



# **ES4324**

# **L2 Gigabit Ethernet Web Smart Switch**



#### **Product Overview**

The Edge-Core ES4324 is Gigabit Ethernet Layer 2 switch featuring 20 RJ-45 10/100/1000 ports and 4 combo Gigabit Ethernet RJ-45/SFP ports.

This switch enables networks of all sizes to introduce Gigabit Ethernet with management features targeted to meet the needs of the SMB network, and Gigabit to the desktop for power users. It is packed with features and is a cost-effective solution that brings continuous availability, QoS priority queuing with classification and prioritization at Layer2.

## **Key Features and Benefits**

### **Performance and Scalability**

With 48Gbps switching capacity, the ES4324 delivers wirespeed 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 loopfree 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 802.3ad 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.

IEEE 802.1Q-in-Q VLAN Tag is purpose to expand the VLAN space by tagging the tagged packets, thus producing a "double-tagged" frame. The expanded VLAN space allows the service provider to provide certain services, such as Internet access on specific VLANs for specific customers, and yet still allows the service provider to provide other types of services for their other customers on other VLANs.

#### Comprehensive QoS

4 egress queues per port enable differentiated management of up to 4 traffic types.

Traffic is prioritized according to 802.1p, 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 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.

### Simple Management

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

It's also supports SNMP v1/v2c to be managed and control SNMP network station.

# **ES4324 Product Specifications**

#### **Features**

### **Physical Ports**

20 RJ-45 10/100/1000Base-T ports 4 Combo G (RJ-45/SFP) ports

### **Performance**

Switching Capability: 48Gbps Forwarding Rate: 35.7Mpps MAC Address Table Size: 8K Packet Buffer Size: 400 KB

## 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)

VLANs:

Supports 255 IEEE 802.1Q VLANs

Port-based VLANs

Link Aggregation:

Static Trunk

IEEE 802.3ad Link Aggregation Control Protocol

Trunk groups: 8, Trunk links: 2~8

IGMP Snooping:

IGMP v1, v2 and v3 snooping

IGMP Queried

Supports QinQ

Supports jumbo frames up to 9.6KB

## **QoS Features**

Priority Queues: 4 hardware queues per port

Traffic classification based on IEEE 802.1p CoS, DSCP

Supports WRR and Strict scheduling

Bandwidth Control:

Egress rate limiting:

128Kbps/1Mbps/10Mbps/30Mbps/100Mbps granularity

Ingress rate limiting:

128Kbps/1Mbps/10Mbps/30Mbps/100Mbps granularity

### Security

Supports IEEE 802.1X port-based access control Access Control List

IP Filter

#### Management

Switch Management:

WEB management

SNMP v1, v2c

Firmware & Configuration:

Firmware upgrade via WEB

Supports RMON (groups 1)

(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

### Mechanical

Dimensions (H x W x D): 4.4 x 44 x 17cm(1RU) LED Indicators: Port, Link/Activity, 1000Mbps

### Safety

CSA/NRTL (UL60950, CSA 22.2. NO60950-1)

TUV/GS (EN60950-1)

CB(IEC60950-1)

### **Electromagnetic Compatibility**

CE Mark

FCC Class A

VCCI Class A

### **Environmental Specifications**

Temperature:

IEC 68-2-14

0°C to 40°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

Three years warranty

## Ordering Information

### **Optional Accessories**

FT4201-SX ET4201-LX ET4201-LHX

ET4201-ZX

**FCView** 

### **Product Description**

1Gbps, Small Form Factor Pluggable (Distance: 500m; Wavelength: 850nm)

1Gbps, Small Form Factor Pluggable (Distance: 10km; Wavelength: 1310nm)

1Gbps, Small Form Factor Pluggable (Distance: 40km; Wavelength: 1310nm)

1Gbps, Small Form Factor Pluggable (Distance: 80km; Wavelength: 1550nm)

SNMP Network Management Software

\* Feature Release