

AP302W

Highlights

Radio Technology

- 802.11ax – 5 GHz 2x2:2
- 802.11ax – 2.4 GHz 2x2:2
- Integrated BLE and Zigbee

Radio Modes - SSR

- 5 GHz/2.4 GHz - fixed
- 5 GHz/5 GHz - dual 5 GHz
- 5 GHz with 2.4 GHz/5 GHz sensor

Wired Connectivity

- 4 Gigabit ethernet ports. One with power sourcing to power digital phones, IoT sensors, or cameras

Universal Hardware Platform

- On-Premises: WiNG OS-Centralized and Distributed*
- ExtremeCloud™ IQ

Management and Analytics with ExtremeCloud IQ

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

Multi-Dwelling Isolation

- Industry unique Private Client Groups provide micro-segmentation for multi-dwelling private networks without complex VLAN management

Secure Network Access

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

* WiNG operating system not available on select part numbers. Refer to Ordering Information table for more information.



Enterprise-grade, Indoor Wallplate, 802.11ax Wi-Fi 6 Dual-Radio 2x2:2 Access Point and Switch

Compact enterprise-class wallplate access point and switch with embedded IoT technology designed for wall or desktop mount. Ideal for use cases like hotel rooms, cruise ships, residential halls, or other multi-dwelling-unit deployments.

The AP302W delivers high-performance wireless access, with aggregate rates of up to 1.6 Gbps, integrated Bluetooth Low Energy (BLE) and Zigbee for IoT connectivity, and 4 Gigabit Ethernet ports that can power digital phones, IoT sensors, or cameras.

The AP302W provides context-based security and performance optimization especially designed for multi-dwelling environments, through an on-board stateful L2-L7 DPI firewall, advanced and customizable Quality of Service (QoS) for traffic optimization, encrypted client tunneling, and much more.

Multi-Access Modes

Versatile in-room device delivering connectivity across multiple wired and wireless mediums including Wi-Fi, Ethernet, BLE, and Zigbee. Securely connect all of your devices from computers to cameras and game consoles through one convenient access solution.

Advanced Security

This device 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.

Wi-Fi 6 (802.11ax) 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. [Learn more](#) about 802.11ax.

Microsegmentation

Private Client Groups capability helps to microsegment multi-dwelling environments without complex Wi-Fi or VLAN designs. User, device, and application profiling at the edge of the network identifies and fine tunes network access and performance based on role and privileges, ensuring secure, compliant, and high-performance wireless connectivity.

Universal Hardware

In today's world, requirements evolve rapidly and businesses must often choose from different operating systems to enhance capabilities, improve product usability, or extend useful lifespan. Universal platforms from Extreme simplify the entire process. The same platforms can run multiple Extreme operating systems, providing flexibility and choice while minimizing total cost of ownership.

Integrated BLE, Zigbee, and USB Port

The AP302W leverages Bluetooth Low Energy (BLE) to connect with wireless IoT devices and engage loyal customers with Apple iBeacons. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. Making it ideal for businesses to advertise their app download pages, captive portals, or site-specific information. A USB port adds additional functionality for IoT support.

Technical Specs

Radio Specifications

Max Users

SSID per Radio/Total: 16/32

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

2.4–2.5GHz 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 and 5.150–5.850 GHz Operating Frequency

802.11n Modulation

2.4GHz: Rates (Mbps): MCS0 - MCS15 (6.5Mbps - 300Mbps)

5GHz: Rates (Mbps): MCS0 - MCS15 (6.5Mbps - 450Mbps)

2x2:2 Multiple-In, Multiple-Out (MIMO) Radio for 5 GHz

2x2:2 Multiple-In, Multiple-Out (MIMO) Radio for 2.4 GHz

HT20 High-Throughput (HT) Support for both 2.4 GHz and 5 GHz

HT40 High-Throughput (HT) Support for 5 GHz

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

20MHz channel

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)

Downlink and uplink OFDMA

2.4GHz: Rates (Mbps): HE0-HE11 (8 Mbps – 574 Mbps).

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio

20/40/80 MHz channel support for 5 GHz

HE2020 MHz channel support for 2.4 GHz

DL SU-MIMO and MU-MIMO

TxBF (Transmit Beamforming)

Interfaces

(3) 10/100/1000 Mbps auto-negotiation Ethernet port, RJ45 PoE

(1) 10/100/1000 Mbps auto-negotiation Power Over Ethernet (PoE) port, RJ45

(2) RJ45 Pass through ports

USB2.0, Type A, 5V/500mA

802.3az Energy-Efficient Ethernet (EEE)

Power Consumption

802.3af Input: Typical 11.3W, Max 12.4W

802.3at Input: Typical 23.6W, Max 24.9W

12 VDC Input: Typical: 10.9W, Max: 11.6W (w/ 2.5W USB Load)

Power Options

IEEE 802.3af/802.3at (PoE/PoE+)

With IEEE 802.3af PoE power, AP302W will power up and the Wi-Fi and Ethernet ports will operate in its full capacity. In this scenario, PoE budget on the downlink port is not supported

With IEEE 802.3at PoE power, AP302W will power up and the Wi-Fi and Ethernet ports will operate in its full capacity. In this scenario, the available PoE budget on the downlink port is 12.5W

Power supply 12VDC, 2.0A (sold as an accessory)

With 12 VDC input, no support for PSE power

Physical

HxWxD: 6.9" x 4.2" x 1.1" (175mm x 105.9mm x 29.2mm)

Weight: .95 lb (.43 kg)

Wallplate Bracket Weight: 0.26 lb (0.1 kg)

Kensington Lock

Antennas

(3) Internal omni-directional 2.4G/5G dual-band antennas (BLE 5.1 Zigbee-IEEE 802.15.4)

(1) Internal omni-directional 5G antenna

Mounting

Wallplate (included with the AP)

Deskmount (sold as an accessory)

20mm wallplate housing extension (sold as an accessory)

Environmental

Operating: 0°C to +40°C

Storage: -40°C to +70°C

Humidity: 0% to 95% (non-condensing)

Power and Sensitivity Tables

Power and Receive Sensitivity – 2.4 GHz

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11b	1 - 11 Mbps	18, 18	-97, -89
11g	6 Mbps	18	-91
	54 Mbps	16	-75
11n HT20	MCS0,7	18, 16	-91,-74
11n HT40	MCS0,7	18, 16	-89,-72
11ax HE20	HE0,11	18, 14	-91, -62
11axHE40	HE0,11	18, 14	-88, -59

Power and Receive Sensitivity – 5 GHz (Low/high band)

Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11g	6 Mbps	16	-93
	54 Mbps	15	-74
11n HT20	MCS0,7	16, 14	-92,-74
11n HT40	MCS0,7	16, 14	-89,-71
11ac VHT20	MCS0,8	16, 13	-92,-69
11ac VHT40	MCS0,9	16, 13	-89,-67
11ac VHT80	MCS0,9	16, 13	-86, -62
11ax HE20	HE0,11	16, 12	-92,-62
11axHE40	HE0,11	16, 12	-89,-59
11ax HE80	HE0,11	16, 12	-86, -55

Power and Receive Sensitivity – 5 GHz (High band)

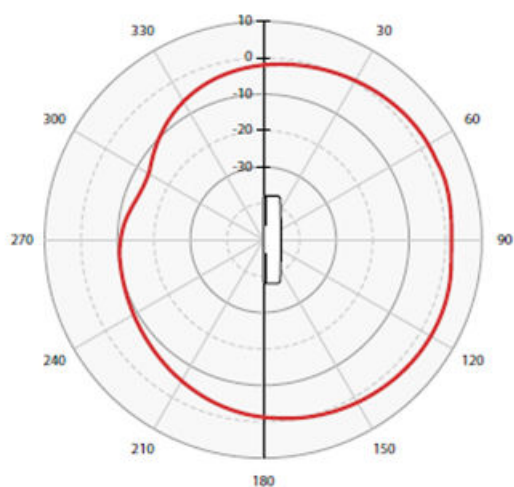
Channel	Data Rate	Power (dBm)	Sensitivity (dBm)
11g	6 Mbps	18	-93
	54 Mbps	17	-74
11n HT20	MCS0,7	18, 16	-93,-75
11n HT40	MCS0,7	18, 16	-90,-72
11ac VHT20	MCS0,8	18, 15	-93,-70
11ac VHT40	MCS0,9	18, 15	-90,-68
11ac VHT80	MCS0,9	18, 15	-87, -65
11ax HE20	HE0,11	18, 14	-92,-62
11axHE40	HE0,11	18, 14	-89,-59
11ax HE80	HE0,11	18, 14	-86, -56

AP302 Antenna dBi

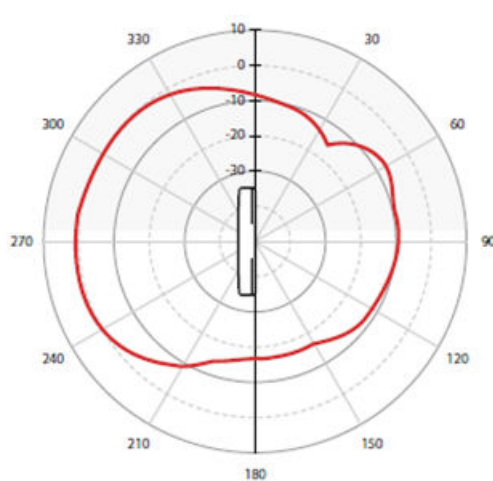
Software Mode		Radio 1	Radio 2	IoT Radio
Mode 1	Dual Band	2.4GHz 4.5dBi	5GHz 6.6dBi	4.8 dBi
Mode 2	Sensor	2.4GHz 4.5dBi 5GHz 6dBi	5GHz 6.6dBi	4.8 dBi
Mode 3	Dual 5G	5GHz 6dBi	5GHz 6dBi	4.8 dBi

Radiation Patterns – Azimuth and Elevation

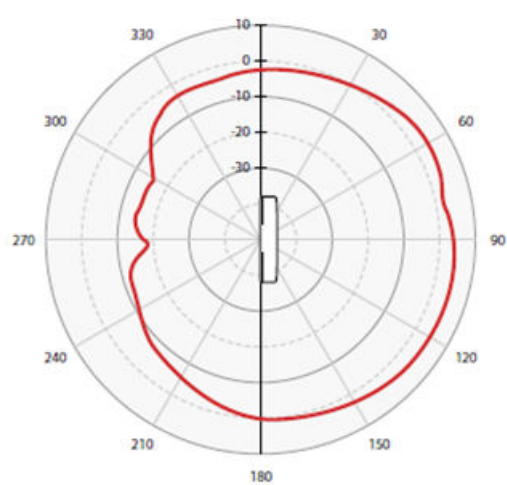
DB 2G Horizontal



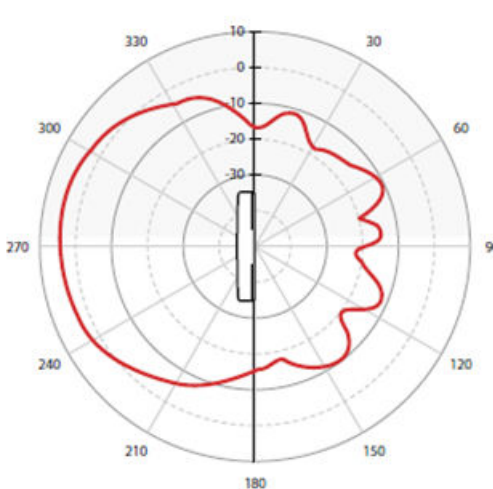
DB 2G Vertical



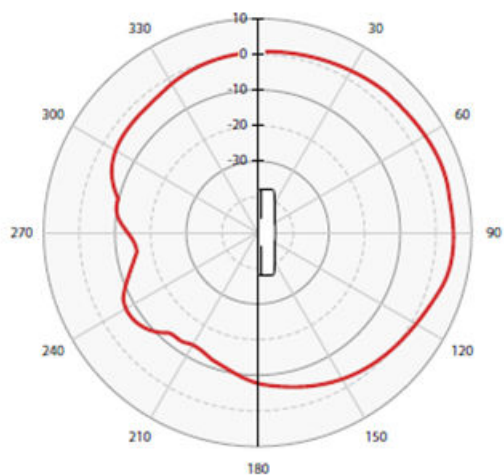
DB 5G 5G Horizontal



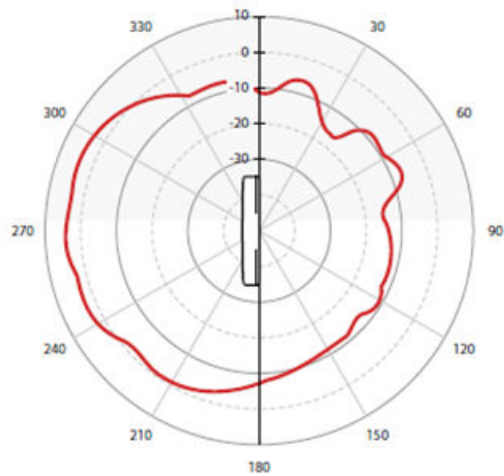
DB 5G 5G Vertical



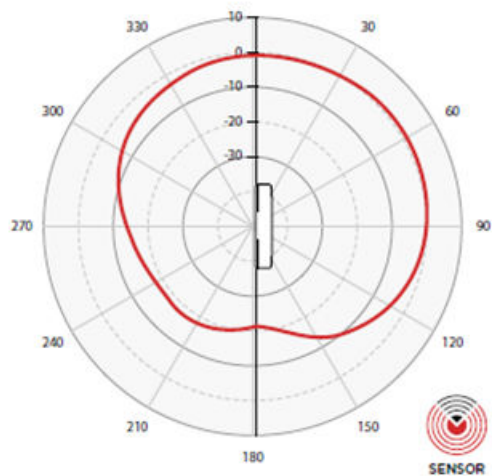
Single 5G Horizontal



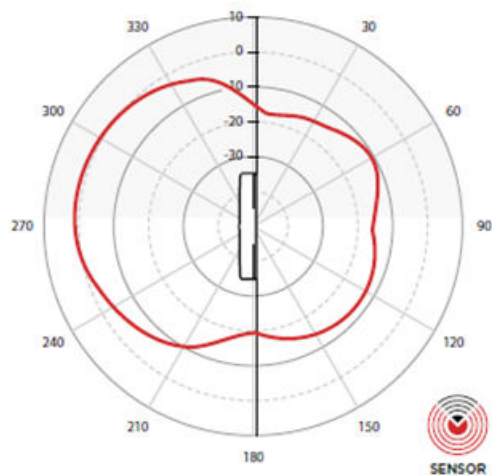
Single 5G Vertical



BLE Horizontal



BLE Vertical



Ordering Information

Mkt Part #	Description
AP302W-FCC	ExtremeCloud IQ: Indoor WiFi 6 Wallplate, 2x2 radios with Dual 5GHz and 4 GE Ethernet ports with POE Out. Integrated light/power sensors & BLE. AI/ML green mode. Internal antennas. Domain: US
AP302W-CAN	ExtremeCloud IQ: Indoor WiFi 6 Wallplate, 2x2 radios with Dual 5GHz and 4 GE Ethernet ports with POE Out. Integrated light/power sensors & BLE. AI/ML green mode. Internal antennas. Domain: Canada
AP302W-WR	ExtremeCloud IQ: Indoor WiFi 6 Wallplate, 2x2 radios with Dual 5GHz and 4 GE Ethernet ports with POE Out. Integrated light/power sensors & BLE. AI/ML green mode. Internal antennas. Domain: EMEA and Rest Of World
AP302W-EG*	ExtremeCloud IQ: Indoor Wi-Fi 6 Wallplate, 2x2 radios with Dual 5GHz and 4 GE Ethernet ports with POE Out. Integrated light/power sensors & BLE. AI/ML green mode. Internal antennas. Domain: Egypt

*WiNG operating system not available on select part numbers. Refer to Ordering Information table for more information.

Mounting Options

Mkt Part #	Description
ACC-BKT-AX-WP-EXT	Surface Mounted Wallplate Housing Extension
ACC-BKT-AX-WP-DSKSTD	Desk Mount stand for AP302W – includes screws
ACC-BKT-AX-WP-SPARE	AP302W mounting bracket (in-box accessory sold as a spare)

Power Options

Mkt Part #	Description
PD-3501G-ENT	Single Port 802.3af Midspan Device
PD-9001GR-ENT	Single Port 802.3at Compliant Midspan
37215	PWR12VDC, 2A, 2.5mm x 5.5mm connector

Other Accessories

Mkt Part #	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB Console Adapter Cable for Extreme Wireless Access Points

Warranty

The AP302W is covered under Extreme's Universal LLW policy. For warranty details, visit <http://www.extremenetworks.com/support/policies>



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