ECS4110 Series

L2 Gigabit Ethernet Standalone Switch

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Product Overview

The Edge-Core ECS4110 Series is a family of Layer 2 switches featuring 28 or 52 ports; with 24/48 10/100/1000BASE-T ports, and 4 SFP uplink ports. The switches support enterprise-class Layer 2 switching features including advanced QoS, security, and intuitive management, allowing network administrators to build high-performing robust networks affordably.

Enterprise Solution

Key Features and Benefits

Performance and Scalability

The ECS4110 Series includes high-performance Gigabit Ethernet L2 access switches with 56/104 Gbps switching capacity. The switches deliver wire-speed switching performance on all Gigabit ports, taking full advantage of existing high-performance PCs by significantly improving the responsiveness of applications and file transfer times.

Continuous Availability

The IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence, ensuring a faster recovery from failed links and enhancing overall network stability and reliability.

The IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing on redundant links.

The ECS4110 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.

Comprehensive QoS

The ECS4110 Series offers advance QoS for marking, classification, and scheduling to deliver best-in-class performance for data, voice, and video traffic at wire speed. Four egress queues per port enable differentiated management of up to four traffic types across the network.

Traffic is prioritized according to 802.1p, DSCI, IP precedence and TCP/UDP to provide optimal performance for real-time applications such as voice and video.

Weight Round Robin (WRR) and strict priority ensure differential prioritization of packet flows and avoid congestion of ingress and egress queues.

PoE Features

The ECS4110-52P can provide up to 30 Watts of power to attached devices, such as VoIP phones, wireless access points, surveillance cameras, etc, all over existing Cat. 5 cables. The switch can deliver up to 30 Watts on 13 ports, 15.4 Watts on 25 ports, or 7.5 Watts on 48 ports.

PoE eliminates the need for individual power sources for devices in the network, saving on costs for power cables and avoiding power outlet availability issues. If the power demand exceeds the switch's maximum power budget, ports can be prioritized to receive power.

Enhanced Security

Port Security limits the total number of devices using a switch port and protects against MAC flooding attacks.

IEEE 802.1X port-based or MAC-based access control ensures all users are authorized before being granted access to the network. When a user is authenticated, the VLAN, QoS, and security policy are automatically applied to the port where the user is connected, otherwise the port is grouped in a guest VLAN with limited access.

DHCP snooping allows a switch to protect a network from rogue DHCP servers that offer invalid IP addresses.

Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on source and destination MAC addresses, IP addresses, or TCP/UDP ports. ACLs are hardware supported, so switching performance is not compromised.

Secure Shell (SSHv1.5/v2.0) and Secure Sockets Layer (SSL/HTTPS) encrypt Telnet and web access to the switch, providing secure network management.

Dynamic ARP Inspection (DAI) is a security feature that validates Address Resolution Protocol (ARP) packets in a network. DAI allows a network administrator to intercept, log, and discard ARP packets with invalid MAC-to-IP address bindings.

Simple Management

An industry-standard command-line interface (CLI), accessed through the console port or Telnet, provides a familiar user interface and command set for users to manage the switch.

Green Ethernet

The ECS4110 Series incorporates a range of green Ethernet technologies to help you save energy costs for your network. The switches do not only use the latest Energy Efficient Ethernet standard to make efficient use of the Ethernet ports, they also detect link status and cable length, powering down when a port is not connected and reducing power for shorter cables.

* IPv6 Ready Logo for ECS4110-28P/ECS4110-52P under certification process.

ECS4110 Series Product Specifications

www.edge-core.com

Features

Product Model		ECS4110-28T	ECS4110-28P	ECS4110-52T	ECS4110-52P
Product Image					
Port	RJ-45 10/100/1000 Ports	24	24	48	48
	SFP Uplink Ports	4	4	4	4
	PoE Ports	No	24	No	48
	RJ-45 Console Port	Yes	Yes	Yes	Yes
Performance	Switching Capacity	56 Gbps	56 Gbps	104 Gbps	104 Gbps
	Forwarding Rate	41.7 Mpps	41.7 Mpps	77.4 Mpps	77.4 Mpps
	Flash Memory	32 MB	32 MB	32 MB	32 MB
	DRAM	128 MB	128 MB	128 MB	128 MB
	MAC Address Table	16 K	16 K	16 K	16 K
	Jumbo Frames	10 K	10 K	10 K	10 K
	Auto-negotiation, Auto-MDI/MDIX	Yes	Yes	Yes	Yes
PoE	Support on all Gigabit ports based on IEEE 802.3af	No	Yes	No	Yes
	PoE+ based on IEEE 802.3at	No	Yes	No	Yes
	Auto disable after exceeding power budget	No	Yes	No	Yes
	Dynamic Power Allocation	No	Yes	No	Yes
	PoE Power Budget	No	390 W	No	410 W
Mechanical	Rack Space	19"	19"	19"	19"
	Dimension (W x D x H) cm	44 x 28 x 4.4	44 x 28 x 4.4	44 x 28 x 4.4	44 x 37.9 x 4.4
	Weight	2.68 kg	3.58 kg	3.14 kg	5.27 kg
Power Supply	100-240 VAC, 50/60 Hz	Yes	Yes	Yes	Yes
	Max System Power Consumption (Watts)	31 W	450 W	65 W	530 W
Environmental	Operating Temperature	0 ~ 50°C	0 ~ 50°C	0 ~ 50°C	0 ~ 50°C
	Storage Temperature	-40 ~ 70°C	-40 ~ 70°C	-40 ~ 70°C	-40 ~ 70°C
	Operating Humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%
	Storage Temperature (non-condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%
	Environmental Regulation compliance: WEEE	Yes	Yes	Yes	Yes
	Environmental Regulation compliance: RoHS	Yes	Yes	Yes	Yes
Certification	FCC Class A	Yes	Yes	Yes	Yes
	CE	Yes	Yes	Yes	Yes
	Safety Compliance: CB	Yes	Yes	Yes	Yes
	Safety Compliance: UL	Yes	Yes	Yes	Yes

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Features

L2 Features

- Auto-negotiation for port speed and duplex mode
- Flow Control:
  - IEEE 802.3x for full-duplex mode
  - Back-pressure for half-duplex mode
- 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)
  - BPDU Guard
  - BPDU filtering
  - Root Guard
  - Spanning Tree Fast Forwarding
  - Loopback Detection
  - Auto EdgePort
  - BPDU Forward
- Storm Control (broadcast/multicast/unknown unicast)
- VLANs:
  - IEEE 802.1Q tagged-based VLANs
  - Port-based VLANs
  - MAC-based VLANs
  - IP subnet-based VLANS
  - Private VLANs (community)
  - Traffic segmentation (port isolated)
  - GVRP/GARP
  - IEEE 802.1v protocol-based VLANs
  - IPv6 VLANs
  - VLAN trunking
- Link Aggregation:
  - Static trunk
  - IEEE 802.3ad Link Aggregation Control Protocol
  - Trunk groups: 16
  - Maximum number of members per group: 8
- IGMP Snooping:
  - IGMP v1/v2/v3 Snooping
  - IGMP Filtering
  - IGMP Throttling
  - IGMP Immediate Leave
  - IGMP v1/v2 Querier
  - IGMP SNP Proxy (V1/V2/V3)
  - IGMP Authentication
- MVR (Multicast VLAN Registration)
- Supports Q-in-Q
- Supports select Q-in-Q
- G.8032v2 (ERPS)
- Non-STP loopback detection
- UDLD
- Digital Diagnostic Monitoring (DDM)
- L2 Protocol Tunneling (CDP,PVST,STP,LLDP)
- Packet filtering of L2 control CDP/PVST

QoS Features

- Priority Queues: 4 hardware queues per port
- 802.1p-based COS
- IP DSCP-based COS
- TCP/UDP Port-based COS
- PHB (Per Hop Behavior – internal priority)
- Port-based default priority
- WRR priority scheduling
- Strict piority scheduling
- Hybrid (WRR +Strict)
- Rate limiting (ingress and egress, per port base)
- DiffServ

Security Features

- Port security
- IEEE 802.1X
  - Port-based Authentication
  - MAC-based Authentication
  - Guest VLAN
  - EAPOL frames pass-through
- MAC authentication
- Web authentication
- 802.1X supplicant support
- Dynamic VLAN assignment
- Dynamic QoS assignment
- Intrusion Lock (link detection)
- MAC filter
- Access Control List
- Dynamic ARP Inspection
- AAA
  - RADIUS authentication
  - RADIUS accounting
  - TACACS+ authentication
  - TACACS+ authorization
  - TACACS+ accounting
- HTTPS and SSL
- SSH (v1.5/v2.0)

IPv6 Features

- IPv4/IPv6 dual protocol stack
- IPv6 address type
  - Unicast
  - Multicast
- ICMPv6
- ICMPv6 Redirect (Host)
- IPv6 Path MTU Discovery
- IPv6 Neighbor Discovery
  - Router discovery
  - Duplicate address
  - Parameter discovery
  - Address resolution
  - Unreachable neighbor detection
- Stateless autoconfiguration
- Manual configuration
- SNMP over IPv6
- HTTP over IPv6
- SSH over IPv6
- IPv6 Telnet support
- IPv6 DNS resolver
- IPv6 Syslog support
- IPv6 SNTP support
- IPv6 TFTP support
- Remote IPv6 Ping
- Ping over IPv6
- Traceroute over IPv6
- DHCPv6
  - Client
  - Snooping
- MVR6
- IPv6 Source Guard
- RA Guard
- MLD Snooping v1/v2
- IPv6 ND Snooping
- IPv6 ACL
- IPv6 Diffserv

*Future Release

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Features

Management

Switch Management:
- CLI via console port or Telnet
- Web management
- SNMP v1, v2c, v3

Telnet
- Client
- Server

Software download/upgrade
- TFTP
- FTP
- HTTP

Dual Images

Configuration download/upload
- TFTP
- HTTP
- FTP

Auto Upgrade
- TFTP
- FTP

SNMP
- v1
- v2c
- v3

RMON1 (1,2,3,9 group)

BOOTP

DHCP
- Client
- Relay
- Snooping
- Snooping option 82
- Dynamic provision (via Option 66,67)

IP source guard

Port mirroring

VLAN mirror

MAC-based mirror

ACL mirror

Remote port mirror (RSPAN)

Even/error logging
- Syslog
- Remote log
- SMTP (E-mail notification)

OAM
- IEEE 802.3ah
- IEEE 802.1ag (CFM)
- Y.1731

DNS
- Client
- Proxy

Remote Ping

SNTPv4

NTP

IP Clustering

LLDP (802.1ab)
- Link Layer Discovery Protocol (LLDP)
- LLDP-MED (VoIP related)
- IEEE 802.3at

Management-continued

MAC flush

Dynamic ARP Inspection (DAI)

Auto Traffic Control (ATC) (software rate limit)

PPPoE intermediate agent

Delay reload

Cable diagnostic/TDR

Green Ethernet

Traceroute

Denial of Service Protection (DoS)

Support MIB

Support 24 Static Route Entries with 8 IP Interface

IEEE Standards

IEEE 802.1p priority tags

IEEE 802.1X port authentication

IEEE 802.3x Ethernet frame start and stop requests and timers used for flow control on full-duplex links

IEEE 802.3u CSMA/CD access method and physical layer specifications for 100BASE-TX Fast Ethernet

IEEE 802.3z CSMA/CD access method and physical layer specifications for 1000BASE Gigabit Ethernet

IEEE 802.1q Virtual LAN

IEEE 802.1d Spanning Tree Protocol

IEEE 802.3ad Link Aggregation Control Protocol

IEEE 802.1s Rapid Spanning Tree Protocol

IEEE 802.1w Multiple Spanning Tree Protocol

Warranty

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

For More Information

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

About Edgecore Networks Corporation

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

Edgecore Networks Corporation is a subsidiary of Accton Technology Corporation, the leading network ODM company. The Edgecore Data Center switches are developed and manufactured by Accton.

To purchase Edgecore Networks solutions, please contact your Edgecore Networks Corporation representatives at +886 3 563 8888 (HQ) or +1 (949)-336-6801 or authorized resellers.

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Ordering Information

Optional Accessories	Product Description
ET4201-SX	1Gbps, Small Form Factor Pluggable (Distance: 500 m; Wavelength: 850 nm)
ET4201-LX	1Gbps, Small Form Factor Pluggable (Distance: 10 km; Wavelength: 1310 nm)
ET4201-LHX	1Gbps, Small Form Factor Pluggable (Distance: 40 km; Wavelength: 1310 nm)
ET4201-ZX	1Gbps, Small Form Factor Pluggable (Distance: 80 km; Wavelength: 1550 nm)
ET4202-SX	1Gbps, Small Form Factor Pluggable (Distance: 500 m; Wavelength: 850 nm, DDM)
ET4202-LX	1Gbps, Small Form Factor Pluggable (Distance: 10 km; Wavelength: 1310 nm, DDM)
ECView Pro	SNMP Network Management Software

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