

NEWBRIDGE AP722-C

Indoor Wi-Fi 7 (802.11be) Tri-Band Ceiling Access Point

2.4 GHz

5 GHz

6 GHz



A Wi-Fi 7 tri-band ceiling access point on the Qualcomm IPQ5322 platform – 2x2 across 2.4, 5 and 6 GHz for up to 9.334 Gbps, with 320 MHz channels, Multi-Link Operation, and a 10G SFP+ / 2.5G uplink.

9.3 Gbps

TRI-BAND PHY

320 MHz

6 GHZ CHANNELS

10G SFP+

+ 2.5G UPLINK

RADIO TECHNOLOGY

- 802.11be 6 GHz 2x2:2 – 5,764¹ Mbps
- 802.11be 5 GHz 2x2:2 – 2,882² Mbps
- 802.11be 2.4 GHz 2x2:2 – 688³ Mbps
- Up to 9.334⁴ Gbps · 320 MHz · MLO

WIRED PORTS

- 1 × 2.5G 802.3bt PoE uplink
- 1 × 2.5G LAN port
- 1 × 10G SFP+ fibre port

MANAGEMENT & AI

- Newbridge 9X80 On-Premises Controller
- Newbridge Controller – cloud or on-prem
- Internet Access Management Gateway
- Advanced reporting & network insight

SECURITY

- WPA2 / WPA3-PSK encryption
- Client isolation
- Privacy VLAN isolation
- 802.1X / RADIUS authentication

INTRODUCTION

The Newbridge AP722-C is a Wi-Fi 7 (802.11be) tri-band ceiling access point engineered for the density, throughput, and latency demands of today's enterprise networks. Six spatial streams – 2x2 MIMO across the 2.4 GHz, 5 GHz, and (where regulations permit) 6 GHz bands – deliver up to 9.334 Gbps of aggregate PHY capacity while cutting airtime contention and co-channel interference.

Powered by the Qualcomm IPQ5322 platform, it sustains high throughput under heavy concurrency. The defining capabilities of Wi-Fi 7 – 320 MHz channels on 6 GHz, 4096-QAM modulation, and Multi-Link Operation – work in concert to lift peak rates and keep every session responsive as client counts climb.

MLO combines the cleanest available links in real time, keeping latency-sensitive traffic – video conferencing, cloud desktops, AR/VR, and real-time collaboration – fluid where single-band radios stall. Where local regulation permits, the dedicated 6 GHz band – reserved for Wi-Fi 6E and Wi-Fi 7 clients – opens a wide swath of interference-free spectrum.

A 10G SFP+ fibre port and a 2.5G multi-gigabit Ethernet port keep wired backhaul ahead of the air. From open-plan offices and lecture halls to hotels and smart buildings, the AP722-C scales cleanly under load.

To unlock maximum throughput and networking flexibility, the AP722-C offers two backhaul uplinks – a 10 Gbps SFP+ fibre interface and a 2.5G 802.3bt PoE Ethernet port – plus a separate 2.5G LAN port for local wired devices. Fibre backhaul lets the access point sit far from the wiring closet without repeaters – ideal for large halls and sprawling campuses.

Flexible powering simplifies every rollout: the AP runs from 802.3bt PoE or a DC input, so a single Ethernet cable can deliver both power and data to a ceiling, corridor, or classroom – with no local outlet at the mounting point. The SFP+ fibre port carries data only, so when backhauling over fibre the unit is still powered by 802.3bt PoE on the RJ45 uplink or by the DC input.

Inside, 320 MHz channels on 6 GHz, 4096-QAM, OFDMA, and intelligent traffic scheduling combine to serve dense client populations with sustained bandwidth and low latency, holding throughput steady where legacy access points degrade.

Security is enforced end to end. WPA2/WPA3 encryption protects client sessions, 802.1X authentication integrates with RADIUS, and client isolation with private VLANs contains untrusted devices – clearing the compliance bar expected across enterprise, education, and hospitality networks.

Management scales with the deployment. The AP722-C runs standalone or under Newbridge on-premises and cloud controllers, giving administrators centralised visibility, zero-touch provisioning, policy control, and automated firmware updates from a single pane of glass. Compact, quiet, and energy-efficient, it blends into any environment while delivering the performance next-generation wireless demands.

¹ The 6 GHz peak rate requires Wi-Fi 7 (802.11be) features – 320 MHz channel width and 4096-QAM (4K-QAM) – and compatible client devices. 320 MHz channels are exclusive to the 6 GHz band and may be restricted or unavailable in some regions due to regulatory limitations.

² The 5 GHz peak rate requires Wi-Fi 7 EHT with 160 MHz channel bandwidth and 4096-QAM, on compatible client devices. 160 MHz availability may vary by region and regulatory domain.

³ The 2.4 GHz peak rate requires Wi-Fi 7 features on 2.4 GHz, including 40 MHz channel width and 4096-QAM, on compatible client devices, and may be restricted by local regulatory conditions.

⁴ The 9.334 Gbps figure is the aggregate theoretical PHY (link) rate – the sum of the 2.4 GHz, 5 GHz and 6 GHz PHY rates – not user-achievable throughput. Actual wireless data throughput and coverage vary with environmental conditions, network factors, product placement, network complexity, and client-specific limitations.

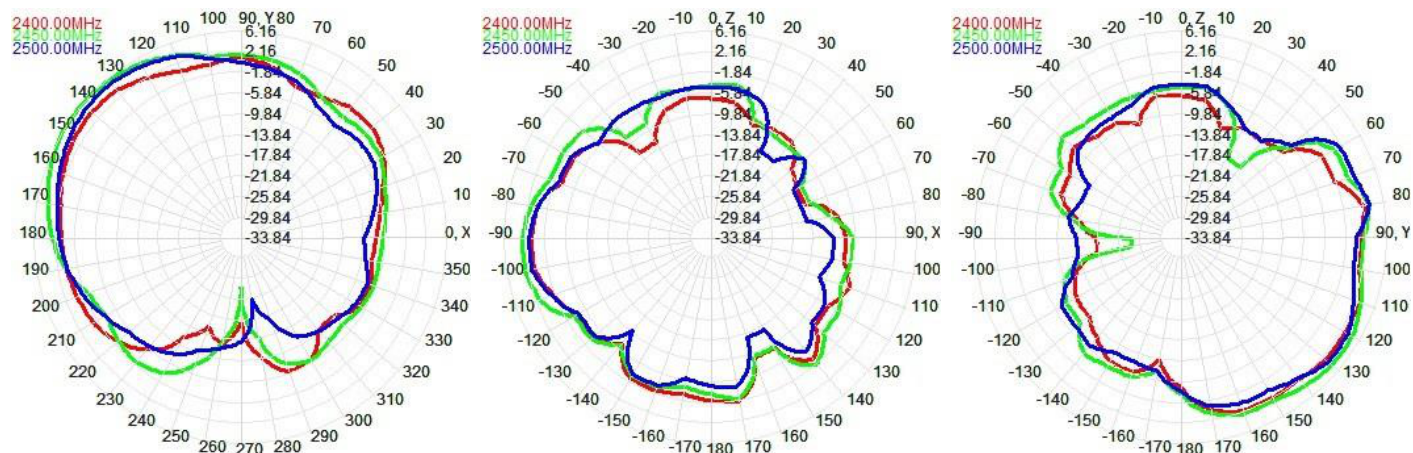
2.5G network port + 10Gbps optical port defines a new standard for future networks

The device is paired with a 2.5G network port and a 10Gbps optical port, achieving a significant increase in data transmission speed and flexible network connectivity.

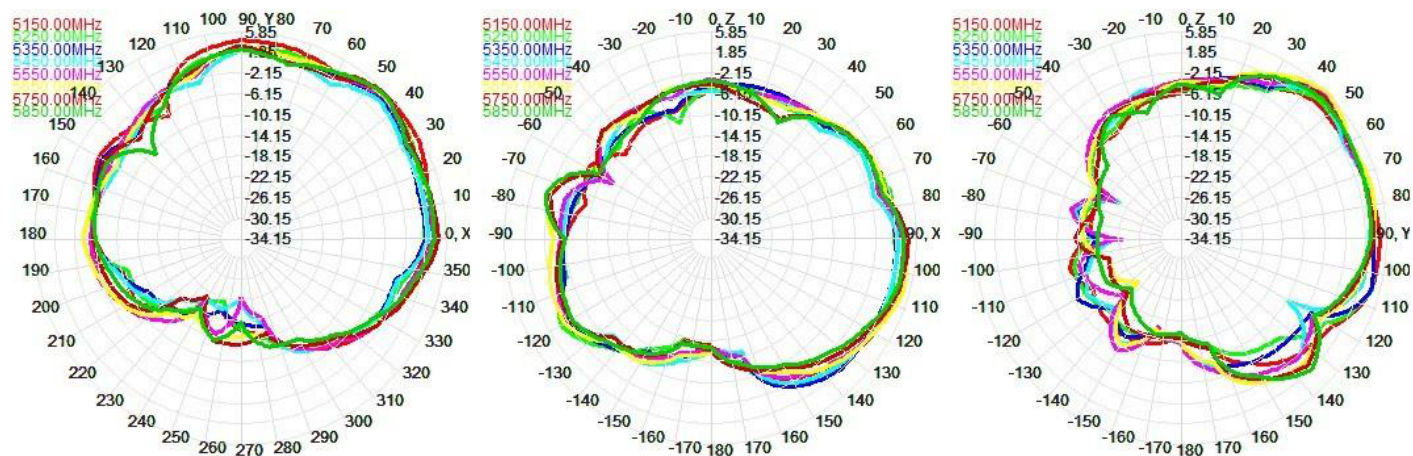


ACCESS POINT 2D RADIATION PATTERNS

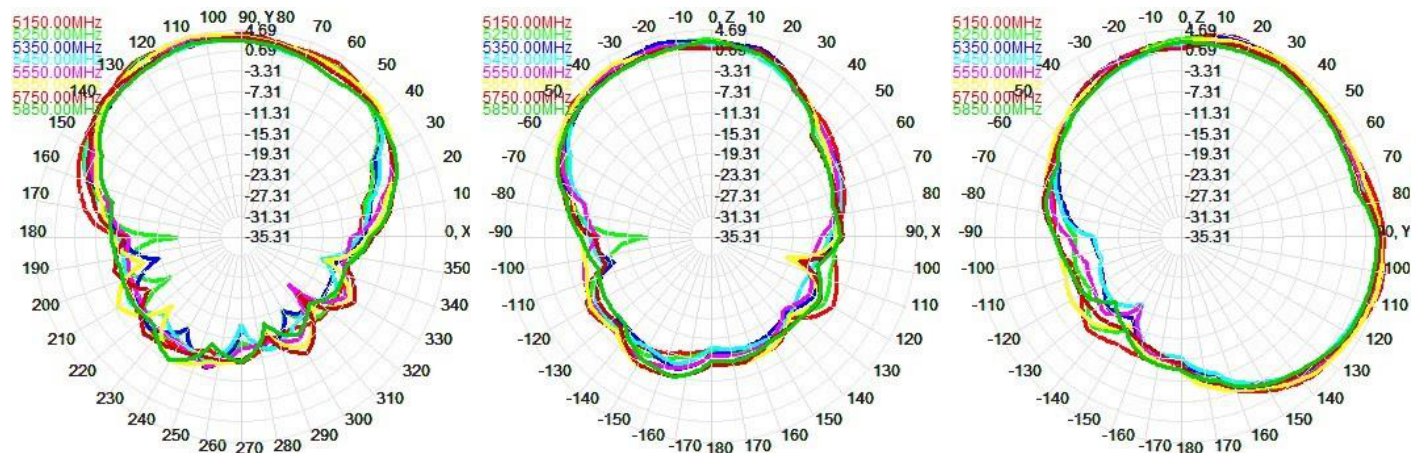
2.4 GHz



5 GHz



6 GHz



TRANSMIT POWER (TX POWER)

STANDARD	RATE	TX (DBM)	RATE	TX (DBM)
2.4 GHz – TX POWER				
802.11b	11M	24±2dBm	1M	24±2dBm
802.11g	54M	23±2dBm	6M	24±2dBm
802.11n HT20	MCS7	23±2dBm	MCS0	24±2dBm
802.11n HT40	MCS7	22±2dBm	MCS0	24±2dBm
802.11ax HE20	MCS11	21±2dBm	MCS0	24±2dBm
802.11ax HE40	MCS11	21±2dBm	MCS0	24±2dBm
802.11be EHT20	MCS13	20±2dBm	MCS0	24±2dBm
802.11be EHT40	MCS13	20±2dBm	MCS0	24±2dBm

STANDARD	RATE	TX (DBM)	RATE	TX (DBM)
5 GHz – TX POWER				
802.11a	54M	21±2dBm	6M	23±2dBm
802.11n HT20	MCS7	20±2dBm	MCS0	23±2dBm
802.11n HT40	MCS7	20±2dBm	MCS0	23±2dBm
802.11ac VHT20	MCS8	19±2dBm	MCS0	23±2dBm
802.11ac VHT40	MCS9	18±2dBm	MCS0	23±2dBm
802.11ac VHT80	MCS9	18±2dBm	MCS0	23±2dBm
802.11ax HE20	MCS11	18±2dBm	MCS0	23±2dBm
802.11ax HE40	MCS11	18±2dBm	MCS0	23±2dBm
802.11ax HE80	MCS11	18±2dBm	MCS0	23±2dBm
802.11ax HE160	MCS11	18±2dBm	MCS0	23±2dBm
802.11be EHT20	MCS13	18±2dBm	MCS0	23±2dBm
802.11be EHT40	MCS13	18±2dBm	MCS0	23±2dBm
802.11be EHT80	MCS13	18±2dBm	MCS0	23±2dBm
802.11be EHT160	MCS13	17±2dBm	MCS0	23±2dBm

STANDARD	RATE	TX (DBM)	RATE	TX (DBM)
6 GHz – TX POWER				
802.11ax HE20	MCS11	18±2dBm	MCS0	22±2dBm
802.11ax HE40	MCS11	18±2dBm	MCS0	22±2dBm
802.11ax HE80	MCS11	17±2dBm	MCS0	21±2dBm
802.11ax HE160	MCS11	17±2dBm	MCS0	21±2dBm
802.11be EHT20	MCS13	16±2dBm	MCS0	21±2dBm
802.11be EHT40	MCS13	16±2dBm	MCS0	21±2dBm
802.11be EHT80	MCS13	16±2dBm	MCS0	21±2dBm
802.11be EHT160	MCS13	16±2dBm	MCS0	21±2dBm
802.11be EHT320	MCS13	15±2dBm	MCS0	21±2dBm

Transmit power is the conducted power at the antenna port. Effective radiated power, supported channels, and maximum permitted output vary by country/region per local regulatory requirements.

RECEIVE SENSITIVITY (RX SENS)

STANDARD	RATE	RX (DBM)	RATE	RX (DBM)
2.4 GHz – RX SENSITIVITY				
802.11b	11M	-89dBm	1M	-95dBm
802.11g	54M	-75dBm	6M	-92dBm
802.11n HT20	MCS7	-72dBm	MCS0	-88dBm
802.11n HT40	MCS7	-70dBm	MCS0	-86dBm
802.11ax HE20	MCS11	-62dBm	MCS0	-88dBm
802.11ax HE40	MCS11	-60dBm	MCS0	-86dBm
802.11be EHT20	MCS13	-62dBm	MCS0	-88dBm
802.11be EHT40	MCS13	-60dBm	MCS0	-86dBm

STANDARD	RATE	RX (DBM)	RATE	RX (DBM)
5 GHz – RX SENSITIVITY				
802.11a	54M	-72dBm	6M	-92dBm
802.11n HT20	MCS7	-68dBm	MCS0	-88dBm
802.11n HT40	MCS7	-68dBm	MCS0	-86dBm
802.11ac VHT20	MCS8	-65dBm	MCS0	-88dBm
802.11ac VHT40	MCS9	-58dBm	MCS0	-86dBm
802.11ac VHT80	MCS9	-58dBm	MCS0	-84dBm
802.11ax HE20	MCS11	-60dBm	MCS0	-90dBm
802.11ax HE40	MCS11	-58dBm	MCS0	-88dBm
802.11ax HE80	MCS11	-54dBm	MCS0	-84dBm
802.11ax HE160	MCS11	-51dBm	MCS0	-82dBm
802.11be EHT20	MCS13	-54dBm	MCS0	-86dBm
802.11be EHT40	MCS13	-52dBm	MCS0	-84dBm
802.11be EHT80	MCS13	-50dBm	MCS0	-82dBm
802.11be EHT160	MCS13	-48dBm	MCS0	-80dBm

STANDARD	RATE	RX (DBM)	RATE	RX (DBM)
6 GHz – RX SENSITIVITY				
802.11ax HE20	MCS11	-60dBm	MCS0	-90dBm
802.11ax HE40	MCS11	-58dBm	MCS0	-88dBm
802.11ax HE80	MCS11	-55dBm	MCS0	-84dBm
802.11ax HE160	MCS11	-51dBm	MCS0	-82dBm
802.11be EHT20	MCS13	-54dBm	MCS0	-86dBm
802.11be EHT40	MCS13	-52dBm	MCS0	-84dBm
802.11be EHT80	MCS13	-50dBm	MCS0	-82dBm
802.11be EHT160	MCS13	-48dBm	MCS0	-80dBm
802.11be EHT320	MCS13	-46dBm	MCS0	-78dBm

SYSTEM PLATFORM

Chipset Platform	Qualcomm IPQ5322 + QCN6274 + QCA8386
Flash	128 MB NAND
Memory	1 GB DDR4 (1024 MB)

WI-FI RADIO SPECIFICATIONS

Wireless Standards	IEEE 802.11a/b/g/n/ac/ax/be
Frequency Bands	2.4 GHz: 2.400-2.484 GHz 5 GHz: 5.150-5.850 GHz 6 GHz: 5.925-7.125 GHz
Supported Rates	802.11be (Wi-Fi 7): 2.4 GHz up to 688 Mbps · 5 GHz up to 2,882 Mbps · 6 GHz up to 5,764 Mbps 802.11ax: up to 2,402 Mbps (160 MHz) 802.11ac: up to 867 Mbps (80 MHz) 802.11n: up to 300 Mbps (40 MHz) · 802.11a/g: up to 54 Mbps · 802.11b: up to 11 Mbps
Supported Channels	2.4 GHz: 1-13 5 GHz: 36-64, 100-144, 149-165 6 GHz (Wi-Fi 6E/7): 1-233
MLO	- Wi-Fi 7 Multi-Link Operation (802.11be) - Combines the 5 GHz and 6 GHz links where the client supports it; the active band combination depends on client capability, regulatory domain and configuration - Per link: up to 160 MHz channel width (320 MHz on 6 GHz); up to 4096-QAM
Spatial Streams	2×2 per band (6 streams total). Under MLO the 5 GHz and 6 GHz links can operate together; the links and streams used depend on client capability and operating mode.
Channelization	20, 40, 80, 160, 320 MHz
Modulation	OFDM: BPSK, QPSK, 16/64/256-QAM, 1024-QAM, 4096-QAM
Antenna	4 built-in omnidirectional antennas. Gain: 1.7 dBi @2.4 GHz, 4 dBi @5 GHz, 4 dBi @6 GHz
Max Transmit Power	2.4 GHz < 24±2 dBm · 5 GHz < 23±2 dBm · 6 GHz < 22±2 dBm
Security	Personal: WPA2/WPA3-PSK (AES); Enterprise: WPA2/WPA3-Enterprise (802.1X/RADIUS)

PHYSICAL

WAN	1 × 100/1,000/2,500 Mbps RJ45, 802.3bt PoE input
LAN	1 × 100/1,000/2,500 Mbps RJ45 (local downlink)
SFP+	1 × 10G SFP+ fibre
Reset	1 × Reset button (hold 6-10 s to restore factory defaults)
LED	WAN · LAN · WiFi · SFP · SYS
Power Supply	PoE (IEEE 802.3bt) on RJ45 uplink, or DC 2.0 mm input 12V / 3A. SFP+ fibre carries data only (no power).
Power Consumption	< 36 W max (access point); add the SFP+ optical module's own draw to the PoE/DC budget
Dimensions	208 × 208 × 46 mm
Weight	0.55 kg
Operating Temperature	Working: -10 °C to 55 °C · Storage: -40 °C to 70 °C
Operating Humidity	5% to 95% (Non-Condensing)
ESD	Air: ±8K, Touch: ±6K
Electrical Surge	Common Mode: 2K, Differential Mode: 1K

PERFORMANCE & CAPACITY

Peak PHY Rates	2.4 GHz: 688³ Mbps 5 GHz: 2,882² Mbps 6 GHz: 5,764¹ Mbps
Maximum Stations Capacity	Up to 1,024 associated clients per radio (3,072 per AP) – association limit; ~192 recommended concurrent (up to 64 per band)
BSSID	Up to 12 per AP (4 per band)

SOFTWARE SPECIFICATION

Operating Modes

- Fat AP (standalone), FIT AP (controller-managed) and Gateway modes
- Home dashboard: AP up/down rates, running time, device & Wi-Fi information

Wireless

- SSID broadcast; up to 12 SSIDs (4 per band); hide SSID
- Encryption: WPA3-PSK (AES), WPA2-PSK (AES), OPEN; legacy WPA/WPA2-TKIP for backward client compatibility only
- Wireless MAC address filtering (whitelist)
- Band steering (5 GHz / 6 GHz first)
- Wi-Fi scheduled off (timer)
- User isolation (between networks and within the AP)
- Adjustable transmit power · Up to 64 clients per band · QoS: WMM

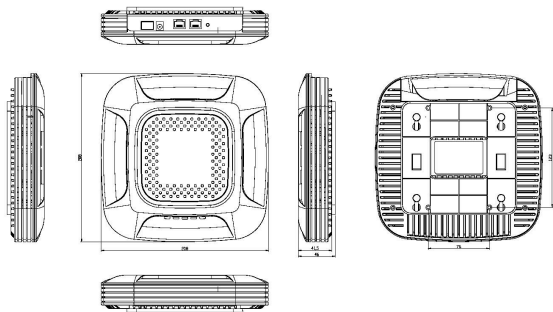
Network & Services

- IP: IPv4 / IPv6 dual-stack
- DHCP server: built-in or external
- Cloud server management · Firewall
- VLAN: VLAN pooling / port-based
- 802.1x: authenticator & supplicant
- Seamless roaming (802.11k/v)

Device Management

- Configuration backup & restore; restore factory settings
- Restart: scheduled and immediate
- Firmware upgrade · System log
- GUI web, AC controller, remote and cloud management

DIMENSIONS (unit: mm)



208 × 208 × 46 mm

ORDER INFORMATION

ORDER NO.	DESCRIPTION
NB-AP722-C	Newbridge AP722-C Wi-Fi 7 Ceiling Mount Access Point, 2x2:2 (2.4/5/6 GHz)
NB-AP722C-SU-1Y	Newbridge AP722-C Hardware and Software Support, 1Y
VC-AP722C-RPL-1Y	VCARE AP722-C NBD AHR, Hardware & Software Support, 1Y



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Contact us at <https://www.newbridge-tech.com/>