



## Cloud5 2x2 Outdoor Cloud Managed 11ac Wave 2 2x2 Outdoor Wireless Access Point

### Overview

EnGenius Cloud Managed 11ac Wave 2 2x2 Outdoor Wireless Access Point ECW160 supports MU-MIMO wireless connection, providing up to 867 Mbps in the 5 GHz band and 400 Mbps in the 2.4 GHz band. Its IP67-rated weatherproof and dustproof housing withstands harsh environments, and its Mesh Wireless Support simplifies setup and self-heals. The EnGenius Cloud App allows remote management of an unlimited number of APs.



### Features & Benefits

- 11ac Wave 2 Wireless Speeds to 867Mbps on 5GHz; to 400Mbps on 2.4GHz
- IP67-Rated Weatherproof & Dustproof Housing Withstands Harsh Environments
- Dual-Radio MU-MIMO Improves Performance & Expands User Capacities
- Beamforming Optimizes Antenna Signal, Reception & Reliability for Clients
- Four (4) Detachable 5dbi High-Gain, 360° SMA-Type Antennas
- Quick-scan device register & configuration and remote monitoring & troubleshooting
- Cloud manage an unlimited number of APs from anywhere with the EnGenius Cloud App
- Mesh Wireless Support simplifies setup, optimizes signals & self-heals

# Technical Specifications

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### Standards

IEEE 802.11b/g/n on 2.4 GHz

IEEE 802.11a/n/ac on 5 GHz

IEEE 802.3 u/ab

IEEE 802.3az

### Antenna

2 x 2.4 GHz: 5 dBi(External Omni-Directional)

2 x 5 GHz: 5 dBi(External Omni-Directional)

### Physical Interfaces

1 x GE Port (PoE+)

### LED indicators

1 x Power

1 x LAN

1 x 2.4 GHz

1 x 5 GHz

### Power Source

Power-over-Ethernet: 802.3af/at Input

Active Ethernet (PoE)

### Maximum Power Consumption

12.6W

## Wireless & Radio Specifications

### Operating Frequency

Dual-Radio Concurrent 2.4 GHz & 5 GHz

### Operation Modes

Managed mode: AP, AP Mesh, Mesh

### Frequency Radio

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

### 5725 MHz ~ 5850 MHz

Up to 23 dBm on 2.4 GHz

Up to 23 dBm on 5 GHz

(Maximum power is limited by regulatory domain)

### Radio Chains

2 x 2:2

### SU-MIMO

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.

### MU-MIMO

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.

### Supported Data Rates

2.4 GHz: Max 400 (MCS0 to MCS11, NSS = 1 to 2)

5 GHz: Max 867 (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) (Additional 25% bandwidth when enabling 256-QAM uner HT40)

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

### Supported Radio Technologies

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

802.11b: Direct-Sequence Spread Spectrum (DSSS)

802.11n/ac: 2x2 MIMO with 2 Streams

### Channelization

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 High Throughput (HT) Under the 2.4 GHz Radio—HT 40 MHz (256-QAM)

802.11n/ac Packet Aggregation: A-MPDU, A-SPDU

### Supported Modulation

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

### DFS Certification

CE

### Max Concurrent User

128 Per radio

### Client Balancing

Yes

### Auto Channel Selection

Yes

## Management Features

### Multiple BSSID

8 SSIDs on both 2.4GHz and 5GHz bands

### VLAN Tagging

Supports 802.1q SSID-to-VLAN Tagging

Cross-Band VLAN Pass-Through

Management VLAN

### Spanning Tree

Supports 802.1d Spanning Tree Protocol

### QoS (Quality of Service)

Compliance With IEEE 802.11e Standard

WMM

### SNMP

v1, v2c, v3

### MIB

I/II, Private MIB

### Fast Roaming

802.11r/k

### Wireless Security

WPA2-PSK

WPA2-Enterprise

WPA3-PSK

WPA3-Enterprise

Hide SSID in Beacons

# Technical Specifications

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Wireless STA (Client) Connected List

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Client Isolation

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Client Access Control

## Interface

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IPv4, IPv6

## Local Web Access

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Supports HTTP or HTTPS

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## Environmental & Physical

### Temperature Range

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Operating: -4°~140°F/-20°C~60°C

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Storage: -40F°~176°F/-40°C~80°C

### Humidity (non-condensing)

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Operating: 90% or less

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Storage: 90% or less

### IP Rating(Outdoor only)

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IP67

### Surge Protection (Outdoor only)

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1KV

### ESD Protection(Outdoor only)

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Contact: 4KV Air: 8 K

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## Dimensions & Weight

### Weight

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829.5 g

### Dimensions

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111.2 x 173.6 x 32.29 mm

### Package Contents

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1 – ECW160 Cloud Managed Outdoor Access Point

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2 – Pole-Mounting Brackets

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1 – Wall-Mount Screw Set

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2 – 2.4GHz 5dBi SMA Antennas

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2 – 5GHz 5dBi SMA Antennas

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1 – Quick Installation Guide

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## Compliance

### Regulatory Compliance

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FCC

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CE

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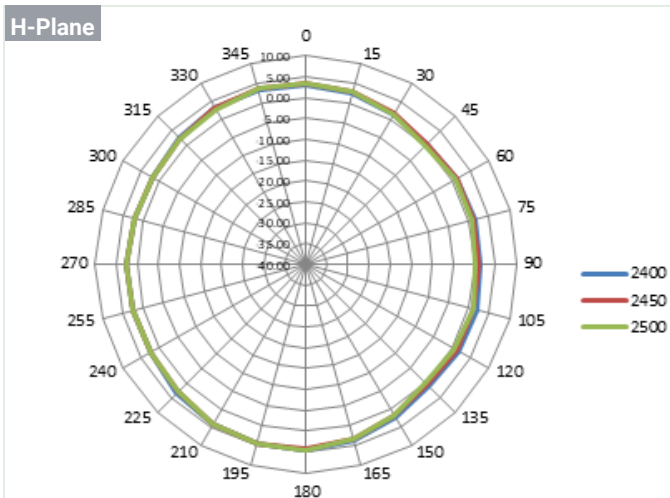
IC

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# Antennas Patterns

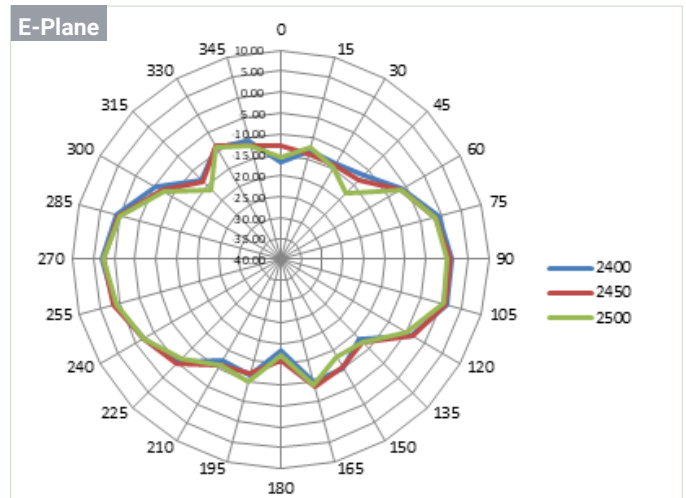
2.4GHz

H-Plane



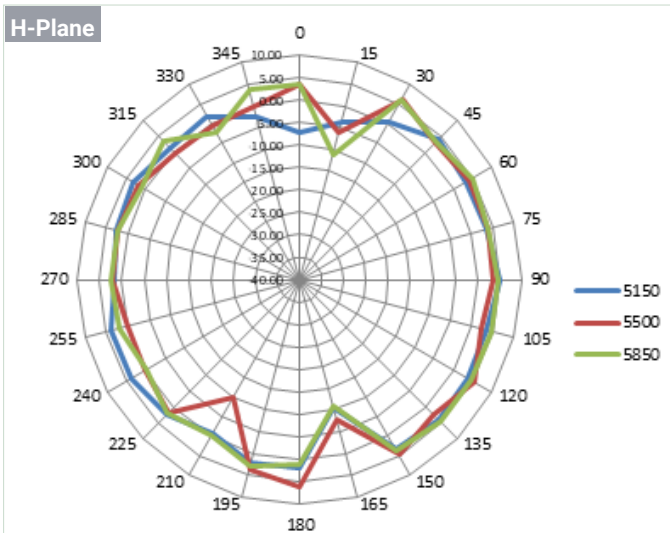
2.4GHz

E-Plane



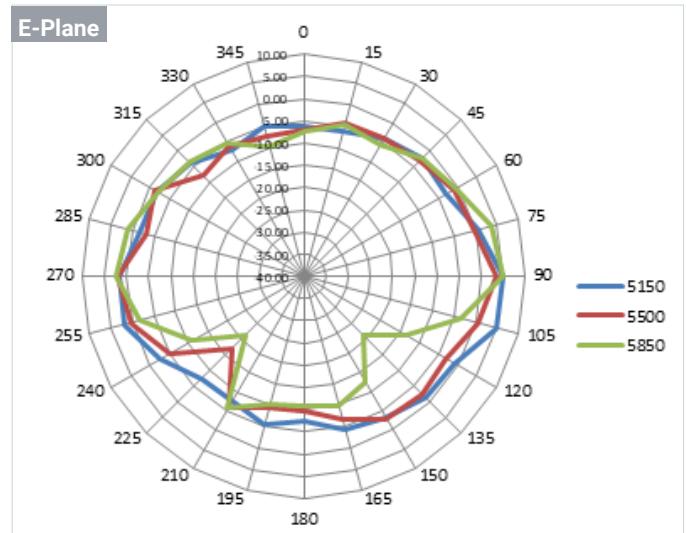
5GHz

H-Plane

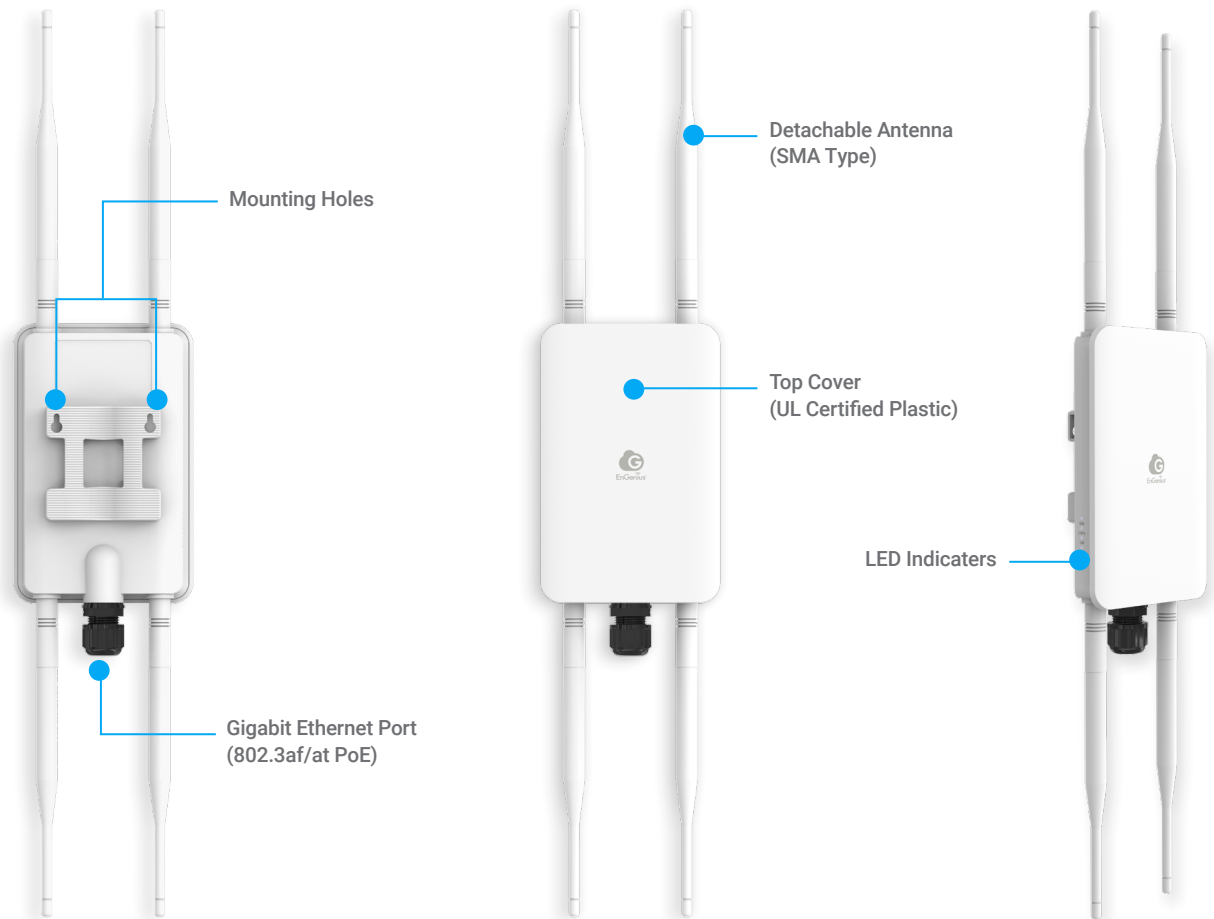


5GHz

E-Plane



## Hardware Overviews



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