

## 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	Management
22 1000Base-X ports 2 Combo G (RJ-45/SFP) ports (2 10/100/1000Base-T) 1 RJ-45 console port	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
Performance	IPv6 Features
Switching Capacity: 48Gbps Forwarding Rate: 35.7Mpps MAC Address Table Size: 8K Packet Buffer Size: 0.75MB	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
L2 Features	Mechanical
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*	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
L3 Features	Safety
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	CSA/NRTL (UL60950, CSA 22.2.No 60950-00) CB
QoS Features	Electromagnetic Compatibility
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	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
Security	Electromagnetic Compatibility
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	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