

Unlicensed Band Radio P2MP

ion4I1_BTS/ion4I2_BTS

5.1 to 5.9 GHz, 700 Mbps UBR with
Integrated BTS Antenna (17, 19 dBi)



IO Enterprise/Carrier Grade point-to-point solution is optimally designed to support low to medium capacity applications in the unlicensed 5 GHz spectrum for short to long range links. An integrated sector antenna with directional coverage ensuring reliable and efficient communication on an already crowded cell tower.

Ease of Installation



Plug-and-Play

The plug-and-play model ensures effortless deployment. Whether redeploying or setting up a new remote site, simply input the IP address, and the radio will automatically fetch intended configuration from the EMS server resulting in quick and seamless set-up. This helps in quick and seamless set-up with minimal manual intervention.



LED & Buzzer Support

According to the LED blink pattern and buzzer sound, the rigger can align the radio's position based on signal strength. Field deployment costs are minimized as devices can be set up without the physical presence of wireless experts.

Adaptive RF Technology

Adaptive RF technology refers to the sophisticated approach that combines Artificial Intelligence (AI) Algorithms with Radio Frequency (RF) systems to optimize wireless communication performance in real time. By leveraging AI, the system can intelligently adapt and adjust various RF parameters to enhance signal quality, coverage, and overall network efficiency.

Automatic Channel Selection (ACS): Immediately switches to the best suitable channel in case of interference

Dynamic Data Rate Selection (DDRS): Switches to the optimal modulation in case of site-specific interference

Automatic Transmit Power Control (ATPC): Automatically adjusts Tx power based on the link distance

Dynamic Channel Selection (DCS): Changes channels when there is high interference without any, downtime



IP67 Certified



Supports wind load
up to 180 kmph



Sustains in challenging
weather conditions and
extreme temperature
(-40°C to 55°C)*



Indoor/Outdoor PoE to support
4kV surge protection and
enhanced 6kV using external
SPD (Surge Protection Device)

*Applicable to extended temperature variant only. For the base model, the range is -15°C to 55°C.

Advanced Technology Support



Dying Gasp

Proactively monitors customer-end power outages, leading to automatic closure of customer-end tickets



GPS

A GPS-enabled system enables planning from a central location to check feasibility & new installation



Temperature Sensor

Proactive monitoring of the radio temperature and threshold-based alert feature helps protect data and equipment within the radio

Security

Our Radio supports AES-256 to provide a robust encryption format in wireless media. Evading unwanted threats in the wireless communication ecosystem

Wireless MAC Access
Level Control

SSID lock with WPA2/3
Support

P2MP

Connects multiple locations together through line of sight (LOS)

Networking Features

Software designed to meet all types of customer requirements.

- Supports both IPv4 & IPv6 addressing
- Supports timer for tracking Ethernet Inactivity
- Supports 4-level quality of service (QoS) priority as per IEEE 802.1e WMM

• Voice • Video • Best Effort • Background

- Flexible VLAN features such as Q-in-Q, Access, Trunk, Transparent, and management VLAN
- ARP and Bridge table allows to view the data and it comes with the option to clear and or refresh
- Supports Network Time Protocol (NTP) Client Application for synchronizing the clock to the network time server

Performance

- Effective wireless algorithm to deliver up to 700 Mbps aggregate throughput
- Better latency and jitter value to provide an excellent customer service experience
- UL/DL Configuration based control for deploying P2MP links



ion4In

5 GHz 700 Mbps UBR with Integrated Sector Antenna (BTS)



Wireless

Access Technology	Dynamic P2MP algorithm
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
Power	IEEE 802.3at 48V
Max Power Consumption	15 W
Interface	1 X 10/100/1000BASE-T Ethernet
Antenna	ion4I1_BTS: Integrated 17 dBi Sector Antenna ion4I2_BTS: Integrated 19 dBi Sector Antenna
Receiver Sensitivity MCS 0	-84 dBm @ 80 MHz -87 dBm @ 40 MHZ -90 dBm @ 20 MHZ

Certifications

Certifications	• CE • FCC Part 15B and 15E [Class A] • MTCTE • RoHS 3.0 • WPC ETA
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Security Features

Security	WPA, WPA2 and 256-bit AES PSK with hardware acceleration
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Rich Feature Set

High Level Features	QoS: 802.11e WMM WAN Protocols: Static IPv4/v6, DHCP client v4/v6 Management: Standalone (via GUI) or through appliance-based EMS Device level firewall features like L2/L3 Broadcast/Multicast White/Black Listing Port/Mac/IP/Protocol based White/Black Listing Smart Spectrum Management: Active scan; monitors/logs ongoing RF interference across channels (no service impact); Dynamic auto-optimization of channel, Adjustable upstream/downstream bandwidth ratio. Two-Way Active Measurement Protocol (TWAMP): Enables measurement of round-trip network performance of links In-built temperature sensor* Dying gasp* GPS Location: GNSS-1 (GPS + GLONASS)
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Physical and Environmental

Dimensions	ion4I1_BTS - 408 X 128 X 120 ion4I2_BTS - 830 X 125 X 120
Weight	ion4I1_BTS - 0.8 kg ion4I2_BTS - 1.4 kg
Mounting	Pole mounting Weight: 1.6 kg
Visual Indicators	Link, Alarm, & Power LEDs

Operating Temperature	Commercial: -15° C to 55° C Extended: -40° C to 55° C
Operating Humidity	5 to 95% (non-condensing)
Operating Altitude	As per QM333 (3050 meter/10000 feet)
Wind Sustainability	150 km/hour (sustained winds)
Outdoor Ingress Protection Rating	IP67

Safety & Other Compliances

- Safety standard as per IEC/EN 62368 IEC60950 & IEC 60215
- Electrostatic Discharge Immunity as per IEC 61000-4-2, Contact Level 2 and Air Discharge Level 3
- 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 32 Class A
- Conducted Emission as per CISPR 32 Class A (power port+signal port)
- Voltage Variation: AC- as per IEC 61000-4-11 and DC- as per IEC 61000-4-29
- Health Test as per IEC/EN62311

Ordering Information	
Model No.	Description
ion4I1_BTS	IO 5 GHz 700 Mbps UBR with Integrated 17 dBi Sector Antenna (BTS)
ion4I2_BTS	IO 5 GHz 700 Mbps UBR with Integrated 19 dBi Sector Antenna (BTS)

Note : *Optional
Customize hardware options are available. Please reach out to Sales Team for more information

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