

RMI - S

Digital Microwave System

RMI - S microwave system provides high capacity transmission, flexibility, reliability, rich features and convenience for wireless communications networks. **RMI - S** digital point-to-point radio represents a new microwave radio product line that is designed to address universal applications for high capacity Ethernet, PDH and SDH platforms. This advanced technology platform is designed to provide high flexibility to customers currently and in the future.

RMI - S is based upon a common platform to support a wide range of network interfaces and configurations, including PDH (16×E1s, 32×E1s and 63×E1s), Ethernet (Gigabit, 1×100Base-T or 2×100Base-T), and STM-1(1×STM-1). The radio family is spectrum and data rate scalable.

RMI - S digital radio enables network operators (mobile and private), government and access service providers to offer a portfolio of secure and scalable wireless applications for data, video, and voice services.

RMI - S IDU allows selection from multiple capacity options, modulation types, radio frequency channels and transmitting output power levels to accommodate and adhere to world-wide regulations and spectral efficiency requirements. **RMI - S** supports 1+0 and 1+1 protection and ring architectures. The modem and power supply functions are provided by applying easily replaceable plug-in modules. **RMI - S** digital radio includes integrated OAM&P (Operations, Administration, Maintenance, and Provisioning) functionality and design features that enable simple commissioning when the radio network is initially set up in the field.

Features and Benefits:

- 16/32/63×E1s, Gigabit,100Base-T, Ethernet, and 4×STM-1 with built-in Ethernet interface
 - Bandwidth capacity and modulation controlled by software
 - Support 1+0, 1+1,N+0,N+N,west/east applications (with ADM capability)
 - Ring application with cross connect function
 - FEC- Trellis coded modulation concatenated with Reed-Solomon coding
 - Field upgradeable by Plug-In assembly
 - RF, IF, digital loopback capability
 - Built-in BER monitor
 - Delay setting for hitless (errorless) switching
 - Wide operating temperature range
 - Wide DC power input range and low power consumption
- SNMP network management protocol
 - Up to 300 meters separation between IDU and ODU
 - Small attractive profile



ODU- Technical Specification

Frequency		5.8GHz	6GHz	7/8GHz	11 GHz	13 GHz	15 GHz	18 GHz	23 GHz	
Standard		ETSI/ITU/FCC								
RF output power (dBm)	128QAM	0 ~ +20	0 ~ +20	0 ~ +20	0 ~ +16	0 ~ +17	0 ~ +16	0 ~ +15	0 ~ +15	
	64QAM	0 ~ +21	0 ~ +21	0 ~ +21	0 ~ +17	0 ~ +19	0 ~ +17	0 ~ +16	0 ~ +16	
	32QAM	0 ~ +22	0 ~ +22	0 ~ +22	0 ~ +19	0 ~ +20	0 ~ +18	0 ~ +17	0 ~ +17	
	16QAM	0 ~ +23	0 ~ +23	0 ~ +23	0 ~ +20	0 ~ +21	0 ~ +20	0 ~ +18	0 ~ +18	
	QPSK	0 ~ +27	0 ~ +27	0 ~ +27	0 ~ +24	0 ~ +25	0 ~ +23	0 ~ +22	0 ~ +22	
Accuracy (dB)		+/-2								
Tuning Increment (dB)		1								
RX at BER=10 ⁻⁶ (dBm)	56MHz / 40MHz	128QAM	-66	-66	-66	-65	-65	-65	-64	-64
		64QAM	-69	-69	-69	-68	-68	-68	-67	-67
		32QAM	-72	-72	-72	-71	-71	-71	-70	-70
		16QAM	-75	-75	-75	-74	-74	-74	-73	-73
		QPSK	-78	-78	-78	-77	-77	-77	-76	-76
	28MHz / 20MHz	128QAM	-69	-69	-69	-68	-68	-68	-67	-67
		64QAM	-72	-72	-72	-71	-71	-71	-70	-70
		32QAM	-75	-75	-75	-74	-74	-74	-73	-73
		16QAM	-78	-78	-78	-77	-77	-77	-76	-76
		QPSK	-81	-81	-81	-80	-80	-80	-79	-79
	14MHz / 10MHz	128QAM	-72	-72	-72	-71	-71	-71	-70	-70
		64QAM	-75	-75	-75	-74	-74	-74	-73	-73
		32QAM	-78	-78	-78	-77	-77	-77	-76	-76
		16QAM	-81	-81	-81	-80	-80	-80	-79	-79
		QPSK	-84	-84	-84	-83	-83	-83	-82	-82
	7MHz / 5MHz	128QAM	-75	-75	-75	-74	-74	-74	-73	-73
		64QAM	-78	-78	-78	-77	-77	-77	-76	-76
		32QAM	-81	-81	-81	-80	-80	-80	-79	-79
		16QAM	-84	-84	-84	-83	-83	-83	-82	-82
		QPSK	-87	-87	-87	-86	-86	-86	-85	-85
	3.5MHz / 2.5MHz	128QAM	-78	-78	-78	-77	-77	-77	-76	-76
		64QAM	-81	-81	-81	-80	-80	-80	-79	-79
		32QAM	-84	-84	-84	-83	-83	-83	-82	-82
		16QAM	-87	-87	-87	-86	-86	-86	-85	-85
		QPSK	-90	-90	-90	-89	-89	-89	-88	-88
Flange		N-type	N-type	UBR84	UBR100	UBR140	UBR140	UBR220	UBR220	

System Capacity

System Capacity (Single ODU) / Mbps		3.5MHz/2.5MHz	7MHz/5MHz	14MHz/10MHz	28MHz/20MHz	56MHz/40MHz
128QAM		20	40	80	160	320
64QAM		15	30	60	130	260
32QAM		12	25	50	100	210
16QAM		10	20	40	80	160
QPSK		5	10	20	40	80
IF Interface		For 50Ω coaxial ODU N/IDU TNC connector, Female			RSSI	Output voltage vs. RSL : 0 ~ 3V vs. -70 ~ -25dBm
Frequency Stability		±5ppm			RSL Accuracy	±2 dB