EnGenius

ENH900EXT

High-Powered, Long Range
Dual Band **N900** Wireless Ruggedized Outdoor Access Point

Keep more clients connected in an EnGenius outdoor wireless network at incredibly fast N speeds on both the 2.4 GHz and 5 GHz bands.

The ENH900EXT is a high-powered, long-range, Mesh-capable 3x3 Dual-Band Wireless 802.11a/b/g/n Outdoor Access Point with speeds up to 450 Mbps on both its high-powered 2.4 GHz and 5 GHz radios. It can be configured as an Access Point, Mesh, or WDS (AP, Station, & Bridge). The ENH900EXT is designed to operate in a variety of outdoor environments 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 a business network.

Key Features

- Up to 29 dBm transmit power, enabling long range connectivity
- Dual-Band / Three Stream
- Band Steering feature shifts Dual-Band clients to 5 GHz
- Supports IEEE802.11a/b/g/n wireless standards with up to 450 Mbps data rate on each band
- Three detachable 5 dBi 2.4 GHz Omni-directional antennas
- Three detachable 7 dBi 5 GHz Omni-directional antennas
- 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 (Free online download)
- Can be used with included PoE Injector (EPE-48GR) and power adapter or via PoE with PoE 802.3at/af capable switches
- Supports Mesh in the 2.4 GHz band only
- Secured Guest Network option available

Mesh for More Reliable Wireless Coverage

Under the AP Mesh mode, the ENH900EXT Wireless Outdoor Access Point can be used as a central connection hub for stations or clients that support IEEE 802.11a/b/g/n networks. Under this mode, the ENH900EXT can be configured with the same Mesh SSID and security password in order to associate with other ENH900EXTs as well as connect with clients under the same SSID and security encryption signatures. For example, installers can use one band to connect the ENH900EXT to the Mesh network topology and the other band to broadcast traffic over the network. Acting as a node within a web framework, each ENH900EXT only needs to connect to the nearest node using the best path to transmit data, working collaboratively with other ENH900EXTs in the network infrastructure to function.

Roaming

The ENH900EXT also supports 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.

The ENH900EXT also includes wireless encryption safeguards, such as Wi-Fi Protected Access (WPA-PSK/WPA2-PSK) Encryption, and IEEE 802.1X with RADIUS. Wireless MAC Filtering is also included allowing network administrators to allow or deny network access to wireless clients (computers, tablet PCs, NAS, smartphones, etc.) according to their MAC addresses. The ENH900EXT is easy to install in virtually any location as well with its included PoE (Power over Ethernet) injector for quick outdoor installation. 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.

Support for IP Surveillance Cameras

When the ENH900EXT is powered with the included 48V/0.8A PoE injector (EPE-48GR) the second Gigabit Ethernet Port (LAN 2) on the Access Point can be used to connect and power an IP Surveillance Camera through a standard Ethernet cable. This eliminates the need to run a separate power cable and plug in a dedicated power adapter just for the IP Camera which can be problematic for installations on light poles or under eaves of roofs.

Waterproof / Dustproof for Harsh Outdoor Enviornments

The ENH900EXT's internal electronics have been mounted in an IP68-rated enclosure, one of the highest waterproof and dustproof ratings available, designed to withstand extremely harsh 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 ENH900EXT an ideal outdoor wireless solution for virtually any locale or any venue including ski and beach resorts, sports arenas, college and corporate campuses, and businesses located in snowy, rainy, and arid climates.

High Power and Long-Range Coverage

Up to 29 dBm transmit power, enabling long range connectivity.

5 GHz Antenna

2.4 GHz Antenna

2.4 GHz Antenna

LAN Port 1* (Input)

LAN Port 2 (Output)

5 GHz Antenna

5 GHz Antenna

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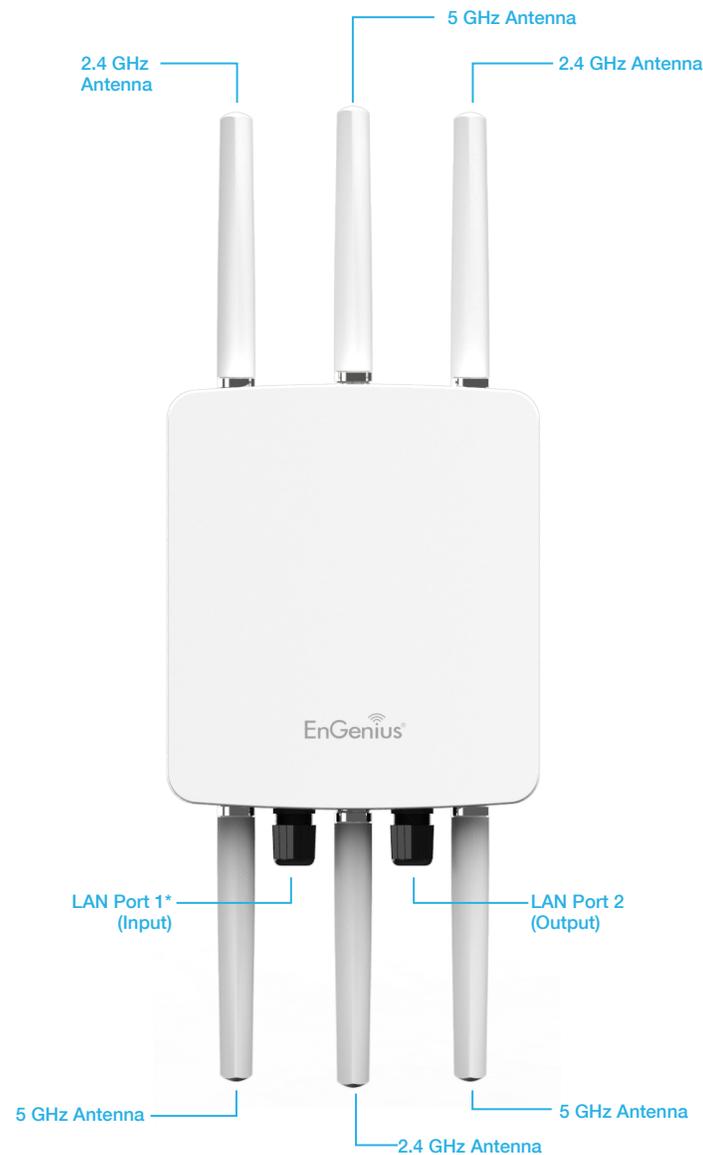
* Use with included PoE Injector (EPE-48GR) with 48V/0.8A Power Adapter

Supports Mesh

Supports Mesh networking in the 2.4 GHz frequency band only to provide redundant and robust connectivity for wireless deployments when running Ethernet cable is not practical.

Band Steering

When Band Steering is activated, the ENH900EXT automatically detects Dual Band (5 GHz-capable clients) and shifts them to the 5 GHz band to relieve network congestion on the 2.4 GHz band for more optimal data traffic flow.

Dual-Band N900 Wireless Speeds

Dual-Band for expanded user capacity, up to 450 Mbps on both the 2.4 GHz and 5 GHz frequency bands for faster connectivity.

## Supports Separate Mode Configuration per Frequency Band

Choose one of three modes available to the ENH900EXT depending on your need: Access Point, Mesh, or WDS (AP, Station & Bridge).

Simplified AP Monitoring and Management

EZ Controller wireless Access Point software for Windows, Mac OS X and Linux (available as a free online download) for easier monitoring and maintenance after deployment on rooftops and other hard to reach places.

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.

Mounting hole

LED Indicators

Ground

2

Mesh

Building 2 — ENH900EXT
Building 1
Building 5
Building 3 — ENH900EXT
ENH900EXT
ENH900EXT
Building 4
ENH900EXT

Access Point

Building 2
Client Bridge
Building 1
Building 3
Client Bridge
ENH900EXT
Building 4
Client Bridge
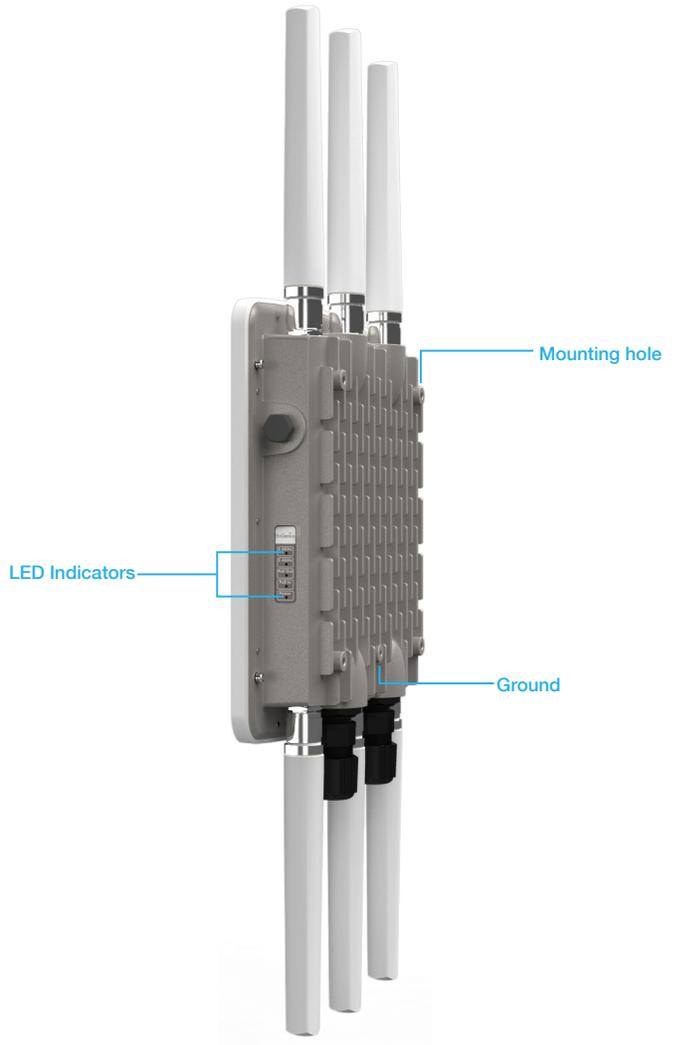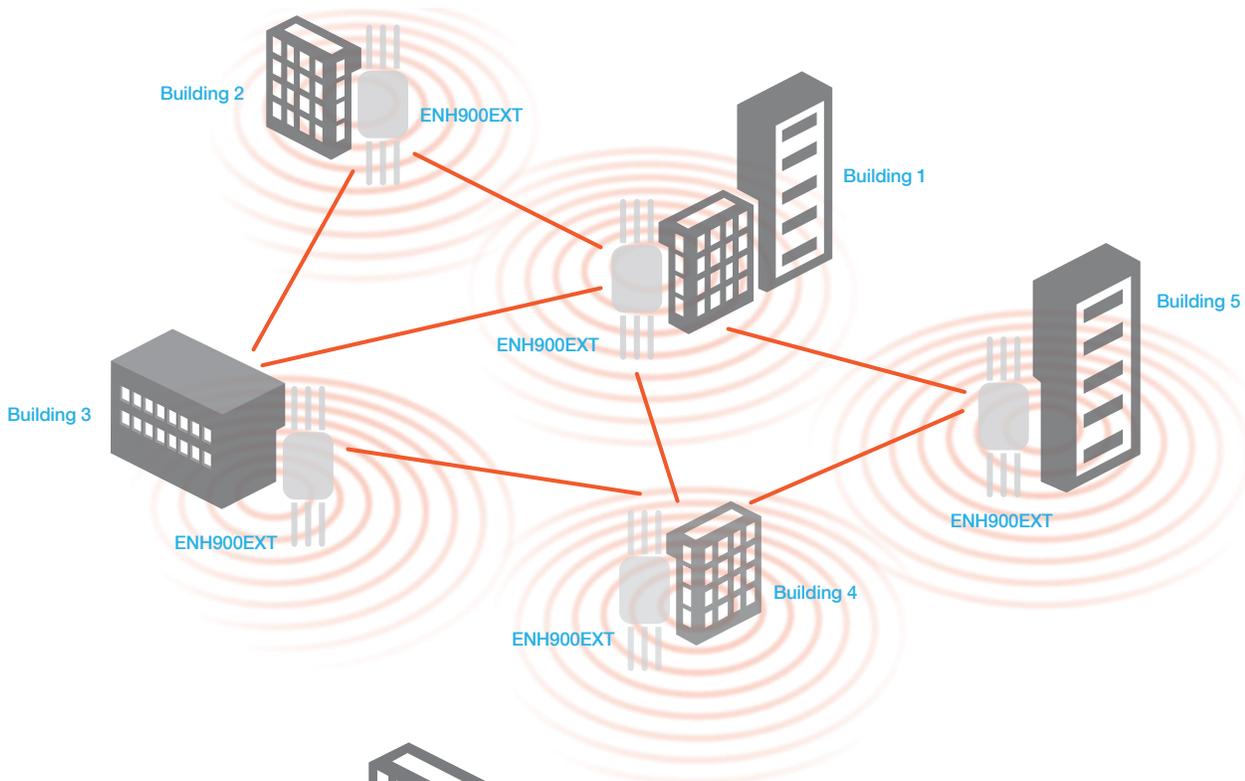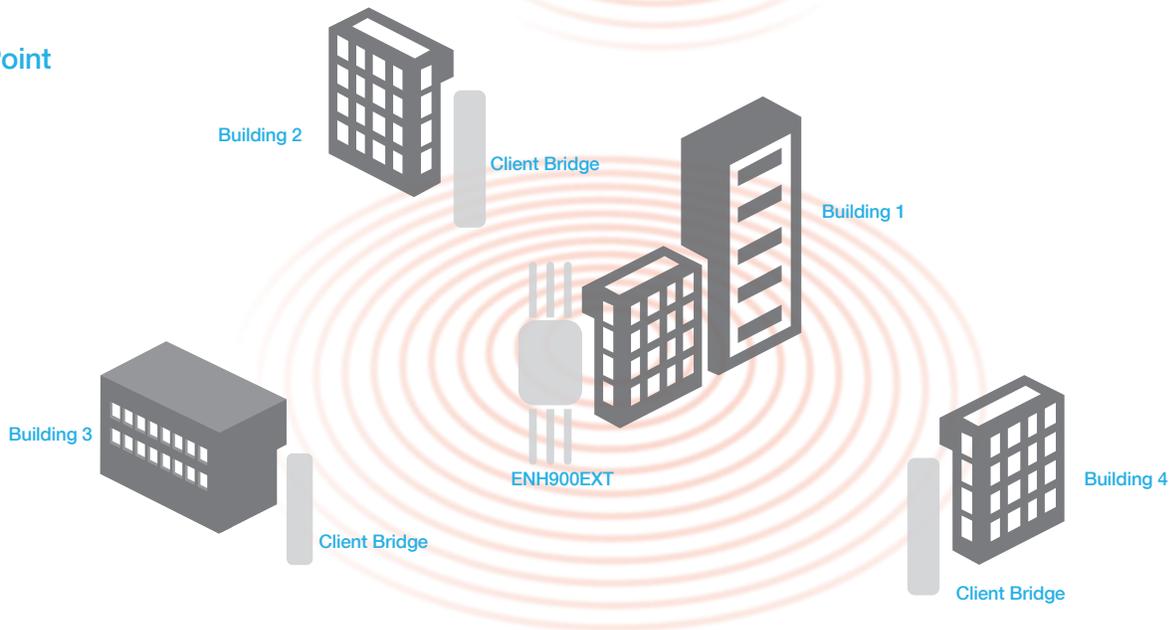
Specifications

Wireless Radio Specifications

Dual Radios

IEEE802.11a/n on 5 GHz - Maximum: 450 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: Orthogonal frequency-division multiplexing (OFDM)

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

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)

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

ENH900EXT Device:

LAN 1: RJ-45 Gigabit Ethernet (10/100/1000 Mbps) – 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

Effective Control

CLI
Distance Control (AcK Timeout)
Multicast
Wi-Fi Scheduler
Band Steering
Seamless Roaming
Fast Handover

Management

Auto Channel Selection

SSIDs

BSSID support
16 SSIDs support
Support 8 SSIDs on each 2.4 GHz and 5 GHz bands

VLAN Tagging

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
Save Configuration as Default
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

ENH900EXT Dual-Band N900 Wireless Outdoor Access Point	
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	