Extreme™
Customer-Driven Networking

Data Sheet

## Innovative Features

### Highest Performance Wireless Speeds with 3X3 MIMO and 256 QAM Modulation

3 spatial streams plus 256 QAM modulation support on both the 2.4 GHz and 5 GHz radios deliver the maximum throughput needed to support virtually any enterprise application, including voice and HD video; works in conjunction with beamforming to boost range.

### Dual-Radio 802.11ac/ 802.11n

Provides an easy upgrade path to 5th generation 1.9 Gbps Wi-Fi for unmatched performance and capacity, with continuing support for all existing Wi-Fi client devices (2.4 GHz/5 GHz).

### 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

Enables a single AP 7532 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.

### 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.

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# ExtremeWireless™ WiNG AP 7532 802.11ac Access Point

Get Blazing-Fast 802.11ac Wi-Fi Speed and Throughput to Support All Your Users and Applications—All at a Low Cost

## Product Overview

You need more out of your wireless LAN—you need to support more wireless users and more of today's extremely demanding voice and data applications. You need the ultimate performance and bandwidth that 802.11ac can deliver, but cost has been an issue—until today. Now you can get maximum 802.11ac performance at a minimum cost with the ExtremeWireless WiNG AP 7532. The AP 7532 is packed with a comprehensive feature set that delivers today's fastest available Wi-Fi speeds. No matter how many users are on your WLAN or what applications they are using, they can count on dependable blazing desktop-style speed. The next-generation 802.11ac radio delivers up to four times the speed of 802.11n. The 802.11n radio ensures backward compatibility with every mobile device in use in your operation today—and advanced technology helps boost the bandwidth of the 802.11n radio to 802.11ac levels. If you need sensor capability, you get the flexibility to meet different business needs—you can deploy a single AP 7532 as both a sensor and an access point for maximum cost-efficiency, or as a dedicated sensor for the most robust sensing functionality. No matter where you need 802.11ac speed, the AP 7532 will fit right in, from customer-facing public spaces to the warehouse floor. 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 that will deliver maximum range and performance in demanding industrial areas. And with our high-powered radios, you'll need fewer access points. The result? Maximum capacity and performance for your wireless LAN—at a new low cost.

## Innovative Features (cont.)

### Unleash Optimal

The ExtremeWireless 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 automatically adjusts channels and power as needed.
- Smart Load Balancing: Distributes clients evenly across access points and bands, improving overall network performance.

### Unmatched Bandwidth for Unmatched Network and Application Performance

802.11ac technology builds on 802.11n, delivering up to four times the bandwidth through new technology advancements. 3X3 Multiple-Input Multiple-Output (MIMO) allows 3-spatial streams of data to be sent simultaneously to a single mobile device, substantially improving bandwidth efficiency and utilization. 256 QAM modulation gives the 802.11ac radio an additional performance boost, and works hand-in-hand with MIMO technology to boost the bandwidth of the 802.11n radio to 802.11ac speeds. Since 802.11ac operates only in the 5 GHz band, interference from 2.4 GHz devices is finally eliminated—from Bluetooth® headsets to microwave ovens. 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 7532 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 are improved, along with mobile device battery power.

### Gap-Free Security

The AP 7532 secures all your wireless transmissions, ensuring compliance with the government or industry regulations your business may be subject 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 7532 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 dualband 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 ensure that users are only able to access authorized networks, sites, and applications, it's easy to provide hotspot and guest access.

### The Extreme Networks Advantage: A Turboboost for Performance and Superior Scalability

Since the AP 7532 802.11ac Access Point is part of our ExtremeWireless WiNG 5 family of WLAN infrastructure, it is "network-aware," able to work in concert with all other ExtremeWireless 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 7532 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.

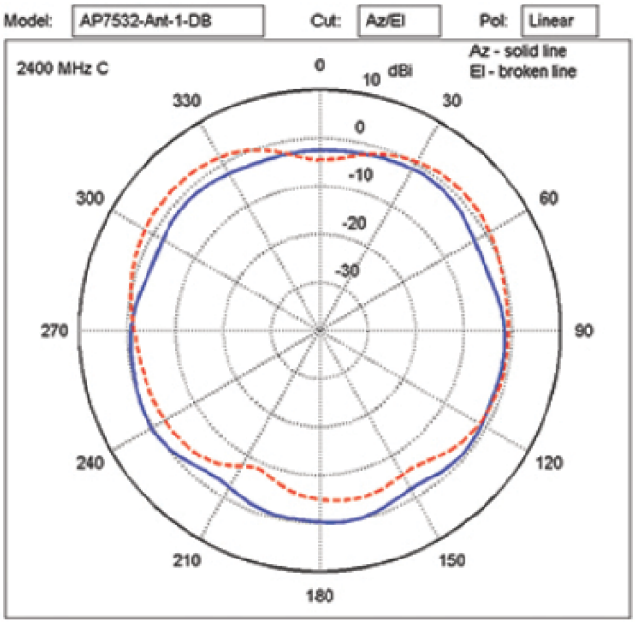
### Support Services Bring Our Expertise Right to Your Door

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 network lifecycle—from planning and implementation to post-deployment everyday support.

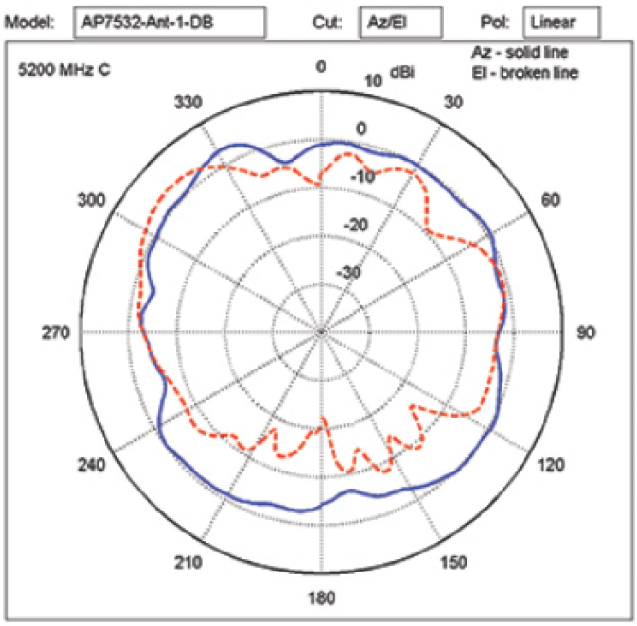
### The AP 7532—Blazing and Affordable 802.11ac Desktop-Style Wireless Speed

For more information, visit our global contact directory at http://www.extremenetworks.com/contact

## AP 7532 Typical Antenna Patterns (Internal Mode)




2.4 GHz - 4 dBi Antenna




5 GHz - 8 dBi Antenna

# Specifications

| Product Features | |
|---|---|
| **802.11AC Capabilities** | |
| • Dual band radios; supports 256-QAM 3X3 MIMO with 3 Spatial Streams<br>• 20, 40, and 80 MHz Channels<br>• 1.9 Gbps data rates on dual concurrent radio operations<br>• Packet Aggregation (AMSDU, AMPDU) Reduced Interface Spacing | • 802.11<br>• MIMO Power Save (Static and Dynamic) Advanced forward error correction coding: STBC, LDPC<br>• 802.11ac transmit beamforming Maximal Ratio Combining (MRC) |
| **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 |
| 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<br>(Internal only — AP-7532-67030-xx) |
| Antenna Connectors | Three RP SMAs<br>(External only —AP-7532-67040-xx) |
| Console Port | RJ45 |
| **User Environment** | |
| Operating Temperature | Internal antennas: 32° F to 104° F/ 0° C to 40° C<br>External antennas: -4° F to 104° F/ -20° C to 40° C |
| Storage Temperature | -40°F to 158°F/-40°C to 70°C |
| Operating Humidity | 85% RH non-condensing |
| Electrostatic Discharge | Internal AP-7532-67030-xx: 15kV air, 8kV contact<br>External AP-7532-67040-xx: 12kV air, 6kV contact |
| **Power Specifications** | |
| Operating Voltage | 48V |
| Operating Current | 312mA at 48V |
| Integrated PoE Support | 802.3af, 802.3at |
| **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) with captive portal, IPSec, and RADIUS Server |
| 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, L2TPv3, Client VPN, MESH (released in a future version of WiNG), Captive Portal server |
| 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 450 Mbps; Turbo mode (256 QAM) on 2.4 GHz band up to 600 Mbps; 802.11ac: MCS 0-9 up to 1.3 Gbps |
| Operating Channels | 2.4 GHz band: channel 1 through channel 13<br>5.2 GHz band: channel 36 through channel 165<br>*Channel availability depends on local regulatory restriction |

# Specifications (cont'd.)

| Product Features | |
|---|---|
| **Radio Specifications (cont.)** | |
| Antenna Configuration | 3X3 MIMO (transmit/receive on both antennas) |
| Transmit Power Adjustment | 1dB increment |
| Operating Frequencies | 2412 to 2472 MHz, 5180 to 5825 MHz |
| **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 |
| **Accessories** | |
| Power Supply | 37215 – PWR 12VDC, 2A, 2.5mm x 5.5mm connector |
| PoE | PD-3501G-ENT – Single Port 802.3AF Midspan Device<br>PD-9001GR-ENT – Single Port 802.3AT Compliant Midspan |
| Mounting | Mounting Plate for Indoor APs (37201) included in box<br>Universal Mounting Kit for EWLAN APS (KT-135628-01)<br>Beam Clip for Mounting Plate (BRKT-000147A-01) |
| **Maximum Conducted Transmit Power*** | |
| Internal antennas (AP-7532-67030-xx) | **2.4 GHz Band**:<br>1 Antenna Tx Power : 20 dBm<br>2 Antennas Tx Power : 23 dBm<br>3 Antennas Tx Power : 24.7 dBm<br>**5 GHz Band:**<br>1 Antenna Tx Power : 20 dBm<br>2 Antennas Tx Power : 23 dBm<br>3 Antennas Tx Power : 24.7 dBm |
| External antennas (AP-7532-67040-xx) | **2.4 GHz Band**:<br>1 Antenna Tx Power : 19 dBm<br>2 Antennas Tx Power : 22 dBm<br>3 Antennas Tx Power : 23.7 dBm<br>**5 GHz Band:**<br>1 Antenna Tx Power : 18 dBm<br>2 Antennas Tx Power : 21 dBm<br>3 Antennas Tx Power : 22.7 dBm |

*Note: *Maximum ERIP may vary based upon deployed country*

# Ordering Information

| Part Number | Product Description |
|---|---|
| AP-7532-67030-US | AP 7532: INDOOR 802.11AC AP, INT ANT US (United States) |
| AP-7532-67030-1-WR | AP 7532: INDOOR 802.11AC AP, INT ANT WR (Rest of World, replace -EU models) |
| AP-7532-67030-EG | AP 7532: INDOOR 802.11AC AP, INT ANT EG (Egypt) |
| AP-7532-67040-US | AP 7532: INDOOR 802.11AC AP, EXT ANT US (United States) |
| AP-7532-67040-1-WR | AP 7532: INDOOR 802.11AC AP, EXT ANT WR (Rest of World, replace -EU models) |
| AP-7532-67040-EG | AP 7532: INDOOR 802.11AC AP, EXT ANT EG (Egypt) |
| AP-7532-67030-IL | AP 7532: INDOOR 802.11AC AP, INT ANT IL (Israel) |

# AP 7532 Receiver Sensitivity

| 802.11B (CCK) | 802.11 (NON HT20) | 802.11G (NON HT20) | 2.4 GHZ: 802.11N (HT20) | 5 GHZ: 802.11N (HT20) | GHZ: 802.11N (HT40) |
|---|---|---|---|---|---|
| -98 @ 1 Mbps<br>-94 @ 2 Mbps<br>-93 @ 5.5 Mbps<br>-90 @ 11.0 Mbps | -95 @ 6 Mbps<br>-95 @ 9 Mbps<br>-95 @ 12 Mbps<br>-93 @ 18 Mbps<br>-90 @ 24 Mbps<br>-86 @ 36 Mbps<br>-82 @ 48 Mbps<br>-81 @ 54 Mbps | -95 @ 6 Mbps<br>-95 @ 9 Mbps<br>-95 @ 12 Mbps<br>-93 @ 18 Mbps<br>-90 @ 24 Mbps<br>-86 @ 36 Mbps<br>-82 @ 48 Mbps<br>-81 @ 54 Mbps | -95 @ MCS 0<br>-93 @ MCS 1<br>-91 @ MCS 2<br>-88 @ MCS 3<br>-86 @ MCS 4<br>-81 @ MCS 5<br>-79 @ MCS 6<br>-78 @ MCS 7<br>-94 @ MCS 8<br>-91 @ MCS 9<br>-89 @ MCS 10<br>-85 @ MCS 11<br>-82 @ MCS 12<br>-78 @ MCS 13<br>-76 @ MCS 14<br>-75 @ MCS 15<br>-93 @ MCS 16<br>-90 @ MCS 17<br>-88 @ MCS 18<br>-84 @ MCS 19<br>-81 @ MCS 20<br>-76 @ MCS 21<br>-75 @ MCS 22<br>-73 @ MCS 23 | -96 @ MCS 0<br>-94 @ MCS 1<br>-92 @ MCS 2<br>-90 @ MCS 3<br>-89 @ MCS 4<br>-81 @ MCS 5<br>-80 @ MCS 6<br>-78 @ MCS 7<br>-95 @ MCS 8<br>-92 @ MCS 9<br>-90 @ MCS 10<br>-86 @ MCS 11<br>-83 @ MCS 12<br>-78 @ MCS 13<br>-77 @ MCS 14<br>-75 @ MCS 15<br>-94 @ MCS 16<br>-91 @ MCS 17<br>-88 @ MCS 18<br>-85 @ MCS 19<br>-82 @ MCS 20<br>-77 @ MCS 21<br>-76 @ MCS 22<br>-74 @ MCS 23 | -94 @ MCS 0<br>-92 @ MCS 1<br>-89 @ MCS 2<br>-85 @ MCS 3<br>-86 @ MCS 4<br>-79 @ MCS 5<br>-77 @ MCS 6<br>-75 @ MCS 7<br>-92 @ MCS 8<br>-89 @ MCS 9<br>-86 @ MCS 10<br>-83 @ MCS 11<br>-80 @ MCS 12<br>-76 @ MCS 13<br>-74 @ MCS 14<br>-72 @ MCS 15<br>-91 @ MCS 16<br>-88 @ MCS 17<br>-85 @ MCS 18<br>-82 @ MCS 19<br>-79 @ MCS 20<br>-75 @ MCS 21<br>-73 @ MCS 22<br>-71 @ MCS 23 |

| 2.4 GHZ: 802.11AC | | | |
|---|---|---|---|
| MCS INDEX | SPATIAL STREAMS | VHT20 | VHT40 |
| 0 | 1 | -95 | -94 |
| 8 | 1 | -72 | -75 |
| 0 | 2 | -93 | -90 |
| 8 | 2 | -68 | -67 |
| 0 | 3 | -93 | -91 |
| 8 | 3 | -69 | -67 |

| 5 GHZ: 802.11AC (VHT80) | | | | |
|---|---|---|---|---|
| MCS INDEX | SPATIAL STREAMS | VHT20 | VHT40 | VHT80 |
| 0 | 1 | -97 | -94 | -90 |
| 8 | 1 | -70 | -71 | -68 |
| 0 | 2 | -93 | -90 | -86 |
| 8 | 2 | -68 | -66 | -63 |
| 0 | 3 | -94 | -90 | -87 |
| 8 | 3 | -68 | -67 | -63 |
| 9 | 3 | -68 | -65 | -61 |

## Warranty

As a customer-centric company, Extreme Networks is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or media replaced as soon as possible.

For full warranty terms and conditions please go to: http://www.extremenetworks.com/support

## Service and Support

Extreme Networks provides comprehensive service offerings that range from Professional Services to design, deploy, and optimize customer networks, with customized technical training, to service and support tailored to individual customer needs.

Please contact your Extreme Networks account executive for more information about Extreme Networks Service and Support.

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Extreme™ Customer-Driven Networking

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