EnGenius

Datasheet

ECW Series Access Points

EnGenius Cloud Access Points Series

Optimal Performance, Enterprise Features, & Cloud Management

The EnGenius Cloud Access Point Series brings the industry's most advanced features for quick deployment and holistic management. EnGenius provides cloud managed access points for indoor and outdoor deployments. This AI-driven cloud solution is designed to increase wireless networking efficiency and reduce operating costs for small and medium-sized businesses, and empowers IT managers to rapidly implement IT initiatives to achieve their organizational objectives.

Easy deployment — Cloud-managed access points for indoors consist of an indoor wall plate and ceiling-mount, while outdoor models are built to withstand difficult outdoor environments. Both indoor and outdoor models are highly flexible to meet the needs of distributed networks across multiple sites and scalable with company growth.

Smart Management — EnGenius Cloud's predictive artificial intelligence and access point data collection helps administrators improve network performance and prevent potential issues. The cloud-based solution allows you to manage the firmware and update network policy remotely for distributed clusters of access points based on region, time zone, and other configuration.

Visualized Analytics — With AI-driven cloud computing, the complex data generated by your networks is aggregated into a centralized, easy-to-navigate visual interface with comprehensive statistical tools and management controls. Minimize potential issues by setting up event-based alerts and receive push notifications through the EnGenius Cloud app.

Features & Benefits

- Supports standards up to 802.11ax and backward-com patible with 11ac/a/b/g/n
- Dual-radio MU-MIMO improves performance, expands capacities
- Versatile 4x4 and 2x2 11ax & 11ac Wave 2 models with internal & detachable antennas
- Flexible secure authentication options for guest Wi-Fi access
- Real-time system metrics, deep-dive analytics, and remote configuration
- Advanced view displays network topology with devices and relationships
- Flexible operation modes: AP, mesh, and AP mesh
- The Cloud manages unlimited number of AP's from anywhere with the EnGenius Cloud app

ECW 120

ECW 220

ECW 230

ECW 160

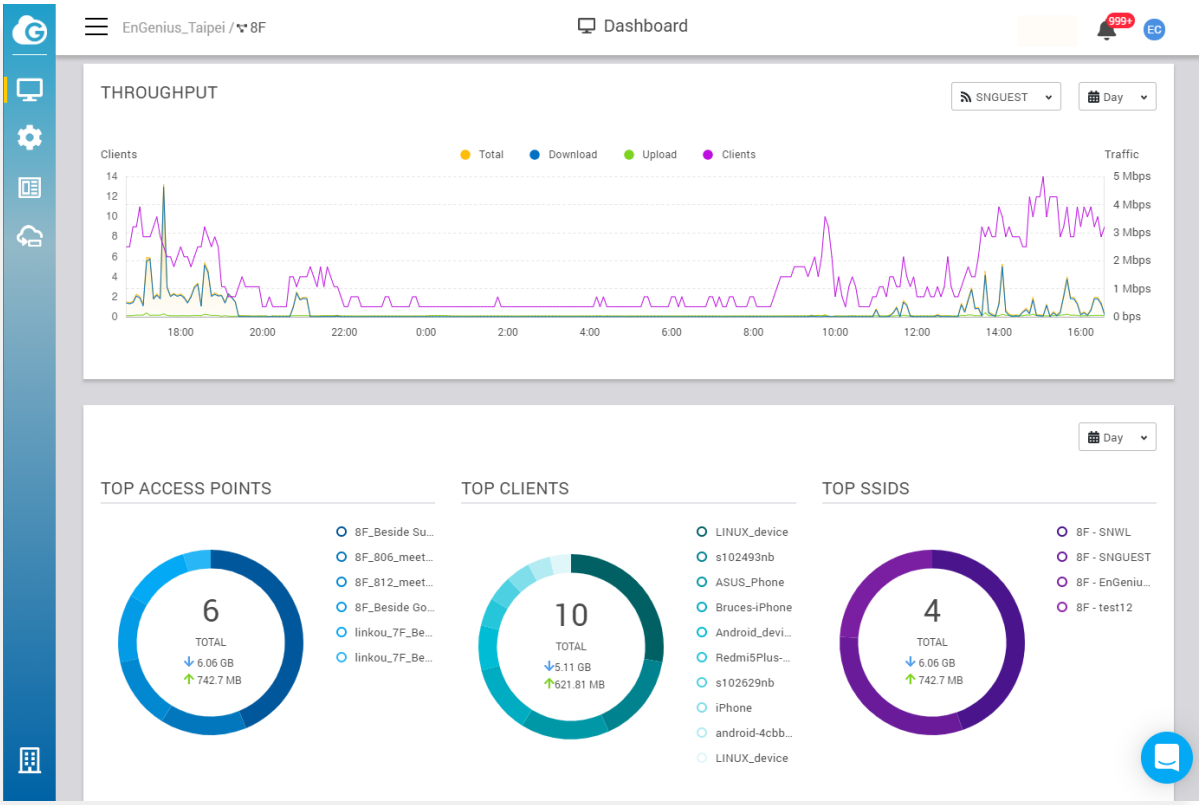
Benefits to Help Grow Your Business

Overview of Access Points Status

The EnGenius Cloud dashboard provides a big-picture view of your network status. The dashboard captures the health status of access points, collects analytics data including network connection status and real-time traffic, and highlights the most used access points, SSID's, clients and applications.

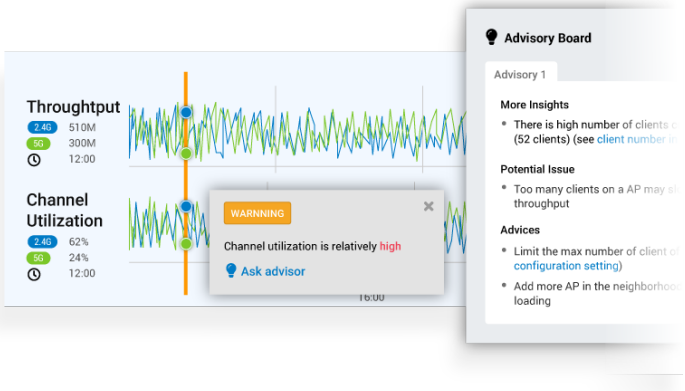
Monitor and Troubleshoot with the Client Timeline

The client timeline pulls up an entire device's history to allow for tracing of potential problems at their source. It provides additional information about issues by analyzing the authentication process between devices, such as a smartphone and wireless access points.



Pinpoint Issues with the AI-Driven Advisory Board

The EnGenius Cloud advisory board uses artificial intelligence to continuously analyze your networks and report potential problems. You can customize notifications to be sent for any identified abnormal situation in your network devices, which will include recommended best responses to common issues derived from EnGenius machine learning and research.



Network Management and Monitoring On the Go

With the EnGenius Cloud mobile app, you can have full control of cloud managed access points and devices. It offers highly customizable and real-time notifications to help you stay alert to all issues when they first arise. By using the EnGenius Cloud app, businesses can easily create a network and configure access points from any location.

User Authentication for Secure Guest Networks

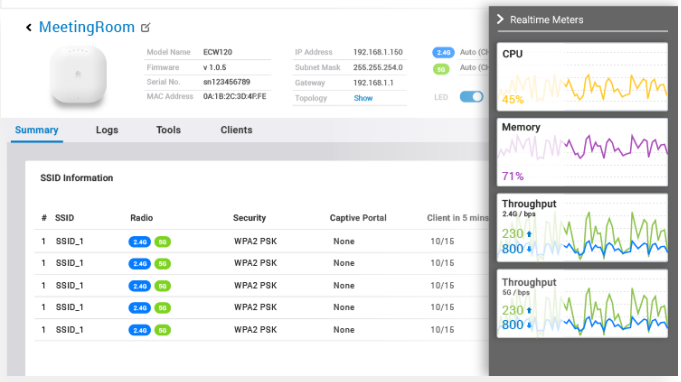
EnGenius Cloud offers various authentication methods for different business requirements. You can configure the AAA authentication all on the cloud or from a customer's RADIUS server, create a guest Wi-Fi connection with preset access, or let users log in by linking to their social account. Organizations offering Internet access to patrons or visitors 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.

Quick Access to Access Point insights

EnGenius Cloud manages all devices in from a single centralized interface. The access points list offers you a summary of the most important current traffic usage data, such as 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.

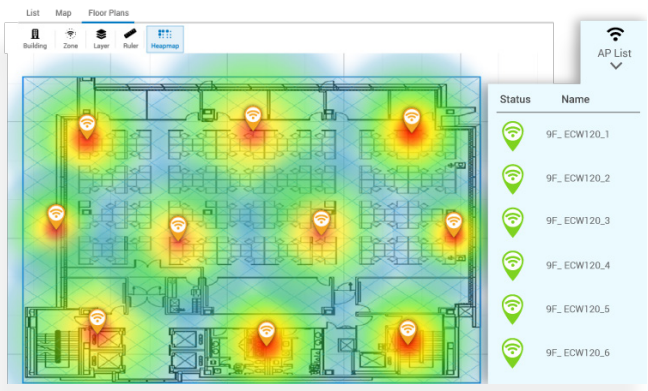
Supervise Access Points with Real-Time Metrics

EnGenius Cloud management can break down an access point's key performance diagnostics such as CPU, memory utilization, and throughput to determine the root cause of a current network problem.



Access Points Locations and Wi-Fi Strength with Floor Plan

The included Wi-Fi site survey tool 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. It is capable of factoring in physical obstacles and other impediments to coverage in its forecast.



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 Gigabit Port(PoE+)	1 x Gigabit Port(PoE)
Power-over-Ethernet	802.3af	802.3af/at	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

1 x 2.4 GHz: 5 dBi

1 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

ECW120/ECW220/ECW230

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 Power Adapter

ECW160

Power-over-Ethernet: 802.3af/at or Proprietary 54V

IEEE 802.11e Compliant Source

Active Ethernet (PoE)

ECW220

Power-over-Ethernet: 802.3af/at Input

12VDC /1.5A Power Adapter

ECW230

Power-over-Ethernet: 802.3at Input

12VDC /2A Power Adapter

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, APMesh, 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

SU-MIMO

ECW120

Two(2) spatial stream Single User (SU) MIMO for up to 400 Mbps wireless data rate with VHT40 bandwidth to a 2x2 wireless 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 stream Single User (SU) MIMO for up to 400 Mbps wireless data rate with VHT40 bandwidth to a 2x2 wireless 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 stream 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 stream 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.

Technical Specifications

MU-MIMO

ECW120

Two (2) Spatial Stream 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 Stream 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: 2×2 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

802.11b: BPSK, QPSK, CCK

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

QoS (Quality of Service)

ECW120/ECW160/ECW220/ECW230

Complaint With IEEE 802.11e Standard

WMM

SNMP

ECW120/ECW160/ECW220/ECW230

v1, v2c, v3

MIB

ECW120/ECW160/ECW220/ECW230

I/II, Private MIB

Technical Specifications

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: 32ºF~104ºF (0 ºC~40 ºC)
Storage: -40 ºF~176 ºF (-40 ºC~80 ºC)

ECW160

Operating: -4º~140ºF/-20ºC~60ºC
Storage: -40F º~176ºF/-40ºC~80ºC

Humidity (non-condensing)

ECW120/ECW160/ECW220/ECW230

Operating: 90% or less
Storage: 90% or less

Dimensions & Weight

ECW120

Weight: 362.8g
Width: 161.5mm
Length: 161.5mm
Height: 41.5mm

ECW160

Weight: 829.5g
Width: 111.2 mm
Length: 173.6 mm
Height: 30.29 mm

ECW220

Weight: 382g
Length: 160mm
Width: 160mm
Height: 33.2mm

ECW230

Weight: 597g
Length: 210mm
Width: 210mm
Height: 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

FCC
CE
IC

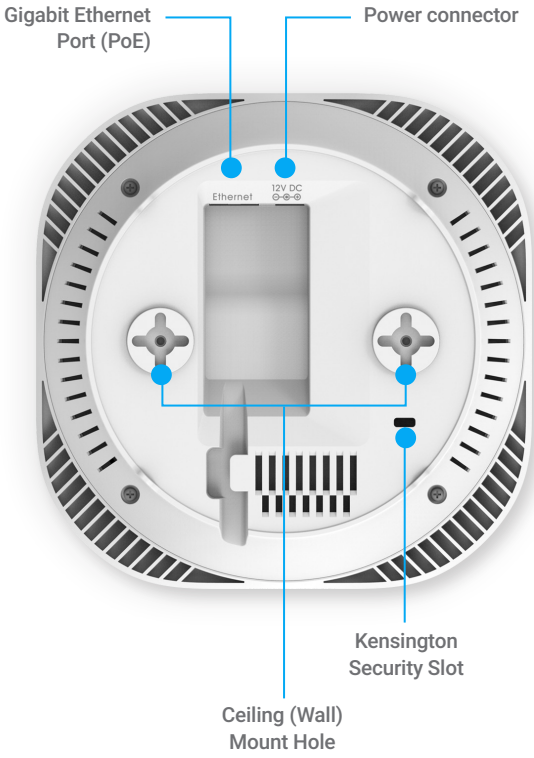
Warranty

ECW120/ECW160/ECW220/ECW230

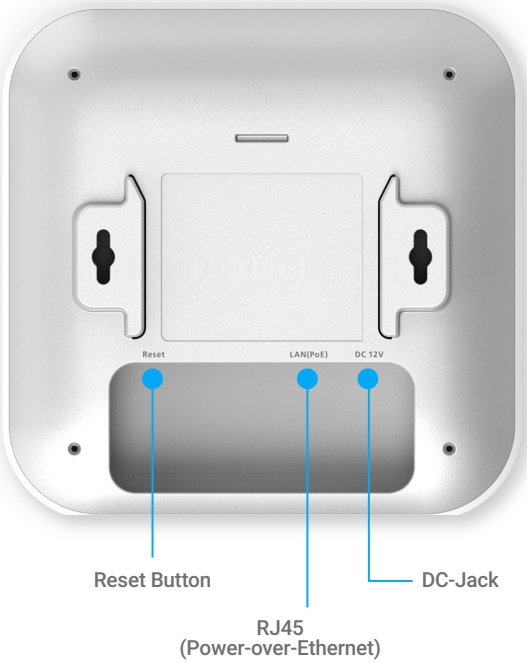
2 Year

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.

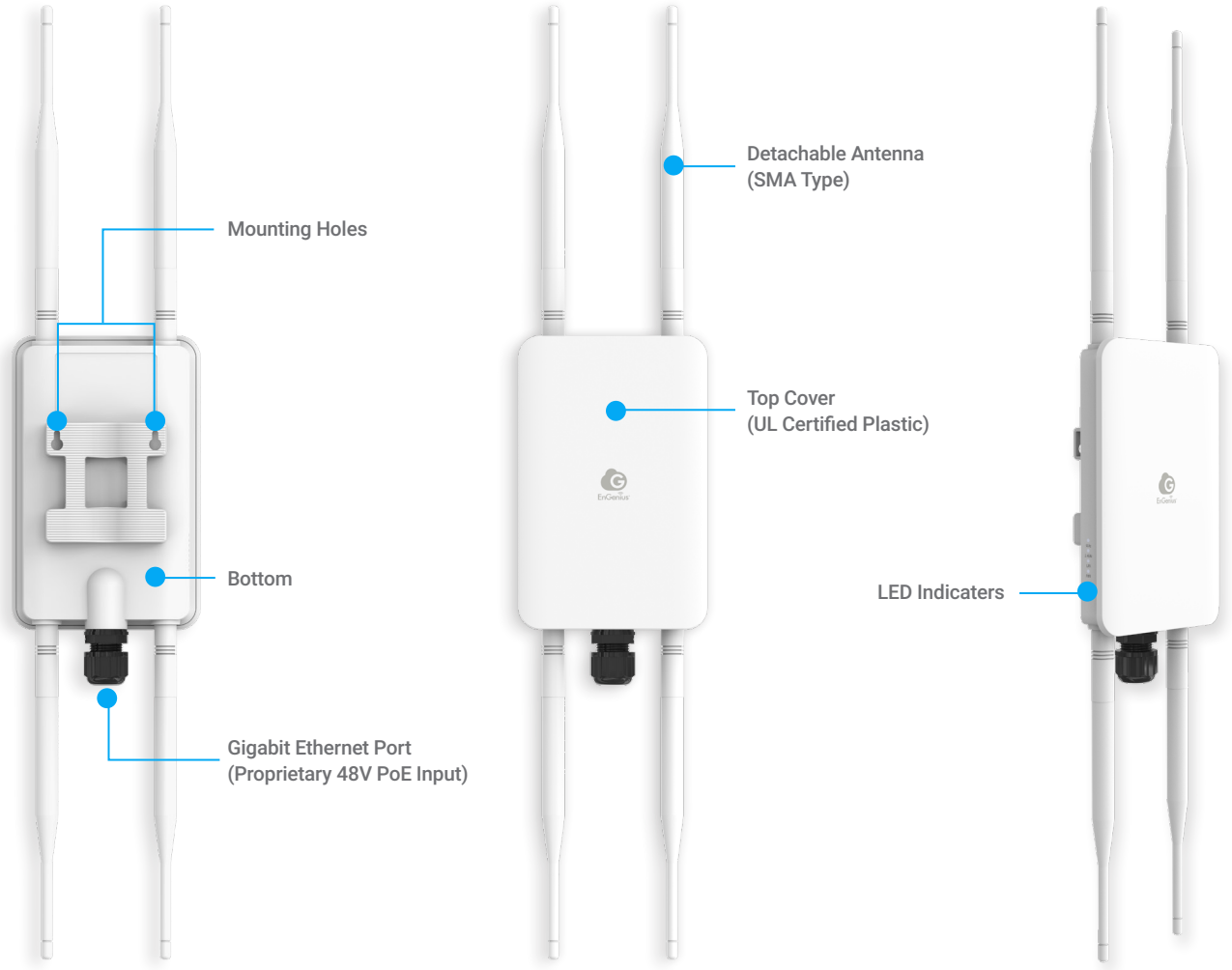
ECW120 Indoor Access Point



ECW220/ECW230 Indoor Access Point



ECW160 Outdoor Access Point



Plug & Play with Zero Configuration

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