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.

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.

Up to 2.9 Gbps
Data Rate

1 GbE
Connectivity

2.4 GHz - 2x2,
5 GHz - 2x2

MU-MIMO
With OFDMA

3 Years
Warranty

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) (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,	
	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	
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	

Access Control List	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
	Man in the Middle 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
NIPS	Dos attack
	DDos attack
	Port scanning
Diagnostics	
Network Diagnostics	Ping, Traceroute, Nslookup, Internet speed, Host discovery, Port connectivity, ARP scanner
RF Diagnostics	PCAP capture, Spectrum Analysis, Spectrum Channel metric, Spectrum FFT Duty cycle, WiFi Analyzer, 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, 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)
IGMP	IGMP v2

	IGMP Snooping	
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		
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
NTP Server Configuration	Supported
Traffic Monitoring	IPDR Logs (IPFix ,Netflow v9)
	URL Logs (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		
Certifications	**Parameter**	**Standards**
Regulatory (USA)	FCC	
Regulatory (IN)	BIS	IS-13252, IEC-60950, IEC-60215
	MTCTE (ER)	EMI/EMC (IEC / EN-61000* & CISPR 32), Safety (IS-13252 & IEC-60950), Radio, Technical (IPv4 & IPv6)
	IPv6 Ready	
	ETA (WPC)	NABL 2.4, NABL 5
Environmental Compliances	CE, RoHS	
Industry Association	Wi-Fi Alliance – WI-Fi6 Certified	
Dry Heat, Cold, Thermal Cyclic, Damp Heat	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-30	

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.