EAP2200

Tri-Band AC2200

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 three dedicated bands Wireless Management Access Point solution is designed for deploying on the versatile indoor application. To meet today's requirement on varied networking environment, EnGenius would like to provide the solution as flexible, robust and effective as the organization they desire. With one 2.4GHz band and two 5GHz bands to work with, the EAP2200 assigns each device to the band where it can connect at its maximum possible speed.

The state-of-the-art 802.11ac and MU-MIMO technology brings revolutionary connecting speed and bandwidth for diversity of multimedia applications. EAP2200 equips with two powerful RF interfaces that support up to 867 + 867 Mbps in 5GHz frequency band and 400 Mbps in 2.4GHz frequency band (with 2ss/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.
- Support up to 867 + 867 Mbps in 5GHz frequency band and 400 Mbps in 2.4GHz frequency band (with 2ss/VHT40 clients).
- Tri radio 2x2 802.11 ac/a/b/g/n Access Point with multi-user MIMO (MU-MIMO).
- 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.
- 360° omni-directional antennas to achieve comprehensive coverage for networking client devices under a pervasive environment.
- Compliance with 802.3af PoE Input for flexible installation over 100 meters (328 feet)
- Choose an operating mode to meet your management and deployment requirement. (AP mode/WDS modes/Repeater mode)

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 2.2Gbps air performance to wireless client devices.

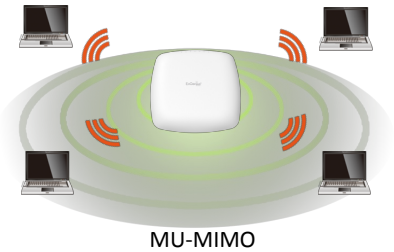
Carry multimedia content over MU-MIMO Transmit Beam-forming technology.

Be a prior AC2200 solution, EAP2200 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, EAP2200 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.

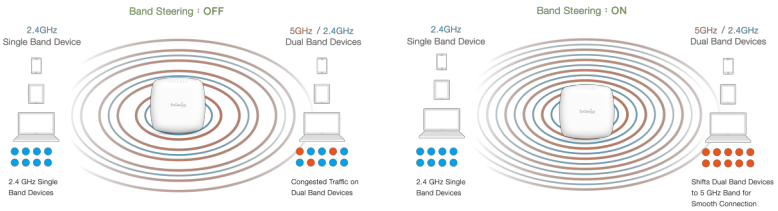


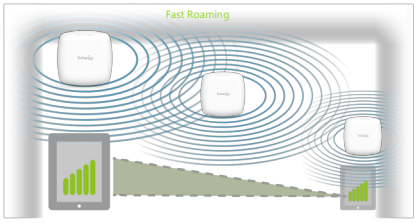
MU-MIMO

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.





Simplified Management and Configuration over ezMaster or EWS Management Switch

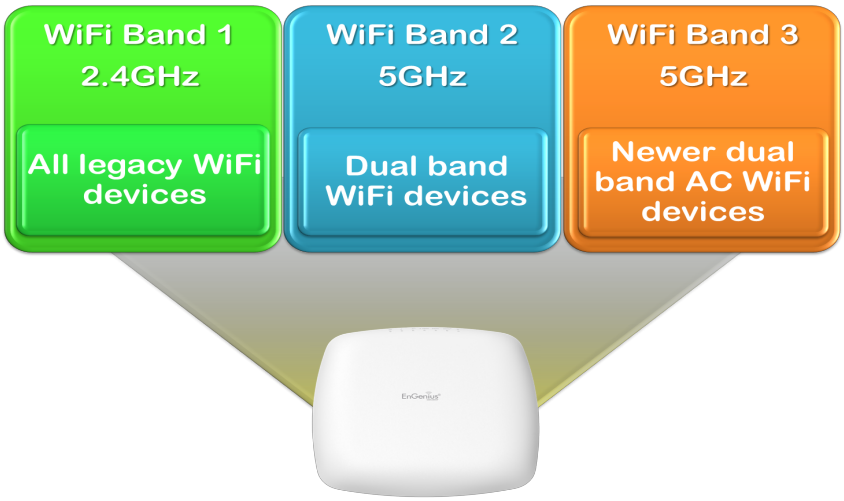
EAP2200 can be worked with EWS-series Wireless Management Switch and ezMaster management platform for scalable and flexible wireless management application. Whether you want to manage a few or 1000+ Access Points and switches on network in different locations with different segment —or 10 to 10,000 concurrent 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 EAP2200 or 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.

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 WiFi Provides 3 Dedicated Bands

Tri-Band WiFi delivers the fastest combined Wi-Fi speeds to more devices. With one 2.4GHz band and two 5GHz WiFi bands to work with, EAP2200 has more client density, flexibility, and smart to assign each device to the WiFi band where it can connect at its maximum possible speed. It prioritizes traffic across the two 5GHz Wi-Fi 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.



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,
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: 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 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

EAP2200: (Integrated Antenna)
2.4GHz: 5dBi
5GHz: 5dBI

Interfaces

Networking Interface
Two (2) 10/100/1000 BASE-T RJ-45 Ethernet Ports
Link Aggregation achieves 2Gbps Throughput

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
1.13kg

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
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

R&TTE Directive 1995/5/EC

Low Voltage Directive 72/23/EEC

Technical Specifications Wireless Indoor Access Point

Operating Mode

AP / WDS/ Repeater Mode
Three configuration options broaden the devices' adaptability to your network needs.

Exquisite RF Management

Auto Transmit Power
Automatically adjust power level when 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

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

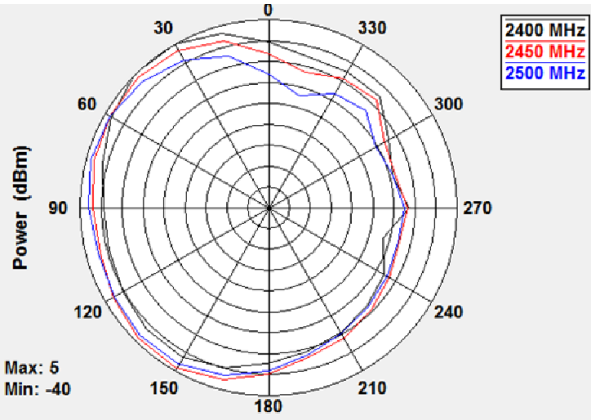
Channel	Data Rate	Transmit Power (Aggregated, dBm)	Receive Sensitivity (Aggregated, dBm)
802.11b 2.4 GHz	1 Mbps	15	-93
	11 Mbps	15	-86
802.11g 2.4 GHz	6 Mbps	15	-89
	54 Mbps	14	-72
802.11a 5 GHz	6 Mbps	15	-87
	54 Mbps	14	-71
802.11n HT20 2.4 GHz	MCS 0 / 8 / 16	15	-88
	MCS 7 / 15 / 23	14	-69
802.11n HT40 2.4 GHz	MCS 0 / 8 / 16	15	-86
	MCS 7 / 15 / 23	14	-67
802.11n HT20 5GHz	MCS 0 / 8 / 16	15	-87
	MCS 7 / 15 / 23	14	-68
802.11n HT40 5GHz	MCS 0 / 8 / 16	15	-84
	MCS 7 / 15 / 23	14	-65
802.11ac VHT20 5GHz	MCS0	15	-87
	MCS8	13	-65
802.11ac VHT40 5GHz	MCS0	15	-84
	MCS9	13	-61
802.11ac VHT80 5GHz	MCS0	15	-76
	MCS9	13	-56

*Maximum performance of the hardware provided. Maximum transmit power is limited by local regulatory.

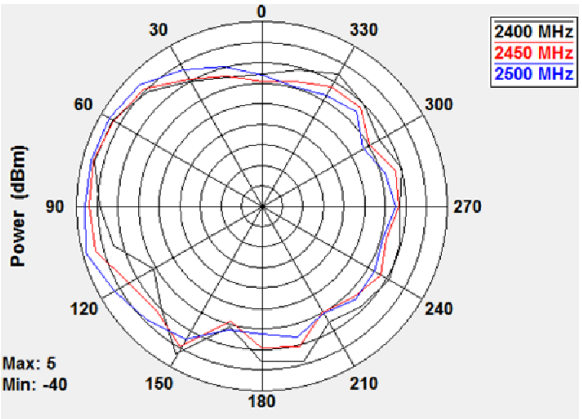
*The supported frequency band is restricted by local regulatory requirements.

Antennas Patterns Wireless Indoor Access Point

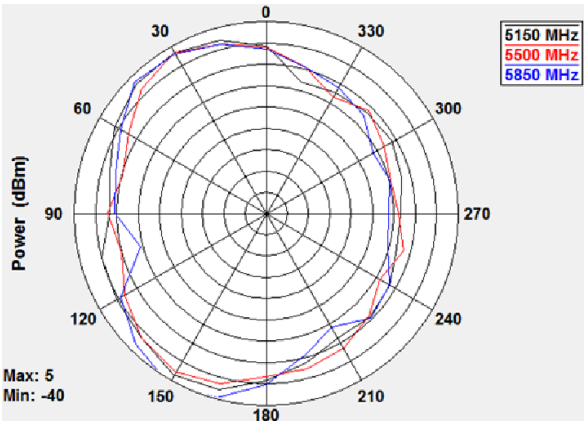
2.4GHz H-Plane



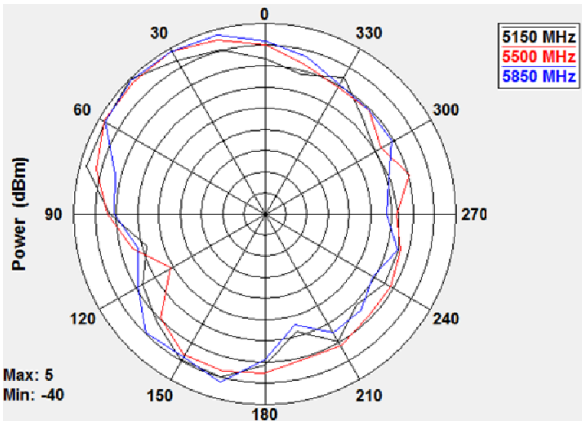
2.4GHz E-Plane



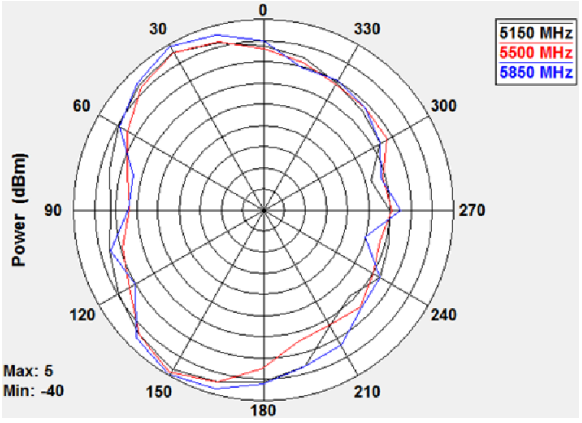
5GHz H-Plane



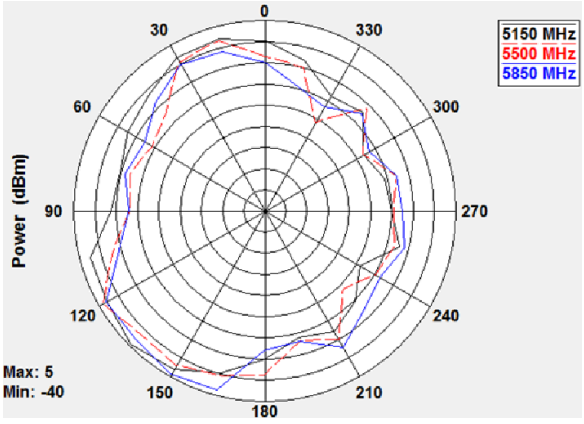
5GHz E-Plane



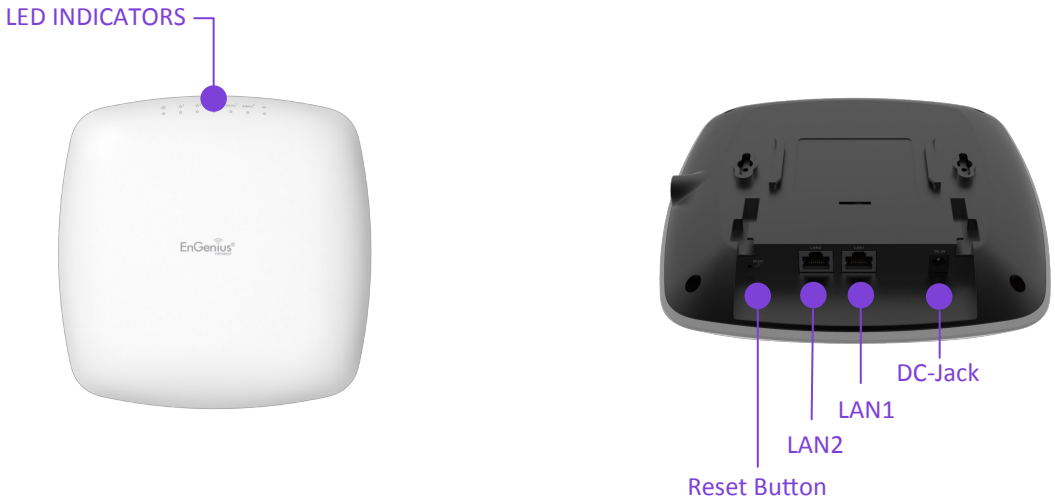
5GHz H-Plane



5GHz E-Plane



Physical Interfaces



EAP2200

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

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