



PTP 200 SERIES

ACCELERATE SPEED AFFORDABLY

Our Cambium Point-to-Point (PTP) 200 Series Wireless Ethernet Solutions are designed to give you high-throughput, reliable broadband communications on a tight budget. With a [PTP 200 Series](#) solution, enterprises, government organizations and service providers with limited resources can establish and extend backhaul communications affordably.

Meeting Your Needs

Within our Cambium PTP 200 family of products¹, you can choose among three line-of-sight (LOS) and near-line-of-sight (nLOS) solution platforms, the PTP 200, PTP 230 and PTP 250. Our PTP 49200 system operates in the 4.9 GHz defined-use licensed band at data rates up to 21 Mbps. This system provides very reliable and affordable connectivity and backhaul to support police officers, firefighters, 9-1-1 centers and other public safety agencies.

In the PTP 230 platform, our PTP 54230 and PTP 58230 models operate in the 5.4 and 5.8 GHz license-exempt bands at data rates up to 50 Mbps. These systems are ideal to supply affordable long-distance communications. In addition, PTP 54230 and 58230 systems can synchronize communications using a GPS timing device, allowing you to collocate multiple radios with virtually no self-interference.

Our PTP 5X250 is a dual-band² radio operating in the 5.4 and 5.8 GHz license-exempt bands. PTP 5X250 systems offer data rates up to 256 Mbps (release 02-00 and higher). For applications such as video surveillance, Voice-over-IP and streaming video content, these systems offer very compelling, price-per-megabit communications.

Having a wide array of value-priced, high-quality communication options makes it easy to obtain the right combination of features to meet your specific application, infrastructure and environmental requirements.

RADIO TECHNOLOGY

RF bands ³	Defined-Use Licensed Band:
	49200: 4.940 – 4.990 GHz
	License-Exempt Bands:
	54230: 5.470 GHz – 5.725 GHz
	58230: 5.725 GHz – 5.875 GHz
Channel size	In all cases, channel sizes depend on region code.
	49200: 10 MHz
	54230, 58230: Configurable to 10 or 20 MHz
Channel selection	49200, 54230, 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
	54230, 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
	54230, 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)
	54230, 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
	54230, 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)
	54230, 58230: ARQ, FEC (3/4 Reed-Solomon block coding)
	5X250: ARQ, FEC
Duplex scheme	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
	54230, 58230: Integrated – 10 dBi (55° antenna), can be enhanced with passive LENS or reflector dish
	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)
	54230, 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
	54230, 58230: DES, FIPS 197 128-bit AES Encryption
	5X250: Proprietary encryption; FIPS 197 128-bit AES Encryption (available in North America)

ETHERNET BRIDGING

Protocol	49200:	Proprietary OFDM
	54230, 58230:	Proprietary OFDM
	5X250:	Proprietary
User data throughput	49200:	Up to 21 Mbps (aggregate)
	54230, 58230:	10 MHz Channel – Up to 24 Mbps 20 MHz Channel – Up to 50 Mbps
	5X250:	Up to 256 Mbps at the Ethernet (aggregate): 20 MHz Channel – Up to 112 Mbps 40 MHz Channel – Up to 256 Mbps
Latency (typical)	49200:	5 to 7 ms round trip
	54230, 58230:	5 to 7 ms round trip
	5X250:	4 ms round trip
QoS	49200:	DiffServ QoS
	54230, 58230:	DiffServ QoS
Ethernet Interface	49200:	10/100 Base T (RJ-45)
	54230, 58230:	10/100 Base T (RJ-45)
	5X250:	1000 Base T (RJ-45), auto MDI/MDIX
VLAN	49200:	802.1Q with 802.1p priority
	54230, 58230:	802.1ad (DVLAN Q-in-Q), 802.1Q with 802.1p priority, dynamic port VID
	5X250:	802.1Q

MANAGEMENT & INSTALLATION

LED indicators	49200:	Power, GPS, Sync, Session, Link and Activity indicators
	54230, 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 CNU T 3.1 or later
	54230, 58230:	HTTP, Telnet, FTP, SNMPv2c; Wireless Manager, version 3.0 or higher
	5X250:	Web access via browser; SNMP v2c using MIBII and proprietary PTP MIB
Installation	49200:	Audio and LED indicators for link optimization
	54230, 58230:	Audio and LED indicators for link optimization
	5X250:	Built-in audio and graphical assistance for link optimization
Connection		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)
	54230, 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)
	54230, 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)
	54230, 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)
	54230, 58230:	118 mph (190 kph)
	5X250:	150 mph (240 kph)
Power supply		PoE power supply unit

Power source	100-240 VAC, 50-60 Hz
Power consumption	49200: 22 W max at 56 VDC 54230, 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 54230, 58230: IEC60950, EN60950 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 54230: FCC – ABZ89FT7638, IC – 109W-5490G, CE – EN301 893 58230: FCC – ABZ89FT7635, IC – 109W-5790, 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.

For more information about our [PTP 200 Series](http://cambiumnetworks.com) solutions visit cambiumnetworks.com.

¹ Because PTP 200 Series products are based on three different platforms, upgrades between platforms are not available.

² Only the 5.8 GHz band will be available in the U.S. and Canada until use of the 5.4 GHz band is authorized by the Federal Communications Commission (FCC).

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.