PRODUCT SPEC SHEET

AP 7522 802.11ac ACCESS POINT

AP 7522 802.11ac - ACCESS POINT

UPGRADE TO 802.11AC WI-FI SPEED AND THROUGHPUT — ALL AT A LOW COST.

Your WLAN keeps your business moving, empowering your workers to achieve maximum productivity and providing your customers with the high-performance wireless services they expect inside your walls. Yet your wireless LAN is constantly pressured by the steady increase in number of users — and the bandwidth-heavy and latency-sensitive voice and multi-media applications they use. Upgrading to 802.11ac could solve the problem, but cost has been an issue — until today.

Introducing the AP 7522 from Zebra, delivering 802.11ac speeds at half the cost of many of its competitors. Now, you can support virtually any of the mobile devices on your network running today's demanding applications, with a design that fits right in to any area in your environment. The 802.11n radio ensures backward compatibility with every mobile device in use in your operation today — and 256 QAM modulation boosts the bandwidth of the 802.11n radio to 802.11ac levels. Choose internal antennas for a sleek understated look that is ideal in customer facing or carpeted office areas, or external antennas that allow you to choose the antennas you need to achieve maximum range and performance in demanding industrial areas. If you need sensor capability, the AP 7522 gives you the flexibility to meet different business needs — you can deploy a single AP 7522 as both a sensor and an access point for maximum cost-efficiency, or as a dedicated sensor for the most robust sensing functionality. 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 — at a new low cost.

THE BANDWIDTH AND APPLICATION PERFORMANCE YOU NEED TO SUPPORT ALL OF YOUR USERS

802.11ac technology builds on advances of 802.11n — the 802.11ac radio delivers more bandwidth and faster speeds through new technology advancements such as Multiple-Input Multiple-Output (MIMO). 256 QAM modulation gives the 2X2 MIMO 802.11ac radio an additional performance boost, and increases the bandwidth of the 802.11n radio to 802.11ac speeds. 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 and empower new workgroups with mobility.

EASY MIGRATION TO 5TH GENERATION 802.11ac WI-FI

The dual radio AP 7522 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.

INNOVATIVE FEATURES OF THE AP 7522

Dual radio 802.11 ac/ 802.11n

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

2X2 MIMO with 256 QAM modulation

Support for 256 QAM modulation on both the 2.4 GHz and 5 GHz radios boosts throughput; works in conjunction with beamforming to boost range

The aesthetics for every inch of your environment

Choose the internal antenna option for a sleek look in public facing areas where aesthetics are important; choose external antennas when you need the flexibility to cover challenging areas

Radio Share and Off-Channel Scan

Gives you the flexibility to enable a single AP 7522 to perform double duty as an access point and a sensor

Standard 802.3af

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

GAP-FREE SECURITY

The AP 7522 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.

FLEXIBLE WIPS SENSOR SUPPORT

You choose how you want to implement sensing to support AirDefense Network Assurance features. While you can always choose to deploy an AP 7522 as a dedicated sensor, Radio Share and Off-Channel Scan features work hand-in-hand to allow either or both radios to carry client data and act as a sensor, providing dual-band sensing without adding cost.

VOICE, LOCATIONING AND GUEST ACCESS

Support for Voice-over-wireless LAN (VoWLAN) quality of service (QoS) ensures 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 ZEBRA ADVANTAGE: A TURBOBOOST FOR PERFORMANCE AND SUPERIOR SCALABILITY

Since the AP 7522 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 Zebra 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 7522 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

Reduce risk, lower your capital investment and reduce operational costs with from-the-manufacturer support services. 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 the network lifecycle — from planning and implementation to post-deployment everyday support.

UNLEASH OPTIMAL

Zebra'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.

WiNG FEATURE HIGHLIGHTS

- **802.11r Fast Roaming:** Supports fast roaming between access points for mobile clients.
- **Roaming Assistance:** Enables a sticky-free client WLAN network and improves network performance.
- **SMART-RF:** Allows the WLAN to automatically and intelligently adapt to changes in the RF environment to protect performance and eliminate unforeseen gaps in coverage. Senses potential interference from Wi-Fi and non Wi-Fi sources (such as faulty antennas and neighboring access point failures) and

The AP 7522 — the power of 802.11ac wireless speed, at a new low cost.

AP 7522 TYPICAL ANTENNA PATTERNS (INTERNAL MODEL)

AP 7522 TECHNICAL SPECIFICATIONS

802.11AC CAPABILITIES

- **Dual band radios; supports 256-QAM**
- **2X2 MIMO with 2 Spatial Streams 20,**
- **40 and 80 MHz Channels**
- **1.267 Gbps data rates on dual concurrent radio operations**
- **Packet Aggregation (AMSDU, AMPDU)**
- **Reduced Interface Spacing**
- **802.11 DFS**
- **MIMO Power Save (Static and Dynamic)**

PHYSICAL CHARACTERISTICS

Dimensions	7.1 in. L x 6.5 in. W x 1.6 in. H 180 mm L x 165 mm W x 41 mm H
Weight	1.8 lbs/0.82 kg
Housing	Plenum-rated housing (UL2043)
Available mounting	No additional hardware required to mount

- **Advanced forward error correction coding: STBC, LDPC**
- **802.11ac transmit beamforming**
- **Maximal Ratio Combining (MRC)**

USER ENVIRONMENT

Operating temp.	Internal antennas: 32° F to 104° F/ 0° C to 40° C External antennas: -4° F to 104° F/ -20° C to 40° C
Storage temp.	-40° F to 158° F/-40° C to 70° C
Operating humidity	85% RH non-condensing
Electrostatic discharge	Internal AP-7522-67030-xx: 15kV air, 8kV contact External AP-7522-67040-xx: 12kV air, 6kV contact

CERTIFICATIONS

Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac

REGULATORY

Product safety certifications	UL / cUL 60950-1, IEC / EN60950-1, UL2043, RoHS
Radio approvals	FCC (USA), EU, TELEC

MAXIMUM CONDUCTED TRANSMIT POWER ONE ANTENNA TX POWER

Internal Antennas (AP-7522-67030-xx)	2.4 GHz Band : 20 dBm 5 GHz Band : 20 dBm
External Antennas (AP-7522-67040-xx)	2.4 GHz Band : 19 dBm 5 GHz Band : 18 dBm

MAXIMUM CONDUCTED TRANSMIT POWER TWO ANTENNAS TX POWER

Internal Antennas (AP-7522-67030-xx)	2.4 GHz Band : 23 dBm 5 GHz Band : 23 dBm
External Antennas (AP-7522-67040-xx)	2.4 GHz Band : 22 dBm 5 GHz Band : 21 dBm

Configurations	Above drop ceiling, under ceiling or on wall
LEDs activity indication	2 top mounted LEDs; activity indication
LAN Ethernet	1x IEEE 802.3 Gigabit Ethernet auto-sensing
Antenna	4dBi - 2.4 GHz band; 6 dBi - 5GHz band
Antenna connectors	Two RP SMAs (External only — AP-7522-67040-xx)
Console port	RJ45

POWER SPECIFICATIONS

Operating voltage	48V
Operating current	280 mA at 48 V
Integrated PoE support	802.3af

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, 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	802.11b/g: 1,2,5.5,11,6,9,12,18,24,36,48 and 54 Mbps 802.11a: 6,9,12,18,24,36,48, and 54 Mbps 802.11n: MCS 0-23 up to 300

automatically adjustschannels and power as needed.

- **Smart Load Balancing:** Distributes clients evenly across access points and bands, improving overall network performance.

	Mbps; Turbo mode (256QAM) on 2.4G band: up to 400Mbps) 802.11ac: MCS 0-9 up to 866.7 Mbps
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	2x2 MIMO (transmit/receive on both antennas)
Transmit power adjustment	1 dB increment
Operating frequencies	2412 to 2472 MHz, 5180 to 5850 MHz

AP 7522 RECEIVER SENSITIVITY

802.11b (CCK)				5 GHz: 802.11n (HT20)				2.4 GHz: 802.11ac				
-98	@	1	Mbps	-95	@	MCS	0	MCS Index	Spatial Streams	VHT20	VHT40	
-95	@	2	Mbps	-92	@	MCS	1	0	1	-95	-93	
-92	@	5.5	Mbps	-90	@	MCS	2	8	1	-70	-68	
-91	@	11	Mbps	-89	@	MCS	3	0	2	-93	-90	
802.11g (non HT20)				-86	@	MCS	4	8	2	-68	-66	
-97	@	6	Mbps	-79	@	MCS	5					
-96	@	9	Mbps	-77	@	MCS	6	5 GHz: 802.11ac				
-95	@	12	Mbps	-76	@	MCS	7	MCS Index	Spatial Streams	VHT20	VHT40	VHT80
-93	@	18	Mbps	-93	@	MCS	8	0	1	-95	-93	-90
-89	@	24	Mbps	-90	@	MCS	9	8	1	-70	-68	-64
-86	@	36	Mbps	-87	@	MCS	10	0	2	-93	-90	-85
-82	@	48	Mbps	-84	@	MCS	11	8	2	-68	-66	-61
-80	@	54	Mbps	-81	@	MCS	12					
802.11a (non HT20)				-76	@	MCS	13					
-95	@	6	Mbps	-74	@	MCS	14					
-95	@	9	Mbps	-73	@	MCS	15					
-94	@	12	Mbps	5 GHz: 802.11n (HT40)								
-92	@	18	Mbps	-92	@	MCS	0					
-88	@	24	Mbps	-89	@	MCS	1					
-85	@	36	Mbps	-87	@	MCS	2					

-81	@	48	Mbps	-85	@	MCS	3
-79	@	54	Mbps	-84	@	MCS	4
2.4 GHz: 802.11n (HT20)				-76	@	MCS	5
-95	@	MCS	0	-75	@	MCS	6
-92	@	MCS	1	-74	@	MCS	7
-90	@	MCS	2	-90	@	MCS	8
-88	@	MCS	3	-87	@	MCS	9
-86	@	MCS	4	-84	@	MCS	10
-79	@	MCS	5	-81	@	MCS	11
-77	@	MCS	6	-77	@	MCS	12
-76	@	MCS	7	-73	@	MCS	13
-93	@	MCS	8	-72	@	MCS	14
-90	@	MCS	9	-65	@	MCS	15
-87	@	MCS	10				
-84	@	MCS	11				
-81	@	MCS	12				
-76	@	MCS	13				
-74	@	MCS	14				
-73	@	MCS	15				