# INDOOR ACCESS POINT
## QN-I-220

**QUANTUM®**
NETWORKS

The demand for resilient wireless infrastructure is on the rise. Whether working from a small office or accessing a public hotspot, users increasingly expect access to high-bandwidth applications and content, just as they would in other locations. QN-I-220 is the optimal choice to meet the specified requirements.

## PRODUCT OVERVIEW

The QN-I-220 ensures a wireless networking technology that offers concurrent dual-band, consistent and dependable 802.11ac wave 2. MU-MIMO technology delivers lightning-fast speeds and exceptional coverage, resulting in exceptional user experiences.

The QN-I-220 is the ideal choice for low-density enterprise and hotspot settings, including small and medium-sized businesses, retail establishments, restaurants, and multi-tenant small offices and branch offices.

The 802.11ac wave 2 Wi-Fi access point integrates exclusive technologies distinctive to the Quantum Wi-Fi portfolio. Every access point includes a manufacturer's warranty covering three years from the activation date, as well as theft protection features to safeguard assets against unauthorized use.

## KEY FEATURES

**Economical Enterprise Performance.**
The QN-I-220 offers exceptional performance, an extended range and all at a budget-friendly cost.

**Exceptional Wi-Fi performance.**
Design to deliver outstanding Wi-Fi performance for demanding voice and video applications.

**Automate the attainment of maximum data throughput.**
Independently identifying the least congested channels guarantees consistent attainment of the highest data transfer rates supported by the available frequency spectrum.

**Build advanced guest Wi-Fi networks for the future.**
Implement customer service hotspots of the next-generation, complete with an integrated splash portal and Beacons via USB.

**Diverse Management Alternatives.**
Administer the QN-I-220 via Rudder cloud-based management or in a controller-free manner.

The QN-I-220 offers easy and effortless installation and mounting, making it the perfect choice for rapid and convenient setup in enterprise deployments.

Up to 1.2 Gbps
Data Rate

MU-MIMO

2x2,
AC Wave2

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 (UNII-1, UNII-2, UNII-2e, 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 5GHz- MU-MIMO |
| | 2x2:2 | Streams in 2.4GHz- 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, Schedule reboot | |
| | Internet speed test | |

## 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 256 clients per access point |
| SSID | Up to 16 per access point (8 per Radio) |

## RF

| | | |
|---|---|---|
| Maximum Aggregate Transmit Power | 5 GHz | 26 dBm (Adjusted as per country regulations) |
| | 2.4 GHz | 27 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 | 29 dBm |
| | 2.4 GHz | 30 dBm |

| Power | |
|---|---|
| Rating | 802.3 af PoE / at PoE+ (Class 4) (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 |
| 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 |

| 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 | 19.5cm(L), 19.5cm(W), 3.5cm(H) |
| Weight | 0.547kg (1.20 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 | |

| Certifications | |
|---|---|
| Regulatory | FCC |
| | BIS |
| | ETA |
| | TEC |
| Environmental | RoHS |
| | CE |

## ORDERING INFORMATION

| Part Code | Description |
|---|---|
| QN-I-220 | Quantum Networks QN-I-220 dual-band 802.11ac wave2 indoor wireless access point, 2x2:2 streams, 3x1G Base-T Ethernet ports, 802.3 af/at PoE support. Includes 3-year limited liability manufacturer's warranty for the access point. Does not include PoE injector or power adaptor. Does not include cloud controller license. |

Revision 3.1