

RADITEK

Telecom
Point to Point Radio

Point to Point Radio LC Family, 7GHz RTR-P2P-7G-IP120M-LC-g16



Up to 100 Mbps, Ethernet, Low Cost, Point to Point

Features & Benefits																		
<ul style="list-style-type: none"> • Licensed Frequency Bands • Point to Point IP Link • Very Low Latency Ethernet • Adaptive Modulation for increased availability • Internet Ethernet 10/100Base-T • Low Power Consumption • Wide Operating Temperature Range • SNMP (V1,2,3) Management • Up to 300 Meter separation between IDU and ODU • Small profile • Low installed cost • Carrier class performance 	<p>Overview</p> <p>This is a Full Duplex (FD), 7GHz Point to Point, Low Cost (LC) microwave, radio link. An IP based Ethernet Radio system, offering Full Duplex (FD) data rates up to 100 Mbps). The radio supports software configurable capacity selection to 120 Mbps, using 7, 14, 28 and 40 MHz channel bandwidths. With QPSK to 32APSK and Advanced, integrated forward Error correction (FEC) provides superior link performance and reliability.</p> <p>This RADIO is ideally suited for: Backhaul networks; including: WiMAX backhaul, ISPs, next generation mobile, and enterprise/campus networks requiring the best solution that exceeds Carrier-Grade Class standards for highest reliability, quality, and environmental compliance at a relatively low price.</p> <p>The simplified all-outdoor solution:</p> <ul style="list-style-type: none"> • Incorporates digital Channel filtering for the various data bandwidths. • Offers volume capacity and proven performance for applications, worldwide • Represents a new low cost solution of roof/tower installation • Designed to minimize product logistics and overall product life cycle costs. • Connects directly to antennas from many (other) manufacturers. • Optional: Protected (1+1), 2 x (2+0) Capacity, Full Duplex and other configurations possible with compatible router <p>Standards Compliance</p> <table border="1" data-bbox="477 1360 1406 1619"> <tr> <td>EMC</td> <td>EN 301 489</td> </tr> <tr> <td>Operation, ODU</td> <td>ETS 300 019 Class 4.1</td> </tr> <tr> <td>Operation , IDU</td> <td>ETS 300 019 Class 3.2</td> </tr> <tr> <td>Storage</td> <td>ETS 300 019 Class 1.2</td> </tr> <tr> <td>Transportation</td> <td>ETS 300 019 Class 2.3</td> </tr> <tr> <td>Safety</td> <td>EN 60950</td> </tr> <tr> <td>RF</td> <td>EN 302 217</td> </tr> <tr> <td>Water resistance, ODU</td> <td>IEC 60529 (IPX6)</td> </tr> </table>	EMC	EN 301 489	Operation, ODU	ETS 300 019 Class 4.1	Operation , IDU	ETS 300 019 Class 3.2	Storage	ETS 300 019 Class 1.2	Transportation	ETS 300 019 Class 2.3	Safety	EN 60950	RF	EN 302 217	Water resistance, ODU	IEC 60529 (IPX6)	
EMC	EN 301 489																	
Operation, ODU	ETS 300 019 Class 4.1																	
Operation , IDU	ETS 300 019 Class 3.2																	
Storage	ETS 300 019 Class 1.2																	
Transportation	ETS 300 019 Class 2.3																	
Safety	EN 60950																	
RF	EN 302 217																	
Water resistance, ODU	IEC 60529 (IPX6)																	

Point to Point Radio Family 7GHZ RTR-P2P-7G-IP120M-LC-g16

Key Feature	GENERAL Technical Information		
<ul style="list-style-type: none"> Browser based GUI for easy setup and management Standard IP and Serial Interfaces Supports NMS & SNMP <p>Benefits</p> <ul style="list-style-type: none"> More cost effective Quick Deployment Lowest cost, Licensed bands Easily Setup and Activated <p>Applications</p> <ul style="list-style-type: none"> Ethernet IP IP Radio Networks G3/G4 Backhaul WiMAX /LTE Backhaul <p>Services available</p> <ul style="list-style-type: none"> Technical Support Installation and Setup Maintenance Applications Support Hardware Support Extended Warranty 	GENERAL Technical Information		
	RTR-P2P-7-IP100-LC-g16		
	Operating frequency	7	GHz
	Range	To 40Km	Depends on antenna
	Digital line rate	100	Mbps (FE)
	Capacity	120	Mbps
	Modulation Options	QPSK, 8PSK, 16APSK, 32APSK	
	Error Correction	RS, LDPC	
	PRODUCT CONFIGURATION:		
	1+1, HSB, FD, SD		
	ENVIRONMENTAL:		
	Operating temperature		
	IDU	-5 to 50 °C	
	ODU, standard		
	ODU, extended		
IDU, Humidity	0 to 100%		
Altitude	4500m	15000 feet	
Fault and configuration management			
Protocol	SNMP v1/v2/v3		
Interface, electrical	Ethernet 10/100 base-T		
Interface, electrical	RJ-45		
Local/remote configuration, support Tools	WEB LCT		
Performance monitoring	ITU-T REC. G.826		
Network management	EMS 1000		
EOW (Engineering orderwire)	EOW and AUX-232		
Channel Bandwidth			
Capacity and modulation			
Capacity	Modulation	Bandwidth	
20-60 Mbps	QPSK-32APSK	14MHz	
40-120 Mbps	OPSK-32APSK	28, 40MHz	
			

Point to Point Radio Family 7GHZ RTR-P2P-7G-IP120M-LC-g16

General. IDU Options

LED indicators	PWR, IDU, ODU, RAI, LNK	
Line interface	FE	
IF interface	Transmit	
	Receive	
IF Cable Connector	N Type	
Auxiliary Data	Channel interface #	1
	interface	RS232
	Line rate, configurable	1.2 to 19.2 Kbps
	Connector type	RS232, 9 PIN D-SUB
Alarm I/O	External Alarm input	2 x TTL
	External Alarm output	2 x TTL, 2 x Form C relay
	Connector	9 pin D-SUB
NMS LNA		
Interface	Type	10/100 BaseT Ethernet, RJ45
Electrical	Input voltage range	-38 to -72 Vdc
	Power consumption	<12W, typ.
	Protective Circuit	6A fuse
Mechanical	Dimensions	44 x 482mm x 240mm
	Weight	~2.8Kg (typ.)
Internet		
Capacity options	Configurable to 120Mbps	
Traffic	4 x FE Electric	
Connectors	4 x RJ45	
Specifications	L2 Switching, VLAN (802.3ac), Flow control (802.3X), QoS (802.1p)	
Threshold (BER 10E-6)		
QPSK (28MHz BW)	-85	dBm
8PSK (28MHz BW)	-82	dBm
16APSK (28MHz BW)	-79	dBm
32APSK (28MHz BW)	-76	dBm
ODU Specifications		
Frequency	7	GHz
Range		
Bandwidth	7/14/28/40	MHz
Modulation	QPSK to 32APSK	
IF Specification		
IF frequency, Tx	350	MHz
IF frequency, Rx	140	MHz
Cable impedance	50Ω	
Maximum IF cable length (IDU-ODU)	300	m
ODU Interfaces		
IF cable connectors	N type	
AGC monitor	BNC	
Antenna port	EIA rectangular (standard)	Refer to ODU system spec.
Polarization (field selectable)	Vertical(standard), horizontal	

Point to Point Radio Family 7GHZ RTR-P2P-7G-IP120M-LC-g16

Antenna mount	Direct mount	
Power	25 (QPSK) 22 (32APSK)	dBm dBm
Power control range	Resolution: 0.1 steps (@ 6 dB/s speed) Accuracy: ± 1	dB dB
Transmit mute	<-50	dBm/MHz
Tolerance		
Transmitter source	Synthesizer	
Stability	±5	ppm
Receiver overload (BER 10E-6)	-20	dBm
Residual BER	10E-13	
RSSI accuracy	±2	dB
@1KHz Phase Noise	-53 (-65 typ.)	dBc/Hz
@10KHz	-73 (-65 typ.)	dBc/Hz
@100KHz	-93 (-95 typ.)	dBc/Hz
@1MHz	-110 (-118 typ.)	dBc/Hz
25 dBm (Pout) QPSK EVM	15 spec. (12.1 typ.)	%
24 dBm (Pout) 8PSK EVM	10 spec. (7.1 typ.)	%
23 dBm (Pout) 16APSK EVM	8 spec. (5.8 typ.)	%
22dBm (Pout) 32 APSK EVM	6 spec (3.6 typ.)	%
Electrical		
Power consumption	30	W
Mechanical		
H x W x D	287 x 287 x 120	mm
Weight	6.5	Kg
Thermal cycle (32APSK, 28MHz BW)	8	hrs



Point to Point Radio Family 7GHZ RTR-P2P-7G-IP120M-LC-g16

Mounting Detail

