

ENH1750EXT

## 802.11ac 3x3 Dual Band Wireless Ruggedized Outdoor Access Point

The ENH1750EXT marks a new speed and performance breakthrough for Outdoor Wireless Access Points. Wireless users with 802.11ac laptops, tablets and other devices, who need to stream HD video or transfer large files will find this powerful AC Access Point more than up to those tasks. The ENH1750EXT is an 802.11ac 3x3 Dual Band high-powered, long-range, Mesh-capable Wireless Ruggedized Outdoor Access Point with speeds up to 1300 Mbps on 5 GHz and up to 450 Mbps on the 2.4 GHz band. It can be configured as an Access Point, Mesh (on 2.4 GHz), or WDS (AP, Station, & Bridge) for customized deployment scenarios. The ENH1750EXT is designed to operate in a variety of outdoor environments and demanding business applications, making its high-powered, long-range characteristics a cost-effective alternative to ordinary Access Points that don't have the range and reach to connect to a growing number of wireless users who wish to connect to an outdoor network.

### Key Features

- 802.11ac wireless speeds of up to 1300 Mbps on the 5 GHz band
- 802.11n wireless speeds up to 450 Mbps on the 2.4 GHz band
- Up to 29 dBm transmit power on both 2.4 and 5 GHz radios, enabling long range connectivity
- Supports Mesh in the 2.4 GHz band
- Three detachable 5 dBi high gain Omni-directional antennas for 2.4 GHz
- Three detachable 7 dBi high gain Omni-directional antennas for 5 GHz
- IP68-Rated waterproof housing for withstanding UV radiation and severe exposure to the elements
- Can be monitored after deployment with EnGenius EZ Controller™ software for Windows, Mac OS X and Linux (available as a free download)
- Can be used with included power injector and power adapter or via PoE with PoE 802.3at/af capable Switches
- Quantum Beam Technology™
- Dual Band / Three Stream (3x3)
- Band Steering feature detects Dual Band clients and shifts them to the 5 GHz band to relieve network congestion on the 2.4 GHz band to maintain optimal data traffic flow
- Secured Guest Network option available

Under AP Mesh mode (in 2.4 GHz), the ENH1750EXT Wireless Outdoor Access Point can be used as a central connection hub for stations or clients that support IEEE 802.11b/g/n networks. Under this mode, the ENH1750EXT can be configured with the same Mesh SSID and security password in order to associate with other ENH1750EXTs as well as connect with clients under the same SSID and security encryption signatures.

While the ENH1750EXT is backwards compatible with previous 802.11a/b/g and n standards its 5 GHz band utilizes Quantum Beam™ which finds the most efficient signal path to AC compatible wireless devices delivering data at nearly 3x faster than Wireless N. The AP's Band Steering feature shifts Dual Band-capable clients to 5 GHz from the 2.4 GHz band, helping to relieve network congestion and maintain optimal data traffic speeds. This means that sensitive applications such as IP camera streams, VoIP (Voice over IP), HD video streaming and large file transfers perform with improved quality and reliability.

The ENH1750EXT is easy to install in virtually any location as well with its included PoE (Power over Ethernet) injector for quick outdoor installation. The Access Point's internal electronics have been mounted in an IP68-rated enclosure, one of the highest waterproof and dustproof ratings available, designed to withstand extreme environmental conditions including severe and prolonged exposure to sunlight, extreme cold, frost, snow, rainfall, hail and humidity. The housing of the Access Point also has been manufactured to repel ultraviolet (UV) radiation from the sun. These protective measures make the ENH1750EXT an ideal outdoor wireless solution for virtually any locale or any venue including ski and beach resorts, sports arenas, college and corporate campuses, indoor industrial environments, and businesses located in snowy, rainy, and arid climates.

The ENH1750EXT's external MIMO antenna array is comprised of three (3) detachable 5 dBi high gain antennas for the 2.4 GHz radio and three (3) detachable 7 dBi high-gain antennas for the 5 GHz radio. This combination of high transmit power, enhanced receive sensitivity, and six (6) high gain antennas results in long range connectivity to client devices and in some venues can minimize the number of Access Points necessary for a deployment.

For secure network configurations, the ENH1750EXT includes wireless encryption standards such as Wi-Fi Protected Access (WPA-PSK/WPA2-PSK) Encryption and IEEE 802.1X with RADIUS. MAC Address Filtering is also included allowing network administrators to allow or deny network access to clients devices (computers, tablet PCs, NAS, smartphones, etc.) according to their MAC addresses.

With EnGenius' EZ Controller™ Management Software, units that have already been deployed on rooftops or other difficult to access locations and other EnGenius APs or Client Bridges in the network can be reconfigured to a different operational mode or upgraded remotely without having to manually reconnect to them or re-install them onsite. When used together with its include PoE injector, the ENH1750EXT can support a tethered IP camera on the available 802.3af Gigabit port for security applications such as warehouses, stadiums, airports, corporate campuses and more.

### 3 Stream 802.11ac Wireless Speeds on 5 GHz

Up to 1300 Mbps on its 5 GHz for faster file transfers and smoother video streaming.

### 3 Stream 802.11n Wireless Speeds on 2.4 GHz

Up to 450 Mbps on the 2.4 GHz band.

### Dual Band operation

- 2.4 GHz and 5 GHz frequency bands for expanded user capacity.
- Greater number of channels available on the 5 GHz frequency spectrum to support higher bandwidth applications like HD video streaming.

### High Power and Long-Range Coverage

- Up to 29 dBm transmit power on both the 2.4 GHz and 5 GHz radios, enabling long range connectivity

### IP68-Rated Waterproof Housing

- Designed to withstand extremely harsh environmental conditions via its water and dust proof IP68-Rated housing.
- Repels UV radiation.

### High Gain Antennas

Three detachable 5 dBi high gain omni-directional antennas for 2.4 GHz and three detachable 7 dBi high gain omni-directional antennas for 5 GHz.

### Band Steering

Detects Dual Band clients and shifts them to the 5 GHz band to relieve network congestion on the 2.4 GHz band to maintain optimal data traffic flow.

### Fast Roaming

The ENH1750EXT supports Fast Roaming for clients authenticated to a RADIUS server. This means that employees can be constantly connected to the network – whether they are warehouse workers scanning and capturing barcode information, employees on Wi-Fi phone calls while walking to meetings on another part of a corporate campus, healthcare professionals capturing patient information on mobile devices, or security personnel who need uninterrupted video surveillance on a mobile device when they are alerted to and making their way to the location of an incident.

### Supports Separate Mode Configuration per Frequency Band

Choose one of three modes available to the ENH1750EXT depending on user needs: Access Point, Mesh (on 2.4 GHz) , or WDS (AP, Station, & Bridge).

### Supports Mesh Technology (2.4 GHz)

- Acting as a node within a web framework, each EnGenius Access Point only needs to connect to the nearest node using the best path to transmit data, working collaboratively with other EnGenius Access Points in the network infrastructure.
- Provides redundant and robust connectivity for wireless deployments when running Ethernet cable is not practical.

### Simplified AP Monitoring and Management

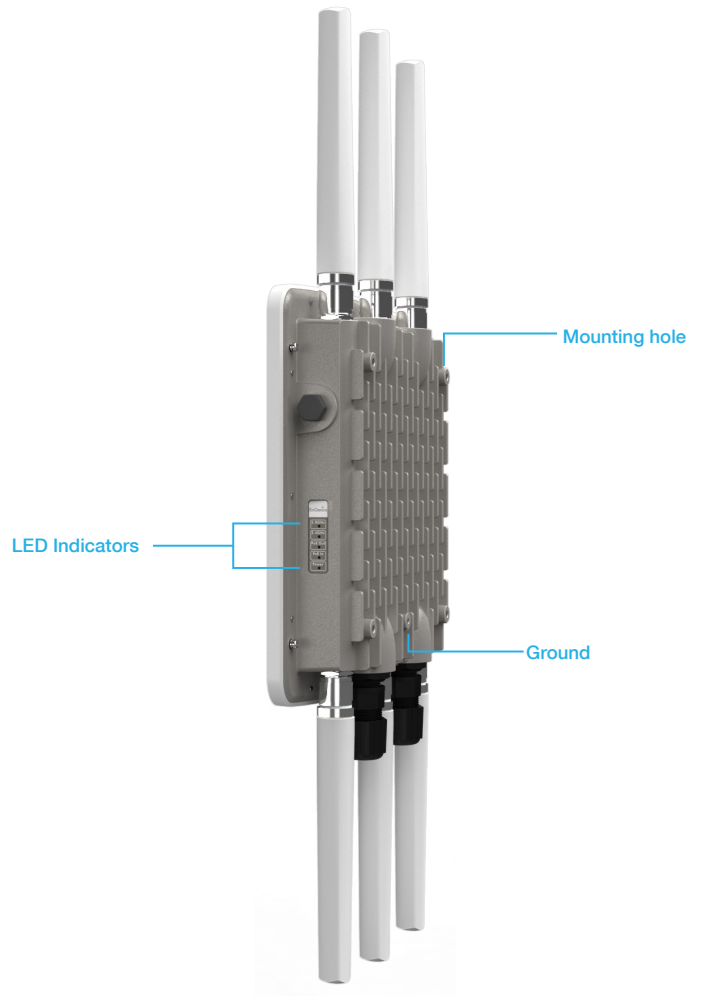
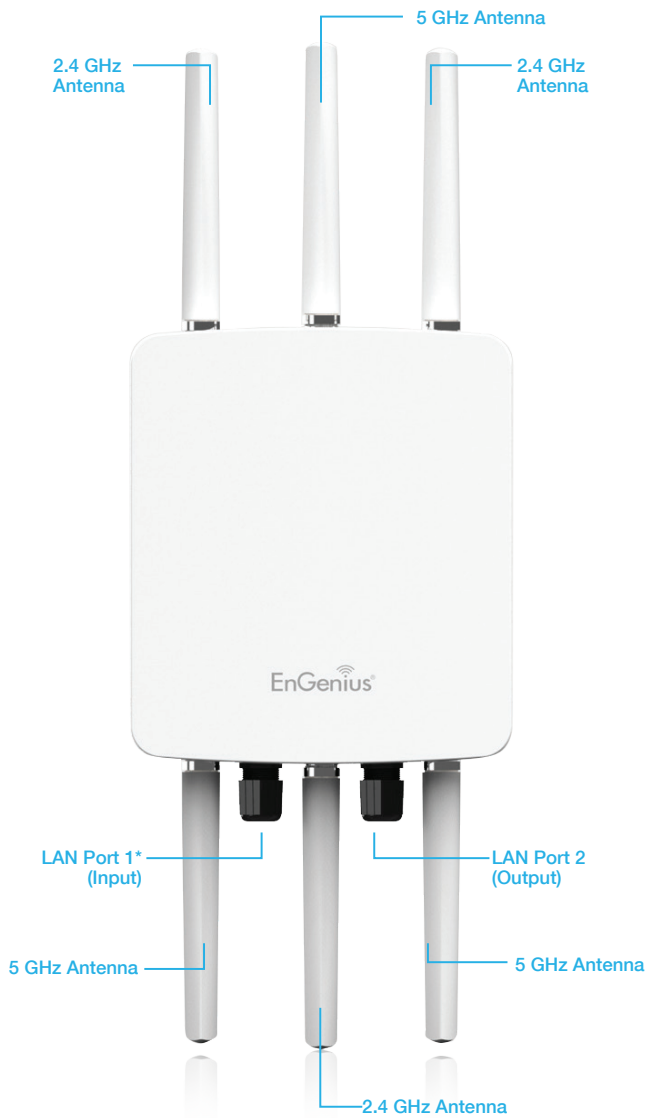
For easier monitoring and maintenance after deployment on rooftops and other hard to reach places, users can monitor the Access Point remotely with SNMP-based EZ Controller wireless Access Point software for Windows, Mac OSX, and Linux (available online as a free download).

### Quantum Beam Technology

Concentrates connectivity to AC compatible computers and other devices (up to 1300 Mbps) exceeding wired Gigabit speeds and nearly 3x faster than Wireless N.

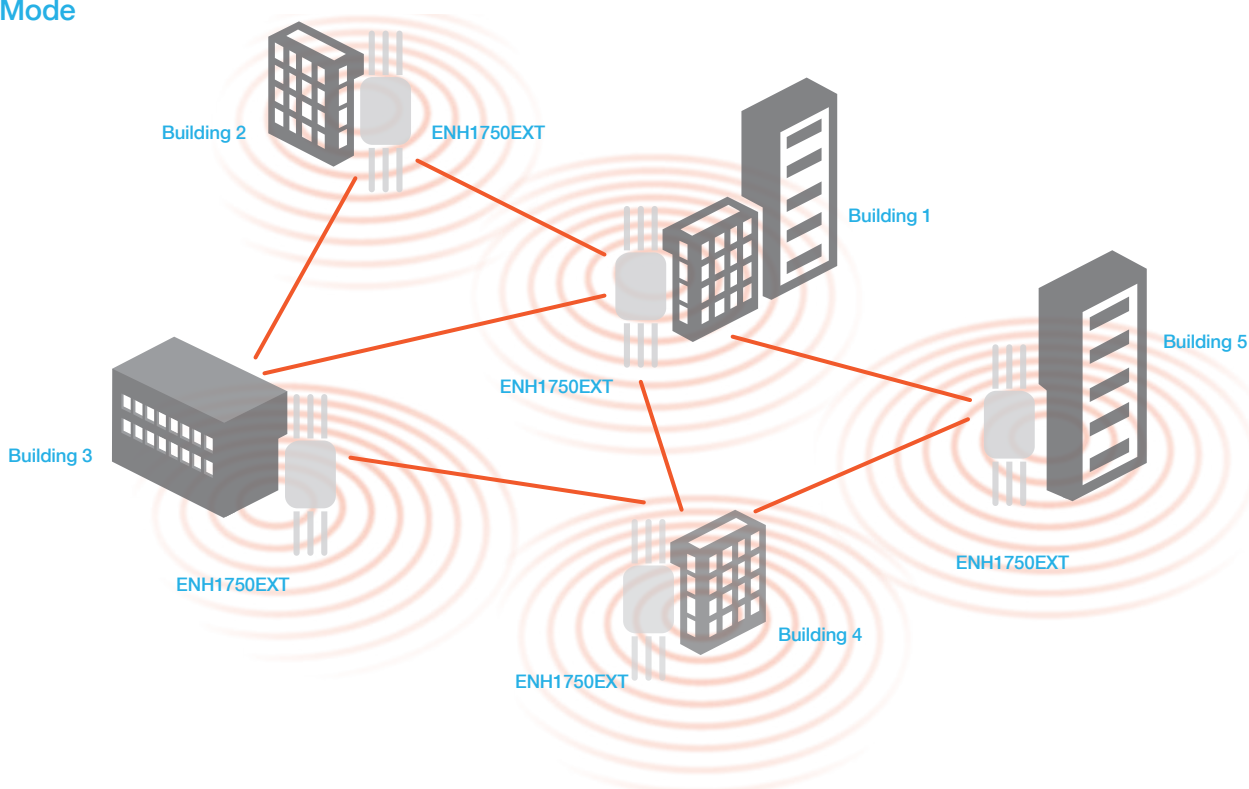
### SSID-to-VLAN Tagging

Can be configured to broadcast up to eight (8) SSIDs per frequency band. Each SSID can be tagged to a specified company network VLAN for different user access based on established access rights.

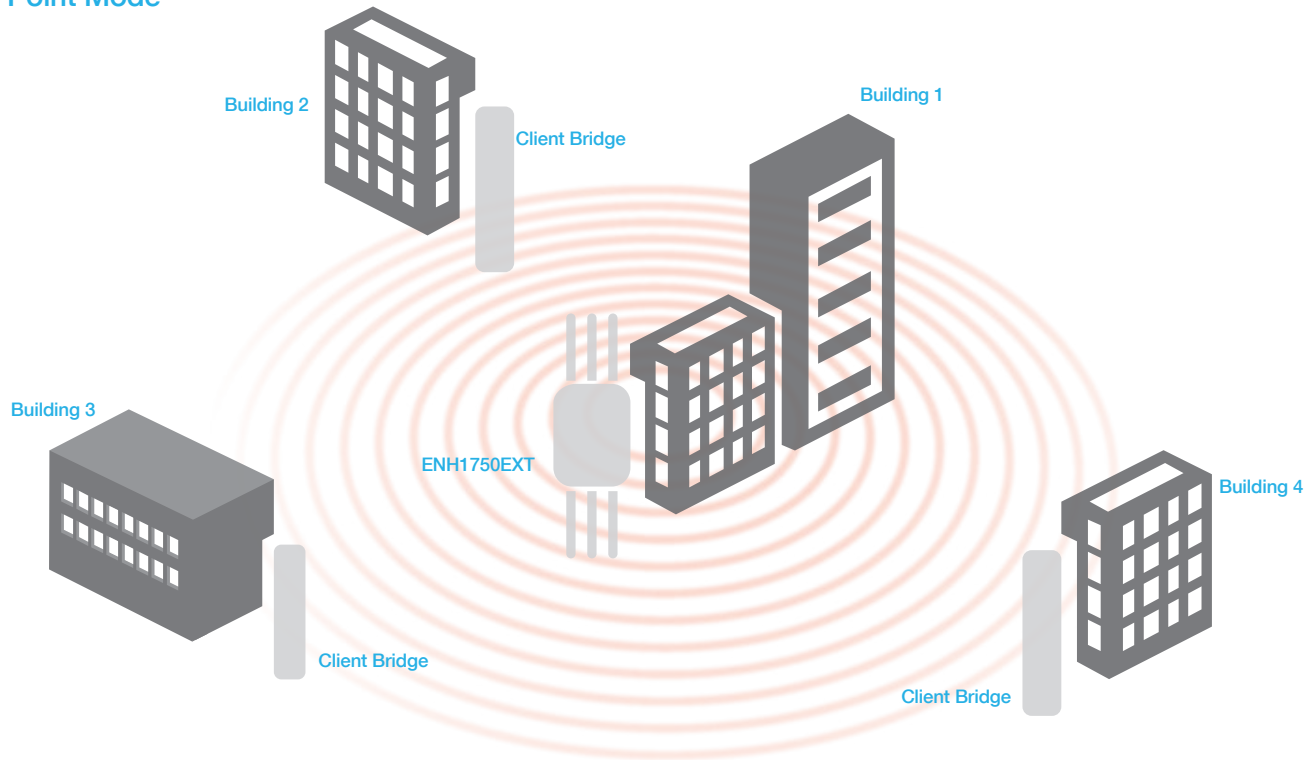


\* Use with included PoE Injector (EPE-48GR) with 48V/0.8A Power Adapter

## Mesh Mode



## Access Point Mode



## Specifications

### Wireless Radio Specifications

#### Dual Radios

IEEE802.11a/n/ac on 5 GHz - Maximum: 1300 Mbps

IEEE802.11b/g/n on 2.4 GHz- Maximum: 450 Mbps

Dual concurrent radio support

#### Transmit Power (Maximum Value)

Maximum 29 dBm on both 2.4GHz and 5 GHz

#### Radio Technologies

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

802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)

802.11n/ac: 3 x 3 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

#### 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

#### Data Rates

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 MCS15)

802.11ac: 6.5 to 1300 (MCS0 to MCS15, nss: 1 to 3)

### Standard

#### Power Source

External Power Adapter on PoE Injector (EPE-48GR); DC IN, 48V/0.8A

IEEE 802.3at Compliant

#### Antennas

Three (3) External Detachable 5 dBi Omni-Directional High Gain antennas for 2.4 GHz

Three (3) External Detachable 7 dBi Omni-Directional High Gain antennas for 5 GHz

Compliant with N type Connector

#### Physical Interface

ENH1750EXT Device:

LAN 1: RJ-45 Gigabit Ethernet (10/100/1000 Mbps) – PoE Capable 802.at (Input)

LAN 2: RJ-45 Gigabit Ethernet (10/100/1000 Mbps) – PoE Capable 802.af (Output)

EPE-48GR PoE Injector:

1 x Reset Button

1 x AP/Bridge Port

1 x DC IN 48 V/0.8A

1 x Gigabit Ethernet (10/100/1000 Mbps) Port

#### LED Indicator

Power

LAN 1

LAN 2

2.4 GHz

5 GHz

## Wireless Functional List

### Operation Modes

Access Point / Mesh / WDS

### WDS Detail

WDS AP / WDS Bridge / WDS Station

### Security

WEP (64/128/152bit)

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

Hidden SSID in beacons

MAC address filtering, up to 50 MACs

Wireless STA (Client) Connection List

HTTPS

SSH

### Features

CLI

Distance Control (Ack Timeout)

Multicast

Wi-Fi Scheduler

Band Steering

Fast Roaming

Fast Handover

Auto Channel Selection

BSSID support

16 SSIDs support

Support 8 SSIDs on each 2.4 GHz and 5 GHz bands

Independent VLAN settings can be enabled or disabled

Any packet without a VLAN tag will be inserted with a PVID (Ethernet Port VID)

VLAN Pass-through (over WDS Bridge)

SNMP v1/v2c/v3, MIB I/II, Private MIB

Client Traffic Status

Guest Network

Email Alert

QoS: Complaint with IEEE 802.11e standard

RADIUS Accounting

## Environmental & Mechanical

### Temperature Range

Operating: -4 °F to 158 °F (-20 °C to 70 °C)

Storage: -22 °F to 176 °F (-30 °C to 80 °C)

### Humidity (non-condensing)

Operating: 90% or less

Storage: 90% or less

### Weights & Measures

Length: 11.22"

Width: 8.58"

Depth: 2.1"

Weight: 4.17lb

### Certifications

FCC, IC, CE

### Warranty

1 Year

### Surge / ESD Protection

Surge Protection: 20KV (Certificated standard is 8KV)

ESD Protection: 6KV (Certificated standard is 1KV)

### Waterproof

IP68 Rated Enclosure

## Package Contents

ENH1750EXT

3x detachable 5 dBi 2.4 GHz Antenna

3x detachable 7 dBi 5 GHz Antenna

Power Adapter (48V/0.8A)

PoE Injector (EPE-48GR)

Grounding Cable

Pole Mount Bracket

Wall Mount Base

Mounting Screw Set

Quick Installation Guide