Tri-Band AC2200

Managed Indoor Access Point

Cutting-edge 802.11ac access point features MU-MIMO technology for performance on multiple applications and in high-density conditions.

The EnGenius three dedicated bands Wireless Management Access Point solution is designed for versatile deployment for indoor environments. To meet the networking environment demands of the modern day, EnGenius has designed the solution with flexibility, durability, and speed as required by enterprise consumers. With one 2.4GHz band and two 5GHz bands available, the EWS385AP assigns each device to the band where maximum speed is possible.

State of the art 802.11ac and MU-MIMO technology bring speed and bandwidth for a diversity of multimedia applications. EWS385AP is equipped with two powerful RF interfaces to support up to 867Mbps + 867Mbps on the 5GHz frequency band, and 400Mbps on the 2.4GHz frequency band (with 2ss/VHT40 clients).

Features

> Built-in Turbo Engine solution with powerful Quad-core chipset solution to process multiple tasks simultaneously and without slowdown.

> Supports up to 867 Mbps + 867 Mbps on the 5GHz frequency band and 400Mbps on the 2.4GHz frequency band (with 2ss/VHT40 clients).

> Tri radio 2x2 802.11 n/ac Access Point with multi-user MIMO(MU-MIMO).

> High-powered amplifiers use special radio frequency patterns to increase receiver sensitivity for improved performance and coverage.

> Supports 802.11ac Wave 2.0 technology to enhance overall bandwidth and speed to wireless client devices.

> 360° Omni-directional antennas achieve comprehensive coverage for networking client devices across the most challenging spaces.

> Compliance with 802.3af PoE Input for flexible installation over 100 meters (328 feet).

> Choose an operating mode to meet your management and deployment requirements (Managed mode/Stand alone mode).

Ideal for deployment in these venues:

> Airports

> Warehouses

> University campus

> Corporate Campuses

> Rail Stations

> Shopping Malls

> Resorts & Hospitality

> Stadiums & Theatres

> Hospitals

> Luxury Homes & Estates

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 2.2Gbps air performance to wireless client devices.

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

Be a prior AC2200 solution, EWS385AP is not only built in powerful RF interface, but it also features advanced Multi-Users Multiple input Multiple output (MU-MIMO) and Transmit beamforming (TxBF) technology.

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, EAP AC2200 advanced 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

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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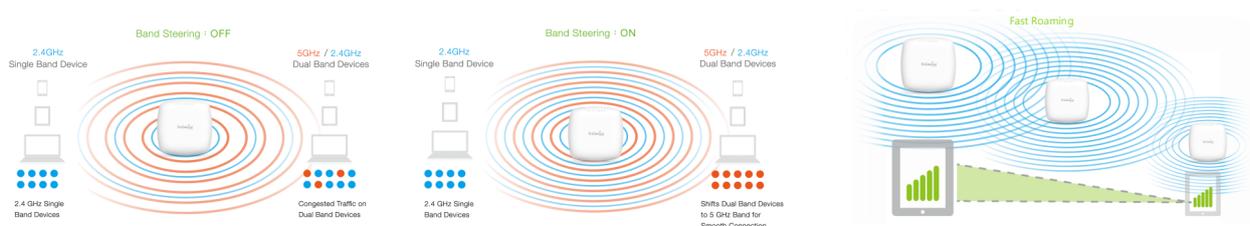
Simplified Management and Configuration over ezMaster or EWS Management Switch

EAP2200 can be worked 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 net-work 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 EAP2200 or EWS managed Access Points. WLAN administrator can easily use individual or cluster settings to fast deploy num-bers of AP with desired settings, saving repetitive configuration tasks. Via SmartSync Redundancy, if the connection to your ez- Master 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.

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.

Tri-Band Provides 3 Dedicated Bands

Tri-Band delivers the fastest combined Wi-Fi speeds to more devices. With one 2.4GHz band and two 5GHz bands to work with, EAP2200 has more client density, flexibility, and smart to assign each device to the band where it can connect at its maximum possible speed. It prioritizes traffic across the two 5GHz bands to deliver the fastest possible speeds for all connected devices, high-bandwidth applications are routed to the high-speed 5 GHz bands, while lower-bandwidth activities utilize the 2.4 GHz band. The result is that faster devices can connect and perform well by slower or older devices.

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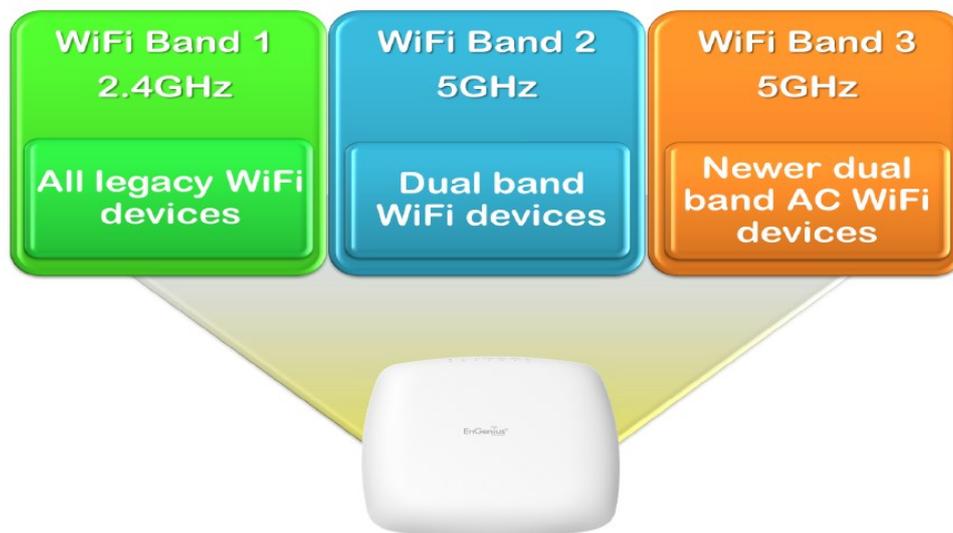
Technical Specifications Wireless Managed Indoor Access Point

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 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,
Main 5GHz: 5470~5725MHz, 5725MHz~5875MHz
Second 5GHz: 5150MHz~5250MHz, 5250MHz~5350MHz
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 2 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: 22dBm
5GHz: 22dBm
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 600 (MCS0 to MCS23)
802.11ac: 6.5 to 1,733 (MCS0 to MCS9, NSS=1 to 4)

Power

Maximum Power Consumption
10W

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

Antenna

EWS385AP: (Integrated Antenna)
2.4GHz ： 5dBi
5GHz-1/2 ： 5dBi

Interfaces

Networking Interface
Two (2) 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 to attach into T-rail for drop ceiling

Wall Mounting
Mount Access Point on a flat wall

Mechanical & Environment

Dimensions
20 x 20 x 4.5cm (7.87" x 7.87" x 1.77")

Weight
614 KG

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

Storage:
Temperature: -30°C~80°C (-22°F~176°F)
Humidity: 0% ~ 90% typical

Compliance Regulatory

FCC
Subpart 15 B
Subpart C 15.247
Subpart E 15.407

CE
EN 300 328
EN 301 893
EN 301 489-1/-17
EN 50385
EN 55032
EN 55035
EN 60950-1
EN 62368-1
EN 60529

RED 2014/53/EU

Low Voltage Directive 2014/30/EU

CB
IEC 60950-1/IEC 62368-1

Technical Specifications   Wireless Managed Indoor Access Point

Operating Mode

Managed Mode
Cluster setting and centralized management over ezMaster or EWS management switch

Stand Alone Mode
Independent services wireless client devices.

Exquisite RF Management

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

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 64 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.

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	22	-93
	11 Mbps	22	-86
802.11g 2.4 GHz	6 Mbps	22	-89
	54 Mbps	19	-72
802.11a 5 GHz	6 Mbps	22	-87
	54 Mbps	19	-71
802.11n HT20 2.4 GHz	MCS 0 / 8 / 16	22	-88
	MCS 7 / 15 / 23	19	-69
802.11n HT40 2.4 GHz	MCS 0 / 8 / 16	22	-86
	MCS 7 / 15 / 23	19	-67
802.11n HT20 5GHz	MCS 0 / 8 / 16	22	-67
	MCS 7 / 15 / 23	19	-68
802.11n HT40 5GHz	MCS 0 / 8 / 16	22	-84
	MCS 7 / 15 / 23	19	-65
802.11ac VHT20 5GHz	MCS0	22	-87
	MCS8	18	-65
802.11ac VHT40 5GHz	MCS0	22	-84
	MCS9	18	-61
802.11ac VHT80 5GHz	MCS0	22	-76
	MCS9	18	-56

*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.

Antennas Patterns Wireless Indoor Access Point

**EWS385AP**

2.4GHz H-Plane
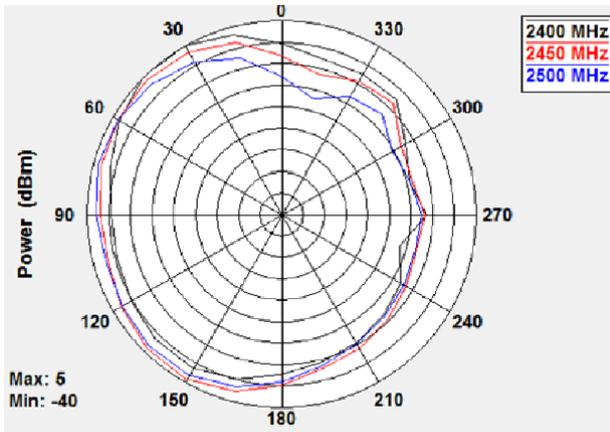
2.4GHz E-Plane
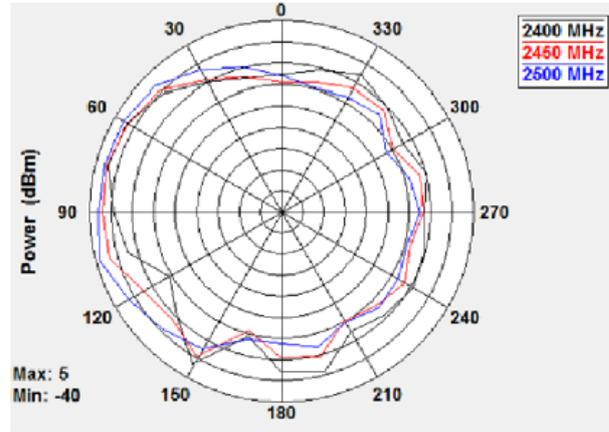
5GHz H-Plane
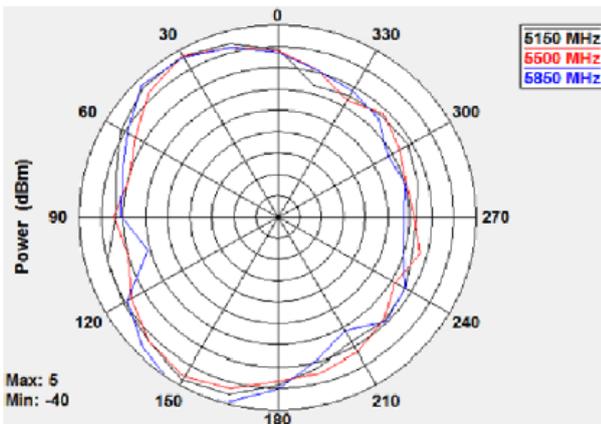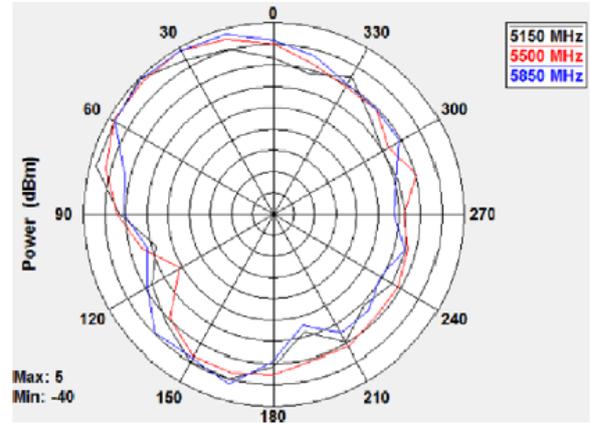
5GHz E-Plane

5GHz H-Plane
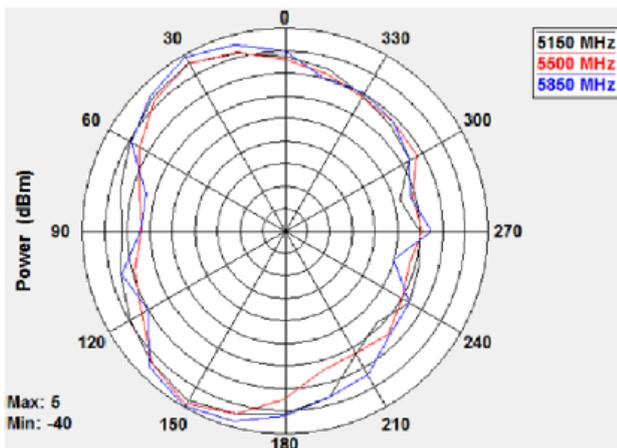
5GHz E-Plane

Physical Interfaces

LED INDICATORS
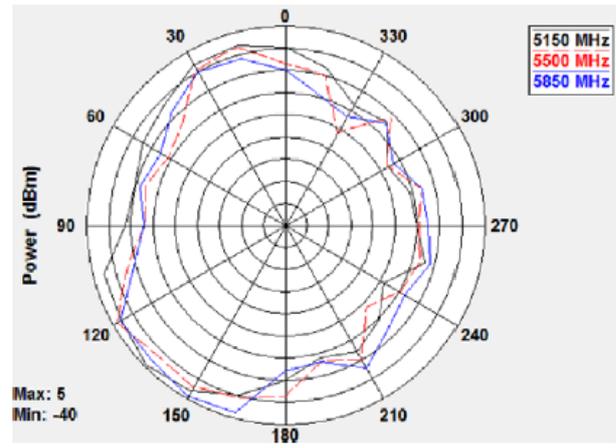
DC-Jack
LAN1
LAN2
Reset Button

EWS385AP

Standards	802.11ac/a/b/g/n
Frequency	2.4GHz+5GHz-1/2
Data Rates	400Mbps + 876Mbps + 876Mbps
Antennas	2.4GHz: 4.0dBi; 5GHz-1/2: 5.0dBi
Physical Interface	2 x Gigabit LAN; 1x DC Jack; Reset
Radio Chains/Streams	2.4GHz: 2x2 / 2 streams; 5GHz: 2x2 / 2+2streams