

Wi-Fi 6 Dual Band 2x2:2 Outdoor Access Point ion4x /ion4x_2

ion4x / ion4x_2 is a cloud 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, it is ideal for most demanding use cases and high performance-intensive applications like high definition videos, AR/VR, etc.

ion4x



ion4x_2



Overview

- Dual band radio offering peak data rate of up to 1.78 Gbps aggregate throughput
- Supporting 1024 concurrent client
- 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 variations

- Better Coverage with Integrated Directional Antennas.
- 8 dBi gain for ion4x
- 14 dBi gain for ion4x_2

- Traffic shaping & Application Aware
- Higher security & Guest Access

- Cloud Managed Access Point

Applications

- Outdoor stadiums & Industrial Belts
- Public Venues
- High Foot Traffic Areas
- Transportation (Airport/ Railways)
- Outdoor Resorts

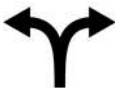
- Transit Stations
- Other arenas with the most demanding wireless requirements due to high client density, high density Outdoor hotspot environments

Unmatched Performance



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

The concurrent dual band radio inside ion4x 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 ion4x 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 30 dBm along with integrated antenna gain of 8 dBi (ion4x) and 14 dBi (ion4x_2) helps transmit data to a larger coverage. This ensures more clients can be connected at far off places.



Traffic shaping & Application Aware

The ion4x /ion4x_2 includes an integrated 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.



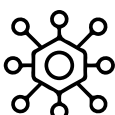
Higher security & Guest Access

The ion4x/ion4x_2 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. 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	2x2 MU-MIMO with 2 spatial streams
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	Upto 1.78 Gbps (1202 Mbps for 5 GHz and 574 Mbps for 2.4 GHz)
Max Transmit Power	30 dBm for 2.4 GHz , 30 dBm for 5 GHz (will depend on country-specific guidelines)
Receiver Sensitivity	-97 dBm (for MCS 0)
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	approx. 17 W
Interface	1 X 10/100/1000BASE-T Ethernet 1 X 2500 Base X Optical Ethernet SFP
Antenna	Integrated directional antennas with 120° beamwidth
Antenna Gain	8 dBi for 5 GHz, 8 dBi for 2.4 Ghz (ion4x) 14 dBi for 5 GHz, 14 dBi for 2.4 Ghz (ion4x_2)

Security

- 802.11i, 802.1x / EAP, Hidden, WIPS, WEP, WPA-PSK, WPA-Enterprise, WPA2-PSK, WPA2-EAP, WPA2-PSK-Mixed, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise, WPA3-SAE, WPA3-SuiteB, MAC, Radius based, EAP-SIM, EAP-TLS, EAP-TTLS, EAP, Protected Management Frames
- VPN pass-through
- IP Security (IPSec), PPTP, IP-Filtering
- Layer 2 Tunneling Protocol (L2TP/LWAP/AMQPS/GRE)
- 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	IP 67
Operating Humidity	5 to 95% (non-condensing)
Operating Temperature	-15°C to 60° C
Wind Sustainability	150 km/hour (sustained winds)

Physical

Enclosure	Two-piece enclosure with ABS top and bottom body and a metal heat sink
Dimensions	178 X 178X 73 mm or 7.01 x 7.01x 2.87 inches (ion4x) 374 X 218 X 73 mm or 14.8 X 8.6 X 2.87 inches (ion4x_2)
Weight	1.20 kg (ion4x) 1.85 kg (ion4x_2)
Mounting	Pole and wall mounting Turning Angle: 140° H & 60° V Weight: 185 grams
Visual Indicators	RF and Power LEDs
Certifications	FCC Class A, CE, Wi-Fi Certified Passpoint 2.0 Wi-Fi Certified 6 Wi-Fi Certified EasyMesh Wi-Fi Certified WPA3

Safety & other compliances

- Safety Protection as per IEC 60950 and 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 22 Class A
- Conducted Emission as per CISPR 22 Class A (power port + signal port)
- Voltage Variation: AC - as per IEC 61000-4-11 and DC - 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 through on-premise based solution or cloud-based
- 16 SSID per Radio
- 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
- In-built temperature sensor
- Non-Wi-Fi interference detection and avoidance
- Layer 4 to Layer 7 application identification and policy enforcement (DPI)
- Support for ATPC and coverage hole detection and correction
- Advance Power Save (U-APSD)
- VoIP support

Order Information

Model Number	Product Description
ion4x	IO Wi-Fi 6 Dual Band 2x2:2 Outdoor Access Point with integrated Antenna (8 dBi)
ion4x_2	IO Wi-Fi 6 Dual Band 2x2:2 Outdoor Access Point with Integrated Antenna (14 dBi)



Email: iosupport@hfcl.com

Website: hfcl.com | io.hfcl.com

Office: 8, Commercial Complex, Masjid Moth Greater Kailash II, New Delhi 110048