



## EnSky Series Outdoor Access Points

# EnSky Series

## Outdoor Managed Access Points

Optimal Performance in Harsh Environments

EnGenius EnSky Series of Outdoor Access Points provide wider coverage, expanded capacity, and ultra-fast Wi-Fi in harsh environments. The powerful, business-class performance of access points are suitable for small to mid-size businesses who are looking for fast, long-rang outdoor Wi-Fi access.

### High-Capacity 11ax Speed & Performance

Support faster 11ax (Wi-Fi 6) wireless speed in heavy multi-application traffic services. More devices can be used simultaneously with less latency.

### Outdoor Access Points Perform Better in Harsh Environments

EnGenius outdoor APs Withstand temperatures ranging from -20° C to 60° C, IP55-IP68 standard waterproofing, and anti-UV protection.

### Flexible deployments with Power-over-Ethernet

Flexible AP placement is possible with PoE support. Deploy outdoor APs where power supply is limited on 802.3at/af PoE-capable switches or PoE adapters up to 328 feet from the source. And reset to factory default via the reset button on the accompanied PoE adapter.

### Reliable Connectivity & Network Protection

Ensure seamless, reliable connectivity for users and efficiently steer dual-band clients to the less congested 5 GHz band. Establish guest networks to prevent guest users from accessing network files or devices and segment user groups for increasing security and bandwidth control.

### Features & Benefits

- Supports standards up to 802.11ax and backward compatible with ac wave2/ac/a/b/g/n client devices
- The latest Wi-Fi 6 technology features high-capacity, high-efficient, and enhanced performance
- Eliminate hidden node collisions to keep throughput more consistently in PtP/PtMP application with EnJet technology
- Industrial-grade IP68 or rugged IP55-rated housing. Withstands harsh environment to ensure your network operates in extreme outdoor climates
- Beamforming technology of 11ac optimizes signal, reception & reliability
- Versatile 4x4, 3x3, and 2x2 802.11 ax/ac/n access points with internal or detachable antennas for diverse PtP/PtMP outdoor usage
- Operate as a stand-alone AP or centrally managed via EnGenius SkyKey Controller or ezMaster software
- EnWiFi App enables users to configure devices quickly and monitor the installed or deployed devices on their smartphones or tablets.



# Outdoor Access Points Feature Highlights

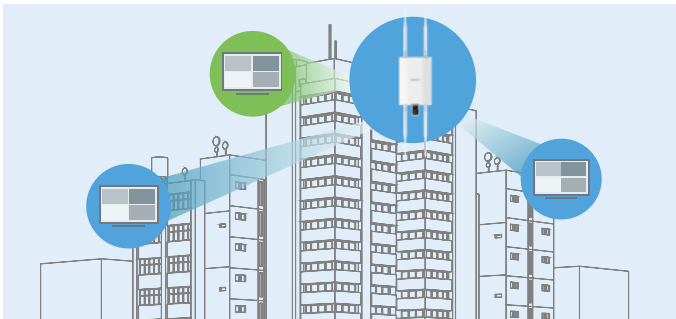
## The Future-Proof Next-Gen Wi-Fi 6

The new 802.11ax (Wi-Fi 6) technology builds upon real-world deployment of 11ac. As next-generation Wi-Fi, 11ax is no longer just about speeds but also about stronger, steadier, and more efficient wireless connections.

| Greater Capacity<br>Serves more devices simultaneously  | Higher Efficiency<br>Handles simultaneous connections without slowdown  | Improved Performance<br>Increases throughput with new modulation scheme   |
|---|---|---|
| <ul style="list-style-type: none"> <li><b>8x8 MU-MIMO</b><br/>Increases capacity up to 4x</li> <li><b>OFDMA</b><br/>Enables more clients to transmit simultaneously</li> <li><b>BSS Coloring</b><br/>Allows access points to be placed closer together</li> </ul> | <ul style="list-style-type: none"> <li><b>OFDMA</b><br/>Reduces payload and latency</li> <li><b>BSS Coloring</b><br/>Reuses the channel and improves interference</li> <li><b>Target Wake Time</b><br/>Saves the battery life of devices</li> </ul> | <ul style="list-style-type: none"> <li><b>8x8 MU-MIMO</b><br/>Receives data from multiple antennas, doubling bandwidth</li> <li><b>1024QAM</b><br/>Increases data rates by 25%</li> <li><b>Target Wake Time</b><br/>Reduces the latency from contention of clients</li> </ul> |

## Ultra-Fast Connecting Speeds

EnGenius Access Points deliver the highest available speeds for Wi-Fi connectivity devices. Beamforming technology focuses signals directly to client devices, providing optimal, reliable reception even in densely crowded environments. Four spatial streams and dual-concurrent MU-MIMO radio operation sends beams to multiple users simultaneously, creating increased network capacity.



## Achieve maximum throughput with EnJet Technology

EnJet™ technology provides steady maximum throughput and high link reliability by dividing a signal into different time slots and assigning them to every client even when bandwidth demands increase and client devices are added.

**Time-based management improves transmission**

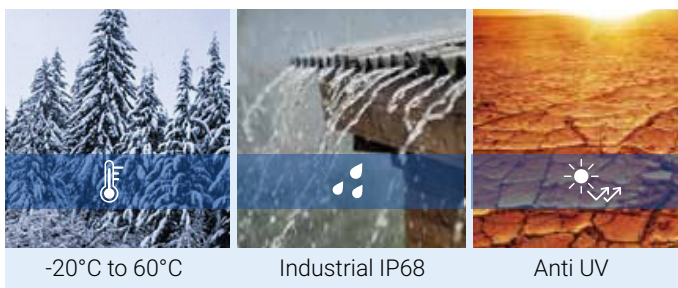
**Prioritize the transmission of important data**

**Maximize throughput at distances**

**Keep consistent performance at scale**

## Keep High Performance in Harsh Environments

Designed to perform in harsh conditions, EnSky and EWS Outdoor Access Points feature industrial-grade from IP55 to IP68-rated enclosures, ensuring the APs can withstand extreme outdoor climates. This includes prolonged outdoor exposure to sunlight, extreme cold, frost, snow, rain, hail, heat and humidity.



## Maximized Wi-Fi Coverage

EnSky Outdoor APs are designed for peak performance in a variety of outdoor environments providing high-performance reception and long-range connections. High-transmit power reaches up to 29dBm, ensuring reliable, long-range network coverage.

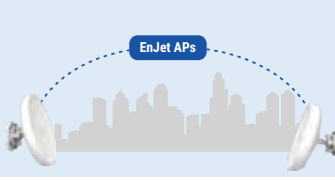
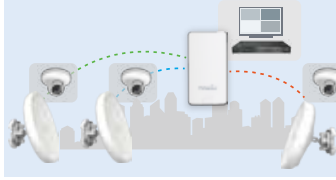
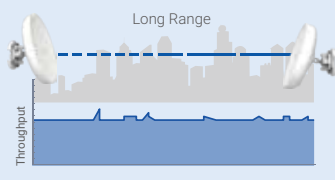
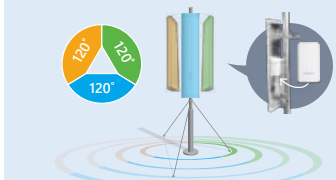
## Flexible Power-over-Ethernet Power Options

EnSky outdoor access points support 1 or 2.5 Gigabit (Wi-Fi 6 series) PoE ports, enabling placement in locations where power outlets are scarce or unavailable such as on poles or rooftop eaves. Power the access points through a connected Ethernet cable directly to a Managed Gigabit PoE Switch or with a PoE adapter up to 328 meter from the power source. And reset to factory default simply via the reset button on the accompanied PoE adapter.

## Simplified Deployment & Provisioning

In combination with SkyKey controller and ezMaster Network Management, EnSky APs are automatically discovered and provisioned. One-click individual or bulk configurations and upgrades save time. In addition, with EnGenius EnWiFi App, these access points can be quickly and easily configured and monitored via a smartphone or tablet by users even with limited networking experience.

## Optimized for Flexible Outdoor Wireless Deployment with EnJet

|  |  |
|--|--|
| <p><b>Point-to-Point</b></p>  <p>EnJet provides a more consistently stable throughput than standard CSMA connections by ordering transmissions into different time slots.</p>  | <p><b>Point-to-Multipoint</b></p>  <p>EnJet Solution features time-division to avoid the hidden node problem commonly found in multi-point transmissions.</p>   |
| <p><b>Long-Range</b></p>  <p>In long range deployments, EnJet ensures high throughput with high-gain antennas (EnStation5-AC/ EnStationAC), while traditional CSMA networks suffer from increasing latency at distance and network size.</p> | <p><b>360° Coverage</b></p>  <p>ENS500EXT-AC supports the use of external antennas to extend coverage to 120 degrees. For an omnidirectional network, install three ENS500EXT-AC with EnGenius sector antenna SA5219 to cover 360° outdoor point-to-multipoint deployments.</p> |

## Protected by Advanced Encryption

With EnSky EWS APs, your network is protected from attacks at multiple levels through advanced wireless encryption standards such as Wi-Fi Protected Access Encryption and authentication. Network threats are quickly detected and avoided through rogue AP detection, email alerts and real-time wireless invasion monitoring, allowing for immediate action to divert network hacks and other security threats.

## Secure Guest Networks

Organizations that offer Internet access to patrons or visitors— notably hotels, retail shops and restaurants—will appreciate EnSky’s guest network capabilities. Establish a secure guest network that blocks access to main corporate computers. Create separate Virtual LANs for increased security, network reliability and bandwidth conservation.



## On-Premises Management Platform

EnGenius EnSky’s on-premises network management platform consists of SkyKey hardware and ezMaster management software. The platform empowers you to monitor, manage, and troubleshoot an indoor network locally or remotely. The plug-and-play SkyKey controller can manage up to 100 EnGenius access points or switches directly with built-in ezMaster software. ezMaster empowers you to setup and maintain multiple customer sites to save time and reduce the operational costs of site visits. You can manage up to 10,000.

# Outdoor AP Comparison Table



| Models                           | ENS202EXT                                | ENS500EXT-AC                    | ENS620EXT                                | ENH1350EXT                           |
|----------------------------------|--|---------------------------------|--|--------------------------------------|
| Wi-Fi Standard                   | 802.11b/g/n                              | 802.11a/b/g/n/ac Wave 2         | 802.11a/b/g/n/ac Wave 2                  | 802.11a/b/g/n/ac Wave 2              |
| Operating Radio                  | 2.4 GHz                                  | 5 GHz                           | 2.4 GHz & 5GHz                           | 2.4 GHz & 5GHz                       |
| Management Radio                 | -  | 2.4 GHz                         | -  | -                                    |
| Max. Data Rate on 2.4GHz         | 300 Mbps                                 | -                               | 400 Mbps                                 | 400 Mbps                             |
| Max. Data Rate on 5GHz           | -  | 867 Mbps                        | 867 Mbps                                 | 867 Mbps                             |
| Radio Chains/ Spatial Streams    | 2 x 2:2                                  | 2 x 2:2                         | 2 x 2:2                                  | 2 x 2:2                              |
| Transmit Power on 2.4GHz         | 26 dBm                                   | -                               | 27 dBm                                   | 23 dBm                               |
| Transmit Power on 5GHz           | -  | 26 dBm                          | 27 dBm                                   | 23 dBm                               |
| Integrated Antenna on 2.4GHz     | -  | -                               | -  | -                                    |
| Integrated Antenna on 5GHz       | -  | -                               | -  | -                                    |
| External Antenna on 2.4GHz       | 2 x 5 dBi (SMA-Type)                     | -                               | 2 x 5 dBi (SMA-Type)                     | 2 x 5 dBi (SMA-Type)                 |
| External Antenna on 5GHz         | -  | 2 x 5dBi (SMA)                  | 2 x 5 dBi (SMA-Type)                     | 2 x 5 dBi (SMA-Type)                 |
| Power-over-Ethernet              | 24V Proprietary                          | 24V Proprietary                 | 24V Proprietary                          | 802.3af/at                           |
| Ethernet Ports                   | 2 x 10/100 Ethernet Ports                | 2 x 10/100/1000 Ethernet Ports  | 2 x 10/100/1000 Ethernet Ports           | 1 x 10/100/1000 Ethernet Port        |
| IP Rating                        | IP55                                     | IP55                            | IP55                                     | IP67                                 |
| Dimensions                       | 186 x 100 x 29 mm                        | 186 x 100 x 29 mm               | 192 x 114 x 48 mm                        | 174 x 111 x 30 mm                    |
| Operating Temperature            | -20°C to 70°C                            | -20°C to 60°C                   | -20°C to 60°C                            | -20°C to 60°C                        |
| Surge Protection                 | L-L: 1KV<br>L-G: 2KV                     | L-L: 1KV<br>L-G: 2KV            | L-L: 1KV<br>L-G: 2KV                     | L-L: 1KV<br>L-G: 2KV                 |
| ESD Protection                   | Air: 8KV                                 | Air: 8KV                        | Air: 8KV                                 | Air: 8KV                             |
| Mounting Type                    | Wall/Pole mount                          | Wall/Pole mount                 | Wall/Pole mount                          | Wall/Pole mount                      |
| Operating Modes                  | AP/CB/WDS AP/WDS BR/<br>WDS STA/Repeater | AP/CB/WDS AP/WDS BR/<br>WDS STA | AP/CB/WDS AP/WDS BR/<br>WDS STA/Repeater | AP/Mesh/CB/WDS AP/WDS BR/<br>WDS STA |
| Mesh Technology                  | -  | -                               | -  | V                                    |
| MU-MIMO                          | -  | V                               | V  | V                                    |
| Beamforming                      | -  | V                               | V  | V                                    |
| On-premise management (ezMaster) | V  | V                               | V  | V                                    |
| Mobile app (EnWiFi App)          | V  | V                               | V  | V                                    |

\*Models vary depending on the region.

# Outdoor AP Comparison Table



| Models                           | ENH1750EXT                           | EWS860AP                       | EWS850AP                           |
|----------------------------------|--------------------------------------|--------------------------------|------------------------------------|
| Wi-Fi Standard                   | 802.11a/b/g/n/ac                     | 802.11a/b/g/n/ac               | 802.11a/b/g/n/ac/ax                |
| Operating Radio                  | 2.4 GHz & 5 GHz                      | 2.4 GHz & 5 GHz                | 2.4 GHz & 5GHz                     |
| Management Radio                 | -                                    | -                              | -                                  |
| Max. Data Rate on 2.4GHz         | 450 Mbps                             | 450 Mbps                       | 574 Mbps                           |
| Max. Data Rate on 5GHz           | 1,300 Mbps                           | 1,300 Mbps                     | 1,201 Mbps                         |
| Radio Chains/ Spatial Streams    | 3 x 3:3                              | 3 x 3:3                        | 2 x 2:2                            |
| Transmit Power on 2.4GHz         | 29 dBm                               | 29 dBm                         | 25 dBm                             |
| Transmit Power on 5GHz           | 29 dBm                               | 29 dBm                         | 23dBm                              |
| Integrated Antenna on 2.4GHz     | -                                    | -                              | -                                  |
| Integrated Antenna on 5GHz       | -                                    | -                              | -                                  |
| External Antenna on 2.4GHz       | 3 x 5 dBi (N-Type)                   | 3 x 5 dBi(N-Type)              | 2 x 5 dBi (SMA-Type)               |
| External Antenna on 5GHz         | 3 x 7 dBi (N-Type)                   | 3 x 7 dBi (N-Type)             | 2 x 5 dBi (SMA-Type)               |
| Power-over-Ethernet              | 802.3at (at in + af out)             | 802.3at (at in + af out)       | 802.3af/at                         |
| Ethernet Ports                   | 2 x 10/100/1000 Ethernet Ports       | 2 x 10/100/1000 Ethernet Ports | 1 x 10/100/1000/2500 Ethernet Port |
| IP Rating                        | IP68                                 | IP68                           | IP67                               |
| Dimensions                       | 285 x 218 x 53 mm                    | 285 x 218 x 53 mm              | 190 x 124 x 47 mm                  |
| Operating Temperature            | -20°C to 70°C                        | -20°C to 70°C                  | -20°C to 60°C                      |
| Surge Protection                 | L-L: 4KV<br>L-G: 8KV                 | L-L: 4KV<br>L-G: 8KV           | L-L: 1KV<br>L-G: 2KV               |
| ESD Protection                   | Air: 6KV                             | Air: 6KV                       | Air: 8KV                           |
| Mounting Type                    | Wall/Pole mount                      | Wall/Pole mount                | Wall/Pole mount                    |
| Operating Modes                  | AP/Mesh/CB/WDS AP/WDS BR/<br>WDS STA | AP/Mesh                        | AP/Mesh/WDS AP/WDS BR/<br>WDS STA  |
| Mesh Technology                  | V                                    | V                              | V                                  |
| MU-MIMO                          | -                                    | -                              | V                                  |
| Beamforming                      | -                                    | -                              | V                                  |
| On-premise management (ezMaster) | V                                    | V                              | V                                  |
| Mobile app (EnWiFi App)          | -                                    | V                              | V                                  |

\*Models vary depending on the region.

# Outdoor CPE Comparison Table



EnJet



EnJet



EnJet

| Models   | EnStation5-AC                                 | EnStationAC                                   | ENS500-AC                      |
|--|---|---|--------------------------------|
| Wi-Fi Standard   | 802.11a/b/g/n/ac Wave 2                       | 802.11a/b/g/n/ac Wave 2                       | 802.11a/b/g/n/ac Wave 2        |
| Operating Radio  | 5 GHz   | 5 GHz   | 5 GHz                          |
| Management Radio   | 2.4 GHz                                       | 2.4 GHz                                       | 2.4 GHz                        |
| Max. Data Rate on 2.4GHz   | -   | -   | -                              |
| Max. Data Rate on 5GHz   | 867 Mbps                                      | 867 Mbps                                      | 867 Mbps                       |
| Radio Chains/ Spatial Streams  | 2 x 2:2                                       | 2 x 2:2                                       | 2 x 2:2                        |
| Transmit Power on 2.4GHz   | -   | -   | -                              |
| Transmit Power on 5GHz   | 26 dBm  | 26 dBm  | 26 dBm                         |
| Integrated Antenna on 2.4GHz   | -   | -   | -                              |
| Integrated Antenna on 5GHz<br>(Antenna Beamwidth :<br>Horizontal x Vertical) | 19 dBi<br>(Port1: 30°x18°;<br>Port2: 18°x30°) | 19 dBi<br>(Port1: 30°x18°;<br>Port2: 18°x30°) | 14 dBi                         |
| External Antenna on 2.4GHz   | -   | -   | -                              |
| External Antenna on 5GHz   | -   | -   | -                              |
| Power-over-Ethernet  | 24V Proprietary                               | PoE: 802.3at<br>PSE: 802.3af                  | 24V Proprietary                |
| Ethernet Ports   | 2 x 10/100/1000 Ethernet Ports                | 2 x 10/100/1000 Ethernet Ports                | 2 x 10/100/1000 Ethernet Ports |
| IP Rating  | IP55  | IP55  | IP55                           |
| Dimensions   | Φ190 x 38 mm                                  | Φ190 x 38 mm                                  | 186 x 100 x 29 mm              |
| Operating Temperature  | -20°C to 60°C                                 | -20°C to 60°C                                 | -20°C to 60°C                  |
| Surge Protection   | L-L: 1KV<br>L-G: 2KV                          | L-L: 1KV<br>L-G: 2KV                          | L-L: 1KV<br>L-G: 2KV           |
| ESD Protection   | Air: 8KV                                      | Air: 8KV                                      | Air: 8KV                       |
| Mounting Type  | Wall/Pole mount                               | Wall/Pole mount                               | Wall/Pole mount                |
| Operating Modes  | AP/CB/WDS AP/WDS STA                          | AP/CB/WDS AP/WDS STA                          | AP/CB/WDS AP/WDS STA           |
| Mesh Technology  | -   | -   | -                              |
| MU-MIMO  | √   | √   | √                              |
| Beamforming  | √   | √   | √                              |
| On-premise management<br>(ezMaster)  | √   | √   | √                              |
| Mobile app (EnWiFi App)  | √   | √   | √                              |

\*Models vary depending on the region.

# Outdoor CPE Comparison Table



EnJet



| Models                           | ENH500                                       | ENS202                                      |
|----------------------------------|--|---|
| Wi-Fi Standard                   | 802.11a/b/g/n/ac Wave 2                      | 802.11b/g/n                                 |
| Operating Radio                  | 5 GHz  | 2.4 GHz                                     |
| Management Radio                 | 2.4 GHz                                      | -   |
| Max. Data Rate on 2.4GHz         | -  | 300 Mbps                                    |
| Max. Data Rate on 5GHz           | 867 Mbps                                     | -   |
| Radio Chains/ Spatial Streams    | 2 x 2:2                                      | -   |
| Transmit Power on 2.4GHz         | -  | 26 dBm                                      |
| Transmit Power on 5GHz           | 27 dBm                                       | -   |
| Integrated Antenna on 2.4GHz     | -  | 8dBi<br>(Port1: 78°x45°;<br>Port2: 54°x59°) |
| Integrated Antenna on 5GHz       | 16dBi<br>(Port1: 40°x20°;<br>Port2: 40°x20°) | -   |
| External Antenna on 2.4GHz       | -  | -   |
| External Antenna on 5GHz         | -  | -   |
| Power-over-Ethernet              | 24V Proprietary                              | 24V Proprietary                             |
| Ethernet Ports                   | 2 x 10/100/1000 Ethernet Ports               | 2 x 10/100 Ethernet Ports                   |
| IP Rating                        | IP55   | IP55  |
| Dimensions                       | 260 x 84 x 55 mm                             | 186 x 100 x 29 mm                           |
| Operating Temperature            | -20°C to 60°C                                | -20°C to 70°C                               |
| Surge Protection                 | L-L: 1KV<br>L-G: 2KV                         | L-L: 1KV<br>L-G: 2KV                        |
| Mounting Type                    | Air: 8KV                                     | Air: 8KV                                    |
| ESD Protection                   | Wall/Pole mount                              | Wall/Pole mount                             |
| Operating Modes                  | AP/CB/WDS AP/WDS STA                         | AP/CB/WDS AP/WDS BR/<br>WDS STA             |
| Mesh Technology                  | -  | -   |
| MU-MIMO                          | √  | -   |
| Beamforming                      | √  | -   |
| On-premise management (ezMaster) | √  | √   |
| Mobile app (EnWiFi App)          | √  | √   |

\*Models vary depending on the region.

# Software Lists

## Access Points / CPE

### Operating Models

#### Access Point

In Access Point Mode, AP behaves like a central connection for stations or clients that support IEEE 802.11ax/ac/a/b/g/n networks. The stations and clients must be configured to use the same SSID (Service Set Identifier) and security password to associate with the AP. The AP supports up to eight SSIDs per band at the same time for secure access.

#### Client Bridge

The Access Points can be used as a centralized Access Point with which other EnGenius Wireless Client Bridges can associate; leveraging the long-range capability of their internal high-gain directional antennas, resulting in a very cost-effective solution to expand a company network over a multiple building campus.

#### WDS AP

This operating mode allows wireless connections to the Access Point using WDS technology. In this mode, configure the MAC addresses in both Access Points to enlarge the wireless area by enabling WDS Link settings.

#### WDS Bridge

In WDS Bridge Mode, the Access Points can wirelessly connect different LANs by configuring the MAC address and security settings of each device. Use this mode when two wired LANs located a small distance apart want to communicate with each other. The best solution is to use the Access Point to connect two wired LANs, as shown in the following diagram.

#### WDS Station

WDS Station mode expands the WDS by receiving a wireless signal/service and sharing it through the Ethernet port.

#### Mesh Mode

Regular scanning signal level of an environment to provide parameters for performing Auto Transmit power and auto channel.

\*Supported operating mode will be varied by different models.

### Exquisite RF Management

#### EnJet (Available on EnJet series)

EnJet provides a more consistently stable throughput than standard CSMA connections by ordering transmissions into different time slots. In long range deployments, EnJet ensures consistent performance, while traditional networks using the CSMA protocol suffer from exponentially increasing latency as distance and network size increases.

#### Time Slot (Available on EnJet series)

EnJet features PtP and PtMP technology, which lets your network overcome the latency of the CSMA/CA protocol design. Access points form a well-ordered flow of transmissions based on predefined times slots. Like cars, traffic is able flow efficiently when an external coordination mechanism is present (traffic lights) and can come to a sudden halt when it is not.

#### Station Priority (Available on EnJet series)

When an outdoor network spans large distances, its access points or stations are unable to detect each other's transmissions. Frequent collisions will occur when multiple points transmit simultaneously. EnJet features PtP and PtMP technology, which allocates transmissions from remote locations into slots for efficient time-based management.

#### ACK timeout

Enabling the function to proceed the long-range transmission over 1Km should be perform the optimal value.

#### Auto Transmit Power

Automatically adjust power level when EnGenius Access Points operate wireless communication service under an environment.

#### Auto Channel

Automatically assign a clearly channel to perform RF transmission under a pervasive environment.

#### Bandwidth Selection

Choose bandwidth of channels, the widely bandwidth will carry more data to enhance the transmission throughput.

#### Transmit Power Configuration

Configure the Transmit power to the proper value for optimizing your network.

#### Fast Roaming (802.11k)

Collect the parameters of neighborhood Access Points to find the optimal AP.

#### Fast Roaming (802.11v)

Cognize the signal strength of client devices under each to steer these client devices to one of Access Points if signal level is less than the default value of AP systems.

#### Band Steering

Steer client devices to a proper frequency band for getting more bandwidth and speed under an Access Point. The change will improve overall performance.

#### Discard Legacy clients

Discard legacy 11 a/b/g client to prevent the slowing down performance of an Access Point. The action can let Access Point carry more client devices under a pervasive environment.

#### Disable 11ax transmission on 2.4GHz

Disable 11ax 2.4GHz wireless mode; the setting will be allowed client devices to associate with an Access Point throughout 11b/g/n mode.

#### Bit Rate Control (Min. Bit Rate)

An administrator can improve the performance of client devices on the 2.4 GHz and 5GHz band via disabling lower bitrates on both radios. Setting the higher bit rate can reduce the loading of Access Points and overall network, as well as improve performance on seamless roaming.

### Optimize Performance

#### Quality of Service

Compliance with IEEE 802.11e standard  
Prioritizes voice over data for both tagged and untagged traffic  
Transmit video, voice and data at the same SSID

#### Power Save Mode (UAPSD)

Some client devices are enabled UAPSD as defaulted for saving their power. Under UAPSD, AP will keep the connection with client devices and without further transmission. When client devices send the request to AP, AP will start to transmit data. The U-APSD will be benefited for VOIP device to save power.

#### Pre-Authentication

Compliance with 802.11i & 11x

#### PMK Caching

Compliance with 802.11i  
If wireless client devices have authenticated to an access point, it does not perform a full authentication exchange when client devices roaming between access points.

#### Fast Roaming (802.11r)

Use a Fast Transition key to handover between Access Points. The behavior will assist client devices move from an AP to one of APs seamless under the same wireless network.

#### Multicast to Unicast Conversion

Using the IGMP protocol, an access Point delivers high definition content to a large number of clients simultaneously.

### Easy to Management

#### Multiple SSIDs

Each radio interface is supported 8 sets of SSIDs. Each SSID can be worked to network client devices independently. Before performing advanced functions, users can consider enable either 2.4GHz or 5GHz radios, and both radio simultaneously.

#### Guest Network (Only in Stand-alone mode)

Isolate each client for avoiding an unnecessary touch, leaking sensitive data, and enhancing Internet security and reliability.

#### VLAN Tag

Independent VLAN setting can be enable or disable. Any packet that enters the Device without a VLAN tag will have a VLAN tag inserted with a PVID (Ethernet Port VID).

#### VLAN Per SSID

Integrate VLAN ID with a SSID interface to forward packets over the defined path.

#### Management VLAN

Feature is enabled with specified VLAN ID, the device will only allow management access with the same specified VLAN ID from remotely location by using protocols such as telnet, SSH, snmp, syslog etc.

#### Traffic Shaping

Controls the bottle of bandwidth to offer the limited bandwidth for an individual SSID or each client per Access Point.



## Easy to Management

### MAC Address Filtering

Filter up to 32 sets MAC addresses per SSID.

### E-Mail Alert

Provides a network monitoring tool for administrators to stay informed the configuration change.

### Finger Printing

The value added solution collects information of client devices including name of devices, IP address, MAC address, Operating system version, transmitting and receiving data, and signal level.

### Save Configuration as Users Default

Save the customized configuration as default value. The saved default value will be resumed when pushing HW reset button or via web UI.

### Scheduler AP/SSID Interfaces

Perform a regular reboot on access point at assigned schedule.  
Perform it to enable or disable SSIDs of 2.4GHz or 5GHz interfaces from a period time. The change can save power of the AP.

### SNMP & MIB

v1/v2c/v3 support  
MIB I/II, Private MIB  
CLI supported

### RADIUS Accounting

Help operators to offload 3G to Wi-Fi seamlessly.

### Wireless Clients list

Provide the list to display real status of wireless client devices on this Access Point.

### Hotspot 2.0

This function will allow client devices to discover wireless Access Point under an environment and to automatically exchange data for getting authorization on accessing Internet when roaming between Access Points.

## Comprehensive Protection

### Wireless Encryption Standard

EnGenius supports the securable encryption including WPA2, WPA3 and OWE.

### Hide SSID in beacons

Enable the hidden SSIDs function will let SSID invisible under SSIDs list when client devices seek to find the SSID.

### L2 Isolation

Block the communication between the associated clients to communicate with other clients from all hosts on the same subnet.

### L2 Isolation with whitelist

Users can enable this function to allow devices to be accessed by client devices when enabling L2 Isolation.

### HTTPS

A secure communication protocol can be enabled to allow secure management web access over a computer network.

### SSH Tunnel

A secure communication protocol can be enabled to allow secure remote shell access or command execution.

## ezMaster

### Controlling capability

#### Managing Qty of Devices

Maximum 1,000 pcs of EnGenius Access Points and switches when operating under VM platform.

Maximum 10,000 pcs of EnGenius Access Points and switches when operating under AMI platform.

### Dashboard

#### Managed Access Points / Switches

Users can realize status of Access Points and Switches

#### System Resource Usage

CPU: Usage (%) of CPU for this ezMaster

Memory: Usage (%) of Memory for this ezMaster

Disk: Usage (%) of Disk for this ezMaster

#### System Overview

Users can realize ezMaster software version on this instance.

#### Recent Projects

Updated or revised projects are listed in the right side bar.

### Global Settings

#### Account Management (Multi-Tenant)

Admin: A supervisor user can be considered as a master which can implement any managerial behaviors to your ezMaster.

Users: Admin can assign one of users to a project. Users can edit, manage, remove, add devices, and block/allow client devices to access Internet.

Managers: Admin can assign one of users to a project. Managers can edit, manage, remove devices, and block/allow client devices to access Internet.

Guests: Master can assign one of guests to a specified project. Under this project, a guest can review any information, except for configuration.

#### E-Mail Alert

Provide a network monitoring tool for administrators stay informed the configuration change.

#### System Overview

Backup overall setting of an ezMaster account. Users can restore this settings/ configuration to one ezMaster easily.

#### Reboot/Reset

Select to reboot or reset your ezMaster VM under your application platform.

#### Background Scanning

Regular scanning signal level of an environment to provide parameters for performing Auto Transmit power and auto channel.

#### Diagnostic

Enable this function to detect the connecting status of this ezMaster.

#### Auto Transmit Power

Automatically adjust power level when EWS access points work at an environment.

#### Auto Channel

Automatically assign a clearly channel to perform RF transmission under a pervasive environment.

#### Software Update

Update ezMaster throughout manually update.

Update ezMaster throughout one-click-update function.

#### Inventory

Put AP to the inventory list before managing. You can choose either ways to add AP into your inventory,

A)Manually Insert MAC and checkcode for putting devices into inventory.

B)Import csv file to inventory. The csv file will be contented the MAC list of devices and checkcode.

#### Scheduler Settings

The value added solution collect information of client devices including name of devices, IP address, MAC address, Operating system version, transmitting and receiving data, and signal level.

## Cluster Setting (Group Setting)

### SSID Setting

Support 8 SSIDs on both 2.4GHz and 5GHz radios. Users can enable either 2.4GHz or 5GHz radios, as well as enable both radios under a SSID.

### Hidden SSID in beacons

Hide this SSID to avoid users for finding it.

### VLAN Per SSID

Integrate VLAN ID with a SSID interface to forward packets over the defined path.

### Fast Roaming

Collect parameters of neighborhood Access Points to find the optimal AP, then client devices will use a fast transition key to handover between AP.

### Band Steering

Steer client devices to a proper frequency band for getting more bandwidth and speed under an Access Point.

### NAS IP

The NAS IP address to be sent in RADIUS packets from that server.

### NAS ID

It is primarily used to notify the source of RADIUS access request so that, the RADIUS server can choose policy for that request.

### NAS Port

Assign a port to be sent in Radius packets from that server.

### Wireless Encryption Standard

OWE  
WPA3/WPA2 Personal (SAE/PSK-AES)  
WPA3/WPA2 Enterprise

### L2 Isolation

Block the communication between the associated clients to communicate with other clients from all hosts on the same subnet. The isolation will be greater for users to isolate each client devices for malicious behavior.

### L2 Isolation with whitelist

Users can enable this function to allow devices to be accessed by client devices when enabling L2 Isolation.

### Whited List/Blocked List per SSID

- Whited List: Enable a list to allow client devices for accessing to this SSID.
- Blocked List: Enable a list to block client devices for accessing to this SSID.
- Filter up to 32 sets of MAC addresses per SSID.

### Captive Portal (NAT / Bridge mode)

Differentiate the authority of users on using Internet access. When enabling the NAT mode, the client devices will get IP from the default NAT server.

### Traffic Shaping (bandwidth control)

- Controls the bottle of bandwidth to offer the limited bandwidth for an individual SSID or each client per Access Point.
- Traffic shaping function will be allowed to configure as Kbps or Mbps.

### Hotspot 2.0

This function will allow client devices to discover wireless Access Point under an environment and to automatically exchange data for getting authorization on accessing internet when roaming between Access Points.

### Social Login

The function will apply users information to achieve single sign-on which does not need to create a new account for a specific service. In this stage, EnGenius will support facebook login function.

## Monitoring

### Rogue AP Detection

Enable the function to detect the fake access points in the environment.

### Active Clients

The page will show clients' information including client name, getting IP, MAC address, Client OS, SSID, Band, Tx, Rx, and RSSI information.

### Access Point

Top ten traffic for the Managed AP. We can reserve data up to 7 days.

## Visualization

### Topology View

Topology view could assist users to realize status of your network and then find abnormal devices for trouble shooting easily.

### Map View

Enter this view to find locations of Access Points or switches on global view of google map. You may also filter one of APs from google map easily.

### Floor Plan View

Upload a floor plan for this project. Users can put a known floor plan and then place Access Points or switches on this view.

### Mesh View

Mesh view also can be realize the overall topology for mesh.

### Hotspot Service

Captive Portal profile setting will be set a profile to apply on one of SSIDs. Users can configure authentication types, session of connecting clients, redirect page types and redirect behavior.

### System Overview

Users can realize ezMaster software version on the ezMaster / SkyKey management platform.

### Recent Projects

Updated or revised projects are listed in the right side bar.

## Maintenance

### Bulk Update

Throughout this function to proceed mass upgrade procedure on a specific AP.

### Bulk Update (Switch)

Throughout this function to proceed mass upgrade procedure on a specific switch.

### One Click Update

Click one button to synchronize with server on checking up-to-date firmware and then decide to upgrade or not by users. This function is available on Access Points, Switches, and ezMaster.

### AP Remote Log

Synchronize clients' information of AP to a remote log server. The information will be included the MAC, browsing url, uptime, last seen and IP information of client devices.

**Note:** The capacity of AP will be reduced when enabling AP remote log function.

## EnWiFi Mobile App

### Controlling capability

#### Proceed Initial Configuration

When powering up EnGenius Access Points, users can use EnWiFi App to configure AP during initial settings.

#### Proceed Cluster (group) Settings

Users can set Wi-Fi interfaces settings, Operating modes, SSIDs settings and VLAN setting and then put to a cluster/group. This is easier for initial configuration throughout your mobile / pad devices.

#### In-time Monitoring

You can review dashboard of an AP to realize status of these devices and then proceed further management. These information includes signal level (RSSI), transmit / receive performance, latency, and firmware version.

#### Backup configure files

Users can backup configure files to your mobile devices and then restore to the Access Points. The backup and restore is greater on deploying same devices on multiple sites.

#### Firmware Update via OCU

Click one button to synchronize with server on checking up-to-date firmware and then decide to upgrade or not by users.

# Specifications, Antenna Patterns, and Product Views

## ENS202EXT Specifications

### Radio Specification

#### Wi-Fi Standards

802.11b/g/n

#### Tx Power (Aggregated)

2.4GHz: Max. 26dBm\*

5GHz: -

#### Data Rate

802.11b: 1, 2, 5.5, 11Mbps

802.11g: 6, 9, 12, 18, 36, 48, 54Mbps

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: -

802.11ax: -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 2x2

5GHz: -

#### MU-MIMO Capability

2.4GHz: 2x2

5GHz: -

#### Modulation Type

802.11b: BPSK, QPSK, CCK

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

802.11ax: -

#### Support frequency

2400-2483.5MHz\*

#### Tx Beamforming

-

### Antenna Specification

#### 2.4GHz

2 x 5dBi (SMA Type)

#### 5GHz

-

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device.

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

Proprietary 24V

#### DC-Input

-

#### Power Consumption

PoE: Max. 10.486W

### Mechanical Specification

#### Dimensions

186 x 100 x 29 mm

#### Weight

300 g

### Environmental Specification

#### Operating Temperature

-20 to 70 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC, NCC

#### Safety Compliance

CB, BSMI

#### Wi-Fi Alliance

-

#### WEEE

Yes

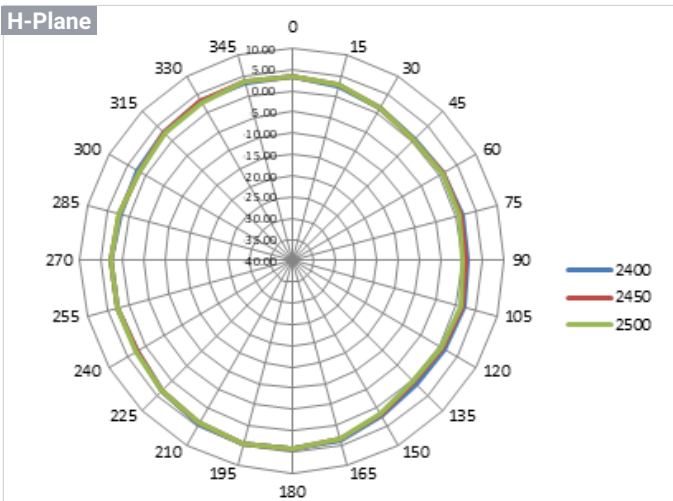
#### RoHS

Yes

# ENS202EXT Antenna Patterns

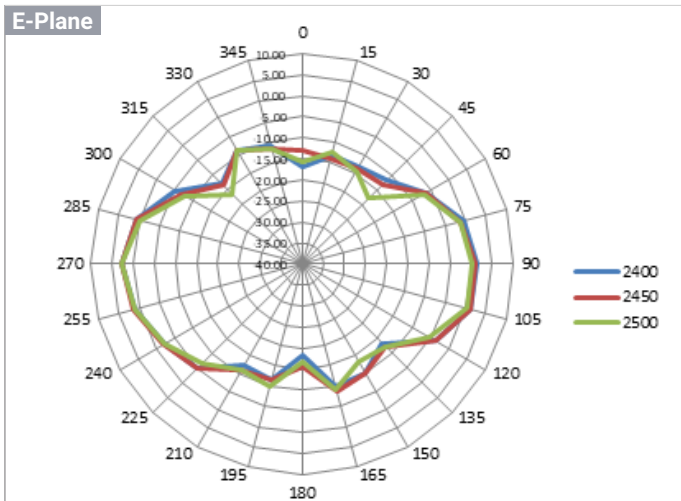
2.4GHz

H-Plane

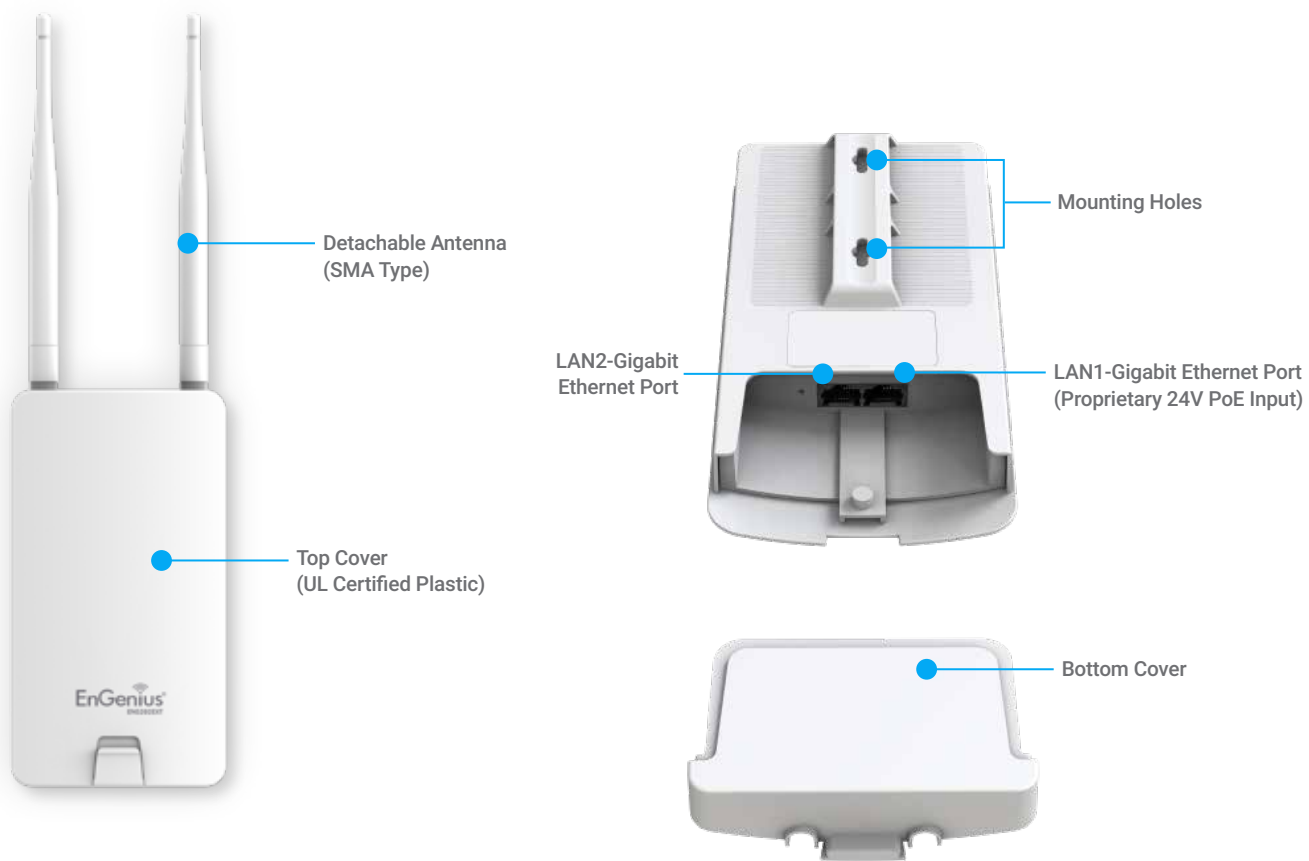


2.4GHz

E-Plane



## ENS202EXT Product Views



# Specifications, Antenna Patterns, and Product Views

## ENS500EXT-AC Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac Wave 2

#### Tx Power (Aggregated)

2.4GHz: -

5GHz: Max. 26dBm\*

#### Data Rate

802.11b: -

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

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 1x1 (management radio)

5GHz: 2x2

#### MU-MIMO Capability

2.4GHz: -

5GHz: 2x2

#### Modulation Type

802.11b: -

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

### Antenna Specification

#### 2.4GHz

-

#### 5GHz

2 x 5dBi (SMA Type)

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device or included EPA2406GR PoE Adapter

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

Proprietary 24V

#### DC-Input

-

#### Power Consumption

PoE: Max. 8.93W

### Mechanical Specification

#### Dimensions

186 x 100 x 29 mm

#### Weight

504 g

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC

#### Safety Compliance

CB, BSMI

#### Wi-Fi Alliance

-

#### WEEE

Yes

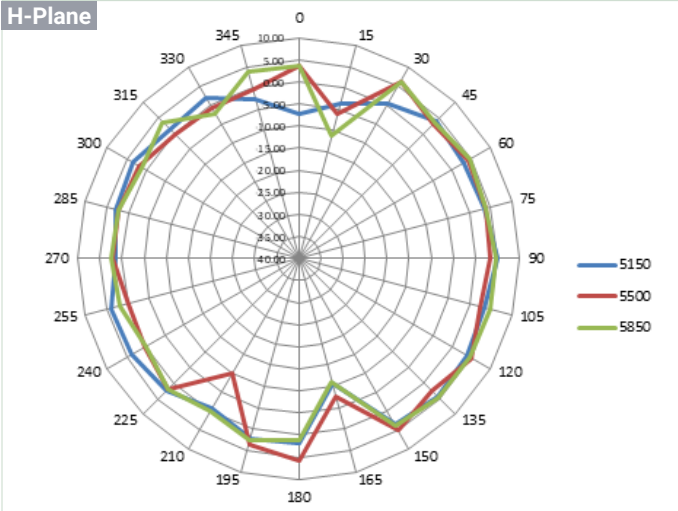
#### RoHS

Yes

# ENS500EXT-AC Antenna Patterns

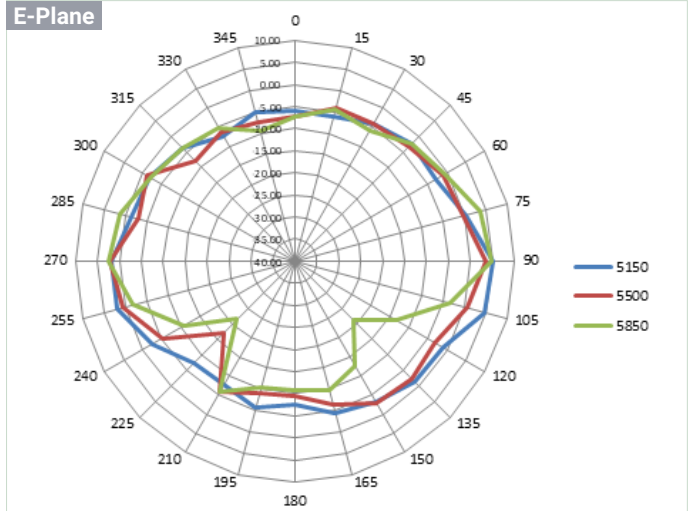
5GHz

H-Plane

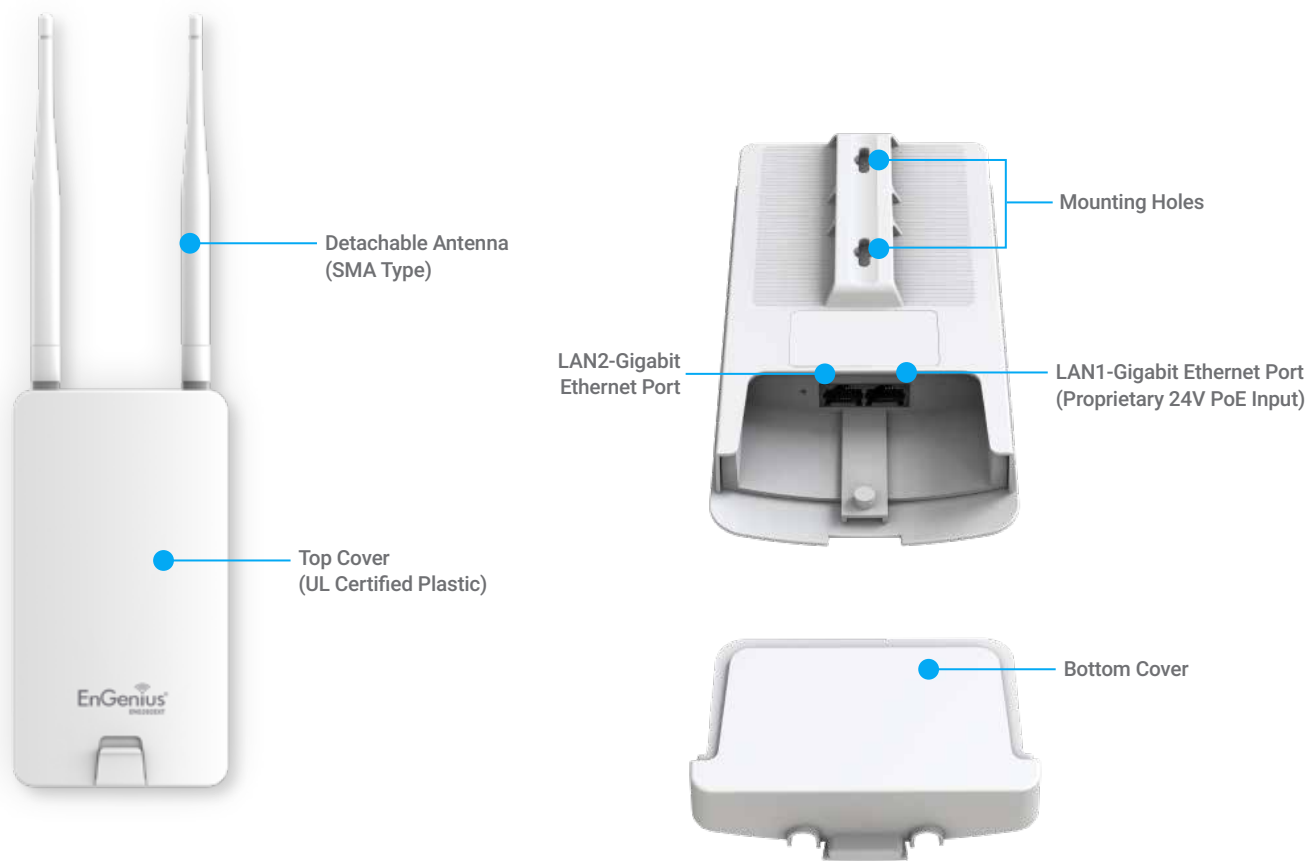


5GHz

E-Plane



## ENS500EXT-AC Product Views





# Specifications, Antenna Patterns, and Product Views

## ENS620EXT Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac Wave 2

#### Tx Power (Aggregated)

2.4GHz: Max. 27dBm\*

5GHz: Max. 27dBm\*

#### Data Rate

802.11b: 1, 2, 5.5, 11Mbps

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

802.11n: 6.5 to 400Mbps (MCS0 to MCS15, HT20 to HT40, support 256-QAM modulation to achieve 400Mbps under 2.4GHz)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 2x2

5GHz: 2X2

#### MU-MIMO Capability

2.4GHz: 2x2

5GHz: 2X2

#### Modulation Type

802.11b: BPSK,QPSK, CCK

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

### Antenna Specification

#### 2.4GHz

2 x 5dBi (SMA Type)

#### 5GHz

2 x 5dBi (SMA Type)

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device.

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

Proprietary 24V

#### DC-Input

-

#### Power Consumption

PoE: Max. 15W

### Mechanical Specification

#### Dimensions

192 x 114 x 48 mm

#### Weight

504 g

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC, RCM, NCC

#### Safety Compliance

CB, UL, BSMI

#### Wi-Fi Alliance

Yes

#### WEEE

Yes

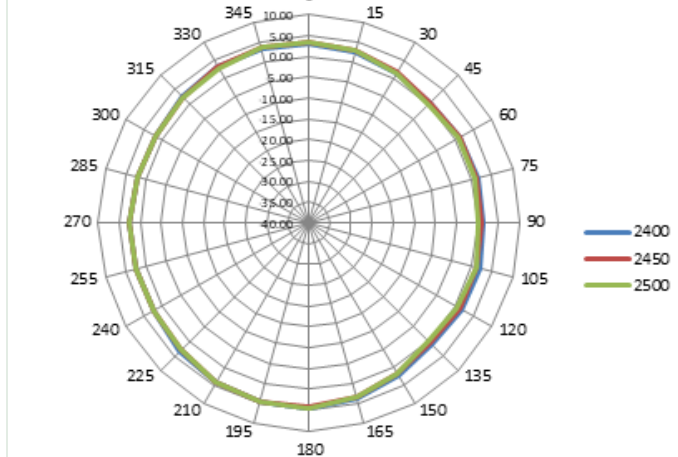
#### RoHS

Yes

# ENS620EXT Antenna Patterns

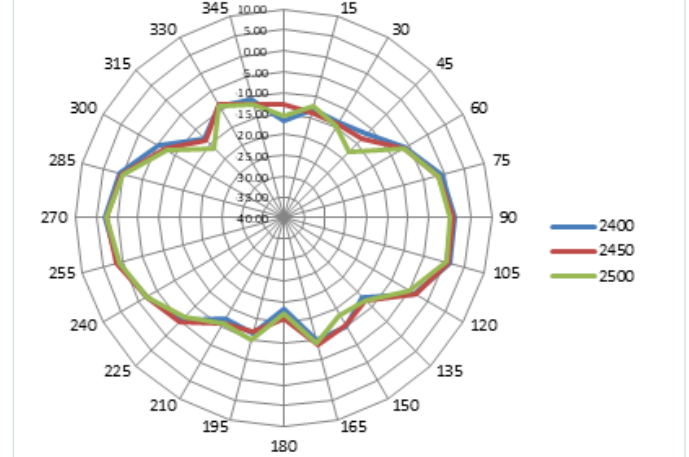
2.4GHz

H-Plane



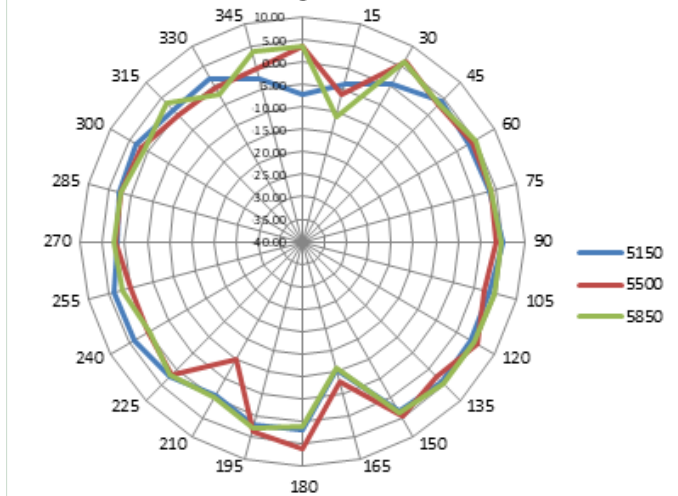
2.4GHz

E-Plane



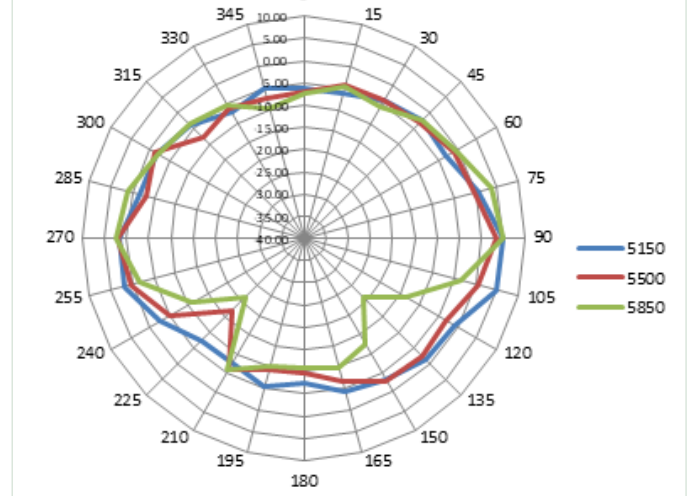
5GHz

H-Plane

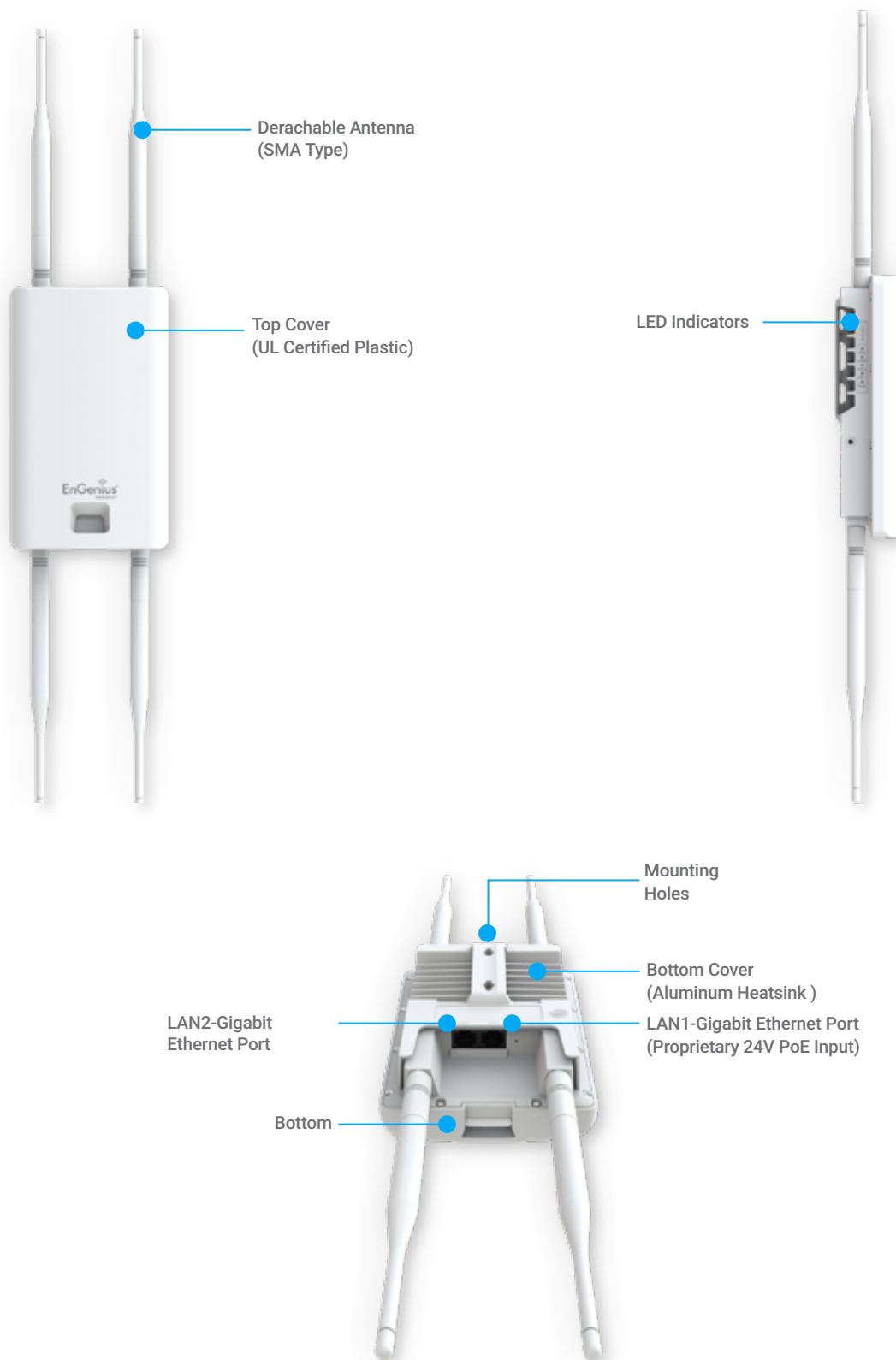


5GHz

E-Plane



## ENS620EXT Product Views



# Specifications, Antenna Patterns, and Product Views

## ENH1350EXT Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac Wave 2

#### Tx Power (Aggregated)

2.4GHz: Max. 23dBm\*

5GHz: Max. 23dBm\*

#### Data Rate

802.11b: 1, 2, 5.5, 11Mbps

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

802.11n: 6.5 to 400Mbps (MCS0 to MCS15, HT20 to HT40, support 256-QAM modulation to achieve 400Mbps under 2.4GHz)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 2x2

5GHz: 2X2

#### MU-MIMO Capability

2.4GHz: 2x2

5GHz: 2X2

#### Modulation Type

802.11b: BPSK,QPSK, CCK

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

### Antenna Specification

#### 2.4GHz

2 x 5dBi (SMA Type)

#### 5GHz

2 x 5dBi (SMA Type)

### Physical Interfaces

#### Networking Ethernet Port

1 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the accompanied PoE adapter EPA5006GR

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

PoE: 802.3af/at , Proprietary 54V

#### DC-Input

-

#### Power Consumption

PoE: Max. 12.6W

### Mechanical Specification

#### Dimensions

174 x 111 x 30 mm

#### Weight

829.5 g

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP67

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC, NCC

#### Safety Compliance

CB, BSMI

#### Wi-Fi Alliance

Yes

#### WEEE

Yes

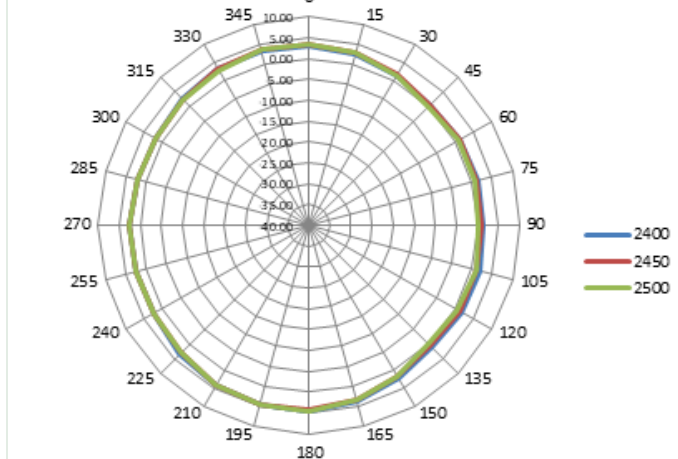
#### RoHS

Yes

# ENH1350EXT Antenna Patterns

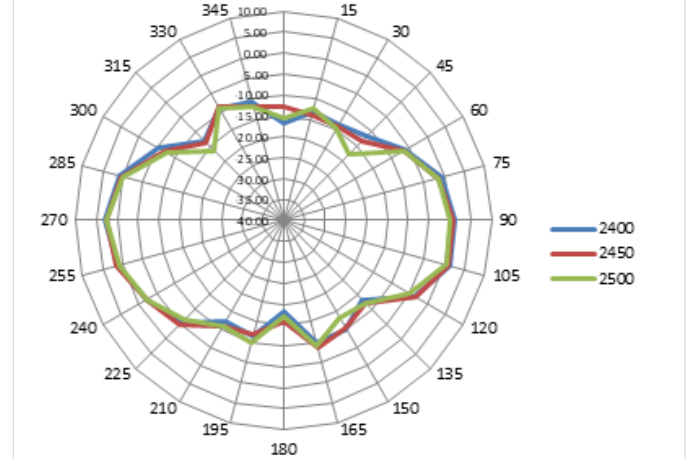
2.4GHz

H-Plane



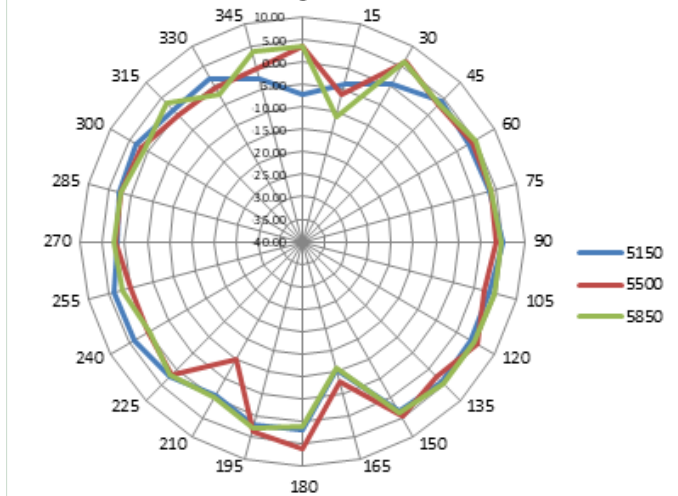
2.4GHz

E-Plane



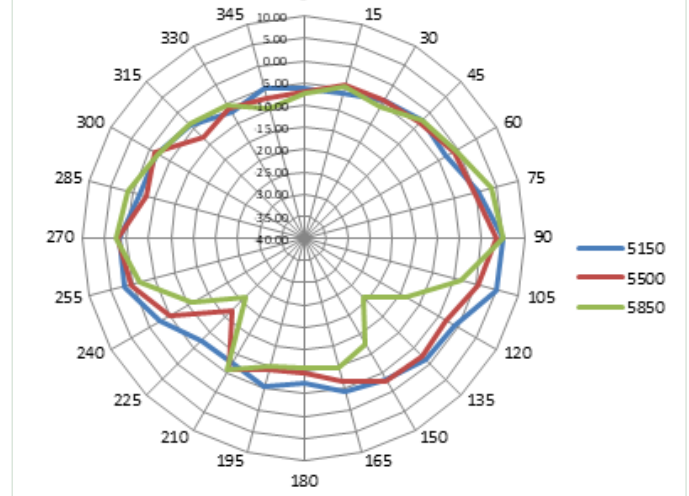
5GHz

H-Plane

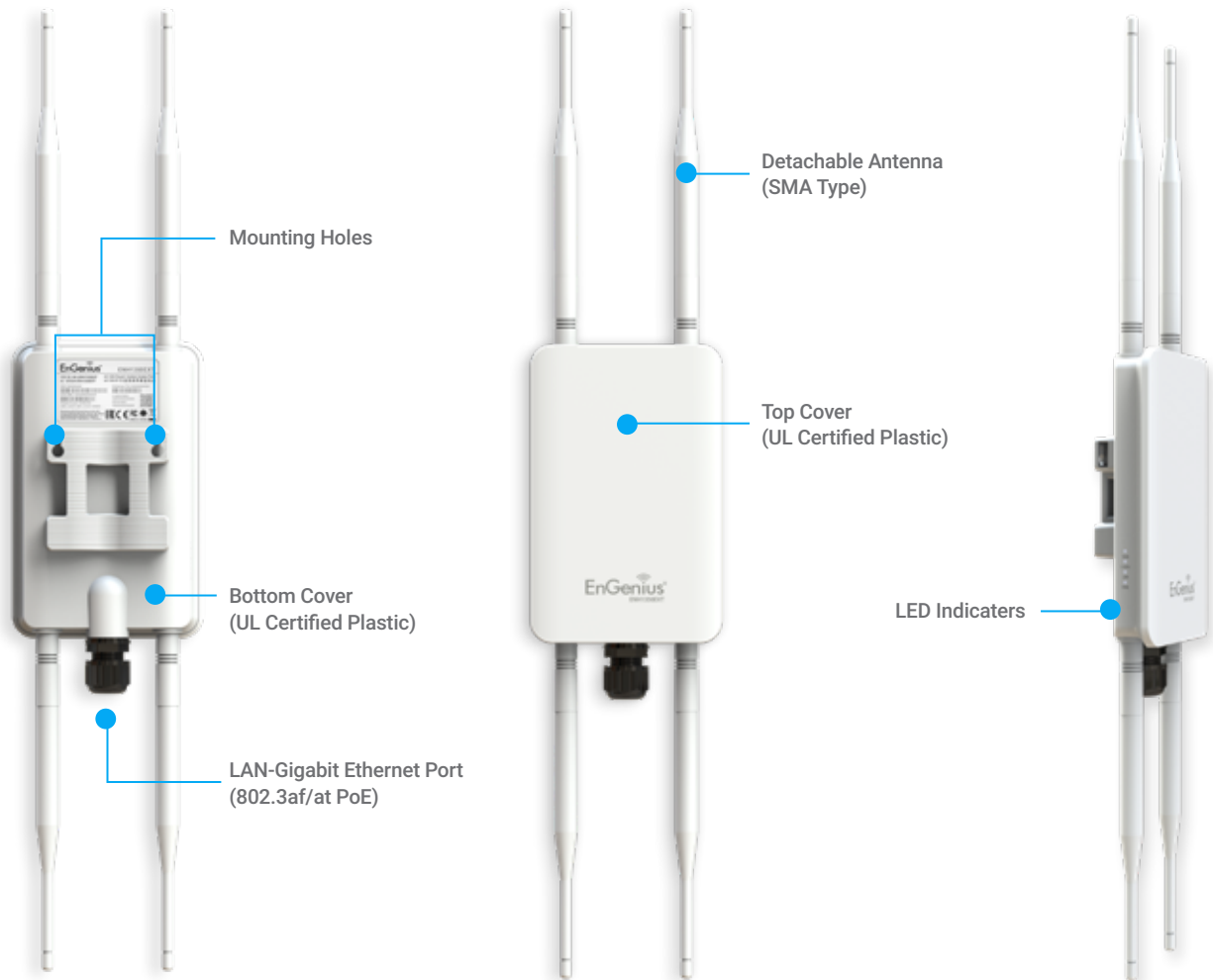


5GHz

E-Plane



## ENH1350EXT Product Views



# Specifications, Antenna Patterns, and Product Views

## ENH1750EXT Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac

#### Tx Power (Aggregated)

2.4GHz: Max. 29dBm\*

5GHz: Max. 29dBm\*

#### Data Rate

802.11b: 1, 2, 5.5, 11Mbps

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

802.11n: 6.5 to 450Mbps (MCS0 to MCS23, HT20 to HT40)

802.11ac: 6.5 to 1300Mbps (MCS0 to MCS9, NSS=1 to 3, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 3x3

5GHz: 3x3

#### MU-MIMO Capability

2.4GHz: 3x3

5GHz: 3x3

#### Modulation Type

802.11b: BPSK,QPSK, CCK

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

-

### Antenna Specification

#### 2.4GHz

3 x 5dBi (N-Type)

#### 5GHz

3 x 7dBi (N-Type)

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

NA

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

PoE: 802.3at ; PSE: 802.3af when inputting 802.3at

#### DC-Input

-

#### Power Consumption

PoE: 22W; PoE+PSE: 37.4W

### Mechanical Specification

#### Dimensions

285 x 218 x 56 mm

#### Weight

2070 g

### Environmental Specification

#### Operating Temperature

-20 to 70 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP68

#### Surge Protection

L-L: 4KV

L-G: 8KV

#### ESD Protection

Air: 6KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC, RCM

#### Safety Compliance

CB

#### Wi-Fi Alliance

-

#### WEEE

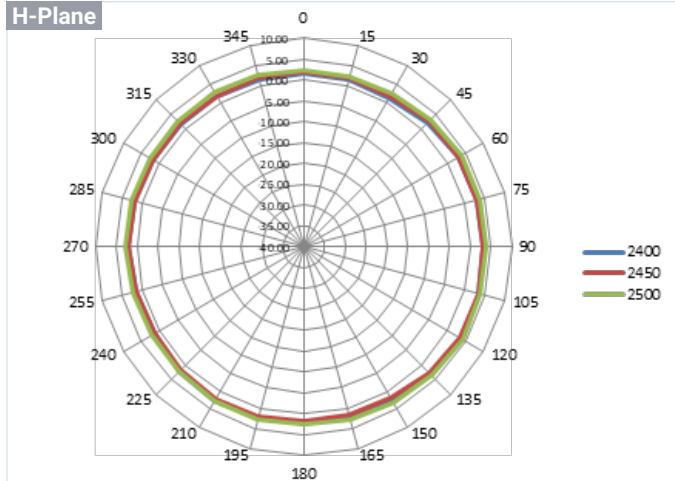
Yes

#### RoHS

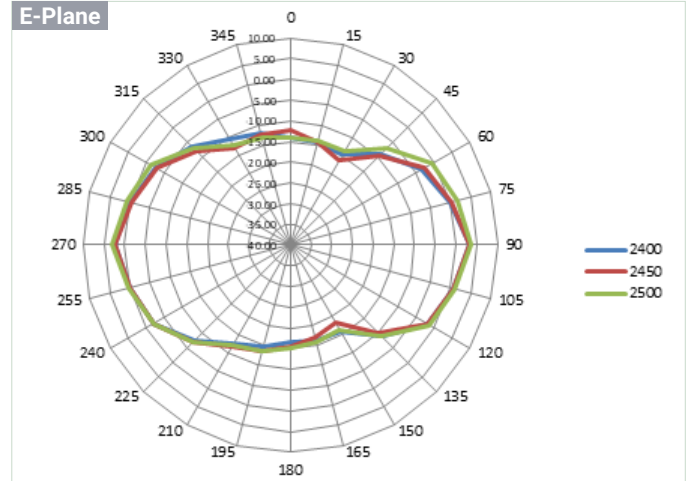
Yes

# ENH1750EXT Antenna Patterns

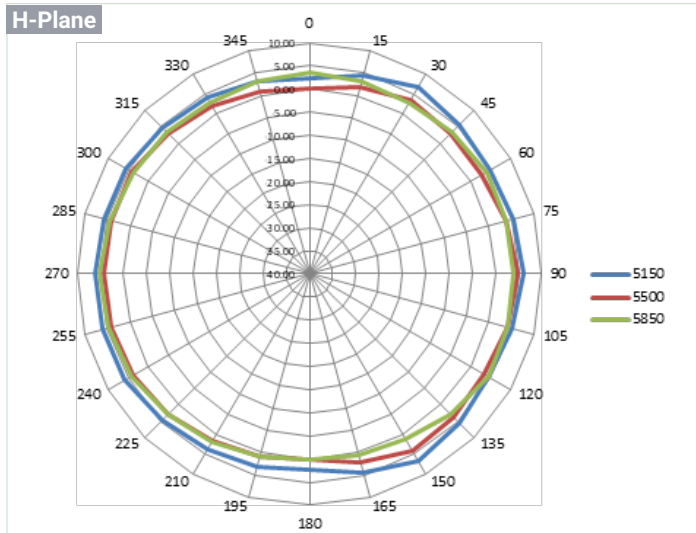
2.4GHz



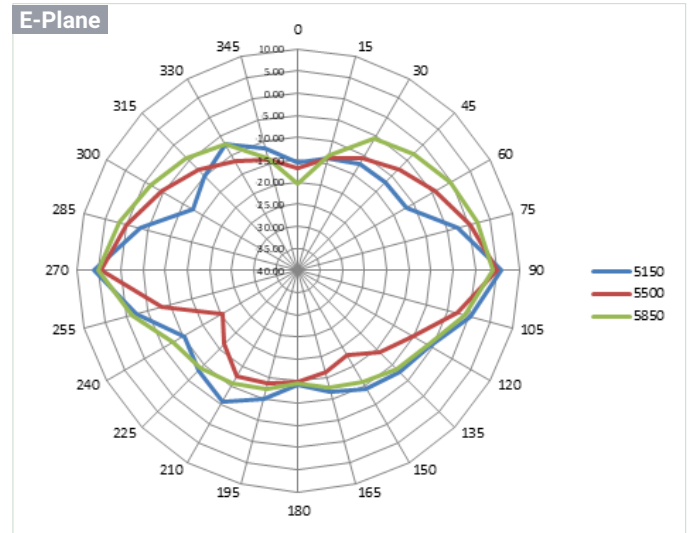
2.4GHz



5GHz

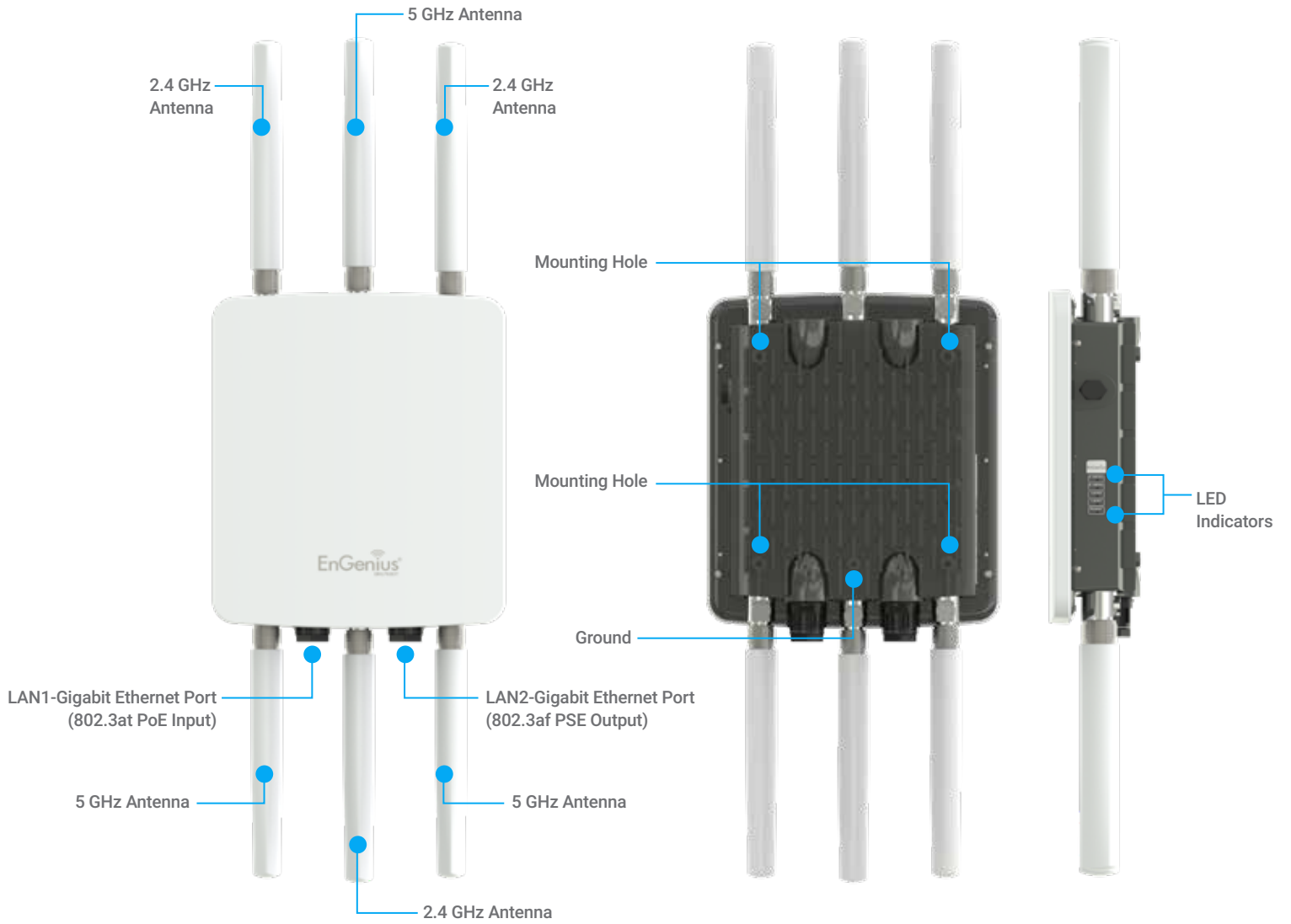


5GHz





# ENH1750EXT Product Views



# Specifications, Antenna Patterns, and Product Views

## EWS860AP Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac

#### Tx Power (Aggregated)

2.4GHz: Max. 29dBm\*

5GHz: Max. 29dBm\*

#### Data Rate

802.11b: 1, 2, 5.5, 11Mbps

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

802.11n: 6.5 to 450Mbps (MCS0 to MCS23, HT20 to HT40)

802.11ac: 6.5 to 1300Mbps (MCS0 to MCS9, NSS=1 to 3, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 3x3

5GHz: 3x3

#### MU-MIMO Capability

2.4GHz: 3x3

5GHz: 3x3

#### Modulation Type

802.11b: BPSK, QPSK, CCK

802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

-

### Antenna Specification

#### 2.4GHz

3 x 5dBi (N-Type)

#### 5GHz

3 x 7dBi (N-Type)

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

NA

### Power Source and Consumption

#### Power over Ethernet (PoE)

PoE: 802.3at ; PSE: 802.3af when inputting 802.3at

#### DC-Input

-

#### Power Consumption

PoE: 22W; PoE+PSE: 37.4W

### Mechanical Specification

#### Dimensions

285 x 218 x 56 mm

#### Weight

2070 g

### Environmental Specification

#### Operating Temperature

-20 to 70 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP68

#### Surge Protection

L-L: 4KV

L-G: 8KV

#### ESD Protection

Air: 6KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC, RCM, NCC

#### Safety Compliance

CB, BSMI

#### Wi-Fi Alliance

-

#### WEEE

Yes

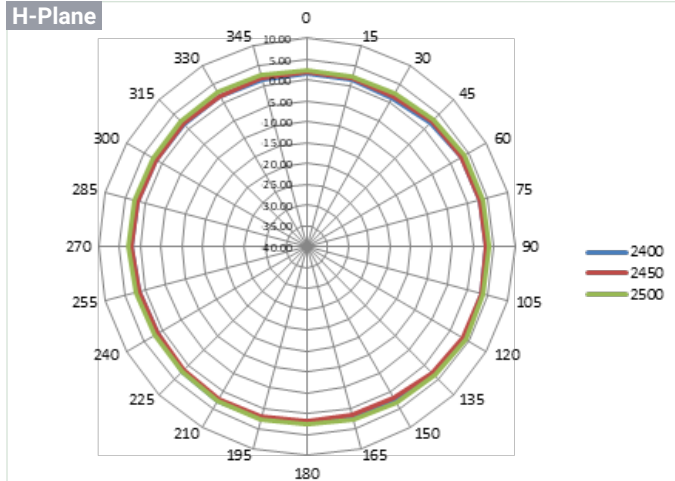
#### RoHS

Yes

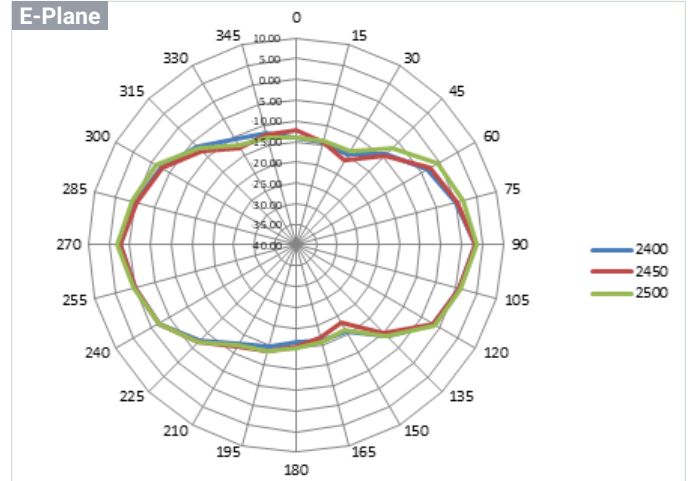
\*The available frequency bands and transmit power is varied by local regulatory.

# EWS860AP Antenna Patterns

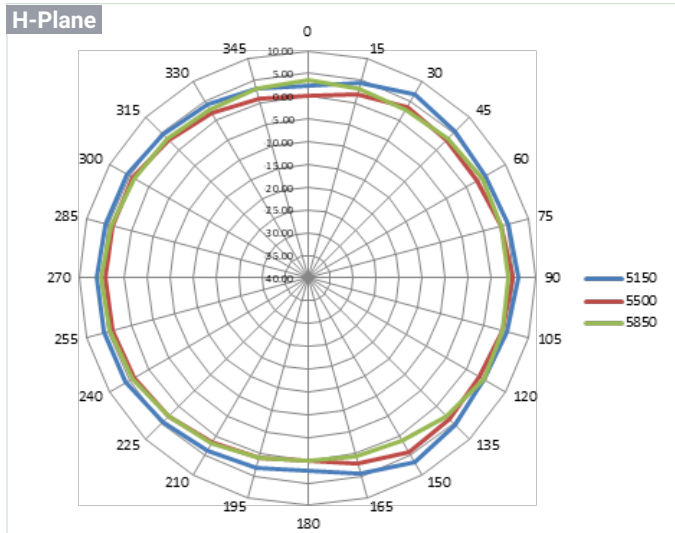
2.4GHz



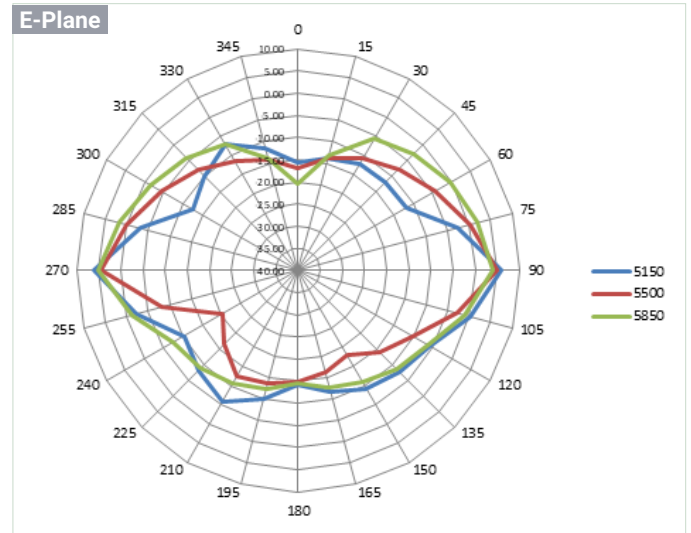
2.4GHz



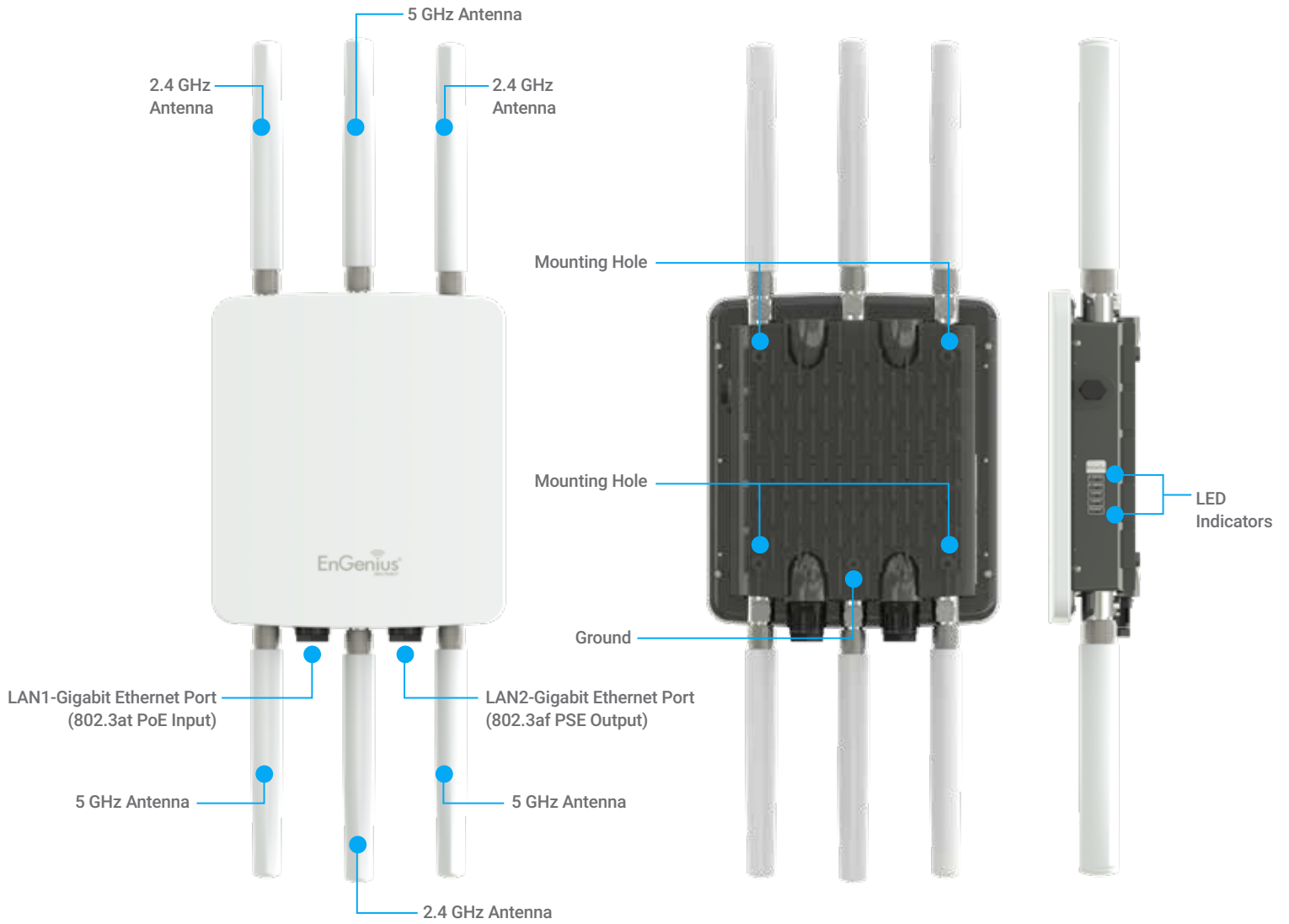
5GHz



5GHz



# EWS860AP Product Views



# Specifications, Antenna Patterns, and Product Views

## EWS850AP Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac/ax

#### Tx Power (Aggregated)

2.4GHz: Max. 23dBm

5GHz: Max. 25dBm\*

#### Data Rate

802.11b: 1, 2, 5.5, 11Mbps

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

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): 9 to 574Mbps (MCS0 to MCS11, NSS=1 to 2, HE20 to HE40)

802.11ax (5GHz): 18 to 1201Mbps (MCS0 to MCS11, NSS=1 to 2, HE20 to HE80)

#### SU-MIMO Capability

2.4GHz: 2x2

5GHz: 2x2

#### MU-MIMO Capability

2.4GHz: 2x2

5GHz: 2x2

#### Modulation Type

802.11b: BPSK,QPSK, CCK

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

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

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

#### Max Concurrent User

511 Per radio

### Antenna Specification

#### 2.4GHz

2 x 5dBi (SMA Type)

#### 5GHz

2 x 5dBi (SMA Type)

### Physical Interfaces

#### Networking Ethernet Port

1 x 10/100/1000/2500 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the accompanied EPA5006GR PoE Adapter

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

PoE: 802.3at

#### DC-Input

-

#### Power Consumption

PoE: Max. 15.9W

### Mechanical Specification

#### Dimensions

190 x 124 x 47 mm

#### Weight

TBD

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP67

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC

#### Safety Compliance

CB

#### Wi-Fi Alliance

-

#### WEEE

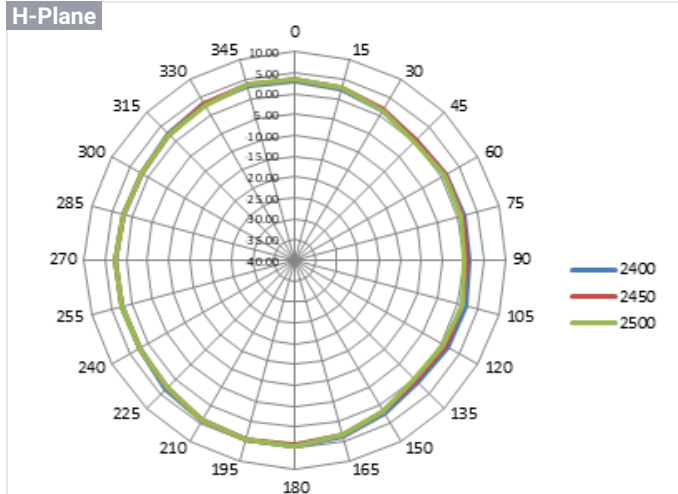
Yes

#### RoHS

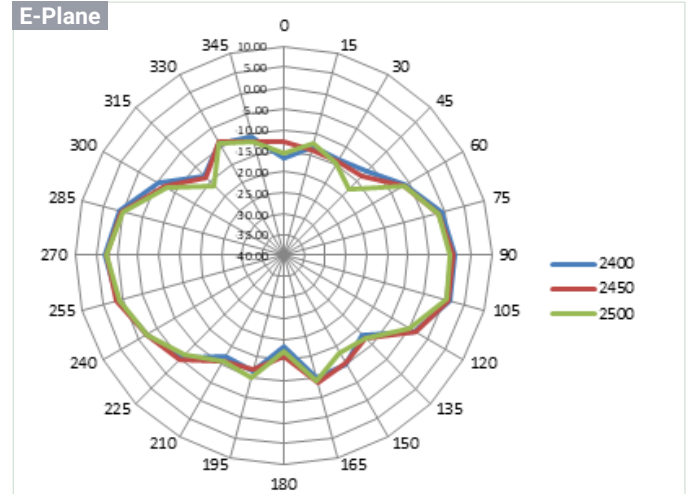
Yes

# EWS850AP Antenna Patterns

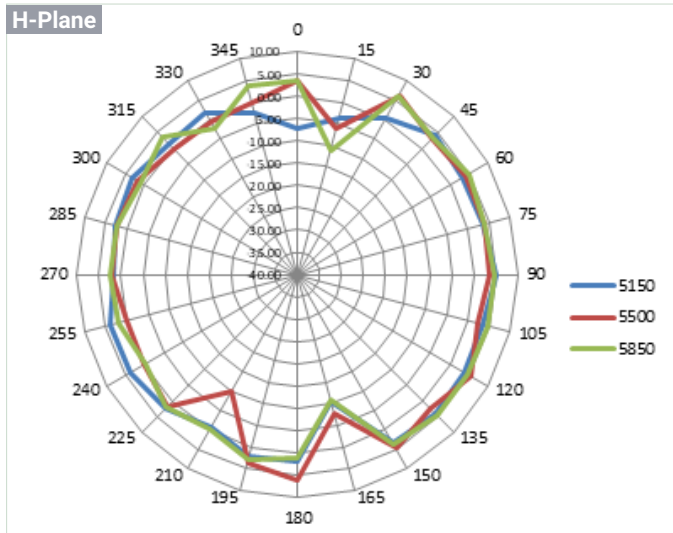
2.4GHz



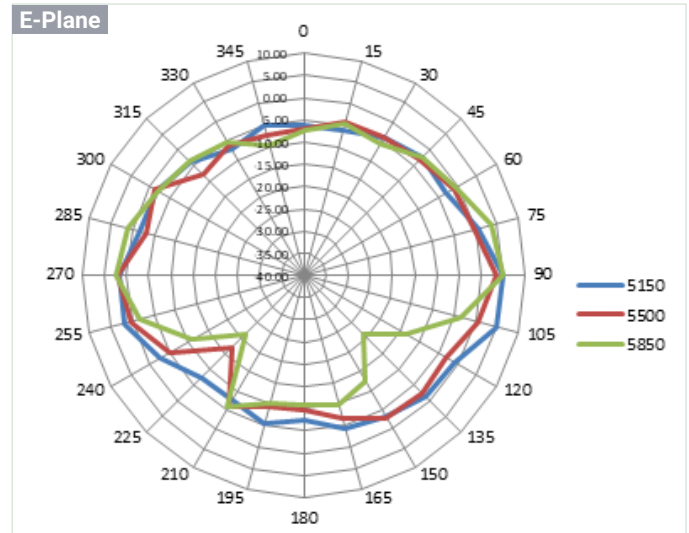
2.4GHz



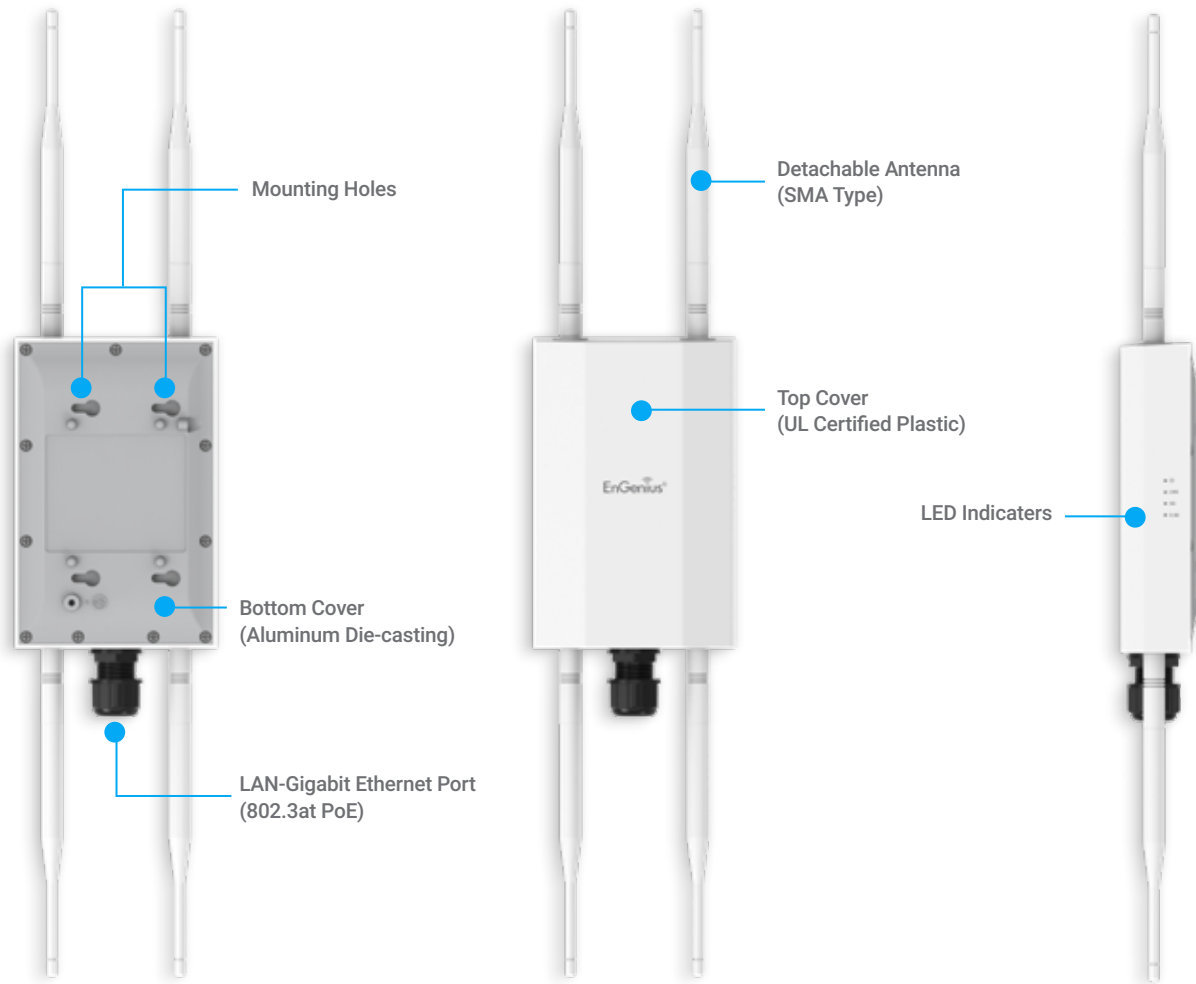
5GHz



5GHz



## EWS850AP Product Views



# Specifications, Antenna Patterns, and Product Views

## EnStation5-AC Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac Wave 2

#### Tx Power (Aggregated)

2.4GHz: -

5GHz: Max. 26dBm\*

#### Data Rate

802.11b: -

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

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 1x1 (management radio)

5GHz: 2x2

#### MU-MIMO Capability

2.4GHz: -

5GHz: 2x2

#### Modulation Type

802.11b: -

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

### Antenna Specification

#### 2.4GHz

-

#### 5GHz

19dBi

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device or included EPA2406GR PoE Adapter

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

Proprietary 24V

#### DC-Input

-

#### Power Consumption

PoE: Max. 8.93W

### Mechanical Specification

#### Dimensions

Φ190 x 38 mm

#### Weight

460 g

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC, NCC

#### Safety Compliance

CB, BSMI

#### Wi-Fi Alliance

-

#### WEEE

Yes

#### RoHS

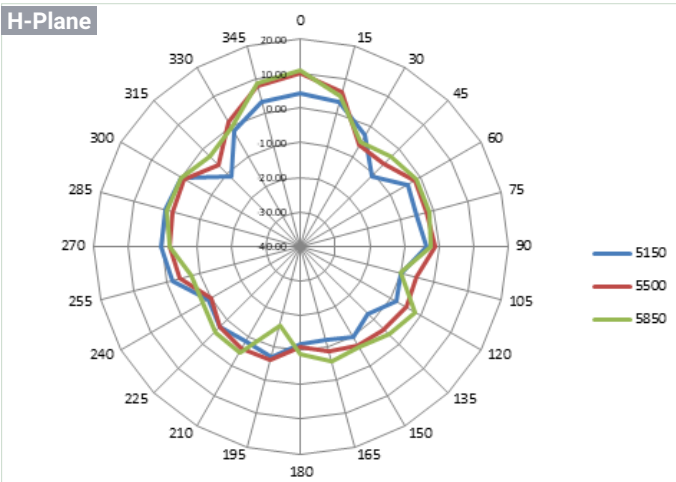
Yes



# EnStation5-AC Antenna Patterns

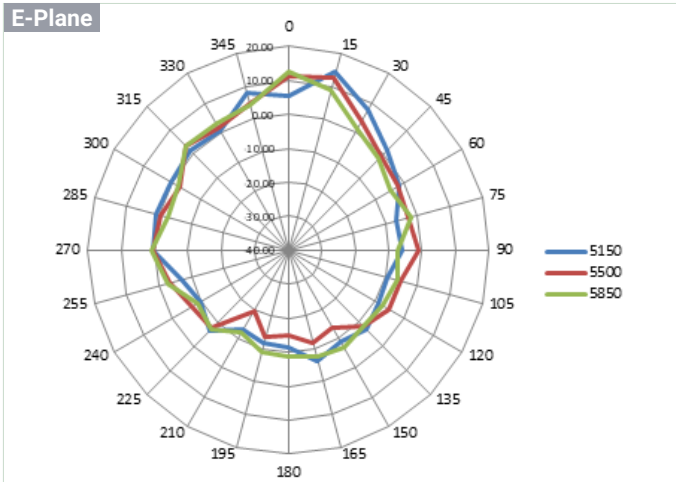
5GHz Port1

H-Plane



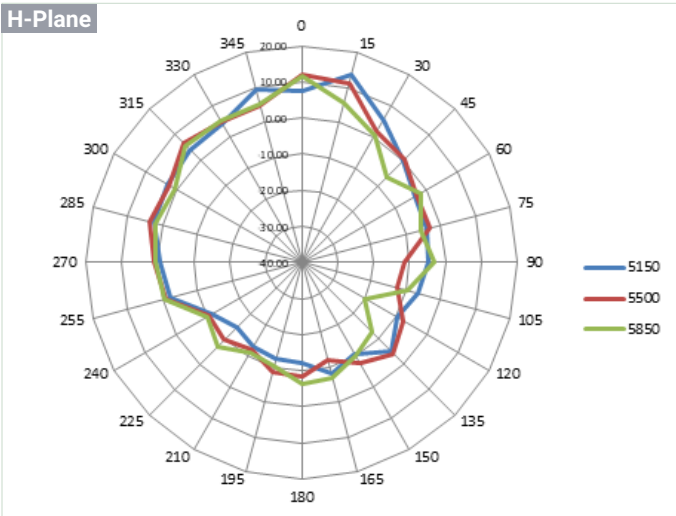
5GHz Port1

E-Plane



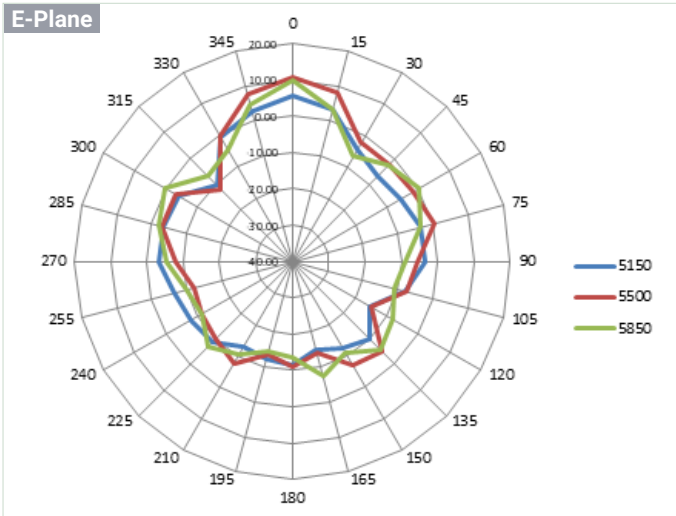
5GHz Port2

H-Plane

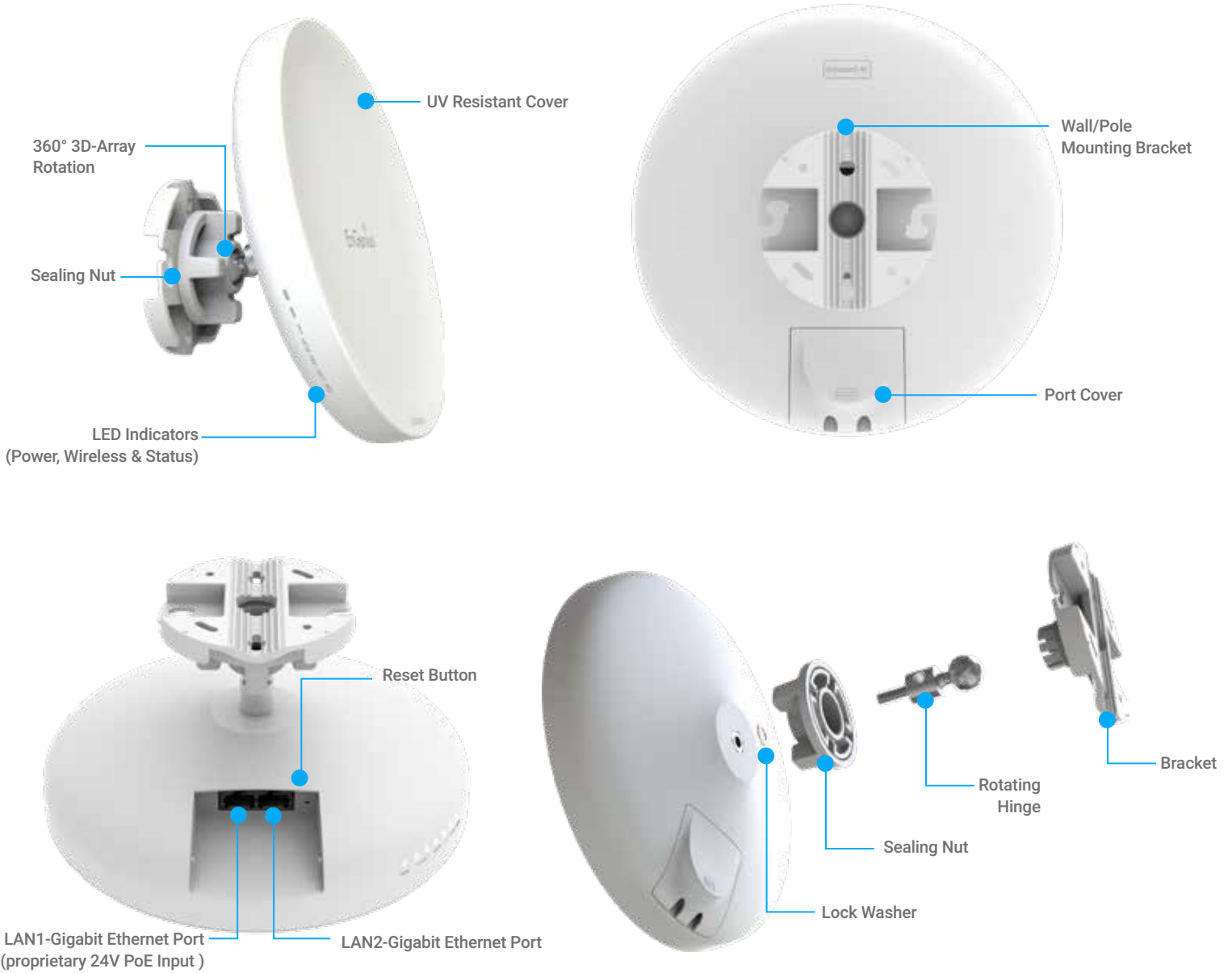


5GHz Port2

E-Plane



# EnStation5-AC Product Views



# Specifications, Antenna Patterns, and Product Views

## EnStationAC Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac Wave 2

#### Tx Power (Aggregated)

2.4GHz: -

5GHz: Max. 26dBm\*

#### Data Rate

802.11b: -

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

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 1x1 (management radio)

5GHz: 2x2

#### MU-MIMO Capability

2.4GHz: -

5GHz: 2x2

#### Modulation Type

802.11b: -

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

### Antenna Specification

#### 2.4GHz

-

#### 5GHz

Directional 19dBi

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device or included EPA5006GR PoE Adapter

### Power Source and Consumption

#### Power over Ethernet (PoE)

PoE: 802.3af/at

#### DC-Input

-

#### Power Consumption

PoE: Max. 8.93W ; PoE+PSE: Max. 24.33W

### Mechanical Specification

#### Dimensions

Φ190 x 38 mm

#### Weight

460 g

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC

#### Safety Compliance

CB

#### Wi-Fi Alliance

-

#### WEEE

Yes

#### RoHS

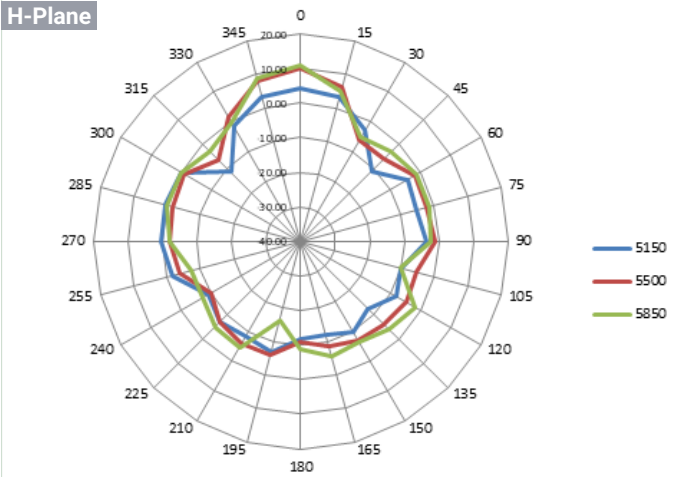
Yes

\*The available frequency bands and transmit power is varied by local regulatory.

# EnStationAC Antenna Patterns

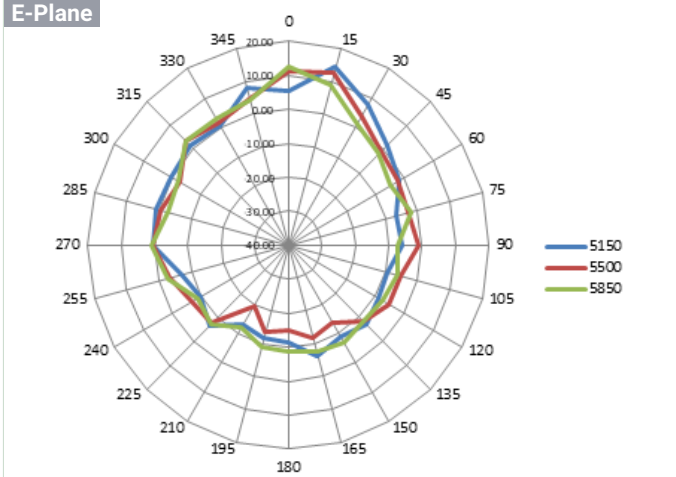
5GHz Port1

H-Plane



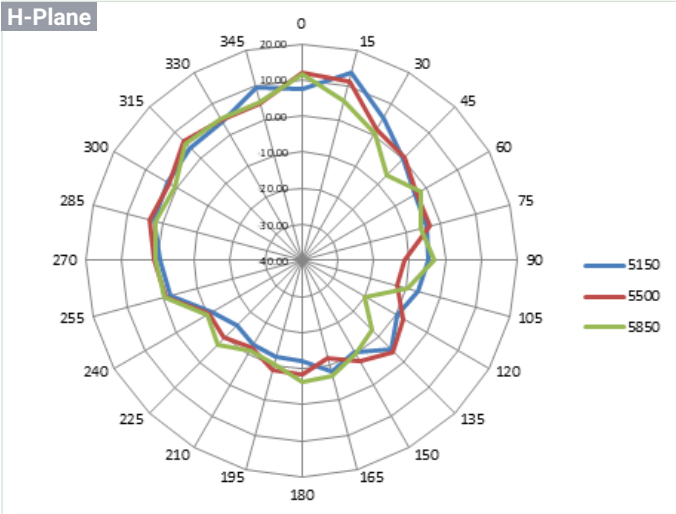
5GHz Port1

E-Plane



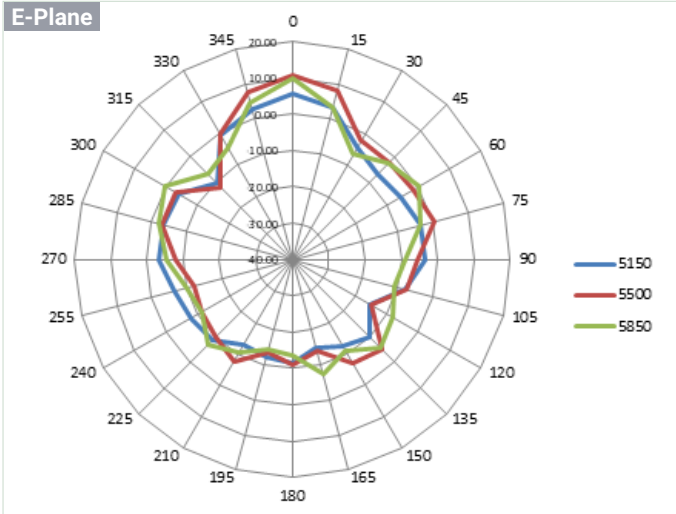
5GHz Port2

H-Plane

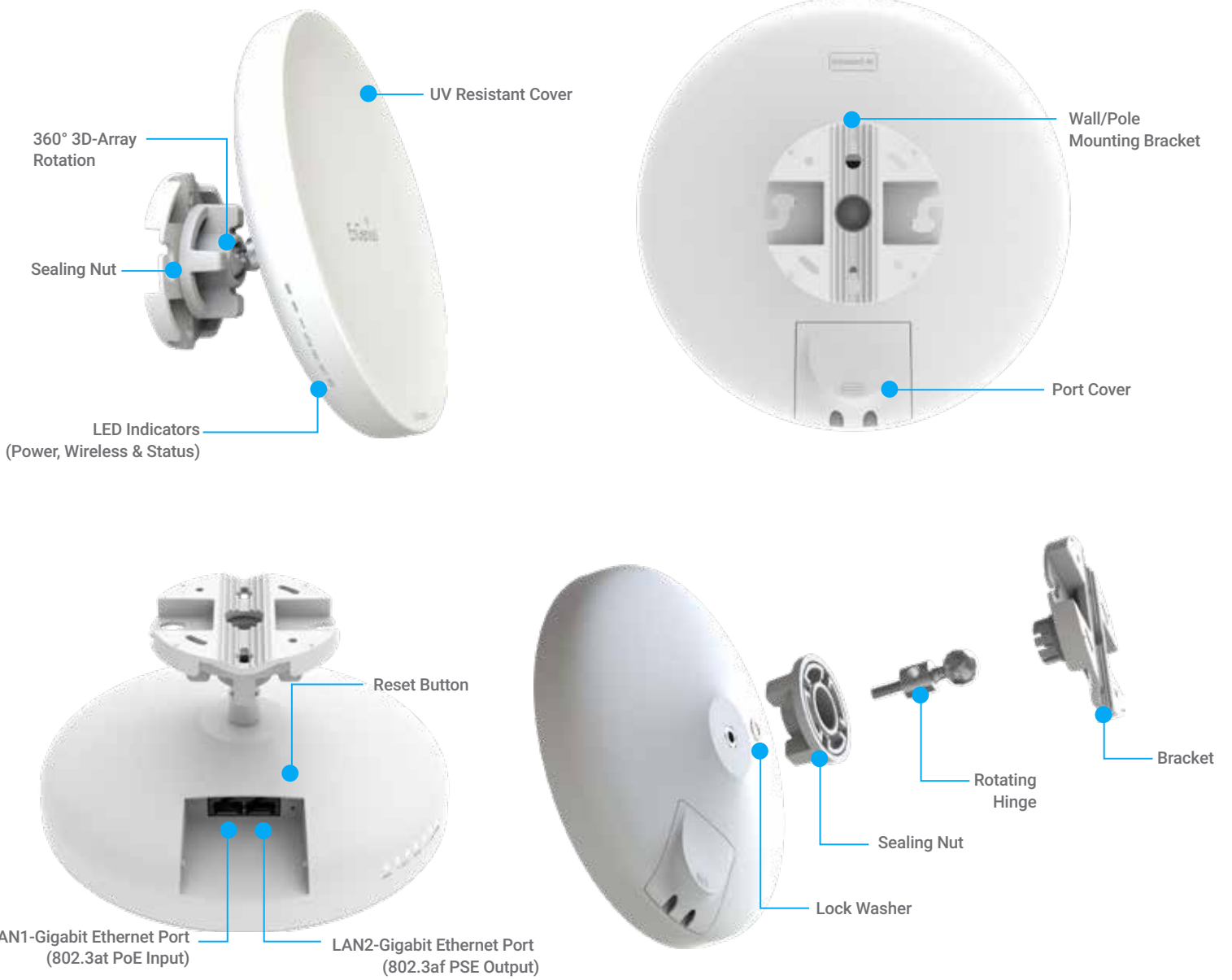


5GHz Port2

E-Plane



# EnStationAC Product Views



# Specifications, Antenna Patterns, and Product Views

## ENS500-AC Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac Wave 2

#### Tx Power (Aggregated)

2.4GHz: -

5GHz: Max. 26dBm\*

#### Data Rate

802.11b: -

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

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 1x1 (management radio)

5GHz: 2x2

#### MU-MIMO Capability

2.4GHz: -

5GHz: 2x2

#### Modulation Type

802.11b: -

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

### Antenna Specification

#### 2.4GHz

-

#### 5GHz

Directional 14dBi

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device or included EPA2406GR PoE Adapter

### Power Source and Consumption

#### Power over Ethernet (PoE)

Proprietary 24V

#### DC-Input

-

#### Power Consumption

PoE: Max. 8.93W

### Mechanical Specification

#### Dimensions

186 x 100 x 29 mm

#### Weight

504 g

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC

#### Safety Compliance

CB, BSMI

#### Wi-Fi Alliance

-

#### WEEE

Yes

#### RoHS

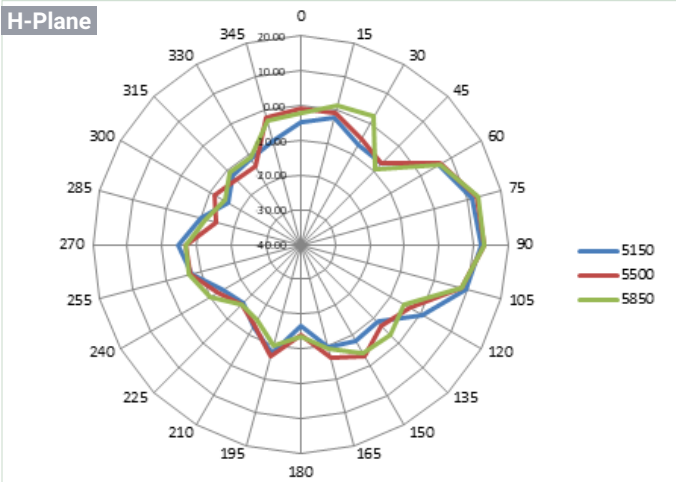
Yes

\*The available frequency bands and transmit power is varied by local regulatory.

# ENS500-AC Antenna Patterns

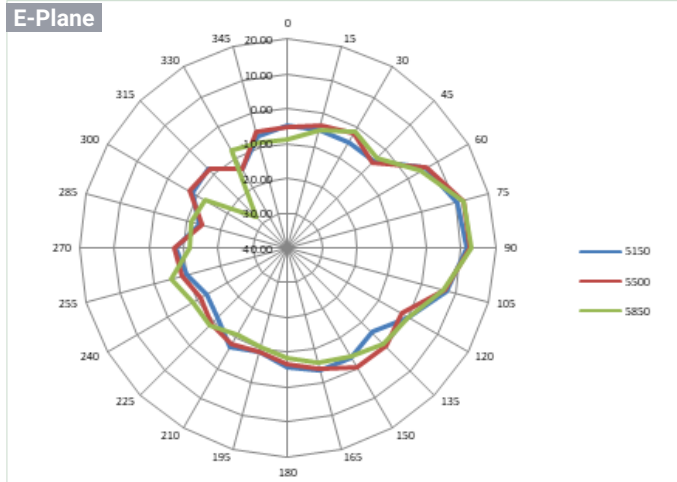
5GHz Port1

H-Plane



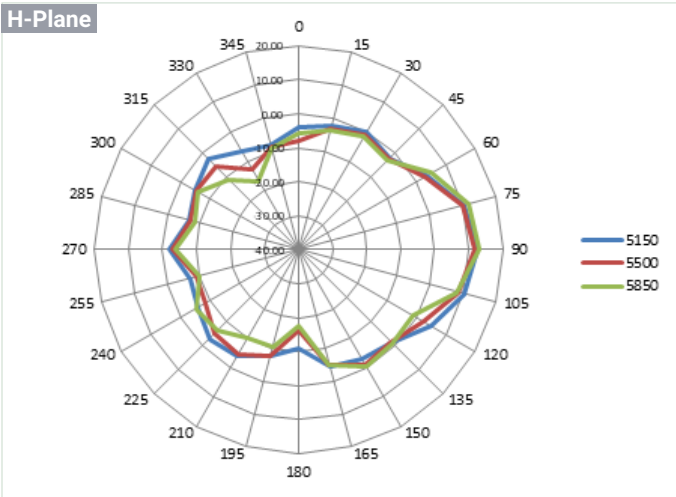
5GHz Port1

E-Plane



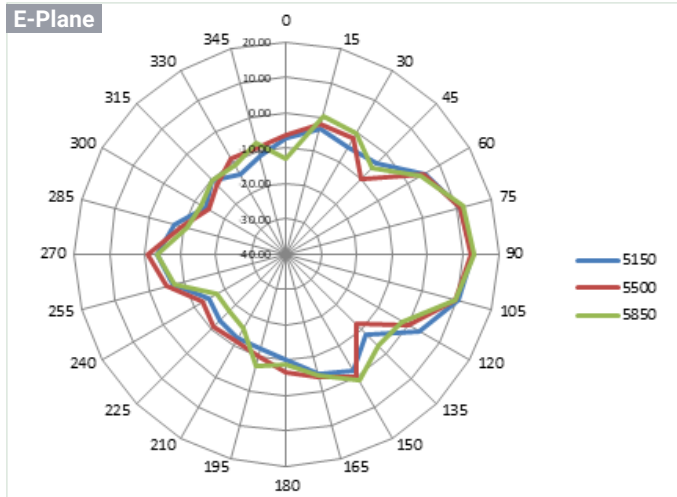
5GHz Port2

H-Plane

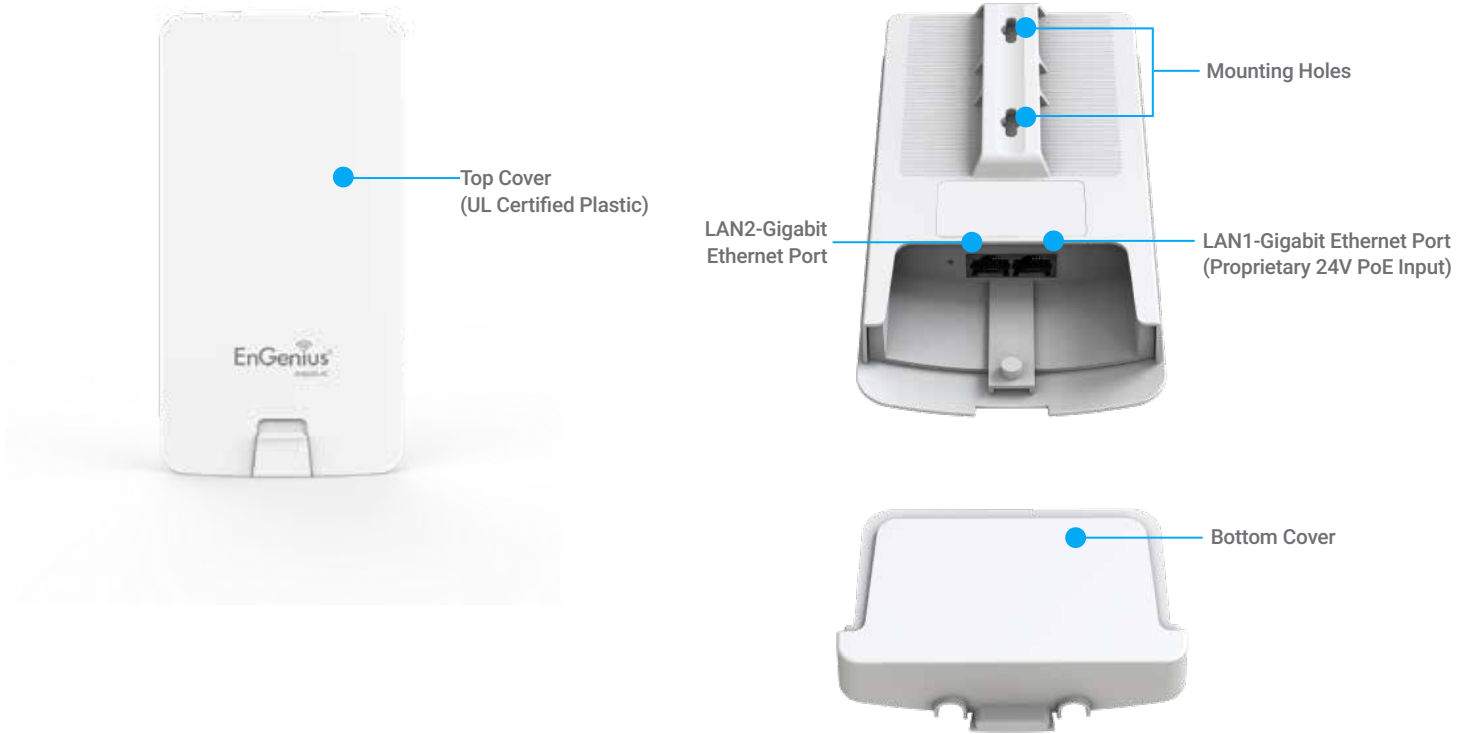


5GHz Port2

E-Plane



## ENS500-AC Product Views





# Specifications, Antenna Patterns, and Product Views

## ENH500v3 Specifications

### Radio Specification

#### Wi-Fi Standards

802.11a/b/g/n/ac Wave 2

#### Tx Power (Aggregated)

2.4GHz: -

5GHz: Max. 27dBm\*

#### Data Rate

802.11b: -

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

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS=1 to 2, VHT20 to VHT80)

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 1x1 (management radio)

5GHz: 2x2

#### MU-MIMO Capability

2.4GHz: -

5GHz: 2x2

#### Modulation Type

802.11b: -

802.11a/g/n/ac: BPSK,QPSK, 16-QAM, 64-QAM, 256-QAM

802.11ax: -

#### Support frequency

2400-2483.5MHz, 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz\*

#### Tx Beamforming

Yes

### Antenna Specification

#### 2.4GHz

-

#### 5GHz

16dBi

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100/1000 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device or included EPA2406GR PoE Adapter

\*The available frequency bands and transmit power is varied by local regulatory.

### Power Source and Consumption

#### Power over Ethernet (PoE)

Proprietary 24V

#### DC-Input

-

#### Power Consumption

PoE: Max. 8.93W

### Mechanical Specification

#### Dimensions

260 x 84 x 55 mm

#### Weight

415.5 g

### Environmental Specification

#### Operating Temperature

-20 to 60 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC

#### Safety Compliance

CB

#### Wi-Fi Alliance

-

#### WEEE

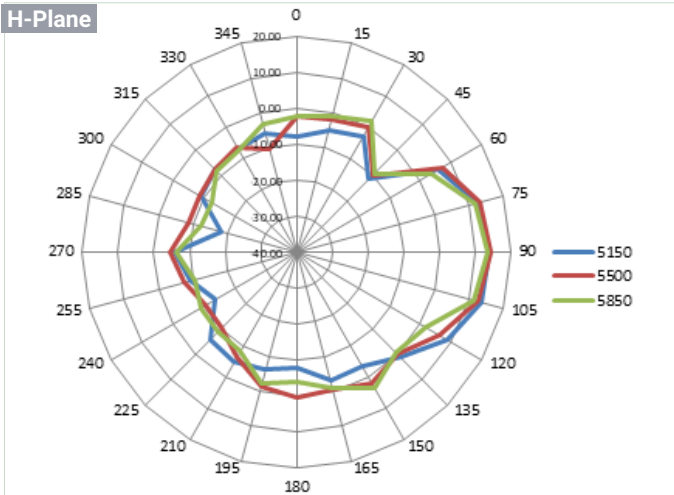
Yes

#### RoHS

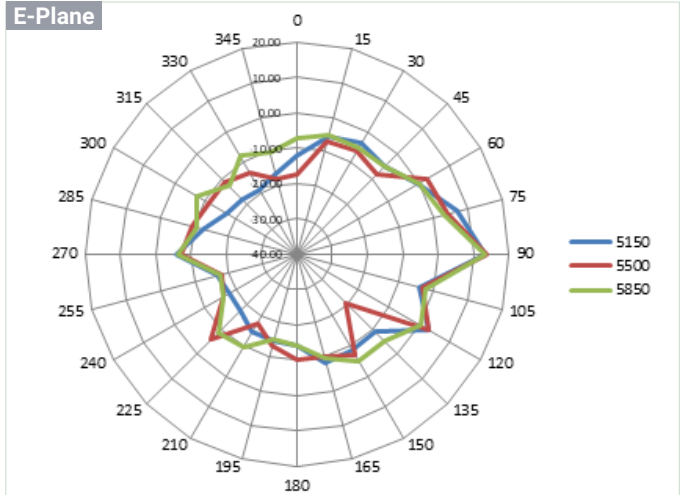
Yes

# ENH500v3 Antenna Patterns

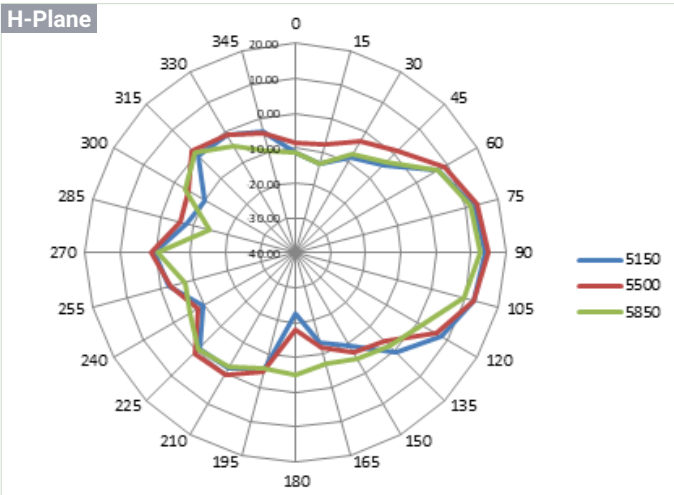
5GHz Port1



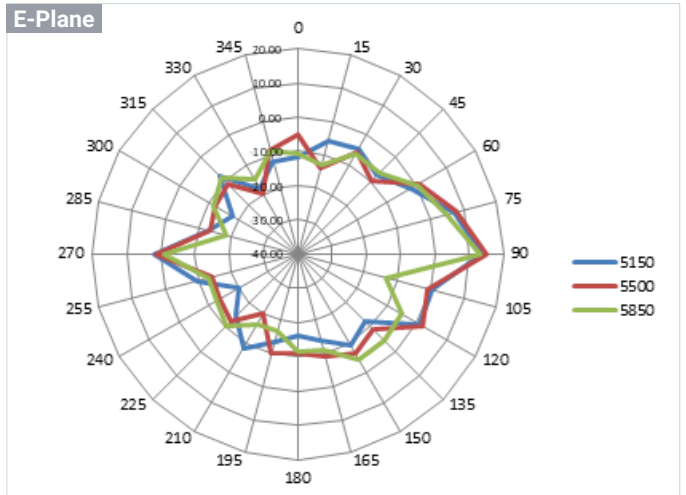
5GHz Port1



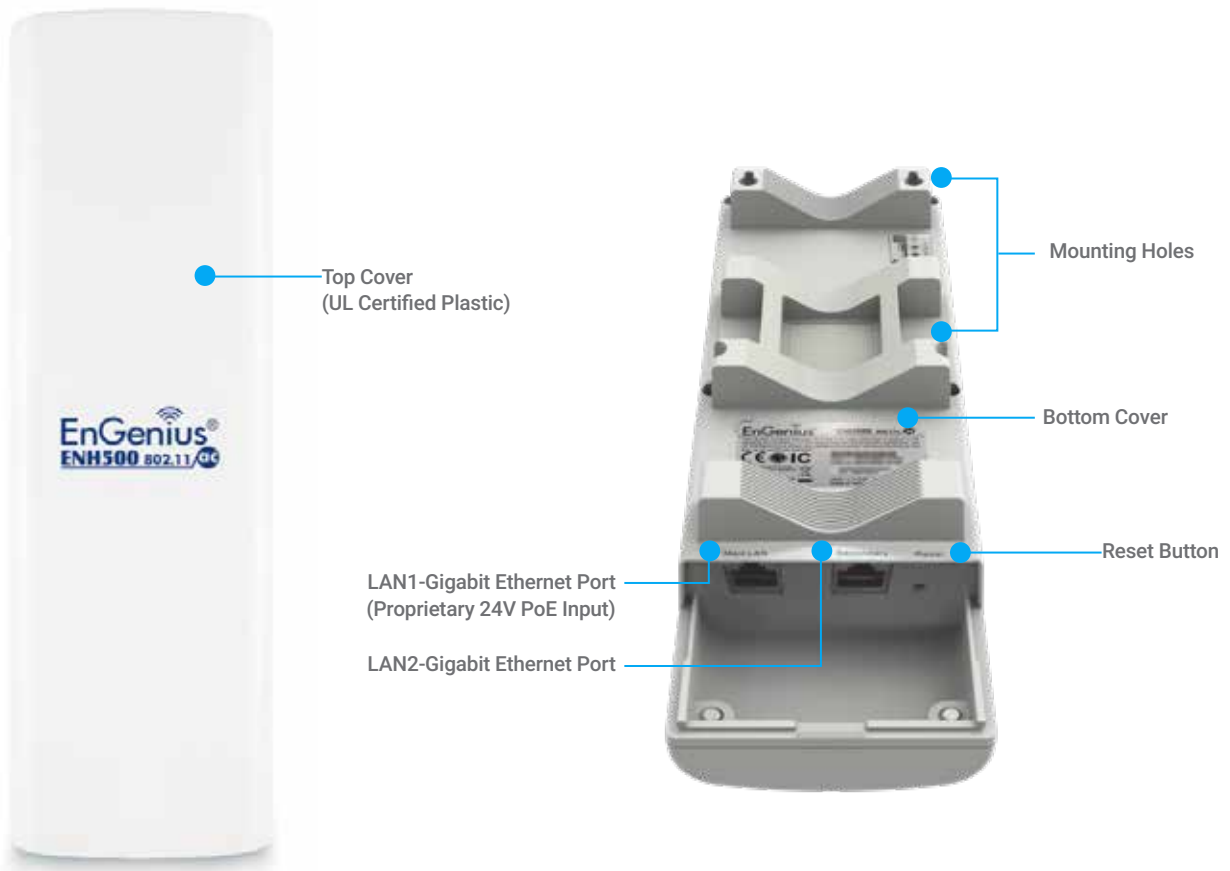
5GHz Port2



5GHz Port2



## ENH500v3 Product Views



# Specifications, Antenna Patterns, and Product Views

## ENS202 Specifications

### Radio Specification

#### Wi-Fi Standards

802.11b/g/n

#### Tx Power (Aggregated)

2.4GHz: Max. 26dBm\*

5GHz: -

#### Data Rate

802.11b: 1, 2, 5.5, 11Mbps

802.11g: 6, 9, 12, 18, 36, 48, 54Mbps

802.11n: 6.5 to 300Mbps (MCS0 to MCS15, HT20 to HT40)

802.11ac: -

802.11ax (2.4GHz): -

802.11ax (5GHz): -

#### SU-MIMO Capability

2.4GHz: 2x2

5GHz: -

#### MU-MIMO Capability

2.4GHz: 2x2

5GHz: -

#### Modulation Type

802.11b: BPSK,QPSK, CCK

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

802.11ax: -

#### Support frequency

2400-2483.5MHz\*

#### Tx Beamforming

-

### Antenna Specification

#### 2.4GHz

Directional 8dBi

#### 5GHz

-

### Physical Interfaces

#### Networking Ethernet Port

2 x 10/100 BASE-T

#### DC-Input

-

#### Reset Button

Yes, proceed reset and reboot when pushing this button on the device

### Power Source and Consumption

#### Power over Ethernet (PoE)

Proprietary 24V

#### DC-Input

-

#### Power Consumption

PoE: Max. 10.486W

### Mechanical Specification

#### Dimensions

186 x 100 x 29 mm

#### Weight

300 g

### Environmental Specification

#### Operating Temperature

-20 to 70 °C

#### Storage Temperature

-40 to 80 °C

#### Storage Humidity

0 to 90% non-condensing

#### IP Rating

IP55

#### Surge Protection

L-L: 1KV

L-G: 2KV

#### ESD Protection

Air: 8KV

### Mounting Method

#### Ceiling Mount

-

#### Wall Mount

Yes

#### Pole Mount

Yes

### Regulatory Compliance and Certification

#### Regulatory Compliance

FCC, CE, IC

#### Safety Compliance

CB

#### Wi-Fi Alliance

-

#### WEEE

Yes

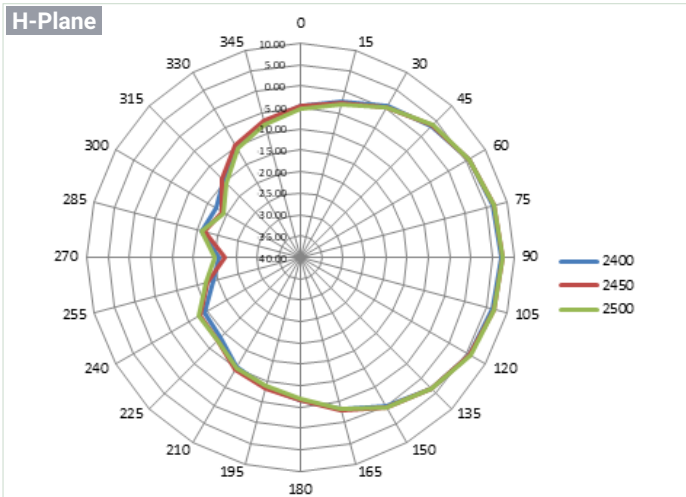
#### RoHS

Yes

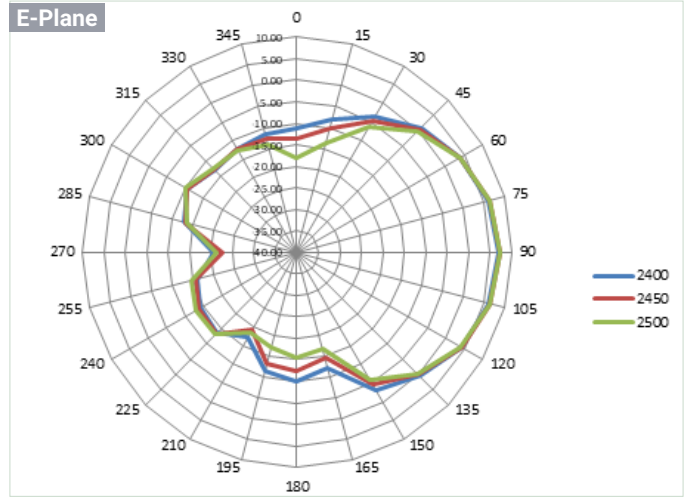
\*The available frequency bands and transmit power is varied by local regulatory.

# ENS202 Antenna Patterns

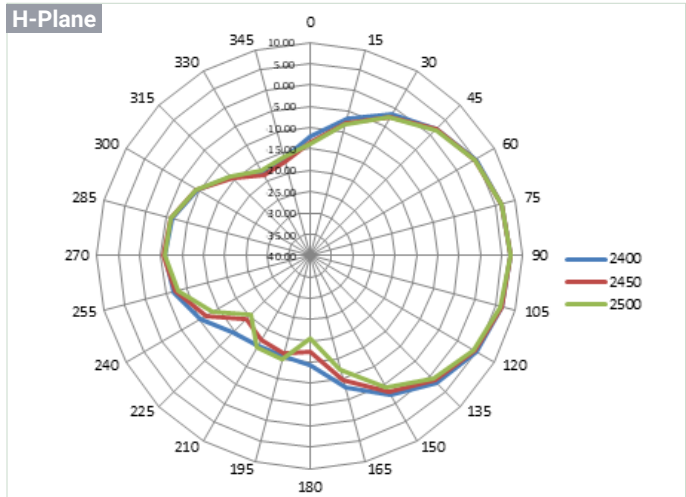
2.4GHz Port1



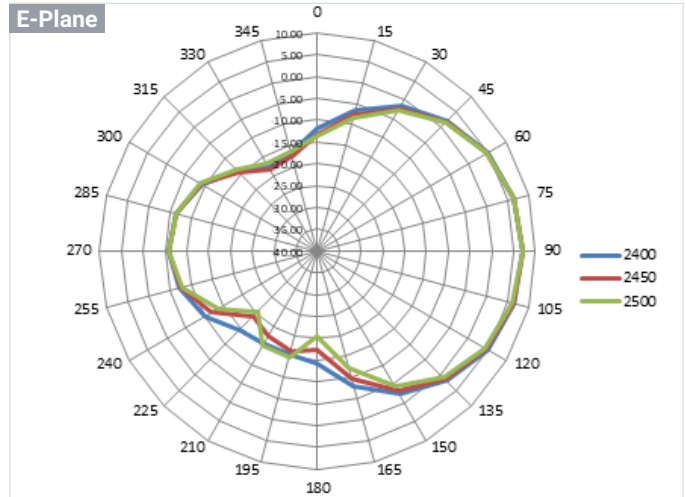
2.4GHz Port1



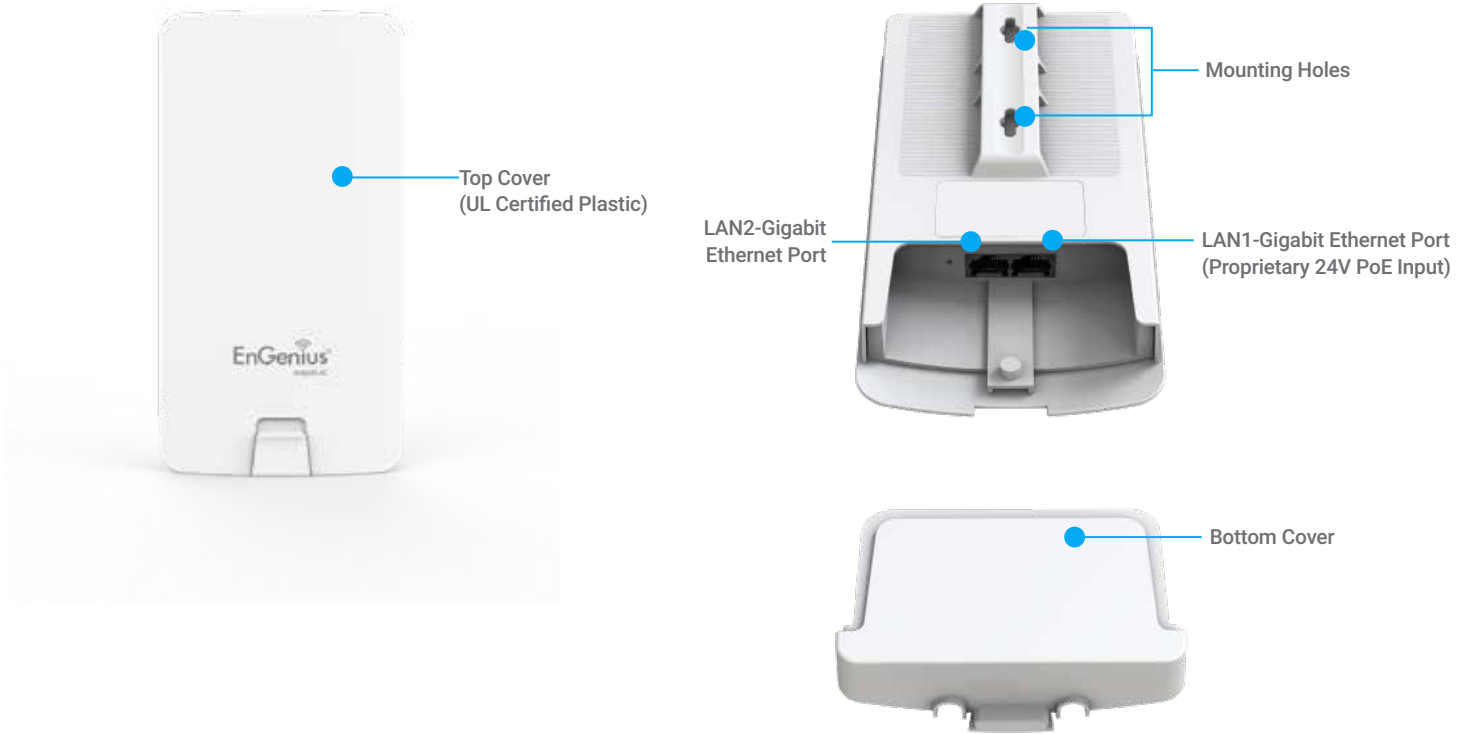
2.4GHz Port2



2.4GHz Port2



## ENS202 Product Views



**EnGenius Technologies** | Costa Mesa, California, USA

Email: [partners@engeniustech.com](mailto:partners@engeniustech.com)  
Website: [www.engeniustech.com](http://www.engeniustech.com)  
Local contact: (+1) 714 432 8668

**EnGenius Networks Singapore Pte Ltd.** | Singapore

Email: [techsupport@engeniustech.com.sg](mailto:techsupport@engeniustech.com.sg)  
Website: [www.engeniustech.com.sg](http://www.engeniustech.com.sg)  
Local contact: (+65) 6227 1088

**EnGenius Technologies Canada** | Ontario, Canada

Email: [info@engeniustech.com](mailto:info@engeniustech.com)  
Website: [www.engeniustech.com](http://www.engeniustech.com)  
Local contact: (+1) 905 940 8181

**EnGenius Networks Dubai** | Dubai, UAE

Email: [support@engeniustech.com](mailto:support@engeniustech.com)  
Website: [www.engeniustech.com](http://www.engeniustech.com)  
Local contact: +971) 4 339 1227

**EnGenius Networks Europe B.V.** | Eindhoven, Netherlands

Email: [sale@engeniustech.com](mailto:sale@engeniustech.com)  
Website: [www.engeniustech.com](http://www.engeniustech.com)  
Local contact: (+31) 40 8200 887

**恩睿科技股份有限公司** | Taiwan, R.O.C.

Email: [sales@engeniustech.com.tw](mailto:sales@engeniustech.com.tw)  
Website: [www.engeniustech.com.tw](http://www.engeniustech.com.tw)  
Local contact: (+886) 2 2652 1808