



Point to Point /Multi-Point Radio 15GHz
RTR-P2MP-15-IP366M-g16

Up to 366 Mbps,
Supports 3 Model: E1+IP mode, SDH mode and IP mode



Overview

RADITEK's microwave Point to Point and Multipoint communication system, which can be configured by software, works with different bandwidth of channel, such as 7MHz, 14MHz, 28MHz or 56MHz. And it supports data capacity up to 366 Mbps. It supports 3 service modes, including E1+IP mode, SDH mode and IP mode. The E1+IP mode transfers E1 service and IP service simultaneously with sharing of channel capacity. It can be expanded at the scene (insert card, change interface board, SD card storing parameters, etc). Users are allowed to make free choice from them to match their infrastructure network.

All outdoor Module Applications:

- Backhaul transmission for GSM, CDMA, 3G/4G
- Private network interconnection (Gas Station, Power/Utility, Bank, Police, Security, Military, CATV)

Features:

- Multi-transmission service: Support single PDH/SDH/IP service and PDH with IP service
- Multi-capacity: supply multi-channel bandwidth, such as 7MHz, 14MHz, 28MHz and 56 MHz
- Large capacity: To 366 Mbps
- Capacity managed: E1 and IP share the total capacity for E1 + IP mode, which is managed by software
- Diverse IP function: L2 switching; VLAN and QinQ; flow control and QoS
- Multi-modulation: support QPSK~256QAM, ACM
- Easy maintenance: support internal BITE function and make bit error test without testing tools
- Anti-multipath fading: support adaptive equalization
- Multi-frequency: supports: **15 GHz**
- Easy fixing: Conect IDU and ODU with single cable
- High integration: Supports 1 + 1 protection function in one **IDU RTR-P2MP-15-IP366M-LC-g16**
- Multi-management: Supports management of one or more network elements by local Web LCT. Supports the centralized management of EMS/NMS software

Standards Compliance:

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)

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Technical Specification Radio & Modem

Parameter	Specifications
Frequency Bands	15 GHz
Duplex Technology	TDD or FDD
Capacity	Up to 366 Mbps
Channel Bandwidth	3.5/ 7 /14 /28 /56 MHz..
Modulation	QPSK~ 256QAM
Protection	1 +0
Adaptive Modulation	Hitless Switching
ATPC	20 dB

RF Tx & Rx

Frequency Bands (GHz)		15
Standards		ETSI / ITU
Frequency Stability		±5ppm
Standard Tx Power(dBm)	QPSK	20
	16QAM	18
	32QAM	17.5
	64QAM	17
	128QAM	16
	256QAM	15
Threshold at 10 ⁻⁶ BER (28MHz Bandwidth dBm)	QPSK	-84
	16QAM	-78
	32QAM	-75
	64QAM	-72
	128QAM	-69
	256QAM	-66
Tx Power Control Range		20dB
Tx Power Control Step		0.5dB
Channel Bandwidth		3.5/ 7/ 14/ 28/ 56 MHz Standard microwave channel bandwidth...
Rx Level Range		-95 to -20dBm
Rx Overload		-5dBm

Management

Network Management	SNMP V1/V2/V3 Protocol, Ethernet 10/100 Base-T(X) Interface
Local Management	web LCT, Ethernet 10/100 Base-T(X) Interface
Memory card	SD card storing parameters and log

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Interfaces:

Parameter		Specifications
IP	Interface Type	10/100/1000Base-T(X); 10/100/1000Base-LX(SX)
	Number of Ports	4GE (Electric) / 2GE (Optical)
	Connector	RJ45, SFP
	Switch Type	Layer 2
	Max frame size	9600 Bytes
	MAC table	4K entries; automatic learning and aging
	Spanning Tree Protocol	RSTP & MSTP
	VLAN	IEEE 802.1p, QinQ
	QoS	IEEE 802.1p
	Flow Control	IEEE 802.3x
	Ethernet Performance Monitoring	IETF RFC2819
Synchronization	Synchronous Ethernet (SyncE), IEEE1588-V2	
PDH	Interface Type	E1 2.048Mbps
	Connector	SCSI68
	Number of Ports	21
	Code	HDB3
	Impedance	75/120ohm

Mechanical, Electrical & Environment:

Parameter	Specifications	
Operating Voltage	-48VDC(-38--72VDC), PoE, Maximum cable length:100m	
Power Consumption	< 60W (Typical) 1+0, IDU+ODU)	
Dimensions	IDU 44mm x 482mm x 300 mm (1U)	ODU 120mm x 287mm x 287mm
Weight	IDU <3Kg	IDU <6.5Kg
Operating Temperature	IDU -5°C~+50°C	ODU -35°C~+55°C
Operating Humidity	IDU 0-95%	IDU 0-100%

All specifications are typical values unless otherwise stated.

Additional Specifications

Parameters	Specification
Fade Margin	31dB
Equipment Specification	Support QPSK~256QAM Without Hardware change
Dual polarization Antenna,	0.6 and 1.2meter
Antenna, - Direct Mount	0.6m
Operating Frequency	2.4 -42Ghz
ODU Type	Support IP65 standard
Last Mile Equipment	
1+0,1+1 HSB/FD/SD, 2+0	
Switching Capacity	7 Gbps
1st Hub Equipment	
1+0,1+1 HSB/FD/SD, 2+0, 4+0, N+ I(N<=3)	
Switching Capacity	7 Gbps