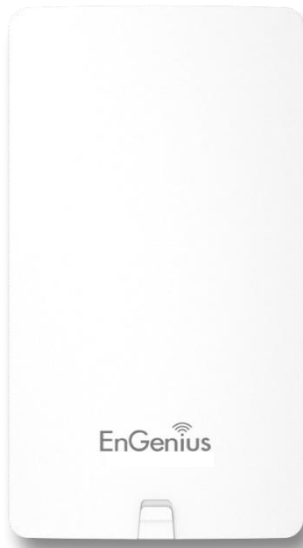## Key Features

- IEEE 802.11 ac/a/b/g/n dual concurrent architecture
- Up to 450Mbps (2.4GHz) + 1300Mbps (5GHz)
- Built high-gain antennas for low-profile design
- Comprehensive IP55 waterproof rated
- Compliant with IEEE 802.3at PoE input
- AP/WDS multi-modes
- Intuitive configuration via the EZ Controller or Web GUI to manage the AP/Client traffic
- SNMP V1/ V2c/V3, MIB I/II supported
- WEP/WPA/WPA2 wireless encryption
- Spectrum Utilization (Band Steering)
- Seamless stream service (Fast Roaming)
- Manage and monitor by the AP, SSID

Dual Concurrent AC1750 Outdoor Access Point

EnGenius Outdoor Access Point delivers the intelligent connection for diversity of multimedia application under harsh environment.

ENS1750 is engineered with dual-band concurrent architecture which offers the bandwidth up to 1300Mbps on the 5GHz band and 450Mbps on the 2.4GHz band. With the IP55-rated waterproof enclosure and the flexible mounting capability, the product is able to be applied under challenging environments.

Cutting-edge Solutions

Each radio of the ENS1750 is built the higher strength and sensitivity; the specification will assist to reduce dead in your deployed WLAN and boost received signal quality on both ends of AP and wireless client devices. ENS1750 offers multiple SSIDs (up to 16 sets) and each SSID can be configured its bandwidth and WLAN security settings, enabling various applications running over WLAN with different levels of security strength and bandwidth limit. ENS1750 also provides the advanced wireless features including the fast roaming and band steering for achieving seamless connection and intelligent connection to optimize the signal quality.

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Intelligent Management

Creating for nowadays networking demands, EnGenius has developed the multiple functions for great coverage, stable performance and easy-to-maintain management tools to ensure the best users' experience for IT manager, MIS administrators and etc. ENS1750 provides wide-range of authentication and encryption standards that including WEP, WPA, WPA2, TKIP/AES and IEEE 802.1X to enforce the security robustness, as well as to manage it via https with SSL encryption or SSH encryption.

Comprehensive Application

To enhance the spectrum usage, ENS1750 has enclosure the band steering technology, enabling 5GHz-capable clients to associate with its 5GHz radio and offloading air utilization in 2.4GHz band. Regarding users' mobility, PMKSA caching will enable fast roaming upon handoff so remaining 4-way handshake can complete key exchange within association process in educed time interval. With intelligent wireless mesh management from EWS switch, mesh connection can extend WLAN coverage great; coupling with client limit and fast handover features. ENS1750 can assure scarce wireless resources and optimize to deploy environment.

802.3at compliant PoE for Alternative Power Sourcing

ENS1750 can be powered by enclosed PoE injector or off-the-shelf 802.3at-compliant PoE switches, solving the common power sourcing issue in the field where devices are usually placed at outdoor environment.

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Physical Interface
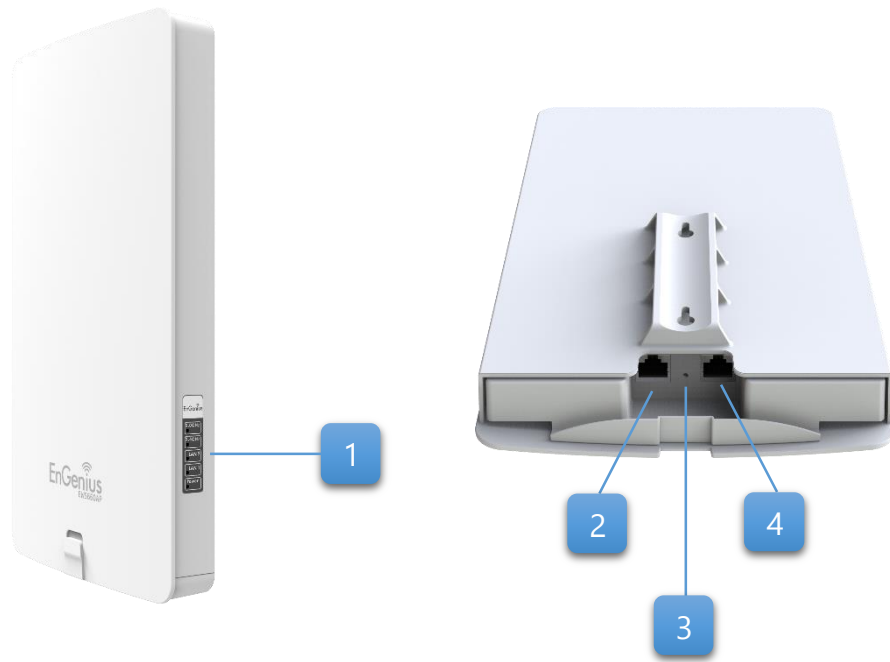
1	LED Indicators
2	LAN2 (Data)
3	LAN1 (PoE Input)
4	Reset Button

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Specification

Wireless Radio Specification

- Dual Radio, 5GHz 802.11a/n/ac and 2.4GHz 802.11b/g/n
  - 2.4GHz: Max 450Mbps
  - 5GHz: Max 1300Mbps
  - Dual concurrent radio support
- Transmit Power (Maximum Value)
  - 2.4GHz: Max 28dBm
  - 5GHz: Max 28dBm
  - Maximum power is limited by regulatory power
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum(DSSS)
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
  - 802.11n/ac: 3x3 MIMO with 3 streams
  - 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 types:
  - 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
- 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 450 (MCS0 to MCS23)
  - 802.11ac: 6.5 to 1,300 (MCS0 to MCS9, NSS=1 to 3)

Power

- Power Source:
  - 802.3at compliant source
  - Active Ethernet (Power over Ethernet, PoE)

Antennas

- Internal high gain antennas
  - 3T3R 5dBi dual concurrent omni antenna

Physical Interface

- Two 10/100/1000 BASE-T Ethernet Ports:
  - LAN2 can extend internet signal
- Reset button

Mechanical & Environment

- Dimensions / Weight
  - 300(L) x 181(W) x 34.1(H) mm
- Storage:
  - Temperature: -30°C~80°C
- Harsh Environment Use:
  - Waterproof: IP55 rated
- Operating:
  - Temperature: -20°C~60°C
  - Humidity: 0%～90% typical

Operation Mode

- Access Point / WDS AP / WDS Bridge:
  - A variety of operation modes to serve multiple constituencies and applications.

Optimal Performance

- Distance Control (Ack Timeout)
- Multicast Supported
- Band Steering
  - enabling 5GHz-capable clients to associate with its 5GHz radio and offloading air utilization in 2.4GHz band
- Fast Roaming
  - Minimize perceptible delay during re-association.
- Fast handover
  - Kick the client which the signal (RSSI) is above the set value from the AP for reducing the interference and optimize the connecting quality
- Auto Channel Selection
  - Setting varies by Regulatory Domains
- BSSID Support

Comprehensive Management

- SSIDs:
  - Capable 8 SSIDs on both 2.4GHz and 5GHz bands
- VLAN Tag:
  - Any packet that enters the Device without a VLAN tag will have a VLAN tag inserted with a PVID (Ethernet Port VID) when VLAN Isolation is enabled
- VLAN Pass-through:
  - VLAN pass through over the WDS bridge mode
- Guest Network
  - Allows users to manage easily grant "visitor" access within the network.
- QoS:
  - Complaint with IEEE 802.11e /WMM
- RADIUS Accounting:
  - Assist operators to offload 3G to the wi-fi seamlessly
- Wireless STA (Client) connection list:
  - Reports the various main information timely which is required by administrator

`

Intuitive Tools

- SNMP &MIB
  - v1/v2c/v3 support
  - MIB I/II, Private MIB
- Save Configuration as Default:
  - Saves the users' configuration as default value.
- CLI Support
- WiFi-Scheduler/Auto Reboot
  - Specifics interval to reboot/reset system periodically
- E-mail Alert:
  - Trigger the alert mail when changing the configuration

Reinforcement Security

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

- Hide SSID in beacons
- MAC address filtering
  - Filter up to 32 MACs per SSID
- Wireless STA (Client) connection list:
Reports the various main information timely which is required by administrator
- Https
  - Widely used communications approach for securing communication over a computer network.
- SSH
  - Provide confidentiality and integrity of data over an unsecured network, such as the Internet.

RF Specification (Aggregated Value)

Channel	Data Rate	Transmit Power (Aggregated, dBm)	Receive Sensitivity (Aggregated, dBm)
802.11b 2.4 GHz	1 Mbps	28.0	-95.0
	2 Mbps	28.0	-93.0
	5.5 Mbps	28.0	-91.0
	11 Mbps	28.0	-90.0
802.11g 2.4 GHz	6 Mbps	28.0	-90.0
	54 Mbps	25.0	-74.0
802.11a 5 GHz	6 Mbps	28.0	-90.0
	54 Mbps	24.0	-74.0
802.11n HT20 2.4 GHz	MCS 0 / 8 / 16	28.0	-90.0
	MCS 7 / 15 / 23	24.0	-72.0
802.11n HT40 2.4 GHz	MCS 0 / 8 / 16	28.0	-86.0
	MCS 7 / 15 / 23	24.0	-70.0
802.11n HT20 5GHz	MCS 0 / 8 / 16	27.0	-91.0
	MCS 7 / 15 / 23	24.0	-72.0
802.11n HT40 5GHz	MCS 0 / 8 / 16	27.0	-87.0
	MCS 7 / 15 / 23	24.0	-70.0
802.11ac VHT20 5GHz	MCS0_1SS / 2SS/ 3SS	27.0	-90.0
	MCS8_1SS / 2SS/ 3SS	22.0	-67.0
802.11ac VHT40 5GHz	MCS0_1SS / 2SS/ 3SS	27.0	-87.0
	MCS9_1SS / 2SS/ 3SS	20.0	-63.0
802.11ac VHT80 5GHz	MCS0_1SS / 2SS/ 3SS	27.0	-85.0
	MCS9_1SS / 2SS/ 3SS	20.0	-60.0

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

*The supported frequency band is restricted by local regulatory requirements.
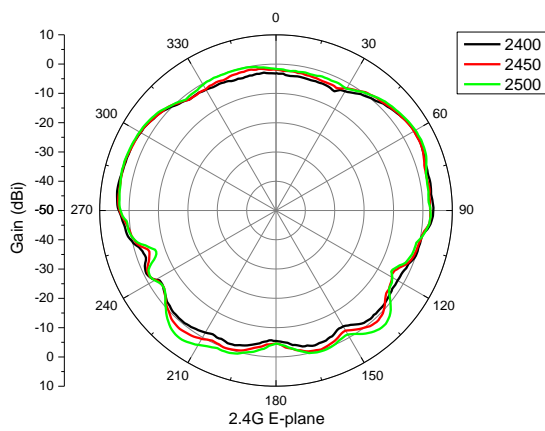
*Transmit power is configured in 1.0dBm increments.

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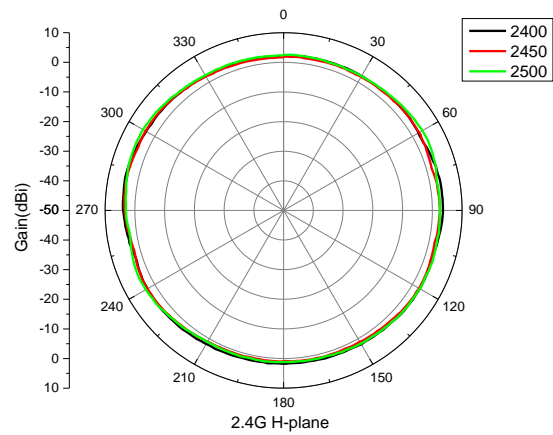## Antenna Specificaitons (Integrated Antennas)

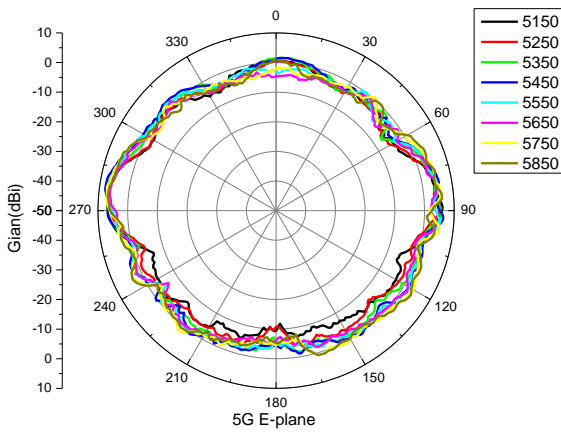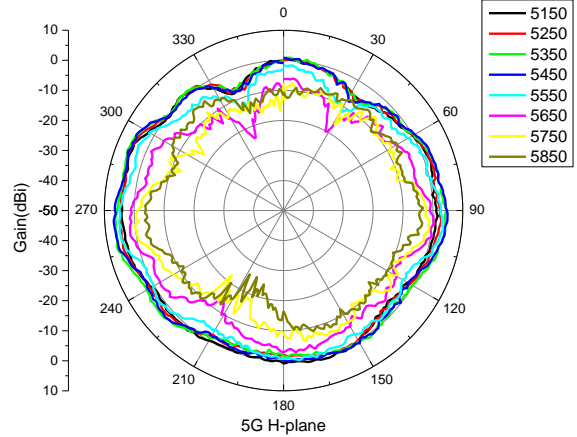| Frequency	2.4GHz	5GHz
Average Antenna Gain	5.0dBi	6.0dBi
Polariztion	Linear	Linear
Azimuth Beam-Width	360°	360°
Elevation Beam-Width	45°	40°
VSWR	1:2.0	1:2.0

Diagram Pattern

2.4GHz: E-Plane

2.4GHz: H-Plane

5GHz: E-Plane

5GHz: H-Plane

Network Management System - EnGenius Zone Controller

In enhancing the real-time functionality of a network, applying the best network management software tool is necessary. Built-in Network Management System, EZ Controller (EnGenius Zone Controller), provides an intelligent tool for IT manager, installer, and network administrators to configure control, and manage all wireless devices within network from one central location. This application ensures the entire network will optimally operate without troubles, glitches and interruptions.

The growing demand of performance related results from service providers or someone involved in an enterprise, you need to provide a huge platform to make it successful. The robust design of EZ Controller can manage different devices simultaneously and precisely, as well as configure the advanced service for wireless clients.
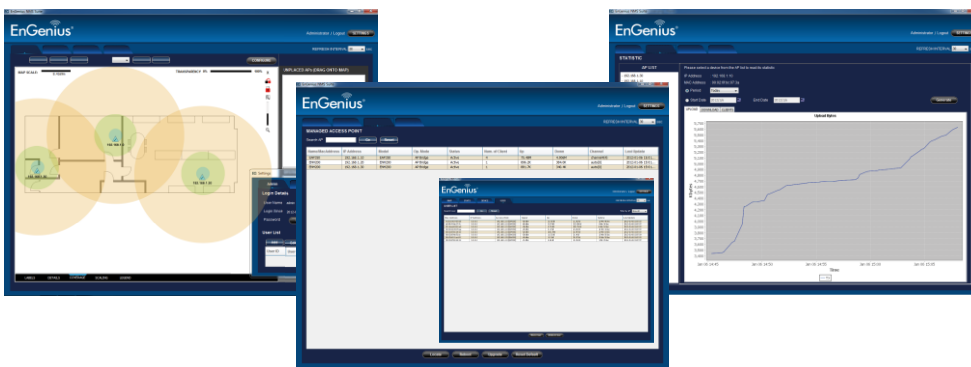
Configure, control and manage EnGenius Enterprise Wireless Devices from one central location.

Features:

- Easy-to-use User Interface
- Optimize network performance
- Eliminate downtime
- Check real-time wireless coverage
- Monitor and control each sheet
- Monitor traffic loads by AP, MAC or IP address

- Sequential firmware upgrades to deployed APs / Bridges
- Import and archive floorplan maps for radio coverage plotting
- Labels assets by MAC and IP address or user-defined aliases
- Export real-time AP statistics report

An intelligent solution for different business environment

| Villa | Campus | Office | Plaza |