

PPC-10G-HP Series

10 Gigabit Ethernet MM-wave Link

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In response to market demand for ultra-wide broadband communication equipment, ELVA-1 offers a new PPC-10G-HP series of 10 Gigabit Ethernet radio links. This new model provides higher output power (24.7 dBm / 300 mW), and ensures reliable throughput over longer distances with high percentage of availability.

The PPC-10G-HP is an all-outdoor, IP, mm-wave radio with up to 10Gbps full duplex data rate. The link is intended for use in point-to-point applications such as 4G/LTE Backhaul, Corporate Campus Networks, IPTV, and Wireless ISP backbone. ELVA-1's PPC-10G-HP is available in either licensed 40.5-43.5 GHz (Q-band) or lightly licensed 70/80 GHz (E-band) frequency formats with 1 ft. or 2 ft. antennas.

The PPC-10G-HP platform is based on state-of-the-art MMIC chips, which support QAM 256 (Quadrature Amplitude Modulation) in digital data radio communications. ELVA-1 has pioneered the implementation of QAM 256 technology for E-band to achieve the best spectrum efficiency in the industry. Using QAM 128, PPC-10G-HP requires only 2 GHz of bandwidth for its 10Gbps data rate.

PPC-10G-HP Series Features:

- Frequency band: 71-76/81-86 GHz, 40.5-43.5GHz
- High output power – 24.7 dBm (300 mW)
- SNMP v.1; v.2; v.3; MIB-II and DOK Enterprise MIB; WEB
- True Full Duplex Operation
- Hitless adaptive bandwidth, coding and modulation
- IEEE 1588v2, SyncE
- Secure communication due inability to intercept the laser-like beam transmission at free air
- Solid reliability with Fiber-like Performance
- Easily installed, zero-footprint
- Compact Cassegrain type antennas
- Quasi-optical (laser-like) propagation of millimeter wave emission
- EMI interference free

Application:

- 4G/LTE/WiMAX backhaul for access and aggregation
- “Last Mile” fiber extension for enterprises
- Temporary high capacity links for disaster recovery
- LAN/WAN extensions for private/enterprise networks



PPC-10G-HP Series



PPC-10G-HP Specification

Specification

Frequency range	71-76/81-86 GHz (E-band)		40.5-43.5 GHz (Q-band)				
Throughput	Up to 10Gbps Full duplex		Up to 7.2Gbps Full duplex				
Channel Bandwidths Available	250/ 500/ 750 / 1000 / 1250 / 1500/ 2000 MHz						
Modulation	from BPSK to QAM-256						
Adaptive rate	Hitless adaptive bandwidth, coding and modulation						
Max Distance with 2ft antennas in clear sky	Up to 20km (12.4 mi)						
Max output power	24.7 dBm (300 mW)						
Link budget with 2ft antennas BPSK/QPSK modulation @ 10 ⁻⁹ BER	206 / 203dB @250MHz 203 / 200dB @500MHz 201 / 198dB @750MHz 200 / 197dB @1000MHz 199 / 196dB @1250MHz 198 / 195dB @1500MHz 197 / 194dB @2000MHz		190 / 187dB @250MHz 187 / 184dB @500MHz 185 / 182dB @750MHz 184 / 181dB @1000MHz 183 / 180dB @1250MHz				
Max throughput	1330Mbps @250MHz	2660Mbps @500MHz	3750Mbps @750MHz	5200Mbps @1000MHz	7200Mbps @1250MHz	7630Mbps @1500MHz	9600Mbps @2000MHz
Management	SNMP v.1; v.2; v.3; MIB-II and DOK Enterprise MIB; WEB GUI						
Ethernet Interface	1 × SFP/SFP+ slot (1000Base-X, 10GBase-LR/SR)						
Ethernet	Transparent to Ethernet services, Flow Control 802.3x Synchronous Ethernet and IEEE 1588v2 support Optionally: 10Gbps built-in L2 Ethernet switch, CPRI up to 9.8Gbps						
Management Port	100 Base-Tx (RJ – 45)						
Forward Error Correction	LDPC; Reed Solomon						
Polarization	Vertical / Horizontal						

Antenna

Antenna Type	Cassegrain type antenna with radome	
Antenna Gain/Beamwidth	71-76/81-86 GHz (E-band)	40.5-43.5 GHz (Q-band)
1ft antenna	45 dB/0.7°	38 dB/1.5°
2ft antenna	51 dB/0.35°	44 dB/0.7°

Power / Environment

Power Supply AC	Input 88-132 / 176-264 Volts, 50/60 Hz
Transceiver Power Consumption	35 W (+60 W when heater is switched on)
DC Power	36 to 60 Volts DC
Power Connection	IP-65 [optional IP-68]
Operational Temperature	-50°C to +60°C / -58°F to 140°F
Humidity	Any Percentage

Physical dimensions

Outdoor unit size w/o antenna	246 x 246 x 110mm
Weight (ODU w/o antenna)	4 kg max
Complete set	2 ODU + 2 antennas + 2 indoor power supplies



PPC - 10G-HP - E - X ft

Q - 40.5 - 43.5 GHz
E - 71-76/81-86 GHz

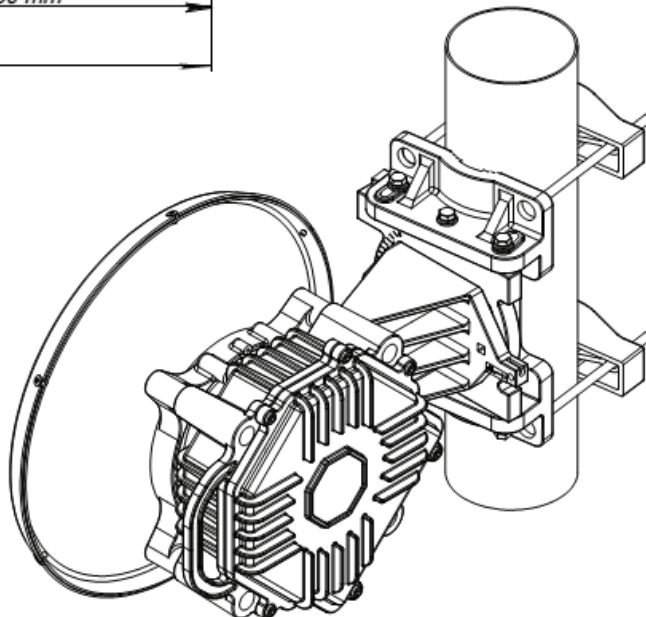
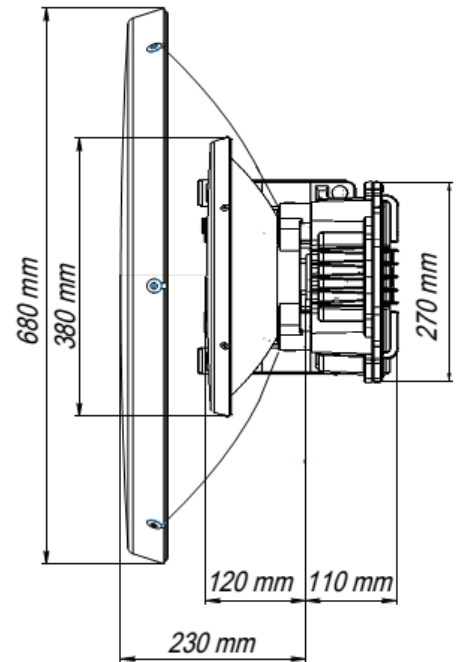
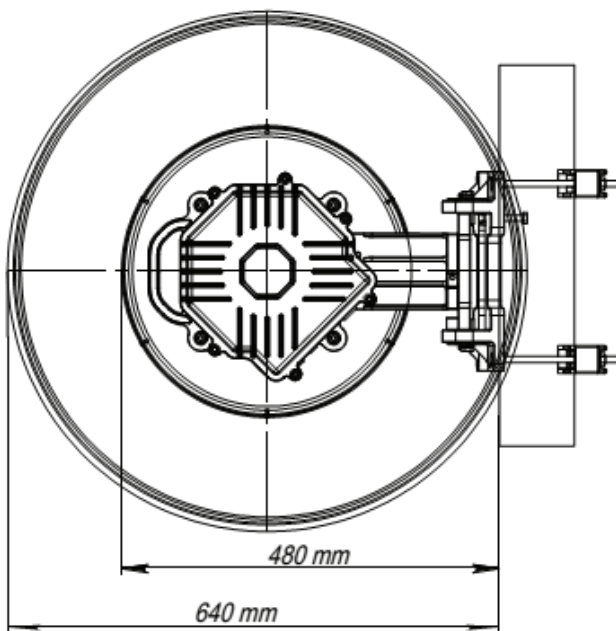
1 or 2

To choose the right model by its product code, please use the following encoding schema:

For example, PPC-10G-HP link with 2ft antennas, 71-76/81-86 GHz frequency band has product code PPC-10G-HP-E-2ft.

Your Local Elva-1 Representatives:

PPC -10G-HP dimensions with antenna

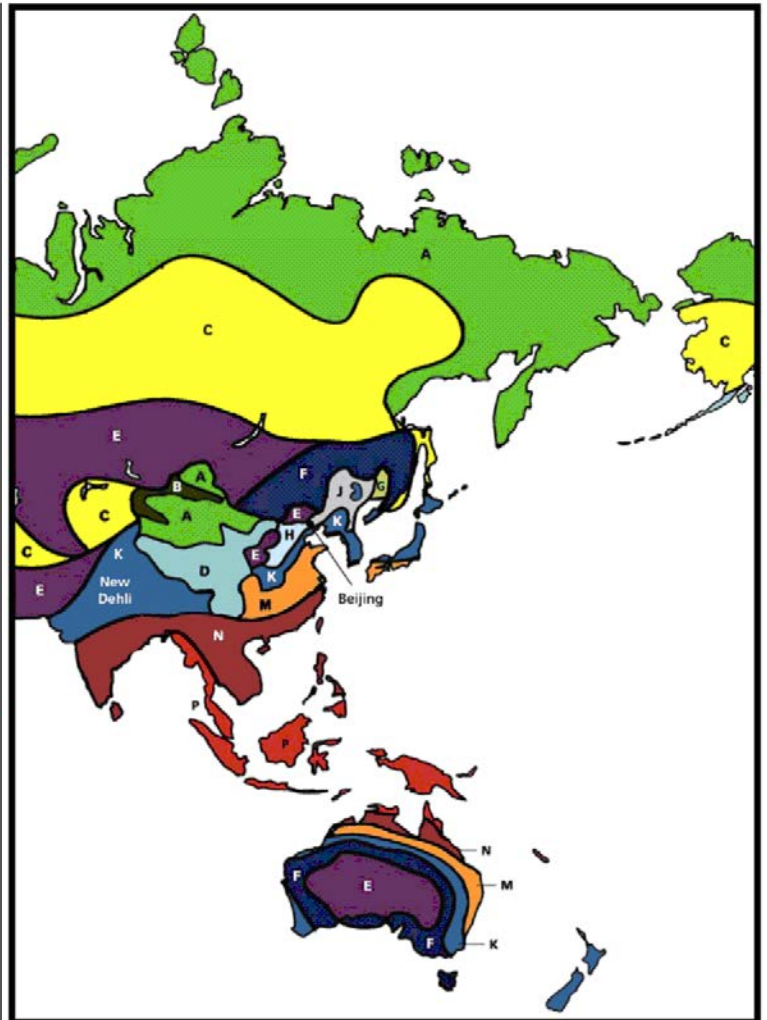




Rain zones



Europe/Africa Rain Regions



Asia-Pacific Rain Regions



Americans Rain Regions

[Click here for Link Budget Calculator](#)