



EnGenius Cloud Access Point Series

Optimal Performance, Enterprise Features & Cloud Management

EnGenius Cloud Managed Access Points provide flexible, scalable and reliable wireless connectivity for a broad range of applications.

Whether you are looking to connect a large office or need to provide ultra-fast Wi-Fi access to a large resort or campus, cloud-managed access points meet the high density and bandwidth requirements and features of today's BYOD users.

No matter what size network you need to support, cloud managed flexible access points can meet your needs — start small and grow or go big. You can deploy and manage a few or an unlimited number of APs on an unlimited number of networks distributed across various locations—regardless of their size and infrastructures.

Simple — With easy-to-deploy design and pre-configuration ability, EnGenius Access Points are operational within minutes. Organizations with limited IT support and budgets can quickly create a reliable, efficiently managed network.

Smart — EnGenius Cloud's predictive artificial intelligence and access point data collection helps administrators improve network performance and prevent potential issues.

Reliable — EnGenius's uses its decades of manufacturing and software development experience, long-lasting chipset vendor relationships and tight manufacturing processes to provide reliable hardware. EnGenius now offers a 2-year factory warranty for all Cloud products.

Secure — Keep your network safe with two-factor authentication and data encryption on every Cloud device. Minimize potential issues by setting up event-based alerts and receive push notifications through the EnGenius Cloud app.

Features & Benefits

- High-Capacity & High-Efficient Wi-Fi 6 (11ax)
- Tri-Radio & Dual-Radio MU-MIMO Improves Performance, Expands Capacities
- Quick-Scan Device Register & Configuration and Remote Monitoring & Troubleshooting
- Beamforming Technology Optimizes Signal, Reception & Reliability
- Industrial-Grade IP68/IP67 & Ruggedized IP55-Rated Housing Withstands Harsh Environments
- Cloud Manage an unlimited number of AP's from Anywhere with the EnGenius Cloud App
- Versatile 4x4 and 2x2 11ax & 11ac Wave 2 Models with Internal & Detachable Antennas



Wi-Fi 6

Benefits to Help Grow Your Business

Next-Generation Wi-Fi in the Cloud

The EnGenius Cloud Access Points take advantage of the latest wireless technology Wi-Fi 6, which enables more efficient channel use and reduces latency between AP and client devices. Administrators see wireless network performance dramatically increase with ground-breaking features, such as uplink and downlink of OFDMA, Target Wake Time, uplink and downlink of MU-MIMO, BSS Coloring, spatial reuse, and preamble updates.

Flexibility in Deployment

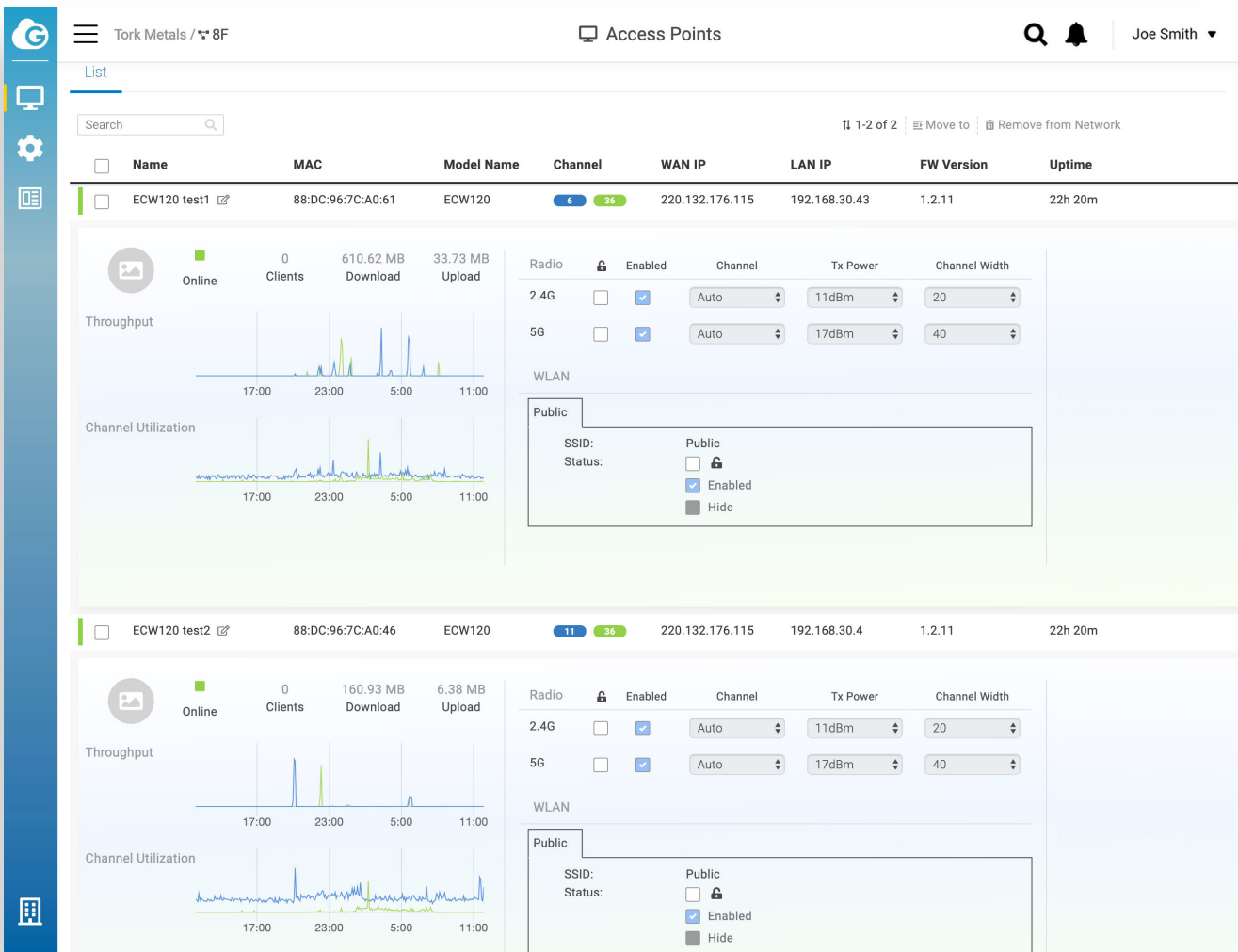
EnGenius Cloud's versatile line of high-performance, managed, ceiling- and wall-mount access points consist of Tri-band and Dual Band high capacity 4x4, and 2x2 Wi-Fi 6 & Wi-Fi 5 versions. Wall plate models serve as all-in-one communication "hubs" for in-room wireless connectivity. Configure Access Points with a scan of the QR code using the EnGenius Cloud app and manage, monitor and troubleshoot an unlimited number of devices from a single visually rich interface.

Optimize Connectivity with Wireless Mesh

Use smart mesh mode with a click of a button for retrofit or new install applications where wire runs are not possible. Mesh's smart sensing technology finds nearby access points and auto connects, optimizes routes between APs, and automatically self-heals the network if the AP loses connection.

The Latest in Wi-Fi Security

With EnGenius APs, WPA3 protects your network, which delivers next-generation wireless security by making connecting client and IoT devices more secure and easier. EnGenius APs provide enterprise-level security for SMBs with wireless encryption standards, such as Wi-Fi Protected Access Encryption. Rouge AP detection quickly detects network threats. With real-time wireless invasion monitoring, IT administrators receive email alerts and can immediately divert and potentially avoid network hacks and other security threats.



Every Cloud Device is Secure and Protected by Advanced Authentication

With EnGenius Cloud, every Cloud device is protected with two-factor authentication and non-sequential serial numbers and MAC address verification to ensure only authorized cloud devices are on the network. Once devices are authenticated, the access point establishes a secure tunnel between the device and the cloud with a unique certificate provided by the EnGenius Cloud to encrypt transmissions.

Secure Guest Networks

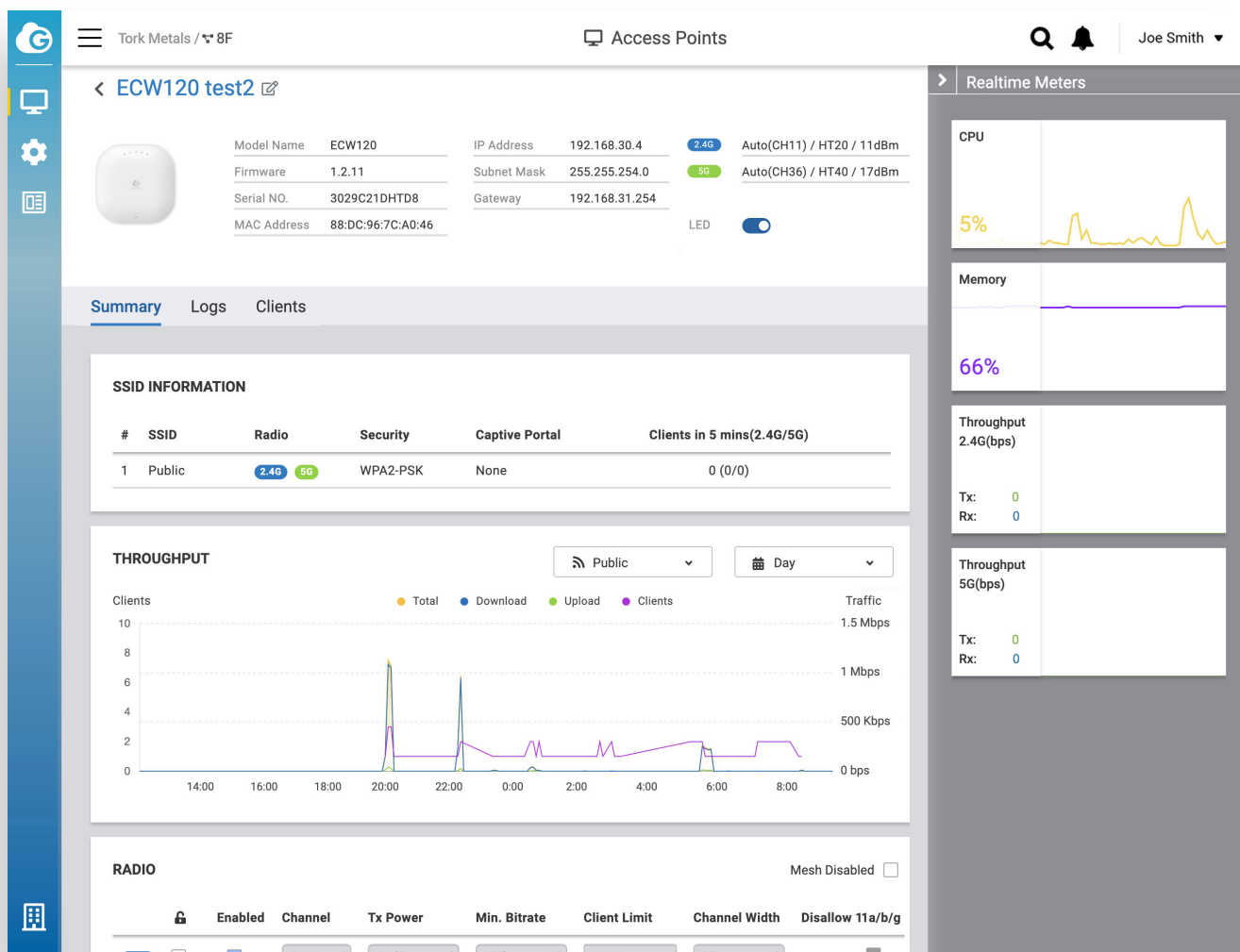
With the EnGenius's guest network capabilities and Front-Desk Manager voucher service, organizations offering Internet access to patrons or visitors— notably hotels, retail shops and restaurants—can create a secure guest network that blocks access to main corporate computers. By creating separate Virtual LANs, organizations increase security, network reliability, and conserve bandwidth.

Simplified Deployment & Provisioning

With EnGenius Cloud's plug-and-play installation, administrators can deploy EnGenius Cloud APs quickly — no lengthy setup or complex integration required. The EnGenius Cloud automatically checks & updates firmware, download configurations and joins the assigned organization and network when an EnGenius Cloud access point is plugged in. By using the EnGenius Cloud app, businesses can easily create a network and configure access points from any location.

Manage Your Workload with EnGenius Cloud

EnGenius Cloud's dashboard provides administrators a visual overview of their network health status. Administrators can easily see access point health status and quickly click into access point list to review radio configurations, IP addressing and system information. The Cloud dashboard also highlights the most used access points, SSID's, clients and applications. Administrators can quickly view a snapshot of their overall network's performance and identify potential issues.



Initial Setup, Maintenance & Troubleshooting with EnGenius Cloud

EnGenius Cloud offers several convenient and easy methods to tune, monitor and troubleshoot all access points for a specific site or network.

The AP list gives admins the ability to review all access points in one window to compare resources, radio configurations and IP settings. In addition to configuration changes, the list view allows administrators to drill down into details of specific access points to check overall configurations, real-time system meters, radio configuration and IP settings for initial setup, monitoring and troubleshooting.

Set maintenance schedules across times zones to improve up-time, allow remote system log to track system modifications or configuration changes, establish event-based email alerts and receive push notifications via the EnGenius Cloud app.

Simplifies Design and Implementation

Implementing Wi-Fi is complicated and takes a skilled hand to do it correctly. Floor Plan view provides administrators a tool for

designing, implementing, monitoring and troubleshooting Wi-Fi networks, all in real-time. The Floor Plans view is an included Cloud Wi-Fi Site Survey tool, designed in-house by EnGenius accepts an upload of your floor plan and simulates Wi-Fi coverage with a heat map of your desired Tx power, RSSI value and channel, factoring in physical obstacles and other impediments to your coverage.

Faster Deployments with Pre-Configured Access Points

Improve customer deployment and onboarding time for network administrators with predefined access point configurations. EnGenius Cloud automatically identifies your location and implements the country's regulatory domains to keep access point deployments in compliance. EnGenius Cloud's easy-to-use configuration menu allows administrators to add and define SSID's with wireless configurations, security type and Wi-Fi accessibility into any network. Network administrators can then scan access points, power them up and automatically configure for simplified deployments at customer sites. Advanced features such as L2 Isolation, Band Steering Traffic Shaping, Radius Users and Captive Portal can then be programmed to fine tune access point configurations.



EnGenius Cloud Access Points

	Indoor			Outdoor
				
Models	ECW120	ECW220	ECW230	ECW160
Standards	802.11a/b/g/n/ac	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac
Frequency	2.4GHz & 5 GHz	2.4GHz & 5 GHz	2.4GHz & 5 GHz	2.4GHz & 5 GHz
2.4 GHz Max. Data Rate	400 Mbps	574 Mbps	1,148 Mbps	400 Mbps
5 GHz Max. Data Rate	867 Mbps	1,200 Mbps	2,400 Mbps	867 Mbps
Radio Chains/Streams	2x2:2	2x2:2	4x4:4	2x2:2
RF Output Power (2.4 GHz)	23 dBm	20 dBm	23 dBm	23 dBm
RF Output Power (5 GHz)	23 dBm	20 dBm	23 dBm	23 dBm
Ethernet Ports	1 x Gigabit Port (PoE)	1 x Gigabit Port (PoE)	1 x 2.5 Gigabit Port (PoE+)	1 x Gigabit Port (PoE)
Power-over-Ethernet	802.3af	802.3af	802.3at	802.3af
Power Consumption(Peak)	12W	12.8W	19.5W	12.6W
Integrated Antenna	2x 5dBi (2.4 GHz) Omni 2x 5dBi (5 GHz) Omni	2 x 3 dBi @ 2.4 GHz 2 x 3 dBi @ 5 GHz	4x 3dBi (2.4 GHz) Omni 4x 3dBi (5 GHz) Omni	2x 5dBi (2.4 GHz) Omni 2x 5dBi (5 GHz) Omni

Technical Specifications

Standards

ECW120/ECW160

IEEE 802.11b/g/n on 2.4 GHz

IEEE 802.11a/n/ac on 5 GHz

ECW220/ECW230

IEEE 802.11ax on 2.4 GHz

IEEE 802.11ax on 5 GHz

Backward compatible with 802.11a/b/g/n/ac

Antenna

ECW120

2 x 2.4 GHz: 5 dBi

2 x 5 GHz: 5 dBi

Integrated Omni-Directional Antenna

ECW160

2 x 2.4 GHz: 5 dBi

2 x 5 GHz: 5 dBi

ECW220

2 x 2.4 GHz: 3 dBi

2 x 5 GHz: 3 dBi

Integrated Omni-Directional Antenna

ECW230

4 x 2.4 GHz: 3 dBi

4 x 5 GHz: 3 dBi

Integrated Omni-Directional Antenna

Technical Specifications

Physical Interface

ECW230
1 x 10/100/1000/2500 N-BASE-T, RJ-45 Ethernet Port
1 x DC Jack
1 x Reset Button
ECW120/ECW220
1 x 10/100/1000 BASE-T, RJ-45 Ethernet Port
1 x DC Jack
1 x Reset Button
ECW160
1 x 10/100/1000 Gigabit Ethernet Ports

LED Indicators

ECW120
1 x Power
1 x LAN
1 x 2.4 GHz
1 x 5 GHz
1 x Mesh
ECW160/ECW220/ECW230
1 x Power
1 x LAN
1 x 2.4 GHz
1 x 5 GHz

Power Source

ECW120
Power-over-Ethernet: 802.3af Input
IEEE 802.11e Compliant Source
12VDC /1A
ECW160
Power-over-Ethernet: 802.3af/at or Proprietary 54V
IEEE 802.11e Compliant Source
Active Ethernet (PoE)
ECW220
Power-over-Ethernet: 802.3af Input
12VDC /1.5A
ECW230
Power-over-Ethernet: 802.3at Input
12VDC /2A

Maximum Power Consumption

ECW120
12W
ECW160
12.6W
ECW220
12.8W
ECW230
19.5W

Wireless & Radio Specifications Operating Frequency

ECW120/ECW160/ECW220/ECW230
Dual-Radio Concurrent 2.4 GHz & 5 GHz
Operation Modes
ECW120/ECW160/ECW220/ECW230
Managed mode: AP, Mesh

Frequency Radio

ECW120/ECW160/ECW220/ECW230
2.4 GHz: 2400 MHz ~ 2482 MHz
5 GHz: 5150 MHz ~ 5250 MHz, 5250 MHz ~ 5350 MHz, 5470 MHz ~ 5725 MHz, 5725 MHz ~ 5850 MHz

Transmit Power

ECW120/ECW160
Up to 23 dBm on 2.4 GHz
Up to 23 dBm on 5 GHz
ECW220
Up to 20 dBm on 2.4 GHz
Up to 20 dBm on 5 GHz
(Maximum power is limited by regulatory domain)
ECW230
Up to 23 dBm on 2.4 GHz
Up to 23 dBm on 5 GHz
(Maximum power is limited by regulatory domain)

Tx Beamforming (TxBF)

Radio Chains/Spatial Stream

ECW120/ECW160/ECW220
2×2:2
ECW230
4×4:4

Technical Specifications continued

SU-MIMO

ECW120

Two (2) spatial streams Single User (SU) MIMO for up to 400 Mbps wireless data rate with VHT40 bandwidth to a 2x2 wireless client device under the 2.4GHz radio. Two (2) spatial stream Single User (SU) MIMO for up to 867 Mbps wireless data rate with VHT80 to a 2x2 wireless device under the 5GHz radio.

ECW160

Two (2) spatial streams Single User (SU) MIMO for up to 400 Mbps wireless data rate with VHT40 bandwidth to a 2x2 wireless client device under the 2.4GHz radio. Two (2) spatial stream Single User (SU) MIMO for up to 867 Mbps wireless data rate with VHT80 to a 2x2 wireless device under the 5GHz radio.

ECW220

Two (2) spatial streams Single User (SU) MIMO for up to 574 Mbps wireless data rate with HE40 bandwidth to a 2x2 wireless client device under the 2.4GHz radio. Two (2) spatial stream Single User (SU) MIMO for up to 867 Mbps wireless data rate with VHT80 to a 2x2 wireless device under the 5GHz radio.

ECW230

Four (4) spatial streams Single User (SU) MIMO for up to 1148 Mbps wireless data rate with HE40 bandwidth to a 4x4 wireless client device under the 2.4GHz radio. Four (4) spatial stream Single User (SU) MIMO for up to 2400 Mbps wireless data rate with HE80 to a 4x4 wireless device under the 5GHz radio.

MU-MIMO

ECW120

Two (2) Spatial Streams MU-MIMO up to 867 Mbps wireless data rate for transmitting to two (2) streams MU-MIMO capable wireless devices under 5GHz simultaneously.

ECW160

Two (2) Spatial Streams MU-MIMO up to 867 Mbps wireless data rate for transmitting to two (2) streams MU-MIMO capable wireless devices under 5GHz simultaneously.

ECW220

Two (2) spatial streams Multiple (MU)-MIMO up to 1,200 Mbps wireless data rate for transmitting to two (2) streams MU-MIMO 11ax capable wireless client devices under 5GHz simultaneously.
Two (2) spatial streams Multiple (MU)-MIMO up to 574 Mbps wireless data rate for transmitting to two (2) streams MU-MIMO 11ax capable wireless client devices under 2.4GHz simultaneously.

ECW230

Four (4) spatial streams Multiple (MU)-MIMO up to 2,400 Mbps wireless data rate for transmitting to four (4) streams MU-MIMO 11ax capable wireless client devices under 5GHz simultaneously.
Four (4) spatial streams Multiple (MU)-MIMO up to 1,148 Mbps wireless data rate for transmitting to four (4) streams MU-MIMO 11ax capable wireless client devices under 2.4GHz simultaneously.

Supported Data Rates (Mbps):

ECW120/ECW160

2.4 GHz: Max 400

5 GHz: Max 867

802.11b: 1, 2, 5.5, 11

802.11a/g: 6, 9, 12, 18, 36, 48, 54

802.11n: 6.5 to 300 Mbps (MCS0 to MCS15) (Additional 25% bandwidth when enabling 256-QAM uner HT40)

802.11ac: 6.5 to 867 Mbps (MCS0 to MCS9, NSS = 1 to 2)

ECW220

802.11ax:

2.4 GHz: 9 to 574 (MCS0 to MCS11, NSS = 1 to 2)

5 GHz: 18 to 1200 (MCS0 to MSC11, NSS = 1 to 2)

802.11b: 1, 2, 5.5, 11

802.11a/g: 6, 9, 12, 18, 36, 48, 54

802.11n: 6.5 to 300 Mbps (MCS0 to MCS15)

802.11ac: 6.5 to 867 Mbps (MCS0 to MCS9, NSS = 1 to 2)

ECW230

802.11ax:

2.4 GHz: 9 to 1,148 (MCS0 to MCS11, NSS = 1 to 4)

5 GHz: 18 to 2,400 (MCS0 to MSC11, NSS = 1 to 4)

802.11b: 1, 2, 5.5, 11

802.11a/g: 6, 9, 12, 18, 36, 48, 54

802.11n: 6.5 to 600 (MCS0 to MCS31)

802.11ac: 6.5 to 1,733 (MCS0 to MCS9, NSS = 1 to 4)

Supported Radio Technologies

ECW120/ECW160

802.11b: Direct-Sequence Spread Spectrum (DSSS)

802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM)

802.11n/ac: 2x2 MIMO with 2 Streams

ECW220/ECW230

802.11ax: Orthogonal Frequency Division Multiple Access(OFDMA)

802.11ac/a/g/n: Orthogonal Frequency Division Multiple (OFDM)

802.11b: Direct-sequence spread-spectrum (DSSS)

Channelization

ECW120/ECW160

802.11ac Supports Very High Throughput (VHT)—VHT 20/40/80 MHz

802.11n Supports High Throughput (HT)—HT 20/40 MHz

802.11n Supports Very High Throughput (VHT) Under the 2.4 GHz Radio—VHT 40 MHz (256-QAM)

802.11n/ac Packet Aggregation: AMPDU, ASPDU

ECW220/ECW230

802.11ax supports very high throughput (VHT) –VHT 20/40/80 MHz

802.11ac supports very high throughput (VHT) –VHT 20/40/80 MHz

802.11n supports high throughput (HT) –HT 20/40 MHz

802.11n supports very high throughput under the 2.4GHz radio –VHT40 MHz (256-QAM)

802.11n/ac/ax packet aggregation: A-MPDU, A-SPDU

Supported Modulation

ECW120/ECW160

802.11b: BPSK, QPSK, CCK

802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM

802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

ECW220/ECW230

802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM

802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM

Management Multiple BSSID

ECW120/ECW160/ECW220/ECW230

8 SSIDs on both 2.4GHz and 5GHz bands.

VLAN Tagging

ECW120/ECW160/ECW220/ECW230

Supports 802.1q SSID-to-VLAN Tagging

Cross-Band VLAN Pass-Through

Management VLAN

Spanning Tree

ECW120/ECW160/ECW220

Supports 802.1d Spanning Tree Protocol

Supports 802.1d Spanning Tree Protocol

Technical Specifications continued

QoS (Quality of Service)

ECW120/ECW160/ECW220/ECW230

Compliant With IEEE 802.11e Standard

WMM

SNMP

ECW120/ECW160/ECW220/ECW230

v1, v2c, v3

MIB

ECW120/ECW160/ECW220/ECW230

I/II, Private MIB

Wireless Security

ECW120

WEP Encryption 64/128/152 bit

WPA/WPA2 Enterprise (WPA-EAP Using TKIP or AES)

Hide SSID in Beacons

MAC Address Filtering, Up to 32 MACs per SSID

Wireless STA (Client) Connected List

SSH Tunnel

Client Isolation

ECW160

WPA2 AES-PSK/WPA2 Enterprise

Hide SSID in Beacons

MAC Address Filtering, Up to 32 MACs per SSID

Wireless STA (Client) Connected List

Https

SSH

Client Isolation

ECW220/ECW230

WPA3

WPA2 Enterprise (AES)

WPA2 AES-PSK

Hide SSID in Beacons

MAC Address Filtering, Up to 32 MACs per SSID

Wireless STA (Client) Connected List

SSH Tunnel

Client Isolation

Environment & Physical Temperature Range

ECW120/ECW220/ECW230

Operating: 32°F~104°F (0 °C~40 °C)

Storage: -40 °F~176 °F (-40 °C~80 °C)

ECW160

Operating: -4°~140°F/-20°C~60°C

Storage: -40°F~-176°F/-40°C~80°C

Humidity (non-condensing)

ECW120/ECW160/ECW220/ECW230

Operating: 90% or less

Storage: 90% or less

Outdoor Rating: IP67-Rated Enclosure

Dimensions & Weight

ECW120

Weight: 0.80 lbs. (362.8 g)

Diameter: 6.36" (161.5 mm)

Height: 1.64" (41.5 mm)

ECW160

Weight: 0.65 lbs. (295 g)

Width: 4.37" (111.2 mm)

Length: 6.83" (173.6 mm)

Height" 1.19" (30.29 mm)

ECW220

Weight: 0.85 lbs. (382 g)

Length: 6.30" (160 mm)

Width: 6.30" (160 mm)

Height: 1.31" (33.2 mm)

ECW230

Weight: 1.31 lbs. (597 g)

Length: 8.27" (210 mm)

Width: 8.27" (210 mm)

Height: 1.31" (33.2 mm)

Package Contents

ECW120

1 – ECW120 Cloud Managed Indoor Access Point

1 – T-Rail Mounting Kit

1 – Ceiling and Wall Mount Screw Kit

1 – Mounting Bracket

1 – Quick Installation Guide

ECW160

1 – ECW160 Cloud Managed Outdoor Access Point

2 – Pole-Mounting Brackets

1 – Wall-Mount Screw Set

2 – 2.4GHz 5dBi SMA Antennas

2 – 5GHz 5dBi SMA Antennas

1 – Quick Installation Guide

ECW220

1 – ECW220 Cloud Managed Indoor Access Point

1 – Ceiling Mount Base (9/16" Trail)

1 – Ceiling Mount Base (15/16" Trail)

1 – Ceiling and Wall Mount Screw Kit

1 – Quick Installation Guide

ECW230

1 – ECW230 Cloud Managed Indoor Access Point

1 – Ceiling Mount Base (9/16" Trail)

1 – Ceiling Mount Base (15/16" Trail)

1 – Ceiling and Wall Mount Screw Kit

1 – Quick Installation Guide

Wireless Security

ECW120/ECW160/ECW220/ECW230

FCC

CE

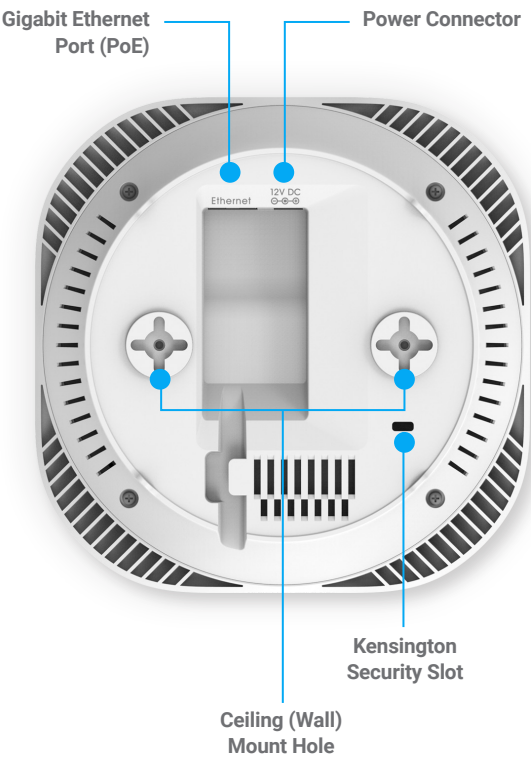
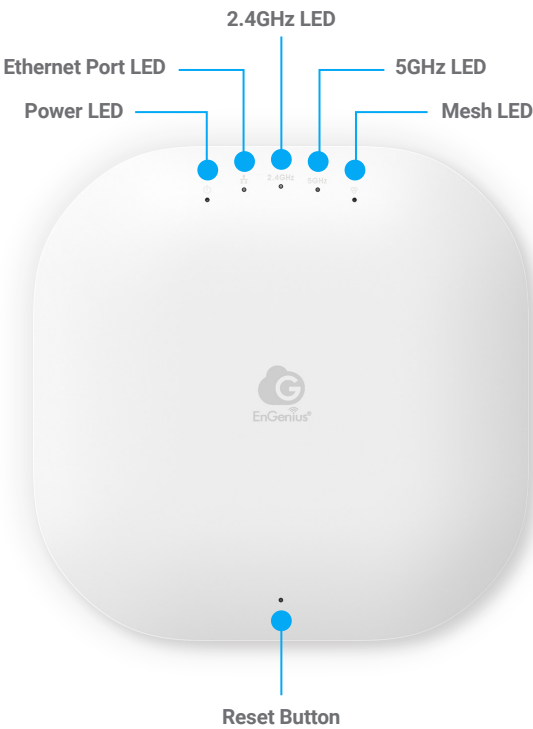
IC

Warranty

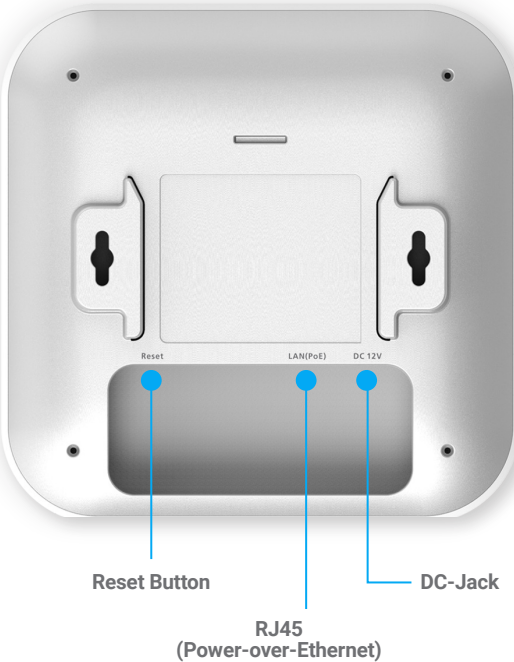
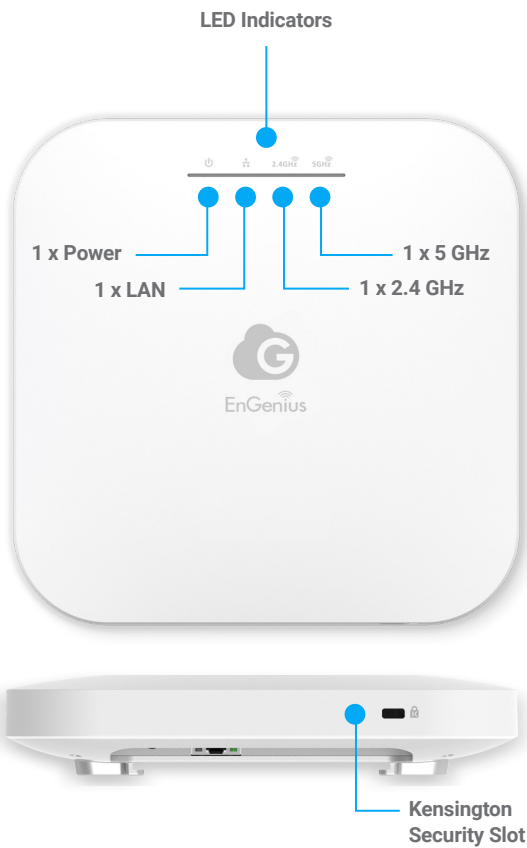
ECW120/ECW160/ECW220/ECW230

2 Year

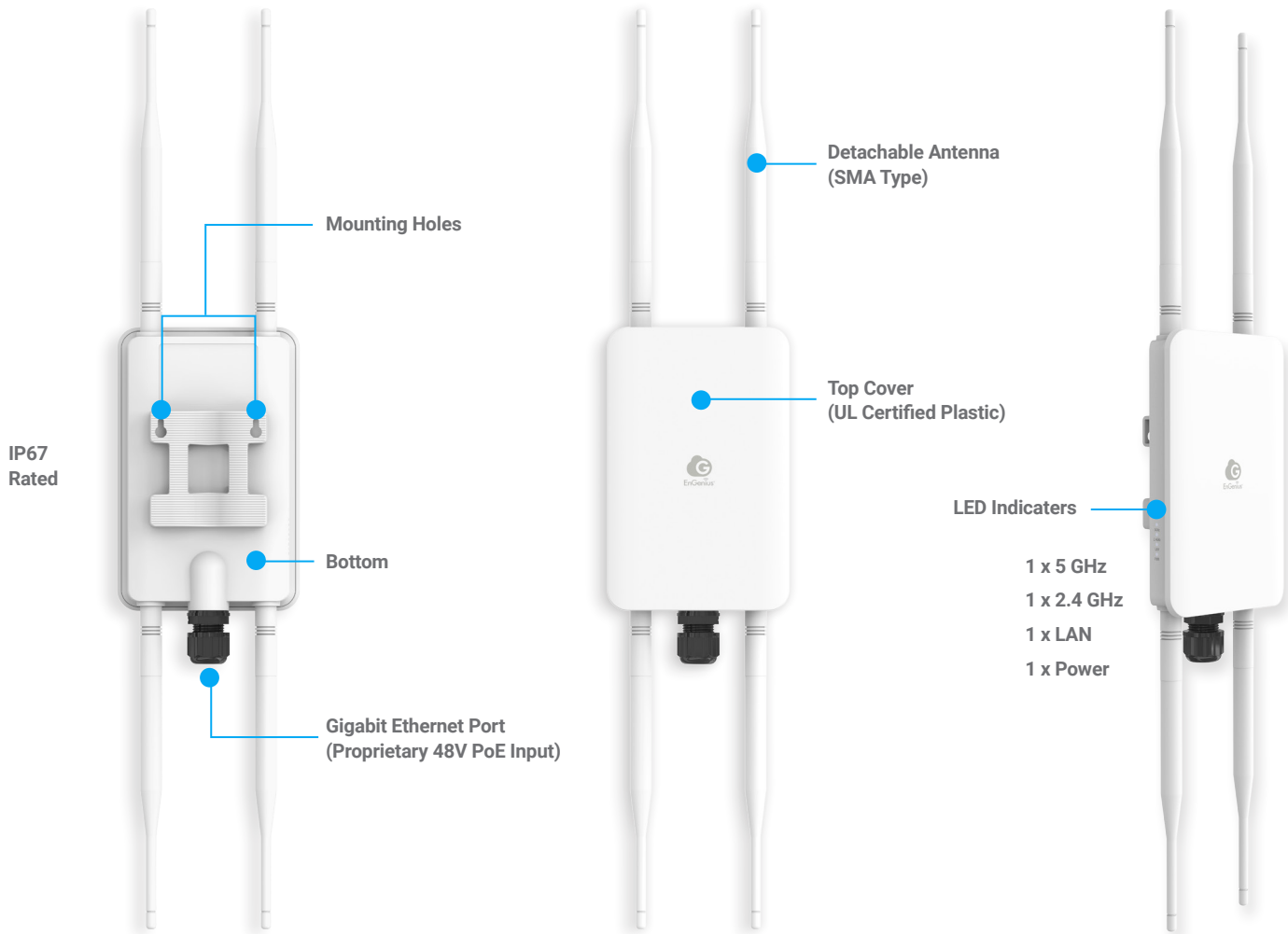
ECW120 Indoor Access Point



ECW220/ECW230 Indoor Access Point



ECW160 Outdoor Access Point



Plug & Play with Zero Configuration



Maximum data rates are based on IEEE 802.11 standards. Actual throughput and range may vary depending on distance between devices or traffic and bandwidth load in the network.

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