INDOOR ACCESS POINT
QN-I-280

Up to 3 Gbps
Data Rate

2.5G
Connectivity

2.4 GHz - 2x2,
5 GHz - 2x2

MU-MIMO
With OFDMA

3 Years
Warranty

PRODUCT OVERVIEW

QN-I-280 is a Wi-Fi 6 access point offering high-performance connectivity for any organization experiencing largely growing numbers of IoT and mobility requirements. With a maximum real-world data rate of up to 3 Gbps, it delivers high-speed, secure, reliable and seamless performance for any enterprise environment.

QN-I-280 provides concurrent dual-band 802.11ax wireless networking solutions. OFDMA technology offers highly efficient fast speed, awesome coverage and smooth performance in high-density areas like railway stations, hospitals, malls, public places, universities etc. It is managed by Quantum Rudder.

Quickly deploy futuristic customer engagement solutions using BLE Beacon.

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

Packed with the latest 802.11ax technology
QN-I-280 has all the advantages of a high-efficiency supported 11ax Access Point. It supports Wi-Fi 6 features such as OFDMA, Target Wake Time, and BSS coloring and spatial reuse.

Phenomenal Wi-Fi performance
It is engineered for phenomenal Wi-Fi performance even in high-density environments for demanding voice and video applications. Provides improved coverage, increased capacity and seamless performance in dense environments.

Build next-generation guest Wi-Fi networks
Deploy next-generation customer service hotspots with an integrated splash portal and BLE Beacons.

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

Three-year warranty
Three-year limited liability manufacturer's warranty from the date of activation of the device.

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: 600 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: 600 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 (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	20/40/80/160 (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)	

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 attack's 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, 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 coloring
	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 Capable	
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	2400 Mbps (802.11ax)
	2.4 GHz	600 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 (Adjusted as per country regulations)	5 GHz	26 dBm
	2.4 GHz	27 dBm
Antenna Type		Built-in integrated antenna for both radios and BLE
Antenna Gain (Max)	5 GHz	6 dBi
	2.4 GHz	6 dBi
	BLE	5 dBi
EIRP (Adjusted as per country regulations)	5 GHz	32 dBm
	2.4 GHz	33 dBm
Power		
Rating	802.3 af PoE / at PoE+ (Class 4) (Fully functional with all components)	
	12V DC 2A Type C - Fully functional with all components	

Physical Interfaces	QN-I-280	QN-I-280-IoT	QN-I-280-FR
Ethernet ports	WAN: 1 x 10/100/1000/2.5G N Base -T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE port	WAN: 1 x 10/100/1000/2.5G N Base -T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE port	WAN: 1 x 10/100/1000 Base -T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE port
	LAN:1 x 1G Base-T Ethernet	LAN:1 x 1G Base-T Ethernet with PoE out	LAN: 3 x 1G Base-T Ethernet
	802.3bz specifications, 802.3az Energy Efficient Ethernet (EEE)		
Optical port	----	----	WAN: 1 x 1000 Base-X (SX / LX) SFP port
IoT	No	Yes (Bluetooth/Zigbee/Thread)	No
USB /Console	----	1	----
Buttons	Restart/Reset		
Kensington security slot	Available		
LED indicators	Power, 2.4 GHz, 5 GHz, Standalone/Cloud		
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	0°C (32°F) to 55°C (131°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
Certifications	
Regulatory	FCC
Standard	IEC-60950
Environmental	CE
	RoHS
Firmware Management	
Cloud-managed firmware update	
Scheduled firmware and security update	
Firmware upgrade via Access Point local GUI	

ORDERING INFORMATION

Part Code	Description
QN-I-280	Quantum Networks QN-I-280 dual-band 802.11ax indoor wireless access point, 2x2:2 streams, 1x1/2.5G PoE N Base-T Ethernet port and 1x1G Base-T Ethernet ports, 802.3 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.
QN-I-280-IoT	The Quantum Networks QN-I-280-IoT is a dual-band 802.11ax indoor wireless access point with 2x2:2 streams, featuring a 1x1/2.5G PoE N Base-T Ethernet port, a 1x1G Base-T Ethernet port, and a 1xUSB/Console port. It supports 802.3at PoE, Bluetooth, Zigbee, and Thread. The access point comes with a 3-year limited liability manufacturer's warranty. PoE injector, power adapter, and cloud controller license are not included.
QN-I-280-FR	The Quantum Networks QN-I-280-FR is a dual-band 802.11ax indoor wireless access point with 2x2:2 streams, featuring a 1x1G Base-T PoE Ethernet port, a 3x1G Base-T Ethernet port, a 1x1000 Base-X (SX / LX) SFP port. It supports 802.3at PoE. The access point comes with a 3-year limited liability manufacturer's warranty. PoE injector, power adapter, and cloud controller license are not included.