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

ion4xi

ion4xi 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 cloud management, high performance hardware and advanced software features, ion4xi is ideal for most demanding use cases and high performance intensive applications like high definition videos, AR/VR, etc.

Overview

- 802.11 a/b/g/n/ac/ax
- Up to 26 dBm transmit power, combined with high gain integrated omnidirectional antenna
- 1.78 Gbps aggregate data rate
- Managed in standalone mode or via cloud controller or via on-premise solution
- 2X2:2 MU-MIMO
- EasyMesh certified
- 1024 concurrent client support
- In-built temperature sensor (optional)

Enterprise Grade Capabilities

- Captive Portal and AAA integration
- Voucher Management; Web Self-care
- Advanced Policy Control
- Wi-Fi Network & Performance Analytics
- Hotspot 2.0 support
- URL/IP Filtering
- MAC ACL Support

ion4xi

TECHNICAL SPECIFICATIONS

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

The concurrent dual band radio inside ion4xi 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 allow the ion4xi 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 and OFDMA for transmission 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.

Better Mesh 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 ion4xi is interoperable with third party EasyMesh compliant 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.

Traffic shaping & Application aware

The ion4xi 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 ion4xi 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

ion4xi has features like Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wake Time (TWT) that enable devices such as smartphones and laptops to determine when and how frequently they will communicate with the Access Point. Benefits of these features are multifold such as 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.

Self- Configuring, Self- Maintaining and Always up to date

Once plugged in, ion4xi can be configured remotely via cloud network management. It uploads firmware upgrades, new features, bug fixes, etc., automatically. The Access Point comes with dual firmware support enabling ion4xi to be automatically booted with the backup firmware during any software malfunction, ensuring minimal downtime.

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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): • 2.40 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	26 dBm for 2.4 GHz , 26 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	+12V DC Power Adaptor IEEE 802.3at PoE/PoE+
Max Power Consumption	20 W (approx.)
Interface	• 1 x 10/100/1000/BASE-T Ethernet • 1 X 2500 Base X Optical Ethernet SFP • DC Power jack
Antenna	Integrated Omni-directional Antennas
Antenna Gain	4 dBi on both 2.4 GHz and 5 GHz

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
- Non Wi-Fi interference detection
- In-built temperature sensor (optional)
- Support for ATPC, coverage hole detection & correction
- Advance Power Save (U-APSD), VOIP Support
- Support for integration with Captive Portal and AAA servers.
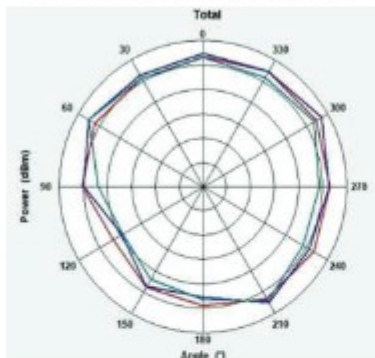- Advanced AI-based analytics

Certifications

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

Physical and Environmental

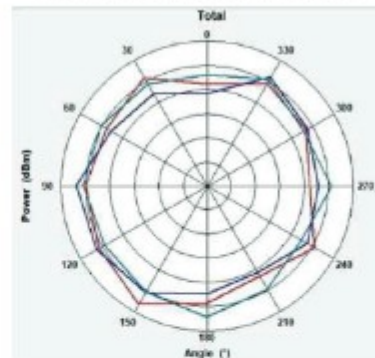|	
Dimensions	180 x 180 x 50 mm
Weight	0.45 kg
Mounting	Wall and ceiling mounting
Visual Indicators	Multicolor status LED and Power LED
Operating Temperature	-10° C to 55° C

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 61000-4-4, 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

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)

Antenna Radiation Pattern

2.4 GHz Antenna Radiation Pattern

5 GHz Antenna Radiation Pattern

Ordering Information

Model No.	Description
ion4xi	io Wi-Fi 6 Dual Band 2x2:2 Indoor Access Point with Integrated Antenna (4 dBi)

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