



PPC-1000 Series Gigabit Ethernet MM-wave Link

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

The Gigabit ElvaLink 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 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 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 are fully compliant with FCC specification requirements for E-band communication. Note, the FCC recently allowed the use of smaller, less expensive antennas with a minimum antenna gain of 43 dBi and a 1.2 degree half-power beamwidth available on the PPC-1000 ElvaLink systems as well. PPC-1000 equipment has been offered as 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 4.4 miles or 1.6 to 7.0 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.



PPC-1000 Series



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

System Parameters

Frequency Band

ECC&FCC E-band | FCC E-band
71-76/81-86 GHz | 92-95 GHz

Capacity

1250 Mbps Full duplex

Modulation Type

DQPSK

Bandwidth

800 MHz + 800 MHz (two bands with duplex separation)

Rx Sensitivity

-87 dBW

Output Power

20 mW

Max Distance at 5 mm/hour rain
@ 60 cm antennas

5.5 km (3.4 mile) | 7.0 km (4.4 mile)

Network Management

SNMP Enabled

Remote Parameters Monitoring

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

Data and Aux Interface

Ethernet Interface

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

Diagnostics Port (SNMP)

RJ-45 [100BaseT] with optional RS-485 or RS-232

Antenna

Antenna Type

Cassegrain type antenna with radome

Antenna Gain/beamwidth

- 30 cm
- 45 cm
- 60 cm

| | | |
|--------------|--|--------------|
| 43.5 dB/0.9° | | 45.0 dB/0.7° |
| 46.5 dB/0.6° | | 48.0 dB/0.5° |
| 50.0 dB/0.4° | | 50.0 dB/0.4° |

Power / Environment

Power Supply AC

Input 88-132 / 176-264 Volts, 50/60 Hz [with manual voltage range switch]

Transceiver Power Consumption

65 W [+15W heating]

DC Power

36 to 60 Volts DC

Power Connector

SNMP Monitor & Power connector

Operational Temperature

IP-65 [optional IP-68]

Humidity

-40°C to 50°C / -40°F to 122°F

0 to 95%, non-condensing

Physical Dimensions

Outdoor unit size w/o antenna

330 x 350 x 460 mm

Weight (ODU w/o antenna)

14 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 |
| W - 92 to 95 GHz |

| |
|------------|
| 30 - 30 cm |
| 45 - 45 cm |
| 60 - 60 cm |

For example, PPC-1000 link with 60 cm antennas for 92-95 GHz band has product code PPC-1000-W60

DOK Ltd.

Voroshilova 2, 193318
St.Petersburg, Russia
Tel: +7-812-3265924
Fax: +7-812-3261060
sales@dokltd.ru
www.dokltd.ru

Your Local DOK Ltd. Representatives: