

# ExtremeWireless™ WiNG 8533 Wave 2 Access Point

True 802.11ac Access Point with Eight Times the Capacity and Triple the Sensors

## EXPANDED CAPABILITIES

### 802.11 WIRELESS SENSOR FOR GAP-FREE SECURITY

Trust the AP 8533 to deliver best-in-class PCI compliance and security with Extreme AirDefense\*. Unlike other sensors that scan only part time, this dedicated, dual-band 802.11ac sensor scans for rogue devices full time, eliminating the risk of being blindsided by them. Once a threat is detected, it is checked with an extensive security and network vulnerability signature database to proactively safeguard your network.

### TWO-IN-ONE BLUETOOTH® SENSOR

For Security and Location Services: Monitor BT2.0 devices in the environment using the AP 8533 and ADSP Security Appliance. Map BT2.0 devices, and analyze for potential security threats.

### COMMUNICATE WITH EVERY CUSTOMER

Due to its ubiquitous nature, Bluetooth is an excellent means to engage customers. The AP 8533 supports Apple iBeacon™ to communicate with a loyalty app on a customer's smartphone. Using Google Eddystone™, enterprises can send advertisements directly to shoppers, guests, and conference attendees, even without a loyalty app pre-installed. This makes it ideal for businesses to advertise their app-download pages, captive portals, or site-specific information.

### RF SPECTRUM SENSOR

Maximize performance and visibility without compromise. Using the dedicated full-time RF spectrum sensor, you can monitor and identify RF interference without slowing down throughput on the data radios.



## Product Overview

Ever-increasing demand to support more mobile devices and applications, as well as customer engagement, redefines the network year after year. Jump to the front of the line with the new ExtremeWireless WiNG AP 8533. This innovative access point features true 802.11ac Wave 2 capabilities and Extreme Triple Sensor technology to support your growing business and customer needs. Personalize the shopping experience with Bluetooth® Low Energy (BLE) beacons, secure the network from existing and new threat vectors, and deepen network visibility of applications running over your wireless LAN. With AP 8533's advanced capabilities, you can prevent "upgrade fatigue."

### HIGH-DENSITY NETWORK

Our true 802.11ac Wave 2 access point, along with the high-density optimization in ExtremeWireless WiNG 5, maximizes the value of MU-MIMO. The AP 8533 supports hundreds of wireless clients and concurrent transmissions critical for any enterprise.

### UNMATCHED PERFORMANCE

Using the Integrated Deep Packet Inspection (DPI) engine, along with the Extreme NSight™ Platform\*, the AP 8533 tirelessly optimizes the network to extract every bit from the airwaves. From RF errors to key performance indicators, the AP 8533 collects data to measure, monitor, and secure application performance. Thanks to its intelligent distributed architecture—ExtremeWireless WiNG 5—it can proactively adjust to deliver the fastest, most reliable experience.

\* sold separately

## UNRIVALED SCALABILITY FROM 1 TO CLOUD

With a modern, WiNG 5 distributed operating system, the AP 8533 offers four deployment modes to meet any requirement: stand-alone AP, virtual controller mode for creating networks of up to 64 access points, NOC controllers scaling to 25,000 access points.

## EXPANDED CAPABILITIES WITH EXTREME'S TRIPLE SENSOR TECHNOLOGY

Access more possibilities with the AP 8533. The AP 8533 has integrated three powerful sensors that optimize security, customer engagement, and network performance.

## EXPERT SUPPORT

Reduce risk and lower your capital investment and operational costs with our support services. From planning to implementation to post-deployment, our experts will ensure every phase of your WLAN lifecycle is working at its peak, so you can too.

## Specifications

| PRODUCT FEATURES  |   |
|---|---|
| <b>802.11AC CAPABILITIES</b>  |   |
| <ul style="list-style-type: none"> <li>Quad radios (3 Wi-Fi radios + one Bluetooth® radio)</li> <li>Band-unlocked Network Sensor for WIPS and Location Service</li> <li>4x4 MU-MIMO with 4 Spatial Streams</li> <li>Auto-Selecting MU-MIMO supports 1 and 2 stream wireless clients</li> <li>20, 40, and 80 MHz Channels. 160MHz and 80MHz + 80MHz in a future release</li> <li>Packet Aggregation (AMSDU, AMPDU) and RIFS</li> <li>MIMO Power Save (Static and Dynamic)</li> </ul> | <ul style="list-style-type: none"> <li>Advanced forward error correction coding: STBC, LDPC</li> <li>802.11ac transmit beamforming</li> <li>Maximal Ratio Combining (MRC)</li> <li>NitroQAM provides up to 800 Mbps on 2.4GHz radio and up to 2166 Mbps on 5GHz radio</li> <li>Support for up to 500* associated client devices per access point and up to 16 BSSIDs per radio</li> </ul> |
| <b>PHYSICAL CHARACTERISTICS</b>   |   |
| Dimensions  | 8.25" x 8.25" x 1.8"<br>210mm x 210mm x 24mm  |
| Weight  | 3.0lbs, 1.27kg  |
| Mounting  | Included mounting bracket for flush mount or T-bar mount  |
| LEDs  | System status: Green, Amber, Blue, White  |
| LAN Ethernet  | 2x IEEE 802.3 Gigabit Ethernet auto-sensing   |
| Antenna Connectors  | AP-8533-68SB30: internal antenna<br>AP-8533-68SB3E: internal antenna<br>AP-8533-68SB40: five RP SMA connectors; one RP-SMA dedicated for BT/BLE radio   |
| Console   | RJ45  |
| <b>USER ENVIRONMENT</b>   |   |
| Operating Temperature   | 32° F to 140° F/0° C to 50° C   |
| Storage Temperature   | 40° F to 158° F/-40° C to 70° C   |
| Operating Humidity  | 95% RH non-condensing   |
| Electrostatic Discharge   | Internal AP-8533-68SB30/3E: ESD to ±12KV air and ±8KV contact   |
| <b>ANTENNA INFORMATION</b>  |   |
| Internal Antenna  | Radio 1 (2.4GHz) : 5.2dBi<br>Radio 2 (5.2GHz): 6.8 dBi<br>Radio 3 (2.4GHz/5.2GHz): 4.9/5.9 dBi<br>Radio 4 (2.4GHz): Integrated antenna with 7.7dBi  |
| External Antenna  | Radio 1, 2 : up to 10dBi<br>Radio 3 (2.4GHz/5.2GHz) integrated antenna: 4.9/5.9 dBi<br>Radio 4 (2.4GHz): dual-mode antenna option. Integrated antenna with 7.7dBi or optional external antenna up to 11dBi.   |
| <b>DC POWER SPECIFICATIONS</b>  |   |
| Operating Power   | Max Power Consumption: 24W<br>Typical Power Consumption: 12W  |

| PRODUCT FEATURES   |  |
|--|--|
| <b>MAXIMUM RADIATED TRANSMIT POWER (RMS)</b>                     |  |
| Internal Antenna   | Radio 1, 2.4GHz band: 32.2dBm (1670 mW)<br>Radio 2, 5.2GHz band: 32.8dBm (1915 mW)<br>Radio 3, 2.4GHz/5.2GHz dual-band sensor:<br>- 2.4GHz band: 25.9 dBm (389 mW)<br>- 5.2GHz band: 22.9 dBm (195 mW)<br>Radio 4: 13.7 dBm (23.4mW) with integrated antenna   |
| External Antenna   | Radio 1, 2.4GHz band: 34dBm (2524 mW)<br>Radio 2, 5.2GHz band: 33dBm (2005 mW)<br>Radio 3, 2.4GHz/5.2GHz dual-band sensor:<br>- 2.4GHz band: 25.9 dBm (389 mW)<br>- 5.2GHz band: 22.9 dBm (195 mW)<br>Radio 4: 13.7 dBm (23.4mW) with integrated antenna or up to 17 dBm (50 mW) with 11dBi external antenna |
| <b>ACCESSORIES</b>   |  |
| Power  | PWR-BGA48V45WOWW<br>AP-PSBIAS-2P3-ATR<br>AP-PS85-1P1-WW - Power Splitter   |
| Mounting   | KT-135628-01<br>BRKT-000147A-01  |
| <b>RADIO SPECIFICATIONS</b>                                      |  |
| Wireless Medium  | DSSS, OFDM, MIMO, MU-MIMO  |
| Network Standards  | IEEE 802.11a/b/g/n/ac, 802.11d, and 802.11i WPA2, WMM, WMM-UAPSD, L2TPv3<br>802.11b/g: 1-54 Mbps<br>802.11a: 6-54 Mbps<br>802.11n: MCS 0-31 up to 600 Mbps<br>802.11ac: MCS 0-9 up to 1.733 Gbps; In Nitro mode, radio 1 and 2 data rates can go up to 1000Mbps and 2166Mbps, respectively.                  |
| Operating Channels   | 2.4 GHz band: channel 1-13 5.2 GHz band: channel 36-165 2412 to 2472 MHz, 5180 to 5850 MHz<br>Channel availability depends on local regulatory restrictions  |
| Antenna Configuration  | Radio 1: 2.4GHz: 4x4 with 4SS<br>Radio 2: 5GHz: 4x4 with 4SS<br>Radio 3: Dual-Band Sensor: 1x3 with 3SS<br>Radio 4: Bluetooth radio with selectable single integrated antenna or external antenna  |
| Conducted Radio Power  | Up to 21dBm, depending on local regulatory restrictions, in 1dB increments   |
| Operating Frequencies  | 2412 to 2472 MHz, 5180 to 5850 MHz   |
| <b>NETWORKING</b>  |  |
| 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   |
| QoS  | WMM, WMM-UAPSD, 802.1p, Diffserv, and TOS. Role-based QoS with rule-based packet marking.  |
| <b>CERTIFICATES</b>  |  |
| Wi-Fi Alliance® (WFA) certified 802.11 a/b/g/n/ac, Passpoint 2.0 |  |
| <b>REGULATORY</b>  |  |
| Product Safety Certifications                                    | UL / cUL 60950-1, IEC / EN60950-1, UL2043, RoHS  |
| Radio Approvals  | FCC (USA), EU, TELEC   |
| Approvals and Certifications                                     | UL / cUL 60950-1, IEC / EN60950-1, UL2043, RoHS. FCC (USA), EU, TELEC, Medical EMC standard: EN/IEC 60601-1-2  |

| PRODUCT FEATURES            |  |
|-----------------------------|--|
| PRODUCT SKU AND DESCRIPTION |  |
| AP-8533-68SB30-US/WR/EU     | 802.11ac Wave 2, Tri-Radio, dedicated sensor, BLE, internal antenna, 2xGE-XX |
| AP-8533-68SB40-US/WR/EU     | 802.11ac Wave 2, Tri-Radio, dedicated sensor, BLE, internal antenna, 2xGE-XX |
| * WiNG 5.8.5 or later       |  |

## Rx Sensitivity Table

| MODE                          | RATE/MCS | SPATIAL STREAM | BW | MAX TX POWER (DBM) | AP-8533-68SB30<br>AVG SENS ANT | MAX TX POWER (DBM) | AP-8533-68SB30<br>AVG SENS ANT |
|-------------------------------|----------|----------------|----|--------------------|--------------------------------|--------------------|--------------------------------|
| <b>2G RADIO</b>               |          |                |    |                    |                                |                    |                                |
| DSSS                          | 1        | -              | 20 | 21                 | -99                            | 20                 | -98                            |
| DSSS                          | 11       | -              | 20 | 21                 | -99                            | 20                 | -98                            |
| OFDM                          | 54       | -              | 20 | 17                 | -82                            | 16                 | -81                            |
| 802.11n                       | MCS0     | 4SS            | 20 | 20                 | -71                            | 19                 | -95                            |
| 802.11n                       | MCS0     | 4SS            | 40 | 20                 | -68                            | 19                 | -92                            |
| 802.11n                       | MCS31    | 4SS            | 20 | 16                 | -71                            | 15                 | -70                            |
| 802.11n                       | MCS31    | 4SS            | 40 | 16                 | -68                            | 15                 | -67                            |
| <b>5G RADIO</b>               |          |                |    |                    |                                |                    |                                |
| OFDM                          | 6        | -              | 20 | 20                 | -99                            | 17                 | -96                            |
| OFDM                          | 54       | -              | 20 | 18                 | -86                            | 15                 | -83                            |
| 802.11ac                      | MCS9     | 4SS            | 20 | 20                 | -70                            | 17                 | -67                            |
| 802.11ac                      | MCS9     | 4SS            | 40 | 13                 | -67                            | 10                 | -64                            |
| 802.11ac                      | MCS9     | 4SS            | 80 | 13                 | -64                            | 10                 | -61                            |
| <b>SENSOR RADIO - 2G MODE</b> |          |                |    |                    |                                |                    |                                |
| DSSS                          | 1        | -              | 20 | 20                 | -99                            | 20                 | -98                            |
| OFDM                          | 54       | -              | 20 | 17                 | -81                            | 15                 | -80                            |
| 802.11n                       | MCS0     | 3SS            | 20 | 20                 | -96                            | 20                 | -95                            |
| 802.11n                       | MCS0     | 3SS            | 40 | 20                 | -93                            | 20                 | -92                            |
| 802.11n                       | MCS23    | 3SS            | 20 | 16                 | -69                            | 13                 | -68                            |
| 802.11n                       | MCS23    | 3SS            | 40 | 13                 | -66                            | 13                 | -65                            |
| <b>SENSOR RADIO - 5G MODE</b> |          |                |    |                    |                                |                    |                                |
| OFDM                          | 6        | -              | 20 | 17                 | -99                            | 20                 | -96                            |
| OFDM                          | 54       | -              | 20 | 15                 | -86                            | 17                 | -83                            |
| 802.11ac                      | MCS9     | 3SS            | 20 | 12                 | -67                            | 13                 | -64                            |
| 802.11ac                      | MCS9     | 3SS            | 40 | 12                 | -64                            | 13                 | -61                            |
| 802.11ac                      | MCS9     | 3SS            | 80 | 12                 | -61                            | 13                 | -58                            |



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