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.

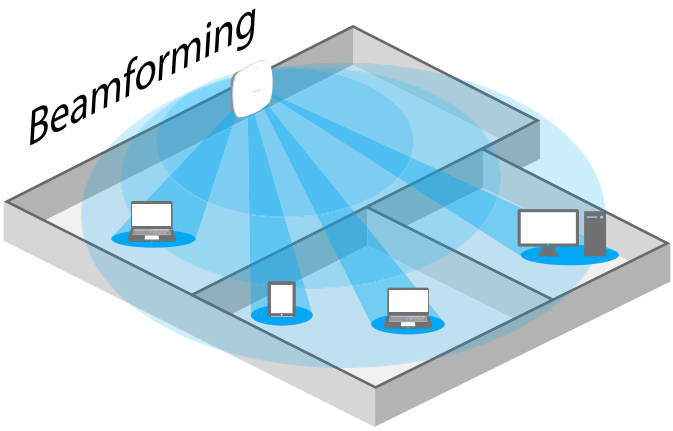
No matter what size network you need to support, Neutron EWS Access Points are flexible enough to meet your needs. Start small and grow or go big. Deploy and manage a few or 1,000+ APs on an unlimited number of networks distributed across various locations—regardless of their size and infrastructures. 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 & 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
- Mesh Wireless Support Simplifies Setup, Optimizes Signals & Self-Heals (Select Models)

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.



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.

Optimize Connectivity With Wireless Mesh

Utilize mesh access point mode on select Neutron APs for retrofit or new install applications where wire runs are not possible. Mesh's smart sensing technology adds devices quickly, optimizes routes between APs, and automatically self-heals the network in the event an AP should ever lose connection.

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.

[1]Exception: the single-band (2.4 GHz) EWS300AP

ezMaster™
Network Management Software

Flexible Distributed Network Management

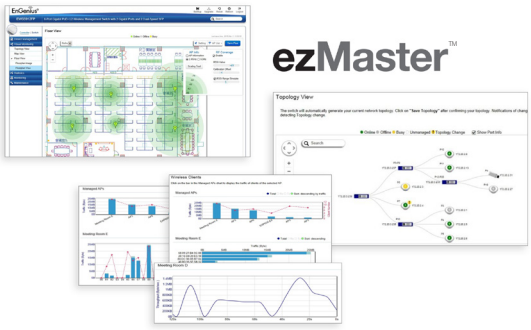
EzMaster Network Management Software expands the flexibility and scalability of Neutron Series EWS Managed Access Points and Switches.

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™ i7 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

Recommended environment for managing 1,000+ APs
CPU: Intel® Xeon® Processor E3 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 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	
Models	**EWS371AP**	**EWS370AP**	**EWS360AP**	**EWS350AP**	**EWS310AP**	**EWS300AP**	**EWS550AP**	**EWS510AP**
Standards	802.11a/b/g/n/ac Wave 2	802.11a/b/g/n/ac Wave 2	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 Wave 2	802.11a/b/g/n
Frequency	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz	2.4 GHz & 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 4:4	4 x 4:4	3 x 3:3	2 x 2:2	2 x 2:2	2 x 2:2	2 x 2:2	2 x 2:2
RF Output Power (2.4 GHz)	27 dBm	27 dBm	28 dBm	26 dBm	29 dBm	29 dBm	21 dBm	20 dBm
RF Output Power (5 GHz)	27 dBm	27 dBm	28 dBm	26 dBm	26 dBm	N/A	20 dBm	20 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 GigE Uplink 2 x GigE Switched 1 x GigE Switched PoE+ 2 x RJ45 Pass-Through 2 x 110 Punch-down	1 x GigE Uplink w/ PoE+ 3 x 10/100 Mbps Switched 1 x 10/100 Switched PoE 2 x RJ45 Pass-Through 1 x 110 Punch-down
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	8 x 3 dBi	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 6 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/EWS510AP/EWS550AP

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

EWS350AP/EWS360AP/EWS370AP/EWS371AP/ EWS550AP

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 2.4 GHz

EWS310AP/EWS510AP Up to 300 Mbps on both frequency bands

EWS350AP Up to 300 Mbps on 2.4 GHz; Up to 867 Mbps on 5 GHz

EWS360AP Up to 450 Mbps on 2.4 GHz; Up to 1300 Mbps on 5 GHz

EWS370AP/EWS371AP Up to 2.5 Gbps with Link Aggregation; Up to 800 Mbps on the 2.4 GHz band; Up to 1,733 Mbps on the 5 GHz band

EWS550AP Up to 400 Mbps on 2.4 GHz; Up to 867 Mbps on 5 GHz

Memory

EWS300AP 64MB

EWS310AP/EWS350AP/EWS360AP/EWS510AP 128MB

Flash Memory

16MB

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

EWS510AP Up to 10.8W

EWS550AP Up to 10W

Antennas

EWS300AP

2 x 5 dBi Internal High Gain

EWS310AP/EWS350AP

2 x 5 dBi 2.4 GHz Internal

2 x 5 dBi 5 GHz Internal

EWS360AP

3 x 5 dBi 2.4 GHz Internal

3 x 5 dBi 5 GHz Internal

EWS370AP

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

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

Technical Specifications continued

Antennas continued

EWS371AP

4 x 3 dBi 2.4 GHz Detachable

4 x 3 dBi 5 GHz Detachable

EWS510AP

2 x 4 dBi 2.4 GHz Internal

2 x 5 dBi 5 GHz Internal

EWS550AP

2 x 4 dBi 2.4 GHz Internal

2 x 6 dBi 5 GHz Internal

Physical Interface

EWS300AP/EWS310AP/WS350AP/EWS360AP

1 x RJ45 10/100/1000 Mbps — PoE Capable

1 x Reset Button

1 x Power Connector

1 x Kensington Lock Slot

EWS370AP/EWS371AP

2 x RJ45 10/100/1000 Mbps 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

1 x Kensington Lock Slot

EWS510AP

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

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

3 x 10/100 Mbps Switched Ports

2 x RJ45 Pass-Through Ports

1 x 110 Punch Down Block

1 x DC Power Connector

1 x Reset Button

EWS550AP

1 x 10/100/1000 Mbps Uplink Port (back plate)

3 x 10/100/1000 Mbps Ethernet Switched Ports (client ports)

- Port 1 (PSE) 802.3af PoE (requires 802.3at power source)

2 x 110 Punch Down Block (1x Passthrough Port, 1x Uplink Port)

2 x RJ45 Pass-Through Ports

1 x Reset Button

1 x Kensington Lock Slot

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

EWS370AP/EWS371AP

1 x Power

2 x WLAN

1 x LAN 2.4 GHz

1 x LAN 5 GHz

EWS510AP

1 x Power

1 x WAN

1 x 2.4 GHz

1 x 5 GHz

1 x LAN 1-4

EWS550AP

1 x Power

1 x Uplink

1 x 5 GHz

1 x 2.4 GHz

1 x PoE Out

1 x LAN

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/EWS350AP/EWS360AP/EWS370AP/EWS371AP 12V/2A

EWS510AP 48V/0.8A

EWS550AP Power-over-Ethernet, IEEE 802.3af out with 802.3at in

Modulations

OFDM: BPSK, QPSK, 26-QAM (EWS300AP) 16-QAM, 64-QAM, 256-QAM (EWS371AP/EWS370AP/EWS550AP) 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

EWS350AP/EWS360AP/EWS550AP

Mesh Access Point

Multiple BSSID

Supports up to 8 SSIDs Per Radio

SSID-to-VLAN Tagging

Supports 802.1q SSID-to-VLAN Tagging

Spanning Tree

Supports 802.1d Spanning Tree Protocol

Wireless

EWS300AP
Wireless Mode: 11b/11g/11n

EWS310AP/EWS510AP
Wireless Mode: 11a/11b/11g/11n

EWS350AP/EWS360AP/EWS370AP/EWS371AP/EWS550AP
Wireless Mode: 11a/11b/11g/11n/11ac

All EWS 11ac APs

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

EWS300AP/EWS310AP

Channel Bandwidth (Auto, 20 MHz, 40 MHz)

Tx Beamforming (Tx BF)

EWS370AP/EWS371AP/EWS550AP

SU-MIMO

EWS370AP/EWS371AP

(4) Spatial Streams to 1733 Mbps to Single Client

EWS550AP
(2) Spatial Streams to 1267 Mbps to Single Client

MU-MIMO

EWS370AP/EWS371AP

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

EWS550AP

(2) Spatial Streams to 1267 Mbps to (2) Clients MU-MIMO-Capable Devices Simultaneously

Management Features

Deployment Options

Stand-Alone (Individually Managed)

Managed Mode (with Neutron Series Switch/ezMaster)

Technical Specifications continued

Stand-Alone Management Features

- Auto Channel Selection
- Auto Transmit Power
- Wireless STA (Client) Connected List
- Guest Network
- Fast Roaming (802.11k & 802.11r)
- Pre-Authentication (802.11i, 802.11x)
- PMK Caching (802.11i)
- RSSI Threshold
- Band Steering
- Traffic Shaping
- VLANs for Access Point – Multiple SSIDs
- MAC Address Filtering
- Backup/Restore Settings
- Power Save Mode
- Auto Reboot
- E-Mail Alert
- Site Survey
- Save Configuration as Default
- Background Scanning
- Client Fingerprinting
- Multicast to Unicast
- Captive Portal
- Wi-Fi Scheduler
- RADIUS Accounting

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

Wireless Management Features (with ezMaster & Neutron Switch) continued

- 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

Tx Power Control

- Adjust Transmit Power by dBm

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

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 Conjested 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
- MAC Address Filtering, Up to 50 Entries
- L2 Isolation

EWS370AP/EWS371AP/EWS550AP

- WEP Encryption 64/128/152 bit

QoS (Quality of Service)

- IEEE 802.11e
- WMM (Wireless Multimedia)

Temperature Range

- Operating: 32ºF to 104ºF (0ºC to 40ºC)
- Storage Temperature: -4ºF to 140ºF (-20ºC to 60ºC)

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)

Technical Specifications continued

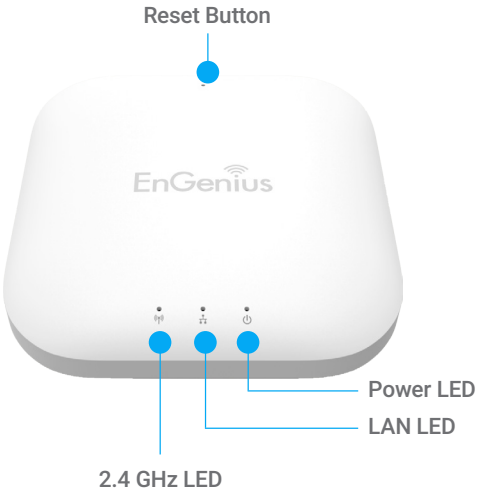
Device Dimensions and Weights continued
EWS350AP/EWS360AP
Weight: 0.80 lbs. (362.8 g)
Length: 6.5" (165.1 mm)
Width: 6.5" (165.1 mm)
Height: 1.64" (41.6 mm)
EWS370AP/EWS371AP
Weight: 3.7 lbs. (1.67 kg)
Length: 8.46" (215 mm)
Width: 8.46" (215 mm)
Height: 2.2" (55.8 mm)
EWS510AP
Weight: 0.65 lbs. (296 g)
Length: 1.45" (37 mm)
Width: 4.33" (110 mm)
Height: 5.19" (130 mm)
EWS550AP
Weight: 1 lbs. (450 kg)
Width: 4.9" (125 mm)
Length: 7.4" (188 mm)
Height: 1" (26 mm)

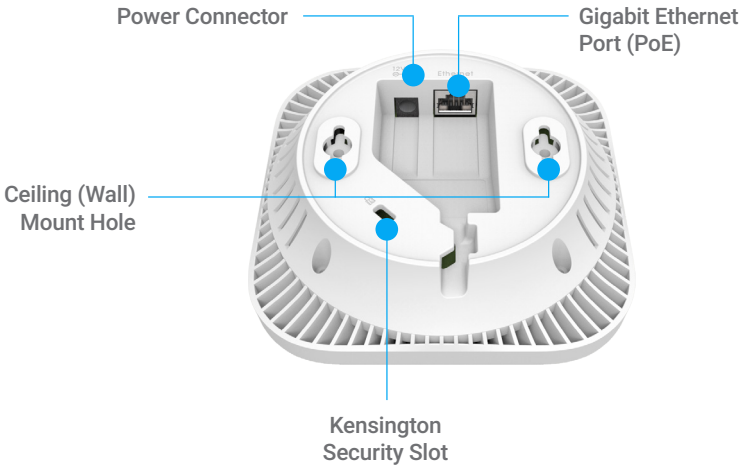
Package Contents
T-Rail Mounting Kits
Ceiling and Wall Mount Screw Kits
Mounting Brackets
Quick Installation Guide
EWS300AP
Power Adapter (12V/1A)
EWS310AP/EWS350AP/EWS360AP
RJ45 Ethernet Cable
EWS370AP/EWS371AP
Power Adapter (12V/2A)
EWS371AP
8 x Detachable RP-SMA Antennas
EWS510AP
Power Adapter (48VDC/0.8A)
Mounting Bracket for J-Box
Bracket Screws
EWS550AP
Mounting Bracket for J-Box
Wall Mount Screw Kits

Certifications
FCC, IC, CE

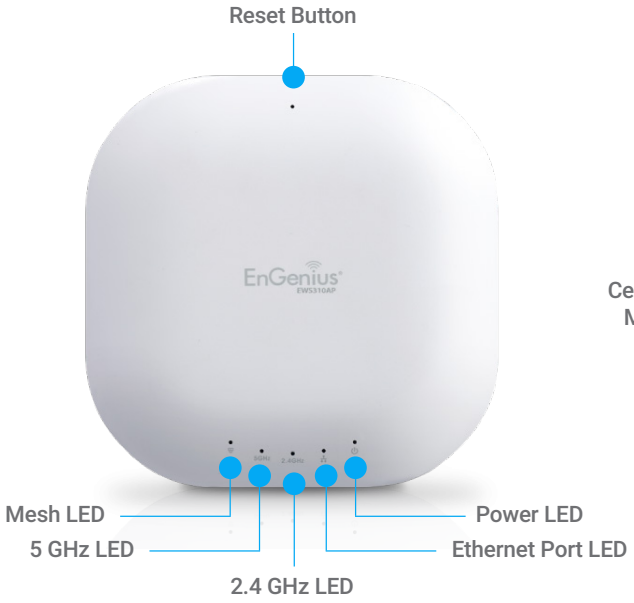
Warranty
1-Year Standard

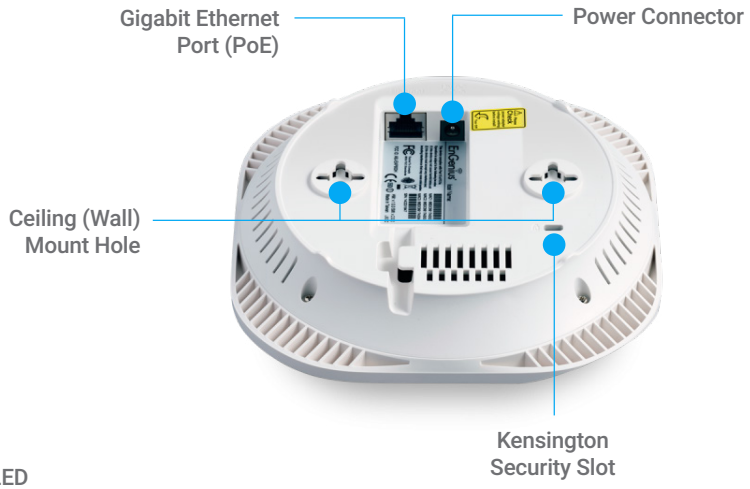
EWS300AP Indoor Access Point



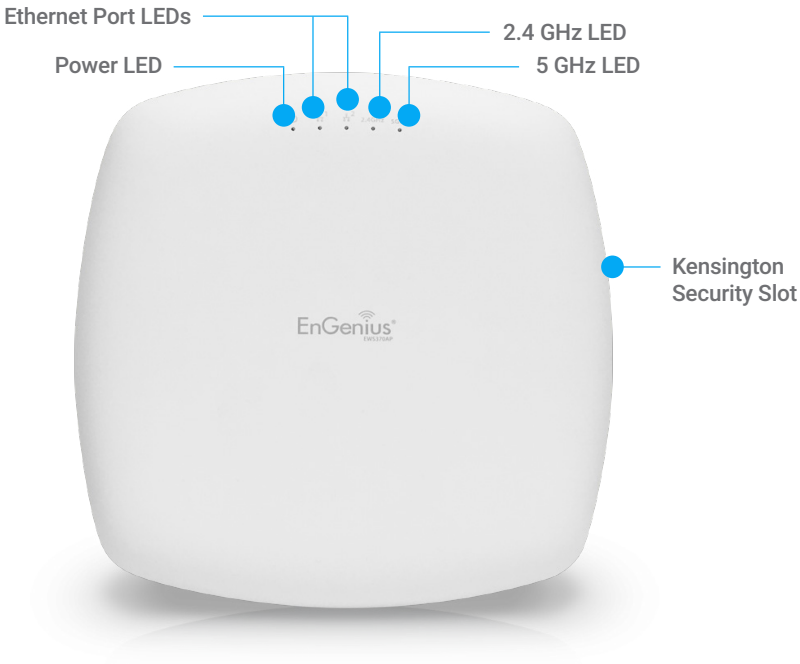


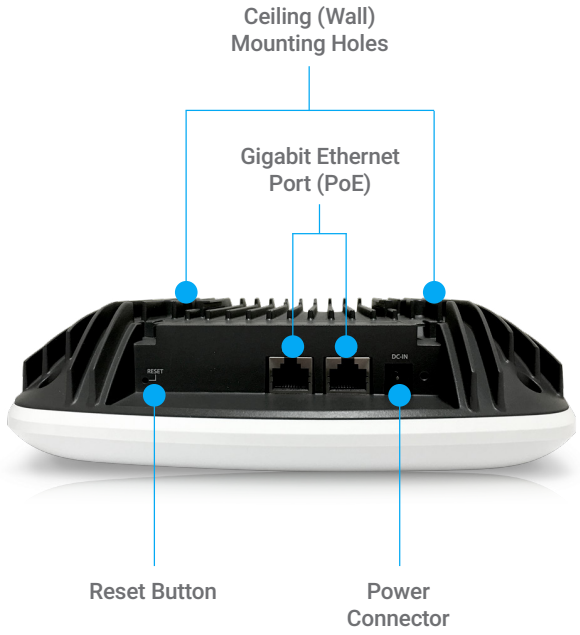
EWS310AP/EWS350AP/EWS360AP Indoor Access Points



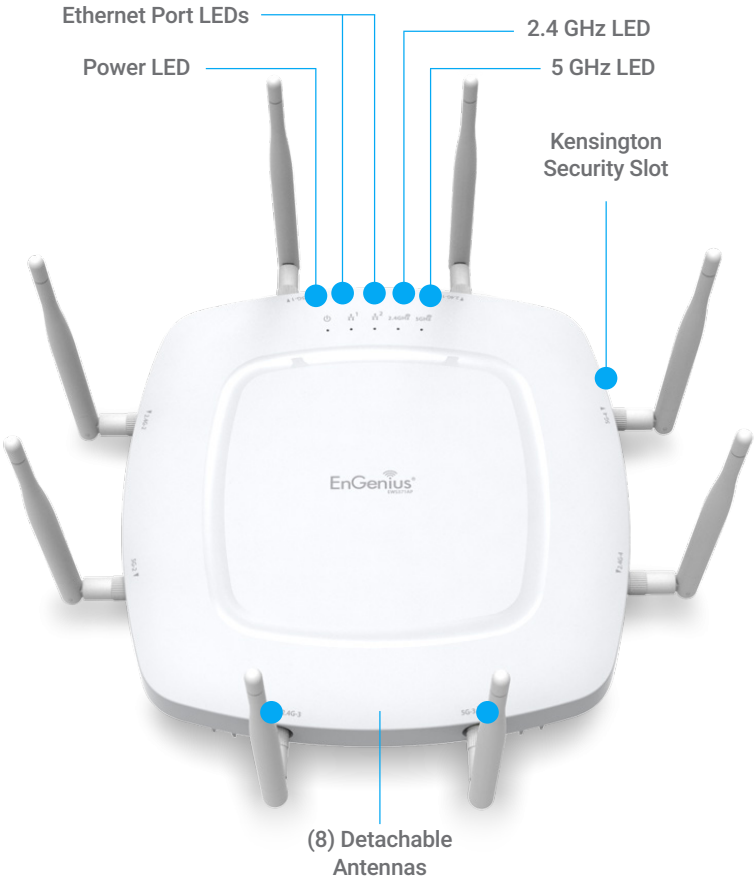


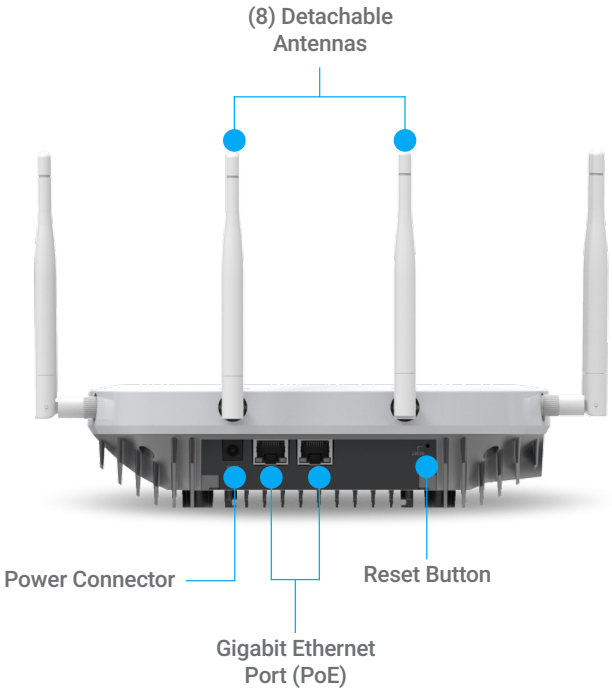
EWS370AP Indoor Access Point



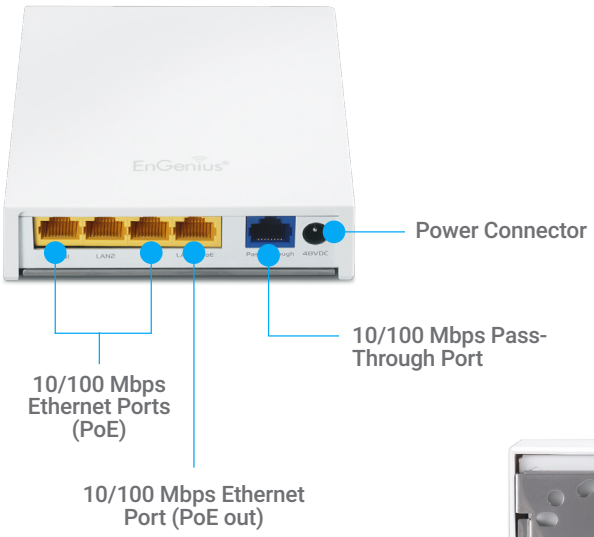


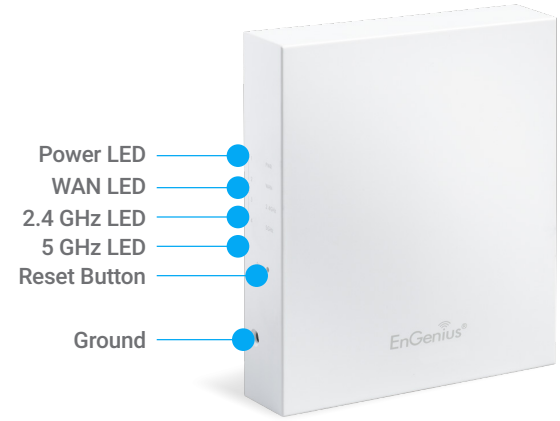
EWS371AP Indoor Access Point

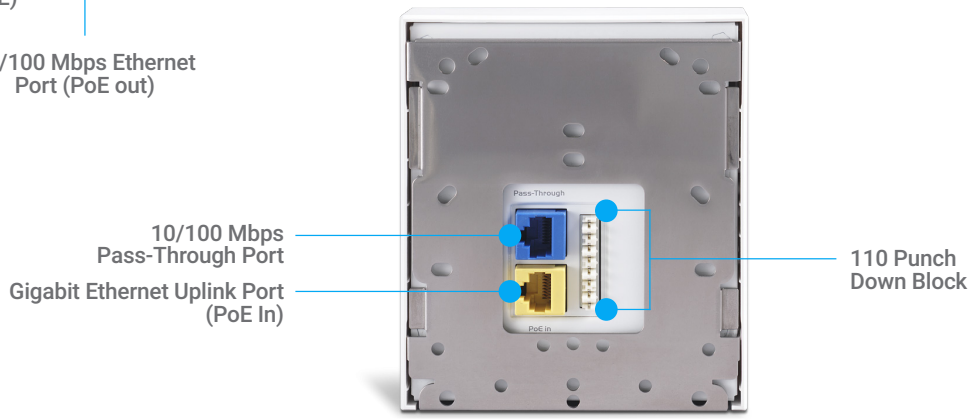




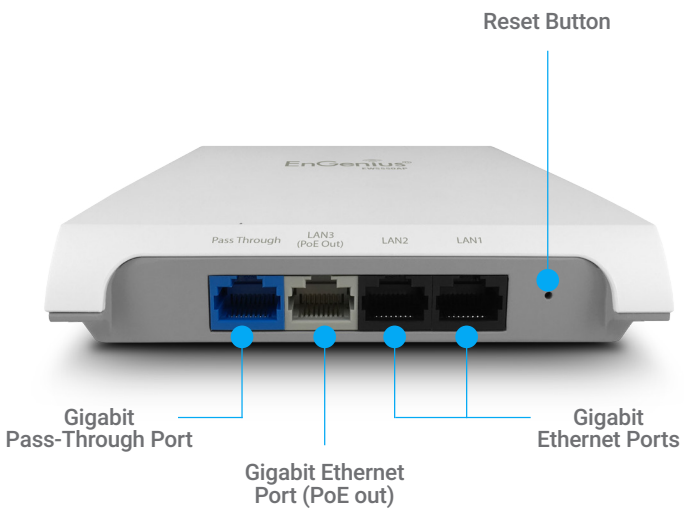
EWS510AP Indoor Wall Plate Access Point

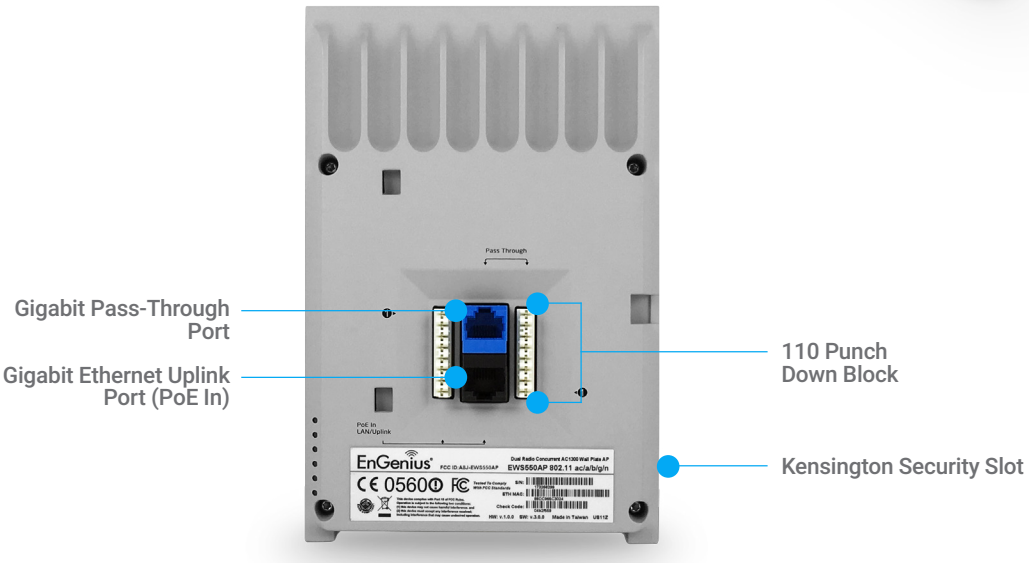






EWS550AP Indoor Wall Plate Access Point





Maximum data rates are based on IEEE 802.11 standards. Actual throughput and range may vary depending on distance between devices or traffic and bandwidth load in the network.

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