

## ES3552M

### L2/4 Fast Ethernet Standalone Switch



#### Product Overview

The Edge-Core ES3552M is a Fast Ethernet Layer 2/4 switch featuring 52 ports; 48 100Base-TX ports and 4 combo Gigabit Ethernet RJ-45/SFP (Small Form Factor Pluggable) ports. It is ideal for desktop Fast Ethernet connectivity and wiring closet installations. 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

With 12.8 Gbps switching capacity, the ES3552M delivers wire-speed switching performance on all gigabit ports, allowing users to take full advantage of existing high-performance, gigabit integrated Servers, PCs and laptops by significantly improving the responsiveness of applications and file transfer times.

There are four Gigabit Ethernet combo ports for uplink flexibility, allowing copper or fiber uplinks.

##### High Availability

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

IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing on redundant links.

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.

Broadcast Storm Control prevents faulty end stations from degrading overall system performance.

Optional Redundant Power Supply provides uninterrupted power.

##### 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 allowing maximum control of network resources.

##### Enhanced Security

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

IEEE 802.1x port-based or MAC-based access control 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) can be used to restrict access to sensitive network resources by denying packets based on source and destination MAC addresses, IP addresses, 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.

##### Simplified 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 configuration, the dual software images and multiple configuration files can be used for backup.

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



## Features

### Physical Ports

48100Base-TX ports  
4 Combo Gigabit (RJ-45/SFP) ports  
1 RS-232 DB-9 console port

### Performance

Switching Capability: 17.6Gbps  
Packet Buffer Size: 1Mbits  
MAC Address Table: 8K

### L2 Features

Auto-negotiation for port speed and duplex mode

Flow Control:

IEEE 802.3x for full duplex mode  
Back-Pressure for half duplex mode

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)  
Loop Back Detection  
BPDU Guard  
BPDU Filter  
Root Guard  
Auto Edge

VLANs:

Supports 255 IEEE 802.1Q VLANs  
Port-based VLANs  
IEEE 802.1v Protocol-based VLANs  
Private VLAN  
GVRP

Link Aggregation:

Static Trunk  
IEEE 802.3ad Link Aggregation Control Protocol  
Trunk groups: 4, Trunk links: 2~8

IGMP Snooping:

IGMP v1/v2/v3\* snooping  
IGMP Queried  
IGMP Filtering

MVR (Multicast VLAN Registration)

DHCP Option 82

DHCP Dynamic provision

Supports jumbo frames up to 10KB

### QoS Features

Priority Queues: 4 hardware queues per port

Traffic classification based on IEEE 802.1p CoS, IP and DSCP.

Supports WRR and Strict scheduling

Bandwidth Control:

Egress rate limiting: FE: 64K bits/sec ~ 100M bits/sec GE: 64K bits/sec ~ 100M bits/sec  
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### Security

Supports IEEE 802.1X port based/MAC-based access control

QoS assignment

RADIUS authentication

IP Source Guard

Dynamic ARP Inspection

Link Detection

MAC Filter

TACACS+ 3.0

Access Control List

SSH (v1.5/v2.0)

SSL

### Management

Switch Management:

CLI via console port or Telnet  
WEB management  
SNMP v1, v2c, v3

Firmware & Configuration:

Dual firmware images  
Firmware upgrade via TFTP server  
Multiple configuration files  
Configuration file upload/download via TFTP server

Auto Upgrade via TFTP server

Supports RMON (groups 1, 2, 3 and 9)

Supports BOOTP, DHCP for IP address assignment

Supports SNTP

Event/Error Log/Syslog

**(Optional)** ECview is a powerful network management system that maximizes the capabilities of Edge-Core devices with:

Topology Management  
Performance Management  
Configuration Management  
Event Management  
SNMP Management

Dynamic APR Inspection

sFlow

MAC Based Mirror

ATC

Delay Reload

### SNMP Standards

RFC 1493 Bridge MIB  
RFC 3289 Differentiated Service MIB  
RFC 2742 SNMP Agents MIB  
RFC 2096 Forwarding Table MIB  
RFC 2933 IGMP MIB  
RFC 2233 Interface Group MIB  
RFC 2668 MAU MIB  
RFC 1213 MIB II  
RFC 2621 RADIUS Authentication Client MIB  
RFC 2819 RMON MIB  
RFC 2021 RMON II Probe Configuration Group  
RFC 2011 SNMPv2 IP MIB  
RFC 3584 SNMP Community MIB  
RFC 3411 SNMP Framework MIB  
RFC 3412 SNMP-MPD MIB  
RFC 3413 SNMP Target MIB, SNMP Notification MIB  
RFC 3414 SNMP User-Based SM MIB  
RFC 3415 SNMP View Based ACM MIB  
RFC 2013 TCP MIB  
RFC 1215 Trap  
RFC 2012 UDP MIB  
RFC 2013 TCP MIB  
RFC 1541 DHCP Client  
RFC 1112 IGMP  
RFC 2236 IGMPv2  
RFC 2618 RADIUS  
RFC 1757 RMON  
RFC 1157 SNMP  
RFC 2571 SNMPv2  
RFC 2030 SNTP  
RFC 1350 TFTP  
TACACS Authentication Client MIB  
Private MIB  
Quality of Service MIB

## Ordering Information

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



## Features

### IEEE Standards

IEEE 802.1D Spanning Tree Protocol and traffic priorities  
IEEE 802.1 w Rapid Spanning Tree Protocol  
IEEE 802.1p Priority tags  
IEEE 802.1Q VLAN  
IEEE 802.1v Protocol-based VLANs  
IEEE 802.1x Port Authentication  
IEEE 802.3-2005  
Ethernet, Fast Ethernet, Gigabit Ethernet  
Full-Duplex flow control  
Link Aggregation Control Protocol  
IEEE 802.3ac VLAN tagging

### Mechanical

Dimensions (H x W x D): 4.3 x 44 x 23 cm (1RU)  
LED Indicators: Port, Uplink, System, Diagnostic  
Weight: 2.9kg

### 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

### Warranty

Limited lifetime warranty

## Ordering Information

### Optional Accessories

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

ECview

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SNMP Network Management Software