Cambium Networks

PTP 550: 1.4 Gbit CAPACITY

Cambium Network is excited to introduce our latest 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 short range and middle 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.

PTP 550 CONNECTORIZED

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 channel the PTP 550 achieves 1.36 Gbps.

Dynamic Channel Selection (DCS)

With Dynamic Channel Selection, 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 INTEGRATED

OTHER KEY FEATURES

- 5.170 to 5.980 GHz
- Up to 1.36 Gbps
- Built in Live Spectrum Analyzer
- IPv6/IPv4 Dual-stack Management Support
- AES 128 Encryption
- LINKPlanner Support
- cnMaestro Support
- ARQ Support

RADIO TECHNOLOGY	
MODEL	PTP 550 Connectorized PTP 550 Integrated
RF BANDS	Wide-band operation 5.170 to 5.980 GHz (Allowable frequencies and bands are dictated by individual country regulations)
CHANNEL SIZES	Dual independent channels, each channel configurable as 20, 40 & 80 MHz
SPECTRAL EFFICIENCY	8.5 bps/Hz maximum
CHANNEL SELECTION	Fixed frequency or Dynamic Channel Selection (DCS)*
MAXIMUM TRANSMIT POWER	Up to 29 dBm combined
SYSTEM GAIN	Up to 173 dB with Integrated Antenna
MODULATION	MCS 0 to MCS 9
DUPLEX SCHEME	Time Division Duplex (TDD) Multiple transmit/receive duty cycles
ANTENNA	Integrated Flat Panel: 23 dBi Connectorized: operate with a selection of separately-purchased single- and dual-polarity antennas through 2 x N-type female connectors
RANGE	Up to 122 miles (200 km)
SECURITY	FIPS-197 compliant 128-bit AES Encryption
ETHERNET BRIDGING	
PROTOCOL	IEEE 802.3
LATENCY	1-3 milliseconds one direction
PACKET CLASSIFICATION	Layer 2 and Layer 3 IEEE 802.1p, Ethernet priority
MAX PACKET SIZE	1538 Bytes
FLEXIBLE I/O	1 x Gigabit Ethernet Copper port: Data + PoE power input 1 x SFP port: single-mode fiber, multi-mode fiber or copper Gigabit Ethernet options available
MANAGEMENT	
NETWORK MANAGEMENT	In-band management
SYSTEM MANAGEMENT	IPv6/IPv4 dual-stack management support SNMPv2c, https, WPA2-PSK Online spectrum analyzer (no impact on payload traffic)
INSTALLATION	Built-in e-alignment using GUI on radio to assist in installation
PHYSICAL	
DIMENSIONS	Integrated Outdoor Unit (ODU): Width 305mm (12”), Height 305mm (12”), Depth 56mm (2.2") Connectorized Outdoor Unit (ODU): Width 177mm (7”), Height 280mm (11”), Depth 89mm (3.5”)
WEIGHT	Integrated Outdoor Unit (ODU): 2.2 kg (4.85 lbs) including bracket Connectorized Outdoor Unit (ODU): 1.6 kg (3.5 lbs) including bracket
OPERATING TEMPERATURE	-40° F to +131° F (-40° C to +55° C), including solar radiation
DUST- WATER INTRUSION PROTECTION	IP66 and IP67
WIND SPEED SURVIVAL	200 mph (322 kmph)
POWER SUPPLY	AC power injector: 32° to 104° F (0° to +40° C); 30 W, 56V Dimensions: Width 5.2” (132mm), Height 1.4” (36mm), Depth 2” (51mm)
POWER CONSUMPTION	30 W maximum

ENVIRONMENTAL & REGULATORY	
PROTECTION AND SAFTEY	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

* Available in future release

THROUGHPUT

SINGLE CHANNEL		
CHANNEL		**AGGREGATE THROUGHTPUT**
20 MHz		140 Mbps
40 MHz		325 Mbps
80 MHz		700 Mbps
DUAL CHANNEL		
CHANNEL A	**CHANNEL B**	**AGGREGATE THROUGHTPUT**
20 MHz	20 MHz	280 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	1.36 Gbps

TRANSMIT POWER (dBm)

		5.8 GHz			5.4 GHz			5.1 & 5.2 GHz		
MCS	Channel	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz
MCS1	Single	25	23	23	25	24	23	26	25	25
MCS2	Single	25	23	23	25	23	23	26	25	25
MCS3	Single	25	23	23	25	23	23	26	25	25
MCS4	Single	23	23	23	23	23	23	25	25	25
MCS5	Single	22	22	22	22	22	22	23	23	23
MCS6	Single	21	21	21	21	21	21	22	22	22
MCS7	Single	20	20	20	20	20	20	22	22	22
MCS8	Single	20	20	20	20	20	20	21	21	21
MCS9	Single	n/a	19	19	n/a	19	19	n/a	20	20
MCS1	Dual	28	26	26	28	27	26	29	28	28
MCS2	Dual	28	26	26	28	26	26	29	28	28
MCS3	Dual	28	26	26	28	26	26	29	28	28
MCS4	Dual	26	26	26	26	26	26	28	28	28
MCS5	Dual	25	25	25	25	25	25	26	26	26
MCS6	Dual	24	24	24	24	24	24	25	25	25
MCS7	Dual	23	23	23	23	23	23	25	25	25
MCS8	Dual	23	23	23	23	23	23	24	24	24
MCS9	Dual	n/a	22	22	n/a	22	22	n/a	23	23

RECEIVER SENSITIVITY (dBm)

		5.8 GHz			5.4 GHz			5.2 GHz			5.1 GHz		
MCS	Payload	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz
MCS1	Single	-87.3	-84.8	-81.7	-87.4	-84.0	-81.7	-87.2	-83.4	-80.3	-86.4	-83.3	-80.9
MCS2	Single	-85.0	-82.3	-79.2	-84.9	-81.6	-79.2	-84.7	-81.0	-77.8	-83.9	-80.9	-78.4
MCS3	Single	-82.6	-79.8	-76.7	-82.4	-79.2	-76.7	-82.2	-78.6	-75.3	-81.4	-78.5	-75.9
MCS4	Single	-80.2	-77.3	-74.2	-79.8	-76.7	-74.2	-79.6	-76.1	-72.8	-78.8	-76.0	-73.4
MCS5	Single	-77.9	-74.8	-71.7	-77.3	-74.3	-71.7	-77.1	-73.7	-70.3	-76.3	-73.6	-70.9
MCS6	Single	-75.5	-72.3	-69.2	-74.8	-71.9	-69.2	-74.6	-71.3	-67.8	-73.8	-71.2	-68.4
MCS7	Single	-73.1	-69.8	-66.7	-72.3	-69.4	-66.7	-72.1	-68.8	-65.3	-71.3	-68.7	-65.9
MCS8	Single	-70.8	-67.3	-64.2	-69.8	-67.0	-64.2	-69.6	-66.4	-62.8	-68.8	-66.3	-63.4
MCS9	Single	n/a	-64.8	-61.7	n/a	-64.6	-61.7	n/a	-64.0	-60.3	n/a	-63.9	-60.9
MCS1	Dual	-66.0	-62.3	-59.2	-64.8	-62.1	-59.2	-64.6	-61.5	-57.8	-63.8	-61.4	-58.4
MCS2	Dual	-86.5	-83.2	-80.7	-85.6	-82.6	-79.0	-85.4	-86.0	-77.6	-84.6	-82.0	-78.1
MCS3	Dual	-83.7	-80.5	-77.8	-82.9	-79.7	-76.1	-82.7	-83.1	-74.7	-81.9	-79.1	-75.2
MCS4	Dual	-81.0	-77.8	-74.8	-80.1	-76.9	-73.2	-79.9	-80.3	-71.8	-79.1	-76.3	-72.3
MCS5	Dual	-78.3	-75.1	-71.9	-77.4	-74.0	-70.3	-77.2	-77.4	-68.9	-76.4	-73.4	-69.4
MCS6	Dual	-75.5	-72.4	-69.0	-74.6	-71.2	-67.3	-74.4	-74.6	-66.0	-73.6	-70.6	-66.5
MCS7	Dual	-72.8	-69.6	-66.0	-71.9	-68.4	-64.4	-71.7	-71.8	-63.1	-70.9	-67.8	-63.6
MCS8	Dual	-70.1	-66.9	-63.1	-69.1	-65.5	-61.5	-68.9	-68.9	-60.2	-68.1	-64.9	-60.7
MCS9	Dual	n/a	-64.2	-60.2	n/a	-62.7	-58.6	n/a	-66.1	-57.3	n/a	-62.1	-57.8