



# PTP 54300 AND PTP 58300 POINT-TO-POINT 300 SERIES RADIOS

**Affordable, carrier grade wireless point-to-point connectivity helps wireless ISPs, small and mid-sized businesses, and government agencies gain the information agility needed to achieve their organization's goals.**

Our Point-to-Point (PTP) 300 Series Wireless Ethernet Bridges operate in the 5.4 and 5.8 GHz license-exempt bands at Ethernet data rates up to 25 Mbps and distances up to 155 miles (250 km). The systems are engineered to reliably transport your communications in virtually any environment, including: non-line-of-sight (NLOS), long-range line-of-sight (LOS) and high interference environments, as well as over water and desert terrain. With a PTP 300 solution, you can establish communications in areas that were previously considered un-connectable.



PTP 300 Integrated



PTP 300 Connectorized

## SCALABILITY FOR GROWTH

Our PTP 300 solutions are secure, high performance wireless broadband systems that let you start small and upgrade as your throughput needs increase. Without changing hardware, you can upgrade your standard PTP 300 system to a higher-throughput PTP 500 system through a simple license key purchase. Depending on your requirements, you can upgrade to the PTP 500 Lite (data rates up to 52 Mbps) or the full-capacity version (up to 105 Mbps). In addition, PTP 300 radios offer an optional LOS feature that increases throughput to 50 Mbps across a total LOS path of up to 6 miles (10 km).

## TYPICAL APPLICATIONS

PTP 300 solutions are ideal for a variety of communications requirements, including:

- **T1/E1 leased-line replacement** to eliminate or greatly reduce your recurring fees
- **Reliable, cost-effective backhaul** for video surveillance and Voice over IP
- **Building-to-building and campus connectivity** in virtually any environment
- **Triple-play access** for data communications, including streaming video and bandwidth-intensive multimedia content

## INDUSTRY-LEADING LINK PLANNER

Our easy-to-use PTP LINKPlanner tool allows you to 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.

## FLEXIBLE NETWORK MANAGEMENT

You can manage your network remotely via the Internet and a standard web browser, use your existing network management system, and/or use our Wireless Manager, version 2.2 or higher.

## 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 300 SERIES

| RADIO TECHNOLOGY        | REMARKS  |
|-------------------------|--|
| RF band                 | 5.725 GHz–5.875 GHz <sup>1</sup><br>5.470 GHz–5.725 GHz <sup>1</sup>   |
| 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 <sup>2</sup><br>Connectorized: Varies with modulation mode and antenna type <sup>2</sup>   |
| Receiver sensitivity    | Adaptive, varying between -94 dBm and -69 dBm  |
| Modulation              | Dynamic; adapting between BPSK and 64 QAM  |
| 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°<br>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); up to 6 miles (10 km) in the optional LOS mode   |
| Security and encryption | Proprietary scrambling mechanism; optional FIPS-197 compliant 128-bit and 256-bit AES Encryption   |

### ETHERNET BRIDGING & T1/E1

|                      |   |
|----------------------|---|
| Protocol             | IEEE 802.3  |
| User data throughput | Standard—Dynamically variable up to 25 Mbps at the Ethernet (aggregate):<br>5 MHz Channel – Up to 13 Mbps<br>10 MHz Channel – Up to 25 Mbps<br>15 MHz Channel – Up to 25 Mbps<br>(Upgradable to a PTP 500; requires a license-key purchase)<br>LOS Mode—Dynamically variable up to 50 Mbps at the Ethernet (aggregate):<br>5 MHz Channel – Up to 18 Mbps<br>10 MHz Channel – Up to 35 Mbps<br>15 MHz Channel – Up to 50 Mbps<br>(Optional, requires a license-key purchase) |
| Latency              | <3 ms average each direction  |
| QoS                  | 802.1p (4 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, plus 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 to protect the indoor LAN equipment |

### PHYSICAL

|                     |   |
|---------------------|---|
| Dimensions          | Integrated ODU: Width 14.5" (370 mm), Height 14.5" (370 mm), Depth 3.75" (95 mm)<br>Connectorized ODU: Width 12.2" (309 mm), Height 12.2" (309 mm), Depth 4.1" (105 mm)<br>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<br>Connectorized ODU: 10.4 lbs (4.7 kg) including bracket<br>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<br>Canada IC RSS-210 Issue 7<br>Europe EN 302 502, Eire Comreg 06/47R, UK IR2007<br>5.4 GHz: USA CFR47 Part 15.407<br>Europe EN 301 893, Canada IC RSS-210 Issue 7 |
| EMC                   | USA CFR 47 Part 15 Class B<br>Canada CSA Std C108.8 1993 Class B<br>Europe EN 55022 CISPR 22, Europe EN 301 489 - 1/4  |

<sup>1</sup> Regulatory conditions for RF bands may vary by geographic location and should be confirmed prior to system purchase.

<sup>2</sup> Gain, maximum transmit power and effective radiated power may vary based on regulatory domain.



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