EWS355AP

Dual Band AC1300

Managed Indoor Access Point

The edge 802.11ac built-in high performance Access Point with MU-MIMO technology for high-density use on multiple applications.

EnGenius Wireless Management Access Point solution is designed for deploying on the versatile indoor application. To meet today's requirement on varied net-working environment, EnGenius would like to provide the solution as flexible, robust and effective as the organization they desire.

The state-of-the-art 802.11ac and MU-MIMO technology brings revolutionary connecting speed and bandwidth for diversity of multimedia applications. EWS355AP equips with two powerful RF interfaces that support up to 867 Mbps in 5GHz frequency band and 400 Mbps in 2.4GHz frequency band (with 4ss/VHT40 clients).

Features

- Built-in Turbo Engine solution with a Quad-core powerful chipset solution to process multiple tasks for driving and enhancing performance effectively.
- Dual radio 2x2 802.11 ac/a/b/g/n Access Point with multi-user MIMO (MU-MIMO)
- Support up to 867 Mbps in 5GHz frequency band and 400 Mbps in 2.4GHz frequency band (with 2ss/VHT40 clients).
- High powered amplifiers to improve the wireless coverage and uses a special radio frequency pattern to increase its receiver sensitivity for improved performance.
- Support 802.11ac Wave 2.0 technology to enhance overall bandwidth and speed to wireless client devices.
- Systemic and distributed management over EnGenius ezMaster and EWS Management switch without licensing or subscription fee.
- 360° omni-directional antennas to achieve comprehensive coverage for networking client devices under a pervasive environment.
- Compliance with 802.3af & 48V PoE Input for flexible installation over 100 meters (328 feet).
- Perform one-click update to deliver a configuration over multi-segments for managed Access Points.
- Choose an operating mode to meet your management and deployment requirement.

Wireless Management solution is ideal for deployment in these venues:

- Airport Terminals
- Rail Station
- Stadiums & Arena
- Warehouse Operations
- Shopping Malls
- Medical Centers
- College Campuses
- Resort Properties
- Luxury Homes & Estates
- Corporate Campuses

Provide Consistent Performance

Designed by EnGenius could provide the powerful RF interfaces to assure the reliability of signal strength and sensitivity in a pervasive environment. The optimist interfaces will provide the evenly coverage to assist users to reduce dead spots in their WLAN and boost received signal quality to deliver the best 1.26Gbps air performance to wireless client devices.

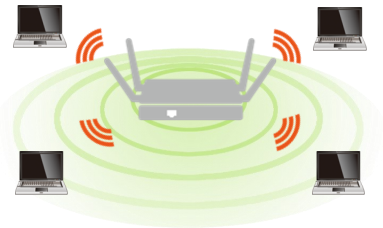
Carry multimedia content over MU-MIMO Transmit Beam-forming technology.

Be a prior AC1300 solution, EWS355AP is not only built in powerful RF interfaces, but it also features advanced Multi-Users Multiple input Multiple output (MU-MIMO) and Transmit beamforming (TxBF) technologies.

The significant improvement on 802.11ac wave 2.0 is MU-MIMO technology, which enhances a dramatic break-through in the performance and flexible transmission to wireless client devices. MU-MIMO allows multiple spatial streams to be allocated to different clients simultaneously, increasing totally throughput, reduce latency, capacity of the WLAN system and increase spectral efficiency.

Beamforming is a standard in 802.11ac wave 2.0 which allows Access Points to focus energy of multiple antennas to transmit to a particular client device in that direction of that client. The innovative technology significantly enhances the higher signal-to-noise ratio and greater throughput of that client .

With MU-MIMO and Beamforming technology, EWS AC1300 advanced Indoor Access Points could bring more traffic to wireless client devices simultaneous over the longer distance and save time for serving other wireless client devices.

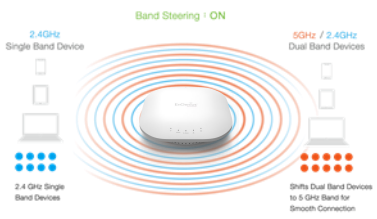


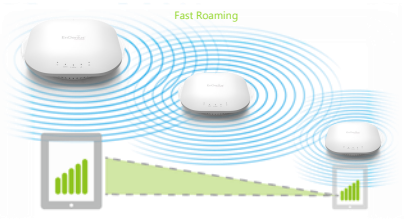
MU-MIMO

MU-MIMO & Beamforming

Exquisite RF Management to Achieve Optimal Wireless Performance

EnGenius intelligent RF detecting mechanism—**Background Scanning**, continues to monitor RF movement of an environment and initialize the control of **Transmit Power** and **channel assignment** assuring the evenly RF coverage and consistent wireless performance. To assist client devices to get the optimal performance under a pervasive environment, **Band Steering** automatically steers dual-band capable client devices to the appropriate channel, while prefer 5GHz or band balancing works to maintain a balanced number of clients per Access Point. Configuring multiple Access Points to serve your own devices (BYOD) in enterprise class wireless LAN environment can enable **Fast Roaming** to reduce roaming delay time and to secure seamless connection on VOIP service when mobile devices move between Access Points.





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Securable Portals for different purpose

EnGenius provides **Captive Portal** to differentiate the authority of users on using Internet access. Considering the value added function, administrators offer a securable service to serve client devices including to encrypt over database of an authentication server, customized-branded splash of webpage, simplified logon service, and promoting content and using polices. Administrators can also use **Virtual LAN (VLAN)** with **Guest Network** to isolate each client for avoiding an unnecessary touch, leaking sensitive data, and enhancing Internet security and reliability.

Restrain Wireless Traffic under a Pervasive Environment

To effective manage the usage of each client devices at a LAN topology, **Traffic Shaping** controls the bottle of bandwidth to offer the limited bandwidth for an individual **SSID** or **each client** per Access Point. This constraint offers the constant bandwidth to perform specific applications like VOIP and video streaming fluently and smoothly without air congestion on each client devices.

Comprehensive Network Protection

With EWS Access Points, your network is protected from attacks at multiple level through advanced wireless encryption standards such as Wi-Fi Protected Access (WPA and WPA2) which uses a temporal key integrity protocol (TKIP) and authentication database, IEEE 802.1X with Radius server. EnGenius also offers the advanced encryption standard (AES) to encrypt traffic between Access Points and client devices. EnGenius wireless management system offers advanced mechanism to detect and to prohibit threats over **Rogue AP detection**. Once threats or event are detected, built-in **E-mail Alerts** systems will automatically deliver an e-mail notification for administrators to trigger immediate actions on these networks threats.

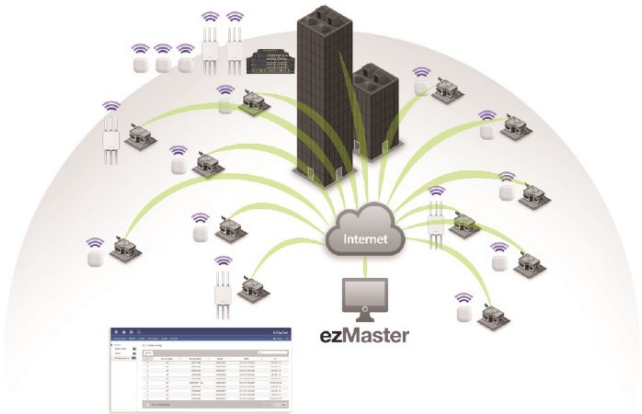
Simplified Management and Configuration over ezMaster or EWS Management Switch

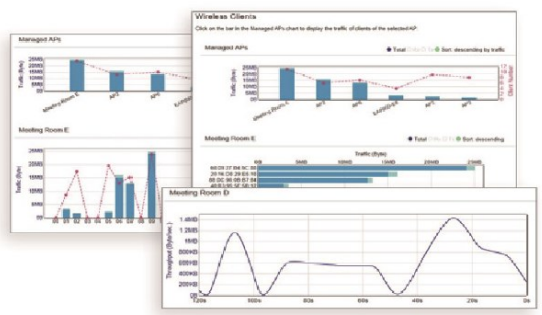
EWS-series managed Access Point is designed to work with EWS-series Wireless Management Switch and ezMaster management platform for scalable and flexible wireless management application.

Whether you want to manage a few or 1000+ Access Points and switches on network in different locations with different segment —or 10 to 10,000 concurrent users, the EnGenius ezMaster platform makes these management and configuration simplified and intuitively over centralizing bulk configuration, provision and monitoring which is the lower operating and maintenance cost from a local or remote server—or in the cloud.

With the small scope or maximum 50pcs managed requirement, EWS management switch can perform auto discovery to search EWS managed Access Points. WLAN administrator can easily use individual or cluster settings to fast deploy numbers of AP with desired settings, saving repetitive configuration tasks.

Via SmartSync Redundancy, if the connection to your ezMaster platform is lost, EWS management switch will automatically store syslog and statistics from the APs. Then, when the connection is re-established, all information will be re-synchronized and sent to ezMaster Management platform. Administrators will not miss any statistics and reports.





Technical Specifications Wireless Indoor Access Point

Wireless Radio Specification

Access Point Type:
Indoor, dual radios concurrent, 5GHz 802.11 ac 2x2 MIMO is backwards compatible with 802.11 a/n mode, 2.4GHz 802.11 n 2x2 MIMO is backwards compatible with 802.11 b/g.

SU-MIMO:
Two(1) spatial stream SU-MIMO for up to 1,267 Mbps wireless data rate to a single wireless client device under the both 2.4gHz and 5GHz radio.

MU-MIMO
Two(2) spatial stream Multiple (MU)-MIMO for up to 867 Mbps wireless data rate to transmit to one(1) two streams MU-MIMO capable wireless client devices simultaneously.

Frequency Radio
2.4GHz: 2400MHz ~ 2484MHz,
5GHz: 5150MHz~5250MHz, 5250MHz~5350MHz, 5470~5725MHz, 5725MHz~5850MHz
Support radios and channels will be varied on the configured regulatory domain.

Supported Radio Technology
802.11b: Direct-sequence spread-spectrum (DSSS)
802.11ac/a/g/n: Orthogonal frequency-division multiplexing (OFDM)
802.11n/ac: 2x2 MIMO with 4 streams
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 under the 2.4GHz radio –VHT40 MHz (256-QAM)
802.11n/ac packet aggregation: A-MPDU, A-SPDU

Supported Modulation Type
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

Transmit Power (Maximum Value)
2.4GHz:15dBm
5GHz: 15dBm
Maximum power is limited by regulatory domain

Tx Beamforming (TxBF)
Increasing signal reliability and transmitting distance.

Supported data rates (Mbps)
802.11b: 1, 2, 5.5, 11
802.11a/g: 6, 9, 12, 18, 36, 48, 54
802.11n: 6.5 to 300 (MCS0 to MCS15)
802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS=1 to 2)

Power

Maximum Power Consumption
12W

Power Source
Direct DC Input: 12V/1A
Power Over Ethernet: 802.3af Input

Antenna

2.4GHz: 5 .0 dBi
5GHz: 5.0 dBi

Interfaces

Networking Interface
One (1) 10/100/1000 BASE-T RJ-45 Ethernet Ports

DC Powering Interface
One (1) DC Jack interface

LED Indicators
Display system and wireless transmission status

Reset Button
Convert Access Point to the Factory default or the Users Default

Mounting

Ceiling Mounting
Assemble a mounting bracket for drop ceiling

Wall Mounting
Mount Access Point on a flat wall

Mechanical & Environment

Dimensions (W x D x H)
161.5 x 161.5 x 41.5mm

Weight
336g

Operating:
Temperature: 0°C~40°C (32°F~104°F)
Humidity: 0% ~ 90% typical

Storage:
Temperature: -40°C~80°C (-40°F~176°F)
Humidity: 0% ~ 90% typical

Compliance Regulatory

FCC
Subpart15 B
Subpart C 15.247
Subpart E 15.407

CE
EN 300 328
EN 301 893
EN 50385
EN 60601-1-1
EN 60601-1-2
EN 55032
EN 55024

RED 2014/53/EU

Low Voltage Directive 2014/30/EU

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Technical Specifications Wireless Indoor Access Point

Operating Mode

Mesh/AP Mode
Two configuration options broaden the devices' adaptability to your network needs.

Exquisite RF Management

Background Scanning
Regular scanning signal level of an environment to provide parameters for performing Auto Transmit power and auto channel.

Auto Transmit Power
Automatically adjust power level when EWS access points work at an environment.

Auto Channel
Automatically assign a clearly channel to perform RF transmission under a pervasive environment.

Fast Roaming (802.11k)
Collect the parameters of neighborhood Access Points to find the optimal AP.

Band Steering
Steer client devices to a proper frequency band for getting more bandwidth and speed under an Access Point.

RSSI Threshold
Kick the client which the signal (RSSI) is above the set value from the AP for reducing the interference and optimize the connecting quality.

Optimize Performance

Quality of Service
Compliance with IEEE 802.11e standard
Prioritizes voice over data for both tagged and untagged traffic
Transmit video, voice and data at the same SSID

Power Save Mode
Support U-APSD

Pre-Authentication
Compliance with 802.11i &11x

PMK Caching
Compliance with 802.11i
If wireless client devices has authenticated to an access point, it does not perform a full authentication exchange when client devices roaming between access points.

Fast Roaming (802.11r)
Use a Fast Transition key to handover between Access Points

Multicast to Unicast Conversion
Using the IGMP protocol, an access Point delivers high definition content to a large number of clients simultaneously.

Easy to Management

Multiple SSIDs
BSSID support
Support 8 SSIDs on both 2.4GHz and 5GHz bands

Captive Portal
Differentiate the authority of users on using Internet access

Guest Network
Isolate each client for avoiding an unnecessary touch, leaking sensitive data, and enhancing Internet security and reliability.

VLAN Tag
Independent VLAN setting can be enable or disable. Any packet that enters the Device without a VLAN tag will have a VLAN tag inserted with a PVID (Ethernet Port VID)

VLAN Per SSID
Integrate VLAN ID with a SSID interface to forward packets over the defined path.

Management VLAN
Feature is enabled with specified VLAN ID, the device will only allow management access with the same specified VLAN ID from remotely location by using protocols such as telnet, SSH, snmp, syslog etc.

Traffic Shaping
Controls the bottle of bandwidth to offer the limited bandwidth for an individual **SSID** or **each client** per Access Point.

MAC Address Filtering
Filter up to 32 sets MAC addresses per SSID

E-Mail Alert
Provides a network monitoring tool for administrators to stay informed the configuration change.

Finger Printing
The value added solution collect information of client devices including name of devices, IP address, MAC address, Operating system version, transmitting and receiving data, and signal level.

Save Configuration as Users Default
Save the customized configuration as default value for different customer demands.

Wi-Fi Scheduler
Perform a regular reboot on access point at assigned schedule
Perform it to enable or disable 2.4GHz or 5GHz interface from a period time.

SNMP &MIB
v1/v2c/v3 support
MIB I/II, Private MIB
CLI supported

RADIUS Accounting
Help operators to offload 3G to Wi-Fi seamlessly

Wireless Clients list
Provide the list to display real status of wireless client devices on this Access Point.

Comprehensive Protection

Wireless Encryption Standard
WEP Encryption—64/128/152 bit
WPA/WPA2 Enterprise (WPA-EAP using TKIP or AES)

Hide SSID in beacons

Rogue AP Detection
Enable the function to detect the fake access points in the environment.

L2 Isolation
Block the communication between the associated clients to communicate with other clients from all hosts on the same subnet.

Client Isolation
Block/Isolate the communication between the associated clients under the same WLAN.

HTTPS
A secure communication protocol can be enabled to allow secure management web access over a computer network.

SSH Tunnel
A secure communication protocol can be enabled to allow secure remote shell access or command execution.

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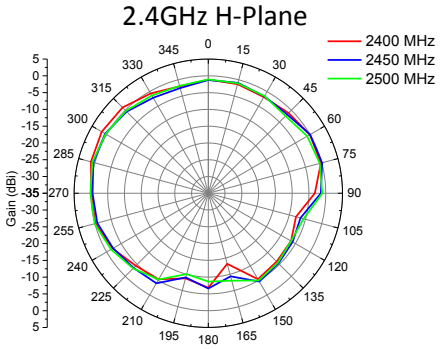
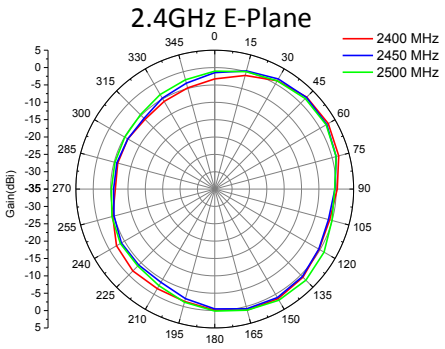
RF Performance Specification Wireless Indoor Access Point

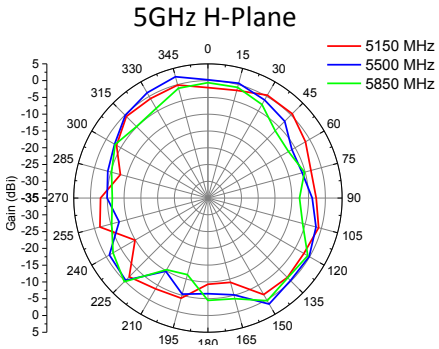
Channel	Data Rate	Transmit Power (Aggregated, dBm)	Receive Sensitivity (Aggregated, dBm)
802.11b 2.4 GHz	1 Mbps	15.0	-97.0
	2 Mbps	15.0	-97.0
	5.5 Mbps	15.0	-97.0
	11 Mbps	15.0	-90.0
802.11g 2.4 GHz	6 Mbps	15.0	-91.0
	54 Mbps	13.0	-76.0
802.11a 5 GHz	6 Mbps	15.0	-91.0
	54 Mbps	13.0	-76.0
802.11n HT20 2.4 GHz	MCS 0 / 8	14.0	-91.0
	MCS 7 / 15	11.0	-71.0
802.11n HT40 2.4 GHz	MCS 0 / 8	11.0	-88.0
	MCS 7 / 15	11.0	-71.0
802.11n HT20 5GHz	MCS 0 / 8	15.0	-91.0
	MCS 7 / 15	11.0	-72.0
802.11n HT40 5GHz	MCS 0 / 8	15.0	-87.0
	MCS 7 / 15	11.0	-70.0
802.11ac VHT20 5GHz	MCS0	14.0	-91.0
	MCS9	11.0	-72.0
802.11ac VHT40 5GHz	MCS0	14.0	-87.0
	MCS9	11.0	-64.0
802.11ac VHT80 5GHz	MCS0	14.0	-84.0
	MCS9	11.0	-60.0

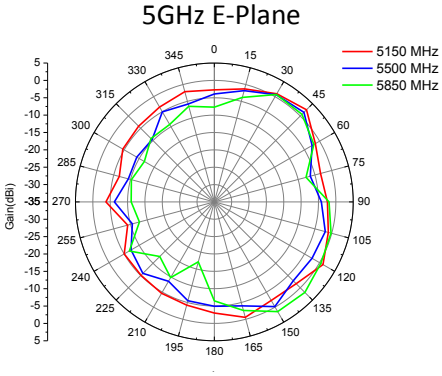
*Maximum RF performance of the hardware provided. Maximum transmit power is limited by local regulatory.
*The supported frequency bands are restricted by local regulatory requirements.
*Transmit power is configured in 1.0dBm increments.

EWS355AP









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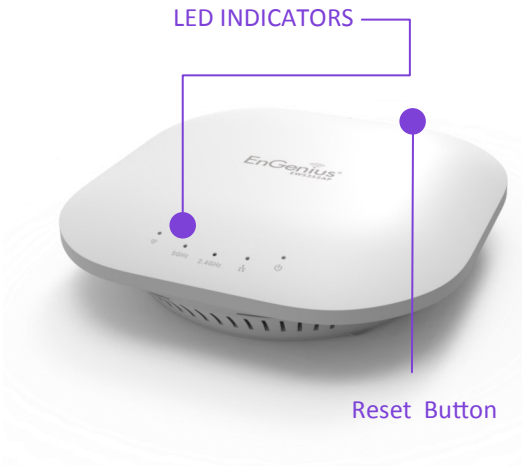
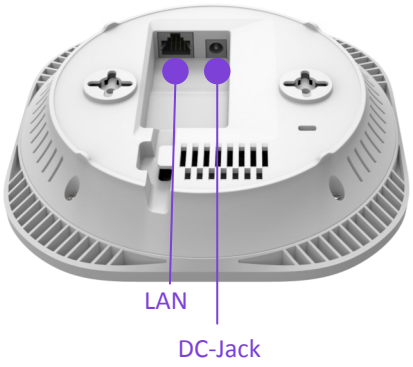
Physical Interfaces





Standards	802.11ac/a/b/g/n
Frequency	2.4GHz+5GHz
Data Rates	400Mbps + 867 Mbps
Antennas	2.4GHz: 5.0dBi; 5GHz: 5.0dBi
Physical Interface	1 x Gigabit LAN; 1x DC Jack
Radio Chains/Streams	2x2: 2