

RM-MAX: Wireless Broadband IP Radio

Carrier Grade High Capacity Wireless Broadband IP Radio

OVERVIEW

This platform deploys reliable and secure high-speed wireless IP connections between multiple remote locations. Available in multiple frequency bands and configurations, it covers a distance of more than 100 kms.

Wireless Broadband IP Radio Modem incorporates the latest technologies such as OFDM with VNL's proprietary protocols.

RM-MAX device can be configured to work in multiple deployment modes i.e. Point-to-Point, Multiple-Point-to-Point & Point-to-Multipoint. When deployed as Point-to-Multipoint Base Station, RM-MAX can inter work with RM series subscriber units.

IP Radios can be used in various applications like

- Last Mile Access to provide internet connectivity for broadband services. It can also be used in enterprises like mines, offshore fields, hospitals, hotels, universities etc.
- Backhaul connectivity in GSM/4G deployments particularly in rural and remote areas.
- E1/TDM Connectivity to transport native TDM enabling seamless migration from TDM to all IP networks.
- Public safety agencies like for emergency response, where time to provideservices with minimum infrastructure dependencies is the key.

BENEFITS

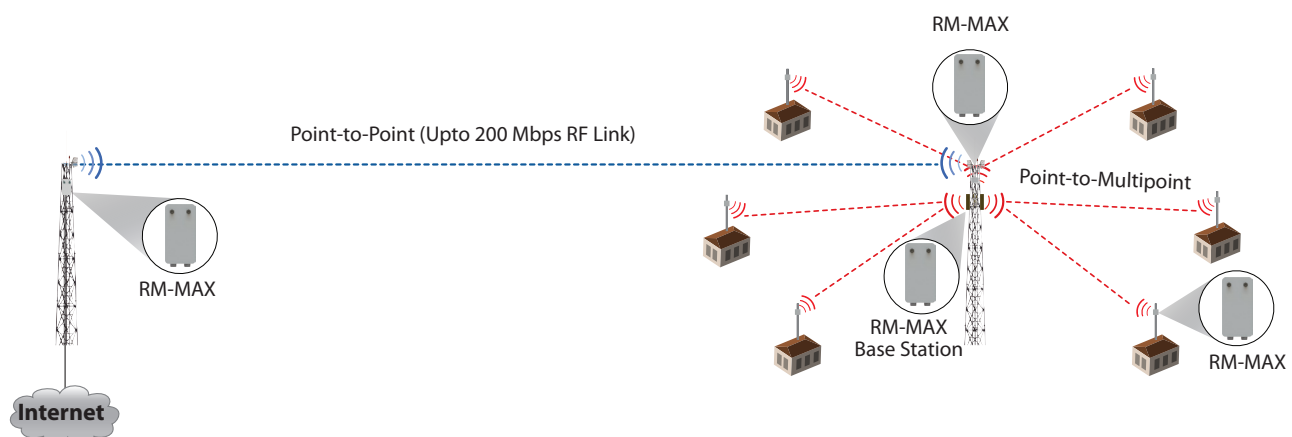
- **Optimized Transmission Cost:** Control your transmission cost by avoiding the need to use fiber and leased lines. Significantly reduces CAPEX and OPEX.
- **Rapid Deployment:** This solution is provided as a Plug and Play solution for rapid deployment. Dismantling and redeployment of the unit is speedy as well.
- **Maximum Service Availability:** RM-MAX offers 1+1 redundancy thus offering maximum service availability.
- **Single Integrated Voice and Data Solution:** Can connect routers via ethernet to provide a Single Voice & Data Link for customers. The revenue generating potential for this application is immense.
- **All Weather Reliability:** Our system is outdoor capable and rugged enough to withstand extreme weather conditions.



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HIGHLIGHTS

- *Aggregate User Throughput of Up to 200 Mbps*
- *License Exempt Frequency (2.4 and 5.8 GHz)*
- *Low Power Consumption – Reduced Opex*
- *Compact Form Factor – Easy to Transport and Install*
- *Centralized Management using OMC*



Point-to-Point and Point-to-Multipoint Network Diagram



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SPECIFICATIONS

Model No.	Freq	Antenna	Sync Port
RMM-5800-SYNC	5.8 GHz	External	Yes

SYSTEM	
Type	Outdoor
Link Topology	Point-to-Point, Multiple-Point-to-Point (Only in Sync Enabled Hardware)
Frequency Bands	5.125 - 5.875 GHz
Channel Bandwidth	5/10/20/40 MHz
RF Output (dBm)	Up to 25 dbm (Configurable)
Rx Sensitivity (dBm) 2.4/5.8 GHz	BPSK: -89, QPSK: -87 16QAM: -82, 64QAM: -74
Data Rate	Aggregate User throughput of Up to 200 Mbps
Latency	4 msec (Typical)
Duplex Technique	TDD
Dimension (HxWxD) in mm	291 x 138 x 73 (With External Antenna)
Weight (Kg)	Without Antenna: 1.3

POWER	
Power Supply	48 V through PoE
Max Power Consumption	12 W

INTERFACES	
ETHERNET	
Type	10/100/1000 BaseT with Auto-Negotiation (IEEE 802.3u) Framing/Coding IEEE 802.3
Number of Ports	With Sync: 1 PoE and 1 Sync
Connector	RJ-45
Antenna Port	N-Type (Only for Unit with External Antenna Option)

FEATURES	
Modulation	OFDM - BPSK/QPSK/16QAM/64QAM
FEC	1/2, 2/3, 3/4, 5/6
Encryption	AES 128
Transmitter Dynamic Range	Min. 8 dB with step of 1 dB
Receiver Dynamic Range	> 30 dB
Authentication	MAC Address Control List, SSID
Adaptive Coding & Modulation	Supported
Automatic Channel Switching	Supported
Site Synchronization	Supported with Sync Option Model
Bridging	Self-Learning Up to 2047 MAC Addresses IEEE 802.1Q
Maximum Frame Size	1536 bytes
QoS	IP ToS Based, Four Priorities, SP Scheduling
Asymmetrical TDD	Supported
Management VLAN	Supported
IP/MAC Filtering	Supported
DFS	Supported
Installation and Maintenance Tools	Built in RF Analyzer, Ethernet Test Tool, Ping Test, Buzzer for Alignment

MANAGEMENT	
Management Interface	Ipv4, UDP, TCP, IP, ICMP, Telnet/SSH, SNMP, HTTP, FTP and Web Server
Firmware Upgrade	Local & Remote
Network Management	Centralized Management using OMC

ENVIRONMENT	
Water & Dust Protection	IP66
Operating Temperature	-20° to 70° C (-4° to 158° F)
Humidity	Up to 95% (Non-Condensing)

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