Highlights

Radio Technology

- 5 GHz 2x2:2
- 2.4 GHz 2x2:2

Radio Modes - SSR

- 2.4 GHz / 5 GHz
- 5 GHz / 5 GHz - Dual 5 GHz
- Sensor (2.4 GHz/5 GHz) / 5 GHz

High Density Environments

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

Designed for Harsh Environments

- IP67 Outdoor Rated

WPA3 Support

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

Fully Functional over 802.3af

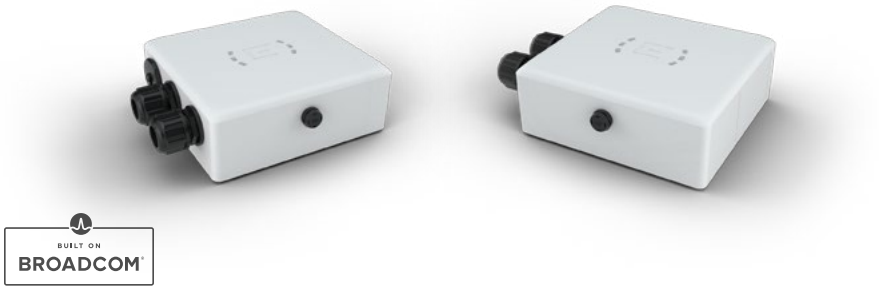
- USB port usage requires 802.3at

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Smart Management Choices

- ExtremeCloud™ IQ delivers powerful, simple and secure public or private cloud management capabilities [Future]
- ExtremeCloud Appliance or VX or NX controller is ideal for on-premises requirements



ExtremeWireless™ AP360i/e

Wi-Fi 6 (802.11ax) Outdoor Access Point With Integrated Or External Antenna Options

The AP360 is designed for harsh environments; from hurricane force winds to sub-zero temperature, IP67 rated and designed to extend Extreme's Wi-Fi 6 outdoors. Integrated GPS and BLE allows for state of the art location applications for asset tracking.

The AP360 is based on new system-on-a-chip (SoC) with two built in dual band 2x2 radios providing the best value with Wi-Fi 6 high-efficiency. Priced for the mass market, this enterprise-grade access point is ideal for budget-conscious enterprises who do not want to sacrifice performance. While other vendors may reduce features and functionality, the AP360 retains all the capabilities of higher-end APs, including software-selectable-radios (SSR). 802.11ax data rates are available concurrently in both the 2.4 GHz and 5 GHz band. The AP360 also provides the flexibility to provide the same data rates simultaneously on two 5 GHz channels using dual-5 GHz SSR technology.

Despite the exponential growth of users, BYOD devices, IoT, high-Bandwidth applications and security threats straining the infrastructure, the AP360 combines performance, security services and insightful ML/AI management capabilities to deliver an enterprise class solution at a value price.

Extreme Elements™

ExtremeWireless™ AP360

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 www.extremenetworks.com/extreme-elements/.

Security

The AP360 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.

Wi-Fi 6 Technology

Prior generations of 802.11n, 802.11ac wave 1 and 2, can be considered generational improvements with an emphasis on faster speed. 802.11ax technology instead enhances Wi-Fi efficiency as well as speed, taking Wi-Fi networks to an entirely new level. To learn more about 802.11ax, go to: https://www.extremenetworks.com/are-you-ready-for-802-11ax/

Programable 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 AP360 intelligent monitoring of the software configurable radios enables network managers configure network RF topology based on user environment and configure the access points in different modes as required.

Management Analytics

In conjunction with management system, cloud or on-premises, the AP360 provides a very rich set of data displayed via context driven widgets, representing historical data or a combination of historical and current data. This provides context-specific granularity with perspective views for locations, network, APs, individual client devices as well as policy roles. In each context, administrators can adjust dashboards from widget library.

RF Monitoring

Network managers will appreciate a powerful choice of RF management for their Wi-Fi networks, with SmartRF, a robust RF management system with AI/ML like functionality. Built on 10 years of experience across thousands of large-scale networks and millions of access points, SmartRF algorithms manage channels, radios, load balancing, band steering and many other attributes of the RF.

Integrated BLE

To support both IoT and Guest Engagement services the AP360 integrates Bluetooth to connect with IoT devices with Thread wireless or 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
- SSID per Radio/Total: 8/16
- Users per Radio/total: 512/1024

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
- 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 - MCS15 (6.5MBps - 300Mbps)
- 2x2 Multiple-In, Multiple-Out (MIMO) Radio
- HT20 High-Throughput (HT) Support (for both 2.4 GHz and 5 GHz)
- HT40 High-Throughput (HT) Support for 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 – 867Mbps), NSS = 1-2.
- 2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio
- VHT20/VHT40/VHT80 support
- TxBF (Transmit Beamforming)

802.11ax
- 2.4–2.5 GHz & 5.150–5.850 GHz Operating Frequency
- 802.11ax Modulation (1024-QAM)
- Dual-band OFDMA
- Rates (Mbps):
- 5G: HE0-HE11 (8 Mbps – 1200 Mbps).
- 2.4G: HE0-HE11 (8 Mbps – 574 Mbps).
- 2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio
- HE20/HE40/HE80 support for 5 GHz
- HE20/HE40 support for 2.4 GHz
- DL SU-MIMO and MU-MIMO
- TxBF (Transmit Beamforming)

Interfaces
- (2) Autosensing 10/100/1000 Ethernet

Power Specifications
- IEEE 802.3af PoE Power

Radios
- BLE Radio Bluetooth® Low Energy (BLE) and IEEE® 802.15.4 compliant
- Internal GPS - accuracy is 2.5m- 3m in open sky

AP360i Peak Gain Chart

Software Mode	Radio 1	Radio 2	Radio 3
Dual Band	2.4 Ghz 4.2 dBi	5 Ghz 4.74dBi	4.5 dBi
Sensor on R1	2.4 Ghz 4.2dBi 5 Ghz 4.5dBi	5 Ghz 4.74dBi	4.5 dBi
Dual 5G	5 Ghz 4.5dBi	5 Ghz 4.74dBi	4.5 dBi

Power Options
- Power Draw: Typical: 9.5W
Max: 12.1W
- 802.3af Power over Ethernet (PoE) capable Gigabit Ethernet port (RJ-45 power input pins: Wires 4,5,7,8 or 1,2,3,6)
- 802.3af Power over Ethernet injector

Physical
- 7.4" x 5.7" x 1.9" (190mm x 145mm x 50mm)
- AP360i/e: estimate 2.2 lbs (1.0kg)

Antennas
AP360i - Internal Antennas
- (2) Integrated dual band, 2.4-2.5 GHz and 5.1-5.8 GHz omnidirectional antennas
- (2) Integrated single band, 5.1-5.8 GHz omnidirectional antennas
- (1) Integrated single band, 2.4-2.5 GHz omnidirectional antennas for BLE

AP360e - External Antennas
- (5) Ntype connectors

Mounting
- Pole Mount with 15 degree tilt (sold as an accessory)
- 12" Extension arm (sold as an accessory)
- 10" Extension w/2-axis 80 degree tilt (sold as an accessory)

Environmental
- Operating: - 40°C to 60°C, Storage: -40 to 70 °C
- Humidity: 10% to 95% (non-condensing)

Environmental Discharge
- +/-4 kV (contact discharge)/ +/-8 kV (Air Discharge)

Regulatory Compliance
Product Safety Certifications
- IEC 62368/60950-1, EN 62368/60950-1, USA 62368/60950-1, AS/NZS 62368/60950.1
- RoHS Directive 2011/65/EU

Radio Approvals
- FCC CFR 47 Part 15, Class B
- ICES-003, Class B
- FCC Subpart C 15.247
- FCC Subpart E 15.407
- RSS247
- AS/NZS4268 + CISPR32
- IEC/EN 60601-1-2
- EN 62311
- EN 50385
- EN 301 489-1
- EN 301 489-17
- EN 55032, (Class B)
- EN 55011, (Group 1, Class B)
- EN 55024
- EN 61000-3-2
- EN 61000-3-3
- EN 300 328
- EN 301 893
- EN 50581
- IR2030/8/3

Support
- 1 Year Warranty

AP360i

Power and Sensitivity – 2.4GHz

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11b	1-11 Mbps	23	-97, -90
11g	6 Mbps	23	-95
	54 Mbps	22	-76
11n HT20	MCS0, 7	23, 20	-94, -73
11n HT40	MCS0, 7	23, 20	-91, -70
11ax HE20	HE0, 11	23, 18	-93, -64
11ax HE40	HE0, 11	23, 18	-90, -61

Power and Sensitivity – 5GHz (Full Band)

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	21	-90
	54 Mbps	19	-74
11n HT20	MCS0, 7	21, 18	-90, -70
11n HT40	MCS0, 7	20, 17	-87, -68
11ac VHT20	MCS0, 8	21, 17	-89, -66
11ac VHT40	MCS0, 9	20, 16	-87, -62
11ac VHT80	MCS0, 9	20, 16	-84, -59
11ax HE20	HE0, 11	21, 15	-89, -61
11ax HE40	HE0, 11	20, 15	-87, -58
11ax HE80	HE0, 11	20, 15	-85, -56

Power and Sensitivity – 5GHz (High Band)

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	20	-89
	54 Mbps	17	-73
11n HT20	MCS0, 7	20, 16	-89, -69
11n HT40	MCS0, 7	19, 16	-86, -67
11ac VHT20	MCS0, 8	20, 15	-89, -66
11ac VHT40	MCS0, 9	19, 15	-86, -61
11ac VHT80	MCS0, 9	19, 15	-84, -58
11ax HE20	HE0, 11	20, 14	-89, -61
11ax HE40	HE0, 11	19, 14	-86, -58
11ax HE80	HE0, 11	19, 14	-84, -56

Power and Sensitivity – 5GHz (Low Band)

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
0.0525 in	6 Mbps	19	-89
	54 Mbps	17	-73
11n HT20	MCS0, 7	19, 16	-89, -69
11n HT40	MCS0, 7	19, 15	-86, -67
11ac VHT20	MCS0, 8	19, 15	-89, -66
11ac VHT40	MCS0, 9	19, 14	-86, -61
11ac VHT80	MCS0, 9	19, 14	-84, -58
11ax HE20	HE0, 11	19, 14	-89, -61
11ax HE40	HE0, 11	19, 14	-86, -58
11ax HE80	HE0, 11	19, 14	-84, -56

AP360e

Power and Sensitivity – 2.4GHz

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11b	1-11 Mbps	22	-96, -90
11g	6 Mbps	22	-95
	54 Mbps	21	-76
11n HT20	MCS0, 7	22, 19	-94, -73
11n HT40	MCS0, 7	22, 19	-91, -70
11ax HE20	HE0, 11	22, 17	-92, -64
11ax HE40	HE0, 11	22, 17	-89, -61

Power and Sensitivity – 5GHz (Full Band)

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	19	-89
	54 Mbps	17	-73
11n HT20	MCS0, 7	19, 16	-89, -69
11n HT40	MCS0, 7	18, 15	-87, -67
11ac VHT20	MCS0, 8	19, 15	-89, -66
11ac VHT40	MCS0, 9	18, 14	-86, -61
11ac VHT80	MCS0, 9	18, 14	-83, -58
11ax HE20	HE0, 11	19, 13	-89, -60
11ax HE40	HE0, 11	18, 13	-86, -57
11ax HE80	HE0, 11	18, 13	-84, -55

Power and Sensitivity – 5GHz (High Band)

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-89
	54 Mbps	15	-73
11n HT20	MCS0, 7	18, 14	-89, -69
11n HT40	MCS0, 7	17, 14	-86, -67
11ac VHT20	MCS0, 8	18, 13	-88, -65
11ac VHT40	MCS0, 9	17, 13	-86, -61
11ac VHT80	MCS0, 9	17, 13	-83, -58
11ax HE20	HE0, 11	18, 12	-88, -60
11ax HE40	HE0, 11	17, 12	-86, -57
11ax HE80	HE0, 11	17, 12	-84, -55

Power and Sensitivity – 5GHz (Low Band)

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
0.0525 in	6 Mbps	17	-89
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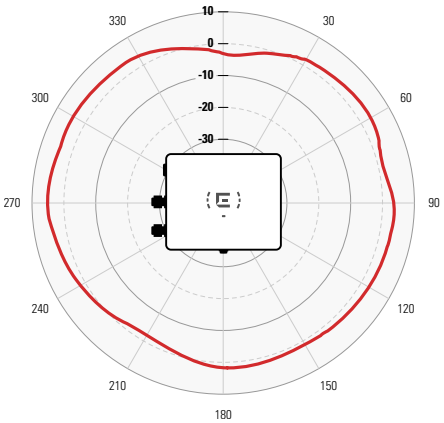
11ac VHT40	MCS0, 9	17, 12	-86, -61
11ac VHT80	MCS0, 9	17, 12	-83, -58
11ax HE20	HE0, 11	17, 12	-88, -60
11ax HE40	HE0, 11	17, 12	-86, -57
11ax HE80	HE0, 11	17, 12	-84, -55

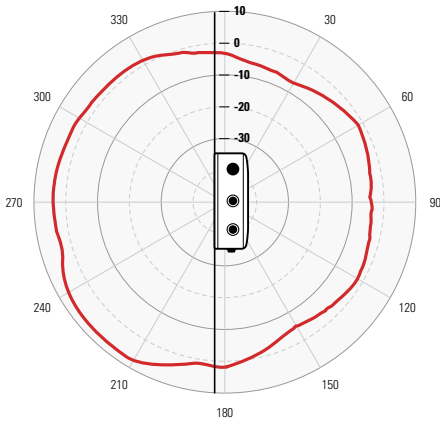
Maximum EIRP may vary based upon deployed country

Radiation Patterns – Azimuth and Elevation

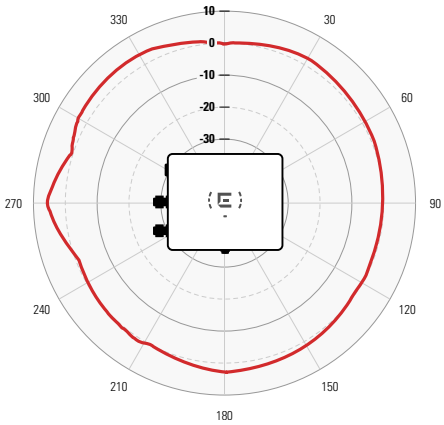
Radio 0 Azimuth – 2.4 GHz



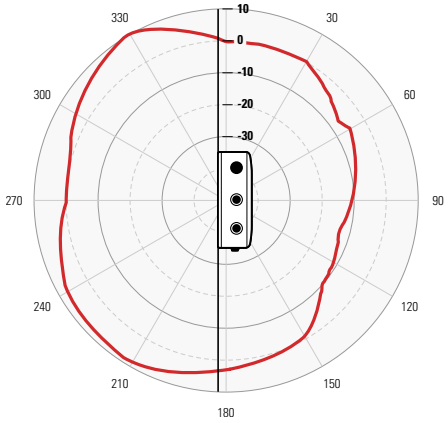
Radio 0 Elevation – 2.4 GHz



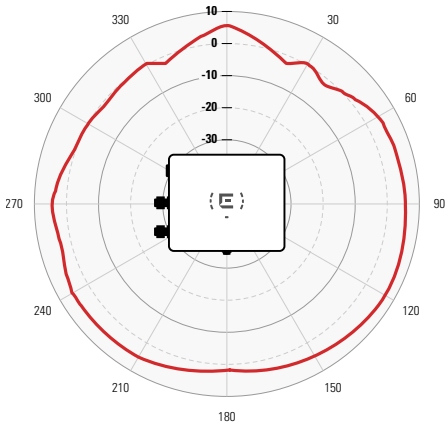
Radio 0 Azimuth – 5 GHz



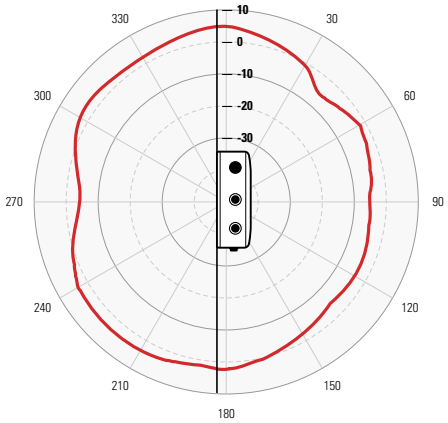
Radio 0 Elevation – 5 GHz



Radio 1 Azimuth – 5 GHz



Radio 1 Elevation – 5 GHz



Ordering Information

AP360i/e

Mkt Part #	Description
AP360i-FCC	Dual Radio 802.11ax - 2x2:2, Dual 5G Outdoor Internal Antenna Access Point. Domain: US, and Puerto Rico
AP360i-WR	Dual Radio 802.11ax - 2x2:2, Dual 5G Outdoor Internal Antenna Access Point. Domain: EMEA, and Rest of World
AP360i-CAN	Dual Radio 802.11ax - 2x2:2, Dual 5G Outdoor Internal Antenna Access Point. Domain: Canada
AP360e-FCC	Dual Radio 802.11ax - 2x2:2, Dual 5G Outdoor External Antenna Access Point. Domain: US, and Puerto Rico
AP360e-CAN	Dual Radio 802.11ax - 2x2:2, Dual 5G Outdoor External Antenna Access Point. Domain: Canada
AP360e-WR	Dual Radio 802.11ax - 2x2:2, Dual 5G Outdoor External Antenna Access Point. Domain: EMEA, Rest of World

AP360i/e - Mounting Options

Mkt Part #	Description
KT-147407-02	OUTDOOR MOUNTING HARDWARE KIT FOR OUTDOOR ACCESS POINTS- STAINLESS STEEL FOR HARSH ENVIRONMENTS
KT-150173-01	OUTDOOR AP 12 IN EXT ARM FOR MNTG KIT
32216	WS-MBV-VMM Vehicle Bracket
30520	WS-MBO-POLE01 Outdoor Pole mounting bracket
MBO-ART02	MBO-ART02 Articulating Mtg Brkt

AP360i/e - Power Options

Mkt Part #	Description
PD-9001GO-ENT	OUTDOOR 802.3AT POE SINGLE PORT MIDSPAN

Antennas - AP360e

Mkt Part #	Description
ML-2452-HPAG4A6-01	Dipole, 4dBi/ 7.3dBi, dual band, outdoor, white with standard N plug connector (up to 5 per AP)
ML-2452-PNA5-01R	Panel, 120 deg sector, 4.5dBi/ 5dBi, dual band, outdoor, 4” lead with standard N plug connector (up to 5 per AP)
ML-2452-HPAG5A8-01	Dipole Omni, 5dBi/7.5dBi/8dBi, dual band, outdoor with standard N Plug connector (up to 5 per AP)
ML-2452-HPA6-01	Dipole Omni, 5.3/4.6/6.1dBi, dual band, outdoor with standard N Plug connector (up to 5 per AP)
ML-2452-PNA7-01R	Panel, 68/ 52 deg sector, 7.8dBi/ 10.7dBi, dual band, outdoor, 4" lead with standard N plug connector (up to 5 per AP)
30724	WS-AO-DQ04360N Outdoor, 2.4-2.5/5.15-5.875GHz, 4-feed 4dBi, Omni antenna with standard N-type plug connector

Extreme networks

http://www.extremenetworks.com/contact