



## Key Features

- Draft IEEE 802.11 ac and IEEE 802.11 a/b/g/n compliant
- Up to 450Mbps (2.4GHz) + 1300Mbps (5GHz)
- Complaint with IEEE 802.3 at for PoE supported
- PoE injector with reset from remote-end
- Two Gigabit Ethernet Port (One PSE out)
- Waterproof Housing IP68 rated
- Mesh/AP/WDS Mode support
- Configure via web GUI or EZ controller
- 8 SSIDs support per radio + VLAN tagged
- SNMP V1/ V2c/V3, MIB I/II supported
- WEP/WPA/WPA2 wireless encryption
- Support IPV4/IPV6
- Intelligent Connection (Band Steering)
- Seamless stream service (Fast Roaming)
- Manage and monitor by the AP, SSID

## 802.11ac/a/b/g/n Dual Radio Concurrent Mesh AP

EnGenius Outdoor Base Station designs High Power, High Sensitivity and Strong Reliability Solutions under Harsh Environment.

ENH1750EXT engineered with dual-band concurrent architecture which offers the bandwidth up to 1300Mbps on 5GHz band and 450Mbps on 2.4GHz band. With the IP68-rated waterproof enclosure and the flexible mounting capability, the product is able to be applied under challenging environments.

### Power Over Ethernet (PoE) and Reset from Remote-end Support

ENH1750EXT equips with two gigabit Ethernet ports that support **IEEE 802.3at PoE input** and **IEEE 802.3af PSE out** as well as PoE injector with reset function. One of gigabit Ethernet ports can deliver the internet signal and support the IEEE 802.3at PoE input. The Other Ethernet port can provide the power source when using IEEE 802.3at PoE input instead of proprietary input. To fulfill the operation from distantly use, clients can reset the ENH1750EXT to default functions via EPE-48GR from remote-end.

## Enterprise high-end Solutions

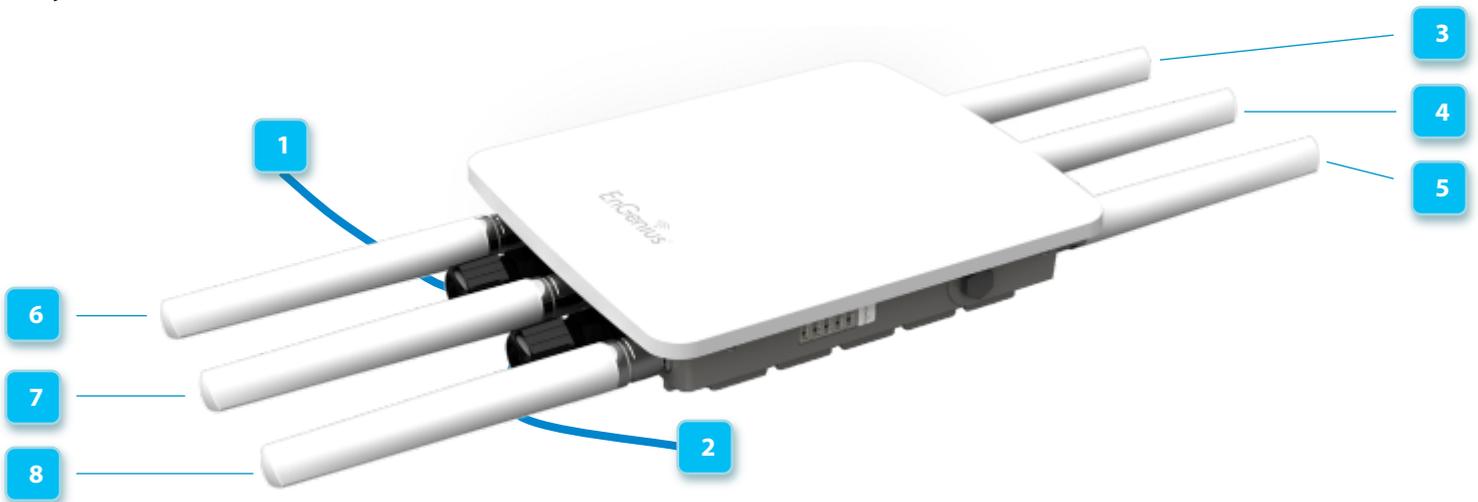
ENH1750EXT can be configured by web configuration or EnGenius Zone Controller (EZ controller) software. With full-featured software built-in, the device allows administrator to control, manage, and optimize the network effectively from a central location which can decrease the maintenance cost greatly. ENH1750EXT can operate into three different modes with **Mesh, Access Point** and **WDS Mode**. With powerful solution and individual interfaces, ENH900EXT can connect with the multiple devices and extend the wireless signal easily, as well as be the point to point connection between office buildings.

## Effective Management

According to the users' needs, EnGenius has developed the advanced functions for maximum security, monitoring and easily management to ensure the optimal users' experience. To provide the reliable connection and stable performance on the transmission, ENH1750EXT provides wide-range of authentication and encryption standards (including WEP, WPA, WPA2, TKIP/AES and IEEE 802.1X) to enforce the maximum security, as well as configure the band steering, fast roaming and clients status to enhance the quality of wireless service.

When clients' device were configured 2.4GHz band and 5GHz band, ENH1750EXT will initialize the band steering and shift clients' device to connect the wireless from 2.4GHz to 5GHz as well as reduce the contention on 2.4GHz band. On the other hand, ENH1750EXT can initialize the fast roaming to minimize the perceptible delay during re-association between two APs.

## Physical Interface



Gigabit Ethernet Port		N-Type Connector			
1	LAN1 Port, IEEE 802.3at PoE Input	3	5	7	Detachable 5dBi 2.4GHz Omni-directional Antennas
2	LAN2 Port, IEEE 802.3af PSE Output	4	6	8	Detachable 7dBi 5GHz Omni-directional Antennas

# Specification

## Wireless Radio Specification

- Dual Radio, 5GHz 802.11a/n/ac and 2.4GHz 802.11b/g/n
  - 2.4GHz: Max 450Mbps
  - 5GHz: Max 1300Mbps
  - Dual concurrent radio support
- Transmit Power (Maximum Value)
  - 2.4GHz: Max 15dBm
  - 5GHz: Max 15dBm
  - Maximum power is limited by regulatory power
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum(DSSS)
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
  - 802.11n/ac: 3x3 MIMO with 3 streams
  - 802.11ac with 20/40/80 MHz channel width
  - 802.11n with 20/40 MHz channel width
  - 802.11a/b/g with 20 MHz channel width
- Supported modulation types:
  - 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
- Supported data rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 36, 48, 54
  - 802.11n: 6.5 to 450 (MCS0 to MCS23)
  - 802.11ac: 6.5 to 1,300 (MCS0 to MCS9, NSS=1 to 3)

## Power

- Power Source:
  - 802.3af/at compliant source
  - Active Ethernet (Power over Ethernet, PoE)
- Power Consumption:
  - Maximum 37W

## Antennas

- Six detachable high gain antennas:
  - Three detachable 5dBi 2.4GHz antennas
  - Three detachable 7dBi 5GHz antennas
- Omni-Directional type:
  - Provide the optimal coverage
- Compliant with N type connector

## Interface

- Two 10/100/1000 BASE-T Ethernet Port:
  - One Port (LAN1) supports 802.3af/at PoE input
  - One Port (LAN2) supports 802.3af PSE output
  - LAN2 can provide the power when using 802.3at PoE input instead of proprietary input
- Reset button on the PoE injector (EPE-48GR)

## Mechanical & Environment

- Dimensions / Weight:

## Effective Control and Use

- 285mm (L) x 218mm (W) x 55.5mm (H)
- 1890g (Unit, without mounting kit and antennas)
- Operating:
  - Temperature: -20°C~70°C
  - Humidity: 0%~90% typical
- Storage:
  - Temperature: -30°C~80°C
- Surge Protection: 20KV (Certificated standard is 8KV)
- ESD Protection: 6KV (Certificated standard is 1KV)
- Harsh Environment Use:
  - IP68 rated

## Operation Mode

- Mesh / Access Point / WDS:
  - A variety of operation modes to serve multiple constituencies and applications.

## Easy to Management

- Auto Channel Selection
  - Setting varies by Regulatory Domains
- SSIDs:
  - BSSID support
  - 16 SSIDs support
  - Support 8 SSIDs on both 2.4GHz and 5GHz bands
- 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 Pass-through:
  - VLAN pass through over WDS bridge
- SNMP &MIB:
  - v1/v2c/v3 support
  - MIB I/II, Private MIB
- Save Configuration as Default:
  - Saves the customized configuration as default value for different customer demands.
- Clients Traffic Status:
  - Reports the various main information timely which is required by administrator
- Guest Network:
  - Allows the administrator to manage easily grant "visitor" access within the network.
- E-mail Alert:
  - Provides a network monitoring tool for administrators to stay informed the configuration change.
- QoS:
  - Complaint with IEEE 802.11e standard
- RADIUS Accounting:
  - Help operators to offload 3G to the wi-fi seamlessly

## Reinforcement Security

- CLI Comments Support:
  - Setting varies by Regulatory Domains
- Distance Control (Ack Timeout)
- Multicast Supported
- Wi-fi Scheduler
  - Set the schedule for rebooting the device
- Band Steering
  - Shift the clients from 2.4GHz band to 5GHz band when the clients contest in 2.4GHz band
- Fast Roaming
  - Minimize perceptible delay during re-association.
- Fast handover
  - Steer clients from the AP to other APs under the same encryption and SSID when the signal is above the default value.
- WEP Encryption-64/128/152 bit
- WPA/WPA2 Enterprise (WPA-EAP using TKIP or AES)
- Hide SSID in beacons
- MAC address filtering:
  - Filter up to 32 MACs per SSID
- Wireless STA (Client) connection list:
  - Reports the various main information timely which is required by administrator
- Https:
  - Widely used communications approach for securing communication over a computer network.
- SSH:
  - Provide confidentiality and integrity of data over an unsecured network, such as the Internet.

### RF Specification (Aggregated Value)

Channel	Data Rate	Transmit Power (Aggregated, dBm)	Receive Sensitivity (Aggregated, dBm)
802.11b 2.4 GHz	1 Mbps	15.0	-96.0
	2 Mbps	15.0	-95.0
	5.5 Mbps	15.0	-93.0
	11 Mbps	15.0	-92.0
802.11g 2.4 GHz	6 Mbps	14.0	-94.0
	54 Mbps	13.0	-75.0
802.11a 5 GHz	6 Mbps	15.0	-93.0
	54 Mbps	13.0	-76.0
802.11n HT20 2.4 GHz	MCS 0 / 8 / 16	14.0	-95.0
	MCS 7 / 15 / 23	13.0	-70.0
802.11n HT40 2.4 GHz	MCS 0 / 8 / 16	14.0	-94.0
	MCS 7 / 15 / 23	13.0	-69.0
802.11n HT20 5GHz	MCS 0 / 8 / 16	15.0	-92.0
	MCS 7 / 15 / 23	13.0	-73.0
802.11n HT40 5GHz	MCS 0 / 8 / 16	15.0	-89.0
	MCS 7 / 15 / 23	13.0	-72.0
802.11ac VHT20 5GHz	MCS0_1SS / 2SS/ 3SS	15.0	-92.0
	MCS8_1SS / 2SS/ 3SS	13.0	-69.0
802.11ac VHT40 5GHz	MCS0_1SS / 2SS/ 3SS	15.0	-89.0
	MCS9_1SS / 2SS/ 3SS	12.0	-65.0
802.11ac VHT80 5GHz	MCS0_1SS / 2SS/ 3SS	15.0	-86.0
	MCS9_1SS / 2SS/ 3SS	12.0	-62.0

\*Maximum performance of the hardware provided. Maximum transmit power is limited by local regulatory.

\*The supported frequency band is restricted by local regulatory requirements.

\*Transmit power is configured in 1.0dBm increments.

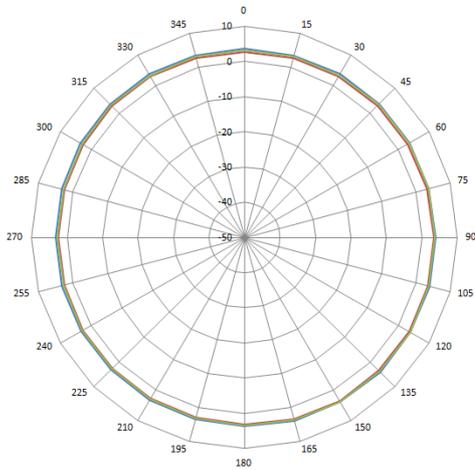


## Antenna Specifications (External Antenna)

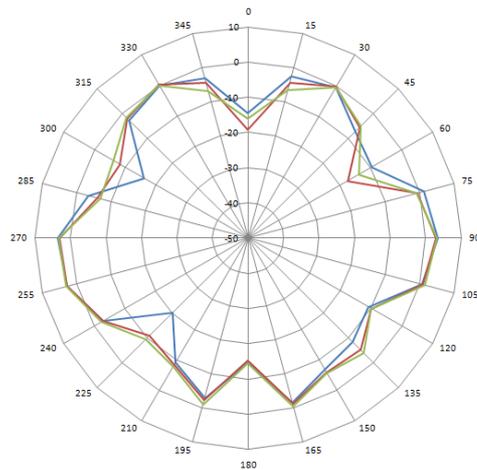
External Antenna	2.4GHz	5GHz
Average Antenna Gain	5.0dBi	7.0dBi
Polarization	Linear	Linear
Azimuth Beam-Width	360°	360°
Elevation Beam-Width	28°	13°
VSWR	1:2.0	1:2.0
Dimension	22.8(Φ)x187(L) mm	

## Diagram Pattern

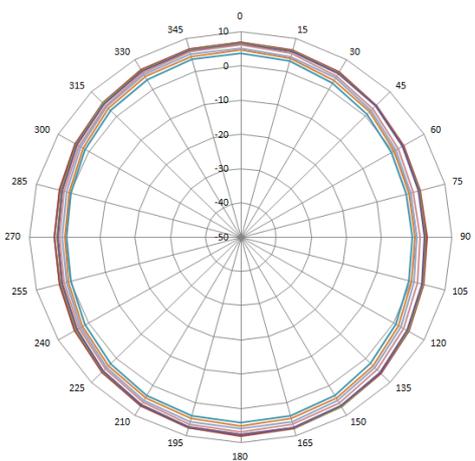
### 2.4GHz-H Plane



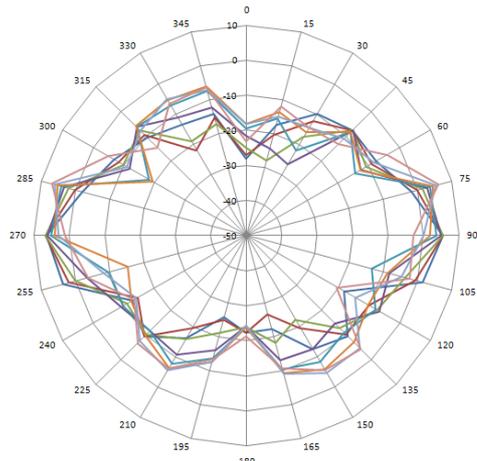
### 2.4GHz-E Plane



### 5GHz-H Plane



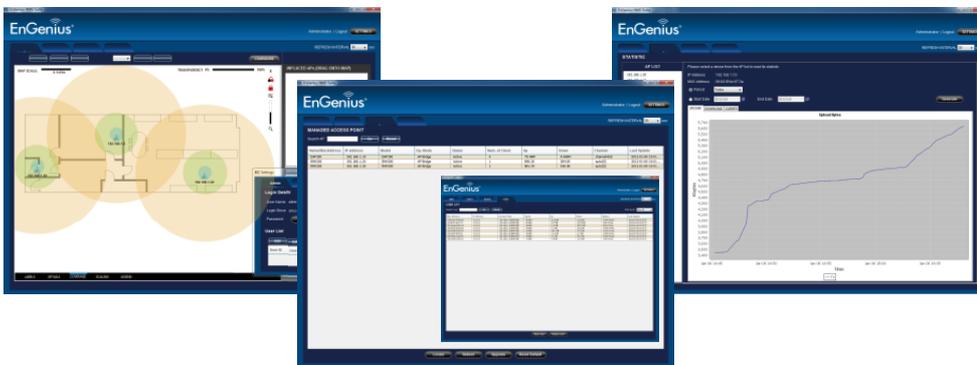
### 5GHz-E Plane



## Network Management System - EnGenius Zone Controller

In enhancing the real-time functionality of a network, applying the best network management software tool is necessary. Built-in Network Management System, EZ Controller (EnGenius Zone Controller), provides an intelligent tool for IT manager, installer, and network administrators to configure control, and manage all wireless devices within network from one central location. This application ensures the entire network will optimally operate without troubles, glitches and interruptions.

The growing demand of performance related results from service providers or someone involved in an enterprise, you need to provide a huge platform to make it successful. The robust design of EZ Controller can manage different devices simultaneously and precisely, as well as configure the advanced service for wireless clients.



Configure, control and manage EnGenius Enterprise Wireless Devices from one central location.

### Features:

- Easy-to-use User Interface
- Optimize network performance
- Eliminate downtime
- Check real-time wireless coverage
- Monitor and control each sheet
- Monitor traffic loads by AP, MAC or IP address
- Sequential firmware upgrades to deployed APs / Bridges
- Import and archive floorplan maps for radio coverage plotting
- Labels assets by MAC and IP address or user-defined aliases
- Export real-time AP statistics report

### An intelligent solution for different business environment



Villa



Campus



Office



Plaza