



EWS1200D-10T
EWS1200-28T
EWS1200-52T

Neutron Series Gigabit Managed Smart Switches

Simplified Management & Optimal Network Performance for Small-to-Mid-Size Organizations

The EnGenius Gigabit Managed Smart Switches with WLAN Controller feature 8-, 24- or 48- Gigabit ports and support full feature Layer 2 manageability.

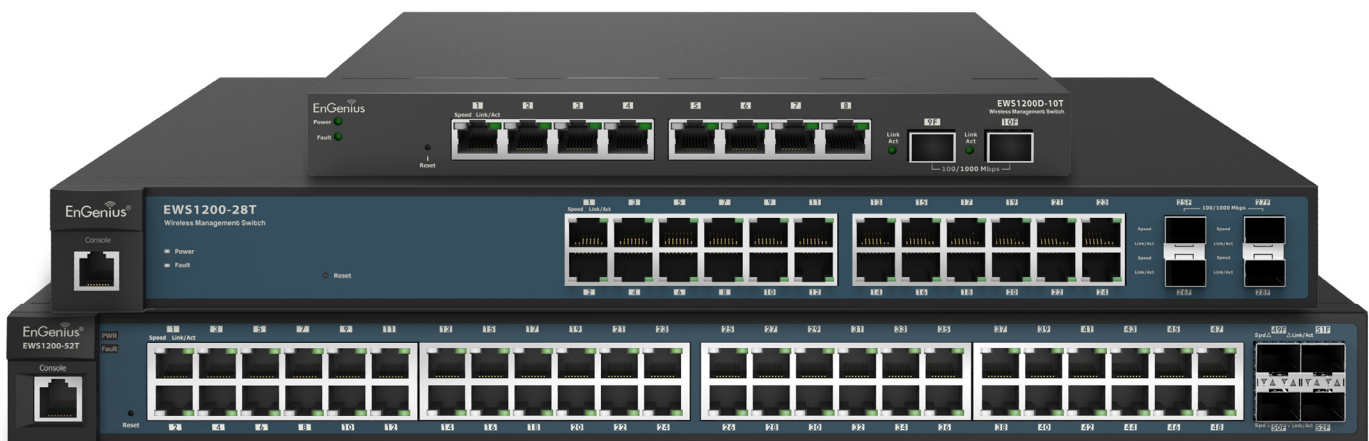
The Switches offer simplified network configuration, monitoring, and management options plus ezMaster™ Centralized Network Management Software, a robust, easy-to-use Web-based tool.

Enterprise-class features optimize network efficiency ensuring peak performance while reducing expenses for cost-conscious SMB organizations.

Whether installed in small or mid-size organizations such as medical offices, warehouses, or large homes, the Smart Switch's design and easy-to-use interface enables effortless and efficient deployment and operation. Organizations with limited IT support and budgets can create a reliable, efficiently managed network in no time.

Features & Benefits:

- 10/100/1000 Mbps GbE Ports
- Onboard Tools Manage Wired & Wireless Devices
- SFP Slots Support Extended Connectivity via Fiber Uplinks, Redundancy & Failover
- Network Troubleshooting, Monitoring, & Email Alerts
- Centrally Manage Wired & Wireless Networks via ezMaster™
- Configure, Manage & Monitor Up to 50 Neutron EWS APs Locally via Controller Mode
- Security: Access Control List/Port Security; 802.1X & RADIUS Authentication
- IGMP & MLD Snooping Provides Advanced Multicast Filtering & Network Efficiency
- 802.3ad Link Aggregation (LACP) Supports Traffic Load Balancing
- Voice VLAN for Fast, Reliable Deployment of VoIP Services
- Advanced QoS with IPv4/IPv6 Ingress Traffic Filtering (ACLs) & Prioritization
- Energy Efficient Ethernet (802.3az) Improves Energy Savings with Compliant Devices
- Dual Firmware Images Improve Reliability & Network Uptime
- Silent, Fanless Design (8/24 port) & Smart Fan Feature (48 port)



High Performance Gigabit & Management Flexibility

Each of the Switch's Gigabit Ethernet ports provide seamless, high-speed access for networked devices while reducing bottlenecks that can interrupt communications. The Switch offers deployment flexibility and four types of management options while efficiently supporting both wired and wireless networks.

Types of Deployment = 4 Types of Management

- 1 Wired LAN Only**
Manage via third-party SNMP manager



- 2 Wired LAN+ Local Management**
Manage locally via on-board tools



- 3 Wired LAN + Wireless APs + Local Management**
Manage locally via built-in controller

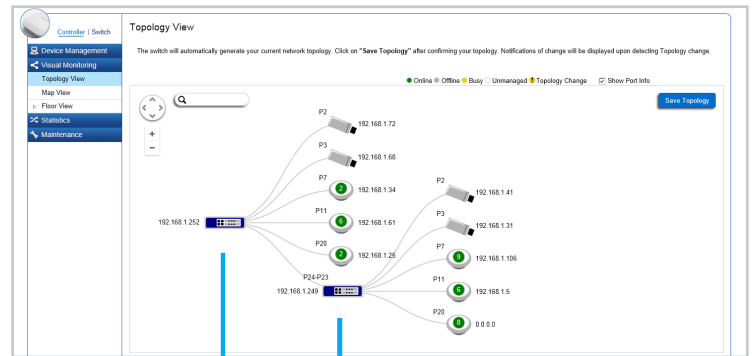


- 4 Wired LAN + Wireless APs + Remote Management**
Manage remote and distributed networks via ezMaster™



Easy Network Management, Visibility & Troubleshooting

Achieve network management, visibility, and troubleshooting locally through the Switch's on-board Web interface tools or remotely with ezMaster software. Its Network Topology view automatically maps the deployment, displaying device relationships across the infrastructure, and is useful for troubleshooting issues without manual tracking.



Wireless Device Management

Quickly discover, configure, and monitor Neutron EWS Access Points and manage up to 50 devices within the local subnet through the Switch's built-in wireless network controller features.

Centrally Manage the Wired & Wireless Network

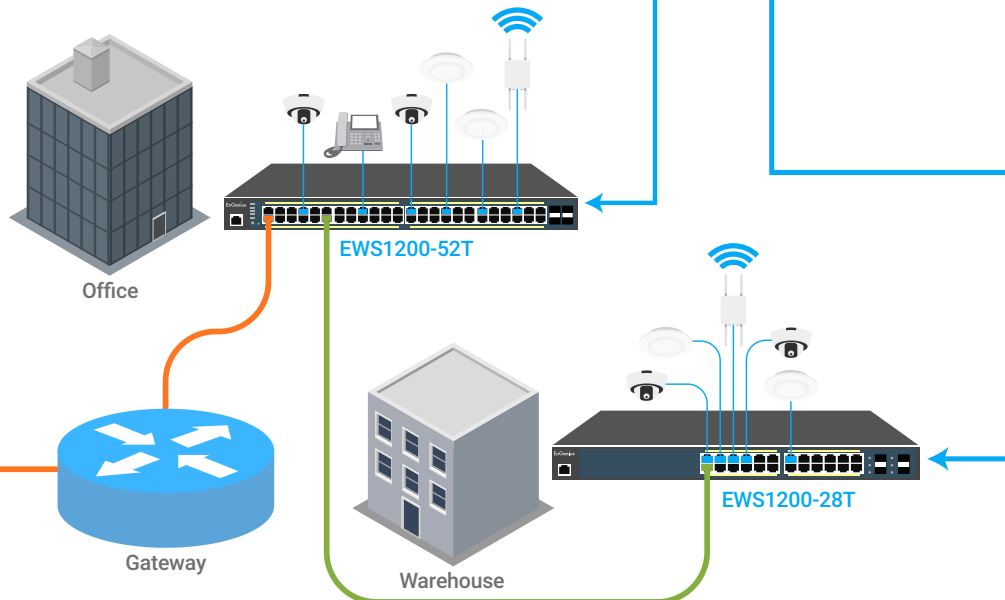
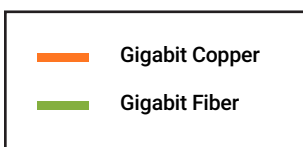
Remotely manage Neutron EWS Access Points, Switches, and IP Cameras through ezMaster Network Management Software. Centrally manage hundreds of EWS devices across the network regardless of its size or location with no licensing or subscription fees.

VLAN/Voice & Quality of Service

Segment the network by departments or traffic types for increased performance and security with 802.1Q VLAN. Prioritize compliant VoIP and video traffic using 802.1p Class of Service (CoS) ensuring high bandwidth, time-sensitive data is forwarded immediately for clear, smooth voice and video delivery.

Network Security

Establish a Guest VLAN to limit Internet resources for visitors while securing the network from sophisticated Trojans and malware that can use guest's mobile devices to attack the network.



Managed Smart Switches



Models	EWS1200-52T	EWS1200-28T	EWS1200D-10T
10/100/1000 Base-T Ports	48	24	8
100/1000 SFP Ports	4	4	2
Console Port	1 RJ45	1 RJ45	-
Rackmount	19" 1U	19" 1U	9.44" (desktop)
Switching Capacity	104 Gbps	56 Gbps	20 Gbps
Forwarding Mode	Store-and-forward	Store-and-forward	Store-and-forward
MAC Address Table	8k	8k	8k
Packet Buffer Memory	1.5 MB	512 KB	512 KB
Power Source	60W Internal Power	30W Internal Power	DC12V/1A External
Full Load Power Consumption	54.02W	24.48W	6.9W
Management	Wireless AP Controller, ezMaster Network Management Software, Web GUI, CLI, SNMP, RMON, HTTPS, Dual Image		
Wireless Controller Supports EWS APs	Up to 50	Up to 50	Up to 50
Advanced QoS with IPv4/IPv6 Multicast Filtering	IGMP and MLD Snooping		
Auto-VoIP	.	.	.
VLANs	Max 4094 Static Groups, Voice VLAN		
Network Standards	IEEE 802.3 Ethernet IEEE 802.3i 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3x Full-Duplex Flow Control IEEE 802.3z Gigabit Ethernet 1000Base-SX/LX IEEE 802.3ad Link Aggregation (Trunking) IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) IEEE 802.1Q VLAN Tagging IEEE 802.1ab Link Layer Discovery Protocol (LLDP) IEEE 802.1p Quality of Service IEEE 802.1X RADIUS Access Control IEEE 802.3az Energy Efficient Ethernet		

Flexible Distributed Network Management

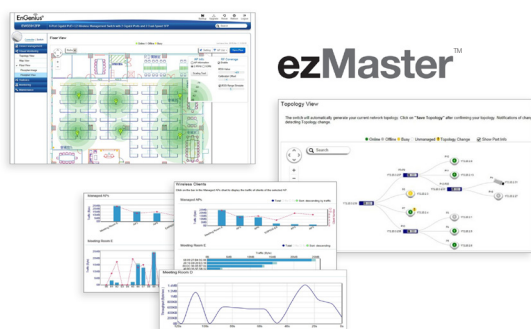
EzMaster Network Management Software expands the flexibility and scalability of Neutron Series EWS Managed Access Points and Switches.

EzMaster allows organizations, such as branch offices and managed service providers, to easily and affordably deploy, monitor and manage a large number of Neutron APs, Controller Switches and Managed Smart Switches across geographically diverse properties. Centrally manage an unlimited number of independent distributed networks in the same subnet or cross-subnet from a single, at-a-glance network dashboard, no matter where they're located.

Deploy ezMaster locally, remotely or via a Cloud-based service with or without an onsite controller.

Powerful, Scalable Options

EzMaster scales with your growing business needs. Manage 1,000+ Neutron EWS Access Points and Switches and 10,000+ concurrent users. Together, Neutron APs, Switches and ezMaster provide a flexible, fully integrated solution with redundancy support and future expandability for broader device connectivity.



System Requirements

Recommended environment for managing up to 500 APs

CPU: Intel® Core™ i3 3.6 GHz dual-core or above
RAM: 4 GB minimum
HDD: 500 GB (actual requirement dependent on log size)
OS: Microsoft® Windows® 7 or later + VMware® Player 7.0 or compatible virtualization software

Recommended environment for managing up to 1,000+ APs

CPU: Intel® Core™ i5 3.2 GHz quad-core or above
RAM: 4 GB minimum
HDD: 500 GB (actual requirement dependent on log size)
OS: Microsoft® Windows® 7 or later + VMware® Player 7.0 or compatible virtualization software

Browser Requirements

Internet Explorer 10 or better
Firefox 34.0 or better
Chrome 31.0 or better
Safari 8.0 or better

Network Topology Requirements

At sites where APs are deployed: A DHCP-enabled network for APs to obtain an IP address

Simplified Device Management

EzMaster Network Management Software makes centralized device management easy. How? Through centralized bulk configuration, provisioning and monitoring, a comprehensive at-a-glance network dashboard, rich analytics and reporting, and much more.

ezMaster Software Features

- **Centralized Management**
 - Configure, Managed & Monitor 1,000+ Neutron Devices
 - Cross-Network AP Management
 - AP Group Configuration
- **Access Point Configuration & Management**
 - Auto Channel Selection
 - Auto Tx Power
 - Background Scanning
 - Band Steering (Auto Band Steering & Band Balancing)
 - Client Isolation
 - Client Limiting
 - Fast Roaming
 - L2 Isolation
 - LED On/Off Control
 - Multiple SSID
 - RSSI Threshold
 - Secure Guest Network
 - Traffic Shaping
 - VLAN Isolation
 - VLAN Tag
- **Comprehensive Monitoring**
 - Device Status Monitoring
 - Floor Plan View
 - Map View
 - Rogue AP Detection
 - System Status Monitoring
 - Visual Topology View
 - Wireless Client Monitoring
 - Wireless Coverage View
 - Wireless Traffic & Usage Statistics
- **Management & Maintenance**
 - Bulk Firmware Upgrade
 - Captive Portal
 - Email Alert
 - ezRedundancy (Available 2016)
 - Kick/Ban Clients
 - One-Click Update
 - Remote Logging
 - Seamless Migration
 - SmartSync Redundancy (Available 2016)
 - Syslog

Technical Specifications

Network Ports

EWS1200D-10T

8x 10/100/1000 Mbps Ports
2x 100/1000 Mbps SFP Ports

EWS1200-28T

24x 10/100/1000 Mbps Ports
4x 100/1000 Mbps SFP Ports
1x RJ45 Console Port

EWS1200-52T

48x 10/100/1000 Mbps Ports
4x 100/1000 Mbps SFP Ports
1x RJ45 Console Port

Performance

EWS1200D-10T

Switching Capacity: 20 Gbps

EWS1200-28T

Switching Capacity: 56 Gbps

EWS1200-52T

Switching Capacity: 104 Gbps

Forwarding Mode: Store-and-Forward

SDRAM: 256 MB

Flash Memory: 32 MB

EWS1200D-10T / EWS1200-28T

Packet Buffer Memory: 512 KB

EWS1200-52T

Packet Buffer Memory: 1.5 MB

Physical Interface

LED Indicators

Reset Button

EWS1200D-10T

Desktop/Wall Mount

EWS1200-28T / EWS1200-52T

Rack Mount

LED Indicators

Device:

Power LED

Fault LED

Ports:

Link/Activity/Speed (per Ethernet port)

Link/Activity/Speed (per SFP slot)

Power Source

EWS1200D-10T

Full Load Power Consumption: 6.59W

DC12V/1A

EWS1200-28T

Full Load Power Consumption: 24.48W

30W Internal Power

Power Source continued

EWS1200-52T

Full Load Power Consumption: 54.02W

60W Internal Power

Software Features

Layer 2 Features

802.3ad Link Aggregation

- Maximum of 8 Groups/8 Ports per Group

Port Mirroring

- One-to-One

- Many-to-One

Spanning Tree Protocol

- 802.1D Spanning Tree Protocol (STP)

- 802.1w Rapid Spanning Tree Protocol (RSTP)

- 802.1s Multiple Spanning Tree Protocol (MSTP)

MAC Address Table

- 8K Entries

Static MAC Address

- 256 Entries

802.1ab Link Layer Discovery Protocol

IGMP Snooping

- IGMP v1/v2/v3 Snooping

- Supports 4094 IGMP Groups

- IGMP per VLAN

- IGMP Snooping Querier

- IGMP Snooping Fast Leave

MLD Snooping

- MDL Snooping v1/v2

- Supports 4,094 MLD Groups

- MLD per VLAN

Jumbo Frame

- Up to 9,216 bytes

802.3x Flow Control

802.3az Energy Efficient Ethernet

VLAN

802.1Q Support

VLAN Group

- Max 4,094 Static VLAN Groups

Voice VLAN

QoS

802.1p Quality of Service

- 8 Queues per Port

Queue Handling

- Strict

- Weighted Round Robin (WRR)

QoS Based on:

- 802.1p Priority

- DSCP

Bandwidth Control

- Port-Based (Ingress/Egress, 64 Kbps~1000 Mbps)

Broadcast/Unknown Multicast/Unknown Unicast Storm Control

Access Control List (ACL)

Layer 2/3

- Supports Maximum 32 Entries (ACL)

- Supports Maximum 256 Entries (ACE)

ACL Based on:

- MAC Address

- VLAN ID

- 802.1p Priority

- Ethertype

- IP Address

- Protocol Type

- DSCP

Security

802.1X

- Guest VLAN

- Port-Based Access Control

Supports RADIUS Authentication

Port Security

- Up to 256 MAC Addresses per Port

Port Isolation

DoS Attack Prevention

BPDU Attack Prevention

Monitoring

Port Statistics

System Log

RMON

Management

Web Graphical User Interface (GUI)

Command Line Interface (CLI)

BootP/DHCP Client/DHCPv6 Client

SSH Server

Telnet Server

TFTP Client

HTTPS

SNMP

- Supports v1/v2c/v3

SNMP Trap

SNTP

Configuration Restore/Backup

Dual Images

Email Alerts

Diagnostic

Cable Diagnostic

Ping Test

Trace Route

Technical Specifications continued

MIB/RFC Standards

RFC1213
 RFC1493
 RFC1757
 RFC2674
 RFC 2863

Wireless Management Features

AP Supported (up to 50 APs in controller mode)
 Access Point Auto Discovery & Provisioning
 Access Point Auto IP-Assignment
 Access Point Group Management
 Remote Access Point Rebooting
 Access Point Device Name Editing
 Access Point Radio Settings
 Band Steering
 Traffic Shaping
 Fast Roaming (802.11k & 802.11r)
 Pre-Authentication (802.11i & 802.11x)
 PMK Caching (802.11i)
 RSSI Threshold
 Access Point Client Limiting
 Client Fingerprinting
 Wireless Security (WEP, WPA/WPA2 Enterprise, WPA/WPA2 PSK)
 AP VLAN Management
 VLANs for Access Point- Multiple SSIDs
 Secured Guest Network
 Capture Portal
 Access Point Status Monitoring
 Rogue AP Detection
 Email Alert
 Wireless Client Monitoring
 Background Scanning
 Wireless Traffic & Usage Statistics
 Real-Time Throughput Monitoring
 SmartSync Redundancy
 Visual Topology View

Wireless Management Features continued

Floor Plan View
 Wireless Coverage Display
 Map View
 Secure Control Messaging
 SSL Certificate
 Local MAC Address Database
 Remote MAC Address Database (RADIUS)
 Unified Configuration Import / Export
 Intelligent Diagnostics
 Bulk Firmware Upgrade Capability
 One-Click Update
 Kick/Ban Clients
 Wi-Fi Scheduler

Environmental & Mechanical

Temperature Range

EWS1200D-10T
 Operating: 32° to 104°F/0° to 40°C

EWS1200-28T / EWS1200-52T

Operating: 32° to 122°F/0° to 50°C

Storage: -40° to 158°F/-40° to 70 °C

Humidity (Non-condensing)

5% - 95%

Dimensions & Weights

Device

EWS1200D-10T

Weight: 1.33 lbs. (.61 kg)
 Width: 9.44" (240 mm)
 Depth: 4.13" (105 mm)
 Height: 1.06" (27 mm)

EWS1200-28T

Weight: 6.6 lbs. (3 kg)
 Width: 17.32" (440 mm)
 Depth: 10.23" (260 mm)
 Height: 1.73" (44 mm)

Device continued

EWS1200-52T

Weight: 8 lbs. (3.68 kg)
 Width: 17.32" (440 mm)
 Depth: 10.23" (260 mm)
 Height: 1.73" (44 mm)

Package Contents

(1) EWS1200 Series GigE Managed Smart Switch
 (1) Quick Installation Guide

EWS1200D-10T

(1) Power Adapter
 (1) Wall-Mount Kit

EWS1200-28T

(1) Power Cord
 (1) Rack Mount Kit

EWS1200-52T

(1) Power Cord
 (1) Rack Mount Kit

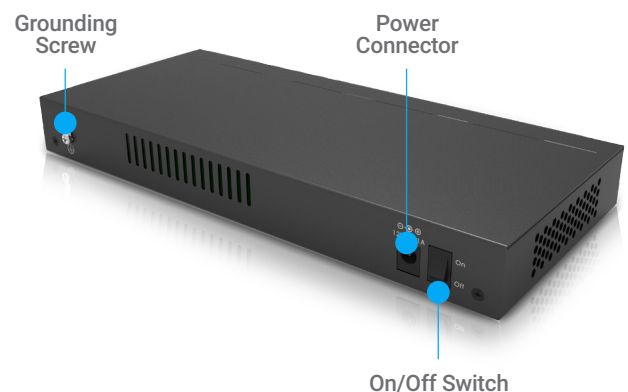
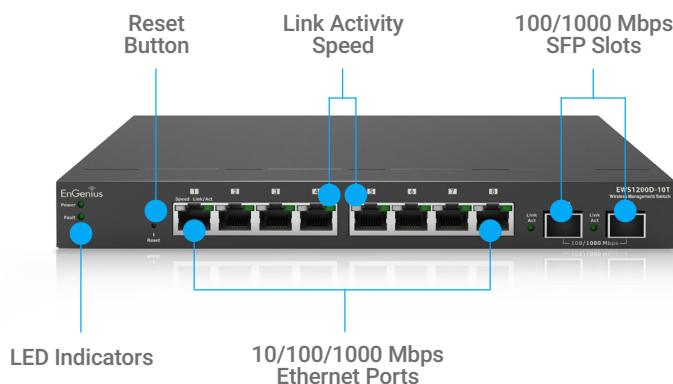
Certifications

CE, FCC

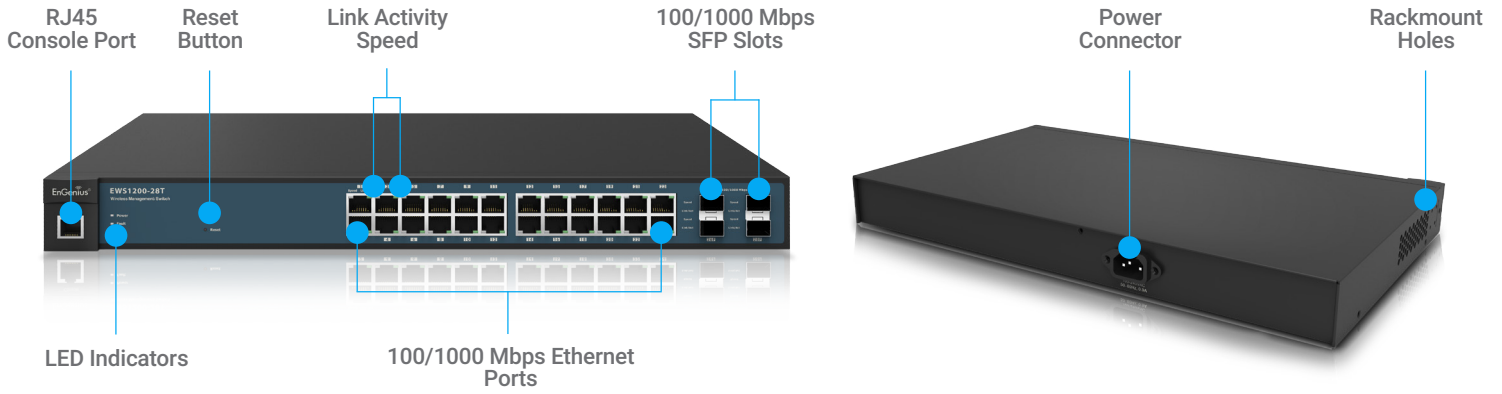
Warranty

1 Year

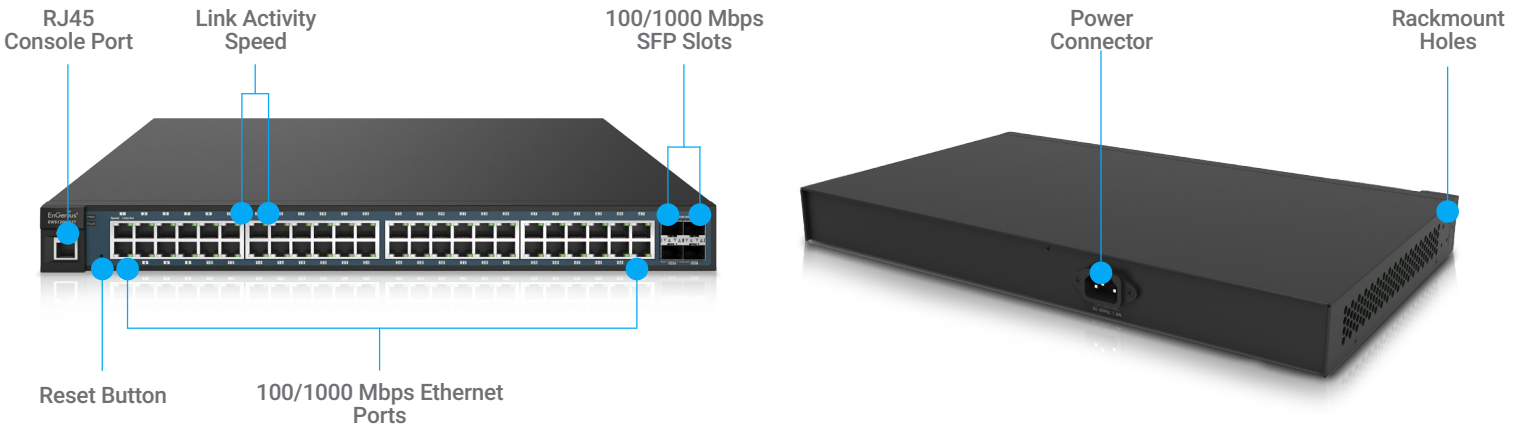
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Maximum data rates are based on IEEE 802.11 standards. Actual throughput and range may vary depending on distance between devices or traffic and bandwidth load in the network.

EnGenius Technologies | 1580 Scenic Ave. Costa Mesa, CA 92626
Email: partners@engeniustech.com | Phone: 888-735-7888 | Website: engeniustech.com

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