

# OUTDOOR ACCESS POINT

## QN-O-490



Up to 3.5 Gbps  
Data Rate



2.5 GbE  
Connectivity



2.4 GHz - 4x4,  
5 GHz - 4x4



MU-MIMO  
With OFDMA



1 Year  
Warranty

## PRODUCT OVERVIEW

The **QN-O-490** is a rugged outdoor access point engineered for high-density, high-interference environments. With smart antenna technology, MU-MIMO, and dual Ethernet WAN/LAN ports, it delivers strong performance and flexible deployment. Its weatherproof design ensures reliable operation in demanding outdoor conditions.

Fully manageable through **Quantum Rudder**, it supports centralized configuration, monitoring, and control, but can also operate as a standalone AP. Built-in theft-prevention safeguards protect the device, and each unit includes a one-year limited liability warranty from activation.

Ideal for stadiums, arenas, airports, convention centres, malls like crowded venues, the QN-O-490 supports heavy data demands—from 4K streaming to low-latency voice and real-time applications—meeting strict quality-of-service needs with ease.

## 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.

### 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		
<b>Wi-Fi Standards</b>	5 GHz	IEEE 802.11a/n/ac/ax
	2.4 GHz	IEEE 802.11b/g/n/ax
<b>Operating Mode</b>	Access point, Router, Mesh mode	
<b>Networking Mode</b>	IPv4, IPv6, IPv4v6 (Dual stack), Gateway mode (NAT), Bridge mode	
<b>Maximum Data Rates</b>	5 GHz	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
	2.4 GHz	802.11ac@ 20 MHz: 481.8 Mbps
		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
<b>Maximum Receiver Sensitivity</b>	5 GHz	-98 dBm
	2.4 GHz	-93 dBm
<b>Supported Channels</b>	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
<b>Channel Bands</b>	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)
<b>Modulation Schemes</b>	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
<b>Radio Chains and Spatial Streams</b>	4x4:4	Streams in 5GHz-OFDMA with MU-MIMO
	4x4:4	Streams in 2.4GHz- OFDMA with MU-MIMO
<b>Channel Size</b>	802.11n	20/40 (HT) MHz
	802.11ac	20/40/80 (VHT) MHz
	802.11ax	20/40/80 (HE) MHz
<b>Wireless Security</b>	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	
<b>External DB Support</b>	Radius, Active directory, LDAP, TACACS+	
<b>Web Authentication</b>	QN-Secure+, Radius, Active directory, LDAP	
<b>User Authentication</b>	Methods	Captive portal, QN-Secure+, 802.1x (Radius)
	Directory	QIM, Microsoft active directory, LDAP, G suite, Oauth
	Mode	Via Controller /Access points
<b>Roaming</b>	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	
<b>Channel / Tx Power Management</b>	Auto / Manual channel selection	
	Speedy channel for performance optimization	
	Channel switch for performance optimization	
	ATP-Automatic Transmit Power management	
<b>Client Management</b>	Band steering	
	Band balancing	
	Airtime fairness	
<b>Guest Management</b>	WISPr – Captive portal, HotSpot 2.0	
<b>Native Guest Portal</b>	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
<b>Access Control List</b>	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	

<b>Meshing</b>	Wireless (singlehop / multihop)
	Wired
<b>WDS</b>	Point to Point
	Point to MultiPoint
<b>Radio Management</b>	DTIM interval
	OFDM Only (Disables 802.11b)
	BSS Rate and management rate
	UAPSD (Power save)
	Inactivity timeout
	Radio mode control
	RTS/CTS Threshold
<b>Network Management</b>	IEEE 802.11d/h (DFS) support
	LLDP discovery, SFlow
	Proxy ARP
	DHCP options 43, 60 and 82
	Port forwarding in router mode
<b>Radius Integration</b>	CoA (Change of Authorization)
	MAC Authentication
	Dynamic VLAN
<b>Administration</b>	WLAN scheduling
	Internet speed test
	Schedule reboot
<b>Wi-Fi 6 Features</b>	Target wake time
	BSS colouring
	Spatial reuse
	Orthogonal frequency division multiple access (OFDMA)
	Preamble puncturing
<b>Advance Features</b>	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
<b>HawkEye – Rogue/WIDS / WIPS / NIPS</b>	
<b>Rogue AP</b>	Rogue SSID
	MAC Spoofing
	SSID Spoofing
	Honeypot / Evil twin attack
	Null Probe request attack

<b>WIDS</b>	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
<b>WIDS/WIPS</b>	Deauth attack
	Disassoc attack
	Omerta attack
	Password guessing attack
	Ad-Hoc connection
<b>NIPS</b>	Dos attack
	DDos attack
	Port scanning
<b>Diagnostics</b>	
<b>Network Diagnostics</b>	Ping, Traceroute, Nslookup, Internet speed, Host discovery, Port connectivity, ARP scanner
<b>RF Diagnostics</b>	PCAP capture, Spectrum Analysis, Spectrum Channel metric, Spectrum FFT Duty cycle, WiFi Analyzer, Airbender
<b>Networking</b>	
<b>Ethernet WAN</b>	WAN (DHCP/Static/PPPoE)
<b>Protocols</b>	Static, RIP v2, OSPF v2
<b>Tunneling</b>	GRE, IPSec, Wire guard, OVPN
<b>Multi WAN</b>	Yes, Auto Failover
<b>DHCP Server</b>	4 Scope, DHCP lease, DHCP MAC reservation, DNS proxy
<b>WAN Security</b>	Ethernet port block management
<b>PPP Interface</b>	PPPoE, L2TP, L2TP with IPSec
<b>DNS</b>	Static, Caching, Dynamic DNS
<b>NAT</b>	Masquerade (SNAT), Port forwarding (DNAT)
<b>VLAN Support</b>	802.1Q (1 per BSSID), Port-based (Tagged, untagged)
<b>IoT</b>	Supported (With BLE)
<b>IGMP</b>	IGMP v2, IGMP Snooping
<b>Supported Features</b>	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						
<b>Peak PHY Rates</b>		5 GHz		2402 Mbps (802.11ax)		
		2.4 GHz		1147.1 Mbps (802.11ax)		
<b>Client Capacity</b>		Up to 1024 clients per access point				
<b>SSID</b>		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
<b>Maximum Aggregate Transmit Power (As per country regulations)</b>	5 GHz	25 dBm	25 dBm	25 dBm	25 dBm	25 dBm
	2.4 GHz	26 dBm	26 dBm	26 dBm	26 dBm	26 dBm
<b>Antenna Gain (Max)</b>	5 GHz	6 dBi	5 dBi	8 dBi	12 dBi	15 dBi
	2.4 GHz	6 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
<b>EIRP (As per country regulations)</b>	5 GHz	31 dBm	30 dBm	33 dBm	37 dBm	40 dBm
	2.4 GHz	32 dBm	31 dBm	34 dBm	38 dBm	41 dBm
<b>Antenna Type</b>	Built-in integrated antenna for both radios and BLE		External antennas connectors			
Power						
<b>Rating</b>	802.3 at (PoE+) - Fully functional with all components					
Physical Interfaces						
<b>Ethernet</b>	WAN / LAN: 1 x 10/100/1000/2.5G Base-T Ethernet, Auto-MDIX, RJ-45 with 802.3at PoE					
	LAN: 1 x 10/100/1000/2.5G Base-T Ethernet					
	802.3bz specifications, 802.3az Energy Efficient Ethernet (EEE)					
<b>LED Indicators</b>	Quick Setup, Cloud / Standalone					
Management						
<b>Device Management</b>	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					

<b>Device /System Monitoring</b>	SNMP v1, v2c, v3, Syslog
<b>NTP Server Configuration</b>	Supported
<b>Traffic Monitoring</b>	Application Statistics
	IPDR Logs (IPFix , Netflow v9)
	URL Logs (Syslog)
<b>Controller DR (Disaster Recovery)</b>	Supported

### Device Security

<b>Certificate</b>	Locally-significant certificates using PKI
<b>Controller Communication</b>	Encrypted
<b>Port Access</b>	802.1x RADIUS supplicant

### Application Integration

PM WANI,
NMS Integration
ZABBIX, PRTG Monitor, Open NMS

### Environmental

<b>Operating temperature</b>	-40°C (-40F) ~ +70°C (+158F)
<b>Humidity</b>	5% ~ 100% non-condensing
<b>Wind Resistance</b>	160 kmph for sustained wind, 250 kmph for wind gusts
<b>Standard</b>	IP67

### Physical

<b>Dimensions</b>	23.9cm(L), 19.5cm(W), 8.3cm(H)
<b>Weight</b>	1575 g (3.47 lbs)
<b>Mounting kit</b>	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
<b>Regulatory (USA)</b>	FCC	
<b>Regulatory (IN)</b>	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
<b>Environmental Compliances</b>	CE, RoHS, IP67	

## ORDERING INFORMATION

Part Code	Description
<b>QN-O-490</b>	Quantum Networks QN-O-490 dual-band 802.11ax outdoor wireless access point, 4x4:4 streams, 1x/2.5G Base-T PoE Ethernet port and 1x/2.5G Base-T Ethernet 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.
<b>QN-O-490-N</b>	Quantum Networks QN-O-490-N-connectorized dual-band 802.11ax outdoor wireless access point, 4x4:4 streams, 1x/2.5G Base-T PoE Ethernet port and 1x/2.5G Base-T Ethernet 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
<b>QN-ANT-25-17DB</b>	Dual Band (2.4GHZ & 5 GHZ) External outdoor antenna with N-Connector, Gain: 17DBI
<b>QN-O-WMK</b>	L-shaped wall mounting bracket

## DEVICE UPGRADE

Part Number	Description
<b>QN-MR-25</b>	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.