PRODUCT SPEC SHEET
PTP 200 SERIES

ACCELERATE SPEED AFFORDABLY

PTP 200 SERIES SOLUTIONS

RADIO TECHNOLOGY

RF bands[3]	Defined-Use Licensed Band: 49200: 4.940 – 4.990 GHz License-Exempt Bands: 58230: 5.725 GHz – 5.875 GHz 5X250: 5.470 GHz – 5.725 GHz 5.725 GHz – 5.850 GHz
Channel size	In all cases, channel sizes depend on region code. 49200: 10 MHz 58230: Configurable to 10 or 20 MHz 5X250: Configurable to 20 or 40 MHz
Channel selection	49200, 58230: Manual selection 5X250: Automatic selection on start-up, with manual override
Transmit power[4]	49200: Auto transmit power control by Master up to 18 dBm 58230: -30 to +19 dBm to EIRP limit by region (1 dBm interval) 5X250: Up to 22 dBm; varies with modulation mode and settings
System gain[4]	49200: Integrated – Up to 141 dB using Integrated antenna 58230: Integrated – Up to 125 dB using Integrated antenna LENS – Up to 137 dB using passive LENS Reflector – Up to 155 dB using passive reflector 5X250: Integrated – Up to 158 dB using 23 dBi Integrated antenna System gain will vary with modulation mode and antenna type.
Receiver sensitivity	49200: Up to -89 dBm (with FEC) 58230: Up to -86 dBm (with FEC) 5X250: Adaptive, varying between -93 dBm and -71 dBm
Modulation	49200: Adaptive between QPSK, 16 QAM and 64 QAM 58230: Adaptive between QPSK, 16 QAM and 64 QAM 5X250: Dynamic; adapting between BPSK and 64 QAM with single and dual payload
Error correction	49200: ARQ, FEC (3/4 Reed-Solomon block coding) 58230: ARQ, FEC (3/4 Reed-Solomon block coding) 5X250: ARQ, FEC (based on IEEE 802.11n)
Duplex scheme	49200: Time Division Duplex (TDD) 58230: Time Division Duplex (TDD) 5X250: Time Division Duplex (TDD)
Antenna	In all cases, check local regulations prior to antenna purchase. 49200: Varies with antenna type; can operate with a selection of separately-purchased antennas, 50 ohm N-type 58230: Integrated – 10 dBi (55° antenna), can be enhanced with passive LENS or reflector dish
Antenna (continued)	5X250: Integrated flat plate 23 dBi / 7° Connectorized: Can operate with a selection of separately-purchased single and dual polar antennas through 2 x N-type female connectors
Maximum Range	49200: Integrated – Up to 15 mi (24 km) 58230: Integrated – Up to 4.5 mi (7.2 km) LENS – Up to 18 mi (29 km), Reflector – Up to 80 mi (128.7 km) 5X250: 20 MHz Channel – Up to 34 mi (54 km) 40 MHz Channel – Up to 17 mi (27 km) Models vary with modulation mode and antenna type and size.
Security and encryption	49200: DES, FIPS 197 128-bit AES Encryption 58230: DES, FIPS 197 128-bit AES Encryption 5X250: Proprietary encryption

ETHERNET BRIDGING

Protocol	49200: Proprietary OFDM 58230: Proprietary OFDM 5X250: Proprietary, based on IEEE 802.11n
User data throughput	49200: Up to 21 Mbps (aggregate) 58230: 10 MHz Channel – Up to 24 Mbps 20 MHz Channel – Up to 50 Mbps 5X250: Up 220 Mbps at the Ethernet (aggregate): 20 MHz Channel – Up to 110 Mbps 40 MHz Channel – Up to 220 Mbps
Latency (typical)	49200: 5 to 7 ms round trip 58230: 5 to 7 ms round trip 5X250: 4 ms round trip
QoS	49200: DiffServ QoS 58230: DiffServ QoS
Ethernet Interface	49200: 10/100 Base T (RJ-45) 58230: 10/100 Base T (RJ-45) 5X250: 1000 Base T (RJ-45), auto MDI/MDIX
VLAN	49200: 802.1Q with 802.1p priority 58230: 802.1ad (DVLAN Q-in-Q), 802.1Q with 802.1p priority, dynamic port VID

MANAGEMENT & INSTALLATION

LED indicators	49200: Power, GPS, Sync, Session, Link and Activity indicators 58230: Power, GPS, Sync, Session, Link and Activity indicators 5X250: Power status LED on Power Supply Unit (PSU)
System management	49200: HTTP, Telnet, FTP, SNMPv2c; compatible with Prizm 3.2 or later and CNUT 3.1 or later 58230: HTTP, Telnet, FTP, SNMPv2c; Wireless Manager, version 3.0 or higher 5X250: Web access via browser using proprietary PTP MIB
Installation	49200: Audio and LED indicators for link optimization 58230: Audio and LED indicators for link optimization 5X250: Built-in audio and graphical assistance for link optimization

[3] Regulatory conditions for RF bands should be confirmed prior to system purchase. Certain bands may not be available in all geographic regions.

[4] Gain, maximum transmit power and effective radiated power may vary based on regulatory domain.

Connection	49200: Distance between outdoor unit and primary network connection: up to 330 ft. (100 meters) 58230: Distance between outdoor unit and primary network connection: up to 330 ft. (100 meters) 5X250: Distance between outdoor unit and primary network connection: up to 330 ft. (100 meters)

PHYSICAL

Dimensions	49200: H-13.25" (33.6 cm), W-8.25" (21 cm), D-4.38" (11.1 cm) 58230: H-11.75" (29.9 cm), W-3.4" (8.6 cm), D-3.4" (8.6 cm) 5X250: Integrated ODU: W-14.5" (370 mm), H-14.5" (370 mm), D-3.75" (95 mm) Connectorized ODU: W-12.2" (309 mm), H-12.2" (309 mm), D-4.1" (105 mm) PoE Power Supply: W-6.5" (165 mm), H-2.0" (50 mm), D-3.5" (88 mm)
Weight	49200: 2.8 lbs (1.3 kg) 58230: 1 lb (0.6 kg) 5X250: Integrated ODU: 12.1 lbs (5.5 kg) including bracket Connectorized ODU: 9.1 lbs (4.3 kg) including bracket PoE power supply: 0.83 lbs (378 g)
Operating temperature	49200: -40° to +131° F (-40° to +55° C) 58230: -40° to +131° F (-40° to +55° C) 5X250: -40° to +140° F (-40° to +60° C), including solar radiation
Wind speed survival	49200: 118 mph (190 kph) 58230: 118 mph (190 kph) 5X250: 150 mph (240 kph)
Power supply	49200: PoE power supply unit 58230: PoE power supply unit 5X250: PoE power supply unit
Power source	49200: 100-240 VAC, 50-60 Hz 58230: 100-240 VAC, 50-60 Hz 5X250: 100–240 VAC, 50–60 Hz
Power consumption	49200: 22 W max at 56 VDC 58230: 9 W max at 30 VDC 5X250: 35 W max

ENVIRONMENTAL & REGULATORY

Protection and safety	49200: UL60950; IEC60950; EN60950; CSA-C22.2 No. 60950; CB Approval for Global 58230: UL60950; IEC60950; EN60950; CSA-C22.2 No. 60950; CB Approval for Global 5X250: UL60950-1; CSA-C22.2 No. 60950-1 IEC60950-1:2005; EN60950-1:2006 + A11:2009 CB Approval for Global
Radio	49200: FCC – ABZ89FT7631, IC – 109W-4940 58230: FCC – TBD, IC – 109W-5784, CE – EN302 502 5X250: 5.4 GHz: EN301 893 5.8 GHz: FCC CFR 47, Part 15, sub-part C, 15.247; IC RSS210, Annex 8; EN 302 502
EMC	FCC CFR 47, 15.209 & 207, Class B; IC RSS210 Annex 8.5 & RSS Gen Para 7.2.2, Class B; EN301 489-1 & EN301 489-4, Class B

Note:
The PTP 5X250 device has not been authorized in the 5.4 GHz band as required by the rules of the Federal Communications Commission and Industry Canada. This device is not, and may not be, offered for sale or lease, or sold or leased, as a dual-band device in the U.S. and Canada until authorization is obtained.