# INROOM ACCESS POINT
# QN-H-220

**QUANTUM® NETWORKS**

## PRODUCT OVERVIEW

The Quantum QN-H-220 is meticulously crafted for individual room installations, serving as an 802.11ac Wave 2 Wi-Fi access point. This device boasts a compact, inconspicuous design that prioritizes security and easy mounting.

The QN-H-220 offers a concurrent dual-band solution for 802.11ac Wave 2 wireless networking. With MU-MIMO technology, it delivers impressive speed alongside extensive coverage. Managed by Quantum Rudder.

## KEY FEATURES

**Loaded with cutting-edge Wave 2 technologies**
QN-H-220 encompasses all the latest advancements of an ac wave 2 access point, including channel bonding, MU-MIMO and more.

**Exceptional Wi-Fi capabilities**
Designed to deliver exceptional Wi-Fi performance, even in medium-density environments with demanding voice and video applications. Enhances coverage, boosts capacity and ensures seamless performance in such settings.

**Establish advanced guest Wi-Fi networks for the next-generation**
Implement cutting-edge customer service hotspots featuring integrated splash portals and beacons via USB.

**Stunning performance**
Extends coverage, connects more devices simultaneously with dual MU-MIMO spatial streams and concurrent dual-band 2.4/5GHz radios.

**Security against unauthorized use**
The access point remains locked for deployment in any other network until decommissioned from the existing network.

**Three-year warranty coverage**
Benefit from a three-year limited liability manufacturer's warranty starting from the date of device activation.

Up to 1.2 Gbps
Data Rate

MU-MIMO

2x2,
AC Wave2

2.4 GHz   5 GHz
Dual-Band
Dual-Concurrent

3 Years
Warranty

| Wi-Fi | | |
|---|---|---|
| Wi-Fi Standards | 5 GHz | IEEE 802.11a/n/ac |
| | 2.4 GHz | IEEE 802.11b/g/n |
| Operating Mode | Access point, Router, Mesh mode | |
| Networking Mode | IPv4, IPv6, IPv4v6 (Dual stack), Gateway mode(NAT), Bridge mode | |
| Maximum Data Rates | 5 GHz | 802.11ac@ 80 MHz:866.7 Mbps |
| | | 802.11ac@ 40 MHz:400 Mbps |
| | | 802.11ac@ 20 MHz:173.3 Mbps |
| | 2.4 GHz | 802.11n@ 40 MHz: 300 Mbps |
| | | 802.11a/g@ 20 MHz: 54 Mbps |
| | | 802.11b@ 20 MHz: 11 Mbps |
| Maximum Receiver Sensitivity | 5 GHz | -98 dBm |
| | 2.4 GHz | -93 dBm |
| Supported Channels | 5 GHz | 36-64, 100-144, 149-165 (U-NII-1, U-NII-2A, U-NII-2C, UNII-3 compliant) (As per country regulations) |
| | 2.4 GHz | 1-13 (As per country regulations) |
| | Dynamic frequency selection (DFS) optimizes the use of available RF spectrum | |
| Channel Bands | 5 GHz | 5.15-5.25GHz (U-NII-1), 5.25-5.35GHz (U-NII-2A), 5.47-5.725GHz (U-NII-2C), 5.725-5.85GHz (U-NII-3) |
| | 2.4 GHz | 2.4-2.484GHz (ISM) |
| Modulation Schemes | 802.11ac | BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM |
| | 802.11a/g/n | BPSK, QPSK, 16-QAM, 64-QAM |
| | 802.11b | BPSK, QPSK, CCK |
| Radio Chains and Spatial Streams | 2x2:2 | Streams in 5 GHz- MU-MIMO |
| | 2x2:2 | Streams in 2.4 GHz- MU-MIMO |
| Channel Size | 802.11n | 20/40 (HT) MHz |
| | 802.11ac | 20/40/80 (VHT) MHz |
| Wireless Security | WPA3-AES personal, Enhanced open ( OWE ) | |
| | WPA3-Enterprise (802.1x/EAP-TLS, EAP-TTLS) | |
| | WPA3-WPA2 Mixed-AES personal, Open | |
| | WPA2-TKIP/AES personal, Open | |
| | WPA2-Enterprise (802.1x/EAP-PEAP,EAP-TLS, EAP-TTLS) | |
| | WPA personal, WPA Mixed-Enterprise (802.1x/EAP-PEAP) | |
| | WEP-64, WEP-128 | |
| | 802.11 w MFP(Management Frame Protection) | |
| | MAC-based authentication | |
| | Captive portal based authentication | |
| | 802.11i | |
| | Quantum Secure | |
| | Hide SSID in beacons | |

| | |
|---|---|
| WIPS/WIDS for Various Attack Signatures | Rogue Station Detection |
| | Deauth attack detection, RTS and CTS abuse attack detection |
| | Assoc attack detection, Fata jack tool detection,  Misconfigured AP detection |
| | DHCP snooping server detection, Honeypot /Evil Twin attacks detection |
| | Ad-Hoc connection detection, Password guessing attacks detection |
| External DB Support | Radius, Active directory, LDAP |
| Web Authentication | QN-Secure+, RADIUS, Active directory, LDAP |
| User Authentication | Methods -  Captive portal, QN-Secure+, 802.1x (Radius) |
| | Directory -  QIM, Microsoft active directory, LDAP, G suite, Oauth |
| | Mode -  Via Controller /Access points |
| Roaming | IEEE 802.11k (Assisted Roaming) |
| | IEEE 802.11v (BSS Transition Management) |
| | IEEE  802.11r (Fast BSS Transition (FT)) |
| | Pairwise Master Key (PMK) caching |
| | Opportunistic key caching |
| | Seamless roaming for captive portal users |
| Channel / Tx Power Management | Auto / Manual channel selection |
| | Speedy channel for RF optimization |
| | Channel switch for RF optimization |
| | ATP-Automatic Transmit Power management |
| Client Management | Band steering |
| | Band balancing |
| | Airtime fairness |
| Guest Management | WISPr – Captive portal, HotSpot 2.0 |
| Native Guest Portal | Customized Template |
| | Authentication Method |
| | Guest Profile Support |
| Diagnostics | Ping, Traceroute, Nslookup, Internet speed, Host discovery, Port connectivity, PCAP capture (Wired and Wireless), ARP scanner |
| Access Control List | Force DHCP |
| | URL filtering |
| | Full Client Isolation, Deny inter-user bridging Deny intra-VLAN traffic |
| | Bandwidth Restriction per SSID/User |
| | OS restriction |
| | L2 (MAC) filtering |
| | L3 (IP) / L4 (Port)  filtering |
| | MAX clients per radio |
| | Internet freeze per SSID /User |
| Meshing | Wireless (singlehop / multihop) |
| | Wired |

| | |
|---|---|
| **Radio Management** | DTIM interval |
| | OFDM Only (Disables 802.11b) |
| | BSS Rate and management rate |
| | UAPSD ( Power save ) |
| | Inactivity timeout |
| **Network Management** | IEEE 802.11d/h (DFS) support |
| | LLDP discovery, SFlow |
| | Proxy ARP |
| | DHCP options 60 and 82 |
| | Port forwarding in router mode |
| **Administration** | WLAN scheduling |
| | Internet speed test |
| | Schedule reboot |

## Networking

| | |
|---|---|
| Ethernet WAN | WAN (DHCP/Static/PPPoE) |
| USB WAN | USB dongle (3G/4G), Mobile tethering (USB ) |
| Tunneling | GRE, IPSec, Wire guard, OVPN |
| Multi-WAN | Yes, Auto-Failover |
| DHCP Server | 4 Scope, DHCP lease, DHCP MAC reservation, DNS proxy |
| WAN Security | Ethernet / USB port block management |
| PPP Interface | PPPoE |
| DNS | Static, Caching |
| NAT | Masquerade (SNAT), Port forwarding (DNAT) |
| VLAN Support | 802.1Q (1 per BSSID or dynamic per user-based on RADIUS) |
| | Port-based (Tagged, untagged) |

## Quality of Service

| |
|---|
| Auto QoS, 802.11e, |
| Manual QoS (DSCP based, Voice, Video, BE and BK) |
| WMM |
| 802.1p |

## Performance & Capacity

| | |
|---|---|
| Peak PHY Rates | 5 GHz - 866.7 Mbps |
| | 2.4 GHz - 300  Mbps |
| Client Capacity | Up to 128 clients per access point |
| SSID | Up to 16 per access point (8 per Radio) |

## RF

| | | |
|---|---|---|
| Maximum Aggregate Transmit Power | 5 GHz | 24 dBm (Adjusted as per country regulations) |
| | 2.4 GHz | 26 dBm (Adjusted as per country regulations) |
| Antenna Type | | Internal Omni-directional antennas |
| Antenna Gain (Max) | 5 GHz | 3 dBi |
| | 2.4 GHz | 3 dBi |

| EIRP | 5 GHz | 27 dBm |
|---|---|---|
| | 2.4 GHz | 29 dBm |

| **Power** | | |
|---|---|---|
| Rating | 802.3 af PoE (Class 0) /at PoE+( Fully functional with all components) | |
| | 12V DC 2A - Fully functional with all components | |

| **Physical Interfaces** | |
|---|---|
| Ethernet | WAN:1 x 10/100/1000 Base-T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE |
| | LAN: 2 x 10/100/1000 Base-T Ethernet, Auto-MDIX, RJ-45 |
| | PoE Out/LAN: 1 x 10/100/1000 Base-T Ethernet, Auto-MDIX, RJ-45 |
| | Pass-Thru (Input and Output): 2 x RJ45 based Ethernet |
| Buttons | Restart/Reset |
| USB | 1 x USB 2.0 |
| LED Indicators | Quick Setup , Cloud / Standalone |

| **Management** | |
|---|---|
| Device Management | Standalone, Local (web UI), SSH (CLI) |
| | Quantum Rudder (Controller based) |
| | Quantum Rudder (On-premises VM ) |
| | Quantum Rudder appliances  (RR-200, RR-300, RR400) |
| | Through NMS using SNMP MIBs |
| | Local device web management |
| Device / System Monitoring | SNMP v1, v2c, v3, Syslog |
| Controller DR (Disaster Recovery) | Supported |

| **Device Security** | |
|---|---|
| Certificate | Locally-significant certificates using PKI |
| Controller Communication | Encrypted |
| Port Access | 802.1x RADIUS supplicant |

| **Application Integration** |
|---|
| PM WANI, |
| NMS Integration -  ZABBIX, PRTG Monitor, Open NMS |

| **Environmental** | |
|---|---|
| Operating Temperature | −20°C (-4F) ~ +55°C (+131F) |
| Humidity | 10% ~ 90% Non-condensing |
| Standard | Plenum-rated (UL2043) |

| **Physical** | |
|---|---|
| Dimensions | 15cm(L), 8.6cm(W), 2.5cm(H) |
| Weight | 184g (0.40 lbs) |
| Mounting Kit | Suspended ceiling mount, Ceiling mount, Wall mount |

| Firmware Management | |
| --- | --- |
| Cloud-managed firmware update | |
| Scheduled firmware and security update | |
| Firmware upgrade via Access Point local GUI | |
| **Certification & Compliances** | |
| Regulatory | FCC |
| | ETA |
| | BIS |
| Environmental | RoHS |
| | CE |

## ORDERING INFORMATION

| Part Code | Description |
| --- | --- |
| QN- H-220 | Quantum QN-H-220 dual-band 802.11ac wave2 wall plate wireless access point, 2x2:2 streams, 1 x1 G Base-T WAN port (One 802.3af/at PoE in) & 3 x 1G Base-T LAN port. Comes with a three-year limited liability manufacturer's warranty for the access point. |

Rev 2.3