Edge-corE
Powered by Accton

ES3510MA

L2 Fast Ethernet Standalone Switch

with IP Stacking

Product Overview

The Edge-Core ES3510MA is a high-performance Fast Ethernet Layer 2/4 switch featuring 10 ports; 8 10/100 ports and 2 combo Gigabit Ethernet RJ-45/SFP (Small Form Factor Pluggable , SFP with dual speed 100Base-X/1GBase-X) 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.

Enterprise Solution

Key Features and Benefits

Performance and Scalability

It's a great entry level managed with 5.6Gbps switching capacity delivers wire-speed switching performance to take full advantage of existing high-performance on PCs and laptops by significantly improving the responsiveness of applications and file transfer times .

The device also has two Gigabit Ethernet combo ports for uplink flexibility, allowing copper or fiber uplinks port for high speed uplinks to servers or backbones. .

Continuous 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 up to 8 instances.

Multicast VLAN Registration (MVR) is designed for applications such as Media-on-Demand is using multicast traffic across an Ethernet network.

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

The voice VLAN feature enables access ports to carry IP voice traffic from an IP phone.

The IEEE 802.1Q-in-Q VLAN Tag is purpose to expand the VLAN space by tagging the tagged packets,.

Comprehensive QoS

Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number, 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 dynamic VLAN assignment with RADIUS server by guest VLAN.

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 (SSHv1.5/v2.0) and Secure Sockets Layer (SSL/HTTPS) encrypt network management information via Telnet and web, providing secure network management.

TACACS+3.0 Authentication for applications such as network access or IP mobility 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.

IP Source Guard is enabled on a trunk port with a large number of VLANs that have DHCP snooping enabled, you might run out of ACL

DHCP snooping provides security by filtering un-trusted DHCP messages and by building and maintaining a DHCP snooping binding table

DHCP Option 82 is feature has a device add information to client TCP/IP configuration requests that it relays to a DHCP server.

ES3510MA Product Specifications

Features

Physical Ports

8 RJ-45 10/100Base-T ports
2 Combo Gigabit (RJ-45/SFP) ports
(Both SFP ports support dual speed 100Base-FX/BX and 1GBase-SX/LX/ZX)
1 RS-232 DB-9 console port

Performance

Switching Capability: 5.6Gbps
Packet Buffer Size: 2Mb
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)

VLANs:
- Supports 255 IEEE 802.1Q VLANs
- Port-based VLANs
- IEEE 802.1v Protocol-based VLANs*
- Private VLAN
- GVRP
- Supports QinQ
- Support Voice VLANs *

Link Aggregation:
- Static Trunk
- IEEE 802.3ad Link Aggregation Control Protocol
- Trunk groups: 5, Trunk links: 2~8

IGMP Snooping:
- IGMP v1/v2/v3 snooping
- IGMP Querier and Filtering

MVR (Multicast VLAN Registration)
Supports jumbo frames up to 9KB

IPv6 Features

IPv4/IPv6 Dual Protocol stack
IPv6 Address Types Stack: Unicast
IPv6 Neighbor Discovery
SNMP over IPv6
HTTP over IPv6
Remote IPv6 ping

QoS Features

Priority Queues: 4 hardware queues per port
Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP, TCP/UDP port number
Supports WRR and Strict scheduling
Rate Limiting (Ingress and Egress, per port base)
- FE: Resolution 64Kbps ~ 100Mbps
- GE: Resolution 64Kbps ~ 1000Mbps

Security

Port security
Supports IEEE 802.1X port based and MAC access control
Dynamic VLAN Assignment, Auto QoS, Auto ACL
MAC based authentication, Web authentication
Voice VLAN, Guest VLAN
RADIUS authentication
TACACS + authorization and accounting
TACACS+ 3.0
L2/L3/L4 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:
- Firmware upgrade via TFTP server
- Multiple configuration files
- Configuration file upload/download via TFTP server

Supports RMON (groups 1, 2, 3 and 9)
Supports BOOTP, DHCP client for IP address assignment
Supports DHCP Option 82, DHCP Snooping
Supports SNTP
Event/Error Log/Syslog, SMTP
Supports LLDP (802.1ab), UPnP
Support IP Source Guard
(Optional) ECview, a powerful network management software that maximizes the managed capabilities of Edge-Core devices with:
- Topology Management
- Performance Management
- Configuration Management
- Event Management
- SNMP Management

Mechanical

Dimensions (W x D x H): 195 mm x 115 mm x 36 mm (Smaller Form Factor)
Weight : 900 g
LED Indicators: Port, Uplink, System, Diagnostic

Safety

cUL(CSA 22.2. NO 60950-1 & UL60950-1)
CB(IEC60950-1)

Electromagnetic Compatibility

CE Mark
FCC Class A
VCCI Class A
CISPR Class A

Environmental Specifications

Temperature:
- IEC 68-2-14
- 0℃ to 50℃ (Standard Operating)
- -40℃ to 70℃ (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 Supply

AC Power code
- 100 to 240 V, 50-60 Hz, 0.8A

Power Supply
- Internal, auto-ranging transformer: 100 to 240 VAC, 50 to 60 Hz

Power Consumption
- 13.2 Watts maximum

Warranty

Limited lifetime warranty

Ordering Information

Optional Accessories	Product Description
ET3203-BX20	100Mbps, Small Form Factor Pluggable (Distance: 20km; Wavelength: RX:1550nm/ TX:1310nm)
ET4201-SX	1Gbps, Small Form Factor Pluggable (Distance: 500m; Wavelength: 850nm)
ET4201-LX	1Gbps, Small Form Factor Pluggable (Distance: 10km; Wavelength: 1310nm)
ET4201-LHX	1Gbps, Small Form Factor Pluggable (Distance: 40km; Wavelength: 1310nm)
ET4201-ZX	1Gbps, Small Form Factor Pluggable (Distance: 80km; Wavelength: 1550nm)
ECview	SNMP Network Management Software

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* Future Release