

## ES4626/ES4650

### L3 Gigabit Ethernet Switch



#### Product Overview

The Edge-Core ES4626 and ES4650 are Gigabit Ethernet Layer 3 switches with 20 or 44 10/100/1000 RJ-45 ports, 4 combo Gigabit Ethernet RJ-45/SFP ports and 2 slots for an optional 10GE module. The ES4626/ ES4650 is ideal for aggregating servers in the distribution layer of three-tier networks, providing high performance, wire speed L2 switching and L3 routing. It is also an excellent choice as a small enterprise core switch for Gigabit to the Desktop migration.

#### Key Features and Benefits

##### Performance and Scalability

The ES4626/ES4650 provides 2 optional 10 Gigabit Ethernet module for 10G uplink to fulfill any bandwidth-eager customer.

Optional 10 Gigabit Ethernet XFP transceivers can be chosen for different distance fiber uplinks.

IP stacking is up to 36 switches virtual stacking together. The Management Station communicates directly with the Commander via the unique IP address of the switch cluster. This technology provides some of the benefits of stackable switches without requiring direct stacking or connections between switch units.

##### Continuous Availability

IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence.

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.

Optional Redundant Power Supply provides uninterrupted power.

##### Comprehensive QoS

8 egress queues per port enable differentiated management of up to 8 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.

Bidirectional rate-limiting, per port or traffic class, preserves network bandwidth and allows full control of network resources

##### Enhanced Security

IEEE 802.1X port-based access control ensures all users are authorized before being granted access to the network.

Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers.

SSH, RADIUS authentication protect data communication and ensure data privacy.

##### Simple Management

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

Industry standard Command Line Interface (CLI) via console port or Telnet can be used for switch management.

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

Support four groups of RMON.

Backup and restore Firmware and configuration files via TFTP.

##### L3 Features

The ES4626/ES4650 delivers high-performance, hardware based IP routing.

RIP and OSPF provides dynamic routing by exchanging routing information with other Layer 3 switches or routers.

DVMRP, PIM-DM, PIM-SM Multicast Routing Protocols send IP multicast traffic from one subnet to another.

VRRP prevents your system from failing by dynamically backing up multiple L3 switches for routing.



Features

Physical Ports	Management
20 or 44 RJ-45 10/100/1000Base-T ports 4 Combo G (RJ-45/SFP) ports 2 optional I/O Slots for 10G uplink 1 RJ-45 console port 1 Redundant Power Supply Connector	Switch Management: <ul style="list-style-type: none"><li>■ CLI via console port or Telnet</li><li>■ WEB management</li><li>■ SNMP v1, v2c, v3</li></ul> Firmware & Configuration: <ul style="list-style-type: none"><li>■ Dual firmware images</li><li>■ Firmware upgrade via TFTP/FTP/Xmodem server</li><li>■ Multiple configuration files</li><li>■ Configuration file upload/download via TFTP/FTP server</li></ul> Supports RMON (groups 1, 2, 3 and 9) Supports BOOTP, DHCP for IP address assignment Supports SNTP Event/Error Log/Syslog
Performance	Mechanical
Switching Capacity: 88Gbps/136Gbps Forwarding Rate: 65.5Mpps/101.2Mpps MAC Address Table Size: 8K Packet Buffer Size: 0.75MB/1.5MB	Dimensions (H x W x D): 4.4 x 44 x 33 cm (1RU) LED Indicators: Port, Uplink, System, Diagnostic,
L2 Features	Safety
Auto-negotiation for port speed and duplex mode Flow Control: IEEE 802.3x & Back-Pressure Spanning Tree Protocol: <ul style="list-style-type: none"><li>■ IEEE 802.1D Spanning Tree Protocol (STP)</li><li>■ IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)</li><li>■ IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)</li></ul> VLANs: <ul style="list-style-type: none"><li>■ Supports 4K IEEE 802.1Q VLANs, port-based VLANs, GVRP</li><li>■ Private VLAN</li></ul> Link Aggregation: <ul style="list-style-type: none"><li>■ Static Trunk, IEEE 802.3ad Link Aggregation Control Protocol</li><li>■ Trunk groups: 8</li><li>■ Trunk links: 2~8 for Gigabit Ethernet port</li><li>■ Trunk links: 2~4 for 10 Gigabit Ethernet port</li></ul> IGMP Snooping: IGMP v1 and v2 snooping and IGMP Querier	CSA/NRTL (UL60950, CSA 22.2.No 60950-00) TUV/GS (EN60950) CB
L3 Features	Electromagnetic Compatibility
2K IP Address entries 512 static routes ARP Multi-netting, Super-netting (CIDR) RIPv1, RIPv2 OSPF DVMRP, PIM-DM , PIM-SM VRRP IPv6* hardware IP routing, future firmware upgrade Policy based routing DHCP/BootP relay, DHCP server	CE Mark FCC Class A VCCI Class A
QoS Features	Environmental Specifications
Priority Queues: 8 hardware queues per port Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP, TCP/UDP port number, Access Control List, Marking DiffServ Supports WRR and Strict scheduling Port Rate Limiting	Temperature: <ul style="list-style-type: none"><li>■ IEC 68-2-14</li><li>■ 0℃ to 50℃ (Standard Operating)</li><li>■ -40℃ to 70℃ (Non-Operating)</li></ul> Humidity:5% to 95% (Non-condensing) Vibration: IEC 68-2-36, IEC 68-2-6 Shock: IEC 68-2-29 Drop: IEC 68-2-32
Security	Warranty
Port Security DHCP Snooping* Supports IEEE 802.1X port-based and MAC based access control RADIUS authentication Access Control List SSH	Limited lifetime warranty

Ordering Information

Optional Accessories	Product Description
RPS600WA  EM4626H-XG-XFP ET4201-SX ET4201-LX ET4201-LHX ET4201-ZX	4 DC output redundant power supply connectors (Supports max. power output 150W/12V per port) 1 port 10GBase-LR module with XFP connector 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)