



Neutron Series Indoor Access Points

# Neutron Series Indoor Managed Access Points

High Performance Reliability

EnGenius' Neutron Series line of Managed Indoor Access Points provides wireless connectivity that's flexible, scalable and reliable for a broad range of indoor applications.

Whether you are looking to connect a luxury home or office or need to provide ultra-fast Wi-Fi access to a large resort or campus, Neutron EWS Access Points meet the high-bandwidth requirements of today's mobile users.

No matter what size network you need to support, Neutron EWS Access Points are flexible enough to meet your needs. Start small and grow or go big. Deploy and manage a few or 1,000+ APs on an unlimited number of networks distributed across various locations—regardless of their size and infrastructures. Neutron Series easily scales with your networking needs.

### Features & Benefits

- High-Capacity 11ac Wave 2 Speeds to 2.5 Gbps
- Dual-Radio MU-MIMO Improves Performance, Expands Capacities
- Beamforming Technology Optimizes Signal, Reception & Reliability
- Operate as a Stand-Alone AP or Centrally Manage
- Remotely Manage 1-1,000+ APs via ezMaster™
- Versatile 4x4, 3x3 & 2x2 11ac & Affordable Single-Band 11n Models
- No Access Point Licensing or Subscription Fees
- GigE PoE-Compliant Ports Expand Deployment & Power Options
- Low-Profile Ceiling-, Wall-Mount & Wall-Plate Designs Blend with Environment



## Flexibility in Deployment

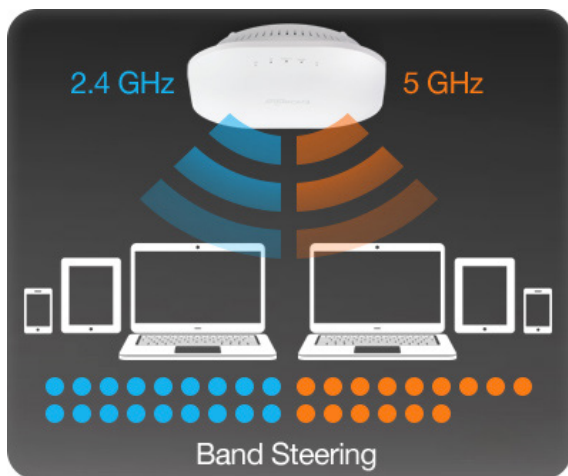
Neutron's versatile line of high-performance, managed, indoor ceiling- and wall-mount access points range from single-band 11n models to high-capacity 4x4 dual-band 11ac Wave 2 versions. Wall-plate models serve as all-in-one communication "hubs" for in-room wireless connectivity. Configure APs individually as stand-alone units, locally manage up to 50 per Neutron Switch or use ezMaster software to control 1,000+ APs.

## Ultra-Fast 11ac Wave 2 Speeds

EnGenius' 11ac Wave 2 Access Points deliver the highest available speeds for Wi-Fi devices reaching 2.5 Gbps. 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.

## Optimized Connectivity

Neutron EWS APs feature dual-band<sup>1</sup> concurrent wireless coverage, high speeds, and high-device capacities. Band Steering optimizes network traffic flow by automatically directing dual-band clients to the less congested 5 GHz band. Fast Roaming capability ensures seamless, reliable connectivity for mobile users as they move between access points.



## Protected by Advanced Encryption

With Neutron 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 Neutron'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.



## Power-over-Ethernet Convenience

All Neutron EWS Access Points feature at least one Gigabit PoE port, enabling placement in discreet locations where power outlets are scarce or unavailable. Power the APs through a connected Ethernet cable directly to a Neutron Managed Gigabit PoE+ Switch or with a PoE adapter up to 328 feet from the power source.

## Simplified Deployment & Provisioning

In combination with Neutron Switches and ezMaster Network Management Software, Neutron EWS APs are automatically discovered and provisioned. One-click individual or bulk configurations and upgrades save time. In addition, these access points are quickly and easily deployed and operated by users with limited networking experience.

## Manage Up to 50 APs with Neutron Switches

In small settings, any Neutron Managed Switch can act as a wireless controller capable of managing up to 50 Neutron EWS Access Points. IT administrators have access to all connected Neutron devices and a full array of Layer 2 management tools. Choose between PoE+ and non-PoE switch models with flexible deployment and management options.

<sup>1</sup>Exception: the single-band (2.4 GHz) EWS300AP

## Flexible Distributed Network Management

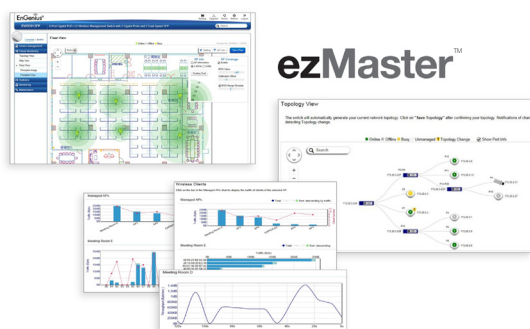
EzMaster Network Management Software expands the flexibility and scalability of Neutron Series EWS Managed Access Points and Switches.

EzMaster allows organizations, such as branch offices and managed service providers, to easily and affordably deploy, monitor and manage a large number of Neutron APs, Switches and IP Cameras across geographically diverse properties. Centrally manage an unlimited number of independent distributed networks in the same subnet or cross-subnet from a single, at-a-glance network dashboard, no matter where they're located.

Deploy ezMaster locally, remotely or via a Cloud-based service with or without an onsite controller.

## Powerful, Scalable Options

EzMaster scales with your growing business needs. Manage 1,000+ Neutron EWS devices and 10,000+ concurrent users. Together, Neutron APs, Switches and ezMaster provide a flexible, fully integrated solution with redundancy support and future expandability for broader device connectivity.



## System Requirements

### Recommended environment for managing up to 500 APs

CPU: Intel® Core™ i3 3.6 GHz dual-core or above  
RAM: 4 GB minimum  
HDD: 500 GB (actual requirement dependent on log size)  
OS: Microsoft® Windows® 7 or later + VMware® Player 7.0 or compatible virtualization software

### Recommended environment for managing up to 1,000+ APs

CPU: Intel® Core™ i5 3.2 GHz quad-core or above  
RAM: 4 GB minimum  
HDD: 500 GB (actual requirement dependent on log size)  
OS: Microsoft® Windows® 7 or later + VMware® Player 7.0 or compatible virtualization software

### Browser Requirements

Internet Explorer 10 or better  
Firefox 34.0 or better  
Chrome 31.0 or better  
Safari 8.0 or better

### Network Topology Requirements

At sites where APs are deployed: A DHCP-enabled network for APs to obtain an IP address

## Simplified Device Management

EzMaster Network Management Software makes centralized device management easy. How? Through centralized bulk configuration, provisioning and monitoring, a comprehensive at-a-glance network dashboard, rich analytics and reporting, and much more.

## ezMaster Software Features

- **Centralized Management**
  - Configure, Managed & Monitor 1,000+ Neutron Devices
  - Cross-Network AP Management
  - AP Group Configuration
- **Access Point Configuration & Management**
  - Auto Channel Selection
  - Auto Tx Power
  - Background Scanning
  - Band Steering (Auto Band Steering & Band Balancing)
  - Client Isolation
  - Client Limiting
  - Fast Roaming
  - L2 Isolation
  - LED On/Off Control
  - Multiple SSID
  - RSSI Threshold
  - Secure Guest Network
  - Traffic Shaping
  - VLAN Isolation
  - VLAN Tag
- **Comprehensive Monitoring**
  - Device Status Monitoring
  - Floor Plan View
  - Map View
  - Rogue AP Detection
  - System Status Monitoring
  - Visual Topology View
  - Wireless Client Monitoring
  - Wireless Coverage View
  - Wireless Traffic & Usage Statistics
- **Management & Maintenance**
  - Bulk Firmware Upgrade
  - Captive Portal
  - Email Alert
  - Kick/Ban Clients
  - One-Click Update
  - Remote Logging
  - Seamless Migration
  - Syslog

## EnGenius Neutron Series Indoor Managed Access Points



	CEILING-MOUNT						WALL PLATE	
Model	EWS371AP	EWS370AP	EWS360AP	EWS350AP	EWS310AP	EWS300AP	EWS550AP	EWS510AP
Standards	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n	802.11b/g/n	802.11a/b/g/n/ac	802.11a/b/g/n
Frequency	2.4 & 5 GHz	2.4 & 5 GHz	2.4 & 5 GHz	2.4 & 5 GHz	2.4 & 5 GHz	2.4 GHz	2.4 & 5 GHz	2.4 & 5 GHz
2.4 GHz Max. Data Rate	800 Mbps	800 Mbps	450 Mbps	300 Mbps	300 Mbps	300 Mbps	400 Mbps	300 Mbps
5 GHz Max. Data Rate	1,733 Mbps	1,733 Mbps	1,300 Mbps	867 Mbps	300 Mbps	N/A	867 Mbps	300 Mbps
Radio Chains/Streams	4 x 4:44	x 4:4	3 x 3:32	x 2:2	2 x 2:22	x 2:2	2 x 2:2	2 x 2:2
RF Output Power (2.4 GHz)	15 dBm	15 dBm	15 dBm	15 dBm	15 dBm	15 dBm	15 dBm	15 dBm
RF Output Power (5 GHz)	15 dBm	15 dBm	15 dBm	15 dBm	15 dBm	N/A	15 dBm	15 dBm
Ethernet Ports	2 x Gig Port (PoE+)	2 x Gig Port (PoE+)	1 x Gig Port (PoE+)	1 x Gig Port (PoE+)	1 x Gig Port (PoE)	1 x Gig Port (PoE)	- 1 x 10/100/1000 Access Port (PoE+) - 2 x 10/100/1000 Access port - 1 x Gig Uplink Port (PoE) - 2 x RJ45 Pass Through port	- 1 x 10/100 Mbps Access Port (PoE+) - 3 x 10/100 Mbps Access Ports - 1 x Gig Uplink Port (PoE) - 1 x RJ45 Pass Through Ports
110 Punch Down Block	N/A	N/A	N/A	N/A	N/A	N/A	1	1
Power-over-Ethernet	802.3at	802.3at	802.3at	802.3at	802.3af/at	802.3af/at	802.3af/at	802.3af/at
Power Consumption (Peak)	21W	21W	22.8W	18W	15.6W	9.6W	10W	10.8W
Integrated Antenna	N/A	4 x 3 dBi (2.4 GHz) 4 x 3 dBi (5 GHz)	6 x 5 dBi	4 x 5 dBi	4 x 5 dBi	2 x 5 dBi	2 x 4 dBi (2.4 GHz) 2 x 5 dBi (5 GHz)	2 x 4 dBi (2.4 GHz) 2 x 5 dBi (5 GHz)
External Antenna	8 x 3 dBi (RP-SMA)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

### Technical Specifications

#### Frequency

**EWS310AP / EWS350AP / EWS360AP / EWS370AP / EWS371AP / EWS550AP / EWS510AP**

2.4 and 5 GHz Frequency Bands

#### EWS300AP

2.4 GHz Frequency Band

#### Standards

##### EWS300AP

IEEE 802.11b/g/n

##### EWS310AP / EWS510AP

IEEE 802.11a/b/g/n

##### EWS550AP / EWS350AP / EWS360AP / EWS370AP / EWS371AP

IEEE 802.11a/b/g/n/ac

#### Radio I

11b/g/n: 2.412~2.484 GHz

#### Radio II (Dual-Band models only)

11a/n/ac: 5.18-5.24 & 5.26-5.32 & 5.5-5.7 & 5.745-5.825 GHz

#### Data Rates

**EWS300AP** Up to 300 Mbps on the 2.4 GHz frequency band

**EWS310AP / EWS510AP** Up to 300 Mbps on both frequency bands

**EWS350AP** Up to 300 Mbps on the 2.4 GHz frequency band; Up to 867 Mbps on the 5 GHz band

**EWS550AP** Up to 400Mbps on the 2.4GHz frequency band; Up to 867 Mbps on the 5 GHz band

#### Data Rates continued

##### EWS360AP

Up to 450 Mbps on the 2.4 GHz frequency band; Up to 1300 Mbps on the 5 GHz band

##### EWS370AP / EWS371AP

Up to 2.5 Mbps; Up to 800 Mbps on the 2.4 GHz band; Up to 1,733 Mbps on the 5 GHz band

#### Memory

**EWS300AP** 64MB

**EWS310AP / EWS350AP / EWS360AP / EWS550AP / EWS510AP** 128MB

**EWS370AP/EWS371AP** 1GB

#### Flash Memory

**EWS300AP/EWS310AP / EWS350AP / EWS360AP /**

**EWS550AP/ EWS510AP** 16MB

**EWS370AP/ EWS371AP** NOR:32MB NAND:512MB

## Technical Specifications continued

### Power Consumption

**EWS300AP** Up to 9.6W

**EWS310AP** Up to 15.6W

**EWS350AP** Up to 18W

**EWS360AP** Up to 22.8W

**EWS370AP** Up to 21W

**EWS371AP** Up to 21W

**EWS550AP** Up to 10W

**EWS510AP** Up to 10.8W

### Antennas

#### EWS300AP

2 x 5 dBi Internal High Gain Antennas

#### EWS310AP / EWS350AP

2 x 5 dBi 2.4 GHz Internal Antennas

2 x 5 dBi 5 GHz Internal Antennas

#### EWS360AP

3 x 5 dBi 2.4 GHz Internal Antennas

3 x 5 dBi 5 GHz Internal Antennas

#### EWS370AP

4 x 3 dBi (RP-SMA) 2.4 GHz Internal Antennas

4 x 3 dBi (RP-SMA) 5 GHz Internal Antennas

#### EWS371AP

4 x 3 dBi 2.4 GHz Detachable Antennas

4 x 3 dBi 5 GHz Detachable Antennas

#### EWS550AP

2 x 4dBi 2.4GHz Internal Antennas

2 x 6dBi 5GHz Internal Antennas

#### EWS510AP

2 x 4 dBi 2.4 GHz Internal Antennas

2 x 5 dBi 5 GHz Internal Antennas

### Physical Interface

1 x RJ45 Gigabit Ethernet 10/100/1000 – PoE Capable

1 x Reset Button, 1 x Power Connector

#### EWS370AP / EWS371AP

1 x Power

2 x WLAN

1 x LAN 2.4 GHz

1 x LAN 5 GHz

2 x RJ45 10/100/1000 Gigabit Ethernet Ports  
(Link Aggregation Achieves 2 Gbps Throughput)

- LAN1: 802.3at PoE Input

- LAN2: Pass Through Port

1 x Reset Button

1 x DC Power Connector

#### EWS550AP / EWS510AP

1 x 10/100/1000 Mbps Uplink Port with 802.3af/at PoE

1 x 10/100 Mbps Access Port with PoE Output  
(support 802.3af output when PoE input is 802.3at)

2 x RJ45 Pass Through Ports

1 x 110 Punch Down Block

1 x DC Power Connector

1 x Reset Button

### LED Indicators

#### EWS300AP

1 x Power

1 x WLAN

1 x LAN

1 x 2.4 GHz

#### EWS310AP / EWS350AP / EWS360AP

1 x Power

1 x WLAN (Wireless Connection)

1 x LAN

1 x 2.4 GHz

1 x 5 GHz

#### EWS550AP / EWS510AP

1 x Power

1 x WAN

1 x 2.4 GHz

1 x 5 GHz (EWS510AP only)

1 x LAN 1-4

1 Mesh Link (EWS550AP only)

### Power Requirements

Power Supply: 100 to 240 VDC ± 10%, 50/60 Hz  
(depends on different countries)

Active Ethernet (Power-over-Ethernet, IEEE 802.3at/af)

**EWS300AP** Power-over-Ethernet, IEEE 802.3af

**EWS310AP / WS350AP / EWS360AP / EWS370AP / EWS371AP** 12V/2A

**EWS550AP / EWS510AP** 48V/0.8A

### Modulations

OFDM: BPSK, QPSK, 26-QAM (EWS300AP) 16-QAM, 64-QAM, 256-QAM (EWS371AP/EWS370AP) DBPSK, DQPSK, CCK

### Radio Technologies

802.11b: Direct-Sequence Spread Spectrum (DSSS)

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

### Operating Channels

2.4 GHz US/Canada 1-11

5 GHz (Dual-Band models only): Country dependent  
for the following ranges:  
36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116,  
120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165

### Operation Modes

Access Point

### Multiple BSSID

Supports up to 8 SSIDs Per Radio

### SSID-to-VLAN Tagging

Supports 802.1q SSID-to-VLAN Tagging

## Key Features

- 11ac Wave 2 4x4 Models
- Beamforming Technology
- Sectorized 3D Antennas
- Dynamic Channel Optimization
- Dual-Band (selected models)
- Band Steering (Dual-Band models)
- Fast Roaming
- Supports Connectivity of 100+ Users
- 16 SSIDs (8 SSIDs per frequency band)
- Wireless Traffic Shaping
- QoS
- SSID-to-VLAN Mapping
- Email Alert
- Wi-Fi Scheduler
- Auto-Reboot
- AP Detection

### Spanning Tree

Supports 802.1d Spanning Tree Protocol

### Wireless

#### EWS300AP / EWS500AP

Wireless Mode: 11b/11g/11n

#### EWS310AP

Wireless Mode: 11a/11b/11g/11n

#### EWS350AP / EWS360AP / EWS370AP / EWS371AP / EWS550AP

Wireless Mode: 11a/11b/11g/11n/11ac

Channel Selection (settings vary by country)

#### All EWS 11ac APs

Channel Bandwidth (Auto, 20 MHz, 40 MHz, 80 MHz)

#### EWS300AP

Channel Bandwidth (Auto, 20 MHz, 40 MHz)

### Transmission Rate

2.4 GHz 11n only, 11b/b/n mix, 11b only, 11b/g, 11g only

5 GHz (Dual-Band models only): 11ac only, 11n only, 11a/n mix, 11a only

#### EWS370AP / EWS371AP

Tx Beamforming (Tx BF)

#### EWS370AP / EWS371AP

#### SU-MIMO

(4) Spatial Streams to 1733 Mbps to Single Client

#### EWS370AP / EWS371AP

#### MU-MIMO

(3) Spatial Streams to 1300 Mbps to (3) MU-MI-MO-Capable Devices Simultaneously

## Technical Specifications continued

### Wireless Management Features (with ezMaster & Neutron Switch)

Access Point Auto Discovery and Provisioning

Access Point Auto IP Assignment

Access Point Group Management

Remote Access Point Rebooting

Access Point Device Name Editing

Access Point Radio Settings

Band Steering (Dual-Band models only)

Traffic Shaping

Fast Roaming (802.11k & 802.11r)

Pre-Authentication (802.11i & 802.11x)

PMK Caching (802.11i)

RSSI Threshold

Access Point Client Limiting

Client Fingerprinting

Wireless Security (WEP, WPA/WPA2 Enterprise, WPA/WPA2 PSK)

AP VLAN Management

VLANs for Access Point- Multiple SSIDs

Secured Guest Network

Captive Portal

Access Point Status Monitoring

Rogue AP Detection

Wireless Client Monitoring

Background Scanning

Email Alert

Wireless Traffic & Usage Statistics

Real-Time Throughput Monitoring

Visual Topology View

Floor Plan View

Map View

Wireless Coverage Display

Secure Control Messaging (SSL Certificate)

Local MAC Address Database

Remote MAC Address Database (RADIUS)

Unified Configuration Import/Export

Bulk Firmware Upgrade Capability

One-Click Update

Intelligent Diagnostics

Kick/Ban Clients

Wi-Fi Scheduler

### Configuration

Web-based Configuration (http)

### Firmware Upgrade

Via Web Browser

### Administrator Settings

Administrator Username and Password Change

### MIB

MIB I, MIB II (RFC1213) and private MIB

### System Monitoring

Status Statistic and Event Log

### SNMP

V1 / V2c / V3

### Traffic Shaping

Incoming and Outgoing Wireless Traffic Shaping

### Reset Settings

Reboot (press and hold for 2 seconds).  
Reset to Factory Default (press and hold for 10 seconds)

### Auto-Channel Selection

Automatically Selecting Least Congested Channel

### Bandwidth Measurement

IP Range and Bandwidth Management

### Schedule Reboot

Reboot Access Point by Minute, Hour, Day, or Week

### Backup and Restore

Save and Restore Settings via Web Interface

### CLI

Supports Command Line Interface

### Diagnosis

IP Pinging Statistics

### Log

SysLog and Local Log Support

### LED Control

On/Off

### AP Detection

Scanning for Available EnGenius APs

### Wireless Security

WPA/WPA2 Personal (WPA-PSK using TKIP or AES)

WPA/WPA2 Enterprise (WPA-EAP using TKIP)

802.1X RADIUS Authenticator: MD5/TLS/TTLS, PEAP

SSID Broadcast Enable/Disable

### Wireless Security continued

MAC Address Filtering, Up to 50 Entries

L2 Isolation

### EWS370AP / EWS371AP

WEP Encryption 64/128/152 bit

### QoS (Quality of Service)

IEEE 802.11e

WMM (Wireless Multimedia)

### Temperature Range

Operating: 32°F to 104°F (0°C to 40°C)

Storage Temperature: -4°F to 140°F (-20°C to 60°C)

### Humidity (non-condensing)

Operating: 90% or less

Operating: 90% or less

### Physical Security

Kensington Security Slot (N/A for EWS510AP)

### Device Dimensions and Weights

#### EWS300AP

Weight: 0.45 lbs. (204.1 g)

Length: 5.07" (128.7 mm)

Width: 5.07" (128.7 mm)

Height: 1.73" (43.9 mm)

#### EWS310AP

Weight: 0.80 lbs. (362.8 g)

Length: 6.36" (161.5 mm)

Width: 6.36" (161.5 mm)

Height: 1.64" (41.6 mm)

#### EWS350AP / EWS360AP

Weight: 0.80 lbs. (362.8 g)

Length: 6.5" (165.1 mm)

Width: 6.5" (165.1 mm)

Height: 1.64" (41.6 mm)

#### EWS370AP / EWS371AP

Weight: 3.7 lbs. (1.67 kg)

Length: 8.46" (215 mm)

Width: 8.46" (215 mm)

Height: 2.2" (55.8 mm)

#### EWS510AP

Weight: 0.65 lbs. (296 g)

Length: 1.45" (37 mm)

Width: 4.33" (110 mm)

Height: 5.19" (130 mm)

## Technical Specifications continued

### Package Contents

#### EWS300AP

Power Adapter (12V/1A)

T-Rail Mounting Kits

Ceiling and Wall Mount Screw Kits

Mounting Brackets

Quick Installation Guide

#### EWS310AP / EWS350AP / EWS360AP

RJ45 Ethernet Cable

#### EWS370AP / EWS371AP

Power Adapter (12V/2A)

#### EWS371AP

8 x Detachable RP-SMA Antennas

#### EWS550AP / EWS510AP

Mounting Bracket

Bracket Screws

Quick Installation Guide

Optional : Wall Mount Bracket

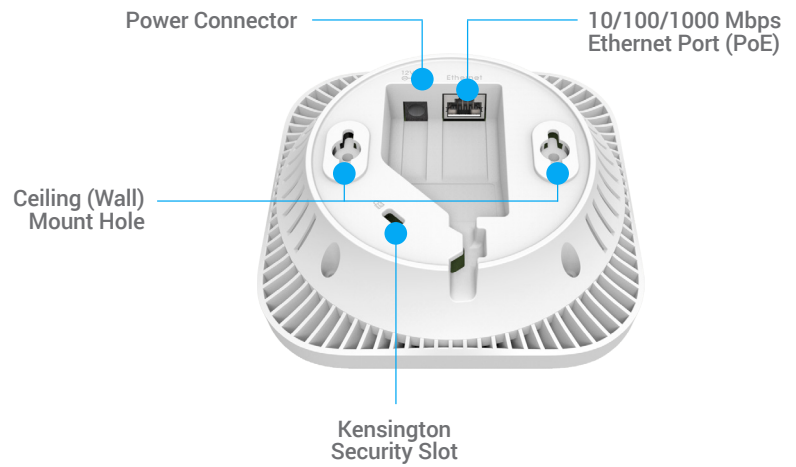
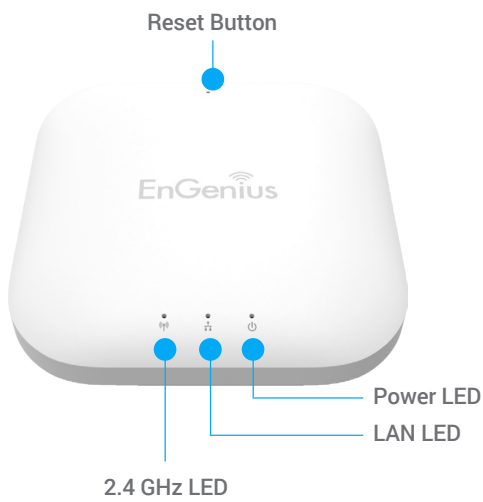
### Certifications

FCC, IC, CE

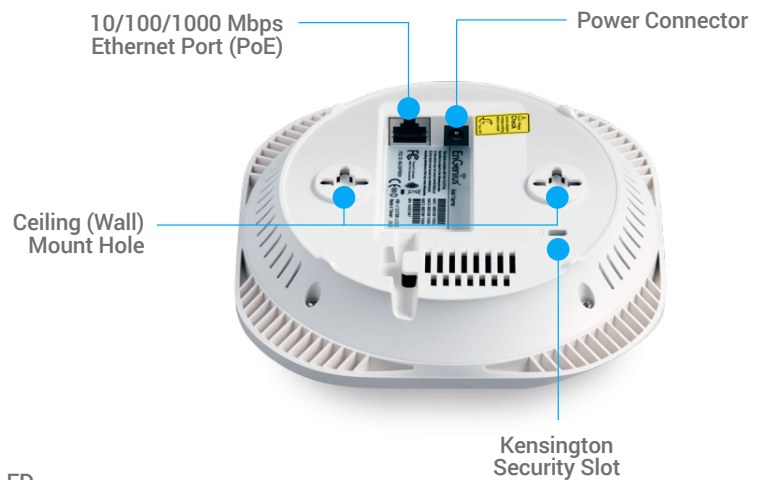
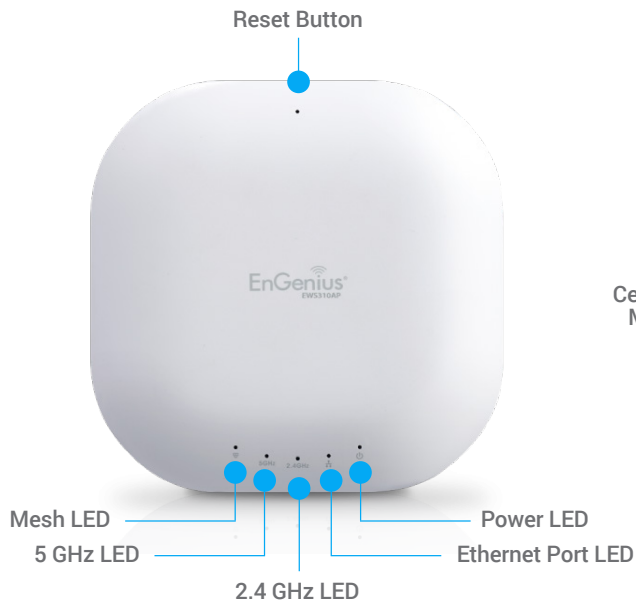
### Warranty

1-Year Standard

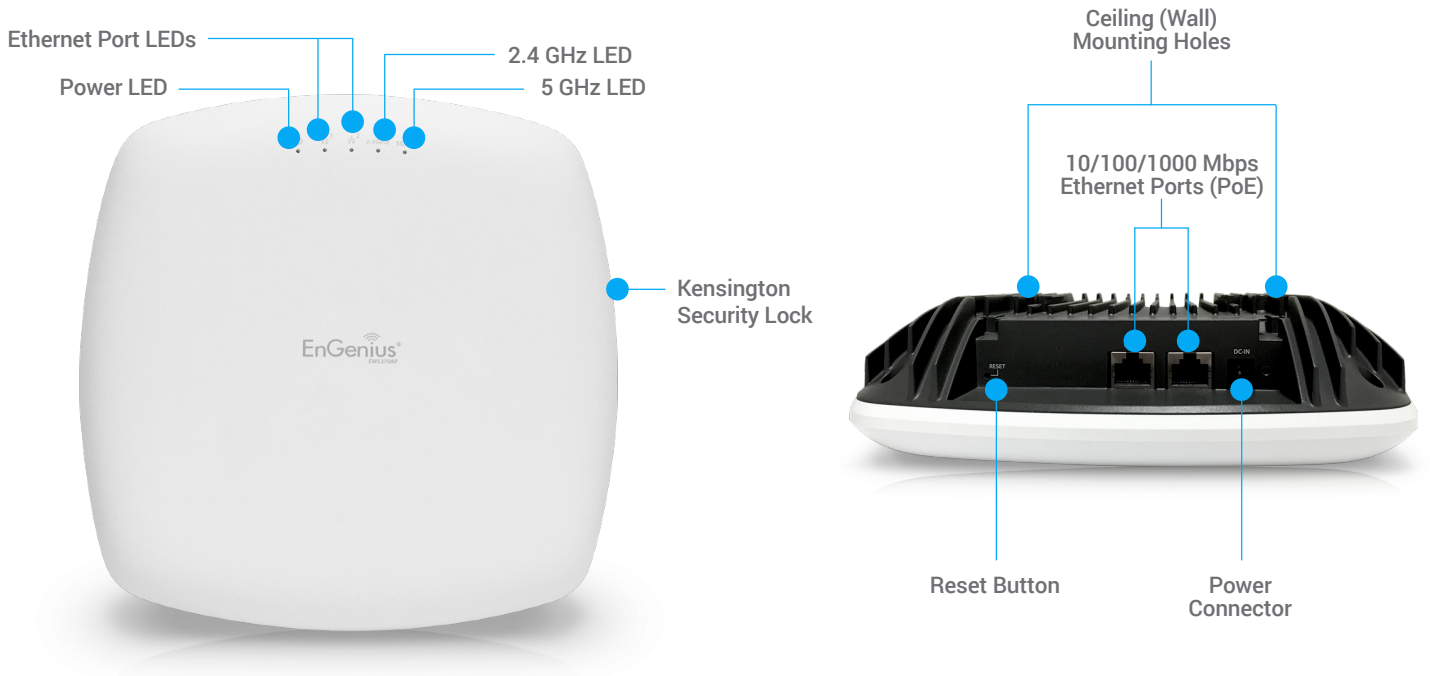
## EWS300AP Indoor Access Point



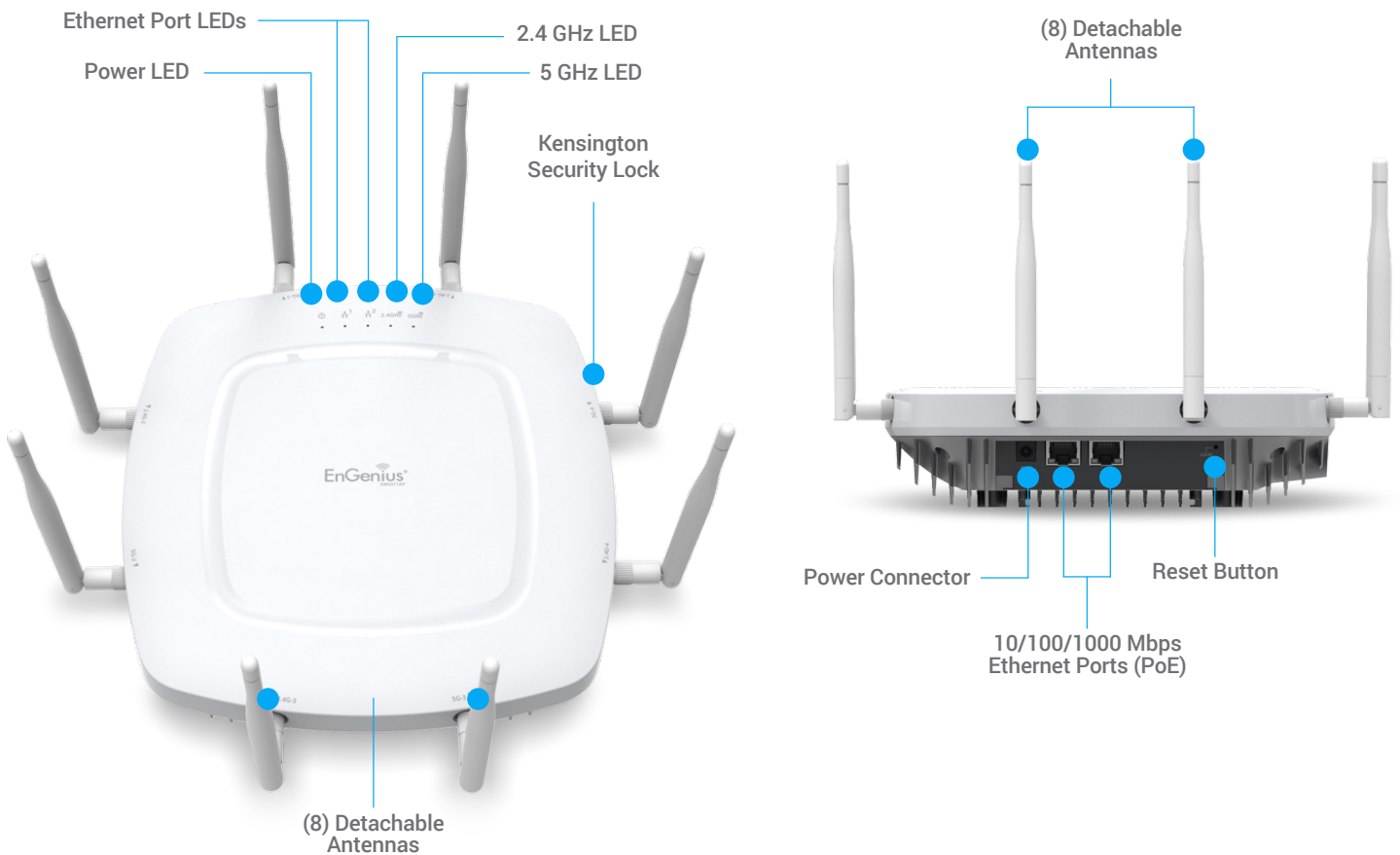
## EWS310AP / EWS350AP / EWS360AP Indoor Access Points



## EWS370AP Indoor Access Point

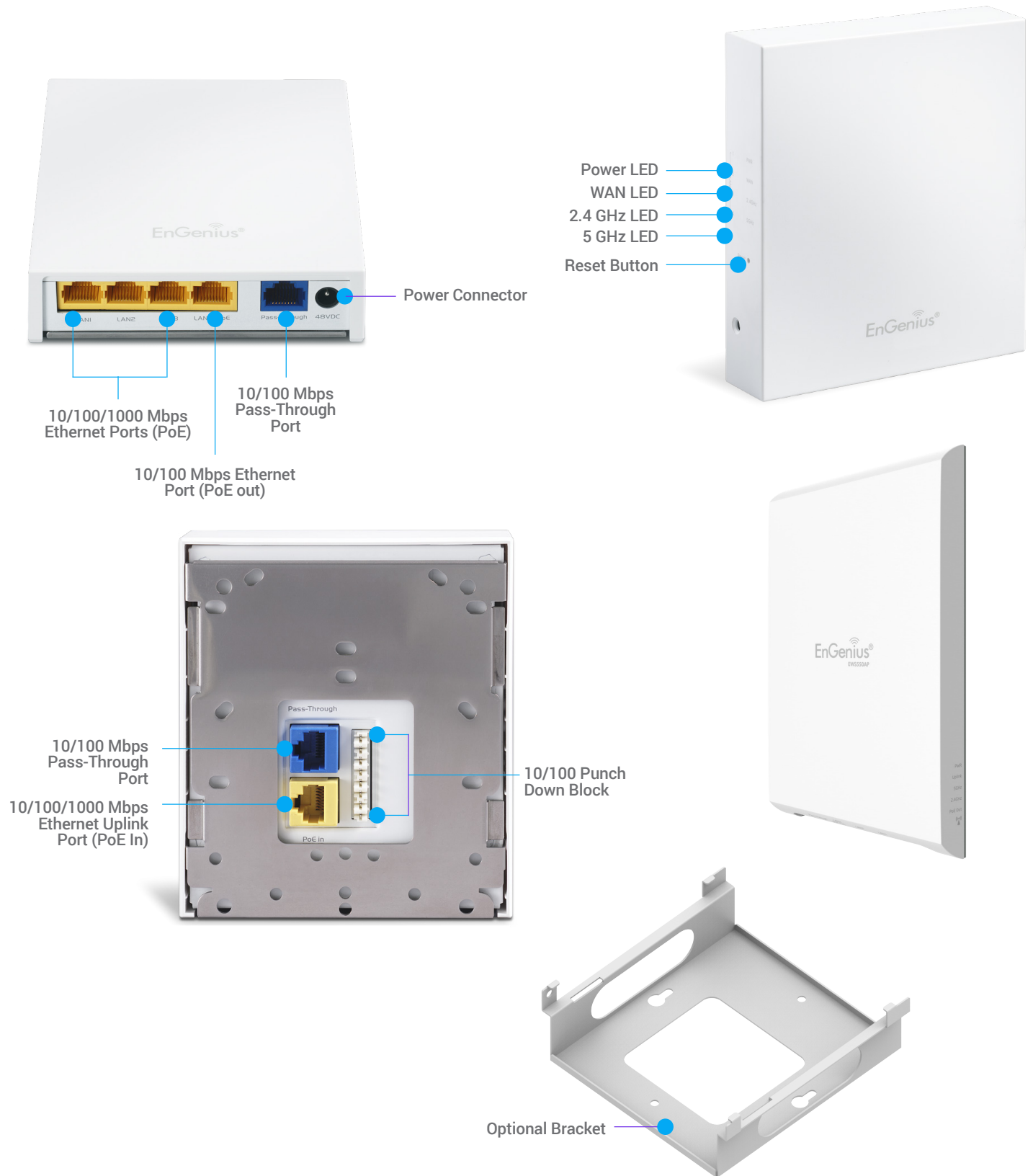


## EWS371AP Indoor Access Point





## EWS550AP / EWS510AP Indoor Wall Plate Access Points



EnGenius Networks Singapore Pte Ltd.

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