

ECS4610-24F

L3 Gigabit Fiber Ethernet Switch



Product Overview

The Edge-Core ECS4610-24F is a layer 3 Gigabit Ethernet routing switch with 22 Gigabit SFP slots and 2 combo ports (RJ45/SFP). The ECS4610-24F is ideal for service provider aggregation layer service for converged voice, data and video network needs. It provides cost-effective solution, wire speed L2/L3 switching and routing, an abundant feature set, robust security function, and comprehensive QoS features to service providers to deliver the scalability and reliability for company's productivity.

Key Features and Benefits

Performance and scalability

The Edge-core ECS4610-24F provides fully non-blocking performance to fulfill the most network demands for voice, data and video streaming. 24 SFP slots can be inserted with Gigabit transceiver to support up to 80km for fiber connection.

High Availability

With IEEE 802.1w Rapid Spanning Tree Protocol, the Edge-Core ECS4600 series provides a loop free network and redundant links to the core network with rapid convergence less than 2 second. IEEE 802.1s Multiple Spanning Tree Protocol allows a spanning-tree instance per VLAN, for Layer 2 load sharing on redundant links.

The Edge-Core ECS4610-24F provides enhanced STP features such as root guard, BPDU filter/guard, and loopback detection. These features enhance switched network reliability, manageability and security.

The ECS4610-24F supports IEEE 802.3ad Link Aggregation Control Protocol (LACP). It increases bandwidth by automatically aggregating several physical links together as a logical trunk and offers load balancing and fault tolerance for uplink connections.

Comprehensive QoS

The Edge-Core ECS4610-24F offers advance QoS for marking, classification, and scheduling to deliver best-in-class performance for data, voice, and video traffic at wire speed. 8 egress queues per port enable differentiated management of up to 8 traffic types across the stack. Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number to provide optimal performance to real-time applications. Weight Round Robin (WRR) and strict priority ensure differential prioritization of packet flows and avoid congestion of ingress and egress queues.

With bidirectional rate-limiting, per port or traffic class, the Edge-Core ECS4610-24F series preserves network bandwidth and allows full control of network resources.

Advanced IPv6 and IPv4 Routing

The Edge-Core ECS4610-24F supports hardware based IPv6 and IPv4 routing hardware for maximum performance. It provides seamless migration path from IPv4 to IPv6 for future network upgrades and investment protection.

Advanced routing protocols such as RIP and OSPF provide dynamic routing by exchanging routing information with other Layer 3 switches or routers. Multicast routing is supported under independent multicast protocol, including PIM-DM, and PIM-SM. DVMRP* is also supported to interconnect two multicast-enabled networks across non-multicast networks. VRRP prevents your system from failing by dynamically backing up multiple L3 switches for routing.

Enhanced Security

The Edge Core ECS4610-24F provides enhanced security features for connectivity and access control, including ACLs, authentication and advanced security with IEEE 802.1X. Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers. SSH and RADIUS authentication protect data communication and ensure data privacy. IEEE 802.1X port-based access control ensures dynamic, port-based security and user authentication for network access. Moreover, after IEEE 802.1X authentication, the Edge-Core ECS4610-24F can automatically assign VLAN ID, priority tag or direct to guest VLAN.

Dynamic ARP Inspection (DAI) is a security feature that validates Address Resolution Protocol (ARP) packets in a network. This capability protects the network from certain "man-in-the-middle" attacks.

IP source guard prevents a malicious user from spoofing or taking over another user's IP address by creating a binding table between client's IP and MAC address, port, and VLAN.

Simplified Management

For IP multicast traffic, the Edge-Core enables IGMP snooping to provide fast client joins and leaves of multicast streams. It prevents flooding of IP multicast traffic, and limits bandwidth intensive video traffic to only the subscribers.

The Edge-Core ECS4610-24F supports IPv6 management functions in SNMP/HTTP/Telnet/TFTP/ICMP, SSH, RADIUS/TACACS+ authentication and IPv6 QoS remapping when connecting to the switch or stack.

The Edge-Core ECS4610-24F can be managed through By industry standard Command Line Interface (CLI) which provides a common industry look and feel to reduce training and operating costs. It also provides easy-of-use Web GUI interface through a standard web browser.

With four groups of RMON, the Edge-Core ECS4600 series can easily backup and restore Firmware and configuration files via TFTP.



Features

Physical Ports

22 1000Base-X ports
 2 Combo G (RJ-45/SFP) ports (2 10/100/1000Base-T)
 1 RJ-45 console port

Performance

Switching Capacity: 48Gbps
 Forwarding Rate: 35.7Mpps
 MAC Address Table Size: 8K
 Packet Buffer Size: 0.75MB

L2 Features

Auto-negotiation for port speed and duplex mode
 Flow Control: IEEE 802.3x & Back-Pressure
 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)
 Spanning Tree Fast Forwarding
 Loopback detection
 Auto edge port
 BPDU filtering/guard
 Root guard
 VLANs:
 ■ Support 4K IEEE 802.11Q VLANs, port-based VLANs, protocol-based VLANs, IP-subnet based VLAN, GVRP
 ■ Private VLAN
 Link Aggregation:
 Static Trunk, IEEE 802.3ad Link Aggregation Control Protocol
 Trunk groups: 8
 Trunk links: 2~8 for Gigabit Ethernet port
 Trunk links: 2~4 for 10 Gigabit Ethernet port
 IGMP Snooping:
 ■ v1/v2/v3
 ■ Immediate leave
 ■ IGMP SNP leave proxy
 MVR*

L3 Features

2K IP Address entries
 64 static routes and 512 net table
 32 IP interface support
 IP ARP RARP
 Super-netting (CIDR)
 RIPv1, RIPv2, and OSPF
 IGMP v1/v2, PIM-DM, PIM-SM, DVMRP*
 VRRP

QoS Features

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 Priority
 Port Rate Limiting

Security

Port Security (static and dynamic)
 IP Source Guard
 IEEE 802.1X
 Port-based
 MAC-based
 VLAN assignment
 QoS assignment
 Guest VLAN
 Web authentication*
 MAC authentication*
 IP filtering configuration for management interface (SNMP, Telnet, Web)
 RADIUS authentication
 Access Control List
 SSH v2
 HTTPS/SSL

Management

Switch Management:
 CLI via console port or Telnet
 WEB GUI management
 SNMP v1, v2c, v3
 IP clustering*
 Firmware & Configuration:
 Dual firmware images
 Firmware upgrade via TFTP/FTP/Xmodem
 Multiple configuration files
 Configuration file upload/download via TFTP/FTP server
 Supports RMON (groups 1, 2, 3 and 9)
 Supports BOOTP client
 ■ DHCP Client
 ■ DHCP Server
 ■ DHCP Relay
 ■ DHCP Snooping*
 ■ DHCP Option 82*
 Supports SNMP
 Supports Event/Error log/ System log
 LLDP & LLDP-MED*

IPv6 Features

IPv4/IPv6 Dual Protocol stack
 IPv6 address type (unicast/multicast)
 ICMPv6 and ICMPv6 redirect (host)
 IPv6 neighbor discovery
 Stateless and statefull auto configuration
 SNMP, HTTP, SSH, Telnet over IPv6
 IPv6 syslog and TFTP support

Mechanical

Dimensions (H x W x D): 4.17 x 44 x 27 cm (1RU)
 LED Indicators: Port, Uplink, Power, Diagnostic
 AC Power Input: 100 ~ 240VAC, 50 ~ 60Hz
 Weight: 3.55kg

Safety

CSA/NRTL (UL60950, CSA 22.2.No 60950-00)
 CB

Electromagnetic Compatibility

CE Mark(EN50081-1: EN55022 Class A, EN50082-1:IEC 1000-4-2/3/4/6), EN60555-2 Class A, EN60555-3
 FCC Class A

Electromagnetic Compatibility

Temperature:
 IEC 68-2-14
 0°C to 45°C (Standard Operating)
 -40°C to 70°C (Non-Operating)
 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

Warranty

Limited lifetime warranty