QUANTUM NETWORKS

DATASHEET | INDOOR ACCESS POINT

QQ-R-3000

High-speed, reliable, and cost-effective wireless for enterprises

Ideal for small retail stores and home offices.

PRODUCT OVERVIEW

The QQ-R-3000 access point offers reliable, high-speed connectivity in medium-density areas, supporting data-intensive applications without high costs.

It delivers secure, dependable performance with high EIRP and 5dBi antenna gain, essential for enterprises.

Featuring dual-band 802.11ax, OFDMA, 1024 QAM, BSS Coloring, Target Wake Time, Spatial Reuse, and 160 MHz Channel Bandwidth, the QQ-R-3000 delivers efficient, high-speed connectivity, broad coverage and reliable performance in dense environments.

- Up to 3 Gbps Data Rate
- 1 GbE Connectivity
- 2.4 GHz - 2x2, 5 GHz - 2x2
- MU-MIMO With OFDMA

HIGHLIGHTS

- Exceptional Wi-Fi Performance
- Theft Prevention Functionality
- Advanced Wi-Fi 6 Features
- 2 Years Warranty

TECHNICAL SPECIFICATIONS

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	
Networking Mode	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-WPA2 Mixed- AES personal, Open	
	WPA2-TKIP/AES personal, Open	
	WPA personal	
	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))	
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	
	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)	
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	802.3 af 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
	LAN: 1 x 10/100/1000 Base-T Ethernet, Auto-MDIX, RJ45
	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 Compass
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-3000	Quantum QQ-R-3000 dual-band 802.11ax indoor wireless ceiling mount access point, 2 x 2:2 streams, 2x1G Base-T Ethernet port, 802.3af/at PoE support. Comes with a two-year limited liability manufacturer's warranty for the access point. Does not include PoE injector or power adaptor. Does not include cloud controller license.