

700 Mbps  
Unlicensed Band Radio

ion4l2/ion4l3/ion4l4

5.1 to 5.9 GHz, 700 Mbps UBR with  
Integrated Antenna (23, 25, 27 dBi)



IO Enterprise/Carrier Grade P2P/P2MP solution is optimally designed to support low to medium capacity applications in the unlicensed 5 GHz spectrum for short to long range links. Integrated Dish Antenna ensures lesser required space 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  
Support

## P2P/P2MP

Connects 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 P2P/P2MP links
- Single device configurable as both P2P and P2MP links



## ion4l2

700 Mbps UBR  
with Integrated  
23 dBi Antenna



## ion4l3

700 Mbps UBR  
with Integrated  
25 dBi Antenna



## ion4l4

700 Mbps UBR  
with Integrated  
27 dBi Antenna



### 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<br>(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                    | ion4l2: Integrated 23 dBi Dish Antenna<br>ion4l3: Integrated 25 dBi Dish Antenna<br>ion4l4: Integrated 27 dBi Dish Antenna |
| Receiver Sensitivity MCS 0 | -84 dBm @ 80 MHz<br>-87 dBm @ 40 MHz<br>-90 dBm @ 20 MHz                                                                   |

### Certifications

|                |                                                                                                                                                    |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Certifications | <ul style="list-style-type: none"><li>• CE</li><li>• FCC Part 15B and 15E [Class A]</li><li>• MTCTE</li><li>• RoHS 3.0</li><li>• WPC ETA</li></ul> |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

### Security Features

|          |                                                          |
|----------|----------------------------------------------------------|
| Security | WPA, WPA2 and 256-bit AES PSK with hardware acceleration |
|----------|----------------------------------------------------------|

### Rich Feature Set

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

## Physical and Environmental

|                          |                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------|
| <b>Dimensions</b>        | ion4I2 - 280x 380x 198 mm<br>ion4I3 - 465x 465x 235 mm<br>ion4I4 - 625x 625x 278 mm |
| <b>Weight</b>            | ion4I2 - 1.1 kg<br>ion4I3 - 1.4 kg<br>ion4I4 - 1.8 kg                               |
| <b>Mounting</b>          | Pole mounting<br>Weight: 1.6 kg                                                     |
| <b>Visual Indicators</b> | Link, Alarm, & Power LEDs                                                           |

|                                          |                                                                        |
|------------------------------------------|------------------------------------------------------------------------|
| <b>Operating Temperature</b>             | <b>Commercial:</b> -15° C to 55° C<br><b>Extended:</b> -40° C to 55° 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>Outdoor Ingress Protection Rating</b> | 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                                            |
| ion4I2               | IO 5 GHz 700 Mbps UBR with Integrated Antenna (23 dBi) |
| ion4I3               | IO 5 GHz 700 Mbps UBR with Integrated Antenna (25 dBi) |
| ion4I4               | IO 5 GHz 700 Mbps UBR with Integrated Antenna (27 dBi) |

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

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