



# PPC-350 Series

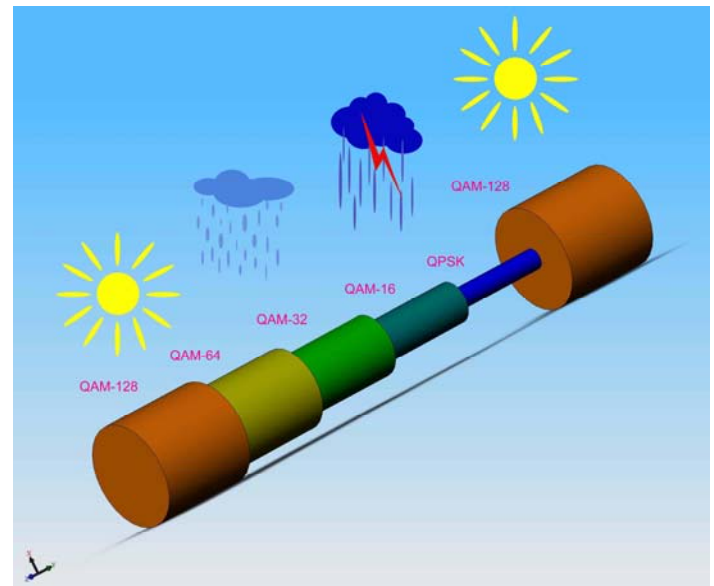
ELVA-1 Millimeter Wave Division announces new full-duplex 350Mbps Series of 40.5-43.5 GHz and 71-76/81-86 GHz mm-wave bands Radio Links. PPC-350 was specifically designed according to European ECC and US FCC performance requirements.

Main feature of PPC-350 consists in possibility to adapt its data transmission speed to the current weather conditions.

PPC-350 supports Adaptive Code and Modulation (ACM) in which changes of coding rate and modulation are set in real time, based on the link conditions. This feature enables to increase radio link availability.

When the link's SNR (Signal to Noise Ratio) is high (during good weather conditions), operation at full capacity is enabled, reaching the maximum speed of 350Mbps. In case that the link's SNR drops significantly (during heavy rain), the channel capacity is reduced up to 80Mbps.

The figure shows radio bridge capacity varies due to changes in SNR level.



## **PPC-350 Series Features**

- Frequency band: 40.5-43.5 GHz, 71-76/81-86 GHz
- 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 5 mile (7.9 km) at 350Mbps and 6.5 mile (10.9 km) at 80Mbps at 10mm/h rain for 40.5-43.5 GHz frequency band
- Distance ranges of up to 3.3 mile (5.5 km) at 350Mbps and 4.5 mile (7.5 km) at 80Mbps at 10mm/h rain for 71-76/81-86 GHz frequency band
- Easily installed, Zero maintenance
- Compact Cassegrain type antennas
- Quasi-optical (laser-like) propagation of millimeter wave emission
- EMI interference free



# PPC-350 Series

## Specifications PPC-350

### Specifications

Frequency Band	E-band		Q-band	
Bandwidth	71-76/81-86 GHz (74-76/84-86 GHz for Czech Republic)		40.5-43.5 GHz	
Capacity	up to 350 Mbps Full duplex			
Modulation Type	from QPSK to QAM-256			
Rx Sensitivity	-63dBm at 350Mbps	-73dBm at 80 Mbps	-69dBm at 350Mbps	-79dBm at 80 Mbps
Output Power	11dBm (16mW) at 350Mbps	16dBm (40mW) at 80Mbps	13dBm (20mW) at 350Mbps	18dBm (63mW) at 80Mbps
Max Distance with 60cm antenna in clear sky	>20 km (12 mile) at 350Mbps	>20 km (12 mile) at 80Mbps	>20 km (12 mile) at 350Mbps	>20 km (12 mile) at 80Mbps
Max Distance with 60cm antenna at 10 mm/h rain	5.5 km (3.3 mile) at 350Mbps	7.5 km (4.5 mile) at 80Mbps	7.9 km (5 mile) at 350Mbps	10.9 km (6.5 mile) at 80Mbps
Network Management	SNMP Enabled			
Remote Parameters Monitoring	SNMP version 1			
Forward Error Correction	LDPC; Reed Solomon			

### Data and Aux Interface

Ethernet Interface	1000 Base-SX (Standard IEEE 802.3z/D.50-1998)
Diagnostics Port	100 Base-SX

### Antenna

Antenna Type	Cassegrain type antenna with radome	
Antenna Gain/Beamwidth at 60cm antenna diameter	50.0 dB/0.4°	44.0 dB/0.7°

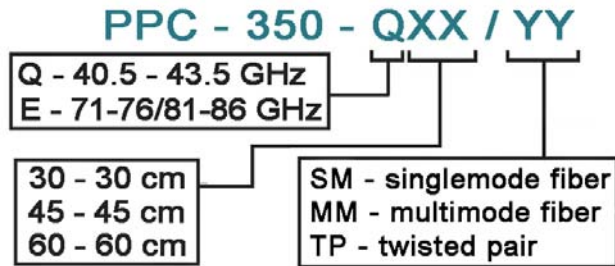
### Power / Environment

Power Supply AC	Input 88-132 / 176-264 Volts, 50/60 Hz
Transceiver Power Consumption	35 W (+15 W heating)
DC Power	36 to 60 Volts DC
Power Connection Ethernet / Power connector	IP-65 [optional IP-68]
Operational Temperature	-40°C to 50°C / -40°F to 122°F
Humidity	Any Rate

### Physical Dimensions

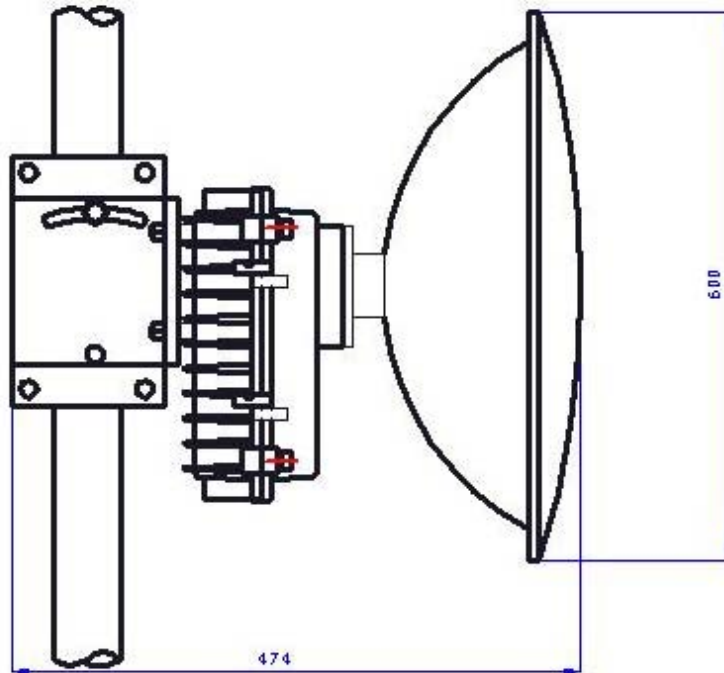
Outdoor unit size w/o antenna	330 x 350 x 460 mm
Weight (ODU w/o antenna)	12 kg max
Complete set	2 ODU + 2 antennas

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

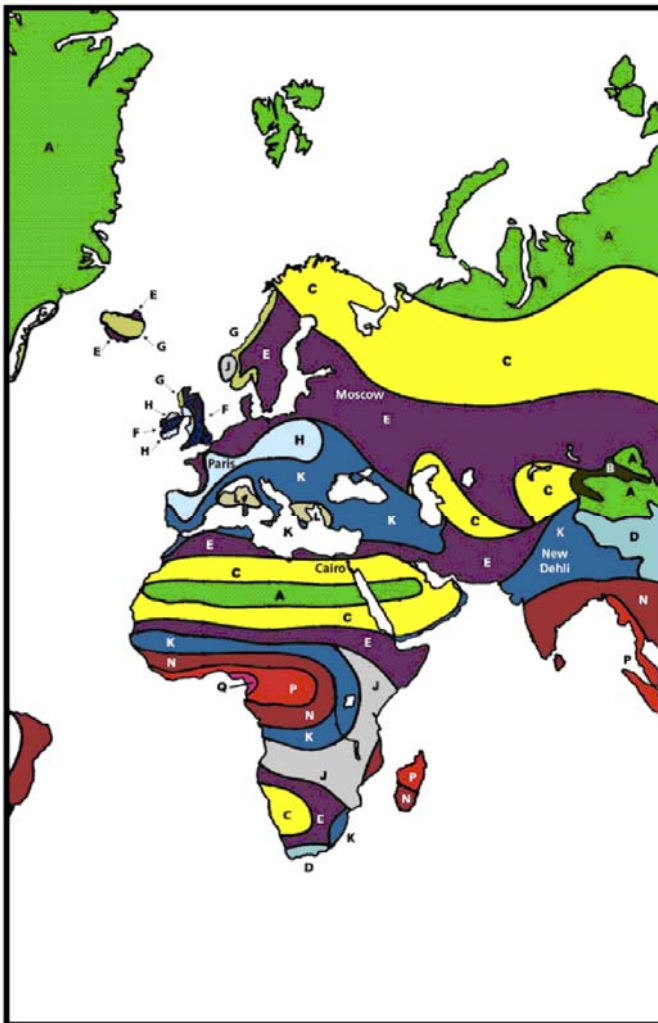


For example, PPC-350 link with 60 cm antenna diameter and single mode fiber optic cable for 40.5 – 43.5 GHz frequency band has product code PPC-350-Q60/SM.

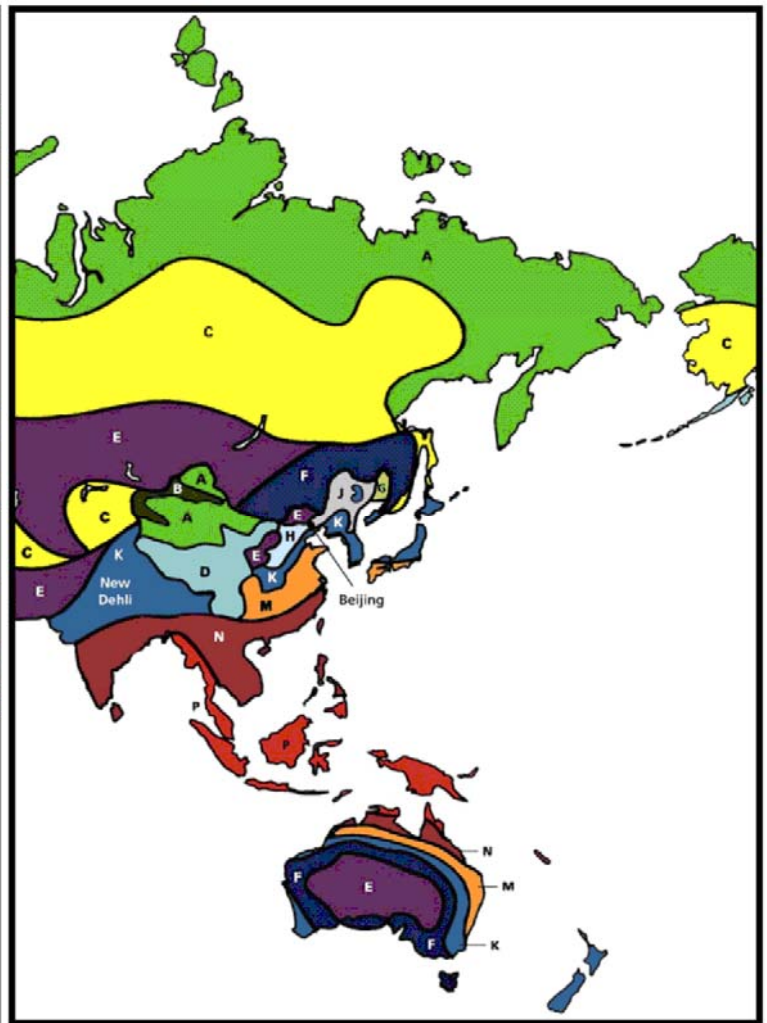
*PPC -350 unit size with antenna*



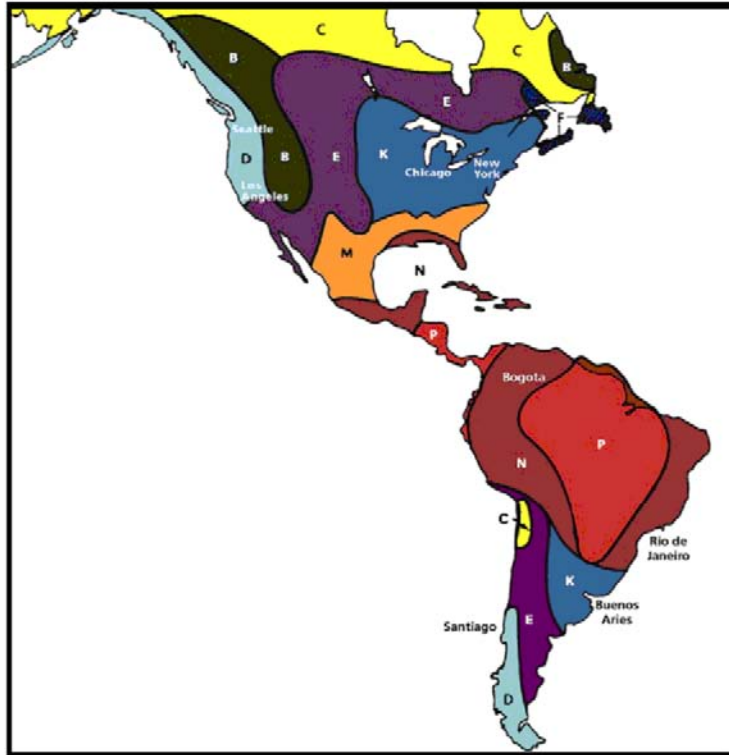
*Versus rain zone and availability dimensions*



Europe/Africa Rain Regions



Asia-Pacific Rain Regions



Americans Rain Regions

Region	Distance PPC-350 Q-Band (km)		Distance PPC-350 E-Band (km)	
	99.9%	99.99%	99.9%	99.99%
A	>20	17	>20	11
B	>20	12.5	15	6.8
C	15	8.5	11	5.5
D	14.8	7.3	10.2	4.4
E	14.3	5.8	9.7	3.8
F	13.2	5.7	8.4	3.7
G	12.5	5.5	7.8	3.6
H	12.0	5.4	7.5	3.5
J	11.2	5.3	7.1	3.4
K	10.5	5.2	6.7	3.3
L	9.6	4.2	6.0	3.0
M	8.5	3.8	5.5	2.7
N	5.2	2.0	3.3	1.2
P	4.0	1.9	3.0	1.1
Q	3.5	1.8	2.7	1.0