Extreme™
Customer-Driven Networking

Highlights

Radio Technology

- 802.11ac Wave 2 - 5 GHz 3x3:3
- 802.11ac Wave 2 - 2.4 GHz 3x3:3
- Integrated BLE (Bluetooth Low Energy) Radio for location services

Management and Analytics with ExtremeCloud™ IQ

- Automated deployments
- Simplified network operations
- Advanced reporting and network insights

Self-Driving Architecture

- Distributed control Wi-Fi delivers self-optimizing and self-healing mobility
- Automated client distribution between radios or neighboring access points
- Dynamic mesh backhaul

Secure Network Access

- Broad range of authentication modes for all devices from Corporate to IoT
- Integrated enterprise protection mechanisms including WIPS and VPN

Aerohive
NETWORKS

ExtremeWireless™ AP245X

High Performance, General-Purpose, 802.11ac Wave 2 Dual-Radio 3x3:3 Access Point with External Antennas

This power optimized AP line uniquely incorporates 802.11ac, integrated BLE radio for iBeacon (and other beacon applications), and a standard USB port for a variety of IoT applications. AP245X smoothly integrates into your existing 802.3af or 802.3at power and network infrastructure.

The AP245X benefits from an AI-driven Wi-Fi architecture capable of self-organizing, self-healing, and self-optimizing connectivity in the most challenging environments, helping eliminate single points of failure and data bottlenecks. Underlying the AP245X is a powerful operating system driving a stateful L2-L7 DPI firewall for context-based access security, advanced and customizable QoS for traffic optimization, intelligent meshing algorithms, Private Pre-Shared Key (PPSK) security, and much more. In addition, the integrated BLE radio and a USB interface in the access point opens up a multitude of deployment use-cases in IoT and proximity/location-oriented services.

Ex | Extreme Elements™

ExtremeWireless AP245X

Hu Human | Wi Wireless Indoor APs | IQ Extreme Cloud IQ

Built to Suit Your Business Needs

Extreme Elements are the building blocks that allow you to tailor your network to your specific business environment, goals, and objectives. They enable the creation of an Autonomous Network that delivers the positive experiences and business outcomes most important to your organization.

Combining architecture, automation, and artificial intelligence, Extreme Elements enable you to ensure that your uses get what they need — when and where they need it. Providing these superior user experiences is as simple as mixing and matching the right elements.

Learn more at extremenetworks.com/elements.

Advanced Security

This access point delivers the highest level of security services, including a fully stateful L2-L7 DPI firewall for context-based access security, Private Pre-Shared Key (PPSK) authentication, on-board RADIUS services, WIPS, VPN tunnelling, and much more.

Automated Deployment

Powered by cloud networking, this access point can easily be deployed alongside thousands of others in no time at all. Extreme's management system provides granular templates and auto provisioning to enable centralized enterprise plug-and-play rollouts.

RF Monitoring

Adaptive RF algorithms provide intelligent selection of the best channels and transmit power for unimpaired network access. Load balancing, band steering and many other attributes of the RF can all be automated. In addition, administrators can view network health through Extreme's management system.

Management Analytics

In conjunction with Extreme's management system, this access point provides a rich set of data displayed via context driven widgets, detailing historical data and real-time analytics. This provides context-specific granularity with perspective views for locations, network, network devices, individual client devices, as well as policy roles. In each context, administrators can adjust dashboards from the widget library.

Performance Optimization

With a performance optimized operating system, this access point works collectively with neighboring devices to fine tune overall network health for connected clients, utilizing a granular, customizable QoS engine that adjusts performance based on user, device, and application privileges.

Integrated BLE and Zigbee

To support both IoT and guest engagement services this access point integrates Bluetooth to connect with IoT devices or engage loyalty customers with beacon services. Enterprises can use Google Eddystone to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app download pages, captive portals, or site-specific information.

Product Specifications

Radio Specifications

802.11a

- 5.150–5.850 GHz Operating Frequency
- Orthogonal Frequency Division Multiplexing (OFDM) Modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/ auto fallback

802.11b

- 2.4–2.5 GHz Operating Frequency
- Direct-Sequence Spread-Spectrum (DSSS) Modulation
- Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

- 2.4–2.5 GHz Operating Frequency
- Orthogonal Frequency Division Multiplexing (OFDM) Modulation
- 20 dBm (100 mW) Transmit Power
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/ auto fallback

802.11n

- 2.4–2.5 GHz & 5.150–5.850 GHz Operating Frequency
- 802.11n Modulation
- Rates (Mbps): MCS0–MCS23 (6.5Mbps - 450Mbps)
- 3x3:3 Stream Multiple-In, Multiple-Out (MIMO) Radio
- HT20 High-Throughput (HT) Support for both 2.4 GHz and 5 GHz
- A-MPDU and A-MSDU Frame Aggregation

802.11ac

- 5.150–5.850 GHz Operating Frequency
- 802.11ac Modulation (256-QAM)
- Rates (Mbps): MCS0–MCS9 (6.5Mbps - 1300Mbps), NSS = 1-3.
- 3x3:3 Stream Multiple-In, Multiple-Out (MIMO) Radio
- VHT20/VHT40/VHT80 support

Interfaces

- Two Autosensing 10/100/1000 BASE-T Ethernet ports
- (PoE (Power over Ethernet 802.3af) capability on one of the ports)
- RJ-45 console port
- Standard USB port

Power Specificatons

- IEEE 802.3af PoE Power: Full 3x3:3 802.11ac MU-MIMO performance and BLE (No USB port, no 2nd Ethernet port)
- IEEE 802.3at PoE Power: full set of features (all of the above plus USB port and 2nd Ethernet port)

Physical

- WxDxH: 7.25" x 7.25" x 1.87"(18.4 cm x 18.4 cm x 1.87cm) [plus .25", mounting hardware – 2.12" (5.4 cm) H total]
- Weight: 1.8 lb (0.81 kg)

Antennas

- 3x RP-SMA connector 2.4 GHz
- 3x RP-SMA connector 5 GHz
- 1x BLE internal antenna

Included Mounting Options

- Wall Mount
- Ceiling Tile flush 15/16" and Wall Mount locking accessory included with AP
- TPM chip for added security

Additional Mounting Options

- Desktop
- Ceiling Tile Recessed 15/16", 3/8", 9/16" sold as an accessory
- Ceiling Tile flush 3/8", 9/16" sold as an accessory
- Suspend Mount sold as an accessory
- Plenum Mount sold as an accessory
- Silhouette and Interlude sold as an accessory

Environmental

- Operating: 0 to 50 °C, Storage: -40 to 70 °C
- Humidity: 95%

Environmental Compliance

- UL2043

Power Options

- Power Draw: Typical 11.22 W; Max 15.74 W

Certifications

- WPA/WPA2
- Voice-Enterprise

Power and Sensitivity Tables

Power – 2.4GHz

Channel	Data Rate	Power (dBm)
11b	1,2,5.5,11 Mbps	20
11g	54 Mbps	17
	48 Mbps	18
	36 Mbps	19
	6 Mbps	19
11n HT20	MCS7,15,23	17
	MCS6,14,22	18
	MCS5,13,21	19
	MCS0,1,2,3,4	19
	MCS8,9,10,11,12	19
	MCS16,17,18,19,20	19

Power – 5GHz

Channel	Data Rate	Power (dBm)
11a	54 Mbps	17
	48 Mbps	18
	36 Mbps	19
	6 Mbps	19
11n HT20	MCS7,15, 23	17
	MCS6,14, 22	18
	MCS5,13, 21	19
	MCS0, 2, 3, 4, 8, 9, 10, 11	19
	MCS12, 16, 17, 18, 19, 20	19
11n HT40	MCS7,15, 23	17
	MCS6,14, 22	18
	MCS5,13, 21	19
	MCS0, 1, 2, 3, 4, 8	19
	MCS9, 10, 11, 12, 16	19
	MCS17, 18, 19, 20	19
11ac VHT	256QAM @ 3/4 Code Rate	14
	256QAM @ 5/6 Code Rate	13

Receive Sensitivity – 2.4GHz

Channel	Data Rate	Power (dBm)
11b	1 Mbps	-100
	11 Mbps	-93
11g	6 Mbps	-95
	36 Mbps	-86
	48 Mbps	-82
	54 Mbps	-80
11n HT20	MCS0, 8, 16	-95
	MCS5,13,21	-81
	MCS6, 14, 22	-79
	MCS7, 15, 23	-77

Receive Sensitivity – 5GHz

Channel	Data Rate	Power (dBm)
11a	6 Mbps	-95
	36 Mbps	-86
	48 Mbps	-81
	54 Mbps	-80
11n HT20	MCS0, 8, 16	-91
	MCS5,13,21	-78
	MCS6, 14, 22	-76
	MCS7, 15, 23	-74
11n HT40	MCS0, 8, 16	-88
	MCS5,13,21	-75
	MCS6, 14, 22	-73
	MCS7, 15, 23	-71
11ac HT20	Code Rate 3/4	-65
	Code Rate 5/6	-63
11ac HT40	Code Rate 3/4	-62
	Code Rate 5/6	-60
11ac HT80	Code Rate 3/4	-59
	Code Rate 5/6	-57

Radiation Patterns – Azimuth and Elevation

Azimuth – 2.4 GHz
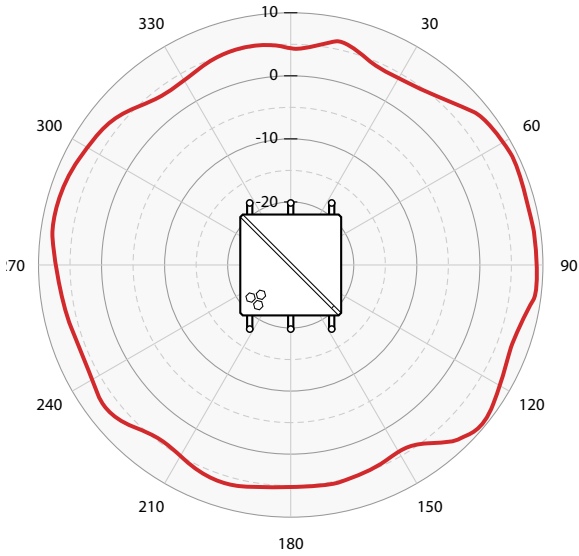
Elevation – 2.4 GHz
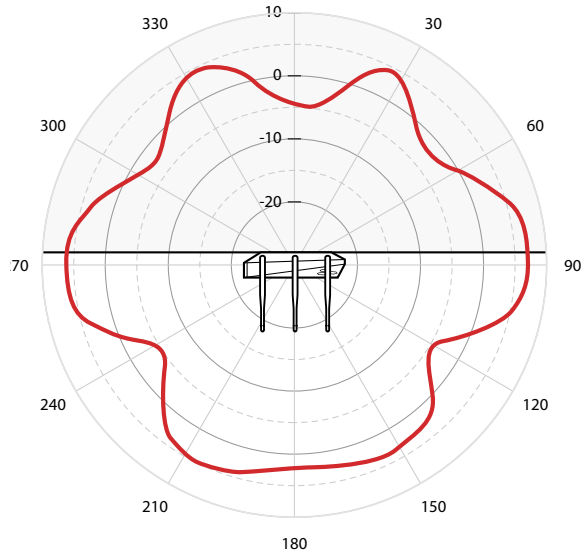
Azimuth – 5 GHz
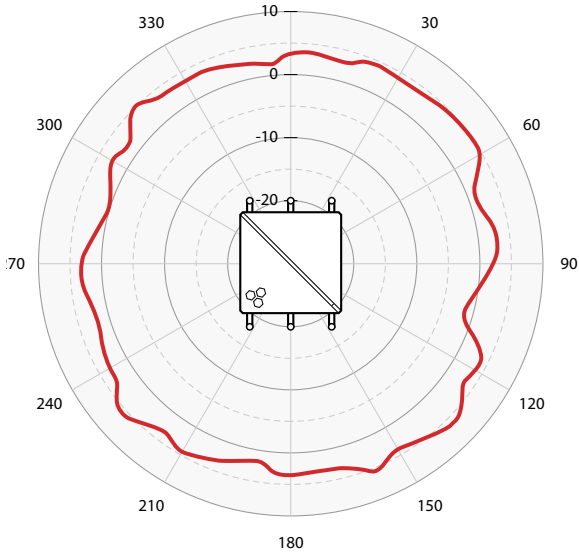
Elevation – 5 GHz
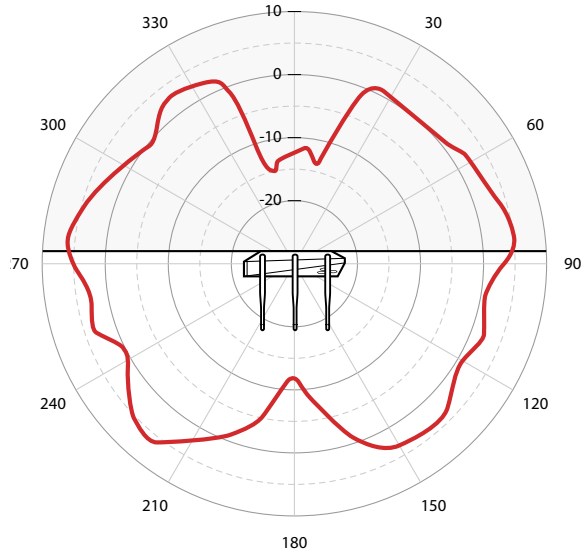
Ordering Information

SKU	Description
AH-AP-245X-AC-XX	AP245X Indoor plenum rated AP, 2 radio 3x3:3 802.11a/b/g/n/ac, MU-MIMO, external antennas, 2 10/100/1000 Ethernet ports, without power supply. Antenna sold separately. Includes HiveManager Connect & HiveCare Community. (Regulatory Domains available: FCC, CE, W (World), CAN (Canada))
AH-ACC-INJ-30W-UK	30W PoE power injector with UK power cord for AP122,AP122X,AP130, AP200 series,AP550,AP630,AP650 and AP650X
AH-ACC-INJ-30W-US	30W PoE power injector with US power cord for AP122,AP122X,AP130, AP200 series,AP550,AP630,AP650 and AP650X
AH-ACC-PLENUM-KIT	AP130,AP230, AP245X, AP250, AP550 Plenum Bracket Kit
AH-ACC-RBR-FT	Rubber feet for AP130/AP200 series/AP550
AH-ACC-SEC-BIT-3PK	AP122,AP122X,AP130,AP230, AP245X, AP250, AP550 security screw bit (3pk)
AH-ACC-SEC-KIT	Security bracket, screws and security screw bit for AP122,AP122X, AP130, AP230, AP245x, AP250
AH-ACC-120-ANT-KIT	120 degree dual-band 5dBi sector antenna for AP245X with 3xRP-SMA connectors. Kit includes 3x75cm coaxial cables and mounting assembly.
AH-ACC-60-ANT-KIT	60 degree dual-band (5.5 dBi/6dBi for 2.4 GHz/5 GHz) sector antenna for AP245X with 3xRP-SMA connectors. Kit includes 3x75cm coaxial cables and mounting assembly.
AH-ACC-ANT-DB-5	Dual Band RP-SMA female indoor 5dBi articulated antenna for AP245X.
AH-ACC-BKT-916-KIT	AP122, AP122X, AP130, AP200 series/AP500 series 9/16" ceiling mount brackets for recessed and flush ceiling tiles
AH-ACC-BKT-AC-KIT	AP122, AP122X, AP130, AP200 series/AP500 series 15/16" ceiling mount brackets for recessed and non-recessed ceiling tiles
AH-ACC-BKT-AC-WALL	AP122, AP122X, AP130/AP230/AP245X/AP250,AP550 wall mounting and 15/16" ceiling mount bracket
AH-ACC-BKT-SILINT-KT	AP122, AP122X, AP130,AP230/AP245X/AP250 ,AP550 Mounting bracket kit for Silhouette and Interlude ceiling types
AH-ACC-BKT-SU-KIT	AP122,AP122X,AP130,AP230,AP245X, AP250, AP550 Suspend Bracket Kit
AH-ACC-BKT-WP-KIT	Wall plate bracket kit for AP122, AP122X, AP130, AP230, AP245X, AP250,AP550 Includes the bracket and security screws
AH-ACC-DB-5-ANT-KIT	AP245X articulated indoor antenna kit (6 x Dual Band 5dBi antennas)
AH-ACC-INJ-30W-AU	30W PoE power injector with Australia/New Zealand power cord for AP122,AP122X,AP130, AP200 series,AP550,AP630,AP650 and AP650X
AH-ACC-INJ-30W-EU	30W PoE power injector with EU power cord for AP122,AP122X,AP130, AP200 series,AP550,AP630,AP650 and AP650X
AH-ACC-INJ-30W-EU	30W PoE power injector with EU power cord for AP122,AP122X,AP130, AP200 series,AP550,AP630,AP650 and AP650X

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