Unlicensed Band Radio

P2P

ion4le

IO Enterprise/ Carrier Grade point-to-point solution is optimally designed to support low to medium capacity enterprise applications in the unlicensed 5 GHz spectrum for short to long range links. Its high precision integrated GPS sync technology allows reuse of the same channel at collocated sites, thereby delivering maximum capacity in minimum spectrum.

Features

Quality of Service (QoS)

Prioritize the internet traffic in case of wireless congestion. Configure your type of traffic such as background, best effort, video, and voice with four different priority levels (low, medium, high, and highest) respectively.

ATPC

Automatic Transmit Power Control not only helps reduce network interference but also minimizes the stress on the power amplifiers in turn reducing power consumption and improving life of equipments

Redundant Link Switching

Supports 1+1 deployments with switching time <100 ms for mission critical applications.

High Capacity TDMA radio

IO's UBRs utilize TDMA access supporting aggregated throughput upto 700 Mbps making these suitable for enterprise & carrier deployments.

Management VLAN

Keep your management traffic on a separate VLAN ID. Unauthorized users cannot make changes to your network or monitor the network traffic.

MIMO and OFDM

Built on advanced MIMO and OFDM technologies, the UBR provides a high-capacity link at channel bandwidth of 80MHz and supports 10, 20, 40, 80 MHz bandwidths.

Highlights

- 2x2 MIMO operation; Modulation support up to 256 QAM
- Up to 700 Mbps aggregate UL/DL throughput
- Single device configurable as both Master BTS or CPE node
- IPv4 and IPv6 network protocol support
- Flexibility for both 1+0 and 1+1 deployment
- IP67 rated enclosure
- Option for external antenna: N-connectors

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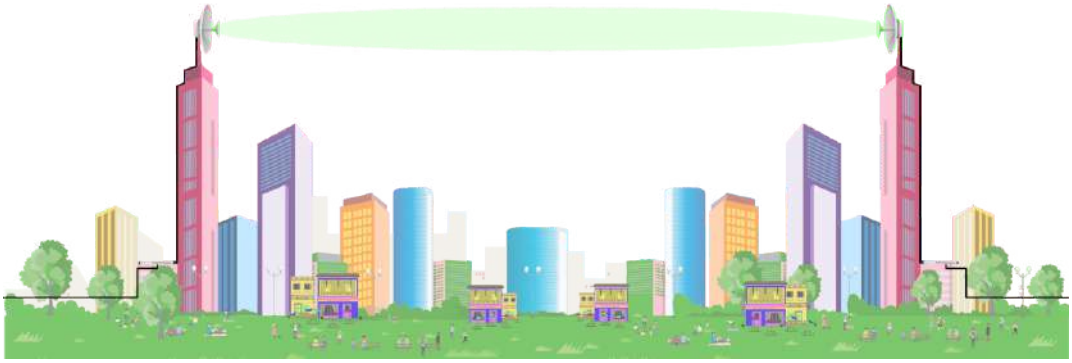
5 GHz 700 Mbps UBR with option for external antenna

P2P Link

Connects two locations together through line of sight (LOS).



Data Protection

The UBR device has full end-to-end WPA, WPA2 and 128-bit AES PSK with hardware acceleration protection and ensures that the information and resources of the industry are protected from attacks and threats. This includes three core concepts of security: confidentiality, integrity, and availability

External Antenna

ion4le supports the flexibility to append external antennas It helps extend coverage to cover distant areas without having the need to deploy more UBRs. This not only helps in maximizing data throughput but also improves the efficiency of the network. The external antennas are equipped with dual pole polarization and flexibility of different beamwidth and gain.

IP67

IO UBRs are able to withstand extreme weather elements and harsh environmental conditions without compromising on the performance. They are IP67 certified to protect against water and dust contaminants, ingress.

Easy to Deploy

Easy to deploy and operate on plug & play model. Deployment within hours and if required can be redeployed at a new site with no or little tweaks in the configuration. UBRs can be mounted on walls & poles. Freedom of movement of the antennas during installation in both horizontal and vertical axis for quick and easy alignment.

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Remote Management

Powerful and intuitive multi-site management via EMS (Element Management System), eliminating the cost and complexity of traditional on-site wireless controllers.

WIRELESS

Access Technology	TDMA
Radio Mode	2x2 MIMO & TDMA upto 256 QAM
Radio Frequency Band	5 GHz (with extended 5 GHz channel support, country-specific restrictions apply)
Peak Throughput	Up to 700 Mbps aggregate UL/DL throughput
Max Transmit Power	27 dBm for 5 GHz (will depend on country-specific guidelines)
Channel Size	10/20/40/80 MHz
Modulation Schemes	Supports upto 256 QAM
Processor	Qualcomm IPQ4019 SOC
RF Power	Automatic transmit power control (ATPC) for enhanced adaptability to the changing environment
Power	IEEE 802.3af Active PoE
Max Power Consumption	<15 W (max..)
Interface	1 X 10/100/1000BASE-T Ethernet
Antenna	Options for external high performance antenna
Receiver Sensitivity	-84 dBm @ 80 MHz -87 dBm @ 40 MHZ -90 dBm @ 20 MHZ

SECURITY & FEATURES

Security	WPA, WPA2 and 128-bit AES PSK with hardware acceleration
High Level Features	Supports dying gasp feature (optional) **WAN Protocols:** Static IPv4/v6, DHCP client v4/v6 **Management:** Standalone (via GUI) or through appliance-based EMS or cloud-based **Smart Spectrum Management:** Active scan; monitors/logs ongoing RF interference across channels (no service impact); Dynamic auto-optimization of channel and bandwidth used, Adjustable upstream/downstream bandwidth ratio **QoS:** 802.11e WMM **GPS Location:** GNSS-1 (GPS + GLONASS) **Co-location Synchronization:** 1PPS GPS Tx/Rx synchronization for collocated co-channel radios **Two-Way Active Measurement Protocol (TWAMP):** Enables measurement of round-trip network performance of links In-built temperature sensor (optional)

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PHYSICAL & ENVIRONMENTAL

Enclosure	UV protected ABS + PC top and bottom body, and an aluminium heat sink at bottom
Dimensions	189 X 116X 52 mm (7.44 x 4.57 x 2.05 in) (For External antenna variant)
Weight	0.775 kg (for External antenna variant)
Mounting	Pole mounting Turning Angle: 140° H & 60° V Weight: 185 grams
Visual Indicators	Link, Alarm, & Power LEDs
Operating Temperature	-15° C to 60° C
Operating Humidity	5 to 95% (non-condensing)
Operating Altitude	As per QM333 (3050 meter/10000 feet)
Wind Sustainability	150 km/hour (sustained winds)
Certifications	FCC Class A, CE, RoHS 3.0
Outdoor Ingress Protection Rating	IP67

SAFETY & OTHER COMPLIANCES

- Safety Protection as per IEC 60950 and IEC 60215
- Electrostatic Discharge Immunity as per IEC 61000-4-2, Contact L2 and Air Discharge, L3 Level
- DC Surge Immunity as per IEC 61000-4-5, Level 2 (power port + signal port)
- Electrical Fast Transient/Burst Immunity as per IEC 61000-4-4, Level 2
- Radiated susceptibility as per IEC 61000-4-3 Level 2
- Conducted Susceptibility as per IEC 61000-4-6, Level2
- Bump and vibration as per QM333
- Radiated Emission as per CISPR 22 Class A
- Conducted Emission as per CISPR 22 Class A (power port+signal port)
- Voltage Variation: AC- as per IEC 61000-4-11 and DC- as per IEC 61000-4-29

Ordering Information

MODEL NUMBER	PRODUCT DESCRIPTION
ion4le	IO 5 GHz 700 Mbps UBR with External Antenna
ion4le_d	IO 5 GHz 700 Mbps UBR with External Antenna with dying gasp