



# Wi-Fi 5 Unlicensed Band Radio P2P | P2MP



## Why io UBR



They are easy to deploy and mostly operate on plug & play model. Deployment within hours and if required can be redeployed somewhere else with no or little tweaks in the configuration.



High-speed wireless broadband access solution for ISPs and carriers where it is not feasible to lay fibre for backhaul.



Reliable, high-speed and secure wireless connectivity between multiple remote locations through high-capacity wireless point to point and point to multipoint configurations.

### IP67

IO UBRs are able to withstand extreme weather elements and harsh environmental conditions without compromising on the performance. They are sealed to protect against moisture and contaminants

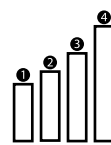
### External Antenna

Extend coverage with our wide range of external antennas to cover distant areas without having the need to deploy more UBRs.

### Ease of Installation

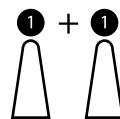
UBRs can be mounted on walls & poles. Freedom of movement of the UBR even after installation in both horizontal and vertical axis for quick and easy alignment.

## 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.

## Redundant Link Switching



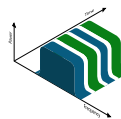
Un-interrupted connectivity as our UBR supports switching from primary link to secondary within 100 micro seconds through an ERPS switch, whenever the primary link is broken or down.

## Management VLAN



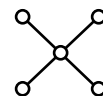
Keep your management traffic on a separate VLAN ID. Unauthorized users cannot make changes to your network or monitor the network traffic.

## High Capacity TDMA radio



IO's UBRs are Carrier & Enterprise grade TDMA solution for IP and Backhaul applications, supporting aggregated throughput of 700 Mbps.

## 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, and 80 MHz bandwidths.

## ATPC



ATPC stands for Adaptive Transmission Power Control. This feature minimizes the stress on the microwave power amplifiers, which reduces power consumption, heat generation, and increases expected lifetime (MTBF).



## P2MP Link

In a P2MP wireless network, a single master controls multiple slaves in the network. Each slave can transmit/receive the data to/from the master.

ion4I1\_BTS/ ion4I2\_BTS



700 Mbps aggregated peak throughput

ion4I2/ion4I3/ion4I4



700 Mbps aggregated peak throughput

ion4I2\_CPE/ion4I3\_CPE



300 Mbps aggregated peak throughput

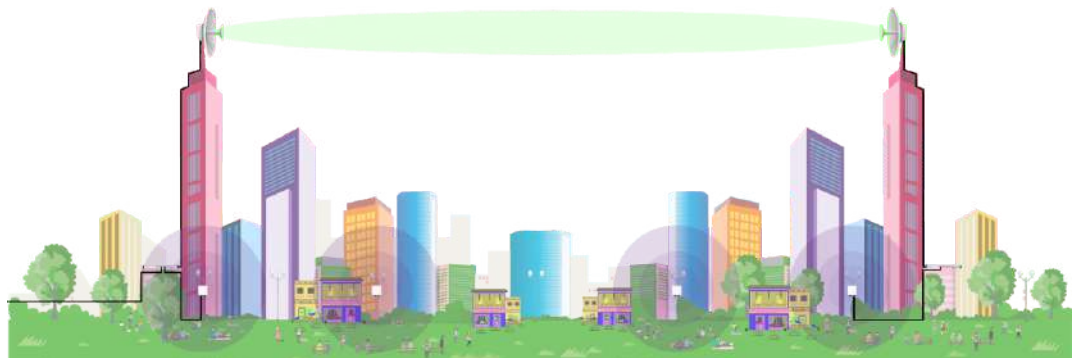
ion4Ie



700 Mbps aggregated peak throughput

## P2P Link

Connects two locations together through line of sight (LOS) or near line of sight (nLOS). P2P wireless link is configured in a master-slave configuration in which the master controls the time slot for communication between the master and the slave.



# 2x2:2 UBR

IO Enterprise Grade point-to-point and point-to-multipoint 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.



## WIRELESS

<b>Wi-Fi Protocols</b>	TDMA
<b>Radio Mode</b>	2x2 MIMO
<b>Radio Frequency Band</b>	5 GHz (with extended 5 GHz channel support, country-specific restrictions apply)
<b>Peak Throughput</b>	Up to 700 Mbps aggregate UL/DL throughput
<b>Max Transmit Power</b>	27 dBm for 5 GHz (will depend on country-specific guidelines)
<b>Channel Size</b>	10/20/40/80 MHz
<b>Modulation Schemes</b>	Supports upto 256 QAM
<b>Processor</b>	Qualcomm IPQ4029 SOC
<b>RF Power</b>	Automatic transmit power control (ATPC) for enhanced adaptability to the changing environment
<b>Power</b>	IEEE 802.3af PoE
<b>Max Power Consumption</b>	12 W (approx..)
<b>Interface</b>	1 X 10/100/1000BASE-T Ethernet
<b>Antenna</b>	Integrated directional antenna with moderate gain (ion4ln) External antennas with dual pole polarization and flexibility of different beamwidth and gain (ion4le)
<b>Receiver Sensitivity</b>	-84 dBm @ 80 MHz -87 dBm @ 40 MHz -90 dBm @ 20 MHz

## SECURITY & FEATURES

<b>Security</b>	WPA, WPA2, and 128-bit AES PSK with hardware acceleration
<b>High Level Features</b>	WAN Protocols: Static IPv4/v6, DHCP client v4/v6, Management: Standalone (via GUI) or through appliance-based EMS or cloud-based, 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, 802.11e WMM, GNSS-1 (GPS + GLONASS), 1PPS GPS Tx/Rx synchronization for collocated co-channel radios, In-built temperature sensor (optional)
<b>Visual Indicators</b>	Link, Alarm, and Power LEDs
<b>Operating Temperature</b>	-15° C to 60° C
<b>Operating Humidity</b>	5 to 95% (non-condensing)
<b>Operating Altitude</b>	As per QM333 (3050 meter/10000 feet)
<b>Wind Sustainability</b>	150 km/hour (sustained winds)
<b>Certifications</b>	FCC Class A, CE
<b>Outdoor Ingress Protection Rating</b>	IP67
<b>Mounting</b>	Pole and wall mounting

## Applications



Small, Medium and Large Businesses

ISPs

Electricity distribution grids & power plants

TSPs