

Highlights

Radio Technology

- 5 GHz 4x4:4
- 2.4 GHz 4x4:4

Radio Modes – SDR

- 5 GHz/2.4 GHz – Fixed
- 5 GHz/5 GHz – Dual 5 GHz
- 5 GHz/Sensor both bands

High Density Environments

- Delivers exceptional end-user experience even in the densest user environments

WPA3 Support

- Includes the latest WPA3 Wi-Fi security standard delivering robust protections for users and IoT devices

Fully Functional over 802.3af

- Reduced functionality with 802.3af

Smart Management Choices

- ExtremeCloud™ IQ™ delivers powerful, simple, and secure public or private cloud management capabilities-



ExtremeWireless™ AP510C/CX

Wi-Fi 6 certified (802.11ax) Indoor Access Point with integrated or external antenna options

Extreme's AP510C is a high performance, enterprise class Wi-Fi 6 access point that is ideal for many verticals, including; retail, education, hospitality and healthcare. These enterprises need to support a high density of users and IoT devices, while delivering an exceptional user experience.

The AP510C provides high-efficiency 802.11ax aggregate data rates up to 4.8 Gbps currently in both the 5 GHz band and 2.4 GHz band. It also supports a software defined radio (SDR), providing the flexibility to simultaneously operate both radios in the 5 GHz band.

Despite the exponential growth of users, BYOD devices, IoT, high-bandwidth applications and security threats straining the infrastructure, the AP510 combines performance, security services and insightful ML/AI management capabilities to deliver an enterprise class solution at a value price.



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 users 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.



Security

The AP510C delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. Additionally, supporting a stateful L2-L7 DPI firewall for context-based access security, Private Pre-Shared Key (PPSK) and much more.



Management Analytics

In conjunction with ExtremeCloud IQ, the AP510C provides a very rich set of data displayed via real-time analytics as well as a historical timeline.. The Network 360 and Client 360 views powered by machine learning provide context-specific granularity with perspective views for locations, network, APs, individual client devices as well as policy roles.



Wi-Fi 6 Technology

The AP510C delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. Additionally, supporting a stateful L2-L7 DPI firewall for context-based access security, Private Pre-Shared Key (PPSK) and much more.



RF Monitoring

Network administrators will appreciate a powerful choice of RF management for their Wi-Fi networks, with Adaptive RF management with AI/ ML like functionality. Adaptive RF algorithms provide intelligent selection of the best channels and transmit power for unimpaired dual 5 GHz operation. Load balancing, band steering and many other attributes of the RF can all be automated.



Programmable Radios

Extreme launched the industry's first software defined 802.11ax access point supporting not only a dual 5 GHz capability but also three software programmable modes to optimally manage radios to provide the highest level of client performance. The A510C intelligent monitoring of the software configurable radios enables network administrators to configure network RF topology based on user environment and configure the access points in different modes as required.



Integrated BLE and Zigbee

To support both IoT and Guest Engagement services the AP510C integrates Bluetooth to connect with IoT devices with Thread wireless to engage loyalty customers with Apple iBeacon. 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

Wireless Frequency Range

- USA: 2.400 - 2.483 GHz, 5.15 - 5.35 GHz, 5.47 - 5.725 GHz, 5.725 - 5.85 GHz
- Europe: 2.400 - 2.483 GHz, 5.15 - 5.35 GHz, 5.47 - 5.725 GHz
- Japan: 2.400 - 2.497 GHz, 5.15 - 5.35 GHz, 5.47 - 5.725 GHz
- China: 2.400 - 2.483 GHz, 5.725 - 5.85 GHz

Modes

- IEEE802.11a 5 GHz OFDM
- IEEE802.11b 2.4 GHz DSSS/CCK
- IEEE802.11g 2.4 GHz OFDM
- IEEE802.11n 2.4 GHz/5 GHz OFDM
- IEEE802.11ac OFDM
- IEEE802.11ax OFDMA

Channel Support

802.11 b/g/n/ax

- US/Canada: 11 (1 - 11)
- Europe: 13 (1 - 13)
- Japan: 11b: 14 (1-13 or 14th), 11g: 13 (1 - 13)
- China: 13 (1 - 13)

802.11 a/n/ac/ax

- US/Canada: 24 non-overlapping channels (36, 40, 44, 48, 52, 56, 60, 64;100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140; 149, 153, 157, 161, 165)
- Europe: 19 non-overlapping channel (36, 40, 44, 48, 52, 56, 60, 64;100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140)
- Japan: 19 non-overlapping channels (36, 40, 44, 48, 52, 56, 60, 64;100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140)
- China: 5 non-overlapping channels (149, 153, 157, 161, 165)

Modulation Technology

802.11 Legacy a/b/g

- DSSS (DBPSK, DQPSK, CCK) OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- DSSS (Direct Sequence Spread Spectrum) with DBPSK (Differential Binary Phase Shift Keying 1 Mbps), DQPSK (Differential Quaternary Phase Shift Keying 2 Mbps), and CCK (Complementary Code Keying 5.5 and 11 Mbps), and OFDM (Orthogonal Frequency Division Multiplexing with BPSK for 6, 9 Mbps. QPSK for 12, 18 Mbps, 16QAM for 24, 36 Mbps, 64QAM for 48, 54 Mbps)

802.11n

- OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

802.11ac

- OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM)

802.11ax

- OFDMA (1024-QAM)

Interfaces

- 1x 10/100/1000 Gigabit Ethernet
- 1x 2.5 mGig
- RJ-45 Console Port

Radios

- Dual Radio AP, 2.4 GHz/5 GHz and 5 GHz radios supporting dual band or dual 5 GHz operation
- 2.4 GHz/ 5 GHz, 802.11a/b/g/n/ac/ax, 4x4
- 5 GHz, 802.11 a/n/ac/ax, 4x4
- 160MHz, 1024-QAM supported
- 1x Bluetooth radio

Power Consumption

- DC Power: Typical 18.78 W, Max 20.65 W
- 802.3at PoE+ Power: Typical 15.72 W, Max 19.92 W

Environmental

- Operating Temperature: -20 to 55 °C
- Storage Temperature: -40 to 70 °C
- Humidity: 10 to 95%

Physical

- Dimensions: 225mm x 225mm x 37.5mm
- Weight: 2.8lb (1.27kg)
- Wall or ceiling mountable
- MTBF: 347,530 Hours @ 25 °C (estimate)
- RoHS: -2 Compliant
- TPM chip for added security

Antenna

- 4x 2.4 GHz/5 GHz, RPSMA Connectors
- 4x 5 GHz, RPSMA Connectors
- 1x internal Bluetooth antenna

Peak Antenna Gain:

- 2.4 GHz omnidirectional, gain 4.6 dBi
- 5 GHz omnidirectional, gain 5.7 dBi
- Bluetooth omnidirectional, gain 5.2 dBi

Power and Sensitivity Tables

Power – 2.4 GHz

Channel	Data Rate	Power (dBm)
11b	1, 2, 5.5, 11 Mbps	18
11g	54 Mbps	15
	48 Mbps	16
	36 Mbps	17
	6 Mbps	18
11n HT20	MCS0, 1, 2	18
	MCS3	17
	MCS4, 5	16
	MCS6, 7	15
	MCS8, 9	14
	MCS10, 11	12
11n HT40	MCS0, 1, 2	18
	MCS3	17
	MCS4, 5	16
	MCS6, 7	15
	MCS8, 9	14
	MCS10, 11	12

Receive Sensitivity – 2.4 GHz

Channel	Data Rate	Sensitivity
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
11n HT40	MCS0, 8, 16	-92
	MCS5, 13, 21	-78
	MCS6, 14, 22	-76
	MCS7, 15, 23	-74

Power – 5 GHz

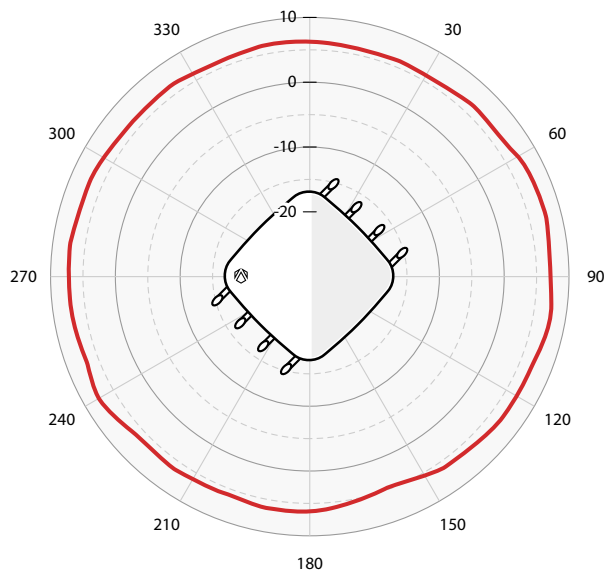
Channel	Data Rate	Power (dBm)
11a	6 Mbps	19
	36 Mbps	18
	48 Mbps	16
	54 Mbps	15
11n HT20	MCS0, 1, 2, 3, 4, 8, 9, 10, 11	19
	MCS5, 13, 21	18
	MCS6, 14, 22	16
	MCS7, 15, 23	15
	MCS12, 16, 17, 18, 19, 20	19
11n HT40	MCS0, 1, 2, 3, 4, 8	19
	MCS5, 13, 21	18
	MCS6, 14, 22	16
	MCS7, 15, 23	14
	MCS9, 10, 11,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

Receive Sensitivity – 5 GHz

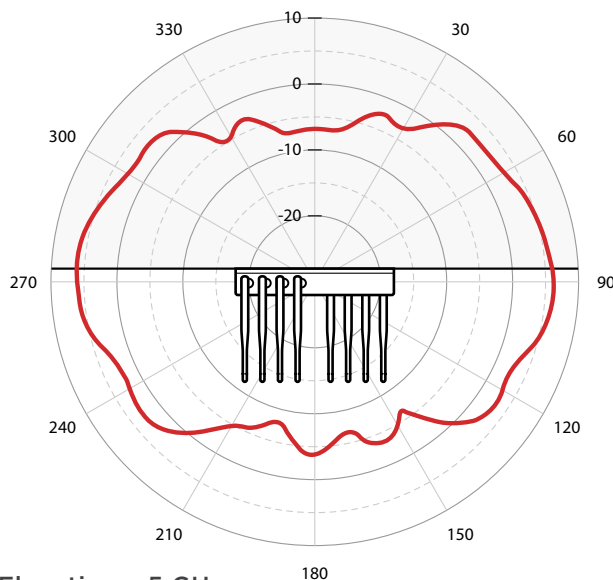
Channel	Data Rate	Sensitivity
11a	6 Mbps	-95
	36 Mbps	-86
	48 Mbps	-81
	54 Mbps	-80
11n HT20	MCS0, 8, 16	-91
	MCS5, 13, 21	-78
	MCS6, 14, 22	-76
	MCS7, 15, 23	-74
11n HT40	MCS0, 8, 16	-88
	MCS5, 13, 21	-75
	MCS6, 14, 22	-73
	MCS7, 15, 23	-71
11ac HT20	3/4	-65
	5/6	-63
11ac HT40	3/4	-62
	5/6	-60
11ac HT80	3/4	-59
	5/6	-57
11ac HT160	3/4	-56
	5/6	-54

Radiation Patterns - Azimuth and Elevation

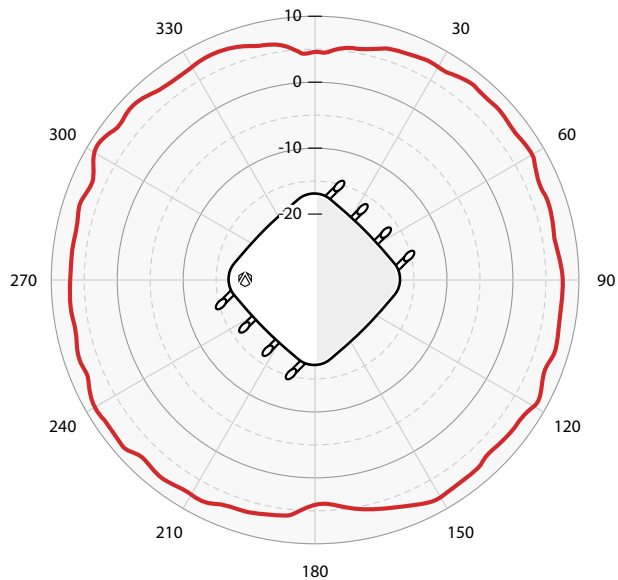
Azimuth - 2.4 GHz



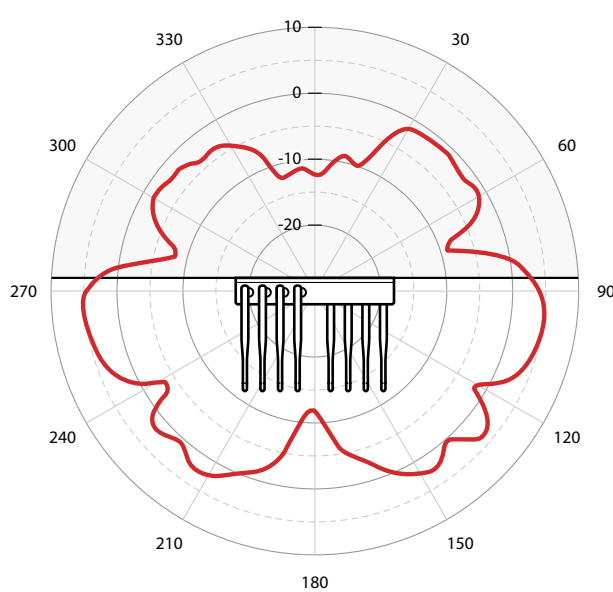
Elevation - 2.4 GHz



Azimuth - 5 GHz



Elevation - 5 GHz



Ordering Information

SKU	Description
AH-AP-650X-AX-XX	AP510C/CX Indoor plenum rated AP, dual 5 GHz 4x4:4 802.11ac/ax, 1x NBASE-T™ Ethernet and 1x GE, supports external antennas and extended temp range. Antennas sold separately. Includes ExtremeCloud IQ Connect and HiveCare Community. (Regulatory Domains available: FCC, CE, W (World), CAN (Canada))
AH-ACC-INJ-30W-US	30W POE power injector with US power cord for AP122,AP122X,AP130, AP200 series,AP550,AP630,AP650 and AP510C/CX
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 AP510C/CX
AH-ACC-INJ-30W-EU	30W POE power injector with EU power cord for AP122,AP122X,AP130, AP200 series,AP550,AP630,AP650 and AP510C/CX
AH-ACC-ANT-AX-KT	AP510C/CX articulated indoor antenna kit (8 x Dual Band 5dBi antennas)
AH-ACC-BKT-AX-IL	Armstrong mounting bracket for Interlude ceiling for the AP650, AP510C/CX, or AP630
AH-ACC-BKT-AX-TB	Replacement Prelude Bracket, T-Bar, Supported on AP630, AP650 and AP510C/CX. Same as in-box accessory.
AH-ACC-BKT-AX-SL	Mounting bracket for Silhouette ceiling, 1/4" or 1/8". Supported on AP630, AP650 and AP510C/CX.
AH-ACC-BKT-AX-WL	Bracket, Wall Mount, Supported on AP630, AP650 and AP510C/CX.
AH-ACC-PW-30W-US	30W Power Supply for AP650/AP510C/CX with US Power Plug
AH-ACC-PW-30W-UK	30W Power Supply for AP650/AP510C/CX with UK Power Plug
AH-ACC-PW-30W-EU	30W Power Supply for AP650/AP510C/CX with EU Power Plug
AH-ACC-PW-30W-AU	30W Power Supply for AP650/AP510C/CX with Australia Power Plug
AH-ACC-PW-30W-JP	30W Power Supply for AP650/AP510C/CX with Japan Power Plug
AH-ACC-PW-30W-KR	30W Power Supply for AP650/AP510C/CX with Korea Power Plug



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