Expanded Network **Solution**
The Electr**on** Series

The EnGenius Electron Series is an expansive line of mix-and-match business-class networking products that, when used together, can provide instant network expansion and connectivity to start-up companies, existing small businesses or provide additional robust and reliable connectivity on the edge of larger enterprise networks. The solution also enhances the productivity of employees in work environments by enabling them to stay connected to colleagues, networked company resources and a company's Internet connection, provide connectivity to students and faculty in campus network deployments or to a hotel or resort's services and Internet for guests and staff throughout their properties — all at a significantly lower total cost of ownership than most enterprise brands.

This solution series is comprised of Managed PoE (Power-over-Ethernet) and PoE+ 8-, 24- and 48-Port Gigabit Switches and high-powered, high-speed, high-performing Indoor and Outdoor Wireless Access Points and Client Bridges in single or dual-band 802.11n and 802.11ac models, many of which can be managed and monitored using the EnGenius EZ Controller™ application for Windows, Mac OS, and Linux.

FULL OFFERING FROM ENGENIUS

DIY

No need to be a tech guru to install and deploy a wireless network. EnGenius DIY solutions which consist of ceiling-mount **EAP Series**, and desktop access points/ client bridges **ECB Series** make it easy and affordable for the non-tech guy to install. Choose from single band to dual band solutions to meet your everyday needs.

All Purpose

EnGenius All Purpose Access Points, such as the **ENS Series**, are suitable for both indoor and outdoor deployment scenarios. Fit with weather proof housings, these cost effective long range solutions can be installed anywhere.

WISP

EnStations are high-performance, competitively priced wireless products that can be used in Client Bridge mode and pointed to a Wireless Internet Service Provider's base station making them ideal CPE that can generate recurring revenue for Internet providers.

Industrial

Built with industrial grade material, the **ENH Series** are built with waterproof housing for harsh outdoor environments. From deployments to outdoor stadiums to RV parks to universities, these industrial grade access points have proven to last against the elements.

Power Source

Power all your indoor or outdoor access points with one power source. The **EGS Series** of PoE/ PoE+ L2 switches provide you with enough power and ports to connect anything from small businesses to enterprise level business.
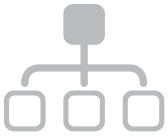
Managed PoE/PoE+ Gigabit Switches

The Electron Series Switches are available in Smart and Layer 2 Managed PoE+ models ideal for providing power and data connectivity to office VoIP phone systems or 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 Electron Series Switch offers Gigabit Ethernet ports for optimal network throughput.

Some Switch models are IEEE 802.3at/af PoE+ rated to supply additional power to some PoE client devices that require more wattage. Many of the Switches also include uplink ports for Gigabit or fiber connections so the Switches can be deployed at the edge of an existing network or used to provide network connectivity to remote offices or in the case of school campuses remote classrooms.

Many of Electron Series PoE Switches 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 gives IT managers the ability to allocate just the amount of wattage they need per port to power specific PoE client devices to conserve as much of their Electron Series Switch's total PoE budget as possible.

Power Source

Electron Series PoE/PoE+ Gigabit Switches give IT managers settings and tools to monitor traffic flow, load and per port connectivity and usage, as well as to manage or quickly adjust the settings or performance of their wired network in real time or reconfigure authorized access to the network on an individual user level.

Gigabit Speeds for a Variety of Needs

All Electron Series IEEE802.11a/b/g/n or 802.11ac Access Points feature Gigabit ports for connectivity to the network to optimize throughput of bandwidth-intensive or sensitive applications like video streaming and video conferencing, telephony, or large file transfers.

Multiple SSID-to-VLAN tagging

Each Dual Band Electron 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.

Leaders in Long Range Wi-Fi

The reputation that EnGenius Electron Series Access Points enjoy is attributable to their high (dBm) transmit power, their strong receive sensitivity and the engineering, tuning and overall design that goes into each of the AP's antenna array. It's that technology expertise when applied that pushes wireless signals farther while at the same time delivering more enhanced receive sensitivity to connect with remote client devices than more expensive enterprise-class devices.

Internal antennas in Electron Series ceiling-mount Access Points can penetrate up to three floors in multiple-story buildings to keep users connected which makes for more cost-effective deployments. Electron Series Outdoor Access/Points with internal directional antennas in optimal conditions can push wireless signals in excess of two miles. And for those IT managers or users who need to push signals even farther, many Electron Series Outdoor Access Points and Indoor desktop Access Point/Client Bridges feature detachable antennas that can be replaced with even higher-gain third-party antennas.

Comprehensive Security

The Electron Series supports robust security features such as SSL Certificate and 802.1x. In addition, the Electron series Switches also support a complete lineup of advanced Layer 2 features; including secure control connections between Switches and Access Points, Port mirroring, STP/RSTP/MSTP, Link Aggregation Control Protocol (LACP), SNMP v1/v2/v3, RMON, and ACL for extensive network security and more. To protect internal electronics, the Electron Series Outdoor Access Points have been mounted in an IP65 to IP68-rated enclosures, one of the highest waterproof and dustproof ratings available, designed to withstand extremely harsh environmental conditions. The Electron Series Indoor Access Points come housed in discreet white housings to blend in with any environment, and all Electron Series Switches come with the ability to be either desk or rack mounted.

Multiple Mode AP/Client Bridges for Virtually any type of Network

Many of the Access Points in the Electron Series can be configured as standard Access Points or Client Bridges. In a point-to-multi-point scenario an AP with omni-directional antennas can be configured as the main access point connected to a wired network while APs with internal high-gain directional antennas can point back to it. This gives IT managers the ability to leverage the longer range that the APs with internal directional antennas have because of their more focused signal beam. Many of the Electron Series dual-band Access Points can be configured as a standard AP in one frequency (typically the 2.4 GHz band) and as a WDS bridge (typically in the 5 GHz band) at the same time. This is ideal for a campus scenario where client devices connect to a company or school network and its Internet connection on the 2.4 GHz band, while the 5 GHz band serves as a backhaul to push the traffic back to the main AP. This eliminates the need to trench for cabling between the main network and the more remote dual-band APs.

Durable and Weatherproof Designs

A lot of thought and care goes into the design and durability of Electron Access Point housings. Electron Series ceiling mount Access Points feature award-winning housing designs that blend with other infrastructure appliances like smoke detectors or alarms mounted on ceilings. These stealthy, unobtrusive designs actually minimize and eliminate theft of the Access Point in hospitality, school and other deployments. Electron Series Outdoor Access Point housings feature IP65 to IP68 waterproof ratings and routinely brave the elements and whatever Mother Nature throws at them from torrential rain, harsh sleet, freezing weather, snow, dust or intense and prolonged desert heat. Connectors for Ethernet cables on Electron Series Outdoor APs are also shielded from moisture to prevent electrical shortage resulting in reliable high-powered, long-range performance throughout the long-life of the product.
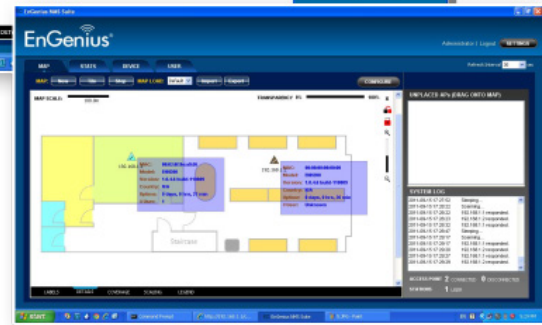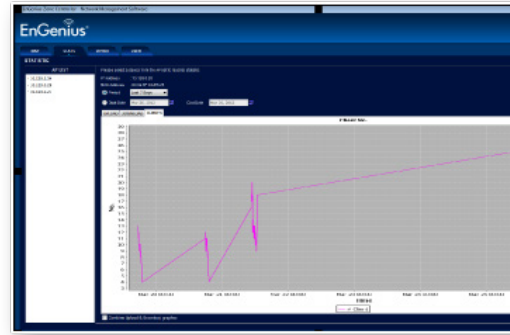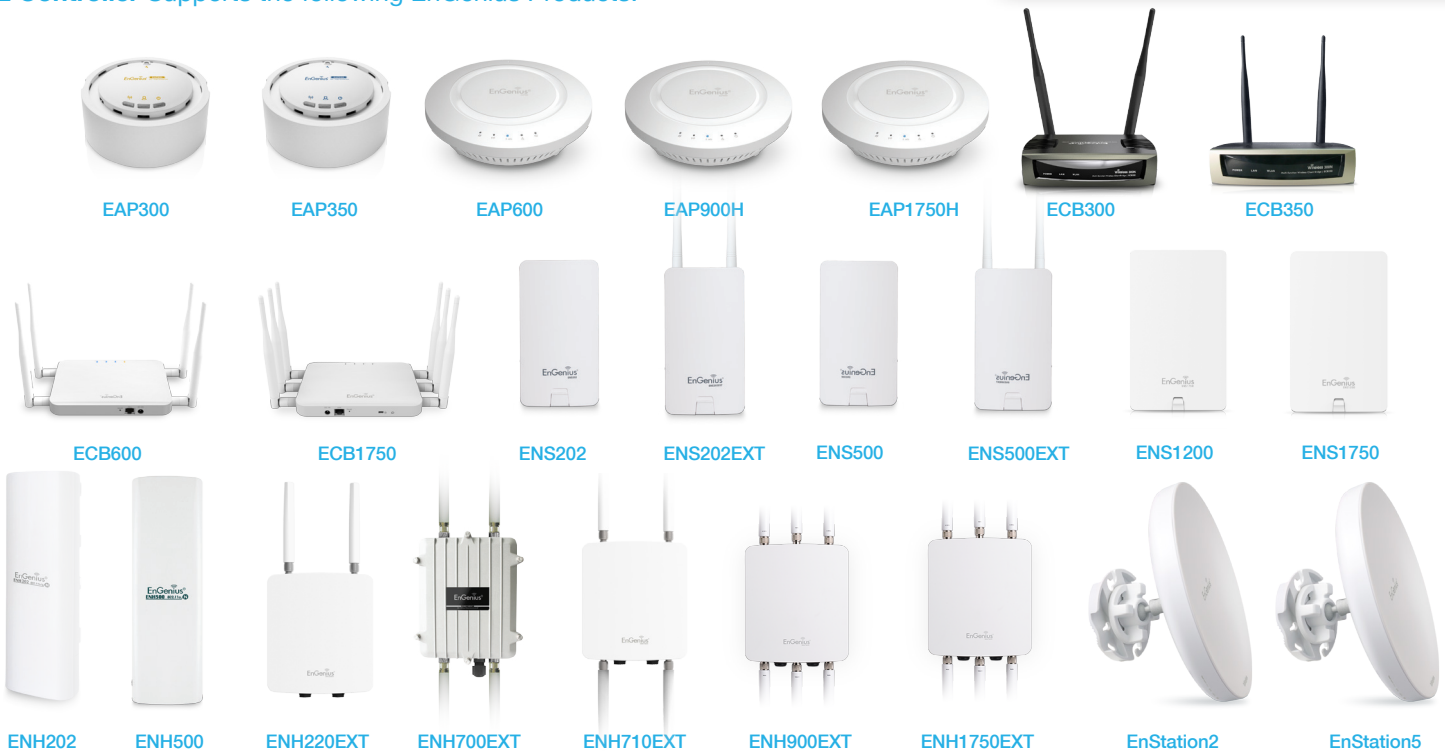
EZ CONTROLLER

EZ Controller

EZ Controller Access Point Management software provides a robust suite of tools for IT managers, installers and network administrators who deploy, manage and maintain wireless networks. With EZ Controller, EnGenius Wireless Indoor and Outdoor Access Points and Client Bridges can be configured, controlled and monitored from one central location.

EZ Controller is a valuable tool for organizations that deploy multiple EnGenius long-range, versatile wireless networking products into complex architectural or environmentally-challenging networking environments.

- Easy-to-use User Interface
- Optimize network performance
- Eliminate downtime
- See real-time wireless coverage
- Monitor and control each asset
- Monitor traffic load by AP, MAC or IP address
- Sequential firmware upgrades to deployed APs/Bridges
- Import and archive floorplan maps for radio coverage plotting
- Label assets by MAC or IP address or user-defined aliases
- Realtime AP statistics

EZ Controller Supports the following EnGenius Products:

EAP300	EAP350	EAP600	EAP900H	EAP1750H	ECB300	ECB350

ECB600	ECB1750	ENS202	ENS202EXT	ENS500	ENS500EXT	ENS1200	ENS1750

ENH202	ENH500	ENH220EXT	ENH700EXT	ENH710EXT	ENH900EXT	ENH1750EXT	EnStation2	EnStation5

Minimum System Requirements

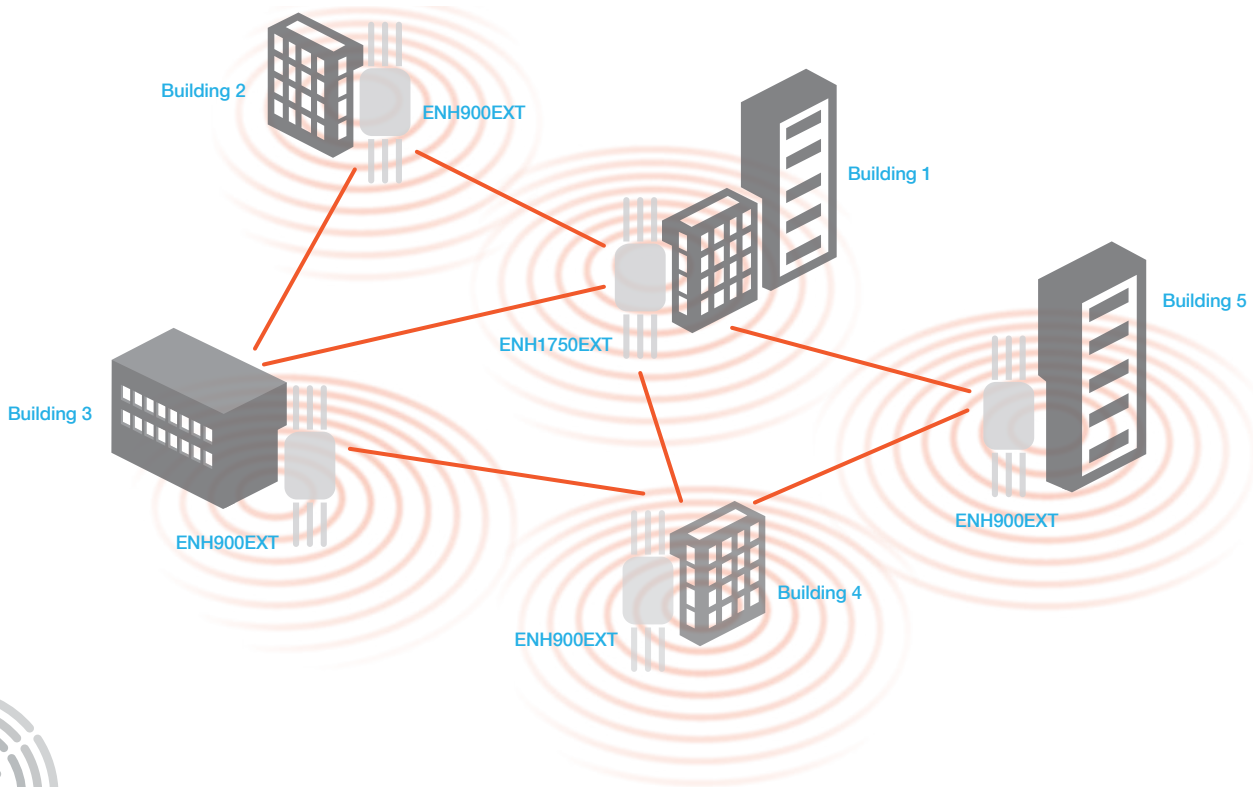Windows: XP SP3 / Vista SP1 & SP2 / 7 SP1 / 8 / Pentium Dual-Core 3.20 GHz / 2 GB RAM / 400 MB HD space

Mac: OS X 10.6 / 10.7 / 10.8 / 10.9 Intel x86 Processor / 2 GB RAM / 400 MB HD space

Linux: Ubuntu 11.04 Pentium Dual-Core 3.2 GHz / 2 GB RAM / 400 MB HD space

Mesh Mode

Electron Series Wireless Access Points support mesh networking in the 2.4 GHz frequency band to provide self-organizing, self-healing, redundant and robust connectivity for wireless clients in the network.

In some scenarios activating mesh can help to lower deployment costs when running Ethernet cabling is not practical.

Building 2

ENH900EXT

Building 1

ENH1750EXT

Building 5

Building 3

ENH900EXT

ENH900EXT

ENH900EXT

Building 4

Roaming – Because Staying Connected Can Be A Moving Experience

Some Electron Series Access Points also support Roaming for clients authenticated to a RADIUS server. This means that employees can be constantly connected to the network – whether they are 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, or security personnel who need uninterrupted video surveillance on a mobile device when they are alerted to and making their way to the location of an incident.
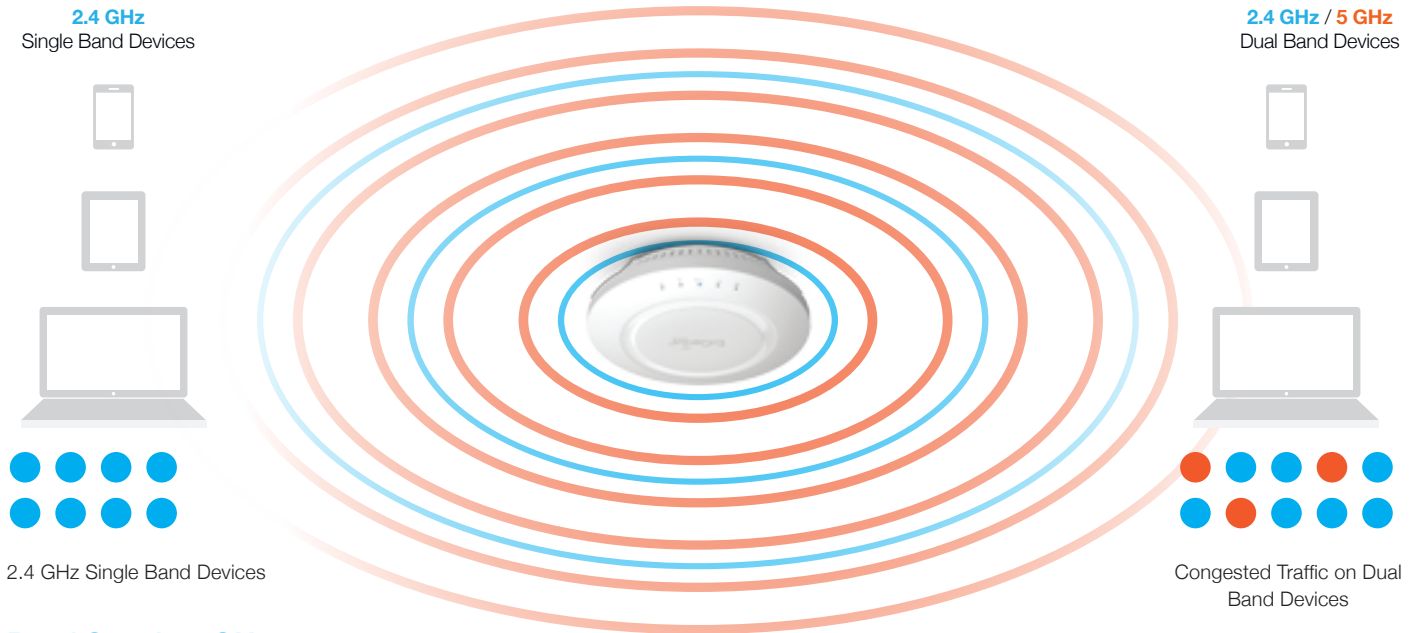
Fast Roaming
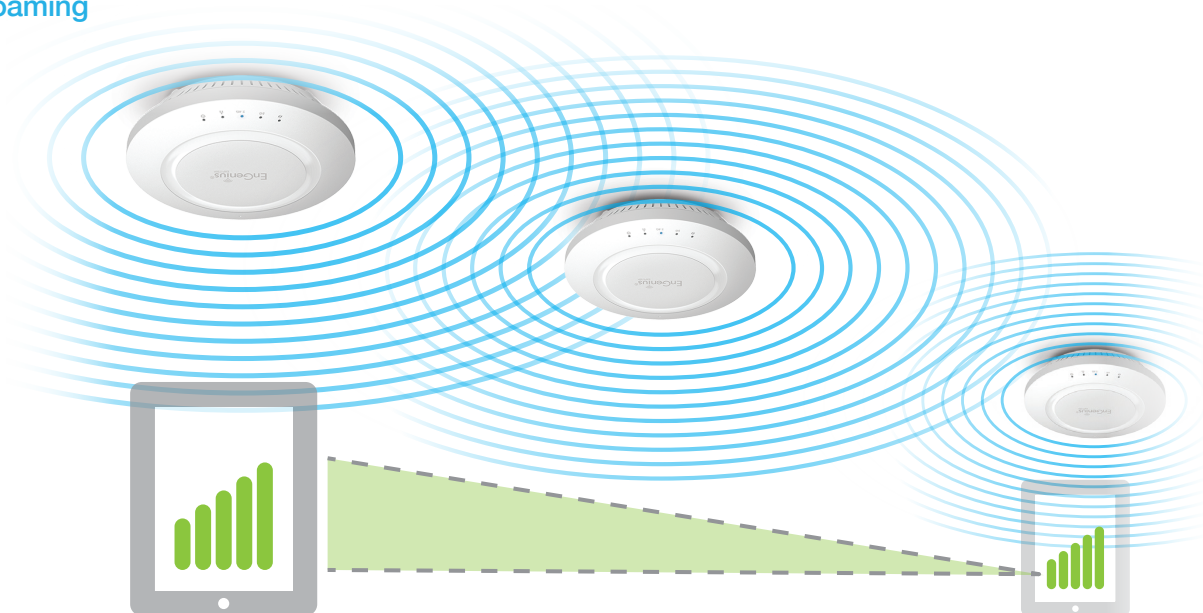
Band Steering (Available on Dual Band Products)

How Band Steering Works and Its Benefit

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. Several of the Electron 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.

Band Steering: OFF

2.4 GHz
Single Band Devices

2.4 GHz / **5 GHz**
Dual Band Devices

2.4 GHz Single Band Devices

Congested Traffic on Dual Band Devices

Band Steering: ON

2.4 GHz Single Band Devices

Shifts Dual Band Devices to 5 GHz Band for Smooth Connection
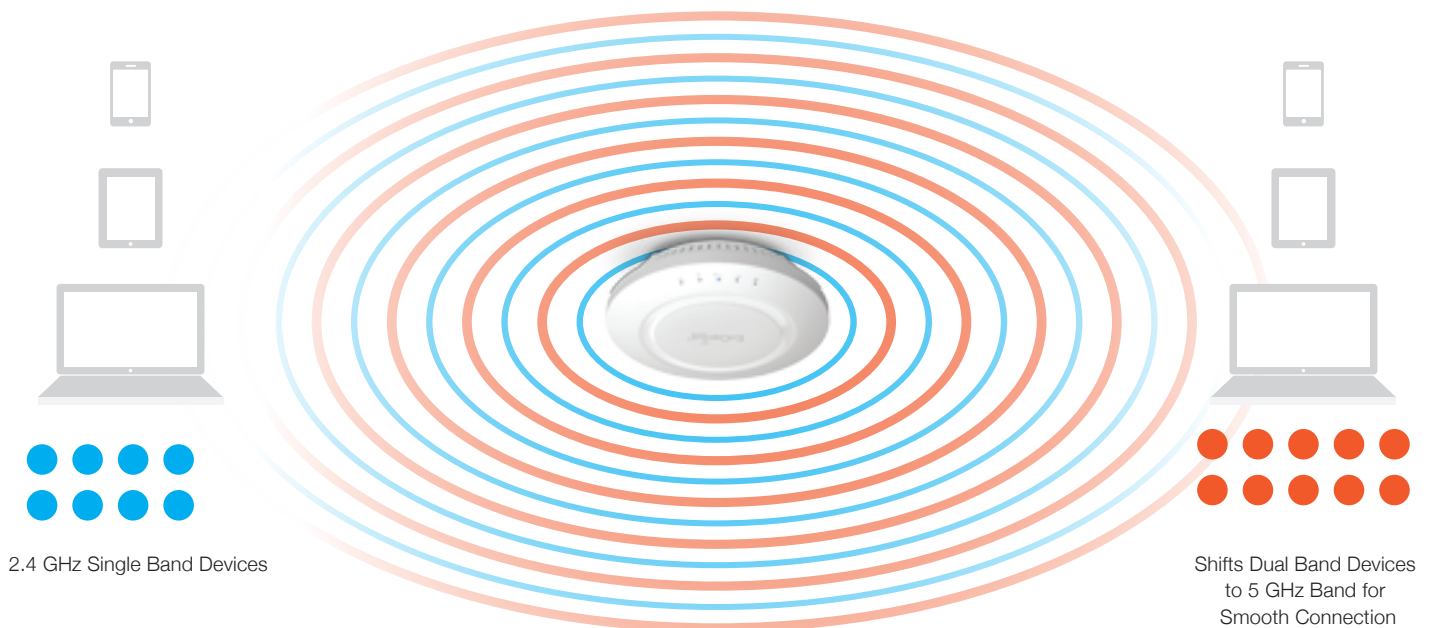
● **2.4 GHz Band**　　● **5 GHz Band**

Point-to-Point Wireless Bridging

A wireless point-to-point bridge is employed when it's more practical or economical to extend an existing network wirelessly than laying and often trenching Ethernet or Fiber cabling. Both the ENS and ENH families of Access Points and Client Bridges in the Electron Series enable IT managers, network administrators or users to configure the devices in Client Bridge or WDS Bridge mode. In a wireless bridging scenario, one of the ENS or ENH Access Points should be configured in AP mode while the other ENS or ENH Access Point or Bridge should be configured as a Client Bridge or WDS Bridge and positioned within the wireless range of the Access Point.

If the ENS or ENH product has an internal directional antenna (like the ENS200, ENS202, ENS500, ENH202 or ENH500) then distance between the Access Point and the Client Bridge can be increased since the device's directional antenna has a more focused signal array for longer point-to-point distance. Using Access Points/ Client Bridges each with internal directional antennas, like the products mentioned above (one configured in AP mode and the other in Bridge mode) enables placement of the two devices even farther apart from each other. Depending on the outdoor ENS or ENH product, the surrounding landscape, interference from nearby wireless signals and other environmental factors, Electron Series Outdoor Client Bridges can connect to Access Points at distances of hundreds of feet or in excess of two miles.
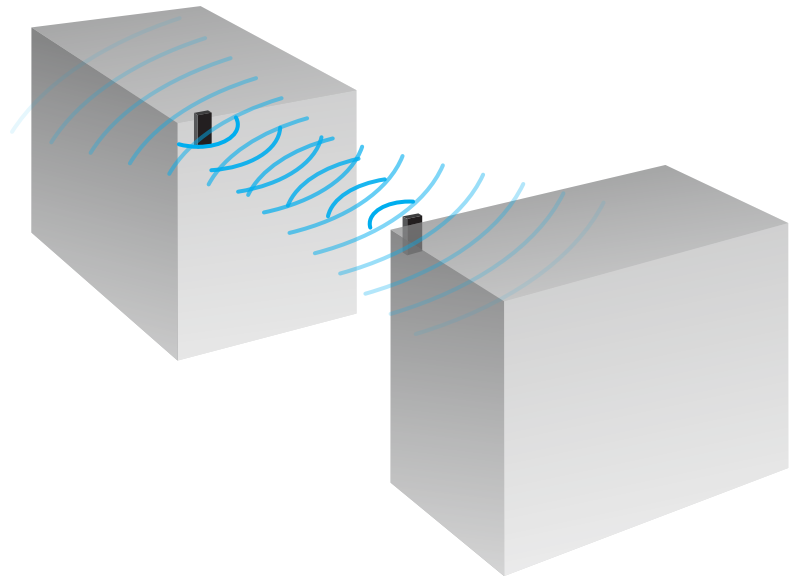
Point-to-Multi-Point Wireless Networking

Point-to-Multi-Point wireless networking scenarios are often used in campus deployments to connect to networks in other buildings; or in deployments using multiple dual-band Access Points for corporate and school campuses, campgrounds or RV parks that provide several wireless cells that users can connect to with their provisioned or BYOD devices (laptops, tablets or smartphones).

In corporate campus building-to-building scenarios there is typically a designated central Access Point that is tethered to the main network. In school or university deployments this could be an administration building or library. Around the central Access Point are other Access Points each configured in Client Bridge or WDS Bridge mode.

With dual-band Access Points, the wireless Bridge established between the central AP and the surrounding Bridges can be configured for one frequency band. The 5 GHz frequency band is often used because it has more channel options and avoids the interference from more commonly used 2.4 GHz devices and networks. Each Client Bridge in this scenario is in turn connected to an Ethernet or PoE Switch that also provides network access and connectivity to other devices like computers, printers, servers, NAS (network attached storage), and other Ethernet-enabled peripherals.
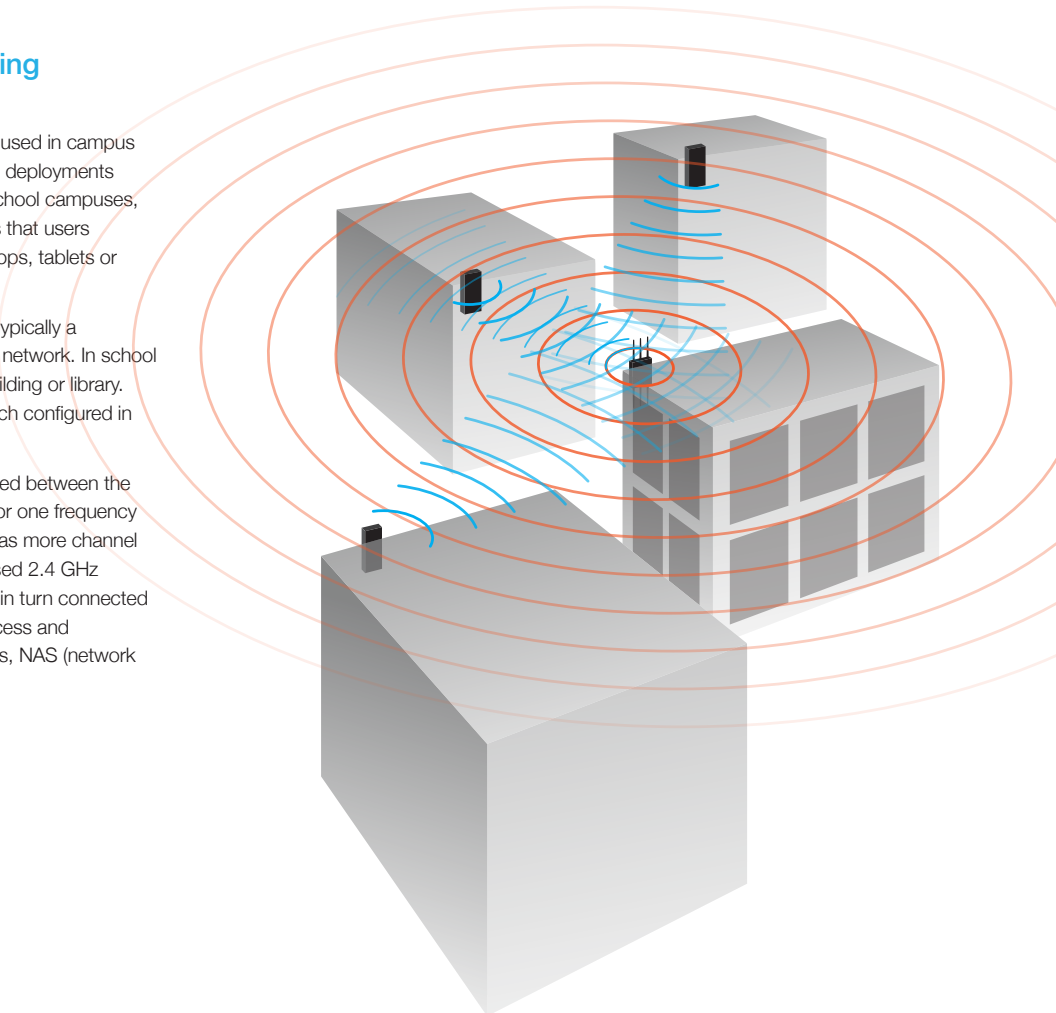
Expanded Network Solution | DIY

Electron Series DIY Ceiling-mount Access Points

Compare
EAP Series

	EAP1750H	EAP900H	EAP600	EAP350	EAP300
Frequency	802.11 a/b/g/n/ac	802.11 a/b/g/n	802.11 a/b/g/n	802.11 b/g/n	802.11 b/g/n
Maximum Data Speed	450 + 1300 Mbps	450 + 450 Mbps	300 + 300 Mbps	300 Mbps	300 Mbps
LAN Interface	10/100/1000	10/100/1000	10/100/1000	10/100/1000	10/100
Encryption	WPA2 WPA WEP	WPA2 WPA WEP	WPA2 WPA WEP	WPA2 WPA WEP	WPA2 WPA WEP
SDRAM	128 MB	128 MB	64 MB	32 MB	32 MB
Flash	16 MB	16 MB	16 MB	4 MB	4 MB
RF Power (dBm)	2.4 GHz: 28 dBm 5 GHz: 28 dBm	2.4 GHz: 28 dBm 5 GHz: 28 dBm	2.4 GHz: 29 dBm 5 GHz: 26 dBm	29 dBm	29 dBm
Receive Sensitivity	≤ -94 dBm	≤ -94 dBm	≤ -94 dBm	≤ -94 dBm	≤ -92 dBm
Antenna	6x 5 dBi Sectorized 3D	6x 5 dBi Sectorized 3D	4x 5 dBi Omni Embedded	2x 5 dBi Omni Embedded	2x 5 dBi Omni Embedded
Transmit Power (mW)	630 mW/630 mW	630 mW/630 mW	800 mW/400 mW	800 mW	800 mW
Operation Modes	Access Point WDS AP WDS Bridge	Access Point WDS AP WDS Bridge	Access Point WDS AP WDS Bridge Repeater	Access Point WDS AP WDS Bridge Repeater	Access Point WDS AP WDS Bridge Repeater
Number of SSID	16 (8 per radio)	16 (8 per radio)	16 (8 per radio)	8	4
802.1q zVLAN	●	●	●	●	●
QoS	●	●	●	●	●
AP Management Software (EZC)	●	●	●	●	●
DC Power	●	●	●	●	●
Power Over Ethernet (PoE)	802.3at	802.3at	802.3at/af	802.3af	802.3af
User Support	Up to 50 on each radio	Up to 50 on each radio	Up to 50 on each radio	Up to 50	Up to 32

Expanded Network Solution | DIY

Electron Series **DIY Desktop Access Points**

Compare
ECB Series

	ECB1750	ECB600	ECB350	ECB300
Frequency	802.11 a/b/g/n/ac	802.11 a/b/g/n	802.11 b/g/n	802.11 b/g/n
Maximum Data Speed	450+1300 Mbps	300+300 Mbps	300 Mbps	300 Mbps
LAN Interface	10/100/1000	10/100/1000	10/100/1000	10/100
Encryption	WPA2 WPA WEP	WPA2 WPA WEP	WPA2 WPA WEP	WPA2 WPA WEP
SDRAM	128 MB	64 MB	32 MB	32 MB
Flash	16 MB	16 MB	8 MB	4 MB
RF Power (dBm)	2.4 GHz: 29 dBm 5 GHz: 29 dBm	2.4 GHz: 29 dBm 5 GHz: 26 dBm	29 dBm	29 dBm
Antenna	6x 5 dBi Omni RP-SMA Female	4x 5 dBi Omni RP-SMA Female	2x 5 dBi Omni RP-SMA Female	2x 5 dBi Omni RP-SMA Female
Transmit Power (mW)	800 mW/400 mW	800 mW/400 mW	800 mW	800mW
Operation Modes	Access Point Client Bridge WDS AP WDS Station WDS Bridge	Access Point Client Bridge WDS AP WDS Station Universal Repeater	Access Point Client Bridge AP Router WDS AP Universal Repeater	Access Point Client Bridge AP Router WDS AP Universal Repeater
Number of SSID	16 (8 per radio)	16 (8 per radio)	8	4
802.1q zVLAN	●	●	●	●
QoS	●	●	●	●
AP Management Software (EZC)	●	●	●	●
DC Power	●	●	●	●
Power Over Ethernet (PoE)	802.3at	802.3at/af	802.3af	802.3af
User Support	Up to 50	Up to 50	Up to 32	Up to 32

Expanded Network Solution | **ALL PURPOSE**

Electron Series **ALL PURPOSE** Indoor/Outdoor Access Points

Compare
ENS Series

	ENS1750	ENS1200	ENS500EXT	ENS500	ENS202EXT	ENS202
Wi-Fi Standard	802.11 a/b/g/n/ac	802.11 a/b/g/n/ac	802.11 a/n	802.11 a/n	802.11 b/g/n	802.11 b/g/n
RAM	64MB	64MB	32MB	32MB	32MB	32MB
Flash	16MB	16MB	16MB	16MB	16MB	16MB
Frequency Band	2.4 GHz & 5GHz	2.4 GHz & 5GHz	5GHz	5 GHz	2.4 GHz	2.4 GHz
Maximum Advertised Speed	2.4 GHz: 450Mbps 5 GHz: 1300Mbps	2.4 GHz: 300Mbps 5 GHz: 866Mbps	300Mbps	300Mbps	300Mbps	300Mbps
RF Power (dBm)	2.4 GHz: 29 dBm 2.4 GHz: 28 dBm	27 dBm	26 dBm	26 dBm	26 dBm	26 dBm
RF Power (mW)	800mW	500mW	400mW	400mW	400mW	400mW
Operation Modes	Access Point Client Bridge WDS Bridge/AP/Station	Access Point Client Bridge WDS Bridge/AP/Station	Access Point Client Bridge WDS Bridge/AP/Station Client Router	Access Point Client Bridge WDS Bridge/AP/Station Client Router	Access Point Client Bridge WDS Bridge/AP/Station Client Router	Access Point Client Bridge WDS Bridge/AP/Station Client Router
LAN Interface	10/100/1000 x2	10/100/1000 x2	10/100 x2	10/100 x2	10/100 x2	10/100 x2
Antenna	Built-in 5 dBi Directional	Built-in 5 dBi Directional	2x External 5 dBi Omni Directional	Built-in 10 dBi Directional	2x External 5 dBi Omni directional	Built-in 8dBi Directional
Antenna Connector Type	N/A	N/A	SMA	N/A	SMA	N/A
Encryption	WEP/WPA/WPA2	WEP/WPA/WPA2	WEP/WPA/WPA2	WEP/WPA/WPA2	WEP/WPA/WPA2	WEP/WPA/WPA2
PoE power	48v	48v	24v	24v	24v	24v
IP rating	65	65	65	65	65	65
Primary application	point 2 multipoints	point 2 multipoints	point 2 multipoints	building 2 building	point 2 multipoints	building 2 building
Secondary application	5GHz single radio bridge	5GHz single radio bridge	5GHz single radio bridge	high speed mid-long range P2P network	2.4GHz N300 radio bridge	high-speed CPE device
Specialty application	Highly interferred 2.4GHz wireless traffic	Highly interferred 2.4GHz wireless traffic	Highly interferred 2.4GHz wireless traffic	Outdoor IP cam AP in congested 2.4GHz area	small base station replacement	Outdoor video IP cam wireless client

Common Key Features

Features

- SSID Broadcast Disabled
- Multiple SSID
- SSID to VLAN Mapping
- Client Isolation

- Radius client support
- VPN Pass-through support
- 802.1X Supplicant (CB Mode)
- MAC address Filtering

- QoS Support
- Telnet
- SNMP
- Management Software / Controller

- PoE kit
- FCC Certification

Expanded Network Solution | WISP

Electron Series **WISP** Long Range Access Points/Bridges

Compare
EnStation Series

	EnStation 2	EnStation 5
Standards	802.11b/g/n	802.11a/n
Frequency	2.4 GHz	5 GHz
Data Rates	Up to 300 Mbps	Up to 300 Mbps
Radio Chains/Streams	2 x 2:2	2 x 2:2
RF Output Power	26 dBm	26 dBm
Ingress Protection Rating	55	55
Fast Ethernet (10/100 Mbps)	●	●
Secondary Gigabit port	●	●
Integrated Antennas	13 dBi	19 dBi

Common Key Features

Features

- Auto Channel Selection
- Guest Network
- WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA-Enterprise, WPA2- Enterprise, WPA-Mixed Enterprise

- 4 SSIDs
- VLAN Pass-through
- QoS
- IPv6

- SSID to VLAN Mapping
- CLI
- Client Traffic Status
- WiFi Scheduler

- RADIUS Accounting
- Multicast Support
- SNMP v1/v2c/v3
- MAC Address Filter

Expanded Network Solution | INDUSTRIAL

Electron Series **INDUSTRIAL** Outdoor Access Points

Compare
ENH Series

	ENH1750EXT	ENH900EXT	ENH710EXT	ENH700EXT	ENH220EXT	ENH500	ENH202
Frequency	802.11a/b/g/n/ac	802.11a/b/g/n	802.11a/b/g/n	802.11a/b/g/n	802.11 b/g/n	802.11 a/n	802.11 b/g/n
Speed	2.4 GHz: 450 Mbps 5 GHz: 1300 Mbps	2.4 GHz: 450 Mbps 5 GHz: 450 Mbps	2.4 GHz: 300 Mbps 5 GHz: 300 Mbps	2.4 GHz: 300 Mbps 5 GHz: 300 Mbps	300 Mbps	300 Mbps	300 Mbps
LAN	10/100/1000 x 2	10/100/1000 x 2	10/100/1000 x 2	10/100/1000 x 1	10/100/1000 x 2	10/100 x 2	10/100 x 2
RAM	256 MB	256 MB	128 MB	64 MB	128 MB	32 MB	32 MB
Flash	16 MB	16 MB	16 MB	8 MB	16 MB	8 MB	8 MB
Encryption	WPA2 / WPA / WEP	WPA2 / WPA / WEP	WPA2 / WPA / WEP	WPA2 / WPA / WEP	WPA2 / WPA / WEP	WPA2 / WPA / WEP	WPA2 / WPA / WEP
Mx. Tx power	29 dBm on 2.4 GHz 29 dBm on 5 GHz	29 dBm on 2.4 GHz 29 dBm on 5 GHz	27 dBm on 2.4 GHz 27 dBm on 5 GHz	27 dBm on 2.4 GHz 27 dBm on 5 GHz	28 dBm	27 dBm	29 dBm
RF output (mW)	Radio 1: 800 mW Radio 2: 800 mW	Radio 1: 800 mW Radio 2: 800 mW	Radio 1: 500 mW Radio 2: 500 mW	Radio 1: 500 mW Radio 2: 500 mW	630 mW	500 mW	800 mW
Internal Antenna	N/A	N/A	N/A	N/A	N/A	13dBi Panel	10dBi Panel
External Antenna	5 dBi 2.4 GHz Omni x 3 7 dBi 5 GHz Omni x 3	5 dBi 2.4 GHz Omni x 3 7 dBi 5 GHz Omni x 3	5 dBi 2.4 GHz Omni x 2 7 dBi 5 GHz Omni x 2	5 dBi 2.4 GHz Omni x 2 7 dBi 5 GHz Omni x 2	5 dBi 2.4 GHz Omni x 2	N/A	N/A
Dual Radio	●	●	●	●	●		
Operation Modes	Access Point WDS AP&STA WDS Bridge Mesh	Access Point WDS AP&STA WDS Bridge Mesh	Access Point WDS AP&STA WDS Bridge Mesh	Access Point Client Bridge WDS AP&STA WDS Bridge	Access Point WDS AP&STA WDS Bridge Mesh	Access Point Client Bridge WDS AP&STA WDS Bridge	Access Point Client Bridge WDS AP&STA WDS Bridge
Band Steering	●	●	●				
Fast Roaming	●	●	●		●		
Signal Strength LED						●	●
Weather Proof	IP68	IP68	IP68	IP67	IP68	IP65	IP65
Ethernet Surge Arrestor	●	●		●			
PoE (proprietary)	48v	48v	48v	48v	48v	24v	24v
PoE Injector kit	●	●	●	●	●	●	●
802.3at	●	●	●	●	●		
Primary application	building 2 buildings (Enterprise class)	building 2 buildings (Enterprise class)	building 2 buildings (Enterprise class)	building 2 buildings (Enterprise class)	building 2 buildings (Enterprise class)	building 2 building in high 2.4 GHz area	building 2 building
Secondary application	campground/ RV park/Marina	campground/ RV park/Marina	campground/ RV park/Marina	campground/ RV park/Marina	campground/ RV park/Marina	high speed mid-long range P2P network	high-speed CPE device
Specialty application	Harsh weather environment AP	Harsh weather environment AP	Harsh weather environment AP	Harsh weather environment AP	Harsh weather environment AP	Outdoor IP cam AP in high 2.4 GHz area	outdoor IP cam wireless client

Common Key Features

Features

- Transparent Bridging
- Multiple SSID's
- WMM QoS
- SNMP
- EZ Controller
- GUI
- AC - DC adapter

Expanded Network Solution | POWER SOURCE

Electron Series **POWER SOURCE** PoE/PoE+ Smart Switches

Compare
EGS Series

	EGS2108P	EGS2110P	EGS5110P
10/100/1000 Ports	8	8	8
SFP	0	2 (additional)	2 (additional)
Power Type	External	External	Internal
PoE Standard (IEEE802.3at/af)	802.3af	802.3af	802.3at/af
PoE Capable Ports	port 1-4	port 1-8	port 1-8
Power Budget	61.6w	61.6w	130w
Chassis	Desktop	Desktop	Rackmount (1U, 13 inch)
Material	Metal	Metal	Metal
Color	Gray	Gray	Dark Blue
Reset Button	●	●	●
Loopback Detection	●	●	●
IGMP Snooping (Supports v1, v2)	●	●	●
Port Mirroring	●	●	●
Port Trunking	●	●	●
Bandwidth Control	●	●	●
Storm Control (Broadcast / Multicast / Unknown Unicast)	●	●	●
802.1Q VLAN	●	●	●
Port-based VLAN	●	●	●
CoS based on 802.1p priority	●	●	●
CoS based on physical port	●	●	●
Power Class Configuration	●	●	●
Power feeding with priority	●	●	●
User defined power limit	●	●	●
Web-based support	●	●	●
Web UI supports non-IE browser (Chrome, Firefox, Safari)	●	●	●
PoE Injector kit	●	●	●
Cable Diagnostic	●	●	●

Expanded Network Solution | POWER SOURCE

Electron Series **POWER SOURCE** Layer 2 PoE+ Switches

Compare
EGS Series

	EGS5212FP	EGS7228P	EGS7228FP	EGS7252FP
10/100/1000 Ports	8	24	24	48
SFP	0	4 (additional)	4 (additional)	4 (additional)
RJ45 Console	1	1	1	1
GIgabit Uplink Port	2	0	0	0
Power Type	Internal	Internal	Internal	Internal
PoE Standard (IEEE802.3at/af)	802.3at/af	802.3at/af	802.3at/af	802.3at/af
PoE Capable Ports	port 1-8	port 1-24	port 1-24	port 1-48
Power Budget	130w	185w	370w	740w
Chassis	Rackmount (1U, 13 inch)	Rackmount (1U, 19 inch)	Rackmount (1U, 19 inch)	Rackmount (1U, 19 inch)
Material	Metal	Metal	Metal	Metal
Color	Dark Blue	Dark Blue	Dark Blue	Dark Blue
Rest Button	●	●	●	●

Common Key Features

L2 Features
- 802.1D Spanning Tree (STP)
- 802.1s Multiple Spanning Tree (MSTP)
- 802.1w Rapid Spanning Tree (RSTP)
- MLD Snooping
- IGMP Snooping v1/v2/v3
- 802.3ad Link Aggregation
- Port Mirroring
- Port Trunking
- LLDP
- MAC Address Table
- Bandwidth Control

VLAN Features
- 802.1Q VLAN
- Management VLAN ID
- Port-based VLAN
- Voice VLAN

CoS Features
- CoS based on DSCP
- CoS based on 802.1p Priority
- CoS based on Physical Port

PoE Management
- Power Class Configuration
- Power Feeding with Priority
- User Defined Power Limit

Security
- 802.1X Port Based Access Control/ Guest VLAN
- RADIUS Authentication
- SSH / Telnet / Http(s)
- Port Security
- Storm Control (Broadcast/Multicast/Unknown unicast)
- DoS Attack Prevention
- BPDU Attack Prevention
- MAC, IPv4, IPv6 ACL

Management
- User Management
- Dual Image
- Web-based Support
- SNMP v1/v2c/v3
- TFTP Upgrade
- Command Line Interface (CLI)
- SNTP
- Web UI, Supports Non IE Browser (Chrome, Firefox, Safari)
- RMONv1 (Supports 4 Groups)
- SYSLOG
- Cable Diagnostics
- MIB Support (RFC1213, RFC1493, RFC1757, RFC2674)

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