



PPC-1000 Series

Gigabit Ethernet MM-wave Link

In response to market demand for ultra-wide broadband communication equipment, Elva-1 offers new PPC-1000 series of Gigabit Ethernet radios.

The Gigabit Elva-1 radio bridge was designed for a wide range of applications such as mobile backhaul, business network, FSO backup, IP network and emergency recovery network. The operating frequencies cover 40.5-43.5 GHz and 71-76/81-86 GHz. These are ECC licensed bands recently released by ECC for commercial use in wireless point-to-point communication.

Elva's PPC-1000 is a full-duplex Gigabit point-to-point link especially designed according to ECC requirements. It provides interconnection between remote LAN segments at ultra high speed and utilizes Gigabit Ethernet protocol, which is the evolving standard for switches and routers available from a variety of telecommunication equipment manufacturers. The PPC-1000 product has 1000 Base-SX connections at each end of the wireless link and transparently establishes the link outputs. The resulting connection can replace a fiber-optics cable physically connected end-to-end. The wireless mm-wave Gigabit link provides fiber equivalent performance, reliability and security but with no high deployment cost associated with outdoor fiber installations.

Features:

- Frequency band: 71-76/81-86 GHz (74-76/84-86 GHz for Czech Republic), 40.5-43.5 GHz
- 1250 Mbps Gigabit Ethernet Interface
- SNMP enabled version 1
- True Full Duplex Operation
- Secure communication due inability to intercept the laser-like beam transmission at free air
- Solid reliability with Fiber-like Performance
- Distance ranges of up to 2.8 mile (4.7 km) at 10mm/h rain for 71-76/81-86 GHz frequency band
- Distance ranges of up to 4.5 mile (7.2 km) at 10mm/h rain for 40.5-43.5 GHz frequency band
- Easily installed, Zero maintenance
- Compact Cassegrain type antennas
- Quasi-optical (laser-like) propagation of millimeter wave emission
- EMI interference free

PPC-1000 Series
Gigabit Ethernet MM-wave Link



PPC-1000 Series



Specifications PPC-1000

Specifications

Frequency Band	ECC E-band	ETSI Q-band
Bandwidth	71-76/81-86 GHz (74-76/84-86 GHz for Czech Republic)	40.5-43.5 GHz
Capacity	1250 Mbps Full duplex	
Modulation Type	QPSK	
Allocated Bandwidth	1250 MHz + 1250 MHz, 2.5 GHz in total	
Rx Sensitivity at BER 10 ⁻⁶	-87 dBW (-57dBm)	-94 dBW (-64dBm)
Output Power	-13 dBW (17dBm, 50mW)	-12 dBW (18dBm, 60mW)
Max Distance with 60cm antenna in clear sky	>20 km (12 mile)	>20 km (12 mile)
Max Distance with 60cm antenna at 10 mm/h rain	4.7 km (2.8 mile)	7.5 km (4.5 mile)
Network Management	SNMP Enabled	
Remote Parameters Monitoring	Proprietary adapter in ODU with software application (Windows 98/2000/XP/Vista)	
MTBF	150 000 hours	

Data and Aux Interface

Ethernet Interface	1000Base-LX10 (Single-mode fiber, 1310 nm wavelength, 10 km)
Connector Type	SC
Diagnostics Port	RJ-45

Antenna

Antenna Type	Cassegrain type antenna with radome	
Antenna Gain/Beamwidth		
30 cm	43.5 dB/0.9 ⁰	38.0 dB/1.6 ⁰
45 cm	46.5 dB/0.6 ⁰	42.0 dB/1.0 ⁰
60 cm	50.0 dB/0.4 ⁰	44.0 dB/0.7 ⁰

Power / Environment

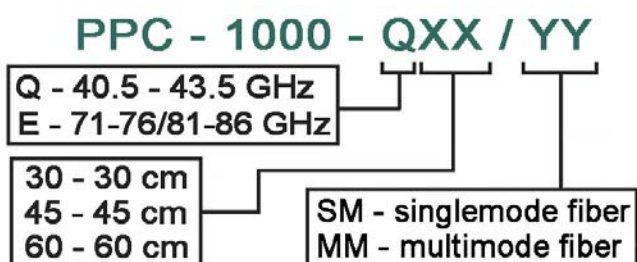
Power Supply AC	Input 88-132 / 176-264 Volts, 50/60 Hz (with manual voltage range switch)
Transceiver Power Consumption	65 W (+15 W heating)
DC Power	36 to 60 Volts DC
Power Connection Ethernet / Power connector	IP-65
Operational Temperature	-40°C to 50°C / -40°F to 122°F
Humidity	Any Rate

Physical Dimensions

Outdoor unit size w/o antenna	330 x 350 x 460 mm	
Weight (ODU w/o antenna)	12 kg max	
Complete set	2 ODU + 2 antennas	2 ODU + 2 antennas



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



For example, PPC-1000 link with 60 cm antenna diameter and single mode fiber optic cable for 40.5 – 43.5 GHz frequency band has product code PPC-1000-Q60/SM.

Your Local Elva-1 Representatives:

PPC -1000 unit size with antenna

