

InfiNet Wireless R5000-Mm

InfiLINK 2x2 Family

Unit Description

The R5000-Mm device is comprised of an Outdoor Unit and an Indoor Unit to be used as an integrated antenna high-capacity MIMO backhaul element. Implemented in a robust, all-weather metal enclosure, the R5000-Mm is an optimal choice for mid-to-long-range, high-speed Point-to-Point connectivity with real throughputs reaching 100 Mbps full-duplex. The R5000-Mm couples best-in-class spectral efficiency with multiple tools for link optimization, network integration and maintenance. In addition, the R5000-Mm possesses the unique ability to be used along with InfiNet Wireless TDM transport equipment to transmit up to 4 E1/T1 streams.



R5000-Mm

Applications

- High-speed Point-to-Point backhaul element with integrated 23 dbi dual-polarity antenna

Radio

- Modulation types: OFDM with BPSK, QPSK, QAM16, QAM64
- Frequency ranges: 5.150 - 5.845 GHz
- Channel widths supported: 40 MHz, 20 MHz, 10 MHz, 5 MHz
- Maximal net throughput:
 - Net capacity: 100 Mbps full-duplex (300 Mbps, 40 MHz channel width)
 - Net capacity: 106 Mbps TDD (130 Mbps, 20 MHz channel width)

Wired Interfaces

- Wired network connection: Ethernet 10/100BaseT (RJ-45)
- Wired network interface: IEEE 802.3 CSMA / CD and Ethernet Blue Book
- Serial interface System Console Port

Integrated Antenna Parameters

- Integrated Flat Panel Antenna (5.150 - 5.845 GHz only)
- 23 dBi gain
- Dual polarization
- Radiation pattern width: 9 degrees vertical, 9 degrees horizontal
- F/B ratio: 35 dB (min)
- Cross polar discrimination: 28 dB (according to ETSI EN 302 085 V.1.1.2 TS1-TS3)

Operating frequencies

5.150 - 5.250 GHz
5.250 - 5.350 GHz
5.470 - 5.725 GHz
5.725 - 5.845 GHz

Output power

up to 63 mW (18 dBm)

Sensitivity

-74 dBm .. -101 dBm

Common distances

- 30+ km in Point-to-Point

Radio Interface Features

- Superpacketting (voice/RTP aware)
- Channel Time Adjustment
- DFS (where applicable)
- "Long" mode for long distances
- Automatic bit-rate control
- Spectral efficiency up to 5.3 bit/Hz

MAC-layer Features

- Proprietary dynamic adaptive polling:
 - Centralized marker grant mode
 - Dynamically takes into account low activity of the subscribers
 - Permanent channel testing
- ARP protocol support
- rSTP/STP protocol support (Spanning Tree Protocol)
- MAC/IP filtering
- Full-fledged 2nd layer switch:
 - Multiple switching groups
 - Full VLAN support (IEEE 802.1q)
 - Trunk groups support
- Pseudo-radio interface support (connecting backhauls via wired interfaces)

Networking Features

- RIPv2 / OSPFv2 /static routing
- Tunneling (Ethernet over IP capable)
- IP-Firewall
- NAT (multi-pool, H.323-aware)
- DHCP client/server/relay
- Quality-of-Service:
 - 16 priority queues
 - IEEE 802.1p support
 - IP TOS / DiffServ support
 - Full voice support
 - Traffic limiting (absolute, relative, mixed)
 - Traffic redirection

Security Features

- Over-the-air encryption
- Storm / flood protection
- Password protection
- Protocol messages encryption

Management Features

- SNMPv1 / SNMPv3 support (MIB II, private MIB)
- Configurable SNMP Traps
- Telnet
- Graphical User Interface (for Windows)
- Web-interface Configurator
- Remote Shell

General Features

- Multiple Radio Profiles
- Automatic over-the-air firmware upgrade

Form Factor and Dimensions

- Outdoor Unit (ODU):
 - Dimensions: 370 x 370 x 85 mm
 - Weight: 3.7 kg
- Indoor CPE (IDU-5000-CPE)
 - Dimensions: 50 x 46 x 23 mm
 - Weight: 0.3 kg

Power

- Up to 15 Watts
- Consumption: 110-240 VAC @ 50/60 Hz

Environmental

- Outdoor Units: -40..+60C, 100% humidity, condensing
- Indoor Unit: 0..+40C, 95% humidity, non-condensing

