INDOOR ACCESS POINT
QN-I-210-PLUS

QUANTUM®
N E T W O R K S

In areas with a medium population density, the demand for wireless infrastructure is frequently high due to consistent data-intensive applications and content usage. Users in these areas expect dependable and robust connectivity. QN-I-210-PLUS effectively fulfils these needs without incurring excessive expenses.

Up to 2.9 Gbps Data Rate

1 GbE Connectivity

2.4 5
GHz GHz

2.4 GHz - 2x2, 5 GHz - 2x2

MU-MIMO With OFDMA

3 Years Warranty

PRODUCT OVERVIEW

The QN-I-210-PLUS represents a cutting-edge Wi-Fi 6 access point designed to cater to the escalating mobility demands of modern organizations. With an impressive maximum data rate of up to 2.9 Gbps, this device boasts lightning-fast data transfer speeds. This access point provides the fast, secure, dependable and uninterrupted performance essential for enterprises of all sizes.

Leveraging simultaneous dual-band, 802.11ax wireless networking solutions, the QN-I-210-PLUS harnesses the power of OFDMA technology to deliver remarkably efficient high-speed connectivity, expansive coverage and uninterrupted performance in densely populated environments.

Managed by Quantum Rudder, the QN-I-210-PLUS includes anti-theft features designed to protect assets from unauthorized usage.

KEY FEATURES

Exceptional Wi-Fi performance
Utilizing cutting-edge Wi-Fi 6 (802.11ax) technology for performance enhancement and interference mitigation, it provides extended coverage and an unmatched user experience.

Mesh technology
Effortlessly establish a self-organizing and self-repairing mesh network using Mesh technology, significantly reducing the need for costly wiring and complex setups.

Theft prevention functionality
Access Point is locked for deployment in any other network until decommissioned from the existing network.

The device supports high EIRP with 5dBi antenna gain.

The access point features include support for 1024 QAM, BSS coloring, Target Wake Time, Spatial Reuse, 160 MHz channel bandwidth, which collectively contribute to a more efficient, faster and reliable wireless network, catering to the growing demands of high-bandwidth applications and providing an enhanced user experience.

Wi-Fi		
Wi-Fi Standards	5 GHz	IEEE 802.11a/n/ac/ax
	2.4 GHz	IEEE 802.11b/g/n/ax
Operating Mode	Access point, Router, Mesh mode	
Networking Mode	IPv4, IPv6, IPv4v6 (Dual stack), Gateway mode (NAT), Bridge mode	
Maximum Data Rates	5 GHz	802.11ax@ 160 MHz: 2400 Mbps
		802.11ax@ 80 MHz:1201 Mbps
		802.11ax@ 40 MHz: 573.5 Mbps
		802.11ax@ 20 MHz: 286.8 Mbps
		802.11ac@ 80 MHz: 1083.3 Mbps
		802.11ac@ 40 MHz: 500 Mbps
		802.11ac@ 20 MHz: 240.5 Mbps
	2.4 GHz	802.11ax@ 40 MHz: 573.5Mbps
		802.11ax@ 20 MHz: 286.8 Mbps
		802.11n@ 40 MHz: 500 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	5.15-5.25 GHz (U-NII-1), 5.25-5.35 GHz (U-NII-2A), 5.47-5.725 GHz (U-NII-2C), 5.725-5.85 GHz (U-NII-3) (As per country regulations)
	2.4 GHz	2.4-2.484GHz (ISM) (As per country regulations)
Modulation Schemes	802.11ax	BPSK, QPSK, 16-QAM, 64-QAM, 256- QAM, 1024-QAM
	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-OFDMA with MU-MIMO
	2x2:2	Streams in 2.4GHz- OFDMA with MU-MIMO
Channel Size	802.11n	20/40 (HT) MHz
	802.11ac	20/40/80 (VHT) MHz
	802.11ax	20/40/80/160 (HE) 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	

Wireless Security	802.11 w MFP (Management Frame Protection)
	MAC-based authentication
	Captive portal-based authentication
	802.11i
	Quantum Secure
	Hide SSID in beacons
External DB Support	Radius, Active directory, LDAP, TACACS+
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

Radio Resource Monitoring	Airbender RF monitoring	Dedicated mode
		Concurrent overlay mode

Client Management	Band steering
	Band balancing
	Airtime fairness
Guest Management	WISPr – Captive portal, HotSpot 2.0

Native Guest Portal	Customized Template	Yes (User define, Theme based)
	Authentication Method	Click-through, Access code, Self-sign-up (SMS, Email), Sponsor based (Domain-based, Individual Email ID based)
	Guest Profile Support	Pass validity, Bandwidth restriction, Quota based

Access Control List	Force DHCP
	URL & Application filtering /Whitelisting
	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
	Session control
	Random MAC Detection
Meshing	Wireless (singlehop / multihop)
	Wired
WDS	Point to Point
	Point to MultiPoint
Radio Management	DTIM interval
	OFDM Only (Disables 802.11b)
	BSS Rate and management rate
	UAPSD (Power save)
	Inactivity timeout
	Radio mode control
	RTS/CTS Threshold
Network Management	IEEE 802.11d/h (DFS) support
	LLDP discovery, SFlow
	Proxy ARP
	DHCP options 43, 60 and 82
	Port forwarding in router mode
Administration	WLAN scheduling
	Internet speed test
	Schedule reboot
Radius Integration	CoA (Change of Authorization)
	MAC Authentication
	Dynamic VLAN
Wi-Fi 6 Features	Target wake time
	BSS colouring
	Spatial reuse
	Orthogonal frequency division multiple access (OFDMA)
	Preamble puncturing
Advance Features	Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
	Cyclic delay/shift diversity (CDD/CSD) to enable the use of multiple transmit antennas
	Short guard interval for 20-MHz, 40-MHz, 80-MHz and 160-MHz
	Space-time block coding (STBC) for increased range and improved reception
	Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
	Transmit beam-forming (TxBF) for increased signal reliability and range

HawkEye – Rogue/WIDS / WIPS / NIPS		
Rogue AP	Rogue SSID	
	MAC Spoofing	
	SSID Spoofing	
	Honeypot / Evil twin attack	
	Null Probe request attack	
WIDS	RTS/CTS Abuse attack	
	Auth attack	
	Assoc attack	
	Fata jack tool attack	
	DHCP snooping server detection	
	AP flood attack	
	Block ACK DoS attack	
	Power saves frame attack	
	Malformed frame–Auth/Assoc attack	
WIDS/WIPS	Deauth attack, Disassoc attack	
	Omerta attack	
	Password guessing attack	
	Ad-Hoc connection	
Diagnostics		
Network Diagnostics	Ping, Traceroute, Nslookup, Internet speed, Host discovery, Port connectivity, ARP scanner	
RF Diagnostics	PCAP capture, Airbender	
Networking		
Ethernet WAN	WAN (DHCP/Static/PPPoE)	
Protocols	Static, RIP v2, OSPF v2	
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 port block management	
PPP Interface	PPPoE, L2TP, L2TP with IPSec	
DNS	Static, Caching, Dynamic DNS	
NAT	Masquerade (SNAT), Port forwarding (DNAT)	
VLAN Support	802.1Q (1 per BSSID or dynamic per user based on RADIUS), Port-based (Tagged, untagged)	
Supported Features	Safe Search, ALG Control	
	UPnP, DMZ Host, Adblock	
Quality of Service		
Auto-QoS, 802.11e,		
Manual QoS (DSCP based, Voice, Video, BE and BK)		
WMM		
802.1p		

WiFi Calling		
DiffServ		
DSCP Tagging		
Performance & Capacity		
Peak PHY Rates	5 GHz	2400 Mbps (802.11ax)
	2.4 GHz	573.5 Mbps (802.11ax)
Client Capacity	Up to 256 clients per access point	
SSID	Up to 16 per access point (8 per Radio)	
RF		
Maximum Aggregate Transmit Power (Adjusted as per country regulations)	5 GHz	25 dBm
	2.4 GHz	25 dBm
Antenna Type		Built-in integrated antenna for both radios
Antenna Gain (Max)	5 GHz	5 dBi
	2.4 GHz	5 dBi
EIRP (Adjusted as per country regulations)	5 GHz	30 dBm
	2.4 GHz	30 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: 2 x 10/100/1000 Base-T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE	
	LAN: 1 x 10/100/1000 Base-T Ethernet, Auto-MDIX, RJ45	
	802.3az Energy Efficient Ethernet (EEE)	
*USB	Available	
Buttons	Restart/Reset	
Kensington Security Slot	Available	
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	
NTP Server Configuration	Supported	
Traffic Monitoring	Application Statistics, IPDR Logs (IPFix , Netflow v9)	
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) ~ +65°C (+149F)
Humidity	5% ~ 100% non-condensing
Standard	Plenum-rated (UL2043)
Physical	
Dimensions	18.5 cm (L), 18.5 cm (W), 3.3 cm (H)
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 and Compliances		

Certifications	Parameter	Standards
Regulatory (USA)	FCC	
Regulatory (IN)	BIS	
	IPv6 Ready	
	ETA (WPC)	NABL 2.4, NABL 5
	MTCTE (ER)	EMI/EMC (IEC / EN-61000* & CISPR 32), Safety (IS-13252 & IEC-60950), Radio, Technical (IPv4 & IPv6)
Environmental Compliances	CE, RoHS	

ORDERING INFORMATION

Part Code	Description
QN-I-210-PLUS	Quantum Networks QN-I-210-PLUS dual-band 802.11ax indoor wireless access point, 2x2:2 streams, 2x1G 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.

DEVICE UPGRADE

Part Code	Description
QN-I-210P-USB	Additional USB interface based on specific requirements for USB-related functionalities.
QN-I-210P- DPOE	Additional PoE support on the LAN interface.

* The USB needs to be ordered separately.

Rev:4.2