



**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™



## 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

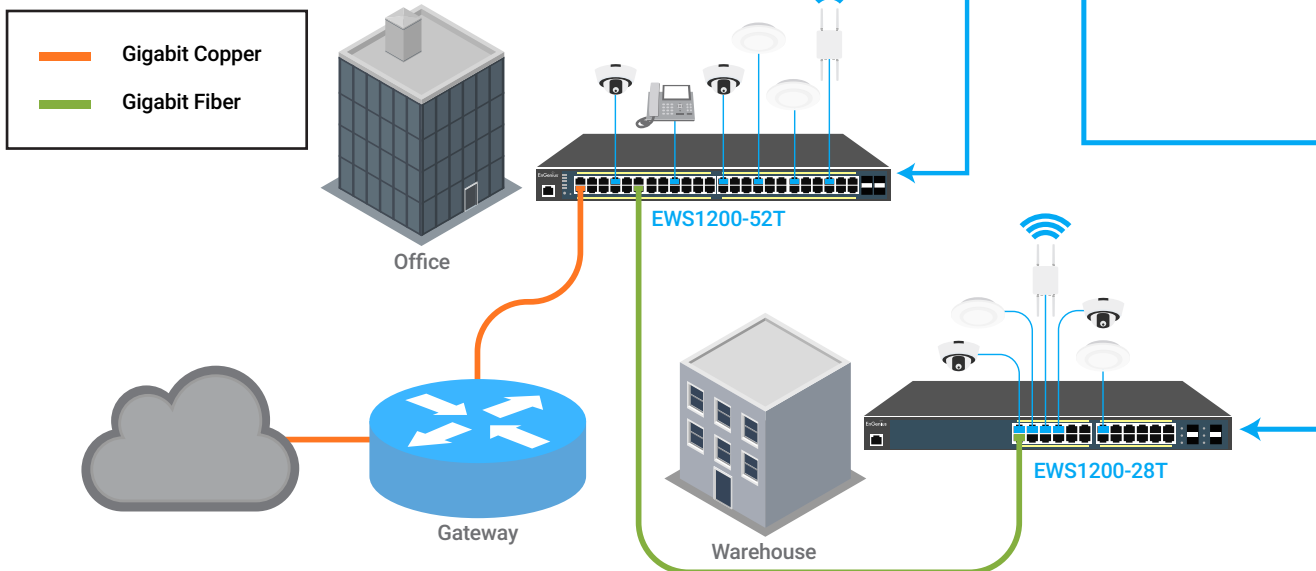
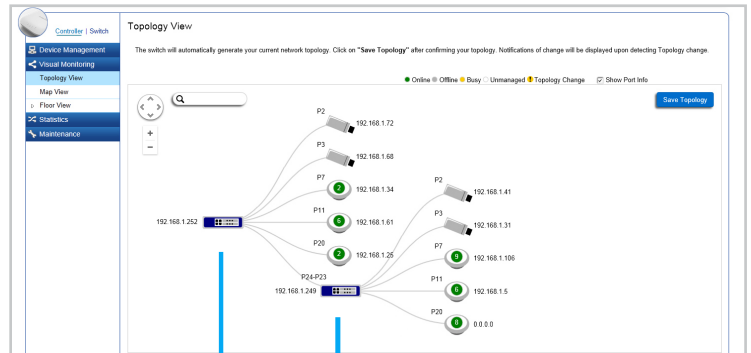
Segment the network by departments or traffic types for increased performance and security with 802.1Q VLAN. Prioritize compliant VoIP and video traffic using 802.1p Class of Service (CoS) ensuring high bandwidth, time-sensitive data is forwarded immediately for clear, smooth voice and video delivery.

### 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.

## 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.



## 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		

# ezMaster™

## Network Management Software

### Flexible Distributed Network Management

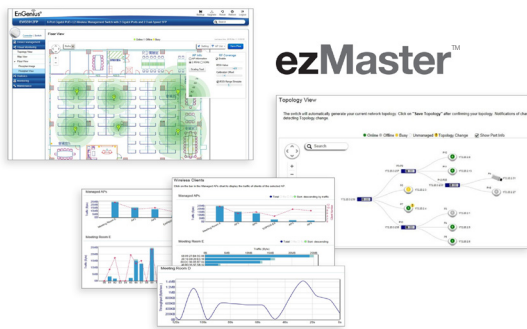
EzMaster Network Management Software expands the flexibility and scalability of Neutron Series EWS Managed Access Points and Switches.

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

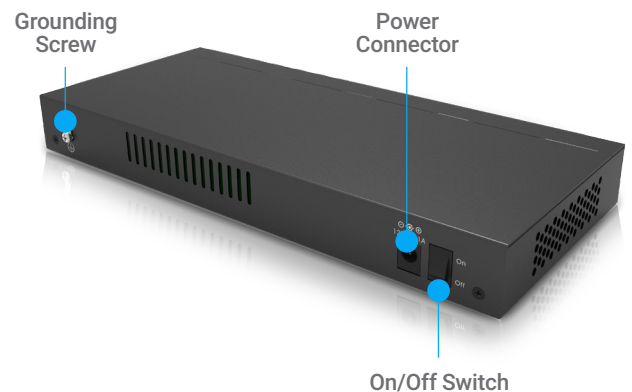
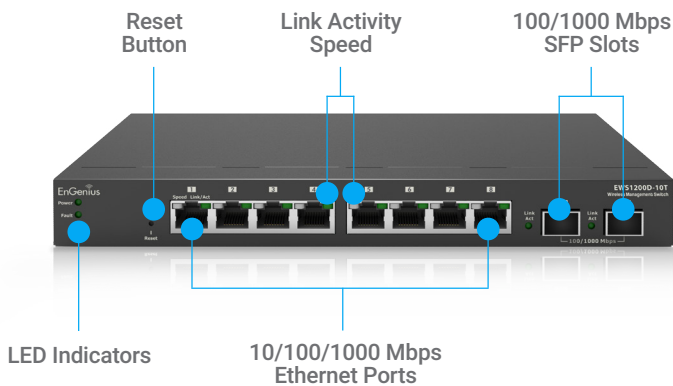
### Certifications

CE, FCC

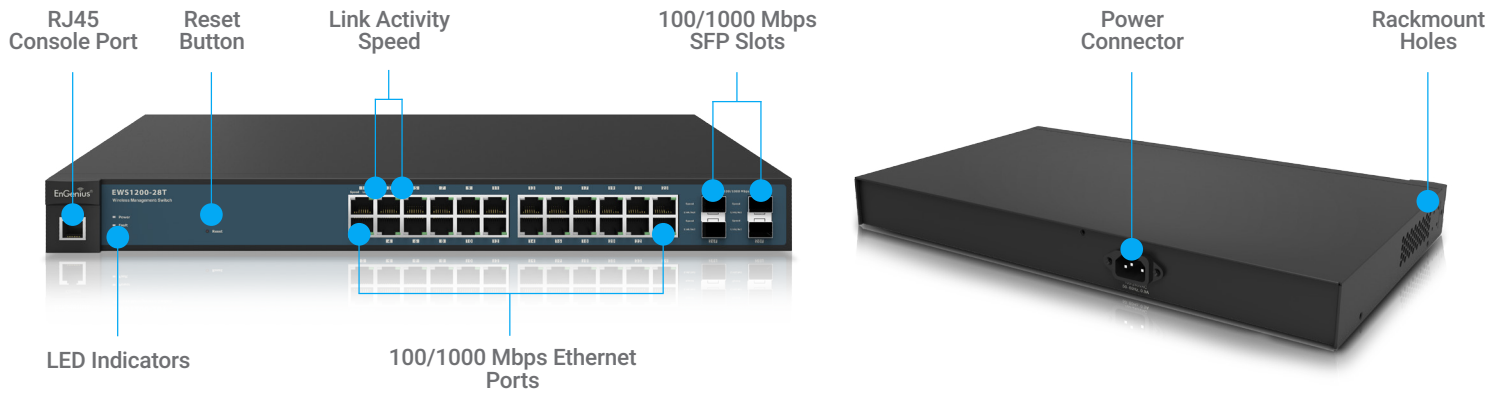
### Warranty

1 Year

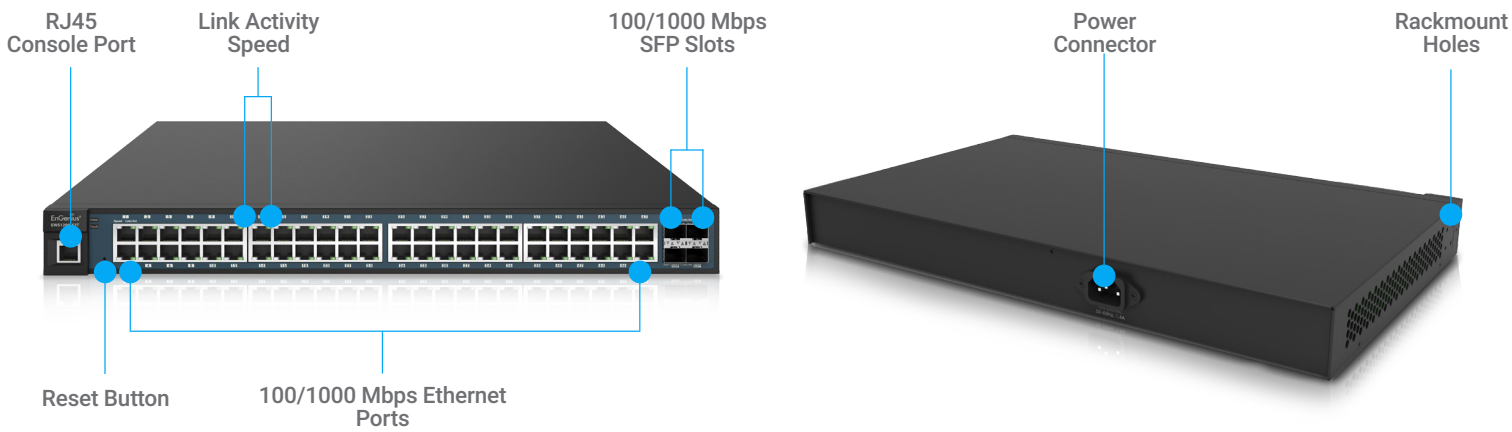
## EWS1200D-10T



## EWS1200-28T



## EWS1200-52T



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. Transmission Power (Tx Power) is subject to local regulation; Actual Tx Power may be different than stated following local regulation.

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