Extreme™
Customer-Driven Networking

Data Sheet

## Innovative Advanced Features For Outdoor Operation

### 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 fifth generation 1.3 Gbps Wi-Fi for unmatched performance and capacity, with continuing support for all existing Wi-Fi client devices (2.4 GHz/5 GHz).

### Outdoor IP67-Rated Diecast Aluminum Enclosure

Designed to withstand wind, rain, and extreme temperatures.

### Subway and Railway Certifications

Built to meet industrial applications with M12 version certified for subway and railroads.

### MeshConnex™ on Both Data Radios

Creating a Mesh network on both radios allows automatic failover for superior uptime and survivability.

### Backhaul Detection

If the AP 7562 loses the backhaul connection, it self-forms and self-heals into a mesh router in the network, eliminating any disruption in wireless connectivity.

### Factory Installed Antenna Option

Outdoor Rated IP 67 antenna model available for easy installation.

### Load Balancing, Preemptive Roaming, and Rate Scaling

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

BUILT ON BROADCOM

# ExtremeWireless™ WiNG 7562 Outdoor Access Point

Blazing-Fast 802.11ac Wi-Fi Speed and Throughput in Your Most Challenging Outdoor Environments—All at a Low Cost

## Product Overview

If you need to provide wireless network access in outdoor areas, you not only need an access point built for the outdoors, you also need the power and performance of 802.11ac to handle today's bandwidth-heavy applications, but cost has been an issue—until now.

Introducing the ExtremeWireless AP 7562 802.11ac outdoor access point from Extreme Networks, purpose-built to meet the demands of your outdoor spaces. On the outside, the AP 7562 offers a rugged housing built to handle anything from rain, snow, and hurricane-force winds to sub-zero temperatures. On the inside, you get all the power you need to provide high-performance, seamless, reliable, and secure wireless access for even the densest user populations.

The 802.11ac radio provides four times the bandwidth of 'n' for blazing-fast speed, regardless of whether users are viewing schematics, placing a video call, or accessing information in a business applications. The 802.11n radio ensures backward compatibility with all your existing user devices. The advanced ExtremeWireless WiNG 5 operating system provides the advanced intelligence required to create a "fully network-aware" WLAN, where all the infrastructure in your WLAN works together to determine the most efficient route for every transmission. Self-healing, automatic failover and site survivability ensure superior network uptime—even if the backhaul connection is lost. And if you need sensor capability, the AP 7562 can meet just about any business need—a single AP 7562 can function as both a sensor and an access point for maximum cost-efficiency, or as a dedicated sensor for the most robust sensing functionality.

The AP 7562—delivering superior Wi-Fi performance in all of your outdoor spaces.

## The Extreme Difference – The Advanced ExtremeWireless WiNG 5 Operating System

WiNG 5 distributes intelligence and control to every piece of infrastructure in your WLAN—the wireless controllers as well as all access points, including the AP 7562. Now, all AP 7562 access points work in concert with all WLAN infrastructure to determine the fastest and most efficient routing of every transmission, based on factors such as user, location, application, and available wired and wireless resources. Traffic no longer needs to travel to a central controller, dramatically reducing the load on the wired network and virtually eliminating the typical bottlenecks and chokepoints in a centralized WLAN.

## 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.

## Blazing-Fast 802.11ac speed for unmatched performance on all of your applications

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 Fifth-generation 802.11ac Wi-Fi

The dual-radio AP 7562 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—without the high cost of “rip and replace”.

## Superior Availability

While the AP 7562 can be adopted by an ExtremeWireless WiNG controller for remote control and management, it can also function as a stand-alone access point. Even if an adopted AP 7562 loses its connection to the wireless controller due to a wired network or T1/E1 line backhaul problem, your users can stay connected.

## Protect Your Network and Your Data with Gap-Free Security

The AP 7562 secures all your wireless transmissions, ensuring compliance with the government or industry regulations your business may be subjected to—from PCI in retail to 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.

## More Robust Wireless Connections

The AP 7562 provides your users with 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 and faster data transmission, improving application throughput and performance, as well as mobile device battery power.

### Flexible WIPS Sensor Support

You choose how you want to implement sensing to support Extreme AirDefense Network Assurance features. While you can always choose to deploy an AP 7562 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 Guess Access

Support for Voice-over-Wireless LAN (VoWLAN) quality of service (QoS) ensures toll-quality calls, 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 with the ability to prevent access to unauthorized networks, sites, and applications, you can easily provide hotspot and guest access.

### Superior Scalability

The AP 7562 can be adopted by WiNG controllers or Extreme WiNG Azara Cloud for easy centralized management, allowing you to easily add capacity as your business grows. 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.

### Patented MeshConnex™ Protects Network Performance and Uptime

As the leader in outdoor mesh networks, Extreme Networks puts over 200 patents to work for you in our AP 7562 access points. Our unique routing engine, MeshConnex™, ensures superior uptime and site survivability, along with the highest possible data rate in challenging outdoor environments—at all times. MeshConnex™ dynamically senses weak or failing signals, securely moves mobile users to alternate APs, and boosts signal power to automatically fill RF holes and ensure uninterrupted mobile user access. And since mesh eliminates the need to install fiber and wires between buildings, on campus grounds, and in business parks and large outdoor areas, the cost and complexity of your WLAN is reduced.

### 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.

## Specifications

| Product Fatures | AP 7562 |
|---|---|
| **802.11ac Capabilities** | |
| Dual radios; supports 256-QAM<br>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)<br>Reduced Interface Spacing | 802.11 DFS<br>MIMO Power Save (Static and Dynamic)<br>Advanced forward error correction coding: STBC, LDPC<br>802.11ac transmit beamforming<br>Maximal Ratio Combining (MRC) |
| **Physical Characteristics** | |
| Dimensions | 9.0 in. L x 10.0 in. W x 2.6 in. H<br>22.8 cm L x 25.4 cm W x 6.6 cm H |
| Weight | 5.6 lbs./2.54 kg |
| Housing | Outdoor IP67-rated, die-cast aluminum, corrosion resistant enclosure, salt, fog, rust ASTM B117 |
| Available Mounting | KT-147407-02 Outdoor Mounting<br>KT-147407-02 Outdoor Stainless Steel Mounting |
| LEDs Activity Indication | 2 top-mounted LEDs; activity indication |
| LAN Ethernet | 2x IEEE 802.3 Gigabit Ethernet auto-sensing |
| Antenna | See Antenna Guide for antennas |
| Antenna Connectors | 6-N-Type Connectors |
| Console Port | Outdoor rated RJ45 console port |

# Specifications (cont.)

| Product Fatures | AP 7562 | | |
|---|---|---|---|
| **User Environment** | | | |
| Operating Temperature | -40° F to 140° F/-40° C to 60° C | | |
| Storage Temperature | -40° F to 185° F/-40° C to 80° C | | |
| Operating Humidity | 95% RH non-condensing | | |
| Electrostatic Discharge | Condensing Electrostatic Discharge | | |
| Operating Altitude | 8,000 ft. at 54 °F/12 °C | | |
| Storage Altitude | 30,000 ft. at 82 °F/28 °C | | |
| Wind Rating | 150 mph | | |
| Operational Shock | IEC60721-3-4, Class 4M3, MIL STD 810F | | |
| Operational Vibration | IEC60721-3-4, Class 4M3 | | |
| Shock and Vibration | ETSI 300-19-2-4 spec T41.E 4M3 | | |
| **Power Specifications** | | | |
| Operating Voltage | 36-57 VDC | | |
| Operating Current | 354mA at 48V in 802.3at | | |
| Power in (PoE) | 802.3at, 802.3af | | |
| **Certifications** | | | |
| Wi-Fi Alliance (WFA) certified 802.11 a/b/g/n/ac | | | |
| **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, WMM-UAPSD, L2TPv3, Client VPN, MESH, Captive Portal server | | |
| Data Rates Supported | 802.11b/g: 1,2,5.5,11,6,9,12,18,24,36,48, and 54 Mbps<br>802.11a: 6,9,12,18,24,36,48, and 54 Mbps<br>802.11n: MCS 0-23 up to 450 Mbps; Turbo mode (256 QAM) on 2.4 GHz band up to 600 Mbps<br>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 restrictions | | |
| Antenna Configuration | 3x3 MIMO (transmit/receive on all three antennas) | | |
| Transmit Power Adjustment | 1 dB increment | | |
| Operating Frequencies | 2412 to 2472 MHz, 5180 to 5850 MHz | | |
| **Regulatory** | | | |
| Product Safety Certifications | UL / cUL 60950-1, IEC / EN60950-1, RoHS | | |
| Radio Approvals | FCC (USA), Industry Canada, CE (Europe), and TELEC (Japan) | | |
| **Maximum Conducted Transmit Power*** | | | |
| | **1 Antenna TX Power** | **2 Antennas TX Power** | **3 Antennas TX Power** |
| External Antennas (AP-7562-670400XX) | | | |
| 2.4 GHz Band | 21 dBm | 24 dBm | 25.7 dBm |
| 5 GHz Band | 20 dBm | 23 dBm | 24.7 dBm |
| * Maximum EIRP may vary based upon deployed country | | | |
| **Subway and Railroad Certifications**** | | | |
| EN 50155, EN50121-1 EMC, EN50121-4 Immunity, IEC 61373 Shock & Vibration | | | |

# Specifications (cont.)

| Product Fatures | AP 7562 |
|---|---|
| **Accessories** | |
| Mounting Bracket | KT-147407-02 |
| Stainless Steel Mounting Bracket | KT-147407-02 |
| Extension Mounting Kit | KT-150173- 01 |
| IP66 Outdoor Rated 802.3 at Power Injector | US – AP-PSBIAS-7161-US<br>International – PD-9001GO-ENT |
| External Antenna Options | See WLAN Antenna Guide for External Antenna Options |
| **Warranty** | |
| One (1) Year on AP 7562 Hardware (Accessories Not Included), 30 Days on Accessories, 90 Days on Software | |

# Ordering Information

| Product SKU | Description |
|---|---|
| AP-7562-67040-US** | AP 7562 Dual Radio 802.11Ac 3X3:3 MIMO Outdoor Access Point External Antenna |
| AP-7562-67040-1-WR** | AP 7562 Dual Radio 802.11Ac 3X3:3 MIMO Outdoor Access Point External Antenna |
| AP-7562-6704M-US** | AP 7562 Dual Radio 802.11Ac 3X3:3 MIMO Outdoor Access Point External Antenna M12 Connector Version |
| AP-7562-6704M-1-WR** | AP 7562 Dual Radio 802.11Ac 3X3:3 MIMO Outdoor Access Point External Antenna M12 Connector Version |
| AP-7562-670042-US | AP7562 Dual Radio 802.11Ac 3X3:3 MIMO Outdoor Access Point Antenna Installed At Factory |
| AP-7562-670042-1-WR | AP7562 Dual Radio 802.11Ac 3X3:3 MIMO Outdoor Access Point Antenna Installed At Factory |
| AP-7562-670042-IL | AP7562 Dual Radio 802.11Ac 3X3:3 MIMO Outdoor Access Point Antenna Installed At Factory |

See See WLAN antenna guide for antenna specifications.

** SKUs are Railway Certified

# AP 7562 Receiver Sensitivity

| 802.11B (CCK) | | | |
|---|---|---|---|
| -98 | @ | 1 | Mbps |
| -94 | @ | 2 | Mbps |
| -93 | @ | 5.5 | Mbps |
| -90 | @ | 11.0 | Mbps |
| **802.11G (NON HT20)** | | | |
| -95 | @ | 6 | Mbps |
| -95 | @ | 9 | Mbps |
| -95 | @ | 12 | Mbps |
| -93 | @ | 18 | Mbps |
| -90 | @ | 24 | Mbps |
| -86 | @ | 36 | Mbps |
| -82 | @ | 48 | Mbps |
| -81 | @ | 54 | Mbps |
| **802.11A (NON HT20)** | | | |
| -95 | @ | 6 | Mbps |
| -93 | @ | 9 | Mbps |
| -91 | @ | 12 | Mbps |
| -88 | @ | 18 | Mbps |
| -86 | @ | 24 | Mbps |
| -81 | @ | 36 | Mbps |
| -79 | @ | 48 | Mbps |
| -78 | @ | 54 | Mbps |

| 2.4 GHZ 802.11N (HT20) | | | |
|---|---|---|---|
| -95 | @ | MCS | 0 |
| -93 | @ | MCS | 1 |
| -91 | @ | MCS | 2 |
| -88 | @ | MCS | 3 |
| -86 | @ | MCS | 4 |
| -81 | @ | MCS | 5 |
| -79 | @ | MCS | 6 |
| -78 | @ | MCS | 7 |
| -94 | @ | MCS | 8 |
| -91 | @ | MCS | 9 |
| -89 | @ | MCS | 10 |
| -85 | @ | MCS | 11 |
| -82 | @ | MCS | 12 |
| -78 | @ | MCS | 13 |
| -76 | @ | MCS | 14 |
| -75 | @ | MCS | 15 |
| -93 | @ | MCS | 16 |
| -90 | @ | MCS | 17 |
| -88 | @ | MCS | 18 |
| -84 | @ | MCS | 19 |
| -81 | @ | MCS | 20 |
| -76 | @ | MCS | 21 |

| 2.4 GHZ 802.11N (HT20) cont. | | | |
|---|---|---|---|
| -75 | @ | MCS | 22 |
| -73 | @ | MCS | 23 |
| **5 GHZ 802.11N (HT20)** | | | |
| -96 | @ | MCS | 0 |
| -94 | @ | MCS | 1 |
| -92 | @ | MCS | 2 |
| -90 | @ | MCS | 3 |
| -89 | @ | MCS | 4 |
| -81 | @ | MCS | 5 |
| -80 | @ | MCS | 6 |
| -78 | @ | MCS | 7 |
| -95 | @ | MCS | 8 |
| -92 | @ | MCS | 9 |
| -90 | @ | MCS | 10 |
| -86 | @ | MCS | 11 |
| -83 | @ | MCS | 12 |
| -78 | @ | MCS | 13 |
| -77 | @ | MCS | 14 |
| -75 | @ | MCS | 15 |
| -94 | @ | MCS | 16 |
| -91 | @ | MCS | 17 |
| -88 | @ | MCS | 18 |
| -85 | @ | MCS | 19 |
| -82 | @ | MCS | 20 |
| -77 | @ | MCS | 21 |
| -76 | @ | MCS | 22 |
| -74 | @ | MCS | 23 |
| **5 GHZ 802.11N (HT40)** | | | |
| -94 | @ | MCS | 0 |
| -92 | @ | MCS | 1 |
| -89 | @ | MCS | 2 |
| -85 | @ | MCS | 3 |
| -86 | @ | MCS | 4 |
| -79 | @ | MCS | 5 |
| -77 | @ | MCS | 6 |
| -75 | @ | MCS | 7 |
| -92 | @ | MCS | 8 |
| -89 | @ | MCS | 9 |
| -86 | @ | MCS | 10 |
| -83 | @ | MCS | 11 |
| -80 | @ | MCS | 12 |
| -76 | @ | MCS | 13 |
| -74 | @ | MCS | 14 |
| -72 | @ | MCS | 15 |
| -91 | @ | MCS | 16 |
| -88 | @ | MCS | 17 |

| 5 GHZ 802.11N (HT40) cont. | | | |
|---|---|---|---|
| -85 | @ | MCS | 18 |
| -82 | @ | MCS | 19 |
| -79 | @ | MCS | 20 |
| -75 | @ | MCS | 21 |
| -73 | @ | MCS | 22 |
| -71 | @ | MCS | 23 |

**2.4 GHZ 802.11AC**

| MCS INDEX | SPATIAL STREAMS | VHT20 | VHT40 |
|---|---|---|---|
| 0 | 1 | -95 | -94 |
| 8 | 1 | -72 | -72 |
| 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 | -65 | -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: 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 account executive for more information about Extreme Networks Service and Support.


©2019 Extreme Networks, Inc. All rights reserved. 11199-1019-11