Wi-Fi 6
Dual Radio 4x4:4
Indoor Access Point
ion8xi

Experience lightning-fast speeds, high spectral efficiency, and reduced latency with our latest range of 4X4 Dual Radio Indoor Access Points, powered by the latest Wi-Fi generation- Wi-Fi 6. With a peak data rate up to 5.95 Gbps, it can cater to 1024 concurrent clients in ultra-low latency & high-density indoor use cases.

Overview

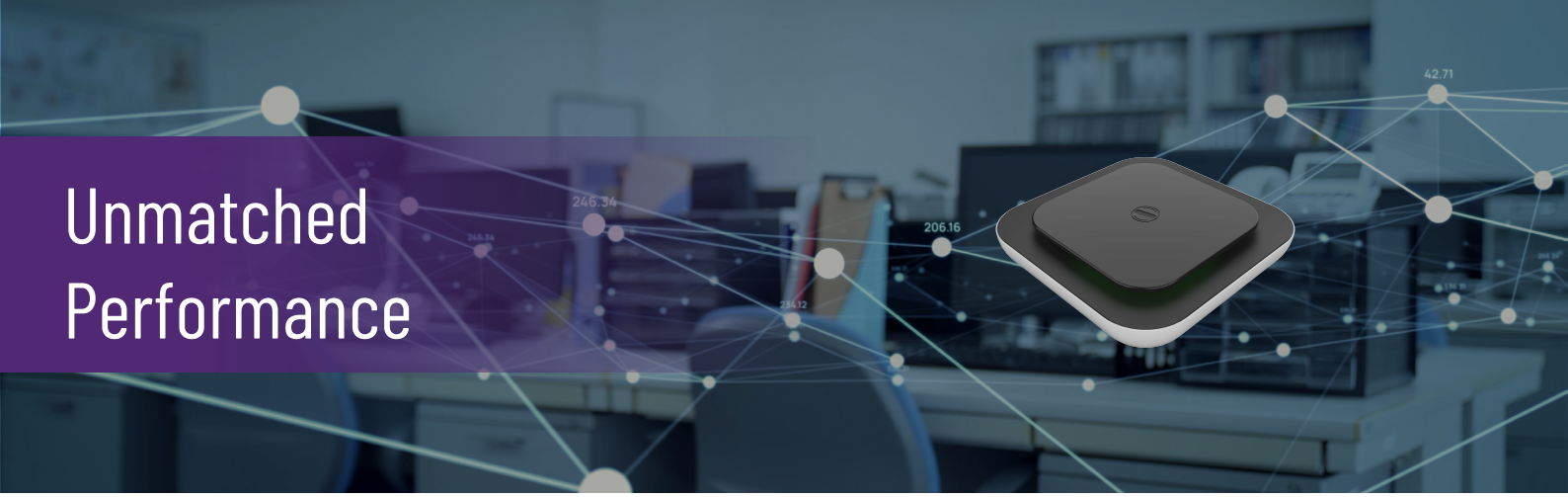
- 802.11 a/b/g/n/ac/ac Wave2/ax
- 5.95 Gbps aggregate data rate
- 4x4:4 MU-MIMO on both 2.4 and 5 GHz bands
- 1024 concurrent client support
- UL2043 Plenum, EasyMesh and Passpoint Release 3.0 certified
- Additional BLE Radio for advanced location services
- Up to 29 dBm transmit power, combined with high gain integrated omnidirectional antennas
- 5 dBi integrated omnidirectional antennas optimized for maximum coverage and range
- Configurable in standalone mode or via cloud controller or via on-premise controller

Carrier Grade

- Captive Portal + AAA
- Coverage Hole Detection & Correction
- Policy Control
- Wi-Fi Network & Performance Analytics
- Automatic Transmit Power Control (ATPC)
- Bluetooth-based Advanced Location Services
- Proximity-based Marketing

Cloud Managed

- Centralized Control
- Troubleshoot on the move
- Network Analytics
- Robust & Scalable Platform



Unmatched Performance

Dual-radio offering peak data rate of up to 5.95 Gbps

ion8xi is integrated with concurrent dual-radio to offer a combined peak data rate of 5.95 Gbps, up to 4800 Mbps in the 5 GHz band and 1150 Mbps in the 2.4 GHz band. Technologies like transmit beamforming and enhanced receiver sensitivity allow the ion8xi to support a higher client density resulting in better performance for more clients connected to each 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.

EasyMesh Networking

Access Points can automatically form a wireless mesh, without any need of expensive cabling and provide connectivity in every possible corner. In case of a mesh node failure, self-healing, and self-optimization functionality, it reconnects and resumes service with the surrounding nodes automatically, without facing downtime. EasyMesh enables ion8xi to be 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 vendor lock-in, reducing the network's total cost of ownership.

Traffic Shaping & Application Aware

The ion8xi includes an integrated layer 2 to layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer, gaming, and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Enhanced Security

The ion8xi 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

ion8xi 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 band- width, optimized spectral efficiency for IoT devices by reduction in overlaps and conflicts.

Centralized Control

Supports centralized management of the entire network on our highly intuitive, flexible, and scalable cloud network manager or on-premise controller. With network distribution flexibility, it allocates varying bandwidths, manages, tracks, troubleshoots, configures, communicates, and enforces policies on all Access Points in the network. The controller has in-built analytics and reporting capabilities to gain insight into usage patterns.

Technical Specifications

Wireless

Wi-Fi Standards	802.11a/b/g/n/ac/ac Wave 2/ax
Radio Mode	4x4 MU-MIMO with 4 spatial streams on both 2.4 and 5 GHz bands
Radio Frequency Band	Supports frequency bands with DFS optimization (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 Data Rate	Up to 5.95 Gbps (4800 Mbps for 5 GHz and 1150 Mbps for 2.4 GHz)
Max Transmit Power	29 dBm for 2.4 GHz , 29 dBm for 5 GHz (depends on country-specific guidelines)
Receiver Sensitivity	-97 dBm (for MCS 0)
Channel Size	20/40/80/160 MHz
Modulation Schemes	Supports up to 1024 QAM
User Support	1024 clients per Access Point (512 clients per radio)
Power	IEEE 802.3bt PoE++
Max Power Consumption	< 50 W
Interface	1 X 100/1000/2500 Base-T Ethernet (WAN) 1 X 10G Base X Optical Ethernet SFP (WAN) 2 × 10/100/1000 Base-T Ethernet (LAN)
Antenna	Integrated Omnidirectional antennas with 5 dBi gain on both 2.4 and 5 GHz

Certifications

Certifications	RoHS 3.0 FCC Class B, CE Wi-Fi Certified Passpoint 3.0 Wi-Fi Certified 6 Wi-Fi Certified EasyMesh Wi-Fi Certified WPA3 Wi-Fi Certified Agile Multiband UL2043 Plenum

Security

- 802.11i, 802.1x / EAP, Hidden SSID
- EAP Type (EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, EAP-SIM)
- Protected Management Frames (PMF)
- WPA (Personal, Enterprise)
- WPA2 (Personal, Enterprise)
- WPA3 (Personal, SAE, OWE, Enterprise and SuiteB; including 192-bit security and R2 for Fast roaming)
- VPN pass-through
- IP-Filtering
- Layer 2 Tunneling Protocol (EoGRE)
- Flexible guest access with device isolation
- 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)

Physical & Environmental

Enclosure	Three piece enclosure with PC top cover & shroud and metal bottom cover
Dimensions	280 x 280 x 70 mm or 11 x 11 x 2.75 inches
Weight	1.9 kg
Mounting	Tabletop, Wall and Ceiling mounting
Visual Indicators	Multicolor status LED
Operating Temperature	0° C to 45° C

Safety & Other Compliances

- Safety Protection as per IEC/EN 62368 / 60950 & 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
- All applicable mechanical tests as per QM333 standard
- Radiated Emission as per CISPR 32 Class A
- Conducted Emission as per CISPR 32 Class A (power port + signal port)
- **Voltage variation and Dips:** AC - as per IEC 61000-4-11 and DC - as per IEC 61000-4-29DC - as per IEC 61000-4-29

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 and self-optimization
- Ability to simultaneously serve clients and monitor RF environment
- Radio Resource Management for power and channel
- Management: Standalone (via GUI) or via cloud controller or via on-premise controller
- 16 SSIDs per radio; 32 per AP
- QOS 802.11e WMM
- 802.11r- fast roaming and fast handover Bandwidth Shaping per SSID
- Maximal ratio combining (MRC) and beamforming support
- 802.11w- Protected Management Frames (PMF) support
- Non-Wi-Fi interference detection and avoidance
- Layer 2 to Layer 7 application identification and policy enforcement (DPI)
- Support for ATPC and coverage hole detection and correction
- Advance Power Save (U-APSD)

Ordering Information

Model Number	Product Description
ion8xi	IO Wi-Fi 6 Dual Radio 4×4:4 Indoor Access Point with Integrated Antenna (5 dBi)

by HFCL

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