



## 5<sup>TH</sup> GENERATION WIRELESS WI-FI NETWORKS FOR CUSTOMER-FACING SPACES

# AP 8222 802.11ac ACCESS POINT

## SLEEK DESIGN DELIVERS NEXT GENERATION HIGH PERFORMANCE WI-FI IN YOUR MOST DESIGN-CONSCIOUS ENVIRONMENTS

Retail stores, hotels, hospitals and schools all have one thing in common. They all need to provide high-speed wireless connections not only for their own workers, but also to the customers, patients and students they serve — and performance expectations are at an all time high. At the same time, applications are becoming bandwidth-heavy: today's data applications are often rich with multimedia video calls are rapidly replacing voice calls.

Now, with Motorola's AP 8222 access point, you can deliver dependable blazing desktop speeds to virtually any number of mobile devices running the most demanding applications. With its sleek housing, understated design and internal antennas, the AP 8222 blends right into your indoor environment — including the most fashionable high-end retail store. The next generation 1.3Gbps 802.11ac radio empowers your network with fifth generation Wi-Fi — up to four times the speed of 802.11n — while the 802.11n radio ensures backward compatibility with every mobile device in use in your operation today. And with our high-powered radios, you'll need fewer access points. The result? A new level of capacity and performance for your wireless LAN — all at a lower cost.

## INNOVATIVE FEATURES OF THE AP 8222

### Aesthetics and a low profile for discrete deployment in the most design-conscious spaces

Sleek design and internal antennas create the ideal access point for retail, hospitality, education and carpeted office spaces — from the reception area to executive offices

### Dual radio 802.11ac/802.11n

Provides an easy upgrade path to 5<sup>th</sup> generation 1.3Gbps Wi-Fi for unmatched performance and capacity, with continuing support for all existing Wi-Fi client devices (2.4 GHz/5 GHz)

### 3-spatial stream 3X3 MIMO access point

Delivers maximum throughput to support virtually any enterprise application, including voice and HD video

### Standard 802.3af/at

Simplifies and reduces total cost of installation using standard Power-over-Ethernet (PoE)

### Load balancing, pre-emptive roaming and rate scaling

Increases reliability and resilience of the wireless network to support mission critical applications

### Gap-free security

Protects your network 24x7x365 with integrated security features; dedicate one radio to wireless IPS sensing — no standalone hardware, power or Ethernet cabling required

## UNMATCHED BANDWIDTH FOR UNMATCHED NETWORK AND APPLICATION PERFORMANCE

802.11ac technology builds on advances of 802.11n, offering up to four times the bandwidth through additional technology advancements. Multiple-Input Multiple-Output (MIMO) enables data to be sent in multiple streams (known as “spatial streams”) to a single device simultaneously to better utilize bandwidth. While MIMO exists in both 802.11n and 802.11ac, the bandwidth per spatial stream is nearly tripled, increasing from 150Mbps in 802.11n to 433Mbps. In addition, interference from 2.4 GHz devices is finally eliminated. Since 802.11ac operates only in the 5 GHz band, Bluetooth® headsets, microwave ovens and more will no longer impact Wi-Fi network performance. The result? Your WLAN can support an unprecedented number of users and applications — including voice and video — allowing you to confidently deploy Bring Your Own Device (BYOD) initiatives as well as empower new workgroups with mobile devices and new mobile applications.

## EASY MIGRATION TO 5TH GENERATION 802.11ac WI-FI

The dual radio AP 8222 provides the simplest path to next generation Wi-Fi. The 802.11ac radio readies you to support new 5 GHz mobile devices, while the 802.11n radio ensures support for all existing mobile devices — including 2.4 GHz clients. The radios work together to allow you to migrate to 802.11ac at your own pace — and without the high cost of “rip and replace”.

## MORE ROBUST WIRELESS CONNECTIONS

Your users will experience a more robust wireless connection than ever before, thanks to improved beamforming. Beamforming creates the most efficient path for data transmission between an access point and a mobile device. Until today, the transmitting beamformer worked alone to define this path. Now, the receiver also assists, a process known as sounding. The result is a stronger connection that enables faster data transmission. Application throughput and performance is improved, along with mobile device battery power.

## GAP-FREE SECURITY

The AP 8222 secures all your wireless transmissions, ensuring compliance with the government or industry regulations your business may be subjected to, such as PCI in retail and HIPAA in healthcare. Your network is protected every second of every day with comprehensive

integrated security features that include layer 2-7 stateful packet filtering firewall, AAA RADIUS services, a VPN gateway and location-based access control. In addition, one of the radios can serve as a dedicated wireless IPS sensor for around-the-clock rogue detection, eliminating the need for standalone hardware and additional power or Ethernet cabling.

## VOICE, LOCATIONING AND GUEST ACCESS

The AP 8222 supports Voice over wireless LAN (VoWLAN) quality of service (QoS), ensuring toll-quality, even with many simultaneous calls on a single access point. In addition, you can leverage locationing services to locate and track people and assets, as well as control network and application access. And since you can prevent users from accessing authorized networks, sites and applications, it's easy to provide hotspot and guest access.

## THE MOTOROLA ADVANTAGE: A TURBOBOOST FOR PERFORMANCE AND SUPERIOR SCALABILITY

Since the AP 8222 802.11ac Access Point is part of our WiNG 5 family of WLAN infrastructure, it is “network aware”, able to work in concert with all other Motorola WiNG 5 controllers and access points to define the route that will enable the fastest and most robust path for every transmission. And since the AP 8222 can be adopted by our controllers for easy centralized management, your network is easy to scale. No matter how many access points and controllers you need, or where in the world they are located, you can deploy, monitor, troubleshoot and manage them all from a single location. No matter how many users you need to support today or tomorrow, you get the peace of mind that comes from knowing your network is always ready and waiting.

## SUPPORT SERVICES BRING OUR EXPERTISE RIGHT TO YOUR DOOR

A respected leader in enterprise mobility, Motorola provides services that allow you to benefit from the experience we've gained from working around the globe with many of the world's leading companies in practically every vertical market. Our family of services can help you get and keep your WLAN up and running at peak performance by providing the assistance you need at every phase of network lifecycle — from planning and implementation to post-deployment everyday support. Not only can we help you tailor your network to meet your specific needs, we can also help you reduce risk, lower your capital investment and reduce operational costs.



## LESS IS MORE

Motorola's WiNG 5 WLAN operating system offers a distributed architecture that extends QoS, security and mobility services to the APs for better direct routing and network resilience. That means no bottleneck at the wireless controller, no latency issues for voice applications and no jitter in your streaming video. And with our broad selection of access points and flexible network configurations, you get the network you need with less hardware to buy. Let us show you the less complicated, less expensive way to more capacity and more agility. And more satisfied users.

## NEW IN WiNG 5.5

When you use our NX/RFS Series controllers to manage your Motorola adaptive access points, you get:

- **Content caching:** automatically recognize and cache frequently requested data (such as a video) on a controller at the local or corporate location to protect network bandwidth
- **Content caching analytics:** provides visibility into the content users are requesting to help determine which content to cache and for how long
- **One View management:** control and manage local NX/RFS controllers as well as the access points they control, all from a single NX9500 controller in the NOC
- **VM management:** allows you to use our NX controllers to host applications (such as a firewall, voice gateway, a POS line of business application), reducing the number of appliances you need to purchase, manage and power

## TECHNICAL SPECIFICATIONS

### 802.11AC CAPABILITIES

- 3X3 MIMO with 3 Spatial Streams
- 20, 40 and 80 MHz Channels
- 1.3 Gbps data rates per radio
- Packet Aggregation (AMSDU, AMPDU)
- Reduced Interface Spacing
- 802.11 DFS
- MIMO Power Save (Static and Dynamic)
- Advanced forward error correction coding: STBC, LDPC
- Smart antenna features with transmit beamforming

### PHYSICAL CHARACTERISTICS

Dimensions	9.0 in. L x 6.0 in. W x 1.77 in. H 230 mm L x 153 mm W x 45 mm H
Weight	3.41 lbs/1.55 kg
Housing	Metal, plenum-rated housing (UL2043)
Available mounting	No additional hardware required to mount
Configurations	Above drop ceiling, under ceiling or on wall
LEDs activity indication	2 top mounted LEDs, 2 bottom mounted LEDs
Uplink	2 ports (GE1, GE2) Auto-sensing 10/100/1000Base-T Ethernet; 802.3at on GE1 LAN port
Antenna connectors	Six RP-SMAs
Console port	RJ45 Console Port

### USER ENVIRONMENT

Operating Temp.	32° F to 122° F/0° C to 50° C
Storage Temp.	-40° F to 185° F/-40° C to 85° C
Operating humidity	5 to 95% RH non-condensing
Electrostatic discharge	15kV air, 8kV contact

### POWER SPECIFICATIONS

Operating voltage	48V
Operating current	310mA or 520mA
Integrated PoE support	802.3af and 802.3at
Aux power supply	30W (625mA@48V) DC auxiliary power supply

### NETWORKING SPECIFICATIONS

Layer 2 and Layer 3	Layer 3 routing, 802.1q, DynDNS, DHCP server/client, BOOTP client, PPPoE, and LLDP
Security	Stateful Firewall, IP filtering, NAT, 802.1x, 802.11i, WPA2, WPA Triple-Methodology Rogue Detection: 24x7 dual-band WIPS sensing, MU-assisted, on-board IDS and secure guest access (hotspot)
Quality of Service (QoS)	WMM, WMM-UAPSD, 802.1p, Diffserv and TOS

### RADIO SPECIFICATIONS

Wireless medium	Direct Sequence Spread Spectrum (DSSS), Orthogonal Frequency Division Multiplexing (OFDM) and Spatial multiplexing (MIMO)
Network standards	IEEE 802.11a/b/g/n/ac, 802.11d and 802.11i WPA2, WMM and WMM-UAPSD
Data rates supported	<i>802.11b/g</i> : 1,2,5.5,11,6,9,12,18,24,36,48, and <i>54Mbps 802.11a</i> : 6,9,12,18,24,36,48, and <i>54Mbps 802.11n</i> : MCS 0-23 up to 450Mbps <i>802.11ac</i> : MCS 0-9 up to 1.3Gbps
Operating channels	2.4 GHz band: channel 1 through channel 13 5.2 GHz band: channel 36 through channel 165  * Channel availability depends on local regulatory restriction
Antenna configuration	3x3 MIMO (transmit/receive on all three antennas) and green mode (dynamical antenna selection)
Transmit power adjustment	1dB increment from 0dBm to max
Operating frequencies	2412 to 2472 MHz, 5180 to 5825 MHz
<b>REGULATORY</b>	
Product safety certifications	UL / cUL 60950-1, IEC / EN60950-1, UL2043, RoHS
Radio approvals	FCC (USA), EU, TELEC

The AP 8222 — providing users in your most design conscious environments with dependable, blazing, desktop-style wireless speeds — all at a lower cost.

**SPECIFICATION SHEET**

AP 8222

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