


MOTOROLA WIRELESS BROADBAND

PTP 54500 & PTP 58500

5.4 and 5.8 GHz Point-to-Point Bridges


High-Performance, Secure Wireless Ethernet Bridges

The Motorola Point-to-Point (PTP) Wireless Ethernet Bridges – PTP 500 Series – are an excellent choice when requirements call for mid-range throughput with carrier-class performance. Operating in the 5.4 and 5.8 GHz bands at Ethernet data rates up to 105 Mbps and distances up to 155 miles (250 km), the systems are designed for virtually any environment – non-line-of-sight, long-range line-of-sight and high interference, over water and open terrain, even in severe weather conditions.

Through Motorola's unique combination of technologies, PTP 500 Series bridges deliver the bandwidth, reach, security and reliability that today's businesses and government agencies require for applications such as high-speed wireless backhaul, building-to-building and campus connectivity, leased-line replacement, backbone operations, network redundancy, Voice-over-IP, video surveillance, telemedicine, distance learning, IP gaming, disaster recovery and emergency services.

With a small footprint, the light-weight PTP 500 radios are pre-configured for fast and easy installation. Typically, systems can be deployed in one or two days. Audio and graphical alignment-assistance features help you obtain maximum signal strength and throughput with ease, while the graphical user interface enables intuitive operations.

Motorola Wireless Broadband

PTP 54500 and PTP 58500 bridges are included in Motorola's comprehensive portfolio of reliable and cost-effective wireless broadband solutions that, together with our WLAN solutions, provide and extend coverage both indoors and outdoors. The Motorola Wireless Broadband portfolio offers high-speed Point-to-Point, Point-to-Multipoint, Mesh, Wi-Fi and WiMAX networks that support data, voice and video communications, enabling a broad range of fixed and mobile applications for public and private systems. With Motorola's innovative software solutions, customers can design, deploy and manage a broadband network, maximizing up-time and reliability while lowering installation costs.

Motorola PTP 54500 Bridges
5.4 GHz Part Numbers

WB2874 Integrated Link
WB2876 Lite Integrated Link
WB2875 Connectorized Link
WB2877 Lite Connectorized Link

Motorola PTP 58500 Bridges
5.8 GHz Part Numbers

WB2857 Integrated Link
WB2859 Lite Integrated Link
WB2858 Connectorized Link
WB2860 Lite Connectorized Link

SPECIFICATION SHEET

Motorola 5.4 and 5.8 GHz Point-To-Point Bridges – PTP 500 Series

Radio Technology	Remarks
RF band	5.725 GHz–5.875 GHz; 5.470 GHz–5.725 GHz ¹
Channel size	Configurable to 5, 10 or 15 MHz
Channel selection	By <i>intelligent</i> Dynamic Frequency Selection (i-DFS) or manual intervention; automatic selection on start-up and continual adaptation to avoid interference
Transmit power	Varies with modulation mode and settings from -18 dBm to 27 dBm
System gain	Integrated: Varies with modulation mode; up to 167 dB using 23 dBi integrated antenna ² Connectorized: Varies with modulation mode and antenna type ²
Receiver sensitivity	Adaptive, varying between -94 dBm and -69 dBm
Modulation	Dynamic; adapting between BPSK single and 64 QAM dual
Error correction	FEC
Duplex scheme	Symmetric Fixed TDD; same or split frequency Tx/Rx where regulations permit
Antenna	Integrated: Integrated flat plate 23 dBi / 8° Connectorized: Can operate with a selection of separately-purchased single and dual polar antennas through 2 x N-type female connectors (check local regulations prior to purchase)
Range	Up to 155 miles (250 km)
Security and encryption	Proprietary scrambling mechanism; optional FIPS-197 compliant 128/256-Bit AES Encryption
¹ Regulatory conditions for RF bands may vary by geographic location and should be confirmed prior to system purchase.	
² Gain, maximum transmit power and effective radiated power may vary based on regulatory domain.	

Ethernet Bridging & T1/E1

Protocol	IEEE 802.3	
User data throughput	Full: Dynamically variable up to 105 Mbps at the Ethernet (aggregate): 5 MHz Channel – Up to 35 Mbps 10 MHz Channel – Up to 70 Mbps 15 MHz Channel – Up to 105 Mbps	Lite: Dynamically variable up to 52 Mbps at the Ethernet (aggregate): 5 MHz Channel – Up to 17 Mbps 10 MHz Channel – Up to 35 Mbps 15 MHz Channel – Up to 52 Mbps
Latency	<3 ms average each direction	
QoS	802.1p (2 levels)	
Interface	10 / 100 / 1000 Base T (RJ-45) – auto MDI/MDIX	
T1/E1 interface	Single T1/E1 port; G703/G704, G823/G824	

Management & Installation

LED indicators	Power status, Ethernet link status and activity
System management	Web or SNMP v1/v2c using MIBII and a proprietary PTP MIB; Motorola One Point Wireless Management Suite
Installation	Built-in audio assistance and voltage output for link optimization
Connection	Distance between outdoor unit and primary network connection: up to 330 ft. (100 meters)
Lightning protection	Built into the ODU; an external PTP Lightning Protection Unit (PTP-LPU) end device is required near the base of the tower or wall at the cable entrance point leading to the network

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: 11.8 lbs (5.35 kg) including bracket Connectorized ODU: 10.4 lbs (4.7 kg) including bracket PIDU Plus: 1.9 lbs (864 g)
Wind speed survival	202 mph (325 kph)
Power supply	Integrated with Indoor Unit
Power source	90–240 VAC, 50–60 Hz / 36–60V DC; redundant powering configurations supported
Power consumption	50 W max

Environmental & Regulatory

Operating temperature	-40°F (-40°C) to +140°F (+60°C), including solar radiation
Protection and safety	UL60950; IEC60950; EN60950; CSA-C22.2 No. 60950
Radio	5.8 GHz: USA CFR 47 Part 15.247, Canada IC RSS-210 Issue 7, Europe EN 302 502, Eire ComReg 03/42, UK IR2007 5.4 GHz: Europe EN 301 893, Canada IC RSS-210 Issue 7
EMC	USA CFR 47 Part 15 Class B, Canada CSA Std C108.8 1993 Class B, Europe EN 55022 CISPR 22
Safety	Europe EN 301 489-4



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