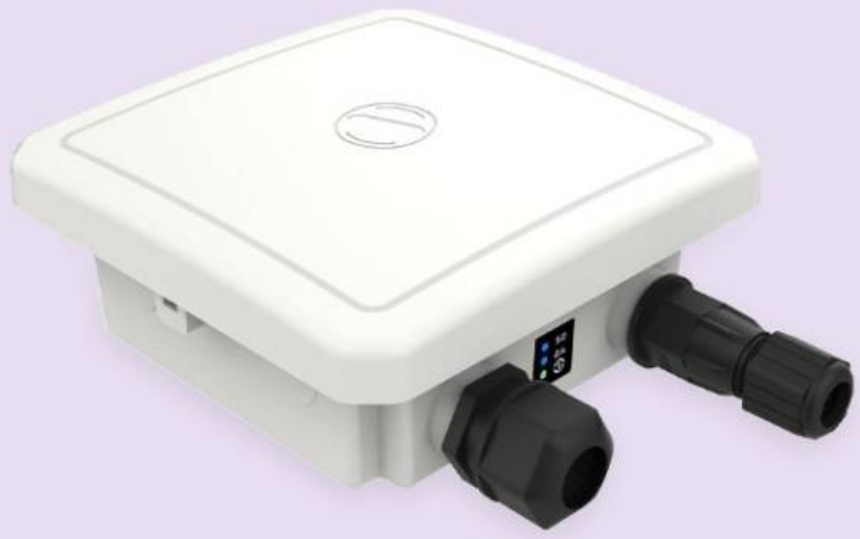
DATASHEET

Wi-Fi 6
Dual Band 2x2:2
Outdoor Access Point

ion4xe/ion4xe_ext



ion4xe is a centrally managed 2x2:2 MU-MIMO Wi-Fi 6 certified Access Point that raises the bar for wireless performance and efficiency. With the combination of central management, high performance hardware and advanced software features makes it ideal for most demanding use cases and high performance-intensive applications like high definition videos, AR/VR, etc.

Overview

- Dual band radio offering peak data rate of up to 1.78 Gbps
- 1024 concurrent client support
- Up to 30 dBm transmit power
- Bi-Directional, Multi User, Multiple Input Multiple Output (MU-MIMO)
- 2X2:2 MU-MIMO
- EasyMesh Certified
- IP67 certified to withstand extreme weather conditions
- Centralized or standalone management options

Applications

- Outdoor stadiums & Industrial Belts
- Transit Stations
- High Foot Traffic Areas
- Public Venues
- Transportation (Airport/ Railways)
- Outdoor Resorts
- Smart city
- Telco offload
- Other arenas with demanding wireless requirements due to high client density, high density Outdoor hotspot environments

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ion4xe

UNMATCHED PERFORMANCE

Dual band radio offering peak data rate of up to 1.78 Gbps

The concurrent dual band radio inside ion4xe offers a combined peak data rate of 1.78 Gbps with up to 1202 Mbps in the 5 GHz band and 574 Mbps in the 2.4 GHz band. Technologies like transmit beamforming and enhanced receiver sensitivity allows the dual band radio to support a higher client density resulting in better performance for more clients connected to Access Point.

Bi-Directional, Multi User-Multiple Input Multiple Output (MU-MIMO)

The Access Point offers MU-MIMO that is more efficient to multiple clients. This is especially suited for environments with numerous varied devices, with each supporting latest or legacy Wi-Fi standards. MU-MIMO enables multiple clients to transmit and receive data simultaneously. This increases the total network performance and improves the end user experience.

EasyMesh Networking

Eliminating the need for expensive cabling, Access Points automatically form a wireless mesh, and provides connectivity in every possible corner. With self-healing and self-optimization functionality, in case of a mesh node failure, the surrounding nodes automatically re-connect and resume service. Support for EasyMesh means that it is interoperable with third party Access Points and/or Routers and can quickly be deployed as standalone or converged with the existing network. This eliminates the need for locking-in with a single vendor, driving down the total cost of ownership of the network.

Flexibility to Add Antennas

ion4xe gives the flexibility to the customer to add N-connector termination antennas

Traffic shaping & Application Aware

The ion4xe includes a traffic control engine which enables URL/IP filtering. Sophisticated QoS policies can also be configured at network, SSID and user level.

Advanced security features

The ion4xe comes with WPA3 - the latest Wi-Fi security standards, offering more security from hacker attacks. It builds a security shield so hackers cannot crack off-site, brute-force, dictionary-based cracking attempts. Integrated, easy-to-use security provides secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. One-click guest isolation provides secure, Internet-only access for visitors.

Improved Battery Life

Unscheduled automatic power save delivery (U-APSD) and Target Wake Time (TWT) feature enables devices such as smartphones and laptops to determine when and how frequently they will communicate with the Access Point. Benefits of these features are multi-fold—an increased sleep time for the device, less consumption of battery and bandwidth, optimized spectral efficiency for IoT devices by reduction in overlaps and conflicts.

Centralized Control

Centralized management of the entire network on our highly intuitive, flexible, and scalable cloud network manager. It provide the flexibility to distribute the network, allocate varying bandwidths, manage, track, troubleshoot, configure, communicate, and enforce policies on all Access Points in the network. The controller has in-built analytics and reporting capabilities to gain insight into usage patterns.

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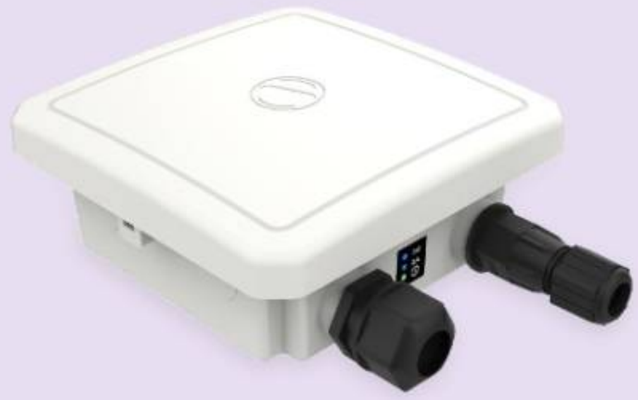
ion4xe

TECHNICAL SPECIFICATIONS



Wireless

Wi-Fi Standards	802.11a/b/g/n/ac/ax
Radio Mode	2x2 MU-MIMO with 2 spatial streams
Radio Frequency Band	Supported frequency bands (country-specific restrictions apply) : • 2.4000 GHz to 2.4835 GHz • 5.150 GHz to 5.250 GHz • 5.250 GHz to 5.350 GHz • 5.470 GHz to 5.725 GHz • 5.725 GHz to 5.875 GHz
Peak Throughput	Upto 1.78 Gbps (1202 Mbps for 5 GHz and 574 Mbps for 2.4 GHz)
Receiver Sensitivity	-97 dBm (for MCS 0)
Max Transmit Power	30 dBm for 2.4 GHz , 30 dBm for 5 GHz (will depend on country-specific guidelines)
Channel Size	20/40/80 MHz
Modulation Schemes	Supports upto 1024 QAM
User Support	1024 clients per Access Point (512 clients per radio)
Power	IEEE 802.3at PoE/PoE+
Max Power Consumption	17 W (approx.)
Interface	• 1 x 10/100/1000 Base-T Ethernet • 1 x 2500 Base X Optical Ethernet SFP
Antenna	Option for External Antennas

Certifications

Certifications	• FCC Class A, CE • Wi-Fi Certified Passpoint 2.0 • Wi-Fi Certified 6 • Wi-Fi Certified EasyMesh • Wi-Fi Certified WPA3

High Level Features

- WAN Protocols: Static IPv4/v6, DHCP client v4/v6
- Band Steering, Load Balancing
- EasyMesh support
- Auto Channel Selection
- Intelligent RF control plane for self-healing & selfoptimization
- Ability to simultaneously serve clients and monitor RF environment
- Radio Resource Management for power and channel
- Management: Standalone (via GUI) or through on-premise based solution or Cloud-based
- 16 SSIDs per radio (32 combined)
- QOS 802.11e WMM
- 802.11k/v/r support for fast roaming and handover
- Rate limiting per SSID and per user
- Maximal ratio combining (MRC)
- 802.11w- Protected Management Frames (PMF) support
- In-built temperature sensor (optional)
- Non Wi-Fi interference detection
- Support for ATPC, coverage hole detection & correction
- Advanced Power Save (U-APSD), VoIP support
- Support for integration with Captive Portal and AAA servers
- Advanced AI-based analytics
- Sensor Mode: The AP can be configured to operate as dedicated sensor for WIDS and WIPS.
- Client Emulation Mode: AP can be configured as a client for emulating end user devices and performing client connectivity and performance tests.

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Physical and Environmental

Dimensions	182 x 185 x 89 mm
Weight	1 kg
Mounting	Wall and Pole Wall Mounting Weight: 0.5 kg Pole Mounting Weight: 0.3 kg
Visual Indicators	RF and Power LEDs
Outdoor Ingress Protection Rating	IP67
Humidity	5 to 95% (non-condensing)
Device Temperature	-15° C to 70° C (ion4xe) -40° C to 70° C (ion4xe_ext)
Wind Sustainability	150 km/hour (sustained winds)

Security

- 802.11i, 802.1x / EAP, Hidden, WIPS, WEP, WPA-PSK, WPA-Enterprise, WPA2-PSK, WPA2-EAP, WPA2-PSK-Mixed, WPA2-Enterprise, WPA3-Personal and WPA3-Enterprise, WPA3-SAE, Enhanced Open, WPA3-SuiteB, MAC, Radius based, EAP Type (EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, EAP-SIM), Protected Management Frames
- VPN pass-through
- IP/URL Filtering
- Layer 2 Tunneling (EoGRE)
- Client isolation support
- Captive portal and guest accounts
- Rogue access point detection and prevention (WIDS & WIPS)
- Hidden SSID in beacons
- MAC address authentication
- X.509 digital certificates
- Support for locally-significant certificates using Public Key Infrastructure (PKI)

Safety & Other Compliances

- RoHS 3.0
- Safety standard as per IEC/EN 62368/IEC60950 & 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 610004-4, Level 2
- Radiated susceptibility as per IEC 61000-4-3 Level 2
- Conducted Susceptibility as per IEC 61000-4-6, Level 2
- Bump and vibration as per QM333
- Radiated Emission as per CISPR 32 Class B
- Conducted Emission as per CISPR 22 Class B (power port + signal port)
- Voltage Variation: AC - as per IEC 61000-4-11 and DC - as per IEC 61000-4-29

Ordering Information

Model No.	Description
ion4xe	io Wi-Fi 6 Dual Band 2x2:2 Outdoor Access Point with External Antenna
ion4xe_ext	io Wi-Fi 6 Dual Band 2x2:2 Outdoor Access Point with External Antenna [extended temperature]

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