

Wireless Technology

PTP 450i Integrated Fixed Wireless



450i Point to Point and Point to MultiPoint Wireless

The 450i product platform is the most scalable industrial-grade wireless broadband solution available.

- **Ultra-Wide band radios 5Ghz or 3Ghz**
- **Rugged Metal Enclosure**
- **2 x 2 OFDM MIMO Radio capable of up to 300Mbps per sector**

KEY FEATURES

Ultra-Wide Band Radios

Supports the entire band, whether in 5Ghz or 3Ghz. Advanced radio design improves transmit power and increases receiver sensitivity

Rugged Metal Enclosure

Designed to meet IP-66 and IP67 standards and to withstand harsh environments. Optional ATEX / HAZLOC certified models available for hazardous deployments

Dynamic Interference Filtering

Provides industry leading noise isolation for improved performance

Updated FPGA and SOC Architecture

Triples the processing power compared to PMP 450

Multifunction AUX Port

Allows for greater flexibility for deployment by adding a camera or other PoE device directly

Increased Throughput

Now capable of up to 300Mbps per sector in a 40Mhz Channel



Product part number

		RoW	US	EU	DES Only
5Ghz	Integrated	C050045B002B	C050045B004B	C050045B006B	C050045B008B
3Ghz	Integrated	C050045B002A	C050045B002A		C050045B004A

Spectrum

Channel Spacing	3Ghz customisable to 50Khz	5Ghz configurable in 2.5Mhz increments
Frequency Range	3Ghz: 3300 – 3900Mhz	5Ghz: 4900 – 5925Mhz
Channel Width	5Mhz, 7Mhz, 10Mhz, 15Mhz, 20 Mhz, 30 Mhz or 40Mhz	5Mhz, 10Mhz, 20 Mhz, 30 Mhz or 40 Mhz

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Interfaces		
MAC (Media Access Control) Layer	Proprietary	
Physical Layer	2 x 2 MIMO OFDM	
Ethernet Interface	100/1000 Base-T, full dúplex, rate auto negotiated (802.3)	
Protocols used	IPv4, IPv5, UDP, TCP/IP, ICMP, Telnet, SNMP, HTTP, FTP	
Network Management	IPv4 / IPv6 (dual stack), HTTP, HTTPS, Telnet, FTP, SNMPv2c & 3	
MTU	1700 bytes	
VLAN	802.1ad (DVLAN Q-in-Q0, 802,1Q with 802.1p priority dynamic port VID	
Security		
Encryption	FIPS-197, AES 128, 256-AES (requires optional License)	
Performance		
ARQ	Yes	Yes
Modulation Levels (Adaptive)	MCS	Signal to Noise Required (SNR in Db)
2x	QPSK	10
4x	16 QAM	17
6x	64 QAM	24
8x	256 QAM	32
Maximum Deployment Range	Up to 200 kilometers (124miles) depending on configuration	
Latency	3 – 5 ms typically	
GPS Synchronisation	Yes, via Autosync (UGPS, CMM4 or CMM5	
Quality of Service	Diffserver QoS	
Physical		
Antenna Connection	50 Ohm, N-Type (Connectorised version only)	
Surge Suppression (LPU Fitted)	EN61000-4-5: 1.2us / 50us, 500V Voltage Waveform. Recommend external surge suppressor Model # C000000L033A	
Dust and Water Ingress Protection	IP67, IP66	
Temperature / Humidity	-40C ~ +75C (-40F to +167F) 0 – 100% non-condensing	
Weight	Approx 2.5Kg (5.5lbs)	
Wind Survival	322Km/h (200 Mph)	
Vibration	NEMA TS2 Section 2.1.9 and 2.2.3	
Shock	NEMA TS2 Section 2.1.0 and 2.2.4	
External icing	NEMA 250-2—3 section 5.6	
Dimensions (H x W x D)	31.0 x 31.0 x 6.4cm (12” x 12” x 2.5”)	
Power Consumption	15W Typical, 18W max	
Input Voltage	48 – 59vdc, 802.3at compliant	
Installation	Wall or Pole Mount with #N000045L002A	

Link Budget

Antenna Beam Width	100 Azimuth for integrated antenna, other antennas available
Antenna Gain	3Ghz integrated +19dBi dual pol H + V
Transmit Power Range	40dB dynamic range (to EIRP limit by region)(1dB steps)
Maximum Power Range	+27dBm combined output (+25dBm combined for 3Ghz)
VSWR	1.5 Reflection Coefficient 0.2, Reflected Power 4%. Return Loss 14dB
Power Control	ATPC (Automatic Transmit Power Control) at system level Backhaul slave implements ATPC (Future software release)

Certifications

	3Ghz	5 Ghz
Industry Canada	109W-0028 (3Ghz)	109AO-50450I(4.9, 5.2, 5.4, 5.8Ghz)
FCC ID	Z8H89FT0028 (3Ghz)	QWP-504501 (4.9,5.1, 5.2, 5.4, 5.8Ghz)
	-	EN-301 893 v1.8.1 (5.4Ghz)
CE		EN-302 625 v1.1.1 (Broadband Disaster Relief, 4.9Ghz, 5.1 Ghz)
		EN-302 502 v1.2.1 (5.8Ghz)

ANTENNA PATTERNS

