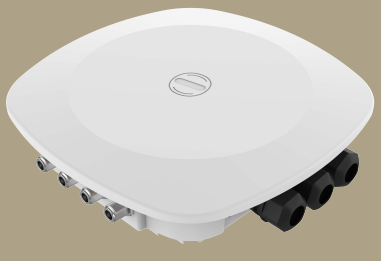
Wi-Fi 6
Dual Radio 4x4:4
Outdoor Access Point
ion8x /ion8xe

ion8x / ion8xe is a contoller managed 4x4:4 MU-MIMO Wi-Fi 6 certified Access Point that raises the bar for wireless performance. Experience lightning-fast speeds, high spectral efficiency, and reduced latency with our latest range of 4X4 Dual Radio outdoor 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.

ion8x

ion8xe



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
- IP67 certified to withstand extreme weather variations
- Additional BLE Radio for advanced location services
- Better Coverage with Integrated Directional Antennas
- 8 dBi gain for ion8x
- Option for external antennas for ion8xe
- Up to 29 dBm transmit power, combined with high gain integrated directional antennas or option to connect even higher gain external antennas
- Configurable in standalone mode or via cloud controller or via on-premise controller

Applications

- Outdoor stadiums & Industrial Belts
- High Foot Traffic Areas
- Transit Stations
- Other arenas with the most demanding wireless requirements due to high client density, high density Outdoor hotspot environments

Unmatched Performance

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

ion8x / ion8xe 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 ion8x /ion8xe 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

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 without downtime. 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.

Better Coverage with Integrated Antenna

Transmit power of up to 29 dBm along with integrated antenna gain of 8 dBi (ion8x) helps transmit data to a larger coverage. This ensures more clients can be connected at far off places.

Traffic shaping & Application Aware

The ion8x /ion8xe includes an integrated layer 2-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, per SSID, per user group, or per individual user for maximum flexibility and control.

Higher security & Guest Access

The ion8x/ion8xe 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.

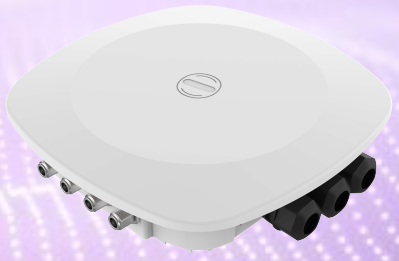
Improved Battery Life

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 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

Centralized management of the entire network on our highly intuitive, flexible, and scalable cloud network manager or on-premise controller. 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.

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	Supported 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 Throughput	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 upto 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) 1 x 10/100/1000 Base-T Ethernet (LAN)
Antenna	Integrated directional antennas for ion8x; option for external antennas for ion8xe
Antenna Gain	8 dBi for 5 GHz, 8 dBi for 2.4 Ghz (ion8x)

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

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)

Environmental

Outdoor Ingress Protection Rating	IP67
Humidity	5 to 95% (non-condensing)
Operating Temperature	-5ºC to 55º C
Wind Sustainability	165 MPH (wind gusts)

Physical

Enclosure	Two piece enclosure with PC top cover and metal bottom cover
Dimensions	345 x 315 x 78 mm or 13.6 x 12.4 x 3.1 inches (for both ion8x and ion8xe)
Weight	2.5 kg (for both ion8x and ion8xe)
Mounting	Pole mounting Weight: 0.32 Kg
Visual Indicators	RF and Power LEDs

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
- WDS and MESH Support
- 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 SSID per Radio; 32 /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)

Order Information

Model Number	Product Description
ion8x	IO Wi-Fi 6 Dual Radio 4x4:4 Outdoor Access Point with Integrated Antenna (8 dBi)
ion8xe	IO Wi-Fi 6 Dual Radio 4x4:4 Outdoor Access Point with option for External Antenna

Email: iosupport@hfcl.com
Website: hfcl.com | io.hfcl.com
Office: 8, Commercial Complex, Masjid Moth Greater Kailash II, New Delhi 110048