

4.9GHz to 6GHz Infinet Wireless 5000 Series Router



InfiNet Wireless 5000 Series Router (Outdoor modification) is created for fixed broad-band wireless networks with common hardware and software platform for both base station and CPE devices. The device set is comprised of outdoor router unit (ODU) and indoor power supply unit (IDU).

Specifications:

Infiner Wireless 5000 Series Router

Supported Topologies

- Point to multi-point Last Mile access network - star topology
- Support for complex base station configurations (up to six sectors per a base)
- Up to 24 km coverage (LOS)

Radio Interface

- Frequency band supported, software selectable:
 - 4,920-6,060 GHz
- Modulation types: OFDM with BPSK, QPSK, 16 QAM, 64 QAM, BPSK, QPSK
- Operating rated frequencies (in MHz):
 - 5150 – 5350 MHz
 - 5470 – 5725 MHz
 - 5725 – 5875 MHz
 - 5875 – 5925 MHz

It is a possible to set up any operating frequency range from 4920 to 6060 with 5MHz step

Spectrum spreading method

- IEEE 802.11a OFDM for 5GHz
- Net Throughput: 20 Mbps actual throughput, maximum up to 150 subscribers per single base station device (for minimal 128 Kbps subscriber throughput) with recommended cell coverage 4-5, max 12 kilometers
- 20 MHz channel width
- Media access method: non-collision, adaptive, polling with dynamic and adaptive bandwidth, permanent link quality monitoring and minimized packets number
- Antenna connection: N-type female
- Spectral efficiency: 2.5 bs/Hz
- Transmitting power automatic control mode
- Transmitter power:
 - 14 to 17dBm
 - up to 22dBm for P200 modification
 - up to 25dBm for 36P300 modification
- Receiver sensitivity:
 - 90...– 69 dBm

MAC Protocol

- Proprietary polling with dynamic and adaptive bandwidth allocation—especially optimized for minimal control messages overhead
- Proprietary scrambling
- Dynamic roaming
- Polling modes and features:
 - centralized marker grant mode
 - dynamically taking into account low activity of the subscribers
 - permanent channel testing
 - auto-bitrate adjustment and distance learning

Management and settings

- HTTP, Telnet, FTP, RS-232, SNMP, MIB I, MIB II, via wired or wireless network

Environment

- Outdoor router unit temperature range:
 - -35... +50 C, Humidity: 100%, condensing
- Power supply temperature ranges: 0... +40C
- Built-in lightning protection for outdoor router unit and power supply

Interfaces

- Wireless interface
- Wire LAN interface Ethernet 10/100BaseT
- Serial interface System Console Port

Wire network connection

- Ethernet 10/100BaseT
- Wire network protocol: IEEE 802.3 CSMA/CD and Ethernet Blue Book

Power

- 220-240 VAC @ 50/60 Hz, 0.2 A
- Power consumption: 30 W

Form factor and dimensions

- Outdoor router unit: Milled waterproof case 220 x 160 x 35, weight: 1 kg
- power supply: 175 x 175 x 30 or 220x180x45

Networking and Security Features

- IP-based Quality-of-Service (QoS) Manager, Traffic Shaping, 64 priority queues with 256 priorities. Service classes: MIR, BER
- Guaranteed unconditional high priority bandwidth allocation for voice traffic.
- Layer 3 and Routing: RIP1, RIP2, static
- Layer 2: ARP, VLAN, small packets aggregation (burst)
- Firewall, NAT, access lists, IP-tunneling, authentication, password protection
- Telnet password encryption

Management and Billing Support

- Support for standard management protocols, billing applications, registration servers (SNMP — MIB I, II, proprietary, HTTP, and telnet)
- Serial local console
- Remote firmware upgrades (using wireless or wired links)
- System log
- Third party billing applications support: CDR (call data records), IP accounting, remote shell

LEDS

- LED indication for estimating link quality: GREEN indicates base station registration status, RED indicates transmit/receive activity.
- power supply has power LED and fuse failure LED

Diagnostic Tools

- Continuous testing of radio environment

Redundancy

- Backup feature, selecting base station with best performance

Compliance

- Manufacturing process compliant with ISO 9001-96
- ETSI, FCC compliant

Factory Preset Options

- 18 Mbps, 63 mW transmit power, 5GHz OFDM radio
- 24 Mbps, 63 mW transmit power, 5GHz OFDM radio
- 36 Mbps, 63 mW transmit power, 5GHz OFDM radio
- 54 Mbps, 63 mW transmit power, 5GHz OFDM radio
- 18 Mbps, 120 mW transmit power (built-in amplifier), 5GHz OFDM radio
- 24 Mbps, 120 mW transmit power (built-in amplifier), 5GHz OFDM radio