Centralized Manageability

The EnGenius Neutron Series Wireless Management Switches and Access Points provide fully-managed L2 switching capabilities and PoE+ support while its Neutron Series Wireless Indoor and Outdoor Access Points extend a network where a company may need to provide connectivity for a growing array of wireless client devices in simplified one-to-many mode configurations and authorized access to network resources or to the company’s Internet connection. For efficient manageability, through an easy-to-navigate, browser-based Graphical User Interface (GUI), each Neutron Series Switch also offers priority-based configurations depending on an IT manager’s or network administrator’s need. When combined together Neutron Series Switches and Access Points reach their full potential by allowing for quick deployment, simplified management and monitoring, and seamless concurrent upgrades, making the platform ideal for expansive and expanding business properties and operations.

Auto AP Discovery and Provisioning

The Neutron Series of PoE+ Switches and Access Points is designed for rapid deployment whether for small companies or for larger companies and organizations in multi-level buildings or campus scenarios. Once Neutron Series Indoor or Outdoor Access Points have been connected to a Neutron Series switch those Access Points immediately become discoverable on the network through the Switch’s wireless management controller interface. IT managers or network administrators then have the option to include the APs to the network and configure them as a cluster with identical settings and change those settings or upgrade firmware simultaneously after deployment.

Wireless Management Solution

The EnGenius Neutron Series of wireless 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. 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 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.

Ideal for deploying for these venues:

- College Campuses
- Corporate Campuses
- Shopping Malls
- Resort Properties
- Parks and Campgrounds
- Military Bases
- Warehouse Operations
- Stadiums & Arenas
- Medical Centers
- Luxury Homes and Estates
Gigabit Speeds for a Variety of Needs

All Neutron 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.

Rapidly Expansive Not Enterprise Expensive

24-ports and 48-ports Neutron Series Switches can support up to 50 Neutron Series Access Points. 8-Ports Neutron Series Switches can support up to 20 Neutron Series Access Points. Each Neutron Series Switch can connect to another via Gigabit Ethernet or fiber uplinks through their SFP ports. This enables network administrators to rapidly build large Neutron Series wireless device deployments over expansive properties with the added assurance that through the AP management User Interface, that they have total visibility of the deployed Neutron Series APs and Switches and can monitor and manage their performance, upgrade their firmware or make operation mode changes or even security changes like selective SSID-to-VLAN tagging as needed. The Neutron Series of Neutron Series Switches when used together can support hundreds of Neutron Series Access Points making it an economical alternative to many more expensive offerings from enterprise networking brands with performance that rivals or exceeds products from those brands. This EnGenius competitive price/performance alternative gives VARs the ability to provide a scalable and sometimes more expansive network footprint of deployed devices for much less than other brands while providing to their customers more service offerings and still keeping within a client’s total budget.

Mesh Mode* (Available soon)

Under the AP Mesh mode, the Neutron Series Access Points can be used as the central connection hub for station or clients that support IEEE 802.11 a/b/g/n network. Under this mode, the Neutron Series APs can be configured with the same Mesh SSID and security password in order to associate with other Neutron Series APs. For example, you would use one band to connect Neutron Series Access Points in range with Mesh mode and the other band to broadcast traffic on the network. Acting as a node within a web framework, each Neutron Series Access Point only needs to connect to the nearest node using the best path to transmit data, working collaboratively with other Access Points in the network infrastructure to function.

Manageable PoE+ Capabilities

The Neutron Series Switches are Layer 2 Managed PoE+ Switches ideal for Access Points and IP Surveillance 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. These powerful 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, the management software User Interface allows network administrators 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 Neutron Series Switch’s 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.

Comprehensive Security

The Neutron Series Wireless Management solution supports robust security features such as SSL Certificate. In addition, the Neutron 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 Neutron Series Outdoor Access Points have been mounted in an IP65-rated enclosures, one of the highest waterproof and dustproof ratings available, designed to withstand extremely harsh environmental conditions. The Neutron Series Indoor Access Points come housed in discreet white housings to blend in with any environment, and all Neutron Series Switches come with the ability to be either desk or rack mounted.

Floor Plan & Map Views

The user interface includes two easy-to-use, drag and drop tools to view a Neutron Wireless Management deployment. The Map View lets IT managers drag and drop a marker representing an Neutron Series Access Point that has been registered to an Neutron Series Switch onto a building within a campus topology to show the relative location of the specific Neutron Series Access Point. This Map View visual reference makes it easy to find the Access Point to monitor or reconfigure as necessary if the needs of the network change over time. Like the Map View, the Floor Plan View does much the same thing but now at the floor plan level. Scanned images of office or facility floor plans that have been saved as jpeg (.jpg) files can be uploaded to the Neutron Series Switch interface so, that IT managers can drag and drop Access Point markers to their approximate locations. This tool also helps in the planning for additional Neutron Series Access Points and other related networked devices like IP Cameras.

The Neutron Series Switches come with the ability to be either desk or rack mounted. In discreet white housings to blend in with any environment, and all Neutron Series Access Points have been mounted in an IP65-rated enclosures, one of the highest waterproof and dustproof ratings available, designed to withstand extremely harsh environmental conditions. The Neutron Series Indoor Access Points come housed in discreet white housings to blend in with any environment, and all Neutron Series Switches come with the ability to be either desk or rack mounted.

*Mesh Mode will be available soon.
Wired and Wireless Network Management and Reporting

In addition to the network management features that are standard with any of the Neutron Series Layer 2 PoE+ Switches, the controller interface included with each Switch gives IT managers and network administrators the visibility they need to monitor, manage and quickly adjust the settings or performance of their network in real time. The feature-rich controller interface includes a Topology View that quickly identifies each connected Neutron AP and the number of clients associated to it. The interface also can serve up real time traffic load and historical traffic reporting over both wired and wireless portions of the network. Each Neutron Wireless Management Switch also enables administrators to create Access Point clusters if there is a requirement to configure the Access Points identically or if company department require unique and encrypted access rights to portions of the network through clustered SSID-to-VLAN tagging.

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.

Day or Night Business Surveillance

EnGenius IP Cameras include IR-Cut filters for day/night mode that gives IT managers and security personnel the ability to monitor interior and exterior areas of buildings and campuses in low light conditions with IR LEDs and up to 32 feet in complete darkness. Each camera has excellent picture quality and a wide field of view over standard definition VGA resolutions that reduces the number of camera installations needed for most deployments. All camera models include an ePTZ feature, so security personnel can monitor and digitally zoom in closer to specific areas for more detailed views.

Monitoring Your Business When You’re Away

Each EnGenius IP Camera includes 16-channel ONVIF-compliant recording software for easy integration with other ONVIF compliant cameras available on the market. Paired with EnViewer™, the EnGenius mobile app for Apple iPhone® and iPad® or for Android™ smartphones and tablets, IT managers and security personnel can remotely monitor business properties while away from them. Event notifications, triggered by each camera’s motion sensor feature can also be sent to mobile devices immediately through the EnViewer app for quick response to security incidents.

Fast Roaming
Band Steering

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

<table>
<thead>
<tr>
<th>2.4 GHz Single Band Devices</th>
<th>2.4 GHz / 5 GHz Dual Band Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4 GHz Single Band Devices</td>
<td></td>
</tr>
<tr>
<td>Congested Traffic on Dual Band Devices</td>
<td></td>
</tr>
</tbody>
</table>

Band Steering: ON

<table>
<thead>
<tr>
<th>2.4 GHz Single Band Devices</th>
<th>2.4 GHz Band</th>
<th>5 GHz Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4 GHz Single Band Devices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shifts Dual Band Devices to 5 GHz Band for Smooth Connection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mesh Mode

Neutron Series Managed 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.
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.

Neutron Series Switch Wireless Management User Interface

The following screens are just a few examples of the features and settings available to manage and monitor an EnGenius Neutron Series Solution from an Neutron Series Switch.

Auto AP Discovery and Provisioning

This screen in the interface displays the status of all Neutron Series Access Points that your Controller is currently managing as well as all the Neutron Series Access Points in the network that have been discovered. IT managers can add Neutron Series Access Points to the Neutron Series Controller Access Point list.

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.
Access Point Cluster Management

Band Steering, Fast Handover and Guest Network settings
Wireless Network Topology View

The Topology View in the interface lets IT managers see the Neutron Series Access Points connected to Neutron Series Switches on a Neutron Series Wireless Management network in tree branch representation. Each Access Point icon will indicate the number of client devices associated to it in real time, the IP address of the Access Point and the Port on the Neutron Series Switch that the Access Point is connected to.

The navigation pad and plus and minus buttons let IT managers quickly navigate to different branches of the network. Access Points can also be located in the network via their IP or MAC addresses. Specific Switch port location can be toggled on or off as necessary.

Floor Plan View

The Floor Plan View lets IT managers upload scanned images of office or facility floor plans that have been saved as jpeg (.jpg) files and then drag and drop a marker representing an Neutron Series Access Point that has been registered to an Neutron Series Switch onto the floor plan. This visual reference makes it easy to find the Access Point to monitor or reconfigure as necessary if the needs of the network change over time and also helps in the planning for additional Neutron Series Access Points and other related networked devices like IP Cameras.

Map View

The Map View lets IT managers drag and drop a marker onto a building within a campus topology to show the relative location of a specific Neutron Series Access Point. This Map View visual reference makes it easy to find the Access Point to monitor or reconfigure as necessary if the needs of the network change over time.
Wireless Access Point Statistics View

Gives network administrators real-time or historical visibility of the traffic being handled by the deployed Neutron Series Access Points.

Neutron Series Managed Access Points in Multi-Floor Building Scenario

Applications:

Education  
Government  
Hospitality

Neutron Series Wireless Management Switch  
(Supports up to 20 or 50 APs)
Multi-Building / Campus Scenario

Building 1

Building 2

Building 3

EWS210AP
EWS310AP
EWS320AP
EWS360AP

EWS7952FP
EWS360AP
EWS320AP
EWS210AP
EWS310AP
EWS5912FP
EWS860AP
EWS660AP
EWS5912FP

Reset Button
Ethernet Port
Power Connector
Mounting Hole (Ceiling/Wall Mount)

Mesh Mode LED (Available Soon)
Sectorized Antenna (EWS320AP shown)
Kensington Security Slot

5 GHz LED (Dual Band AP Only)
2.4 GHz LED
Power LED
Ethernet Port LED
EWS7928P

- RJ45 Console Port
- Power LED
- Fault LED
- PoE Max LED
- PoE Mode LED
- LAN Mode LED
- LED Mode Selector
- Reset Button
- Link/Act LED (Per Copper Port)
- Link/Act LED (Per SFP Port)
- LAN Mode LED (Per Copper Port)
- LAN Mode LED (Per SFP Port)
- PoE Ethernet Ports
- Speed LED (Per SFP Port)
- Dual-Speed SFP Slots
- Cooling Fan
- Power Connector
- Rack Mount Hole
- 17.3”
- 10”

EWS7928FP

- RPS LED
- Power LED
- Fault LED
- RJ45 Console Port
- PoE Max LED
- PoE Mode LED
- LAN Mode LED
- Power Connector
- Redundant Power Supply
- LED Mode Selector
- Reset Button
- Link/Act LED (Per Copper Port)
- Link/Act LED (Per SFP Port)
- LAN Mode LED (Per Copper Port)
- LAN Mode LED (Per SFP Port)
- PoE Ethernet Ports
- Speed LED (Per SFP Port)
- Dual-Speed SFP Slots
- Cooling Fan
- Rack Mount Hole
- 17.3”
- 13.5”
EDS5200

- IR Illuminator
- Vari-Focal Lens
- Mounting Bracket

EDS6200

- PIR sensor
- IR illuminator
- Vari-Focal Lens

EDS5110

- IR LED
- Lens
- Mounting Bracket

EDS6110

- Built-in Lens
- IR Illuminator
- Reset Button
- Micro-SDHC Slot
### Compare

<table>
<thead>
<tr>
<th>Indoor Managed Access Points</th>
<th>EWS360AP</th>
<th>EWS320AP</th>
<th>EWS310AP</th>
<th>EWS210AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards</td>
<td>802.11a/b/g/n/ac</td>
<td>802.11a/b/g/n</td>
<td>802.11a/b/g/n</td>
<td>802.11b/g/n</td>
</tr>
<tr>
<td>Frequency</td>
<td>2.4 &amp; 5 GHz</td>
<td>2.4 &amp; 5 GHz</td>
<td>2.4 &amp; 5 GHz</td>
<td>2.4 GHz</td>
</tr>
<tr>
<td>2.4 GHz Max. Data Rate</td>
<td>450 Mbps</td>
<td>450 Mbps</td>
<td>300 Mbps</td>
<td>300 Mbps</td>
</tr>
<tr>
<td>5 GHz Max. Data Rate</td>
<td>1300 Mbps</td>
<td>450 Mbps</td>
<td>300 Mbps</td>
<td></td>
</tr>
<tr>
<td>Radio Chains/Streams</td>
<td>3 x 3:3</td>
<td>3 x 3:3</td>
<td>2 x 2:2</td>
<td>2 x 2</td>
</tr>
<tr>
<td>RF Output Power (2.4 GHz)</td>
<td>28 dBm</td>
<td>28 dBm</td>
<td>29 dBm</td>
<td>29 dBm</td>
</tr>
<tr>
<td>RF Output Power (5 GHz)</td>
<td>28 dBm</td>
<td>28 dBm</td>
<td>26 dBm</td>
<td>N/A</td>
</tr>
<tr>
<td>Gigabit Ethernet</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Power over Ethernet</td>
<td>802.3at</td>
<td>802.3at</td>
<td>802.3af/at</td>
<td>802.3af/at</td>
</tr>
<tr>
<td>Power Consumption (Peak)</td>
<td>22 W</td>
<td>22 W</td>
<td>15.6 W</td>
<td>9 W</td>
</tr>
<tr>
<td>Integrated Antenna</td>
<td>6 x 5 dBi</td>
<td>6 x 5 dBi</td>
<td>4 x 5 dBi</td>
<td>2 x 5 dBi</td>
</tr>
</tbody>
</table>

### 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)

**Other Features for Stand-alone Mode**
- 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

* 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.
**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)
- 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.
### 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)
- SNMP
- Web UI, Supports Non IE Browser (Chrome, Firefox, Safari)
- SYLOG
- Cable Diagnostics
- MB Support (RFC1213, RFC1493, RFC1757, RFC2874)
- RMONv1
- SSH Server

#### Wireless 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.

---

### Management Switches

<table>
<thead>
<tr>
<th>Supported EWS AP</th>
<th>EWS7952FP</th>
<th>EWS7928FP</th>
<th>EWS7928P</th>
<th>EWS5912FP</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/100/1000 BASE-T, PoE+</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>Total PoE Budget</td>
<td>740W</td>
<td>370W (Up to 740W with RPS)</td>
<td>185W</td>
<td>130W</td>
</tr>
<tr>
<td>PoE+ Capable Port</td>
<td>1~48</td>
<td>1~24</td>
<td>1~24</td>
<td>1~8</td>
</tr>
<tr>
<td>Rackmount</td>
<td>19&quot; 1U</td>
<td>19&quot; 1U</td>
<td>19&quot; 1U</td>
<td>13&quot; 1U</td>
</tr>
<tr>
<td>SFP Ports</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Auto Uplink Gigabit Ports</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
</tr>
<tr>
<td>RJ45 Console Port</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>SDRAM</td>
<td>256MB</td>
<td>256MB</td>
<td>256MB</td>
<td>256MB</td>
</tr>
<tr>
<td>Flash</td>
<td>32MB</td>
<td>32MB</td>
<td>32MB</td>
<td>32MB</td>
</tr>
</tbody>
</table>
Compare

2 Megapixel IP Cameras

<table>
<thead>
<tr>
<th></th>
<th>EDS3200</th>
<th>EDS5200</th>
<th>EDS6200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>Box</td>
<td>Bullet</td>
<td>Dome</td>
</tr>
<tr>
<td>Minimum Illumination</td>
<td>Color: 0.2 Lux @ F1.4 B/W: 0 Lux @ F1.4 (with optional IR illuminator)</td>
<td>Color: 0.2 Lux @ F1.2 B/W 0 Lux @ F1.2 (IR on)</td>
<td>color: 0.5 Lux @ F1.2 B/W 0 Lux @ F1.2 (IR on)</td>
</tr>
<tr>
<td>DC Iris</td>
<td>Connector for DC-Iris lens</td>
<td>DC-Iris</td>
<td>DC-Iris</td>
</tr>
<tr>
<td>Lens (included)</td>
<td>Fixed CS-mount lens 4mm @ F1.4</td>
<td>Vari-focal board-mount lens 3-9 mm @ F1.2</td>
<td>Vari-focal board-mount lens 3-9mm @ F1.2</td>
</tr>
<tr>
<td>Audio Input / Output</td>
<td>2-way audio: audio input, audio output, built-in microphone G.711, AAC</td>
<td>2-way audio: audio input, audio output, G.711, AAC</td>
<td>2-way audio with built-in microphone, audio input, audio output, G.711, AAC</td>
</tr>
<tr>
<td>Terminal Block</td>
<td>1 I/O port, RS-485, 24VAC input Analog Video out (BNC)</td>
<td>One IO port, RS-485, 24VAC input BNC</td>
<td>One IO port</td>
</tr>
<tr>
<td>IR LEDs</td>
<td>IR lamp attachment for up to 15 meters or 50 feet</td>
<td>Built-in IR for up to 20 meters or 65 feet</td>
<td>Built-in IR for up to 15 meters or 50 feet</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 - 50°C</td>
<td>-20 - 50°C</td>
<td>0 - 40°C</td>
</tr>
<tr>
<td>Usage</td>
<td>Indoor</td>
<td>Outdoor: IP67 Outdoor Rating</td>
<td>Indoor</td>
</tr>
<tr>
<td>Additional Information</td>
<td>-</td>
<td>-</td>
<td>PIR Sensor, Dual Axis</td>
</tr>
</tbody>
</table>

Common Key Features

- Resolution: 2 Megapixel 1920 x 1080 (1080P HD Resolution)
- Image sensor: ½.7” Progressive CMOS sensor
- Video Compression: H.264/MPEG-4 Motion JPEG
- Frame rate: up to 30 fps
- Shutter speed: 1/7.5 sec – 1/32000 sec
- Automatic day/night IR cut filter
- Image Settings: Adjustable image size, quality and bit rate, Brightness, contrast, saturation, sharpness, white balance, and exposure. Time stamp and text caption overlay, flip & mirror, AGC/AWB/AES, WDR, focus assist, Privacy Mask
- Networking: Network: 10/100 Mbps Ethernet, RJ-45 - PoE: 802.3af
- Security: Admin/User account level, Password protection
- Protocol: IPv4, TCP, UDP, DHCP, NTP, DNS, DDNS, SMTP, FTP, HTTP, PPPoE, UPnP, NFS/Samba client, QoS/DSCP, RTP, RTSP, 3GPP
- Local storage Micro SD/SDHC card slot (supports up to 32GB)
- Alarm and Event: Event trigger – Motion detection, Schedule, Tamper Detection digital input
- Event action: Send snapshot or video clip to FTP/Email/NAS/Local-Storage - Video buffer: 5 second pre-alarm, 10 second post-alarm
- Power: 12V 1A , POE 802.3af, 24 VAC (for EDS3200 & EDS5200 Models)
- Viewing system requirements
  Operating system: Microsoft Windows XP/2000/Vista/2003/2008/7
  Web browser: IE, Safari, Google Chrome, Firefox, Opera
- Recording software: Engenius CMS 16 CH software (for Windows XP/2000/ Vista/2003/2008/7)
- Smartphone: Enviewer Mobile APP (iOS / Android)
- Simultaneous viewers: Live viewing for up to 10 clients
- Certification: FCC/CE/LVD
- ONVIF Compliant
### 1 Megapixel IP Cameras

<table>
<thead>
<tr>
<th></th>
<th>EDS3110</th>
<th>EDS5110</th>
<th>EDS6110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>Mini Box</td>
<td>Mini Bullet</td>
<td>Mini Dome</td>
</tr>
<tr>
<td>Minimum Illumination</td>
<td>Color: 0.2 Lux @ F1.5 B/W: 0 Lux @ F1.5 (with optional IR illuminator)</td>
<td>0.5 Lux @ F1.5 B/W 0 Lux @ F1.5 (IR on)</td>
<td>Color: 0.5 Lux @ F1.5 B/W 0 Lux @ F1.5 (IR on)</td>
</tr>
<tr>
<td>Lens</td>
<td>Fixed CS-mount lens 4mm @ F1.5</td>
<td>Fixed board-mount lens 4mm @ F1.5</td>
<td>Fixed board-mount lens 4mm @ F1.5</td>
</tr>
<tr>
<td>Audio Input / Output</td>
<td>2-way audio: audio input, audio output, built-in microphone G.711</td>
<td>No Audio</td>
<td>1-way audio with built-in microphone G.711</td>
</tr>
<tr>
<td>Terminal Block</td>
<td>1 I/O port</td>
<td>1 I/O port</td>
<td>-</td>
</tr>
<tr>
<td>IR LEDs</td>
<td>IR lamp attachment for up to 15 meters or 50 feet</td>
<td>Built-in IR for up to 10 meters or 32 feet</td>
<td>Built-in IR for up to 10 meters or 32 feet</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 - 40°C</td>
<td>-20 - 50°C</td>
<td>0 - 40°C</td>
</tr>
<tr>
<td>Usage</td>
<td>Indoor</td>
<td>Outdoor: IP66 Outdoor Rating</td>
<td>Indoor</td>
</tr>
<tr>
<td>Additional Information</td>
<td>-</td>
<td>-</td>
<td>Dual Axis</td>
</tr>
</tbody>
</table>

### Common Key Features

- **Resolution:** 1 Megapixel 1280 x 720 (720P HD Resolution)
- **Image sensor:** 1/4" Progressive CMOS sensor
- **Video Compression:** H.264/MPEG-4 Motion JPEG
- **Frame rate:** up to 30 fps
- **Shutter speed:** 1/7.5 sec – 1/2000 sec
- **Automatic day/night IR cut filter**
- **Image Settings:** Adjustable image size, quality and bit rate Brightness, contrast, saturation, sharpness, white balance and exposure Time stamp and text caption overlay, flip & mirror, AGC/AWB/AES, Privacy Mask
- **Networking:** Network: 10/100 Mbps Ethernet, RJ-45 - PoE: 802.3af - Security: Admin/User account level, Password protection
- **Protocol:** IPv4, TCP, UDP, DHCP, NTP, DNS, DDNS, SMTP, FTP, HTTP, PPPoE, UPnP, NFS/Samba client, QoS/DSCP, RTP, RTSP, 3GPP
- **Local storage Micro SD/SDHC card slot (supports up to 32GB)**
- **Alarm and Event:** Event trigger: Motion detection, Schedule, Tamper Detection
- **Event action:** Send snapshot or video clip to FTP/Email/NAS/Local-Storage (EDS3110 & EDS6110) - Video buffer: 5 second pre-alarm, 10 second post-alarm
- **Power:** 12V 1A , POE 802.3af
- **Viewing system requirements:** Operating system: Microsoft Windows XP/2000/Vista/2003/2008/7
- **Web browser:** IE, Safari, Google Chrome, Firefox, Opera
- **Recording software:** Engenius CMS 32CH software (for Windows XP/2000/ Vista/2003/2008/7)
- **Smartphone:** Enviewer Mobile APP (iOS / Android)
- **Simultaneous viewers:** Live viewing for up to 5 clients
- **Certification:** FCC/CE/LVD