ECS4210 Series
L2 Gigabit Ethernet Access Switch

Product Overview
The Edgecore ECS4210 series includes high-performance Gigabit Ethernet Layer 2/4 switches featuring 12 and 28 ports; 8/24 10/100/1000BASE-TX ports, and four Gigabit Ethernet SFP (Small Form Factor Pluggable) ports. The switches are ideal for Internet service providers delivering Gigabit-bandwidth services to home or business users. The switches are also ideal for enterprise Gigabit-to-the-desktop and wiring closet installations. These switches are packed with features and offer a cost-effective solution that brings continuous availability, enhanced security, and advanced QoS to the network edge, while maintaining simplicity of management.

L2 Gigabit Ethernet Access Switch

Key Features and Benefits
Performance and Scalability
The ECS4210 series includes high-performance Gigabit Ethernet L2 access switches with up to 56 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.

The switches have four Gigabit Ethernet SFP ports for uplink flexibility, allowing the insertion of copper or fiber transceivers for high-speed uplinks to servers or the network backbone.

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, to ensure faster recovery from failed links, 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.

Multicast VLAN Registration (MVR) is designed for applications such as Media-on-Demand that stream multicast traffic across an Ethernet network.

IGMP snooping prevents flooding of IP multicast traffic and limits bandwidth intensive video traffic to only the subscribers.

The voice VLAN feature enables access ports to carry IP voice traffic from an IP phone.

The IEEE 802.1Q-in-Q VLAN tag expands the VLAN space by double tagging packets.

Comprehensive QoS
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.

Asymmetric bidirectional rate-limiting, per port or per traffic class, preserves network bandwidth and allows maximum control of network resources.

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.

IP Source Guard prevents people from using IP addresses that were not assigned to them.

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.

DHCP Option 82 is feature has a device add information to client TCP/IP configuration requests that it relays to a DHCP server.

ECS4210 Series Product Specifications

www.edge-core.com

Features

Product Model		ECS4210-12T	ECS4210-12P	ECS4210-28T	ECS4210-28P
Port	RJ-45 10/100/1000 Ports	8	8	24	24
	RJ-45 10/100/1000 Uplink Ports	X	2	X	X
	SFP Uplink Ports	4	2	4	4
	PoE Port	0	8	0	24
	RJ-45 Console Port	O	O	O	O
Performance	Switching Capacity	24 Gbps	24 Gbps	56 Gbps	56 Gbps
	Forwarding Rate	17.9 Mpps	17.9 Mpps	41.7 Mpps	41.7 Mpps
	Flash Memory	32 MB	32 MB	32 MB	32 MB
	DRAM	128 MB	128 MB	128 MB	128 MB
	MAC Address Table Size	16 K	16 K	16 K	16 K
	Jumbo Frames	13 K	13 K	13 K	13 K
	Auto-negotiation, Auto-MDI/MDIX	O	O	O	O
PoE	Support on all Gigabit ports based on IEEE 802.3af	X	O	X	O
	PoE+ based on IEEE 802.3at	X	O	X	O
	Auto disable after exceeding power budget	X	O	X	O
	Dynamic Power Allocation	X	O	X	O
	PoE Power Budget	X	150 W	X	400 W
Mechanical	Rack Space	19”	19”	19”	19”
	Dimension (W x D x H)	18 x 16.41 x 3.75	28 x 22 x 4.4	44 x 22 x 4.4	44 x 22 x 4.4
	Weight	0.7 kg	2.3 kg	2.16 kg	3.13 kg
Power Supply	100-240 VAC, 50/60 Hz	O	O	O	O
	Max System Power Consumption (Watts)	9.1 W	189 W	17.2 W	460 W
Environment	Operating Temperature	0ºC to 50ºC	0ºC to 50ºC	0ºC to 50ºC	0ºC to 50ºC
	Storage Temperature	-40ºC to 70ºC	-40ºC to 70ºC	-40ºC to 70ºC	-40ºC to 70ºC
	Operating Humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%
	Storage Humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%
	Environmental Regulation compliance: WEEE	O	O	O	O
	Environmental Regulation compliance: RoHS	O	O	O	O
Certification	Power Surge Protection	4KV	2KV	4KV	2KV
	FCC Class A	O	O	O	O
	CE	O	O	O	O
	Safety Compliance: CB	O	O	O	O
	Safety Compliance: UL	O	O	O	O

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20 Mason Irvine, CA 92618

Features

L2 Features

- Tri-speed (10/100/1000BASE-T) copper interfaces
- Auto-negotiation for port speed and duplex mode
- Auto MDI/MDI-X
- SFP ports support 1000BASE-SX/LX/LHX/ZX/TX transceivers
- Digital Diagnostic Monitoring (DDM)
- Flow Control:
  - IEEE 802.3x for full-duplex mode
  - Back-pressure for half-duplex mode
- Storm Control:
  - Broadcast
  - Multicast
  - Unknown Unicast
- 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
  - BPDU transparent
  - Loopback detection
- VLANs:
  - Supports 4K VLANs
  - Port-based
  - IEEE 802.1Q VLAN
  - GVRP (256 VLANs)
  - IEEE 802.1v protocol-based VLANs
  - MAC-based VLANs
  - IP subnet-based VLAN
  - Private VLAN (Traffic Segmentation per port)
  - Voice VLAN
  - VLAN trunking
  - L2 Virtual Private VLAN
  - Q-in-Q
- Link Aggregation:
  - Static trunk
  - IEEE 802.3ad Link Aggregation Control Protocol
  - Trunk groups: 8, up to 8 ports per group
  - Load Balance: on MAC SA/DA, Ethertype, SIP, DIP, Source (TCP/UDP) port, Destination (TCP/UDP) port
- IGMP Snooping:
  - IGMP v1/v2/v3 snooping
  - IGMP Proxy reporting
  - IGMP Filtering
  - IGMP Throttling
  - IGMP Immediate Leave
  - IGMP Querier
- MVR (Multicast VLAN Registration)
  - Support for 5 multicast VLANs
- Port mirroring
- VLAN mirroring
- MAC-based mirroring
- Remote port mirroring (RSPAN)
- Supports jumbo frames up to 13 KB

QoS Features

- Priority Queues: 8 hardware queues per port
- Traffic classification
  - IEEE 802.1p based COS
  - IP Precedence based COS
  - IP DSCP based COS
  - MAC access control lists (source/destination MAC, Ether type, priority ID/VLAN ID)
  - IP standard access control lists (source IP)
  - IP extended access control lists (source/destination IP, protocol, TCP/UDP port number)
- Traffic Scheduling
  - Strict priority
  - Weighted Round Robin
  - Strict + WRR traffic scheduling
- Two Rate Three Color Marker (trTCM)
- Ingress traffic policing
- Egress traffic shaping
- Marking/remarking
- Rate limiting (ingress and egress, per port base)
  - GE: Resolution 64 Kbps ~ 1000 Mbps
- DiffServ

Security Features

- Port security
- IEEE 802.1X port-based and MAC-based authentication
- MAC authentication, Web authentication
- Voice VLAN, Guest VLAN
- EAPOL frames pass through
- L2/L3/L4 Access Control Lists
- IPv6 ACL
- DHCP Snooping
- DHCP Option 82
- IP Source Guard
- Dynamic ARP Inspection
- RADIUS Authentication
- TACACS+ Authentication
- TACACS+ Authorization and Accounting
- HTTPS and SSL
- SSH (v1.5/v2.0)
- User name password authentication
  - Local authentication
  - Remote authentication via RADIUS/TACACS+
- Management interface access filtering
  - SNMP
  - Web
  - Telnet/SSH
- MAC filter
- PPPoE intermediate agent

IPv6 Features

- IPv4/IPv6 dual protocol stack
- IPv6 Address Types Stack: Unicast
- IPv6 Neighbor Discovery
- SNMP over IPv6
- HTTP over IPv6
- Remote IPv6 ping

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ECS4210 Series Product Specifications

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Features

Management

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

Firmware & Configuration:
- Firmware upgrade via TFTP server
- Multiple configuration files
- Configuration file upload/download via TFTP server

RMON (groups 1, 2, 3 and 9)
BOOTP, DHCP client for IP address assignment
DHCP dynamic provision option 66, 67
SNTP
IP clustering
Event/Error Log/Syslog, SMTP
LLDP (802.1ab)
Multicast DNS
(Optional) ECview Pro, powerful network management software that maximizes the managed capabilities of Edgecoredevices with:
- Topology Management
- Performance Management
- Configuration Management
- Event Management
- SNMP Management

Electromagnetic Compatibility

CE Mark
FCC Class A
4KV surge protection
8KV/15KV ESD protection

Environmental Specifications

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

Humidity: 10% to 90% (non-condensing)
Vibration: IEC 68-2-36, IEC 68-2-6
Shock: IEC 68-2-29
Drop: IEC 68-2-32

Power Supply

AC Power
- 100 to 240 V, 50-60 Hz

Power Supply
- Internal, auto-ranging transformer: 100 to 240 VAC, 50 to 60 Hz

Safety

UL(CSA 22.2. NO 60950-1 & UL60950-1)
CB (IEC60950-1)

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 nformation 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.

Ordering Information

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

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