

## InfiNet Wireless R5000-Om

InfiMAN 2x2 Family

InfiLINK 2x2 Family

### Unit Description

The R5000-Om, which is comprised of an Outdoor Unit and an Indoor Unit, can be used with external antenna using two N-type connectorized ports to build a high-capacity MIMO backhaul link for ultra-long distances. Implemented in a robust all-weather metal enclosure, the R5000-Om equipment can be used to create wireless links with capacity up to 100 Mbps at distances reaching 60 km and more. The R5000-Om equipment couples best-in-class spectral efficiency with multiple tools for link optimization, network integration and maintenance. In addition, the R5000-Om possesses the unique ability to be used along with InfiNet Wireless TDM transport equipment to transmit up to 4 E1/T1 streams.



R5000-Om

The R5000-Om can also be used as a high-capacity Point-to-Multipoint Base Station along with the R5000-Sm and R5000-Lm units as CPE to be part of the InfiMAN 2x2 family. With maximal sector capacity of 240 Mbps and real spectral efficiency of 5.3 bits/Hz, the R5000-Om and InfiMAN 2x2 family provides unprecedented throughputs, distances and services.

#### Applications

- High-speed Point-to-Point external antenna backhaul element
- High-speed Base Station in Point-to-Multipoint networks

#### Radio

- Modulation types: OFDM with BPSK, QPSK, QAM16, QAM64
- Frequency ranges: 2.3 - 2.4 GHz, 4.8 - 6.0 GHz

- Channel widths supported: 40 MHz, 20 MHz, 10 MHz, 5 MHz
- Maximal net throughput:
  - Up to 260 Mbps in Point-to-Point (two Ethernet ports at ODU, 300 Mbps, 40 MHz)
  - Up to 240 Mbps in Point-to-Multipoint (two Ethernet ports at ODU, 300 Mbps, 40 MHz)
  - Up to 106 Mbps (130 Mbps, 20 MHz)

Operating frequencies	Output power	Sensitivity	Common distances
2.312 - 2.412 GHz	up to 63 mW (18 dBm)	-74 dBm .. -101 dBm	- 60+ km in Point-to-Point
2.412 - 2.482 GHz	up to 300 mW (25 dBm)		- 25+ km in Point-to-Multipoint
4.950 - 4.990 GHz			
5.150 - 5.250 GHz			
5.250 - 5.350 GHz			
5.470 - 5.725 GHz			
5.725 - 5.845 GHz			
5.920 - 5.950 GHz			

### 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
- Up to two Ethernet ports at Outdoor Unit (optional)

### Antenna Connection

- Two N-type connectors for dual-polarity antenna or two V/H external antenna

### 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 (multipool, 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

- Frequency / IP-roaming for CPE between Base Stations
- Automatic over-the-air firmware upgrade

### Form Factor and Dimensions

- Outdoor Unit (ODU):
  - Dimensions: 240 x 240 x 51 mm
  - Weight: 2.6 kg
- Indoor CPE (IDU-5000-BS)
  - Dimensions: 140 x 45 x 40 mm
  - Weight: 0.3 kg

### Power

- Up to 30 Watts
- Consumption: 110-240 VAC @ 50/60 Hz

### Environmental

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

