INDOOR ACCESS POINT
QN-I-490

QUANTUM® NETWORKS

The QN-I-490 establishes itself as a forefront player in Wi-Fi technology by harnessing the advancements of the latest Wi-Fi 6 standard. This innovation caters to the growing demand for faster and more efficient wireless connectivity.

Up to 5.9 Gbps
Data Rate

2.5 GbE
Connectivity

2.4 GHz - 4x4,
5 GHz – 4x4

MU-MIMO
With OFDMA

3 Years
Warranty

PRODUCT OVERVIEW

QN-I-490 is a Wi-Fi 6 access point offering high-performance connectivity for any organization experiencing growing IoT and mobility requirements. With a maximum real-world data rate of up to 5.9 Gbps, it delivers high-speed, secure, reliable and seamless performance for any enterprise environment.

QN-I-490 provides concurrent dual-band 802.11ax wireless networking solutions. OFDMA technology offers highly efficient fast speed, excellent coverage and smooth performance in high-density areas like railway stations, hospitals, malls, public places, universities etc.

Airbender using Speedy Channel will frequently scan over the air interference (of co-channel, adjacent, noise floor) and allocate the most reliable channel to AP for the best performance.

Quickly deploy futuristic customer engagement solutions like location and asset tracking with analytics using a BLE Beacon. QN-I-490 is managed by Quantum Rudder.

KEY FEATURES

Enhance the performance of the device
Enable the capability to connect multiple devices simultaneously with utilizing the built-in 8-spatial streams (4x4:4 in 5GHz, 4x4:4 in 2.4GHz), along with MU-MIMO and OFDMA technology for enhanced connections.

Exceptional Wi-Fi performance
Offers an exceptional end-user experience in expansive environments. The Converged Access Point facilitates the integration of diverse networks by utilizing built-in BLE capabilities.

Theft prevention functionality
The access point remains restricted from deployment in any other network until it is decommissioned from the current network.

Advanced Security
Experience heightened security with the latest Wi-Fi standard, WPA3, providing enhanced protection against wireless intrusion attacks in the most secure manner.

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: 4800 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: 1147.1 Mbps
		802.11ax@ 20 MHz: 573.5 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
Spatial Streams	4x4:4	Streams in 5GHz-OFDMA with MU-MIMO
	4x4:4	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 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, 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 performance optimization	
	Channel switch for performance 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	
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), Port-based (Tagged, untagged)	
IoT	Supported (With BLE)	
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	4800 Mbps (802.11ax)
	2.4 GHz	1147.1 Mbps (802.11ax)
Client Capacity	Up to 1024 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	7.6 dBi
	2.4 GHz	5.5 dBi
	BLE	5.5 dBi
EIRP	5 GHz	31.6 dBm
	2.4 GHz	32.5 dBm
Power		
Rating	802.3 at / bt (PoE++) - Fully functional with all components	
	12V DC 3A - 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	
	LAN: 1 x 10/100/1000/2.5G N Base -T Ethernet, Auto-MDIX, RJ-45	
Fiber	WAN / LAN:1 x 10G Base-X (SX / LX) SFP port	
	802.3bz specifications, 802.3az Energy Efficient Ethernet (EEE)	

Console	1 x RJ-45 Ethernet
Buttons	Restart/Reset
LED Indicators	Power, 2.4 GHz , 5 GHz , Uplink
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 45°C (113°F)
Humidity	Up to 95%, Non-condensing
Standard	Plenum-rated (UL2043)
Physical	
Dimensions	19.5 cm (L) x 20.1 cm (W) x 3.98 cm (H)
Weight	0.7 kg (1.54 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
Standard	IEC-60950
Environmental	RoHS
	CE

ORDERING INFORMATION

Part Code	Description
QN-I-490	Quantum Networks QN-I-490, 802.11ax, concurrent dual-band Wi-Fi 6 indoor access point, includes 4x4:4 streams configuration in both bands and adaptive antennas, supports Power over Ethernet (PoE), Includes 3 Years online activation warranty.
QN-I-490-T	Quantum Networks QN-I-490-T is 802.11ax concurrent Tri-band Wi-Fi 6 indoor access point integrated with add on dedicated Wi-Fi radio module (QN-MR-25), supports dual band for various applications including dedicated WIPS/WIDS Sensor, Better RRM decisions from continuous Spectrum visibility, Network assurance and troubleshooting. Also includes 4x4:4 streams configuration in both bands and adaptive antennas, supports Power over Ethernet (PoE), and includes onboard BLE capabilities. Includes 3 Years online activation warranty.