EnGenius

Datasheet

WLAN Management **Solution**

The Neutr**on** Series

The EnGenius Neutron Series of WLAN management products can be mixed and matched to create ideal wireless connectivity solutions for hotels, resorts, high schools, universities, corporate campuses, sports stadiums and arenas and for other companies and organizations. You will now be able to manage larger amounts of clients with the Neutron Series.

This is a scalable solution for operations that occupy large properties and that need to deploy, monitor, and manage numerous EnGenius Neutron Series Wireless Access Points from one simple and accessible browser-based software platform. Neutron Series Controller Switches can support any small number of Neutron Series Wireless Access Points to several hundred depending on the number of Neutron Series Switches in the network.

Configure and Manage Multiple Access Points and PoE+ Switches from the Convenience of Your Desktop

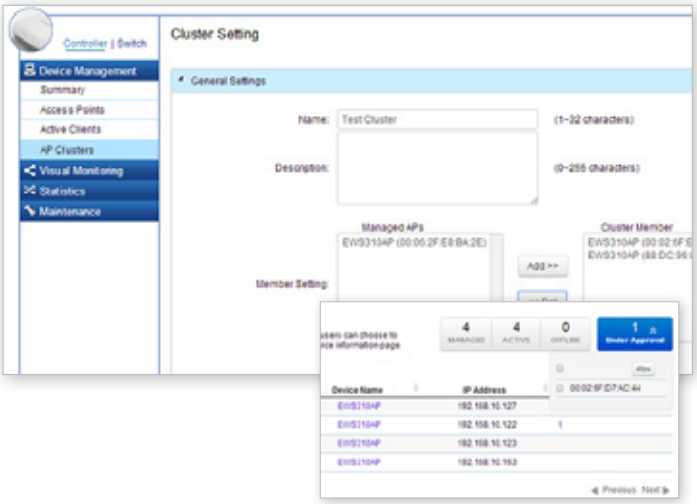
- Each Neutron Series WLAN Management Switch is a Wireless Network Controller.
- The Controller interface of the switch discovers and gives IT managers visibility to all of the Neutron Series Access Points and enables APs to be grouped into clusters with the same settings and policies.
- Each Neutron Switch also indicates when new Access Point firmware is available from the EnGenius server that can be upgraded to them with just one click.
- The embedded Controller interface lets IT managers monitor wireless network traffic per Access Point, optimize coverage, apply SSID-to-VLAN tagging and much more.

Manage Multiple Network Sites from One Central Location

- EnGenius **NAVIGATOR** (a free download for Windows OS computers) lets IT managers manage multiple sites no matter where you are - ideal for Managed Service Providers, VARs, and System Integrators.
- Instantly see, access, and manage every Neutron WLAN Management Switch and Access Point in your entire network - even multiple sites with EnGenius Navigator.
- Makes scaling each network incredibly easy.

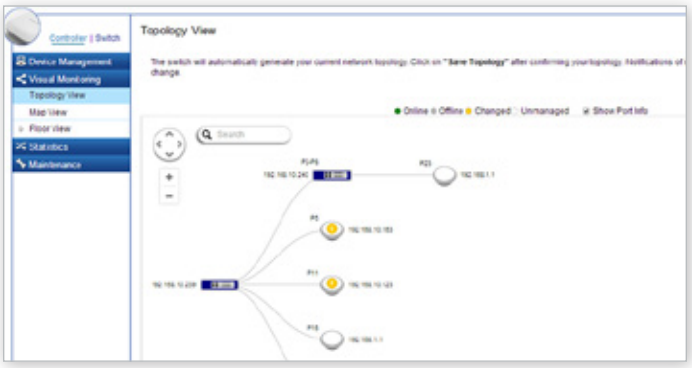
Auto AP Discover and Provisioning

EnGenius Neutrons Series APs can be auto discovered and provisioned. This means once your APs are connected to the Neutron Switch, it is automatically synced with your system. No more manual work to find an on your network to find and provision an Access Point.



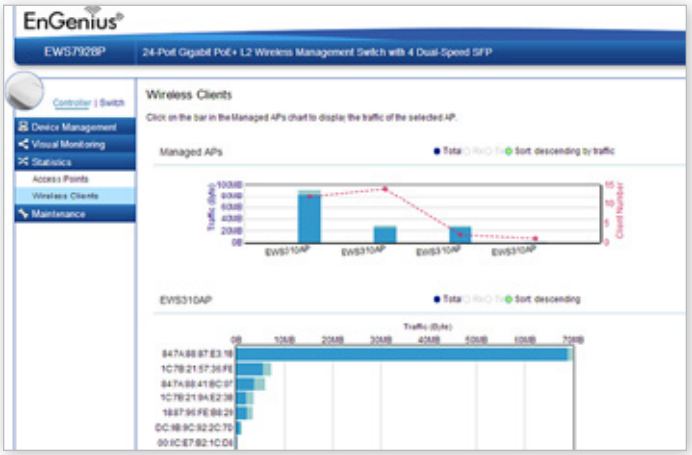
Wired and Wireless Network Management Reporting

Reporting gives IT managers, Managed Service Providers and other network administrators real time or historical visibility of the traffic being handled by the deployed Neutron Series Access Points or Controller Switches, so they can identify any breaches in security, or any abnormalities in the wireless network or any particular client device that may be using an inordinate amount of bandwidth— so they can modify device or cluster policies or make necessary changes to the network topologies to serve clients better.



Statistics View for Access Points or Wireless Clients

Gives IT managers, Managed Service Providers and other network administrators realtime or historical visibility of the traffic being handled by the deployed Neutron Series Access Points, so they can identify any breaches in security, or any abnormalities in the wireless network or any particular client device that may be using an inordinate amount of bandwidth — so they can modify device or cluster policies or make necessary changes to the network topologies to serve clients better.



With 802.11r, real time roaming is now available

No more dropped signals in the vicinity of your deployment. Ideal for:

- Warehouse workers scanning and capturing barcode information.
- Employees on Wi-Fi phone calls while walking to meetings on another part of a corporate campus.
- Healthcare professionals capturing patient information on mobile devices.
- Security personnel who need uninterrupted video surveillance on a mobile device when making their way to the location of an incident.

Comprehensive Network & Device Security

EnGenius has you covered when it comes to security. With new features like rogue AP detection and e-mail alert, attacks on your network infrastructure can be detected and network hacks can be avoided. Real time wireless invasion monitoring is enabled so network administrators have the upper hand and provide immediate action to avoid security threats.

Rapidly Expansive Not Enterprise Expensive

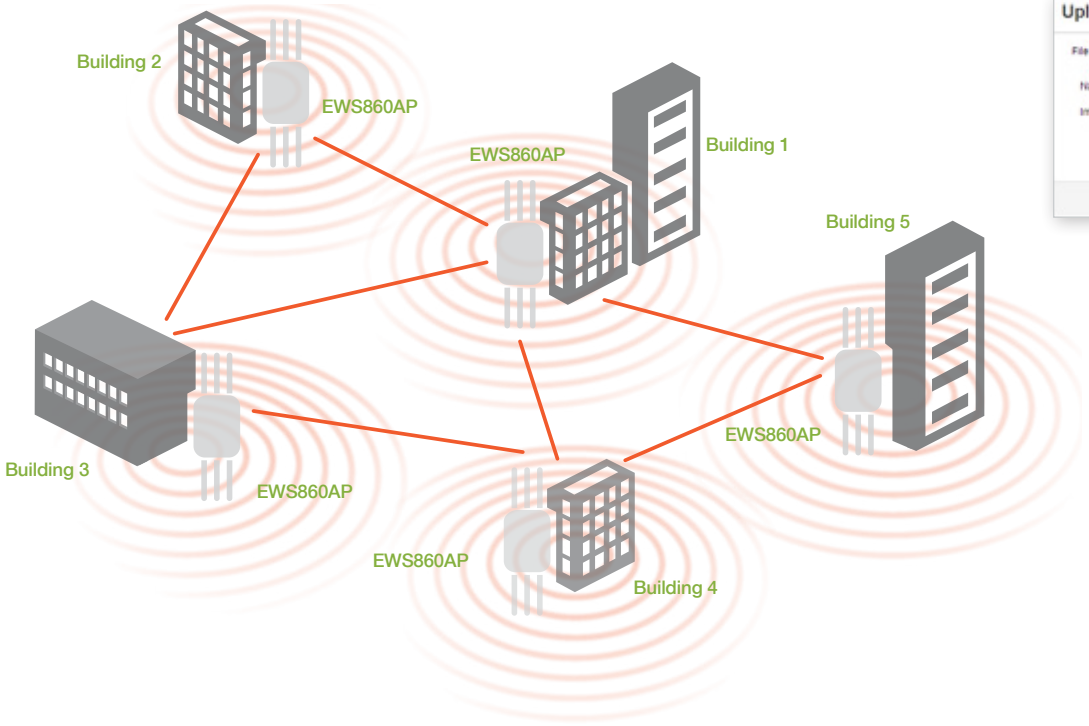
At price points that won't break the bank, EnGenius Neutron solution now has the capability to manage and control over 1,000 devices and 10,000 users. Neutron is easily scalable and easy to use compared to other expensive solutions out there. This EnGenius competitive price/performance alternative gives VARs and System Integrators the ability to provide a scalable and expansive network for much less than other brands while providing to their customers more service offerings and still keeping within a client's total budget.

Client Finger Printing

With Client Fingerprint now an option on EWS, even more detail about active clients such as the name of the device, the operating system being used and IP address of client devices can be displayed. This makes tracking and identifying active clients easier for network administrators.

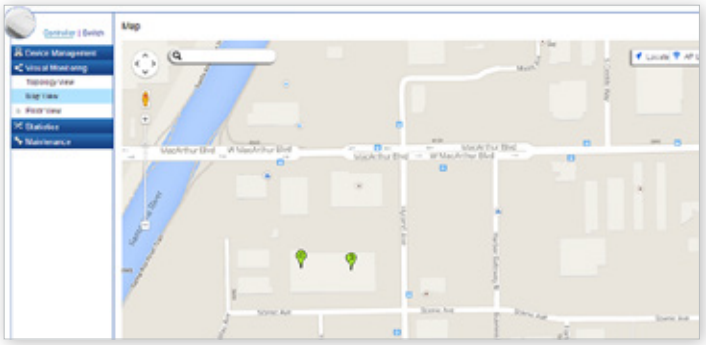
Mesh Mode (Available through future firmware upgrade)

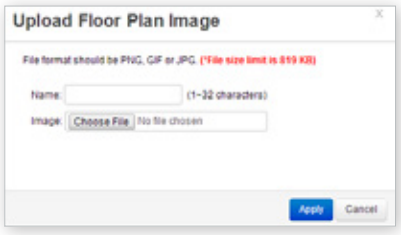
- Provides self-organizing, self-healing, redundant and robust connectivity for wireless clients in the network.
- Activating mesh can help to lower deployment costs when running Ethernet cabling is not practical.
- Access Points can be used as the central connection hub for station or clients that support IEEE 802.11 a/b/g/n network.



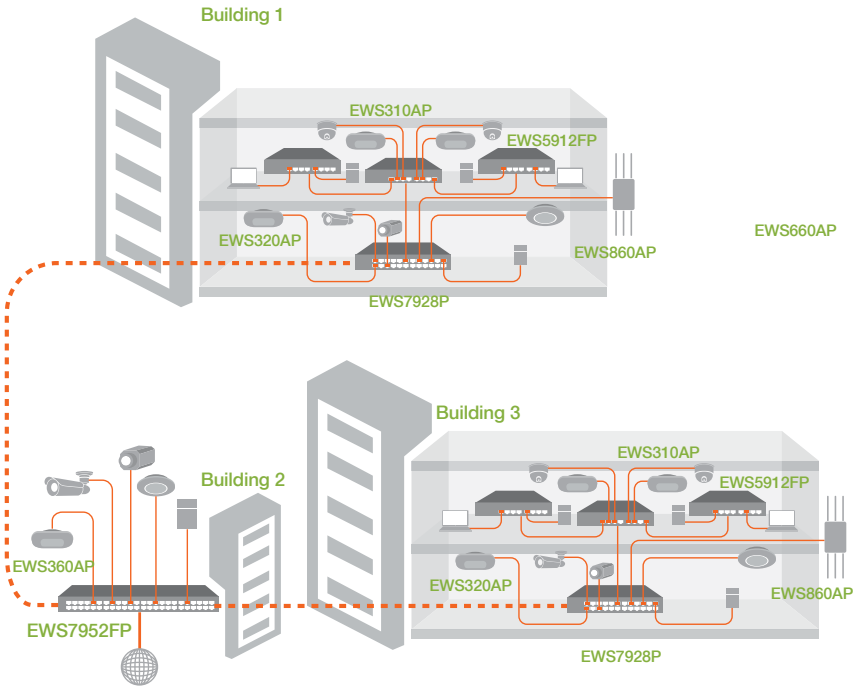
Easy-to-Find and Manage Specific Access Points with Floor Plan & Map Views

- The Controller interface includes two easy-to-use tools to view a Neutron WLAN Management deployment.
- Map View lets IT managers drag and drop a marker representing a Neutron Series Access Point registered to a Neutron Series Switch onto a building within a campus topology.
- In Floor Plan View an office or facility floor plan can be uploaded to the Controller interface so, that IT managers can drag and drop Access Point markers to their approximate locations.
- Then an AP can quickly be selected to monitor traffic, to review historical data, reconfigure its settings, upload its firmware and more.

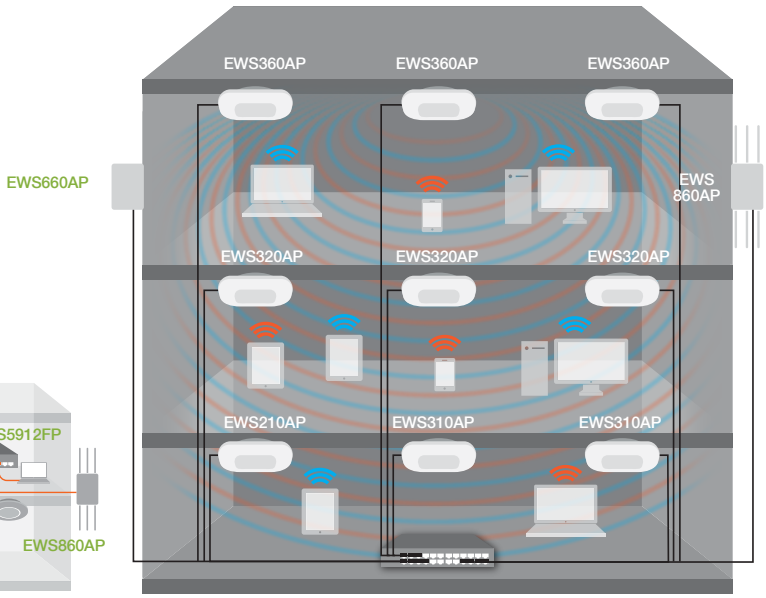




Multi-Building / Campus Scenario



Managed Access Points in Multi-Floor Building Scenario



Neutron Series WLAN Management Controller Switch
(Supports up to 20 or 50 APs)

2.4 GHz 5 GHz

GIG

You Have the Power. You're In Total Control

- Neutron Series Switches are Layer 2 Managed PoE+ Switches
- Ideal for Access Points and IP Surveillance Cameras that need to be positioned where power outlets may not be readily available.
- Available in 8-port, 24-port and 48-port models each Neutron Series Switch offers Gigabit Ethernet ports with IEEE802.3at/af PoE+ support, as well as SFP slots for longer fiber uplinks.
- Can deliver up to 30 watts per port over connected Ethernet cables to power devices like Wireless Access Points, IP Cameras, and VoIP (Voice-over-IP) Phone Systems.
- Since many PoE client devices don't require a full 30 watts of power, each Switch's management interface lets network administrators allocate just the amount of wattage they need per port to power specific PoE client devices to conserve as much of total PoE budget as possible.
- Adding more Neutron Series Switches to the network gives administrators the ability and versatility to substantially and rapidly scale their networks and to provide just the right Neutron Series Switch necessary to provide wireless connectivity or surveillance in a part of the network previously unserved.

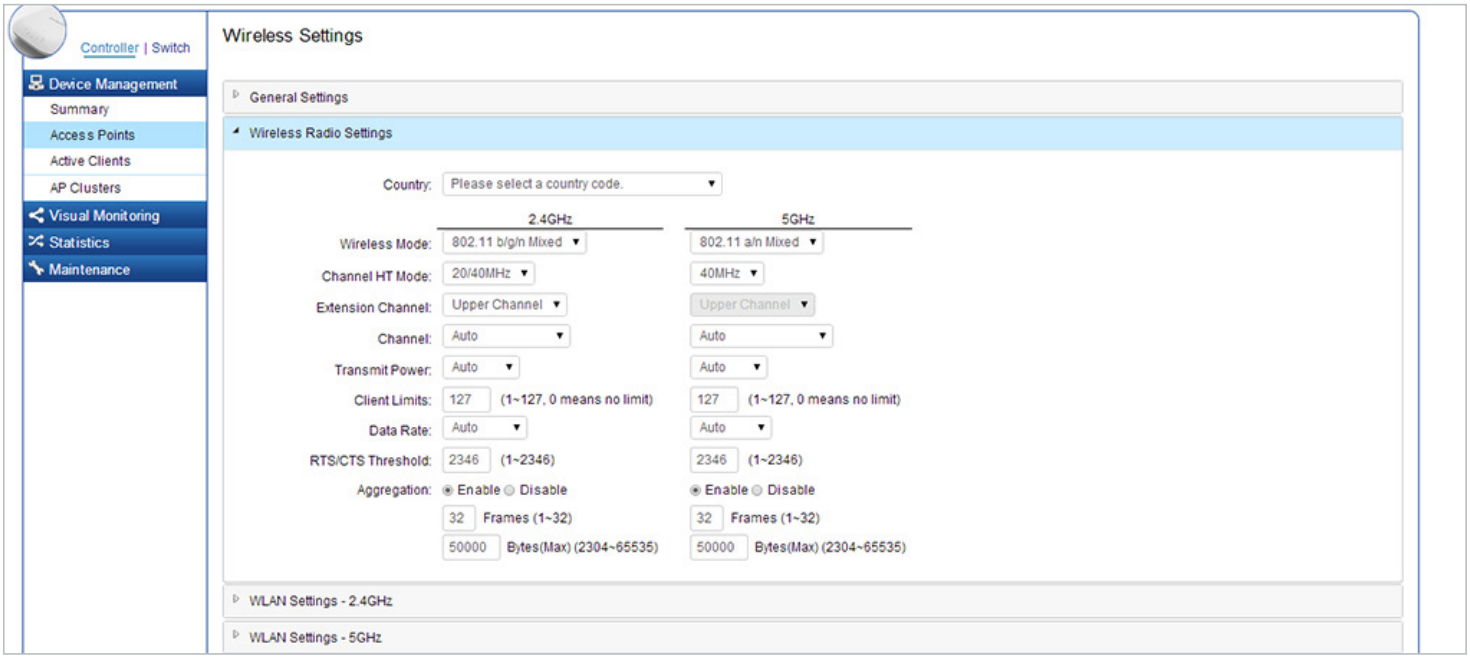
1-Click Access Point Firmware Updates

Each Neutron Switch's Controller interface also posts a list of newly released Access Point firmware versions by AP model that it discovers from the EnGenius server to upload to deployed Neutron APs. This helps to streamline the upgrade process and ensure that Neutron Access Points are always up-to-date.

How Band Steering Optimizes Network Traffic Load

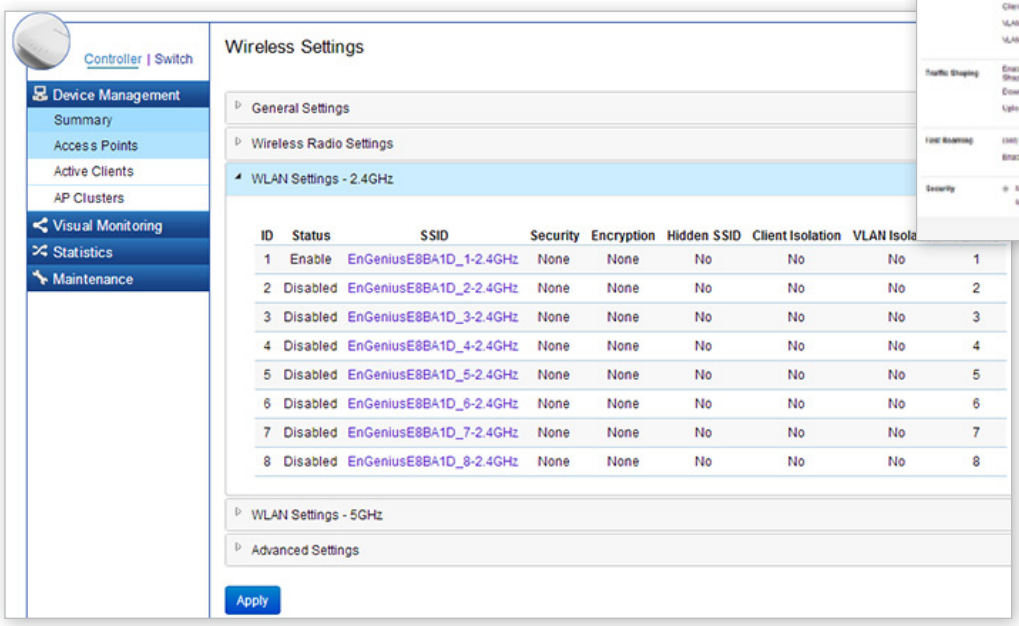
- When wireless networks experience excessive traffic, users may be inconvenienced by slower file transfers and frequent video buffering especially on the 2.4 GHz band.
- Neutron Series Access Points include a Band Steering option which when applied in the browser-based interface, automatically shifts the connection of Dual-Band client computers, tablets, smart phones and other devices to the 5 GHz band where there is less traffic and more available RF channels.
- This leaves Single-Band 2.4 GHz (802.11b/g/n) clients to operate in the 2.4 GHz band that with Band Steering activated becomes less congested.

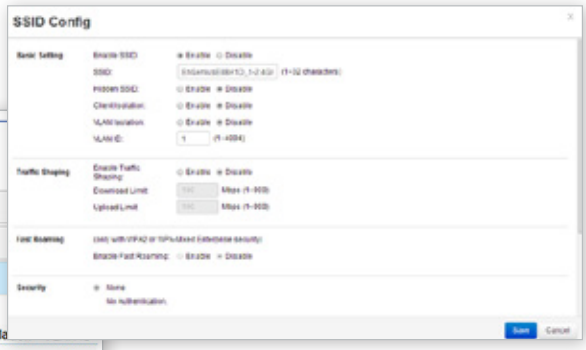
Access Point Radio Frequency Management



Establishing Separate SSIDs

Each Dual Band Neutron Series Access Point is capable of providing 8 separate SSIDs per frequency band and (16 total) each SSID can be tagged to an established VLAN on the network.



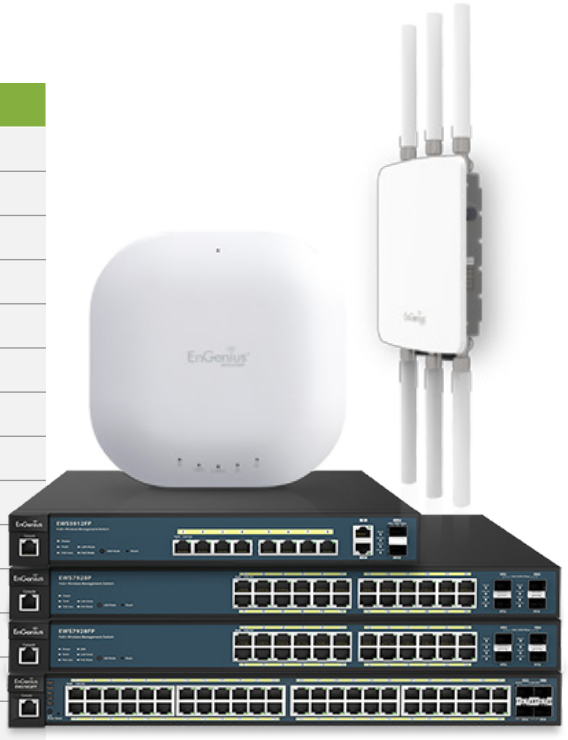


The Neutron Series WLAN Manamgement Solution Features

- Managed Gigabit PoE+ Capabilities
- Auto AP Discover and Provisioning
- Wired and Wireless Network Management and Reporting
- 802.11k/r Fast Roaming
- Rapidly Expansive Not Enterprise Expensive
- Client Fingerprinting
- Comprehensive Security
- Rogue AP Detection
- Floor Plan and Map Views
- Email Alert
- Mesh Mode (Available Soon)
- Monitor Your Business When You're Away
- Wireless Coverage Display
- Kick/Ban Clients
- Controller Event Log
- AP LED On/Off
- IP Cam Topology
- Day or Night Business Surveillance
- One-Click Firmware Upgrade

Complete Line of the Neutron Series Products

MODEL #	DESCRIPTION
EWS210AP	Single Band 2.4 GHz Indoor Managed Access Point
EWS300AP	Single Band Wireless 2 x 2:2 Mangaed Indoor Access Point
EWS310AP	Dual Band 11n 2 x 2:2 Indoor Managed Access Point
EWS320AP	Dual Band 11n 3 x 3:3 Indoor Managed Access Point
EWS360AP	11ac Dual Band 3 x 3:3 Indoor Managed Access Point
EWS500AP	Single Band 11n Wall Mount Wireless Managed Access Point
EWS510AP	Dual Band 11n Wall Mount Wireless Managed Access Point
EWS600AP	Single Band 11n 2 x 2:2 Outdoor Wireless Managed Access Point
EWS660AP	11ac Dual Band Outdoor Managed Access Point with Integrated Antennas
EWS860AP	11ac Dual Band 3x3:3 Outdoor Managed Access Point with External Antennas
EWS5912FP	8-Port PoE+ Controller Switch (130W), Managed up to 20 APs
EWS7928P	24-Port PoE+ Controller (185W), Managed up to 50 APs
EWS7928FP	24-Port PoE+ Controller (370W), Managed up to 50 APs
EWS7952FP	48-Port PoE+ Controller (740W), Managed up to 50 APs



EnGenius Wall Mount Access Points

EnGenius EWS500AP/EWS510AP is a wall mount access point designed to be installed onto any standard wall junction box, providing not only wireless, but also PoE and phone connectivity from a single device. By using the existing cabling system present in a building, the access point is ideal for offering in-room wired and wireless network access in hotel rooms, universities dormitories, classrooms and hospitality environments.

Compare

(Available in March 2015)

(Available in March 2015)

Indoor Managed Access Points	EWS510AP	EWS500AP
Standards	802.11a/b/g/n	802.11b/g/n
Frequency	2.4 & 5 GHz	2.4 GHz
2.4 GHz Max. Data Rate	300 Mbps	300 Mbps
5 GHz Max. Data Rate	300 Mbps	N/A
Radio Chains/Streams	2 x 2:2	2 x 2:2
RF Output Power (2.4 GHz)	TBD	TBD
RF Output Power (5 GHz)	TBD	N/A
Ethernet Ports	1 x Gigabit Port 4 x Fast Ethernet Ports	1 x Gigabit Port 4 x Fast Ethernet Ports
Power over Ethernet	802.3af/at	802.3af/at
Power Consumption (Peak)	TBD	TBD
Integrated Antenna	2.4 GHz: 2 x 2 dBi 5 GHz: 2 x 3 dBi	2 x 2 dBi
Chasis	Wall Mount	Wall Mount

Common Key Features

Managed AP Mode Features

- Access Point Mode / Mesh AP Mode* (with Controller Interface)
- Sectorized 3D Antenna (select models)
- Dynamic Channel Optimization
- Guest Network
- Band Steering
- Fast Handover
- Fast Roaming
- Supports connectivity of up to 100+ users**
- WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA-Enterprise, WPA2- Enterprise, WPA-Mixed Enterprise
- 16 SSIDs (8 SSIDS per frequency band)
- Wireless Traffic Shaping
- 802.1q VLAN
- QoS
- IPv6
- Spanning Tree Protocol (STP)
- SSID to VLAN Mapping
- SNMP
- CLI/SSH/Https
- VLAN Isolation
- Client Isolation
- Ping Test/Traceroute Test/Speed Test

Other Features for Stand-alone Mode

- Email Alert
- WiFi Scheduler
- Auto Reboot
- Date and Time Settings
- LED Control
- SYSLOG
- SNMP v1/v2c/v3
- Wireless MAC Filter
- AP Detection

* Available soon. Mesh AP mode is only available through configuration with a Neutron Series Switch.

** User capacity performance results may vary based on topology configuration, structural and architectural elements, environmental factors, type of data traffic, RF capabilities of client devices, distance, RF interference in the operating environment and other factors.

Compare

Indoor Managed Access Points				 (Available in March 2015)	
	EWS360AP	**EWS320AP**	**EWS310AP**	**EWS300AP**	**EWS210AP**
Standards	802.11a/b/g/n/ac	802.11a/b/g/n	802.11a/b/g/n	802.11b/g/n	802.11b/g/n
Frequency	2.4 & 5 GHz	2.4 & 5 GHz	2.4 & 5 GHz	2.4 GHz	2.4 GHz
2.4 GHz Max. Data Rate	450 Mbps	450 Mbps	300 Mbps	300 Mbps	300 Mbps
5 GHz Max. Data Rate	1300 Mbps	450 Mbps	300 Mbps	N/A	N/A
Radio Chains/Streams	3 x 3:3	3 x 3:3	2 x 2:2	2 x 2:2	2 x 2:2
RF Output Power (2.4 GHz)	28 dBm	28 dBm	29 dBm	29 dBm	29 dBm
RF Output Power (5 GHz)	28 dBm	28 dBm	26 dBm	N/A	N/A
Ethernet Ports	1 x Gigabit Port (PoE+)	1 x Gigabit Port (PoE+)	1 x Gigabit Port (PoE+)	1 x Gigabit Port (PoE+)	1 x Gigabit Port (PoE+)
Power over Ethernet	802.3at	802.3at	802.3af/at	802.3af/at	802.3af/at
Power Consumption (Peak)	22 W	22 W	15.6 W	9 W	9 W
Integrated Antenna	6 x 5 dBi	6 x 5 dBi	4 x 5 dBi	2 x 5 dBi	2 x 5 dBi

Common Key Features

Managed AP Mode Features

- Access Point Mode / Mesh AP Mode* (with Controller Interface)
- Sectorized 3D Antenna (select models)
- Dynamic Channel Optimization
- Guest Network
- Band Steering
- Fast Handover
- Fast Roaming
- Supports connectivity of up to 100+ users**
- WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA-Enterprise, WPA2- Enterprise, WPA-Mixed Enterprise
- 16 SSIDs (8 SSIDS per frequency band)
- Wireless Traffic Shaping
- 802.1q VLAN
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- IPv6
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Other Features for Stand-alone Mode

- Email Alert
- WiFi Scheduler
- Auto Reboot
- Date and Time Settings
- LED Control
- SYSLOG
- SNMP v1/v2c/v3
- Wireless MAC Filter
- AP Detection

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Compare

Outdoor Managed Access Points

(Available in March 2015)

	EWS860AP	EWS660AP	EWS600AP
Standards	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11b/g/n
Frequency	2.4 & 5 GHz	2.4 & 5 GHz	2.4 GHz
Data Rates	Up to 450 Mbps (2.4 GHz) Up to 1300 Mbps (5 GHz)	Up to 450 Mbps (2.4 GHz) Up to 1300 Mbps (5 GHz)	Up to 300 Mbps (2.4 GHz)
Radio Chains/Streams	3 x 3:3	3 x 3:3	2 x 2:2
RF Output Power	29 dBm	29 dBm	26 dBm
Ingress Protection Rating	68	55	55
Primary Ethernet Port (PoE)	1 x Gigabit Port	1 x Gigabit Port	1 x Fast Ethernet Port
Secondary Ethernet Port	1 x Gigabit Port (PoE Output)	1 x Gigabit Port	1 x Fast Ethernet Port
PoE Compliant	802.3at (PoE+)	802.3at (PoE+)	802.3af
Power Consumption (Peak)	34 W	23 W	TBD
Integrated Antennas	N/A	6 x 5 dBi	N/A
External Antennas	2.4 GHz: 3 x 5 dBi 5 GHz: 3 x 7 dBi	N/A	2.4 GHz: 2 x 5 dBi

Common Key Features

Managed AP Mode Features

- Access Point Mode / Mesh AP Mode* (with Controller Interface)
- Dynamic Channel Optimization
- Guest Network
- Band Steering
- Fast Handover
- Fast Roaming
- Supports connectivity of up to 100+ users**
- WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA-Enterprise, WPA2- Enterprise, WPA-Mixed Enterprise
- 16 SSIDs (8 SSIDS per frequency band)
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- CLI/SSH/Https
- VLAN Isolation
- Client Isolation
- Ping Test/Traceroute Test/Speed Test

Other Features for Stand-alone Mode

- Email Alert
- WiFi Scheduler
- Auto Reboot
- Date and Time Settings
- LED Control
- SYSLOG
- SNMP v1/v2c/v3
- Wireless MAC Filter
- AP Detection

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Compare

Controller Switches				
	EWS7952FP	**EWS7928FP**	**EWS7928P**	**EWS5912FP**
Supported EWS AP	50	50	50	20
10/100/1000 BASE-T, PoE+	48	24	24	8
Total PoE Budget	740W	370W (Up to 740W with RPS)	185W	130W
PoE+ Capable Port	1~48	1~24	1~24	1~8
Rackmount	19" 1U	19" 1U	19" 1U	13" 1U
SFP Ports	4	4	4	2
Auto Uplink Gigabit Ports	-	-	-	●
RJ45 Console Port	●	●	●	●
Annual License Fees Per AP	$0	$0	$0	$0

Common Key Features

L2 Features

- VLAN Group
- Voice VLAN
- 802.3ad Link Aggregation
- 802.1D Spanning Tree (STP)
- 802.1w Rapid Spanning Tree (RSTP)
- 802.1s Multiple Spanning Tree (MSTP)
- Port Mirroring
- Port Trunking
- IGMP Snooping v1/v2/v3
- IGMP Fast Leave
- Power Class Configuration
- MLD Snooping
- Bandwidth Control
- IEEE 802.1X Guest VLAN
- CoS based on 802.1p Priority
- CoS based on Physical Port
- CoS based on TOS
- CoS based on DSCP
- 802.1X Port-based Access Control
- Port Security
- Storm Control
- Port Isolation
- Attack Prevention
- Access Control List (ACL)
- SNMP v1/v2c/v3
- Power Feeding with Priority
- User Defined Power Limit
- Telnet Server
- IEEE802.3az Energy Efficient Ethernet
- BootP/DHCP Client
- Web-based Support
- SNMP v1/v2/v3 Support
- TFTP Client
- TFTP Upgrade
- Command Line Interface (CLI)
- SNTP
- Web UI, Supports Non IE Browser (Chrome, Firefox, Safari)
- SYSLOG
- Cable Diagnostics
- MIB Support (RFC1213, RFC1493, RFC1757, RFC2674)
- RMONv1
- SSH Server

WLAN Management Features

- Access Point Auto Discovery and Provisioning
- Access Point Auto IP-Assignment
- Access Point Cluster Management
- Mesh Network*
- Visual Topology View
- Floor Plan View
- Map View
- Access Point Status Monitoring
- Wireless Client Monitoring
- Wireless Traffic & Usage Statistics
- Real-time Throughput Monitoring
- Bulk Firmware Upgrade Capability
- Remote Access Point Rebooting
- Fast Roaming
- Band Steering
- Traffic Shaping
- Intelligent Diagnostics
- Access Point Device Name Editing
- Access Point Radio Settings
- Fast Handover
- Access Point Client Limiting
- Wireless Security (WEP, WPA/WPA2 Enterprise, WPA/WPA2 PSK)
- VLANs for Access Point- Multiple SSIDs
- Guest Network
- Secure Control Messaging
- SSL Certificate
- Local MAC Address Database
- Remote MAC Address Database (RADIUS)
- Unified Configuration Import / Export

* Available soon. Mesh AP mode is only available through configuration with a Neutron Series Switch.

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