

ECS4610-26T/ECS4610-50T

Managed 24/48 port Gigabit Stackable
L3 Ethernet Switch with 4 combo SFP slots



Product Overview

The Edge-Core ECS4610 series is a stackable Gigabit Ethernet routing switch with a choice of 24 or 48 Gigabit 10/100/1000BASE-T ports, 4 combo Gigabit Ethernet SFP slots and 2 optional 10 Gigabit Ethernet slots and 2 stacking ports on the rear panel. The ECS4600 series is ideal for service provider edge aggregation, Enterprise wiring closets, data center aggregation and network core deployment. It provides high performance, resilient stacking, wire speed L2 switching and L3 routing, comprehensive QoS and advanced security to deliver the scalability and resiliency to increase your company's productivity while reducing operation cost.

Key Features and Benefits

Resilient Stacking up to 8 units

The Edge-core ECS4610 series currently includes 2 different models ECS4610-26T and ECS4610-50T with dual optional 10 Gigabit Ethernet uplinks. The two models provide fully non-blocking performance to fulfill the most network demands for voice and video streaming. Optional 10GBASE-XFP10 transceivers can support up to 40km for fiber uplinks.

The Edge-core ECS4610 series provides two stacking ports for hardware stacking up to 320Gbps throughput. Any combination of ECS4610 series units can be stacked up to 8 units high or to a maximum of 400 ports. The stack acts as a single switching unit that is managed by a master switch, elected from one of the member switches. The master switch automatically creates and updates all the switching and optional routing tables. A working stack can add new members or delete old ones without service interruption.

High Availability

With IEEE 802.1w Rapid Spanning Tree Protocol, the Edge-Core ECS4610 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 4610 series 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.

Adding Optional Redundant Power Supply ensures that the Edge-Core ECS4610 series delivers the stable and redundant power support for today's high-availability, mission-critical environments.

Comprehensive QoS

The Edge-Core ECS4610 series 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 series preserves network bandwidth and allows full control of network resources.

Enhanced Security

The Edge Core ECS4610 series provides enhanced security features for connectivity and access control, including ACLs, authentication and port-level 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

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 series 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 series 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 ECS4610 series can easily backup and restore Firmware and configuration files via TFTP.

Advanced IPv6 and IPv4 Routing

The Edge-Core ECS4610 series 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.



Features

Physical Ports

20 or 44 RJ-45 10Base-T/100Base-TX/1000Base-T ports, with auto-negotiation
 4 GE copper ports shared with 4 SFP transceiver slots (RJ-45/SFP)
 2 slots for extended module of XFP or 10G Base-T
 2 slots for stacking transceivers
 1 RJ-45 console port
 1 Redundant Power Supply Connector

Performance

Switching Capacity: 128Gbps/176Gbps
 Forwarding Rate: 95.2Mpps/130.9Mpps
 MAC Address Table Size: 16K
 Packet Buffer Size: 2MB

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)
 Loopback detection
 Spanning Tree transparent
 Auto edge/STP fast forwarding
 VLANs:
 Support 4K IEEE 802.11Q VLANs, port-based, MAC-based, IP subnet-based VLAN, private VLAN, GVRP, GARP, protocol VLAN, VLAN translation, VLAN trunking, QinQ
 Link Aggregation:
 Static Trunk, IEEE 802.3ad Link Aggregation Control Protocol
 Trunk groups: 32
 Trunk links: 2~8 for Gigabit Ethernet port
 Trunk links: 2~4 for 10 Gigabit Ethernet port
 IGMP snooping:
 IGMP query v1/v2
 IGMP snooping v1/v2/v3
 IGMP throttling/filtering
 IGMP snooping proxy: v1/v2/v3
 IGMP immediate leave
 MVR

L3 Features

8K host table & net table
 512 static routes
 1K multicast table
 Multi-netting, Super-netting (CIDR)
 Static route, RIP v1/v2, OSPF
 IGMP v1/v2/v3 & proxy
 PIM-DM, PIM-SM
 VRRP
 ARP/ARP proxy
 UDP helper
 IPv6 hardware route
 4K host table & net table
 OSPF v3
 MLD v1/v2
 PIM DM-6

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, Strict Priority and Hybrid
 Port Rate Limiting

Security

Port Security (static/dynamic)
 IP Source Guard
 IEEE 802.1X: port-based, MAC-based, VLAN assignment, QoS assignment, and Guest VLAN
 MAC authentication & Web authentication
 AAA (RADIUS/TACACS+ authentication/accounting)
 2K ACL rules/ 128 rules per port
 Dynamic ARP Inspection

Management

Switch Management:
 CLI via console port or Telnet
 WEB management
 SNMP v1, v2c, v3
 Firmware & Configuration:
 Dual firmware images
 Firmware upgrade via TFTP/FTP/Xmodem
 Multiple configuration files
 Configuration file upload/download via TFTP/FTP server
 IP filtering (SNMP, Telnet, Web)
 SSH v2/HTTPS/SSL
 RMON (groups 1, 2, 3 and 9)
 BOOTP/DHCP/DHCP relay/DHCP server
 DHCP snooping & snooping 82
 DHCP option 66, 67
 SNTpv4 (RFC2030)
 sFlow
 LLDP (802.1ab)
 DNS client/proxy
 Event/Error log/ System log
 Thermal sensor: FAN speed control/temperature display/trap sent
 IPv6:
 SNMP/HTTP/Telnet/SSH/ICMP/RADIUS/SSH/SMTP/ACL/Dual Stack/Neighbor discover/ DSCP remapping CoS/System log/DNS resolver/TFTP/Remote Ping

SNMP Standards

RFC 1907 SNMPv2-MIB (MIB-II)
 RFC 2011 IP-MIB (MIB-II)
 RFC 2012 TCP-MIB (MIB-II)
 RFC 2013 UDP-MIB (MIB-II)
 IEEE 802.1X IEEE8021-PAE-MIB
 RFC 1493 Bridge MIB
 RFC 2863 IF-MIB
 RFC 2819 RMON MIB
 RFC 2618 RADIUS MIB
 RFC 2665 Etherlike MIB
 RFC 2737 Entity MIB
 RFC 2674 P-bridge, Q-bridge
 V-Bridge MIB
 RFC 3036 MAU MIB
 RFC 1612 DNS Resolver MIB
 RFC 3411 SNMP Framework
 RFC 3412 SNMP MPD MIB
 RFC 3413 SNMP Target MIB, SNMP Notify MIB
 RFC 3415 SNMP View-Based ACM MIB
 SNMP Trap Supported:
 RFC 1215, 1907, 2863, 1493, 1757, 2819
 Private MIB

Mechanical

Dimensions (H x W x D): 4.4 x 44 x 41.5 cm (1RU)
 LED Indicators: Port, Uplink, System, Diagnostic
 AC Power Input: 100 ~ 240VAC, 50 ~ 60Hz
 Weight:

ECS4610-26T: 5.7 kg (12.6 lbs)
 ECS4610-50T: 6.1 kg (13.4 lbs)

Safety

UL60950-1 & CSA 60950-1
 IEC 60950-1 & EN 60950-1

Electromagnetic Compatibility

CE Mark(EN55022 (CISPR 22) Class A
 EN 61000-3/2/3
 FCC Class A
 VCCI Class A

* Future Release



Features

Environmental Specifications	Warranty
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Temperature:
 IEC 68-2-14
 0°C to 50°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

Limited lifetime warranty

Electrical

Power Consumption (Max.):
ECS4610-26T
 ■ 49.6 Watts (without expansion XFP modules)
 ■ 63.96 Watts (with two expansion XFP modules)
ECS4610-50T
 ■ 98.16 Watts (without expansion XFP modules)
 ■ 104.16 Watts (with two expansion XFP modules)

Power characteristics:
 Voltage: 100-240V AC auto-ranging
 Frequency: 47-63Hz

Current:
ECS4610-26T
 ■ 0.58 A @ 110 VAC (without expansion XFP modules)
 ■ 0.74 A @ 110 VAC (with two expansion XFP modules)
 ■ 0.312 A @ 240 VAC (without expansion XFP modules)
 ■ 0.375 A @ 240 VAC (with two expansion XFP modules)
ECS4610-50T
 ■ 0.995 A @ 110 VAC (without expansion XFP modules)
 ■ 1.21 A @ 110 VAC (with two expansion XFP modules)
 ■ 0.54 A @ 240 VAC (without expansion XFP modules)
 ■ 0.605 A @ 240 VAC (with two expansion XFP modules)

Standards & Compliance

IEEE 802.3-2005
 Ethernet, Fast Ethernet, Gigabit Ethernet
 Full-duplex flow control
 IEEE 802.3ae 10 Gigabit Ethernet
 IEEE 802.3D Spanning Tree Protocol
 IEEE 802.1w Rapid Spanning Tree Protocol
 IEEE 802.1s Multiple Spanning Tree Protocol
 IEEE 802.1Q Virtual LAN
 ISO/IEC 8802-3 CSMA/CD

Ordering Information

Optional Accessories	Product Description
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RPS600WA
 EM4625-STKCABLE-S
 EM4625-STKCABLE-L
 EM4626H-XG-XFP
 ET4201-SX
 ET4201-LX
 ET4201-LHX
 ET4201-ZX
 ET5302-SR
 ES5302-LR
 ET5302-ER

4 DC output redundant power supply connectors (Supports max. power output 150W/12V per port)
 1 port 10GBase-LR module with XFP connector