**ECS4610-26T/ECS4610-50T**
Managed 24/48-Port Gigabit Ethernet Stackable L3 Switch with 4 Combo SFP Slots

**Product Overview**
The Edge-Core ECS4610 Series includes two stackable Gigabit Ethernet routing switches with a choice of 24 or 48 Gigabit 10/100/1000BASE-T ports, four combination Gigabit Ethernet SFP slots, two optional 10 Gigabit Ethernet slots, and two stacking ports on the rear panel. The ECS4610 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 costs.

**Key Features and Benefits**

**Resilient Stacking up to 8 Units**
The Edge-Core ECS4610 Series currently includes two different models, the ECS4610-26T and ECS4610-50T, with dual optional 10 Gigabit Ethernet uplinks. The two models provide full non-blocking performance to meet network demands for voice and video streaming. Optional 10GBASE-XFP transceivers can support fiber uplinks up to 40 km.

The Edge-Core ECS4610 Series provides two stacking ports for hardware stacking with up to 32 Gbps 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 of less than 2 seconds. 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). The switches increase bandwidth by automatically aggregating several physical links together as a logical trunk and offer load balancing and fault tolerance for uplink connections.

Adding an optional redundant power supply ensures that the Edge-Core ECS4610 Series remains stable to support 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. Eight egress queues per port enable differentiated management of up to eight traffic types across the stack. Traffic is prioritized according to 802.1p, DSCP, IP precedence, and TCP/UDP port number to provide optimal performance for real-time applications. Weighted 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 communications 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 4610 Series enables IGMP snooping to provide fast client joins and leaves of multicast streams. The switches prevent flooding of IP multicast traffic, and limit bandwidth-intensive video traffic to only the subscribers.

The Edge-Core ECS4610 Series supports IPv6 management functions in SNMP, HTTP, Telnet, TFTP, ICMP, SSH, and IPv6 QoS remapping when connecting to the switch or stack.

The Edge-Core ECS4610 Series can be managed through an industry-standard Command Line Interface (CLI) that provides a common look and feel to reduce training and operating costs. The switches also provide an easy-to-use web interface through a standard web browser.

Four-group RMON is supported to collect traffic statistics and run network diagnostics. The switches can also 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 for maximum performance. The switches provide a 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 protocols, including PIM-DM and PIM-SM.
Features

Physical Ports
- 20 or 44 RJ-45 10/100/1000BASE-T ports, with auto-negotiation
- 4 Combination (RJ-45/SFP) Gigabit Ethernet ports
- 2 10GBase extender module slots for XFP transceivers
- 2 slots for stacking transceivers
- 1 RJ-45 console port
- 1 Redundant power supply connector

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

L2 Features
- Spanning Tree
  ■ Loopback detection
  ■ Auto edge port
  ■ BPDU filter/guard
- VLAN
  ■ IP subnet based VLAN
  ■ Private VLAN Isolated
  ■ Private VLAN
  ■ GVRP/GARP
  ■ 802.1v protocol
  ■ Voice VLAN
  ■ VLAN translation
  ■ IPv6 VLANs
  ■ VLAN Trunking
- Jumbo Frame : 9K
- IGMP Snooping v1/v2/v3
- Select Q-in-Q

L3 Features
- Host table: 8K
- Route table: 8K
- Static route table: 512
- Multicast table: 1K
- Unicast routing
  ■ Static unicast routes
  ■ RIP v1/v2
  ■ OSPF
  ■ BGP
- Multicast routing
  ■ PIM-DM
  ■ PIM-SM
  ■ IGMP v1/v2/v3
  ■ IGMP v3 proxy
  ■ IP Redundancy
  ■ Proxy ARP
  ■ UDP Helper

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

IPv6 Features
- IPv4/IPv6 Dual Protocol Stack
- IPv6 Address Types : Unicast, Multicast
- ICMPv6
- ICMPv6 Redirect
- IPv6 Path MTU Discovery
- IPv6 Neighbor Discovery
- SNMP over IPv6
- HTTP over IPv6
- SSH over IPv6
- Support IPv6 Telnet
- Support IPv6 DNS Resolver
- Support IPv6 syslog
- Support IPv6 SNMP
- Support IPv6 TFTP
- Remote IPv6 ping
- Ping over IPv6
- Trace route over IPv6
- IPv6 DHCP relay
- sFlow over IPv6
- IPv6 ACL
- IPv6 DiffServ
- PIM-DMv6
- PIM-Sv6
- MVRv6

Management
- Switch Management:
  ■ CLI via console port or Telnet
  ■ Web management
  ■ SNMP v1, v2c, v3
  ■ IGMP snooping (v1/v2)

- Firmware and 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, DHCP for IP address assignment
- DHCP Snooping
- DHCP option 66, 67
- Supports SNTP
- Supports event/error log, system log
- Cable diagnostics
- ATC traffic control
- Delay reload
- sFlow
- CPU Process Utilization
- Cable Diagnostic
- IP Clustering
- Port Mirroring

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 MIB
- RFC 3413 SNMP Target MIB, SNMP Notify MIB
- RFC 3415 SNMP View-Based ACM MIB
- SNMP Trap Supported:
  ■ RFC 1215, 1907, 2963, 1493, 1757, 2819
  ■ Private MIB
Features

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

Reliability

ECS4610-26T
- MTBF 25ºC 146,894 hours
- MTBF 50ºC 65,293 hours

ECS4610-50T
- MTBF 25ºC 125,128 hours
- MTBF 55ºC 56,627 hours

Electromagnetic Compatibility

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

Environmental Specifications

Temperature:
- IEC 68-2-14
- 0ºC to 50ºC (standard operating)
- -40ºC to 70ºC (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

Mechanical

Dimensions (H x W x D): 4.4 x 44 x 41.5 cm (1.7 x 17.3 x 16.3 inch)
LED Indicators: Port, Uplink, System, Diagnostic
AC Power Input: 100 ~ 240 VAC, 50 ~ 60 Hz
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

Warranty

Please check www.edge-core.com for the warranty terms in your country.

For More Information

To find out more about Edge-Core Networks products and solutions, visit www.edge-core.com

About Edge-Core Networks

Edge-Core Networks is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edge-Core Networks delivers the software and systems that transform the way the world connects. Edge-Core Networks serves customers and partners worldwide. Additional information can be found at www.edge-core.com.

To purchase Edge-Core Networks solutions, please contact your Edge-Core Networks representative at 886 3 563 8888 or authorized reseller.

Ordering Information

RPS600WA
ECS4600-STACABLE-S
ECS4600-STACABLE-L
EM4626H-XG-XFP
ET4201-SX
ET4201-LX
ET4201-LHX
ET4201-ZX
ETS302-SR
ESS302-LR
ETS302-ER
EM4626H-XG10GSFP+
ET5402-SR
ET5402-LR

Network Management System

4 DC output redundant power supply connectors (Supports max. power output 150W/12V per port)
Stacking cable for ECS4610-26T/ECS4610-50T, 30cm
Stacking cable for ECS4610-26T/ECS4610-50T, 130cm
10G XFP module
1000BASE-SX Multi mode SFP transceiver, up to 500m (850nm)
1000BASE-LX Single mode SFP transceiver, up to 10Km (1310nm)
1000BASE-LHX Single mode SFP transceiver, up to 40Km (1310nm)
1000BASE-ZX Single mode SFP transceiver, up to 80Km (1550nm)
10G XFP transceiver, 300m, 850nm, LC connector (Multi-mode)
10G XFP transceiver, 10km, 1310nm, LC connector (Single-mode)
10G XFP transceiver, 10km, 1550nm, LC connector (Single-mode)
10G SFP+ module
10G SFP+ transceiver, 300m, 850nm, LC connector (Multi-mode)
10G SFP+ transceiver, 10km, 1310nm, LC connector (Single-mode)

ECView Pro Network Management Software