



PPC-10G 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, cost-effective PPC-10G series of 10 Gigabit Ethernet radio links.

The PPC-10G 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 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 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 requires only 2 GHz of bandwidth for its 10Gbps data rate.

PPC-10G Series Features:

- Frequency band: 71-76/81-86 GHz, 40.5-43.5GHz
- 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 Series



PPC-10G 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	20 dBm (100mW)							
Link budget with 2ft antennas BPSK/QPSK modulation @ 10 ⁻⁹ BER	200 / 197dB @250MHz 197 / 194dB @500MHz 195 / 192dB @750MHz 194 / 191dB @1000MHz 193 / 190dB @1250MHz 192 / 189dB @1500MHz 191 / 188dB @2000MHz				186 / 183dB @250MHz 183 / 180dB @500MHz 181 / 178dB @750MHz 180 / 177dB @1000MHz 179 / 176dB @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 - E - X ft

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

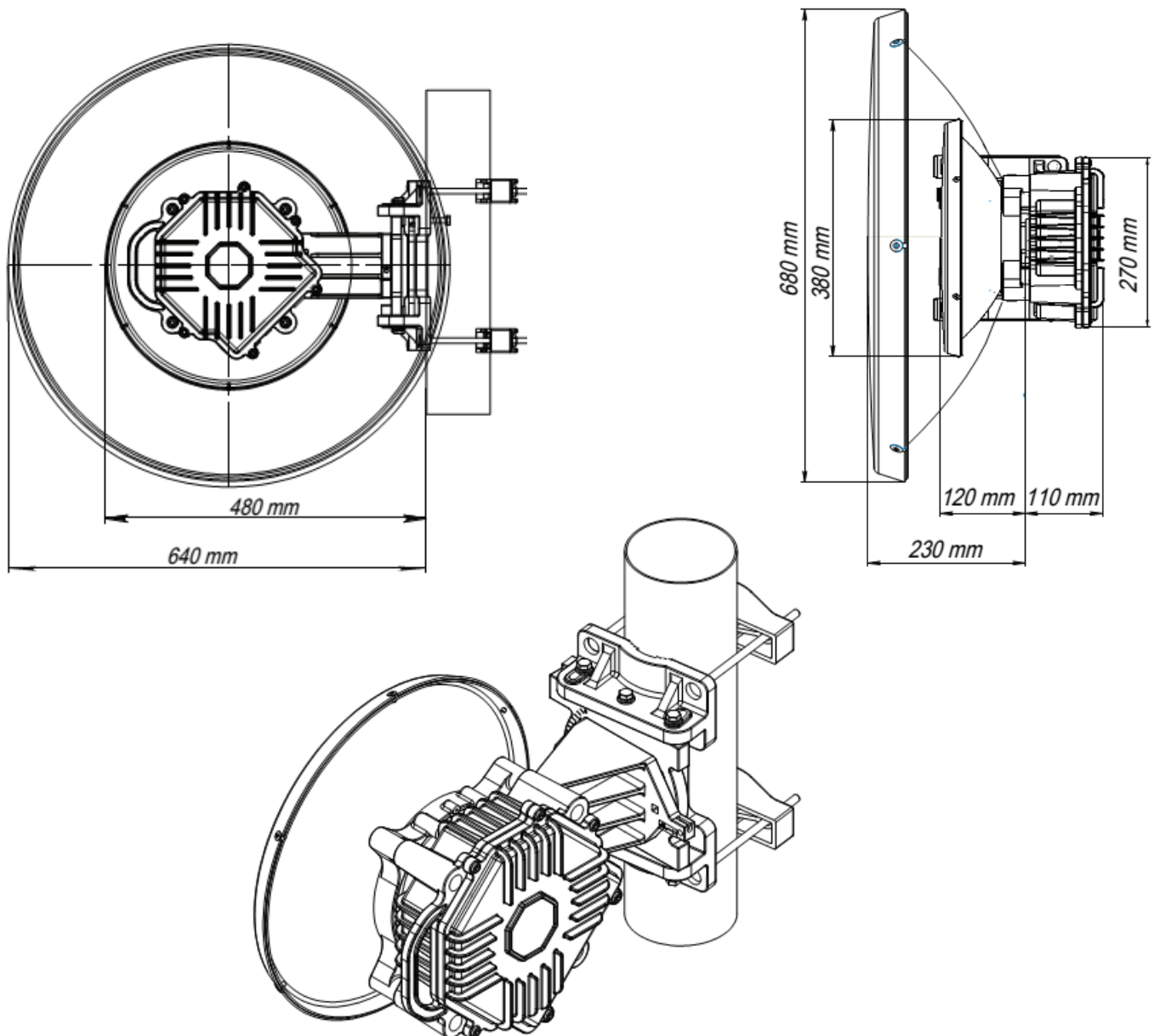
1 or 2

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

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

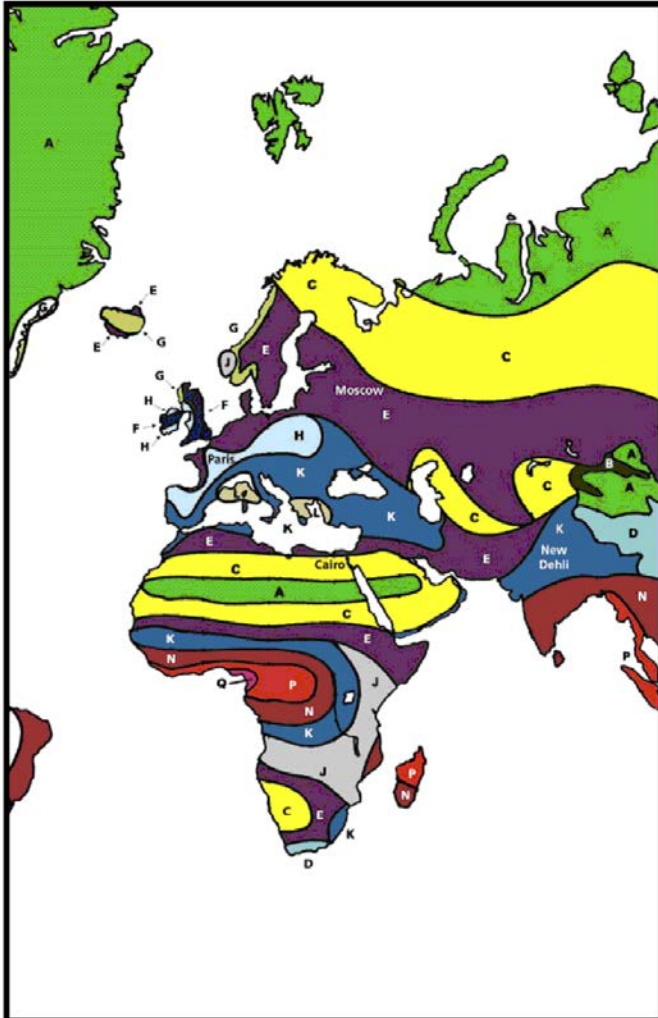
Your Local Elva-1 Representatives:

PPC -10G dimensions with antenna

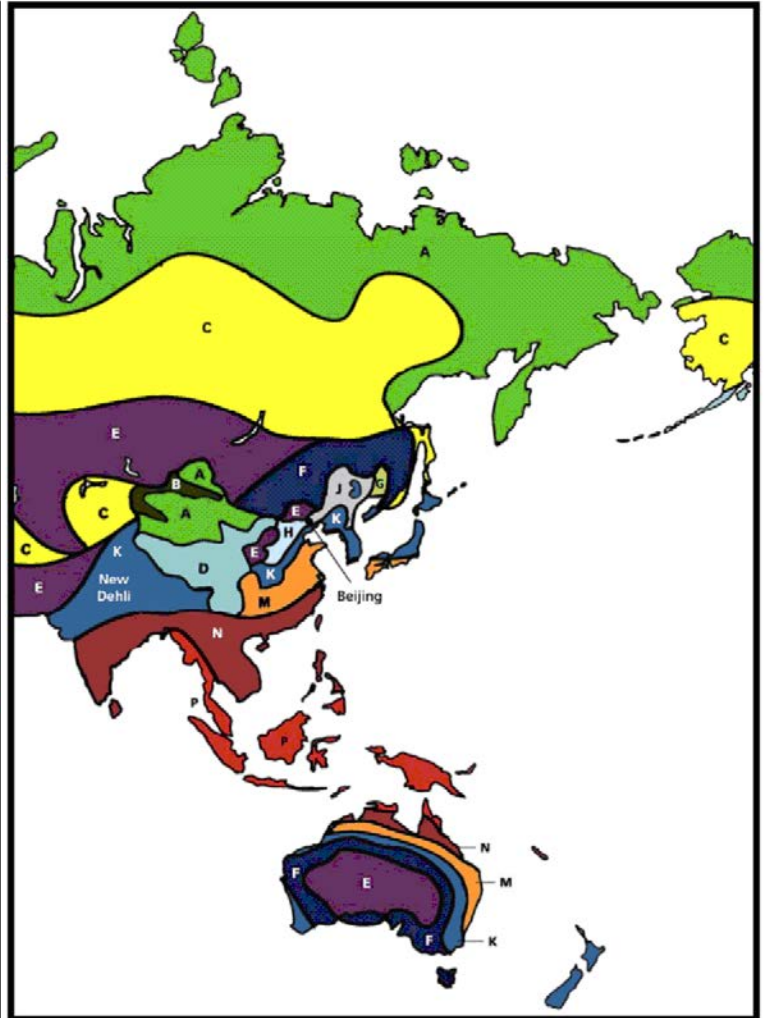




Rain zones



Europe/Africa Rain Regions



Asia-Pacific Rain Regions



Americans Rain Regions

[Click here for Link Budget Calculator](#)