



EAP2200
EAP1300
EAP1300EXT

EnTurbo™ Series Indoor Next-Gen 11ac Wave 2 Indoor Access Points

Turbocharged Wi-Fi

EnTurbo Indoor Access Points turbocharge wireless speed, coverage, and reliability. EnTurbo makes powerful, next generation Wave 2, business-class Wi-Fi affordably accessible for small to mid-size businesses and large residences.

Turbocharged Performance

EnTurbo's powerful onboard Qualcomm® 717 MHz quad-core processors turbocharge wireless performance and efficiency with up to 30 percent faster throughput compared to 11ac Wave 1 3x3 access points. Combined with new 11ac technology, EnTurbo APs maximize speed and performance, support greater user device capacity and enhanced connection reliability.

New Tri-Band AP Technology

Uncompromised Audio & Video Streaming

Tri-band technology delivers double the available bandwidth ensuring stable multimedia streaming performance for more wireless users simultaneously by adding a second 5 GHz band.

Support the newest 11ac mobile gear while maintaining connectivity for all other Wi-Fi-capable devices and tomorrow's growing IoT deployments.

Features & Benefits

- Quad-Core CPU, 717 MHz "Turbo Engine"
- 11ac Wave 2 Tri-Band AP Supports 2.4/5/5 GHz
- Reach Over Air Speeds to 2.2 Gbps on 3 Bands; 400 Mbps (2.4 GHz); 867 Mbps (5 GHz) +867 Mbps (5 GHz) (EAP2200)
- 11ac Wave 2 Wireless Speeds to 867 Mbps (5 GHz); to 400 Mbps (2.4 GHz) (EAP1300/EAP1300EXT)
- Up to 30% Faster Throughput Over 11ac Wave 1 3x3 APs
- Ceiling-Mount, Integrated or Detachable High-Gain Antennas
- MU-MIMO Improves Performance & Device Capacities
- Beamforming Optimizes Antenna Signal, Reception & Reliability for Clients
- Combine Tri-Band's Dual-GigE Ports, Maximize Wired Speed to 2 Gbps via Link Aggregation
- 802.3af PoE for Easy Placement Where Outlets are Scarce
- Suite of Advanced AP Management & Security Features
- Flexible Operation Modes: AP, WDS & Repeater
- Simple Web-Based AP Monitoring & Management Software
- Stand-Alone or Manage APs via EnGenius Switches or ezMaster™ Software



Next Generation Wireless Technology

Replace your old wireless with new, advanced 11ac Wave 2 technology to support today's content-rich mobile world.



Maximized Speed & Performance

The feature-rich EnTurbo Indoor Series leverages the advanced 11ac Wave 2 Wi-Fi technology that maximizes wireless speed and performance while eliminating network lag.



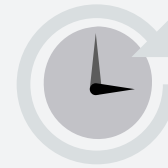
Improved Signal Reliability

Beamforming Antenna technology directs and adjusts signal beams as staff or customers move throughout the area, ensuring optimal signal and reception reliability.



Increased User Capacities

Multi-User (MU) MIMO sends dedicated wireless streams to multiple user devices at the same time, improving your network's efficiency.



Future-Proof Network

Upgrade from slower, older technology while supporting the future needs of IoT and mobile technology. Ensure your network against further upgrades for the next five years.

Indoor Form & Function

Clean lines and low profile housing ensure the EnTurbo Indoor AP's ceiling-mount design (EAP1300 & EAP2200) blends seamlessly into most deployment environments.

Maneuver EAP1300EXT's four detachable antennas to ensure optimal signal alignment, increasing the effectiveness of your network deployment. Remove the antennas and replace them with higher gain antennas to further amplify your wireless range.

Far-Reaching Wireless Blankets Coverage

Wide reaching, detachable 360-degree antennas minimize interference for blanketed coverage through floors, ceilings and walls to provide far-reaching reliable connectivity.

Reliable Connectivity & Network Protection

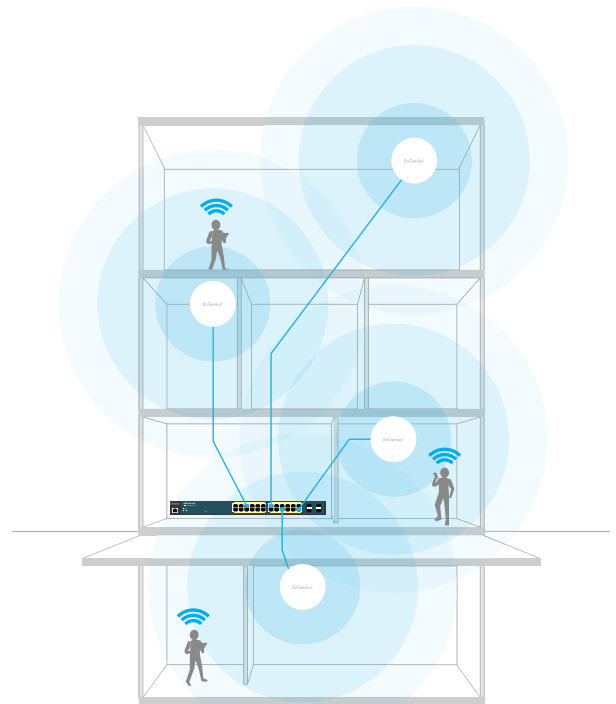
Configure multiple APs to ensure seamless, reliable connectivity for users as they move about the network with standards-based roaming. Quickly detect and avoid network threats through a suite of advanced security features including Guest Networks and email alerts.

Automatic Band Selection

Efficiently steer dual-band client devices to the optimal, less congested frequency band. While the Tri-band AP also routes dedicated 2.4 and 5 GHz devices directly to the respective bands ensuring the fastest bandwidth for all devices.

Flexible Power Options

Connect and power the EnTurbo Indoor APs via their Gigabit 802.3af Power-over-Ethernet ports for discrete placement in locations where power outlets are limited or unavailable, such as ceilings, hallways, rafters and attics. Place the APs up to 328 feet from a PoE-compliant switch or PoE adapter.



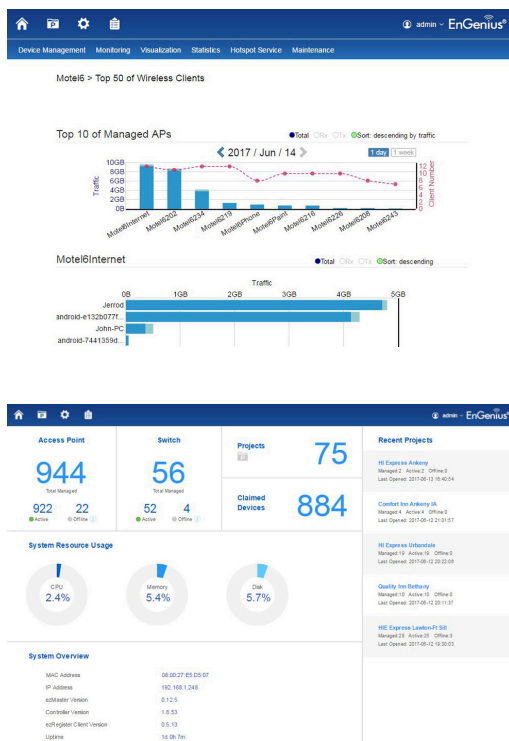
ezMaster™

Network Management

The EnTurbo Indoor can operate as stand-alone APs or as part of a scalable EnGenius Wireless Network Management Solution, centrally managed by ezMaster, and expandable as your network needs grow.

Manage Up to 50 APs With EnGenius Managed Switches

Any EnGenius Gigabit Managed Switch can also manage up to 50 EnTurbo APs. Through the switch, access all connected EnGenius devices and a full array of wireless and Layer 2 management tools. Choose between PoE+ and non-PoE switch models with flexible deployment and management options and no AP license or subscription fees.



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 up to 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

ezMaster Network Management Software

EnGenius ezMaster Software's simple, intuitive Web-based interface allows flexible access point monitoring - locally or remotely. Quickly and easily set up, manage, monitor, and troubleshoot multiple APs at the same time. See real-time network performance and monitor AP traffic through ezMaster's at-a-glance dashboard.

EzMaster provides business-class features, unlimited scalability and centralized management of hundreds of EnTurbo Access Points and EnGenius Switches - locally, remotely or via a cloud-based service, with no licensing or subscription fees.

ezMaster Software Features

- **Centralized Management**
 - Configure, Manage & Monitor
 - Cross-Network AP Management
 - AP Group Configuration
- **Access Point Configuration & Management**
 - Band Steering
 - 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
 - System Status Monitoring
 - Visual Topology View
 - Wireless Client Monitoring
 - Wireless Coverage View
 - Wireless Traffic & Usage Statistics
- **Management & Maintenance**
 - Bulk Firmware Upgrade
 - Email Alert
 - Kick/Ban Clients
 - One-Click Update
 - Remote Logging
 - Seamless Migration
 - Syslog

EnTurbo Series Indoor Access Points



Models	EAP2200	EAP1300	EAP1300EXT
Standards	802.11a/b/g/n/ac Wave 2	802.11a/b/g/n/ac Wave 2	802.11a/b/g/n/ac Wave 2
Frequency	2.4/5/5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz
2.4 GHz Max. Data Rate	400 Mbps	400 Mbps	400 Mbps
5 GHz Max. Data Rate	867+867 Mbps	867 Mbps	867 Mbps
Radio Chains/Streams	2x2:2	2 x 2:2	2 x 2:2
RF Output Power (2.4 GHz)	22 dBm	23 dBm	23 dBm
RF Output Power (5 GHz)	22 dBm	23 dBm	23 dBm
Ethernet Ports	2 x Gigabit (1 x PoE)	1 x Gigabit PoE	1 x Gigabit PoE
Power-over-Ethernet	802.3af	802.3af	802.3af
Power Consumption (Peak)	10W	12W	12W
Integrated Antenna	2 x 5 dBi (2.4 GHz) 2 x 5 dBi (5 GHz)	2 x 5 dBi Omni-Directional	N/A
External Antenna	N/A	N/A	4 x 5 dBi Omni-Directional Detachable SMA-Type

Technical Specifications

Standards

IEEE 802.11b/g/n on 2.4 GHz

IEEE802.11a/n/ac on 5 GHz

Processor

Qualcomm® 717 MHz Quad-Core CPU

4x ARM Cortex A7

Antennas

EAP2200

2 x 2.4 GHz: 5 dBi

4 x 5 GHz: 5 dBi

Omni-Directional Integrated

EAP1300

2 x 5 dBi Omni-Directional Integrated

EAP1300EXT

4 x 5 dBi Omni-Directional Detachable (SMA-Type)

Physical Interface

EAP2200

2 x 10/100/1000 Gigabit Ethernet Port

Link Aggregation Achieves 2 Gbps Throughput

DC Jack

Reset Button

Kensington Security Slot

Physical Interface continued

EAP1300/EAP1300EXT

10/100/1000 Gigabit Ethernet Port

DC Jack

Reset Button

Kensington Security Slot

LED Indicators

EAP2200

Power

2 x LAN

1 x 2.4 GHz

2 x 5 GHz

EAP1300/EAP1300EXT

Power

LAN

2.4 GHz

5 GHz

Power Source

Power-over-Ethernet: 802.3af Input

IEEE 802.11e Compliant Source

12VDC/1A Power Adapter

Maximum Power Consumption

EAP2200 10W

EAP1300/EAP1300EXT 12W

Surge Protection

0.5KV

Wireless & Radio Specifications

Operating Frequency

EAP2200

Tri-Radio Concurrent 2.4 GHz/5 GHz/5 GHz

EAP1300/EAP1300EXT

Dual-Radio Concurrent 2.4 GHz & 5 GHz

Operation Modes

EAP2200

Access Point Mode (AP Mode)

WDS: WDS AP, WDS Bridge

Repeater

EAP1300/EAP1300EXT

Access Point Mode (AP mode)

WDS: WDS AP, WDS Bridge

Technical Specifications continued

Frequency Radio
EAP2200
2.4 GHz: 2400 MHz~2835 MHz
Main: 5 GHz: 5470 MHz~5725 MHz, 5725 MHz~5875 MHz
Second: 5150 MHz~5250 MHz, 5250 MHz~5350 MHz
EAP1300/EAP1300EXT
2.4 GHz: 2400 MHz~2472 MHz
5 GHz: 5150 MHz~5250 MHz, 5250 MHz~5350 MHz, 5470 MHz~5725 MHz, 5725 MHz~5850 MHz
Transmit Power
EAP2200
2.4 GHz: 22 dBm
5 GHz: 22 dBm
EAP1300/EAP1300EXT
2.4 GHz: 23 dBm
5 GHz: 23 dBm
Tx Beamforming (TxBF)
Radio Chains/Spatial Streams
2x2:2
EAP2200
SU-MIMO
2.4 GHz - Two (2) Spatial Stream SU-MIMO up to 400 Mbps to individual 2x2 VHT40 client devices (300 Mbps for HT40 802.11n client devices)
5 GHz - Two (2) Spatial Stream SU-MIMO up to 867 Mbps to individual 2x2 VHT40 client devices for the both 5 GHz radios.
MU-MIMO
Two (2) Spatial Stream Multi User (MU) MIMO for up to 400 Mbps to two (2) MU-MIMO capable wireless devices simultaneously for the both 5 GHz radios.
EAP1300/EAP1300EXT
SU-MIMO
2.4 GHz - Two (2) Spatial Stream SU-MIMO up to 400 Mbps to individual 2x2 VHT40 client devices (300 Mbps for HT40 802.11n client devices)
5 GHz - Two (2) Spatial Stream SU-MIMO up to 867 Mbps to individual 2x2 VHT40 client devices
MU-MIMO
Two (2) Spatial Streams MU-MIMO up to 867 Mbps to two (2) MU-MIMO capable wireless devices simultaneously
Supported Data Rates (Mbps):
2.4 GHz: Max 400
5 GHz: Max 867
802.11b: 1, 2, 5.5, 11
802.11a/g: 6, 9, 12, 18, 36, 48, 54
802.11n: 6.5 to 400 Mbps (MCS0 to MCS15)

Supported Data Rates (Mbps) continued
802.11ac: 6.5 to 867 Mbps (MCS0 to MCS9, NSS = 1 to 2)
Supported Radio Technologies
802.11b: Direct-Sequence Spread Spectrum (DSSS)
802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM)
802.11n/ac: 2x2 MIMO with 2 Streams
Channelization
802.11ac Supports Very High Throughput (VHT)—VHT 20/40/80 MHz
802.11n Supports High Throughput (HT)—HT 20/40 MHz
802.11n Supports Very High Throughput (VHT) Under the 2.4 GHz Radio—VHT 40 MHz (256-QAM)
802.11n/ac Packet Aggregation: AMPDU, ASPDU
Supported Modulation
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
Management
Multiple BSSID
Supports 16 SSIDs (8 SSIDs per Band)
VLAN Tagging
Supports 802.1q SSID-to-VLAN Tagging
Cross-Band VLAN Pass-Through
Management VLAN
Spanning Tree
Supports 802.1d Spanning Tree Protocol
QoS (Quality of Service)
Compliant With IEEE 802.11e Standard
WMM
SNMP
v1, v2c, v3
MIB
I/II, Private MIB
Management Features
Deployment Options
Stand-Alone (Individually Managed)
Managed Mode (w/ezMaster & Neutron Switch)
Stand-Alone Management Features
Auto Channel Selection
Auto Transmit Power
Wireless STA (Client) Connected List

Stand-Alone Management Features continued
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
Backup/Restore Settings
Auto Reboot
E-Mail Alert
Site Survey
Save Configuration as Default
Control Features
Managed Mode (w/ezMaster/Neutron Switch)
Distance Control (ACK Timeout)
Multicast Supported
Wi-Fi Scheduler
Client Traffic Status
RADIUS Accounting (802.1x)
Power Save Mode (U-APSD Support)
CLI Support
HTTPS
Wireless Security
WEP Encryption 64/128/152 bit
WPA/WPA2 Enterprise (WPA-EAP using TKIP or AES)
Hide SSID in Beacons
MAC Address Filtering, Up to 32 MACs per SSID
Wireless STA (Client) Connected List
SSH Tunnel
Client Isolation
Wireless Management Features (w/ezMaster & Neutron Switch) (Available in AP Mode)
AP Auto Discovery & Provisioning
AP Auto IP Assignment
AP Group Management
Auto AP Rebooting
AP Device Name Editing
AP Radio Settings
Band Steering
Traffic Shaping
Fast Roaming (802.11k & 802.11r)
Pre-Authentication (802.11i, 802.11x)
PMK Caching (802.11i)
RSSI Threshold
AP Client Limiting

Technical Specifications continued

Wireless Management Features (w/ezMaster & Neutron Switch) (Available in AP Mode) [continued](#)

Client Fingerprinting
AP VLAN Management
VLANs for AP - Multiple SSIDs
Secured Guest Network
Access Point Status Monitoring
Wireless Client Monitoring
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

Temperature Range

Operating: 32° F~104° F (0° C~40° C)
Storage: -22° F~176° F (-30° C~80° C)

Humidity (non-condensing)

Operating: 90% or less
Storage: 90% or less

Dimensions & Weights

EAP2200

Weight: 1.35 lbs. (0.61 kg)
Length: 7.87" (200 mm)
Width: 7.87" (200 mm)
Height: 1.6" (40.64 mm)

EAP1300

Weight: 0.62 lbs. (0.28 kg)
Diameter: 6.36" (161.54 mm)
Height: 1.64" (41.66 mm)

EAP1300EXT

Weight: 0.65 lbs. (0.29 kg)
Diameter: 6.36" (161.54 mm)
Height: 1.85" (47 mm)

Package Contents

EAP2200

EAP2200 Tri-Band Indoor Access Point
Power Adapter (12V/1A)
T-Rail Mounting Kits
Ceiling & Wall Mount Screw Sets
Mounting Brackets
RJ-45 Ethernet Cable
Quick Installation Guide

Package Contents continued

EAP1300

EAP1300 Indoor Access Point
Power Adapter (12V/1A)
T-Rail Mounting Kits
Ceiling & Wall Mount Screw Sets
Mounting Brackets
RJ-45 Ethernet Cable
Quick Installation Guide

EAP1300EXT

EAP1300EXT Indoor Access Point
Power Adapter (12V/1A)
(4) 5 dBi SMA Antennas
T-Rail Mounting Kits
Ceiling & Wall Mount Screw Kits
Mounting Brackets
RJ-45 Ethernet Cable
Quick Installation Guide

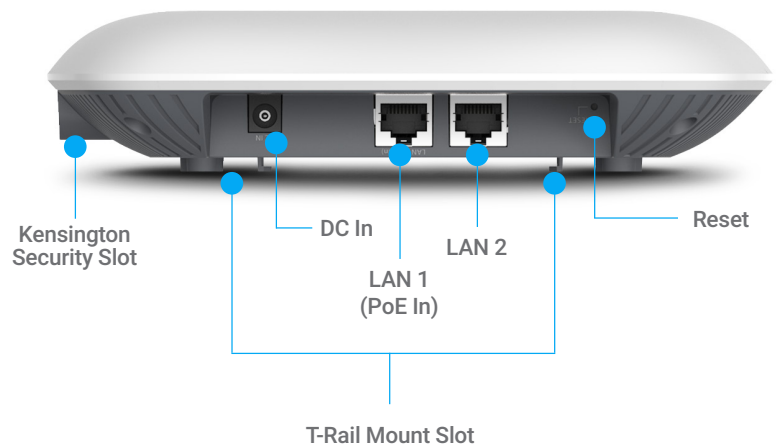
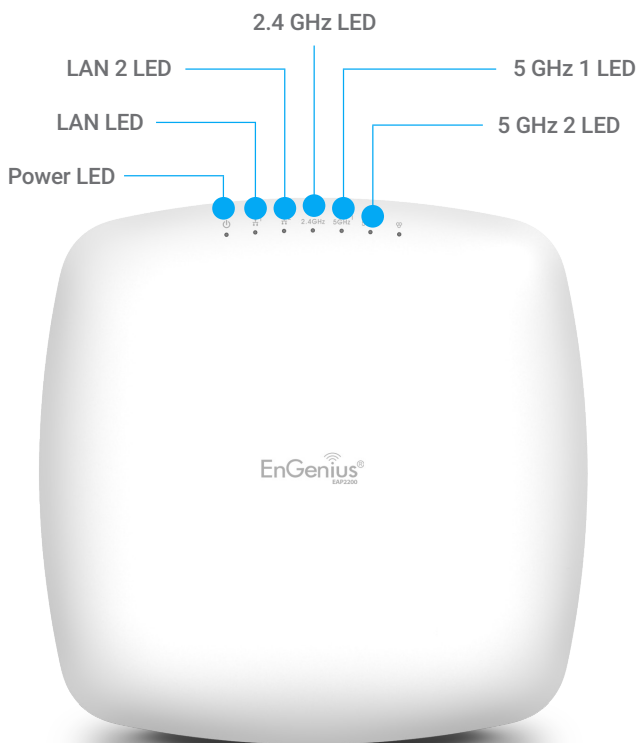
Certifications

FCC, CE

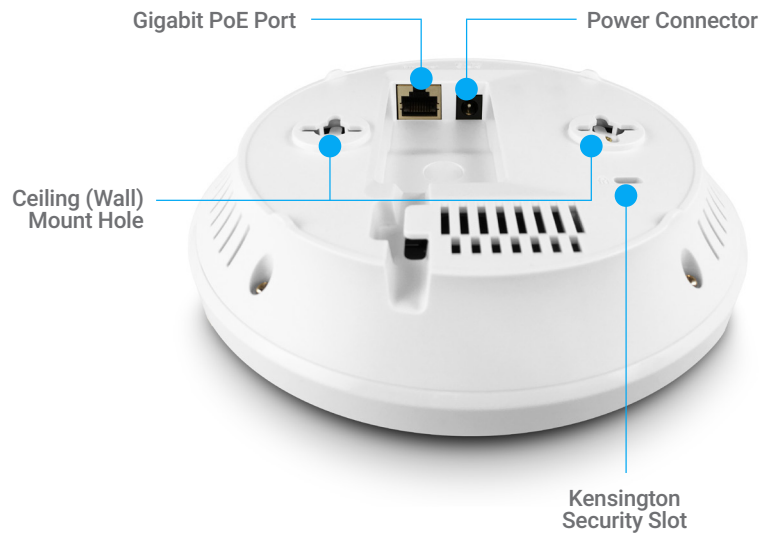
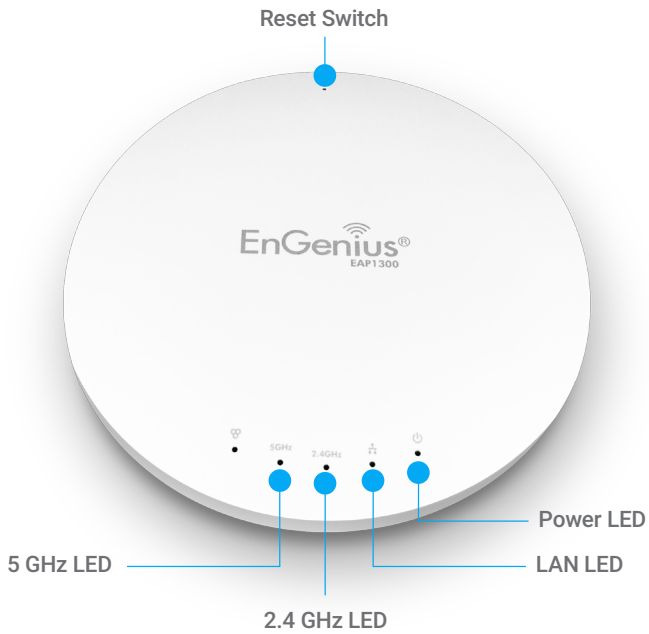
Warranty

1-Year Standard

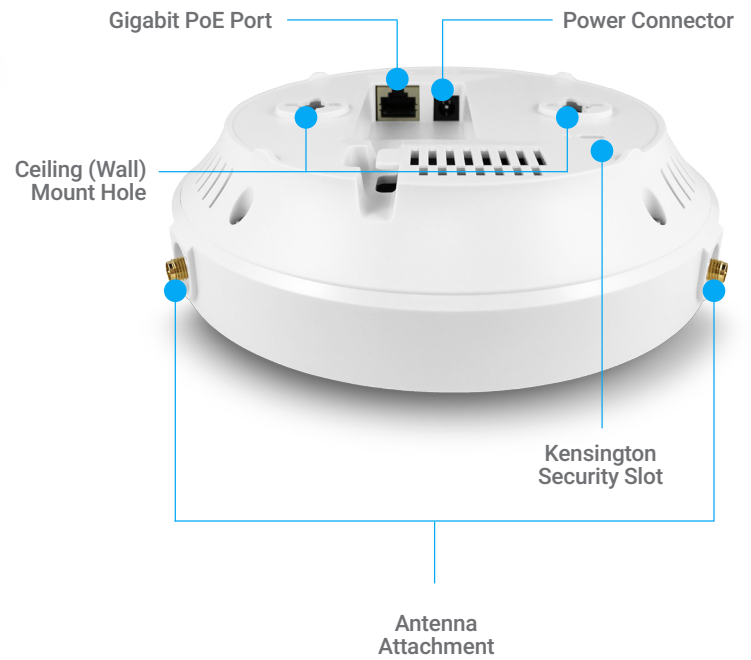
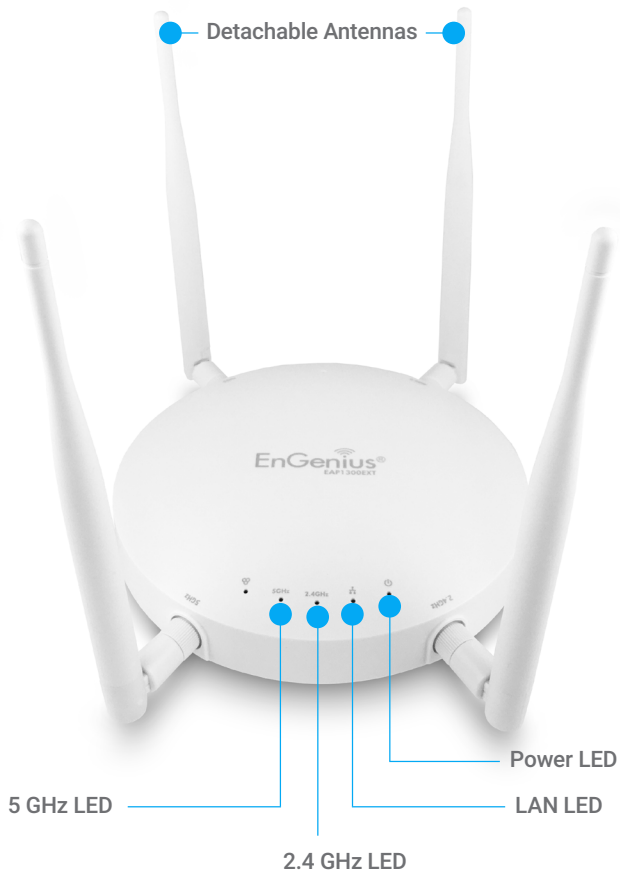
EAP2200 Indoor Access Point



EAP1300 Indoor Access Point



EAP1300EXT Indoor 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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