



PTP 54500 AND PTP 58500 POINT-TO-POINT 500 SERIES RADIOS

PTP 500 Series systems can create a powerful wireless network for today's businesses and government agencies, while delivering the communications agility they need to achieve their goals.

Our Point-to-Point (PTP) 500 Series Wireless Ethernet Bridges are excellent choices when your 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), our PTP 500 systems are designed for virtually any environment: non-line-of-sight (NLOS), long-range line-of-sight (LOS), high interference, water crossings and desert.

Through our unique combination of technologies, PTP 500 Series bridges deliver the throughput, 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.



PTP 500 Integrated



PTP 500 Connectorized

TDD SYNCHRONIZATION MAXIMIZES TOWER USE

PTP 500 radios include Time Division Duplex (TDD) synchronization capability which synchronizes transmit and receive signals between multiple radios deployed on the same tower or rooftop. Synchronizing the signals greatly reduces interference and optimizes frequency usage. This lets you collocate radios and maximize your existing tower or rooftop space. Each TDD-synchronized link requires our PTP-SYNC Unit to provide PTP 500 radios with an accurate timing reference.

INDUSTRY-LEADING LINK PLANNER

Our easy-to-use PTP LINKPlanner tool allows you to easily and accurately predict link performance based on geography, distance, antenna height and other factors specific to your deployment. LINKPlanner is available as a stand-alone tool or included in our One Point Wireless Suite.

PERFORMANCE-ENHANCING TOOLS

Our PTP systems provide industry-leading metrics to help you get the best possible performance out of your wireless network. Those metrics include antenna alignment information, measurements of interference, throughput, signal level, signal quality, as well as troubleshooting diagnostics

WIRELESS NETWORK SOLUTIONS

At Motorola, our unrivaled wireless network solutions include indoor WLAN, outdoor wireless mesh, point-to-multipoint and point-to-point networks as well as voice over WLAN systems, giving you the agility and seamless connectivity you need to grow your business or better protect and serve the public. Combined with powerful software for wireless network design, security and management, our solutions deliver trusted networking and anywhere access to organizations worldwide.

SPECIFICATION SHEET

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>i</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 and 64 QAM
Error correction	FEC
Duplex scheme	Time Division Duplex (TDD); each TDD-synchronized link requires a PTP-SYNC Synchronization Unit to provide an accurate timing reference signal
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

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 Base T (RJ-45) – auto MDI/MDIX
T1/E1 interface	Single T1/E1 port (with splitter cable); G703/G704, G823/G824

MANAGEMENT & INSTALLATION

LED indicators	Power status, Ethernet link status and activity
System management	Web or SNMP v1/v2c/v3 using MIBII and a proprietary PTP MIB; Motorola Wireless Manager, version 2.2 or higher
Installation	Built-in audio and graphical 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 Outdoor Unit (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 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	UL60950-1; IEC60950-1; EN60950-1; CSA-C22.2 No. 60950-1
Radio	5.8 GHz: USA CFR 47 Part 15.247 Canada IC RSS-210 Issue 7 Europe EN 302 502, Eire Comreg 06/47R, UK IR2007 5.4 GHz: USA CFR47 Part 15.407 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 - 1/4

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.



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