INDOOR ACCESS POINT
QN-I-270

QUANTUM® NETWORKS

The increasing demands for Wi-Fi capacity in the Education, Enterprise sectors and medium-sized venues, fueled by the proliferation of connected devices, pose a significant challenge. Introducing the QN-I-270 Access Point equipped with the latest Wi-Fi 6 (802.11ax) technology. It offers an optimal combination of increased capacity, improved coverage and cost-effectiveness in densely populated environments.

PRODUCT OVERVIEW

The necessity for Wi-Fi coverage has become imperative across enterprises, educational institutions, medium-sized venues and smart cities. The QN-I-270 operates as a mid-range dual-band, dual-concurrent Access Point, supporting four spatial streams (2x2:2 in 2.4GHz/5GHz) and achieving peak data rates of up to 1774 Mbps.

Leveraging OFDMA technology, the QN-I-270 guarantees remarkably efficient high-speed connectivity, impressive coverage and seamless performance—all managed by Quantum Rudder.

Each access point includes a three-year limited liability manufacturer's warranty from the activation date and incorporates theft prevention functionality, safeguarding assets from potential misuse.

KEY FEATURES

Packed with the latest 802.11ax technology
The QN-I-270 is equipped with the latest advancements in 802.11ax technology, encompassing all the benefits of a high-efficiency 11ax Access Point. It supports key Wi-Fi 6 features, including OFDMA, Target Wake Time, BSS coloring and spatial reuse.

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

Converged access point
The built-in BLE, Zigbee support along with the USB port, enable seamless integration of current and future wireless technologies.

Enhanced device connectivity
Simultaneously connect more devices with four MU-MIMO spatial streams and concurrent dual-band 2.4/5 GHz radios, while optimizing device performance.

QN-I-270 Wi-Fi 6 access point certified by Wi-Fi Alliance under Wi-Fi Certified 6.

Up to 1.7 Gbps
Data Rate

2.5GbE
Connectivity

2.4 GHz - 2x2,
5 GHz - 2x2

MU-MIMO
With OFDMA

3 Years
Warranty

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@ 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 (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	5.15-5.25 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)
	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 (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)	

Wireless Security	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	
	SSH Brute force attacks detection, Man in the middle attacks detection	
	Port scanning 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, Gsuite, 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/per 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-Fi6 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)
USB WAN	USB dongle (3G/4G), Mobile tethering (USB)
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 / USB 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), Port-based (Tagged, untagged)
IoT	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	1201 Mbps (802.11ax)
	2.4 GHz	573.5 Mbps (802.11ax)
Client Capacity	Up to 512 clients per access point	
SSID	Up to 32 per access point (16 per Radio)	

RF

Maximum Aggregate Transmit Power	5 GHz	24 dBm (Adjusted as per country regulations)
	2.4 GHz	27 dBm (Adjusted as per country regulations)
Antenna Type		Built-in integrated antenna for both radios and BLE
Antenna Gain (Max)	5 GHz	6 dBi
	2.4 GHz	5 dBi
	BLE	4.6 dBi
EIRP	5 GHz	30 dBm
	2.4 GHz	32 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 10/100/1000/2.5G N Base-T Ethernet, Auto MDIX, RJ-45 with 802.3at PoE port	
	LAN: 2 x 10/100/1000 Base-T Ethernet, Auto MDIX, RJ45 Console: 1 x RJ-45 Ethernet	
	802.3bz specifications, 802.3az Energy Efficient Ethernet (EEE)	
Console	1 x RJ-45 Ethernet	

USB	1 x USB 3.0
Buttons	Restart/Reset
Kensington Security Slot	Available
LED indicators	2.4 GHz , 5 GHz , 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
	Standalone, Local (web UI), SSH (CLI)
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	0°C (32°F) to 50°C (122°F)
Humidity	Up to 95%, Non-condensing
Standard	Plenum-rated (UL2043)

Physical	
Dimensions	19.5 cm x 19.5 cm x 3.9 cm
Weight	0.65 kg (1.44 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	CE,
	RoHS

ORDERING INFORMATION

Part Code	Description
QN-I-270	Quantum QN-I-270 dual-band 802.11ax indoor wireless access point, 2 x 2:2 streams, 1 x1 /2.5G Base-T WAN port and 2 x 1 G Base-T LAN port, 802.3af/at PoE support. Comes with a three-year limited liability manufacturer's warranty for the access point.

CONFIGURATION OPTION	
Option A (Optical Interface)	Fiber : 1 x 2.5G Base-X (SX / LX) SFP port
	Ethernet : 1 x 10/100/1000 Base-T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE