PTP 550
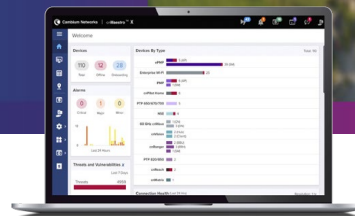## 1.4 Gbit Capacity

Product Name Quick Look

- 5.17 GHz to 5.9 GHz
- Up to 1.4 Gbps
- Built-in live spectrum analyzer
- IPv6/IPv4 dual-stack management support
- AES 128 encryption
- ARQ support

cnMaestro

The PTP 550 is a point-to-point Gigabit throughput solution based on 802.11 ac Wave 2 operating in 5 GHz wireless space, addressing the gigabit capacity needs for high-speed backhaul solutions in mid- and long-range applications. The PTP 550 solution draws its attributes from Cambium Networks' point to point products such as PTP 650/670 and PTP 450i.

Metal Housing

Each PTP 550 radio is enclosed in a rugged IP66/67-rated metal enclosure, which protects the radio from extreme conditions and solar radiation.

Antenna Alignment

The e-alignment GUI provides the installer with an accurate and reliable way of installing PTP 550.

Channel Bonding

Each channel can have independent channel bandwidth that provides for flexibility in channel selection, band selection, and address throughput requirements. Using two 80 MHz channels, the PTP 550 achieves 1.4 Gbps.

Dynamic Channel Selection

With dynamic channel selection (DCS), PTP 550 systems constantly optimize the channel of operation to maximize link reliability and performance. Responding to the radio interference environment, PTP 550 will search for the clearest spectrum and move to it seamlessly. The customer benefits from best available throughput with limited spectrum in the most challenging environments.

PTP 550

Radio Technology

Model	PTP 550 Connectorized PTP 550 Integrated
RF Bands	Wide-band operation 5.1 GHz to 5.9 GHz (Allowable frequency bands are dictated by individual country regulations.) 5170–5320 MHz 5520–5980 MHz
Number of Radios	2 independent radios 2x2:2 (each 2 streams), 4 streams total (4X4 MIMO)
Channel Sizes	Dual independent channels, each channel configurable as 10, 20, 40, and 80 MHz
Spectral Efficiency	8.5 bps/Hz maximum
Channel Selection	Fixed frequency or dynamic channel selection (DCS)
Maximum Transmit Power	Up to 26 dBm
System Gain	Up to 173 dB with integrated antenna
Modulation	MCS 0 to MCS 9 (256 QAM 5/6)
Duplex Scheme	Time division duplex (TDD) Multiple transmit/receive duty cycles
Antenna	Integrated flat panel: 23 dBi Connectorized: Single- and dual-polarity antennas through 2 x N-type connectors
Range	Up to 200 km (122 miles)
UL/DL Ratio Supported	50:50 , 70:30, and 75:25
Security	FIPS 197 compliant 128-bit AES encryption Factory mode recovery

Ethernet Bridging

Latency	3 ms one direction
Packet Classification	Layer 2 and layer 3 IEEE 802.1p, Ethernet priority, VLAN
Quality of Service (QoS)	3 levels of QoS
Maximum Packet Size	1700 bytes
TDD Sync	Supports CMM5 and cnPulse
Flexible I/O	1 Gigabit port: Data + PoE power input 1 SFP port (single-mode fiber, multi-mode fiber, and copper Gigabit Ethernet options available)

Management

Network Management	In-band and out-of-band management
System Management	IPv6/IPv4 dual-stack management support SNMPv2 and SNMPv3, https, WPA-PSK2 Online spectrum analyzer (no impact on payload traffic) cnMaestro™ management
Installation	Built-in e-alignment using GUI on radio to assist in installation

PTP 550

Throughput (UDP)

Single Channel

Channel Size	Aggregate Throughput
10 MHz	83 Mbps
20 MHz	166 Mbps
40 MHz	332 Mbps
80 MHz	725 Mbps

Dual Channel

Channel A	Channel B	Aggregate Throughput
10 MHz	10 MHz	166 Mbps
10 MHz	20 MHz	249 Mbps
10 MHz	40 MHz	415 Mbps
10 MHz	80 MHz	747 Mbps
20 MHz	20 MHz	332 Mbps
20 MHz	40 MHz	465 Mbps
20 MHz	80 MHz	840 Mbps
40 MHz	40 MHz	650 Mbps
40 MHz	80 MHz	1.025 Gbps
80 MHz	80 MHz	1.4 Gbps

Receiver Sensitivity

Frequency Band	5.170–5.250 GHz				5.250–5320 GHz				5.520–5725 GHz				5.725–5.980 GHz			
Bandwidth (MHz)	10	20	40	80	10	20	40	80	10	20	40	80	10	20	40	80
MCS1	-91.0	-89.0	-87.0	-84.0	-91.0	-88.0	-86.0	-84.0	-92.0	-89.5	-86.5	-84.0	-91.0	-88.0	-85.0	-83.0
MCS2	-89.0	-87.0	-85.0	-83.0	-90.0	-87.0	-84.0	-82.0	-89.5	-87.0	-84.5	-81.9	-89.0	-86.0	-83.0	-81.0
MCS3	-86.0	-84.0	-81.0	-78.0	-86.0	-83.0	-81.0	-79.0	-87.0	-84.5	-82.5	-80.5	-86.0	-83.0	-81.0	-79.0
MCS4	-84.0	-82.0	-79.0	-76.0	-84.0	-81.0	-78.0	-76.0	-84.0	-81.5	-78.9	-76.2	-83.0	-81.0	-79.0	-77.0
MCS5	-80.0	-78.0	-75.0	-73.0	-80.0	-77.0	-74.0	-72.0	-79.5	-77.5	-75.0	-72.5	-80.0	-77.0	-74.0	-72.0
MCS6	-78.0	-76.0	-73.0	-70.0	-78.0	-75.0	-73.0	-71.0	-78.5	-76.0	-73.5	-70.9	-78.0	-75.0	-73.0	-71.0
MCS7	-77.0	-75.0	-72.0	-69.0	-77.0	-74.0	-72.0	-70.0	-77.0	-74.5	-71.9	-69.2	-76.0	-73.0	-71.0	-69.0
MCS8	-73.0	-70.0	-67.0	-65.0	-72.0	-69.0	-67.0	-65.0	-72.5	-70.5	-67.9	-65.2	-72.0	-69.0	-67.0	-65.0
MCS9	-71.0	-68.0	-65.0	-63.0	-70.0	-67.0	-65.0	-63.0	-70.5	-68.5	-66.5	-63.9	-70.0	-67.0	-65.0	-63.0

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Transmit Power (dBm)

MCS	Payloads	5.170–5.250 GHz				5.250–5320 GHz				5.520–5725 GHz				5.725–5.980 GHz			
		10 MHz	20 MHz	40 MHz	80 MHz	10 MHz	20 MHz	40 MHz	80 MHz	10 MHz	20 MHz	40 MHz	80 MHz	10 MHz	20 MHz	40 MHz	80 MHz
MCS1	Single	26	26	25	25	26	26	25	25	25	25	24	23	25	25	23	23
MCS2	Single	26	26	25	25	26	26	25	25	25	25	23	23	25	25	23	23
MCS3	Single	26	26	25	25	26	26	25	25	25	25	23	23	25	25	23	23
MCS4	Single	25	25	25	25	25	25	25	25	23	23	23	23	23	23	23	23
MCS5	Single	23	23	23	23	23	23	23	23	22	22	22	22	22	22	22	22
MCS6	Single	22	22	22	22	22	22	22	22	21	21	21	21	21	21	21	21
MCS7	Single	22	22	22	22	22	22	22	22	20	20	20	20	20	20	20	20
MCS8	Single	21	21	21	21	21	21	21	21	20	20	20	20	20	20	20	20
MCS9	Single	20	20	20	20	20	20	20	20	19	19	19	19	19	19	19	19
MCS1	Dual	26	26	25	25	26	26	25	25	25	25	24	23	25	25	23	23
MCS2	Dual	26	26	25	25	26	26	25	25	25	25	23	23	25	25	23	23
MCS3	Dual	26	26	25	25	26	26	25	25	25	25	23	23	25	25	23	23
MCS4	Dual	25	25	25	25	25	25	25	25	23	23	23	23	23	23	23	23
MCS5	Dual	23	23	23	23	23	23	23	23	22	22	22	22	22	22	22	22
MCS6	Dual	22	22	22	22	22	22	22	22	21	21	21	21	21	21	21	21
MCS7	Dual	22	22	22	22	22	22	22	22	20	20	20	20	20	20	20	20
MCS8	Dual	21	21	21	21	21	21	21	21	20	20	20	20	20	20	20	20
MCS9	Dual	20	20	20	20	20	20	20	20	19	19	19	19	19	19	19	19

Physical

Physical	
Dimensions W x H x D	Integrated Outdoor Unit (ODU): 305 mm x (12") 305 mm (12") x 68 mm (12 in x 12 in x 2.2 in) Connectorized ODU: 185 mm x 278 mm x 88 mm (7 in x 11 in x 3.5 in)
Weight	Integrated ODU: 2.2 kg (4.85 lb), including bracket Connectorized ODU: 1.6 kg (3.5 lb) including bracket
Operating Temperature	-40° F to +140° F (-40° C to +60° C), including solar radiation
Dust-Water Intrusion Protection	IP66 and IP67
Wind Speed Survival	322 kph (200 mph)
Power Supply	AC power injector: 32° to 104° F (0° to +40° C); 30 W , 56V Dimensions (W x H x D): 132 mm x 36 mm x 51 mm (5.2 in x 1.4 in x 2 in)
Power Consumption	30W maximum (22W typical)

PTP 550

Environmental & Regulatory	
Protection & Safety	UL60950-1/22; IEC60950-1/22; EN60950-1.22; CSA-C22.2 No. 60950-1/22; CB approval with all National Deviations
Radio	5.x GHz: FCC Part 15E ; RSS 247 Issue 2; EN 302 502; EN 301 893
EMC	US Part 15B, Canada RSS-GEN, Europe – EN 301 489-1 and -17

ABOUT CAMBIUM NETWORKS

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences and device connectivity with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

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