INROOM ACCESS POINT
QN-H-245

The Quantum room access point simplifies the provision of in-room connectivity, catering to even the most rigorous demands. The QN-H-245, a Wi-Fi 6 access point, provides high-performance connectivity to meet the increasing demands of converged services, especially in industries such as hospitality, education and residential areas, where IoT and mobility requirements are rapidly expanding.

Up to 2.9 Gbps Data Rate

1G Connectivity

2.4 GHz - 2x2, 5 GHz - 2x2

MU-MIMO With OFDMA

3 Years Warranty

PRODUCT OVERVIEW

The QN-H-245 streamlines the provision of converged services in hospitality and residential areas, encompassing student residence areas, apartments and diverse structures. It provides support for a broad range of IoT devices, minimizing the dependence on standalone IoT networks and simplifying the integration of IoT solutions.

The QN-H-245 boasts a maximum real-world data rate of up to 2.9 Gbps, ensuring fast, secure, reliable and seamless performance, catering to the needs of any indoor room environment. Access Point equipped with a Power over Ethernet (PoE) port and pass-through features, the H245 can directly connect and power devices.

Managed by Quantum Rudder, each Access Point comes with a three-year limited liability manufacturer's warranty from the date of activation and theft prevention functionality to protect assets from misuse.

KEY FEATURES

Loaded with Cutting-Edge 802.11ax Technology
The QN-H-245 incorporates the latest advancements in 802.11ax technology, offering the benefits of a high-efficiency 11ax Access Point. It supports Wi-Fi 6 features such as OFDMA, Target Wake Time, BSS Colouring and Spatial Reuse.

Exceptional Wi-Fi Performance
Engineered to deliver outstanding Wi-Fi performance, especially in high-density environments with demanding voice and video applications.

Comprehensive All-in-One Solution
Experience the benefits of Wi-Fi 6, IoT integration and wired ports, delivering high-performance in-room Wi-Fi coupled with consolidated IP services.

Diverse Service Support
Provide a variety of SSIDs with advanced features, ensuring seamless connectivity for in-room devices with high-speed Internet access.

Expanded Device Connectivity
Simultaneously connect numerous devices with dual MU-MIMO spatial streams and concurrent dual-band 2.4/5 GHz radios.

Efficient mesh networking
Reduce costly cabling and complex mesh configurations with QN Mesh wireless meshing technology.

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: 2402 Mbps
		802.11ax@ 80 MHz: 2402 Mbps
		802.11ax@ 40 MHz: 1147.1 Mbps
		802.11ax@ 20 MHz: 573.5 Mbps
		802.11ac@ 80 MHz: 2166.7 Mbps
		802.11ac@ 40 MHz: 1000 Mbps
		802.11ac@ 20 MHz: 481.8 Mbps
	2.4 GHz	802.11ax@ 40 MHz: 573.5 Mbps
		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	5.15-5.25GHz (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	802.11ax	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,	
	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,	
	DHCP snooping server detection, Honeypot / Evil Twin attacks detection	
	Misconfigured AP 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	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

Diagnostics	Ping, Traceroute, Nslookup, Internet speed, Host discovery, Port connectivity, PCAP capture (Wired and Wireless), ARP scanner
Access Control List	Force DHCP
	URL & Application 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
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

Networking

Ethernet WAN	WAN (DHCP/Static/PPPoE)
Protocols	Static, RIP v2, OSPF v2
Tunneling	GRE, IPSec, Wire guard, OVPN
Multi-WAN	Yes, Auto-Failover, Link load balancing
DHCP Server	4 Scope, DHCP lease, DHCP MAC reservation, DNS proxy
WAN Security	Ethernet
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), Port-based (Tagged, untagged)
IoT Capable	Supported (With BLE, Zigbee)

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	2402 Mbps (802.11ax)
	2.4 GHz	573.5 Mbps (802.11ax)
Client Capacity	Up to 256 clients per access point	
SSID	Up to 32 per access point (16 per Radio)	

RF

Maximum Aggregate Transmit Power (Adjusted as per country regulations)	5 GHz	22 dBm
	2.4 GHz	25 dBm
Antenna Type		Built-in integrated antenna for both radios and BLE
Antenna Gain (Max)	5 GHz	5.2 dBi
	2.4 GHz	3.9 dBi
	BLE	4 dBi
EIRP (Adjusted as per country regulations)	5 GHz	27.2 dBm
	2.4 GHz	28.9 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: 3 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, Supports 802.3af PoE out up to 10W while the system is powered by 802.3at
	Pass-Thru (Input and Output): 2 x RJ45 based Ethernet
	802.3az Energy Efficient Ethernet (EEE)
Console	1 x Micro USB (USB 2.0 Support)
Buttons	Restart/Reset
LED indicators	Uplink, 2.4 GHz, 5 GHz, Cloud / Standalone, Power
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	Up to 95%, non-condensing
Standard	Plenum-rated (UL2043)
Physical	
Dimensions	16.5 cm (L), 8.95 cm (W), 3.5 cm (H)
Weight	0.45 kg (0.99 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
	ETA
	BIS
	TEC
Environmental	RoHS
	CE

ORDERING INFORMATION

Part Code	Description
QN-H-245	Quantum Networks QN-H-245 dual-band 802.11ax In-room wireless access point, 2x2:2 streams, 5x1G Base-T Ethernet ports, 2x2 passthru ports, onboard BLE support, 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.