

Twoja Infrastruktura IT

netf.pl

NETF, specjalizujemy się w sprzedaży zaawansowanej infrastruktury IT. Znajdą tu Państwo szeroki asortyment produktów od czołowych światowych producentów sprzętu i oprogramowania IT, w tym H3C, Huawei, Cisco, Juniper, Fortinet, a także Dell, IBM, CommVault i ESET. Dzięki współpracy z tymi renomowanymi partnerami, NETF zapewnia swoim klientom dostęp do najnowocześniejszych rozwiązań technologicznych.

**Bezpieczeństwo,
Efektywność,
Optymalizacja**



PTP 550E

1.4 Gbit Capacity

Product Name Quick Look

- 4.9 GHz to 6.2 GHz
- Up to 1.4 Gbps
- Built-in live spectrum analyzer
- IPv6/IPv4 dual-stack management support
- AES 128 encryption
- ARQ support



The PTP 550E 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 550E solution draws its attributes from Cambium Networks' point to point products such as PTP 650/670 and PTP 450i.

Metal Housing

Each PTP 550E 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 550E.

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 550E achieves 1.4 Gbps.

Dynamic Channel Selection

With dynamic channel selection (DCS), PTP 550E systems constantly optimize the channel of operation to maximize link reliability and performance. Responding to the radio interference environment, PTP 550E 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 550E

Radio Technology

| | |
|-------------------------------|--|
| Model | PTP 550E Connectorized PTP 550E Integrated |
| RF Bands | Wide-band operation 4.9 GHz to 6.2 GHz (entire frequency range) |
| 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) |
| 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, TCP/IP, UDP,FTP, SSH SNMPv2 and SNMPv3, https, WPA-PSK2 , ICMP, Telnet online spectrum analyzer (no impact on payload traffic) cnMaestro™ management |
| Installation | Built-in e-alignment using GUI on radio to assist in installation |

PTP 550E

| 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 | 4.9 GHz | | | | 5.1 GHz | | | | 5.2 GHz | | | | 5.4 GHz | | | | 5.8 – 6.2 GHz | | | |
| Bandwidth (MHz) | 10 | 20 | 40 | 80 | 10 | 20 | 40 | 80 | 10 | 20 | 40 | 80 | 10 | 20 | 40 | 80 | 10 | 20 | 40 | 80 |
| MCS1 | -92.0 | -90.0 | -87.0 | -84.0 | -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 | -90.0 | -88.0 | -85.0 | -82.0 | -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 | -87.0 | -85.0 | -82.0 | -79.0 | -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 | -85.0 | -83.0 | -80.0 | -77.0 | -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 | -72.0 | -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 | -79.0 | -77.0 | -74.0 | -71.0 | -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 | -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 | -71.0 | -68.0 | -65.0 | -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 | -69.0 | -66.0 | -63.0 | -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 |

PTP 550E

| Transmit Power (dBm) | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|-----------|--------------------|-------|-------|-------|----------------------|-------|-------|-------|----------------------|-------|-------|-------|----------------------|-------|-------|-------|--------------------|-------|-------|-------|------------------|-------|-------|-------|
| | | 4.9–5.150 GHz Band | | | | 5.150–5.250 GHz Band | | | | 5.250–5.350 GHz Band | | | | 5.350–5.725 GHz Band | | | | 5.725–5.9 GHz Band | | | | 6.0–6.2 GHz Band | | | |
| MCS | Pay-loads | 10 MH | 20 MH | 40 MH | 80 MH | 10 MH | 20 MH | 40 MH | 80 MH | 10 MH | 20 MH | 40 MH | 80 MH | 10 MH | 20 MH | 40 MH | 80 MH | 10 MH | 20 MH | 40 MH | 80 MH | 10 MH | 20 MH | 40 MH | 80 MH |
| | | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z |
| MCS 1 | Single | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 23 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 |
| MCS 2 | Single | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 |
| MCS 3 | Single | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 |
| MCS 4 | Single | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| MCS 5 | Single | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| MCS 6 | Single | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| MCS 7 | Single | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| MCS 8 | Single | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| MCS 9 | Single | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| MCS 1 | Dual | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 23 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 |
| MCS 2 | Dual | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 |
| MCS 3 | Dual | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 26 | 26 | 25 | 25 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 | 25 | 25 | 23 | 23 |
| MCS 4 | Dual | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| MCS 5 | Dual | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| MCS 6 | Dual | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| MCS 7 | Dual | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| MCS 8 | Dual | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| MCS 9 | Dual | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |

Physical

Dimensions Integrated Outdoor Unit (ODU): 305 mm x (12") 305 mm (12") x 68 mm (12 in x 12 in x 2.2 in)
W x H x D 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 IP66 and IP67

Intrusion Protection

Wind Speed 322 kph (200 mph)

Survival

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 550E

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 | EN 302 502; EN 301 893 |
| EMC | 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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