



PPC-1000 Series

Gigabit Ethernet MM-wave Link

In response to market demand for ultra-wide broadband communication equipment, ElvaLink has introduced its new PPC-1000 series of Gigabit Ethernet radios.

ElvaLink's PPC-1000 radio link 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 71-76 GHz, 81-86 GHz, and 92-95 GHz. These are FCC licensed bands recently released by the FCC for commercial use in wireless point-to-point communications.

ElvaLink's PPC-1000 is a full-duplex Gigabit point-to-point link especially designed according to FCC requirements. It provides interconnection between remote LAN segments at ultra high speed and utilizes Gigabit Ethernet protocols, 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.

PPC-1000 links have remote management as well as parameter monitoring capabilities. A twisted pair patch cable connected to any RJ-45 socket within the LAN will allow remote SNMP management and parameter control of a set of PPC-1000 links from a central location.

The Gigabit Ethernet links have been designed with compact parabolic Cassegrain antennas of 30/45/60 cm diameters. The 60 cm antenna has a 0.4° beam width and 50 dB antenna gain parameters, which exceed FCC specification requirements for E-band communication.

PPC-1000 equipment is provided in a comprehensive link kit with antennas, mounting units and accessories to allow a turnkey installation into the customer's communication system.

The PPC-1000 operating distances vary from 1.0 to 7.5 miles (1.6 to 12.0 km) for varying weather conditions depending of the link frequency and rain intensity. The advantage of millimeter waves is a permit on more densely packed communications links, thus providing very efficient spectrum utilization, and they can increase security of communication transmissions.

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PPC-1000 Gigabit Ethernet Point-to-point Link Specs

System Parameters

Frequency Band
 Bandwidth
 Capacity
 Modulation Type
 Allocated Bandwidth
 Rx Sensitivity
 Output Power
 Max Distance, 60 cm antennas
 with 10mm/hr rainfall
 Network Management
 Remote Monitoring

FCC E-band	ETSI Q-band
71-76 and 81-86 GHz	40.5-43.5 GHz
1250 Mbps Full duplex	
DQPSK	
1300 MHz + 1300 MHz = 2.6 GHz in total	
-84 dBW	-92 dBW
10 mW	30 mW
18.0 km (10 mile)	32.4 km (19 mile)
4.0 km (2.4 mile)	7.2 km (4.5 mile)

SNMP Enabled

Proprietary adapter in ODU with software application [Windows 98/2000/XP]

Data and Aux Interface

Ethernet Interface
 Diagnostics Port

1000Base-SX (for multimode fiber, Standard IEEE 802.3z/D.50-1998)
 RJ45

Antenna

Antenna Type
 Antenna Gain/beamwidth

- 30 cm
- 45 cm
- 60 cm

Cassegrain type antenna with radome cover

43.5 dB/0.9°	38.0 dB/1.6°
46.5 dB/0.6°	42.0 dB/1.0°
50.0 dB/0.4°	44.0 dB/0.7°

Power / Environment

Power Supply AC
 Transceiver Power Consumption
 DC Power
 Power Connector Ethernet
 / Power connector
 Operational Temperature
 Humidity

Input 88-132 / 176-264 Volts, 50/60 Hz [with manual voltage range switch]
 65 W [+15W heating]
 36 to 60 Volts DC

IP-65

-40°C to 50°C / -40°F to 122°F
 0 to 95%, non-condensing

Physical Dimensions

Outdoor unit size w/o antenna
 Weight (ODU w/o antenna)

330 x 350 x 460 mm
 12 kg max

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

PPC-1000-YXX

E - 71-76/81-86 GHz	30 - 30 cm
Q - 40.5-43.5 GHz	45 - 45 cm
	60 - 60 cm

For example, PPC-1000 link with 60 cm antennas for 40.5-43.5 GHz band has product code PPC-1000-Q60

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