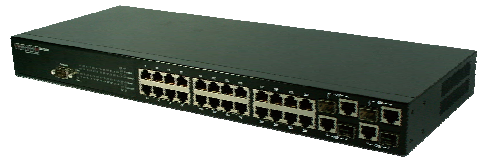


ES3528M/ES3552M

L2 Fast Ethernet Switch with IP Clustering



Product Overview

The Edge-Core ES3528M/ ES3552M is a Fast Ethernet Layer 2/4 Stackable switch featuring 28 or 52 ports; 24 or 48 10/100 RJ-45 ports, 4 combo Gigabit Ethernet RJ-45/SFP ports.

It is ideal for desktop Fast Ethernet connectivity and wiring closet installations for growing small medium businesses and campuses. Using IP Clustering for a virtual stack of up to 36 switches. The whole stack can be managed as a single entity with a single IP address. This switch is packed with features and is a cost-effective solution that brings continuous availability, enhanced security and advanced QoS to the network edge, while maintaining simplicity of management.

Key Features and Benefits

Performance and Scalability

The ES3528M/ES3552M delivers Wire-speed and Non-blocking switching performance on all ports.

The ES3528M/ES3552M can use single IP to stack up to 36 units. This technology provides some of the benefits of stackable switches without requiring direct stacking or connections between switch units.

Four Gigabit Ethernet combo ports allow uplink flexibility for copper or fiber use.

Various optional Gigabit Ethernet mini-GBIC transceivers can be chosen for different distance fiber uplinks.

Continuous Availability

IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence, ensuring faster recovery from failed links, enhancing overall network stability and reliability.

IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and providing load balancing and fault tolerance for uplink connections.

IGMP snooping prevents flooding of IP multicast traffic, and limits bandwidth intensive video traffic to only the subscribers.

Multicast VLAN Registration (MVR) provides the ability to continuously send multicast streams in the multicast VLAN, but to isolate the streams from the subscriber VLANs for bandwidth and security reasons.

Comprehensive QoS

4 egress queues per port enable differentiated management of up to 4 traffic types. Traffic is prioritized according to 802.1p and DSCP giving optimal performance to real-time applications such as voice and video.

Asymmetric bidirectional rate-limiting, per port or per traffic class, preserves network bandwidth and allows maximum control of network resources.

Enhanced Security

Port Security ensures access to a switch port based on MAC address, Filter or limits the total number of devices from using a switch port and protects from MAC flooding attacks.

IEEE 802.1X port-based access control (login) ensures all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server.

Access Control Lists (ACLs) restrict access to sensitive network resources by denying packets based on source and destination MAC addresses, IP addresses and TCP/UDP ports. This is done by hardware, so switching performance is not compromised.

Security Shell (SSH) and Secure Sockets Layer (SSL/HTTPS) encrypt network management information via Telnet and web, providing secure network management.

TACACS+/RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

Private VLAN isolates edge ports to ensure user privacy.

Simple Management

Industry standard Command Line Interface (CLI) via console port or Telnet provides a common user interface and command set for users to manipulate the switch.

Embedded user friendly web interface helps users quickly and simply configure switches.

Four groups of RMON are supported for traffic management, monitoring and analysis.

When upgrading firmware or fine tuning configurations, the dual software images and multiple configuration files can be used for back up.

TFTP can be used to backup and restore firmware and configuration files.



Features

Physical Ports

- 24 or 48 10/100Base-T auto-sensing ports
- 4 Combo G (RJ-45/SFP SX/LX/LHX/ZX) ports
- 1 RS-232 DB-9 console port

Performance

- Switching Capacity: 12.8Gbps(ES3528M)/17.6Gbps(ES3552M)
- Forwarding Rate: 9.5Mpps(ES3528M)/13.1Mpps(ES3552M)
- MAC Address Table Size: 8K
- Packet Buffer: 5Mb(ES3528M), 8Mb(ES3552M)

L2 Features

- Auto-negotiation for port speed and duplex mode
- All ports can be edited/named/configured by software commands
- Flow Control:
 - IEEE 802.3x for full duplex mode
 - Back-Pressure for half duplex mode
 - Store & Forward switching methods
- Spanning Tree Protocol:
 - IEEE 802.1D Spanning Tree Protocol (STP)
 - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
 - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)*
 - GVRP*
- VLANs:
 - Supports 255 IEEE 802.1Q VLANs
 - Port-based VLANs
 - Private VLAN (Community)
 - IEEE 802.1v Protocol VLAN
 - Supports VLAN Tagging
 - MVR (Multicast VLAN Registration)
 - QinQ*
- Link Aggregation:
 - Static Trunk
 - IEEE 802.3ad Link Aggregation Control Protocol
 - Maximum Trunk groups:
 - 6, Trunk links: 2-8 for Fast Ethernet port; 2-4 for Gigabit ports
- IGMP Snooping:
 - IGMP v1 and v2 snooping
 - IGMP Querier
 - IGMP Immediate Leave
 - Supports jumbo frames up to 10KB (for Gigabit port)
 - Port Mirroring: 1:N

QoS Features

- Priority Queues: 4 queues per port
- Traffic classification based on IEEE 802.1p CoS and DSCP, Access Control List(ACL) Supports WRR and Strict scheduling
- Bandwidth Control:
 - Egress rate limiting: 64Kbps~100Mbps granularity; resolution: 64Kbps
 - Ingress rate limiting: 64Kbps~100Mbps granularity; resolution: 64Kbps
 - DiffServ
- Broadcast Storm Control prevents faulty end stations from degrading overall system performance.

Security

- Supports IEEE 802.1X port-based access control with automatic VLAN assignment based on user-profile
- Access Control Lists
- RADIUS authentication
- TACACS+/TACACS+ 3.0 authentication
- SSH (v1.5/v2.0) for telnet management sessions
- SSL for Web management sessions
- User name and password authentication
- IP Source Guard

Management

- Support IP Clustering up to 36 units
- Switch Management and monitoring:
 - CLI via console port (async terminal) or Telnet
 - WEB management
 - SNMP v1, v2c, v3
- Firmware & Configuration:
 - Dual firmware images
 - Firmware upgrade via TFTP server
 - Multiple configuration files
 - Configuration file uploaded/downloaded via TFTP server
 - Configuration file stored in Flash Memory
 - Local and/or remote configurations
- Supports RMON (groups 1, 2, 3 and 9)
- Supports MIB II and Private MIB
- Supports BOOTP
- Support DHCP:
 - Client
 - Snooping
 - Option 82 Relay
- Supports SNTP
- Event/Error Log Internally in Flash Memory, or sends it to a Syslog Server

Mechanical

- Dimensions (H x W x D): 43 x 440 x 171 mm (1RU)19"rack-mount metal case
- Weight: 2.005Kg (4.42lbs)
- LED Indicators: Power, Diagnostic, Link/Act, 1000M

Safety

- CSA/NRTL (UL1950, CSA 22.2.9.50)
- TUV/GS (EN60950)

Electromagnetic Compatibility

- CE Mark
- FCC Class A
- VCCI Class A
- CISPR Class A

Environmental Specifications

- Temperature:
 - IEC 68-2-14
 - 0°C to 45°C (Standard Operating)
 - 40°C to 70°C (Non-Operating)
- Humidity: 10% to 90% (Non-condensing)
- Vibration: IEC 68-2-36, IEC 68-2-6
- Shock: IEC 68-2-29
- Drop: IEC 68-2-32
- Power Specification: 100-240V / 50/60 Hz
- Max. Power Consumption: 30W

Warranty

- Limited lifetime warranty

* Future upgradeable

Ordering Information

Optional Accessories

- ET4201-SX
- ET4201-LX
- ET4201-LHX
- ET4201-ZX

ECview

Product Description

- Small Form Factor Pluggable (Distance: 500m; Wavelength: 850nm)
- Small Form Factor Pluggable (Distance: 10km; Wavelength: 1310nm)
- Small Form Factor Pluggable (Distance: 40km; Wavelength: 1310nm)
- Small Form Factor Pluggable (Distance: 80km; Wavelength: 1550nm)

SNMP Network Management Software