Edge-corE
Powered by Accton

ES3510

L2 Fast Ethernet Standalone Switch

with IP Stacking

Product Overview

The Edge-Core ES3510 is a 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) ports. It is ideal for desktop Fast Ethernet Wire Speed and Non-Blocking 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 5.6Gbps switching capacity, the ES3510 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.

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.

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, 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 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 (SSHv1.5/v2.0) 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 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.

Enterprise Solution

ES3510 Product Specifications

Features

Physical Ports

8 RJ-45 10/100Base-T ports
2 Combo Gigabit (RJ-45/SFP) ports
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
- Store & Forward switching methods
- 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 VLAN Tagging
- Port-based and MAC-based VLANs(*)
- IEEE 802.1v Protocol-based VLANs
- Private VLAN
- GVRP
- Supports QinQ

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 Queried

MVR (Multicast VLAN Registration)
DHCP Option 82
Supports jumbo frames up to 9KB

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 8Kb/s ~ 8Mb/s for total 128 levels
- GE: Resolution 8Kb/s ~ 8Mb/s for total 128 levels

Security

Supports IEEE 802.1X port based access control
RADIUS authentication
TACACS
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

Supports RMON (groups 1, 2, 3 and 9)
Supports BOOTP, DHCP for IP address assignment
Supports SNTP
- Topology Management
- Performance Management
- Configuration Management
- Event Management
- SNMP Management
- DHCP Option 82

Mechanical

Dimensions (W x D x H): 330mm x 204mm x 43.6mm (1RU)
19" by Rack-mount kit
LED Indicators: Port, Uplink, System, Diagnostic

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℃ 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

Warranty

Limited lifetime warranty

Ordering Information

Optional Accessories	Product Description
ET4201-SX	Small Form Factor Pluggable (Distance: 500m; Wavelength: 850nm)
ET4201-LX	Small Form Factor Pluggable (Distance: 10km; Wavelength: 1310nm)
ET4201-LHX	Small Form Factor Pluggable (Distance: 40km; Wavelength: 1310nm)
ET4201-ZX	Small Form Factor Pluggable (Distance: 80km; Wavelength: 1550nm)
	SNMP Network Management Software

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* Feature Release