EnGenius® ADVICE

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)

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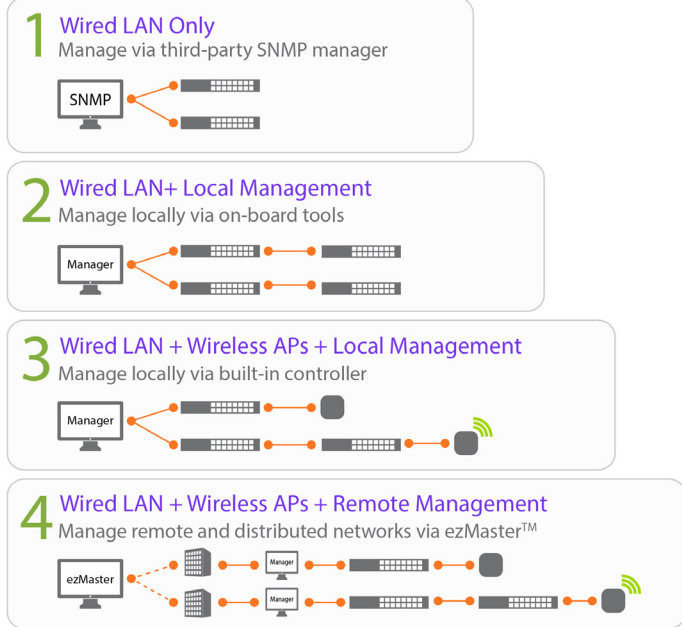
Whether installed in small or mid-size organizations such as medical offices, warehouses, or large homes, the Smart Switch's design and easy-to-use interface enables effortless and efficient deployment and operation. Organizations with limited IT support and budgets can create a reliable, efficiently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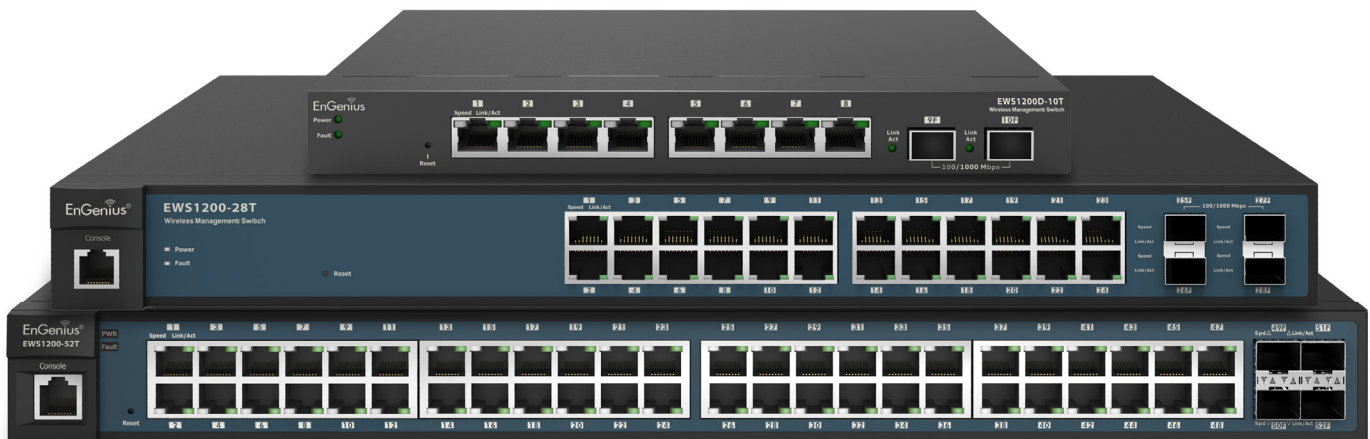
High Performance Gigabit & Management Flexibility

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

SNMP

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

Manager

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

Manager

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

ezMaster   Manager   Manager

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.

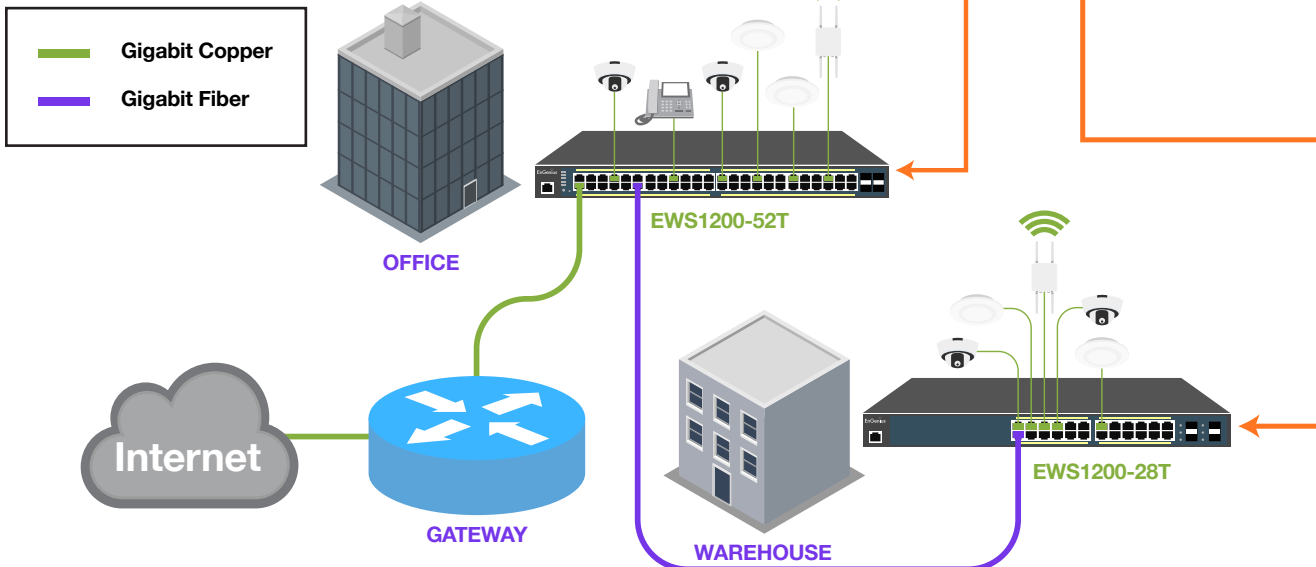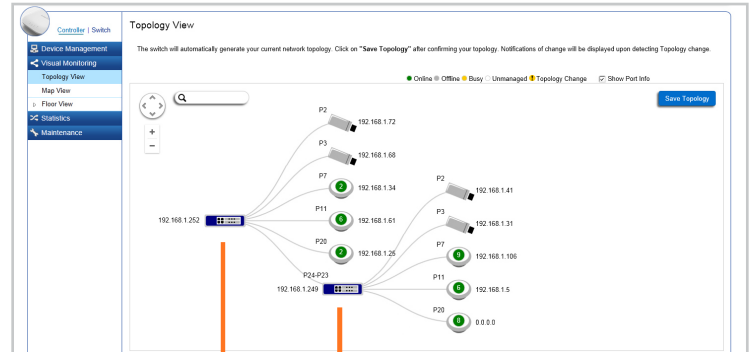# Centrally Manage the Wired & Wireless Network

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.

Gigabit Copper
Gigabit Fiber

OFFICE

EWS1200-52T

Internet

GATEWAY

WAREHOUSE

EWS1200-28T

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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	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 10000Base-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		

Model	Description
EWS1200-52T	48-Port Gigabit Layer 2 Managed Smart Switch w/ WLAN Controller - Manage up to 50 Access Points
EWS1200-28T	24-Port Gigabit Layer 2 Managed Smart Switch w/ WLAN Controller - Manage up to 50 Access Points
EWS1200D-10T	8-Port Gigabit Layer 2 Managed Smart Switch w/ WLAN Controller - Manage up to 50 Access Points

Advice Building,16 Atir Yeda St., Kfar Saba, 4464321, Israel •Tel:+972-3-9000990• advicecom@advicecom.co.il• www.advice.co.il

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ezMaster™
Network Management Software

## Flexible Distributed Network Management

EzMaster Network Management Software expands the flexibility and scalability of Neutron Series 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 EWS APs, and 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 WLAN 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 EWS APs, Switches and ezMaster provide a flexible, fully integrated solution with redundancy support and future expandability for broader device connectivity.
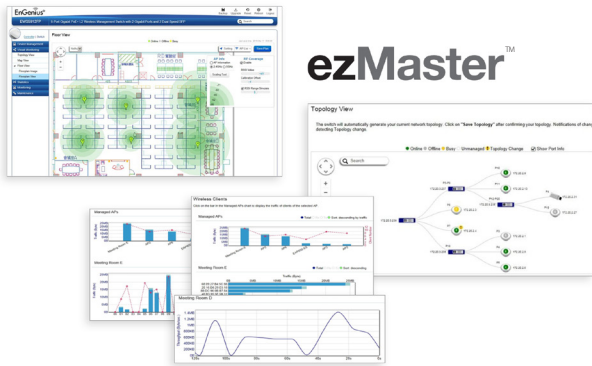
System Requirements

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 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

Address Database Size: 8,000 MAC Addresses

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

Power Source continued

EWS1200-28T
Full Load Power Consumption: 24.48W
30W Internal Power

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

QoS continued
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
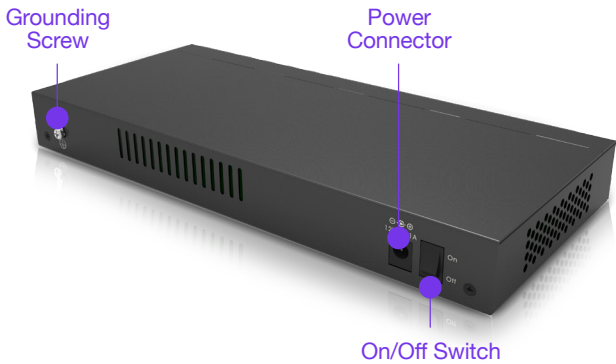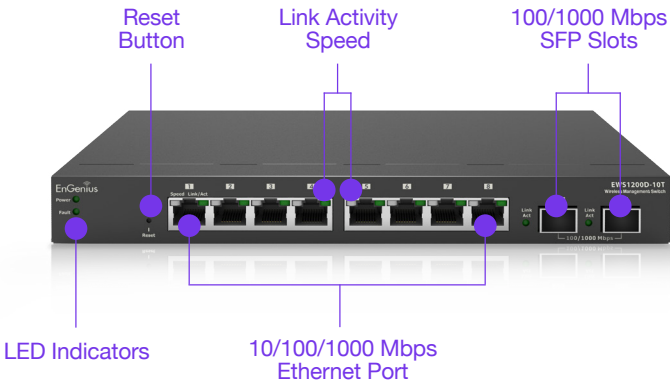Cable Diagnostic
Ping Test
Trace Route

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 Handover

Fast Roaming

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

Visual Topology View

Floor Plan View

Wireless Coverage Display

Map View
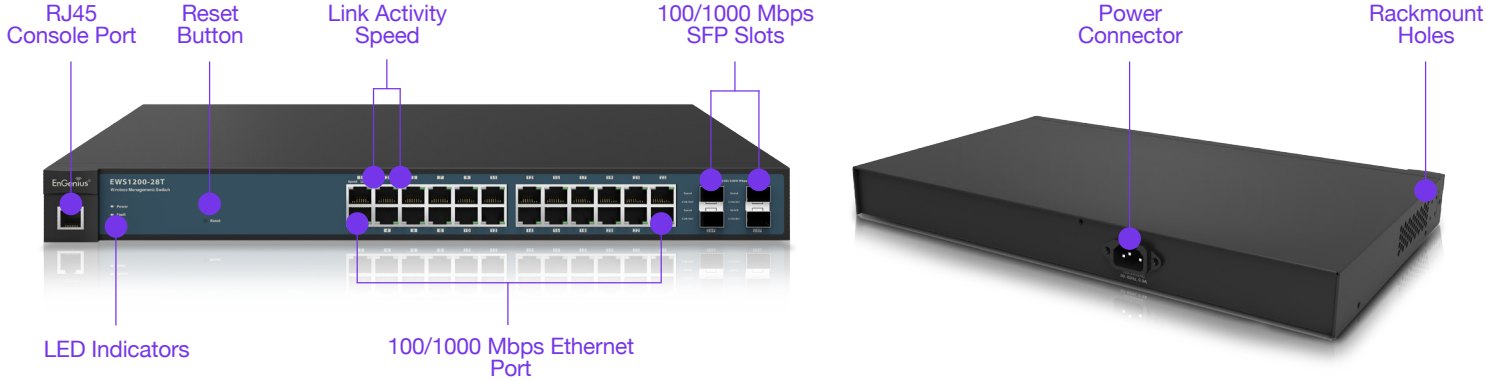
Secure Control Messaging

Wireless Management Features continued

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

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)

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

Warranty

1 Year

Certifications

CE, FCC

EWS1200D-10T

Reset Button · Link Activity Speed · 100/1000 Mbps SFP Slots · Grounding Screw · Power Connector · LED Indicators · 10/100/1000 Mbps Ethernet Port · On/Off Switch

EWS1200-28T

RJ45 Console Port

Reset Button

Link Activity Speed

100/1000 Mbps SFP Slots

Power Connector

Rackmount Holes

LED Indicators

100/1000 Mbps Ethernet Port

EWS1200-52T

RJ45 Console Port

Link Activity Speed

100/1000 Mbps SFP Slots

Power Connector

Rackmount Holes

Reset Button

100/1000 Mbps Ethernet Port