

Key Features

- Draft IEEE 802.11ac and IEEE802.11b/g/n compliant
- Up to 450Mbps(2.4GHz) + 1300Mbps(5GHz) wireless data transmission rate
- Compliant with IEEE802.3at for PoE support
- IP55 Rated Waterproof Housing
- Built-in high-gain antennas for low profile design
- Integrated WLAN management solution with EWS-series PoE switch
- Advanced AP mode with mesh support¹
- SNMP v1/ v2c/v3, MIB I/II supported
- WEP/WPA/WPA2 wireless encryption
- IPv4/IPv6 support

Dual Band Wireless AC1750 Managed Outdoor Access Point

High power, high sensitivity and high reliability solution designed to operate under harsh environments

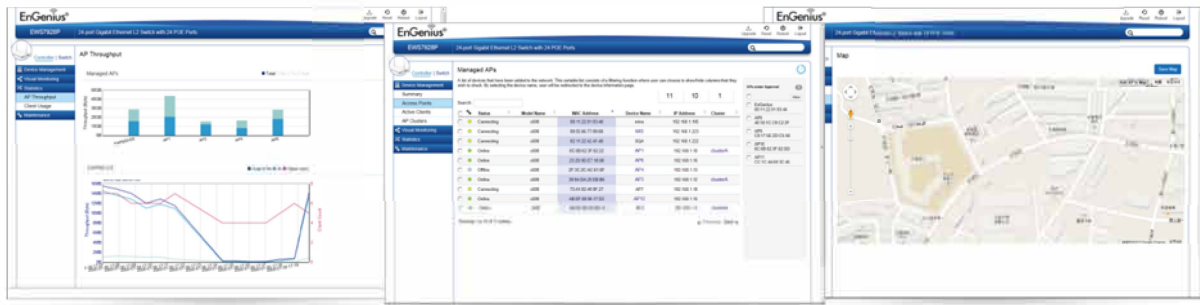
The EWS660AP is a versatile, high power outdoor access point designed to withstand harsh environments making it an ideal solution for creating outdoor wireless networks. With transfer rates of up to 1300Mbps in 5GHz and 450Mbps in 2.4GHz, users are able to enjoy faster wireless connections for bandwidth hungry applications such as audio, video and voice streaming. With its IP55-rated waterproof enclosure and the flexible mounting capabilities, this product is suitable to be installed in stadiums, school campuses, stations, airports, manufacturing plants or virtually any venue requiring a robust outdoor wireless solution.

Enhanced Signal Strength to Further Extend WLAN Coverage

Equipped with built-in high-gain antennas designed for high power radio, the EWS660AP has been enhanced to provide higher signal strength and sensitivity; this will assist to reduce dead spots in your deployed WLAN and boost received signal quality on both ends of AP and wireless client devices.

802.3at Power Over Ethernet (PoE) Support

EWS660AP can be powered using the enclosed PoE injector or any off-the-shelf 802.3at-compliant PoE switches, solving the common power sourcing issue in the field where devices are usually placed in outdoor environment. With PoE power management from EWS management switch, the power budget of EWS660AP and its consumption can be configured and monitored immediately.



Configuration and Management with Ease

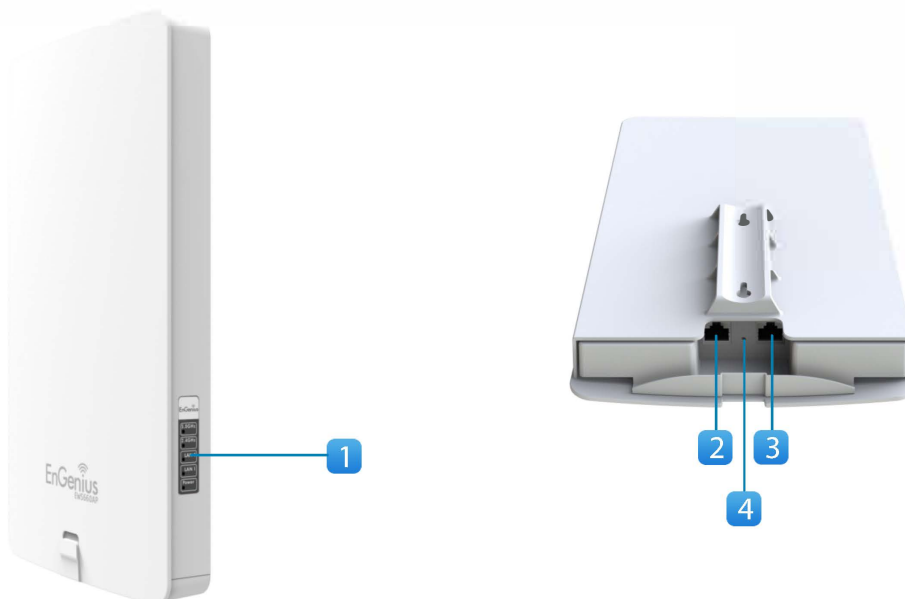
EWS-series managed AP is designed to work with EWS-series Wireless Management Switch as part of EnGenius' integrated WLAN management solution, providing intuitive web-based configuration, management, and advanced wireless features such as fast handover, fast roaming, and band steering. The AP is self-discovered by EWS management switch on your WLAN without extra efforts; once added into managed device list, WLAN administrator can easily use individual or cluster settings to fast deploy numbers of AP with desired settings, saving repetitive configuration tasks. Other than intuitive device management, this integrated solution provides map-view UI on EWS switch for AP placement visualization with built-in troubleshooting tools to perform diagnosis upon error occurred.

Flexible Bandwidth Management and Enterprise-Class WLAN Security for Versatile Applications

EWS660AP offers multiple SSIDs (up to 16 sets) and each SSID can have its own bandwidth and WLAN security settings, enabling various applications running over WLAN with different levels of security strength and bandwidth limit. Regarding the user mobility, PMKSA caching will facilitate fast roaming upon handoff so remaining 4-way handshake can complete key exchange within association process in reduced time interval. In addition, Guest Network feature also allocates a separate network segment for guest access within deployed WLAN so access attempts on internal networks can be restricted.

Physical Interface

1. LED Indicators
2. LAN2 (Data)
3. LAN1 (PoE IN)
4. Reset Button



Technical Specifications

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 29dBm
 - 5GHz: Max 27dBm
 - 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:
 - 802.3af/at compliant source
 - Active Ethernet (Power over Ethernet, PoE)

Antennas

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

Interface

- Two 10/100/1000 BASE-T Ethernet Port:
 - LAN1 supports 802.3af/at PoE input
 - LAN2 is used to extend internet signal
- Reset button

Mechanical & Environment

- Dimensions / Weight
 - 304(L) x 181(W) x 46(H) mm

- Operating:
 - Temperature: -20°C~70°C
 - Humidity: 0% ~90% typical
- Storage:
 - Temperature: -30°C~80°C
- Waterproof rating:
 - IP55 rated

Easy Management

- Auto Channel Selection
 - Setting varies by Regulatory Domains
- SSIDs:
 - BSSID support
 - 16 SSIDs support
 - Support 8 SSIDs on both 2.4GHz and 5GHz bands
- 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)
- SNMP &MIB:
 - v1/v2c/v3 support
 - MIB I/II, Private MIB
- Save Configuration as Default:
 - Saves the customized configuration as default value for different customer demands.
- Clients Traffic Status:
 - Reports the various main information timely which is required by administrator
- Guest Network:
 - Allows the administrator to manage easily grant "visitor" access within the network.
- E-mail Alert:
 - Provides a network monitoring tool for administrators to stay informed the configuration change.
- QoS:
 - Complaint with IEEE 802.11e standard
- RADIUS Accounting:
 - Help operators to offload 3G to Wi-Fi seamlessly

Technical Specifications

Effective Control and Use

- CLI Comments Support:
 - Setting varies by Regulatory Domains
- Distance Control (Ack Timeout)
- Multicast Supported
- Wi-Fi Scheduler
 - Set the schedule for rebooting the device
- Band Steering
 - Shift the clients from 2.4GHz band to 5GHz band when the clients contest in 2.4GHz band
- Fast Roaming
 - Minimize perceptible delay during re-association.
- Fast handover
 - Steer clients from the AP to other APs under the same encryption and SSID when the signal is above the default value.

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 Performance Table (Aggregated Value)

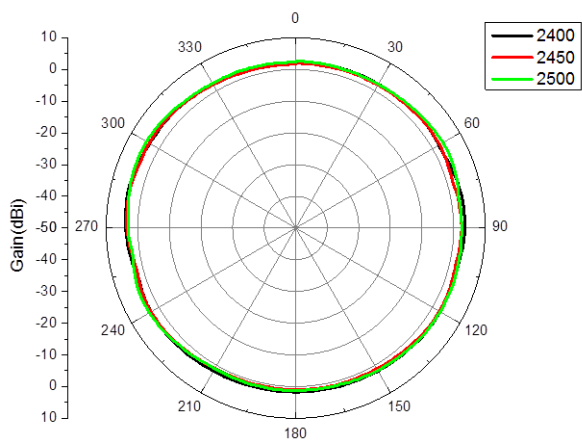
Channel	Data Rate	Transmit Power (Aggregated, dBm)	Receive Sensitivity (Aggregated, dBm)
802.11b 2.4 GHz	1 Mbps	29.0	-95.0
	2 Mbps	29.0	-93.0
	5.5 Mbps	29.0	-91.0
	11 Mbps	29.0	-90.0
802.11g 2.4 GHz	6 Mbps	29.0	-90.0
	54 Mbps	26.0	-74.0
802.11a 5 GHz	6 Mbps	28.0	-90.0
	54 Mbps	24.0	-74.0
802.11n HT20 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.

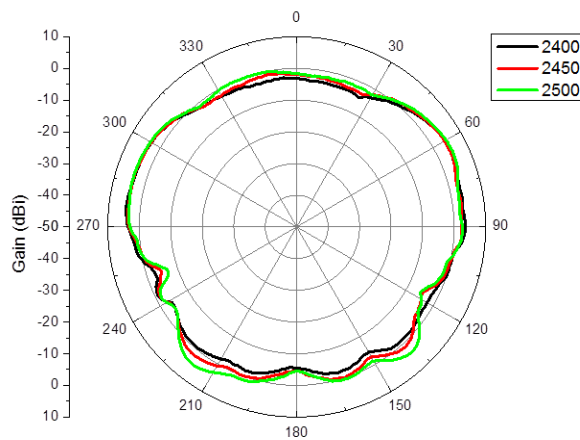
** The supported frequency band is restricted by local regulatory requirements.

*** Transmit power is configured in 1.0dBm increments.

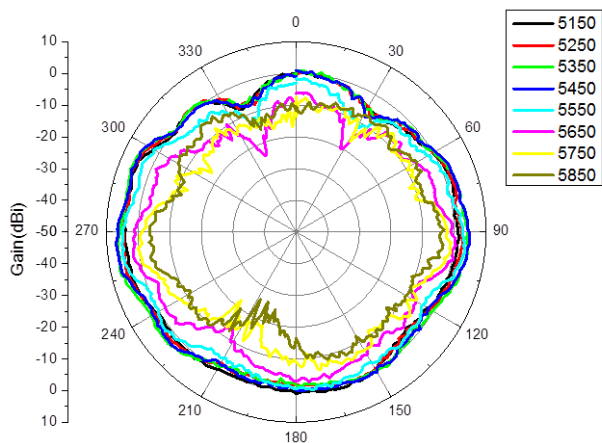
Antenna Radiation Patterns



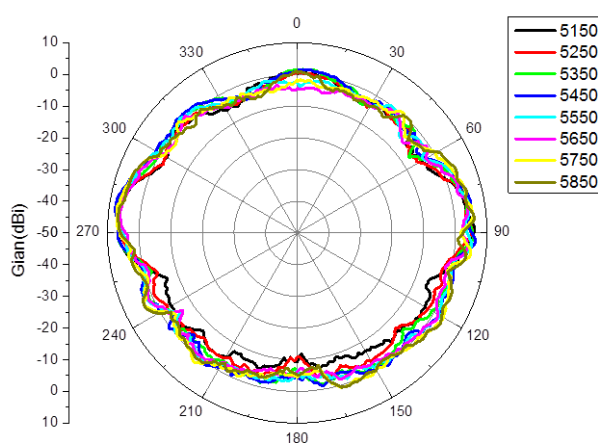
2.4GHz-H Plane



2.4GHz-E Plane



5GHz-H Plane



5GHz-E Plane

Ordering Information

Product No.	Product Description
Wireless Management Switch	
EWS5912FP	8-Port Gigabit PoE+ L2 Wireless Management Switch with 2 GbE Ports and 2 Dual-Speed SFP; 130w
EWS7928P	24-Port Gigabit PoE+ L2 Wireless Management Switch with 4 Dual-Speed SFP; 185w
EWS7928P	24-Port Gigabit PoE+ L2 Wireless Management Switch with 4 Dual-Speed SFP; 370w
EWS7952FP	48-Port Gigabit PoE+ L2 Wireless Management Switch with 4 Dual-Speed SFP; 740w
Wireless Managed Access Point	
EWS210AP	Single Band Wireless N300 Managed Indoor Access Point
EWS310AP	Dual Band Wireless N600 Managed Indoor Access Point
EWS320AP	Dual Band Wireless N900 Managed Indoor Access Point
EWS360AP	Dual Band Wireless AC1750 Managed Indoor Access Point
EWS660AP	Dual Band Wireless AC1750 Managed Outdoor Access Point; IP55
EWS860AP	Dual Band Wireless AC1750 Managed Outdoor Access Point; IP68
PoE+ Layer 2 Managed Switch	
EGS5212FP	8-Port Gigabit PoE+ L2 Managed Switch with 2 GbE Ports and 2 Gigabit SFP; 130w
EGS7228P	24-Port Gigabit PoE+ L2 Managed Switch with 4 Dual-Speed SFP; 185w
EGS7228FP	24-Port Gigabit PoE+ L2 Managed Switch with 4 Dual-Speed SFP; 370w
EGS7252FP	48-Port Gigabit PoE+ L2 Managed Switch with 4 Dual-Speed SFP; 740w

¹ Mesh Network is supported through future firmware upgrade.