T1/E1 in 10 and 15 MHz channels Dual T1/E1 in 30 MHz channels

Management & Installation

LED indicators	Power status, Ethernet link status and activity
System management	Web or SNMP V1/2c using MIB-II and proprietary PTP MIB; Canopy® Prizm
Installation	Built-in audio and graphical assistance for link optimization
Connection	Distance between outdoor unit and primary network connection: up to 330' (100 meters)

Physical

Dimensions	Integrated Outdoor Unit (ODU): Width 14.5" (370 mm), Height 14.5" (370 mm), Depth 3.75" (95 mm) Connectorized ODU: Width 12.2" (309 mm), Height 12.2" (309 mm), Depth 4.1" (105 mm) Powered indoor unit (PIDU Plus): Width 9.75" (250 mm), Height 1.5" (40 mm), Depth 3" (80 mm)
Weight	Integrated ODU: 12.1 lbs (5.5 kg) including bracket Connectorized ODU: 9.1 lbs (4.3 kg) PIDU Plus: 1.9 lbs (864 g)
Wind speed	202 mph (325 kph)
Operating temperature	-40°F (-40°C) to +140°F (+60°C), including solar radiation
Power supply	Integrated with Indoor Unit
Power source	90–240 VAC, 50–60 Hz / 36-60V DC
Power consumption	55 W max

Environmental & Regulatory

Protection and safety	UL60950
Radio	FCC Part 27
EMC	FCC Part 15 Class B

