EnGenius

Datasheet

ECB1200

802.11ac 2x2:2 Dual-Band High-Powered Wireless Access Point/Client Bridge

The EnGenius ECB1200 is an 802.11ac 2x2:2 Dual Band Wireless Access Point and Client Bridge that is ideal for use in a wide array of settings including multi-floor corporate offices, hotels, schools and universities, small-to-mid-sized companies and large homes.

The ECB1200 features Dual-Band, concurrent operations with Band Steering and Quantum Beam technology for highly optimized user capacity per band, and the latest 802.11ac speeds delivering up to 867 Mbps on the 5 GHz band and up to 300 Mbps on the 2.4 GHz band. Combining high-transmit power, enhanced receive sensitivity and 4 external high-gain MIMO antennas, the ECB1200 supports long-range wireless connectivity ensuring seamless application delivery to a large number of clients simultaneously.

An expert in wireless communications and RF technology, EnGenius delivers feature-rich, long-range wireless communications technology for voice and data. The versatility and performance of the company's solutions lower total cost of ownership, increase productivity and maximize return on investment.

Key Features and Benefits:

- 802.11ac wireless speeds up to 867 Mbps on 5 GHz band
- 802.11n wireless speeds up to 300 Mbps on 2.4 GHz band
- Up to 26 dBm transmit power per band penetrates floors, ceilings and walls for long-range connectivity
- Dual-Band-capable for expanded user capacity and support for higher bandwidth applications
- Four (4) 5 dBi high-gain detachable Omni-Directional antennas; two (2) on 2.4 GHz/two (2) on 5 GHz
- Band Steering detects Dual-Band clients, shifting them to 5 GHz, optimizing data flow
- Power-over-Ethernet (PoE)-compatible for flexible power options with PoE 802.3at capable Switches or the EnGenius Gigabit PoE Injector EPE-4818G
- Fast Roaming configurable when used with a RADIUS server for seamless application delivery without delays
- Wireless Encryption (64/128/152 bit)
- Secured Guest Network option keeps primary network secure, limiting Internet resources
- SSID-to-VLAN Tagging – tag and assign different user access rights on the company VLAN
- Supports IPv4/IPv6
- Designed for use in: multi-floor corporate offices, hotels, schools, universities, small-to-mid-sized companies and large homes

Accelerated Dual-Band Performance

The EnGenius ECB1200's accelerated speed and performance for users with 802.11ac laptops and other devices ensures smooth, rapid wireless HD video streaming and large file transfers over long distances. With Dual-Band support, this 802.11ac 2x2:2 Indoor Access Point and Client Bridge features data speeds of up to 867 Mbps on the 5 GHz band, when associated with AC client devices, and up to 300 Mbps on the 2.4 GHz band. Its Dual-Band feature incorporates high-capacity performance without bottlenecks for legacy and newer devices to a large number of clients simultaneously.

Long-Range Connectivity with External Detachable Antennas

With powerful, long-range connectivity capacity, the ECB1200's external MIMO antenna array is comprised of four (4) detachable 5 dBi high-gain antennas; two (2) for the 2.4 GHz radio and two (2) for the 5 GHz radio, transmitting up to 26 dBm of power per band. This combination of high-transmit power, enhanced receive sensitivity and long-range high gain external antennas results in wide-reaching connectivity to client devices, and in some venues, drastically minimizes the number of APs needed for deployment compared to other solutions.

Customize Wireless Access for Different Departments or Workgroups

Create and configure up to eight (8) separate wireless networks per frequency band for a total of 16 SSIDs. Utilizing SSID-to-VLAN tagging (802.11q) can help increase security, network reliability and conserve bandwidth by limiting who has access to connect.

Secured Guest Network Option

Establish and secure Guest Networks and control access to company computers and servers. Limit Internet resources available to visiting customers, clients and vendors and ensure your company network and servers are kept secure from sophisticated Trojans and malware that can use guest's mobile devices to attack your network.

Fast Roaming with Enhanced Security

When used with a RADIUS server, the ECB1200's Fast Roaming feature supports secure authentication, distributing and caching a designated WPA/WPA2-Enterprise encryption key to neighboring ECB Access Points. Together with the Fast Handover feature, the AP automatically initiates a secure client transfer from one ECB Access Point to the next nearest AP with a stronger signal, keeping clients continuously and seamlessly connected to the network.

Simplified AP Monitoring

For simplified Wireless Access Point monitoring and sequential firmware upgrades after deployment, IT managers can download the free the SNMP-based EZ Controller software for Windows, Mac OSX and Linux from the EnGenius web site. Since the ECB1200 requires no software, set up and configuration is easily completed through its web User Interface or the optional EZ Controller software.

Flexible Mode Configurations per Frequency Band

Easily configure the ECB1200 as an Access Point, Client Bridge or WDS (AP, Station & Bridge) based on user needs in each frequency band. When set to Client Bridge mode, Ethernet-enabled devices, such as printers, copiers or storage can join an existing wireless network when connected via a Switch or directly to the wired device, making applications like wireless printing and archiving from laptops and tablets even easier.

Technical Specifications

Standard
IEEE 802.11a/n/ac on 5 GHz
IEEE 802.11b/g/n on 2.4 GHz
IEEE 802.3at
Antenna
4 External Antennas
(2) Detachable 5 dBi 2.4 GHz Omni-Directional Antennas
(2) Detachable 5 dBi 5 GHz Omni-Directional Antennas
Physical Interface
1 x 10/100/1000 Gigabit Ethernet Port with PoE support
1 x Reset Button
1 x Power Connector

Physical Security
Kensington Security Slot
LED Indicators
1 x Power
1 x LAN 1
1 x 2.4 GHz
1 x 5 GHz
Power Source
DC Input: 12VDC/2A
PoE: Compatible with 802.3at
Memory Capacity
16 MB Flash
128 MB SDRAM

Wireless & Radio Specifications
Dual-Band, Dual-Concurrent Radio
Operation Modes
Access Point
Client Bridge
WDS AP
WDS Bridge
WDS Station
Transmit Power (combined)
2.4 GHz up to 26 dBm
5 GHz up to 26 dBm
Radio Chains/Spatial Streams
2 x 2: 2

Technical Specifications continued

Supported Data Rates (Mbps)
2.4 GHz: Max 300
5 GHz: Max 867
802.11b: 1, 2, 5.5, 11
802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
802.11n: 6.5 to 450 (MCS0 to MCS9, NSS=1 to 3)
802.11ac: 6.5 to 1,300 (MCS0 to MCS9, NSS=1 to 3)

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 with 20/40/80 MHz channel width
802.11n with 20/40 MHz channel width
802.11a/b/g with 20 MHz channel width

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
Auto Channel Selection
Multiple SSID: 16 SSIDs, 8 SSIDs per Radio
BSSID
SNMP V1/V2c/V3
MIB I/II, Private MIB
VLAN Tag/VLAN Pass-through
Save Configuration as Default
Clients Statistics
Email Alert
Fast Roaming
Fast Handover
Client Limit
Real Time Status
RADIUS Accounting
Guest Network

Control
EnGenius EZ Controller
CLI Supported
Multicast Supported
Wi-Fi Scheduler
Band Steering
802.1x Supplicant (CB Mode)
Auto Reboot
Green Setting

Security
WEP Encryption (64/128/152 bit)
WPA/WPA2 Personal (WPA-PSK using TKIP or AES)
WPA/WPA2 Enterprise (WPA-PSK using TKIP)
802.1x Authenticator
Hide SSID in Beacons
Client Isolation
L2 Isolation (AP Mode)
MAC Address Filtering, Up to 50 Fields

Wireless STA (Client) Connection List
Https Support
SSH Support

QoS (Quality of Service)
Supports 802.11e/WMM/Traffic Shaping Standards
(WMM – Wireless Multimedia

Environmental & Physical
Temperature Range
Operating: 32 °F to 122 °F (0°C to 50 °C)
Storage: -4 °F to 140°F (-20 °C to 60 °C)

Humidity (non-condensing)
Operating: 90% or less
Storage: 90% or less

Dimensions & Weights:
ECB1200 Device
Weight: 1.20 lbs. (544.31 g)
Length: 7.44" (189 mm)
Width: 5.51" (140 mm)
Height: 1.02" (26 mm)

Packaging
Weight: 2.8 lbs. (1.27 kg)
Length: 12" (304.80 mm)
Width: 3" (76.20 mm)
Height: 1" (25.40 mm)

Master Carton
Weight: 28 lbs. (12.70 kg)
Length: 19" (482.60 mm)
Width: 15.4" (391.16 mm)
Height: 13" (330.20 mm)
No. of boxes per master carton: 10 units

Package Contents
ECB1200 802.11ac 2x2:2 Dual Band Indoor Access Point/ Client Bridge
(2) Detachable 5 dBi 2.4 GHz Omni-Directional Antennas
(2) Detachable 5 dBi 5 GHz Omni-Directional Antennas
RJ-45 Cable
Power Adapter (12V/2A)
Wall Mount Kit
Quick Installation Guide

Certifications
FCC, CE, IC

Warranty:
1 Year

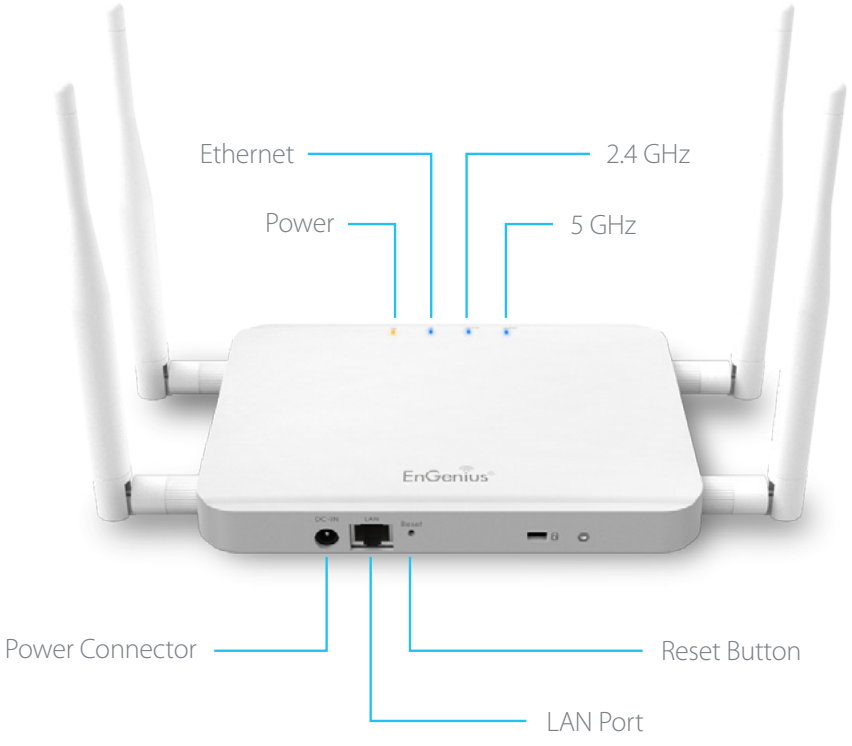
Antenna Specifications (External Antenna)

External Antenna	2.4 GHz	5 GHz
Average Antenna Gain	5.0dBi	5.0dBi
Polarization	Vertical	Vertical
Azimuth Beam-Width	360°	360°
Elevation Beam-Width	30°	30°
VSWR	1:2.0	1:2.0
Dimension	13(Φ)x199(L) mm	

RF Specifications (Aggregated Value)

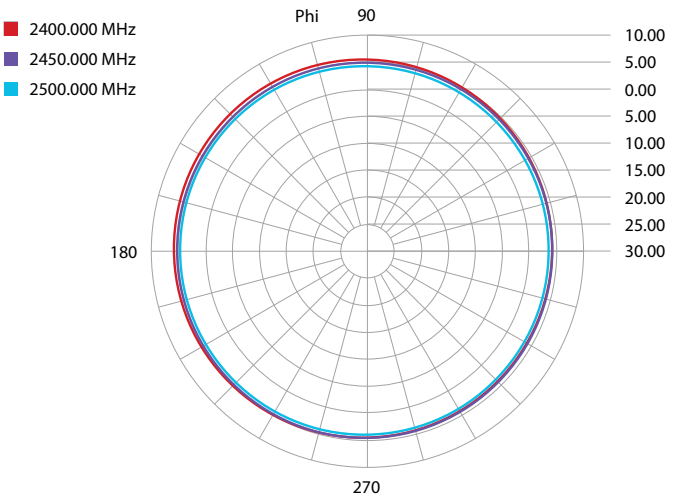
Channel	Data Rate	Transmit Power (Combined, dBM)	Receive Sensitivity (Combined, dBm)
802.11b 2.4 GHz	1 Mbps	26.0	-92.0
	2 Mbps	26.0	-91.0
	5.5 Mbps	26.0	-91.0
	11 Mbps	26.0	-89.0
802.11g 2.4 GHz	6 Mbps	25.0	-88.0
	54 Mbps	22.0	-72.0
802.11a 5 GHz	6 Mbps	26.0	-90.0
	54 Mbps	23.0	-72.0
802.11n HT20 2.4 GHz	MCS 0 / 8	25.0	-88.0
	MCS 7 / 15	22.0	-69.0
802.11n HT40 2.4 GHz	MCS 0 / 8	25.0	-84.0
	MCS 7 / 15	21.0	-68.0
802.11n HT20 5GHz	MCS 0 / 8	26.0	-89.0
	MCS 7 / 15	22.0	-70.0
802.11n HT40 5GHz	MCS 0 / 8	26.0	-85.0
	MCS 7 / 15	21.0	-68.0
802.11ac VHT20 5GHz	MCS0	25.0	-88.0
	MCS8	19.0	-65.0
802.11ac VHT40 5GHz	MCS0	25.0	-85.0
	MCS9	17.0	-61.0
802.11ac VHT80 5GHz	MCS0	25.0	-82.0
	MCS9	17.0	-58.0

*Maximum transmit power is limited by local regulation.
*The supported frequency band is restricted by local regulatory requirements.
*Transmit power is configurable in 1.0dB increments.

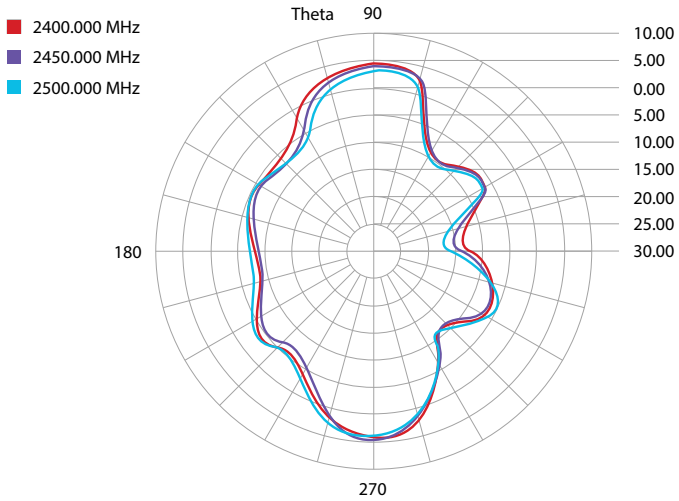


Antenna Radiation Patterns

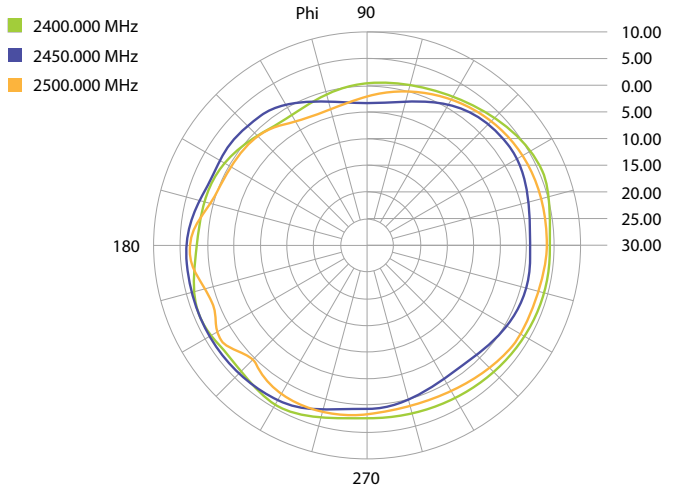
2.4 GHz-H Plane



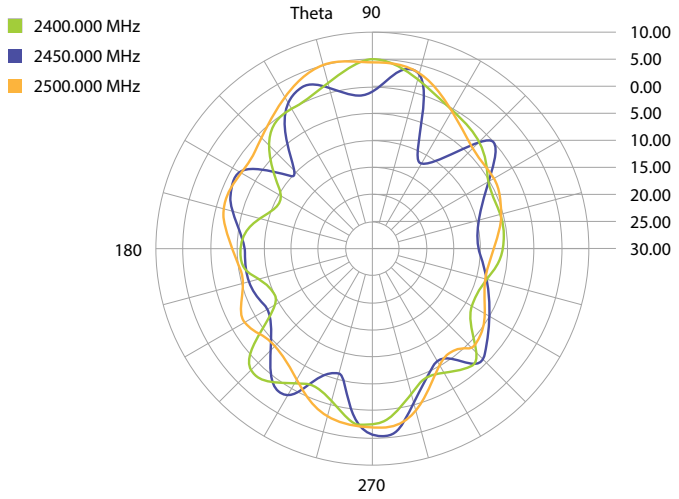
2.4 GHz-E Plane



5 GHz-H Plane



5 GHz-E Plane



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