

INDOOR ACCESS POINT

QQ-R-3000



Up to 3 Gbps
Data Rate



1 GbE
Connectivity



2.4 GHz - 2x2,
5 GHz - 2x2



MU-MIMO
With OFDMA



2 Years
Warranty

PRODUCT OVERVIEW

Introducing the QQ-R-3000 dual-band Wi-Fi 6 Access Point from Quantum Networks, engineered to elevate your connectivity to new heights. Featuring cutting-edge Wi-Fi 6 technology, this Access Point delivers lightning-fast speeds of up to 3 Gbps, perfect for both educational and business needs. Tailored for small to medium-sized residences, it guarantees seamless performance and reliability.

Enter the Quantum era with the QQ-R-3000 Access Point, accommodating both modern and legacy Wi-Fi devices. Experience the convenience of easy wall-mounting and seamless monitoring via the user-friendly Rudder Lite cloud controller. With WPA3 security, it offers robust cyber threat protection for all connected devices while streamlining online time management across your network, promoting healthier digital habits. Quantum Networks' QQ-R-3000 marks a significant advancement in connectivity.

KEY FEATURES

Exceptional Wi-Fi performance

Utilizing cutting-edge Wi-Fi 6 (802.11ax) technology for performance enhancement and interference mitigation, it provides extended coverage and an unmatched user experience.

ISP Compatibility

Works seamlessly with most ISPs flexible connections like PPPoE, DHCP, Static etc.

Wi-Fi 6 Advancements

Faster speeds reduced lag and increased capacity with Wi-Fi 6 technology.

Ultra-Fast Smart Roaming

Rapid roaming within the 5 GHz band for uninterrupted connectivity.

Enhanced Security

Latest WPA3 security protocol for improved protection against cyber security threats.

Versatile Parental Controls

Safeguard children with customizable online time and internet pausing.

Easy, User-Friendly Setup

Quick setup in minutes.

Two years warranty

Two years 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	
Networking Mode	IPv4, Gateway mode(NAT), Bridge mode	
Maximum Data Rates	5 GHz	802.11ax@ 160 MHz: 2402 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: 573.5 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	20/40/80/160 (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)	
	802.11i	
	Hide SSID in beacons	
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	
Channel / Tx Power Management	Auto / Manual channel selection	
	ATP-Automatic Transmit Power management	
Client Management	Band steering	
Diagnostics	Ping, Traceroute, Nslookup, Internet speed, Host discovery, Port connectivity, PCAP capture (Wired and Wireless), ARP scanner	
Access Control List	Bandwidth Restriction per SSID/User	
	L2 (MAC) filtering	
	MAX clients per radio	
	Internet freeze per SSID/User	
Administration	WLAN scheduling	
	Schedule reboot	
Wi-Fi 6 Features	Target wake time	
	BSS colouring	
	Spatial reuse	
	Orthogonal frequency division multiple access (OFDMA)	
	Preamble puncturing	
Networking		
Ethernet WAN	WAN (DHCP/Static/PPPoE)	
DHCP Server	4 Scope, DHCP lease, DHCP MAC reservation, DNS proxy	
NAT	Masquerade (SNAT), Port forwarding (DNAT)	
VLAN Support	802.1Q (1 per BSSID), Port-based (Tagged, untagged)	
Performance & Capacity		
Peak PHY Rates	5 GHz	2402 Mbps (802.11ax)
	2.4 GHz	573.5 Mbps (802.11ax)
Client Capacity	Up to 128 clients per access point	
SSID	Up to 8 per access point	
RF		
Maximum Aggregate Transmit Power	5 GHz	21 dBm (Adjusted as per country regulations)
	2.4 GHz	23 dBm (Adjusted as per country regulations)
Antenna Type	Built-in integrated antenna for both radios	
Antenna Gain (Max)	5 GHz	3 dBi
Antenna Gain (Max)	2.4 GHz	3 dBi

EIRP	5 GHz	24 dBm
	2.4 GHz	26 dBm
Power		
Rating	802.3af 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 Base-T ethernet, Auto-MDIX,RJ-45 with 802.3at PoE	
	802.3az Energy Efficient Ethernet (EEE)	
Buttons	Restart/Reset	
LED indicators	Quick Setup , Cloud / Standalone	
Management		
Device Management	Standalone, Local (web UI), SSH (CLI)	
	Quantum Rudder Lite (Controller based)	
Environmental		
Operating Temperature	-20°C (-4F) ~ +55°C (+131F)	
Humidity	5% ~ 100% Non-Condensing	
Standard	Plenum-rated (UL2043)	
Physical		
Dimensions	18.5 cm (L), 18.5 cm (W), 3.3 cm (H)	
Mounting Kit	Ceiling mount	
Firmware Management		
Cloud-managed firmware update		
Firmware upgrade via Access Point local GUI		

ORDERING INFORMATION

Part Code	Description
QQ-R-3000C	Quantum QQ-R-3000C dual-band 802.11ax indoor wireless ceiling mount access point, 2 x 2:2 streams, 1x1G Base-T Ethernet port, 802.3af/at PoE support. Comes with a two-year limited liability manufacturer's warranty for the access point.