OUTDOOR ACCESS POINT
QN-O-490

Up to 5.9 Gbps
Data Rate

2.5GbE
Connectivity

2.4 GHz - 4x4,
5 GHz – 4x4

MU-MIMO
With OFDMA

1 Year
Warranty

PRODUCT OVERVIEW

QN-O-490 built-in with smart antenna and MU-MIMO technology provide high data rates even in high-density and high-interference environments. SFP backhaul port allows service providers to backhaul data over fiber without the need for additional hardware devices to convert Fiber to Ethernet.

QN-O-490 is manageable through a centralized platform and supported by Quantum Rudder. QN-O-490 can also be deployed as a standalone access point.

Each access point comes with a one-year limited liability manufacturer's warranty from the date of activation and theft prevention functionality to protect assets from misuse.

KEY FEATURES

Delivering high-performance outdoor Wi-Fi access.
Deploy secure and reliable outdoor hotspots at Transportation hubs, Stadiums, Smart cities and Rural Wi-Fi setups.

Phenomenal Wi-Fi performance.
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.

Cost-Efficient Connectivity
Reduces operational costs and the expense of additional hardware required for deployment by service providers/telcos. SFP port provides high-speed fiber backhaul without any additional hardware.

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

Industrial-grade IP67 enclosure.
IP67 rating can withstand challenging environments with extreme temperatures and dusty environments.

Easy to manage.
Easily manage Wi-Fi infrastructure through the feature-rich Quantum Rudder management console.

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) (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	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)	

	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 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
Access Control List	Force DHCP	
	URL & Application filtering /Whitelisting	
	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	
	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
Radius Integration	CoA (Change of Authorization)
	MAC Authentication
	Dynamic VLAN
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
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)
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)
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						
DSCP Tagging						
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		**QN-O-490**	**QN-O-490-N**			
			QN-ANT-5-5DB / QN-ANT-2-5DB	QN-ANT-5-8DB / QN-ANT-2-8DB	QN-ANT-5-12DB / QN-ANT-2-12DB	QN-ANT-5-15DB / QN-ANT-2-15DB
Maximum Aggregate Transmit Power (As per country regulations)	5 GHz	24 dBm	24 dBm	22 dBm	22 dBm	22 dBm
	2.4 GHz	27 dBm	27 dBm	25 dBm	25 dBm	25 dBm
Antenna Gain (Max)	5 GHz	7.6 dBi	5 dBi	8 dBi	12 dBi	15 dBi
	2.4 GHz	5.5 dBi	5 dBi	8 dBi	12 dBi	15 dBi
	BLE	5.5 dBi	5.5 dBi	5.5 dBi	5.5 dBi	5.5 dBi
EIRP (As per country regulations)	5 GHz	31.6 dBm	29 dBm	30 dBm	34 dBm	37 dBm
	2.4 GHz	32.5 dBm	32 dBm	33 dBm	37 dBm	40 dBm
Antenna Type	Built-in integrated antenna for both radios and BLE		External antennas connectors			
Power						
Rating	802.3 at / bt (PoE++)- Fully functional with all components					
Physical Interfaces						
Ethernet	WAN / LAN: 1 x 10/100/1000/2.5G Base-T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE					
Fiber	WAN / LAN:1 x 10G Base-X (SX / LX) SFP port					
	802.3bz specifications, 802.3az Energy Efficient Ethernet (EEE)					
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
NTP Server Configuration	Supported
Traffic Monitoring	Application Statistics
	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	-40°C (-40F) ~ +70°C (+158F)
Humidity	5% ~ 100% non-condensing
Wind Resistance	160 kmph for sustained wind, 250 kmph for wind gusts
Standard	IP67
Physical	
Dimensions	23.9cm(L), 19.5cm(W), 8.3cm(H)
Weight	1575 g (3.47 lbs)
Mounting kit	Pole mount
Firmware Management	
Cloud-managed firmware update	
Scheduled firmware and security update	
Firmware upgrade via Access Point local GUI	

Certification and Compliances		
Certifications	**Parameter**	**Standards**
Regulatory (USA)	FCC	
Regulatory (IN)	BIS	IS-13252, IEC-60950
	MTCTE (ER)	MI/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	

ORDERING INFORMATION

Part Code	Description
QN-O-490	Quantum Networks QN-O-490 dual-band 802.11ax outdoor wireless access point, 4x4:4 streams, 1x1/2.5G base-T Ethernet port and 1x10G Base-X SFP port, onboard BLE support, 802.3 at PoE support. Includes 1-year limited liability manufacturer's warranty start from date of activation for the access point. Does not include PoE injector or power adaptor. Does not include cloud controller license.
QN-O-490-N	Quantum Networks QN-O-490-N-connectorized dual-band 802.11ax outdoor wireless access point, 4x4:4 streams, 1x1/2.5G Base-T Ethernet port and 1x10G Base-X SFP port, onboard BLE support, 802.3 at PoE support. Includes 1-year limited liability manufacturer's warranty for the access point. Does not include PoE injector or power adaptor. Does not include cloud controller license.
Accessories Part Code*	**Description**
QN-ANT-2-5DB	2.4GHz External Outdoor Antennae with N-Connector, Gain: 5dBi
QN-ANT-2-8DB	2.4GHz External Outdoor Antennae with N-Connector, Gain: 8dBi
QN-ANT-2-12DB	2.4GHz External Outdoor Antennae with N-Connector, Gain: 12dBi
QN-ANT-2-15DB	2.4GHz External Outdoor Antennae with N-Connector, Gain: 15dBi
QN-ANT-5-5DB	5GHz External Outdoor Antennae with N-Connector, Gain: 5dBi
QN-ANT-5-8DB	5GHz External Outdoor Antennae with N-Connector, Gain: 8dBi
QN-ANT-5-12DB	5GHz External Outdoor Antennae with N-Connector, Gain: 12dBi
QN-ANT-5-15DB	5GHz External Outdoor Antennae with N-Connector, Gain: 15dBi

DEVICE UPGRADE

Part Number	Description
QN-MR-25	Add-on dedicated Wi-Fi radio module (QN-MR-25) supports dual band, ideal for applications such as WIPS/WIDS sensors, improved RRM decisions from continuous spectrum visibility, and enhanced network assurance and troubleshooting. This module must be ordered with the hardware.

*The antenna connection cable (N-Type) is not included in the device packaging and must be purchased separately, as per requirement.

Rev: 4.1