ECS2020 Series
8/24 Gigabit Web-Smart Ethernet Switch

Product Highlight

0ºC to 50ºC

Voice / Surveillance Traffic Prioritization

IGMP / MLP Snooping

4K VLAN

8 queues QoS

IPv4/ IPv6

DDOS Protection

CPU Guard

Dual Configuration

Standard MIB / Private MIB *

Energy Efficient Technology

* future release

Product Overview

The ECS2020 Series is Edgecore's latest generation cost-effective web-smart switch solution.

The ECS2020 is designed for SMB and enterprise markets and provides a complete solution from 10/28-port , including both non-PoE and PoE options. The switches comply with the IEEE 802.3az Energy Efficient Ethernet standard. Support IPv4 & IPv6 management and features to ensure your network upgrade from IPv4 to IPv6.

The ECS2020 Series offers complete PoE solutions from 70 W to 190 W.. All series could mount in a rack. The ECS2020-10P is a fan-less design POE switch, it supports up to 4 ports at 15.4 W, or 2 ports at 30 W to meet the increasing power demands of users.The ECS2020-28P delivers a default 190 W of PoE power to support future IP cameras, IP telephones, or access points.

Network Application

Feature Benefits

Hardware Features	Benefits
IEEE 802.3af/802.3at	The ECS2020 Series PoE switches all support IEEE 802.3af & 802.3at for your VoIP, surveillance, and Wi-Fi APs.
Integrated 2 or 4 Gigabit SFP	The ECS2020-10/28 switches support 2/4 integrated Gigabit SFP ports. Besides providing more uplink bandwidth, the SFP ports can be used for redundant links.
System LED	The ECS2020 Series includes a system LED to help check the switch status. When the switch boots, it runs a self-check. When the LED is on green, it means the switch operating status is normal.
POE Support	ECS2020-10P 70W ECS2020-28P 190W
Fan-less design & operating temperature	The ECS2020P series could operating temperature from 0-50 degree . Besides ECS2020-28P is fan design . ECS2020-10T/10P/28Tare fan-less design switches.

Software Features	Benefits
Dual Configuration	The ECS2020 Series can save dual configuration files to provide redundancy and more security for users.
PoE Timer	The PoE Timer can define a PoE power schedule for different customer applications. This saves money and reduces unnecessary waste.
IGMP and MLD Snooping	IGMP/MLD snooping manages multicast streams to ensure high-quality, smooth video.
802.3az and Green-Ethernet	The ECS2020 Series supports the new IEEE 802.3az and Green Ethernet. Using the Energy Efficient Ethernet standard, the switch automatically decreases power usage when network traffic is low.
Multi Network Management	The ECS2020 Series supports Web, SNMP v1/v2c/v3, and Telnet management to provide multiple network management access. The switch supports a private MIB for detailed information.
Enhanced Security	The ECS2020 Series supports multiple security features, such as ACLs, storm control, 802.1X, port security, MAC filters, IP source guard, and AAA.
Comprehensive QoS	The ECS2020 Series supports 8 hardware queues, port-based QoS (IPv4/IPv6 DSCP), and DiffServ features to provide optimal real-time services.
DDOS Protection	The ECS2020 Series provides DDOS protection to avoid hacker attacks on your network.
Cable Diagnostics	Cable diagnostics check real-time cable status to find network problems immediately.
Voice / Surveillance VLAN	The ECS2020 Series supports automatic voice / surveillance VLANs, providing VoIP and IP cameras the optimum network traffic usage.
Multiple Language	The ECS2020 Series supports multiple languages (TW/CN/English). Let customer all could easily operate the switch.

Key Features and Benefits

Performance and Scalability

The ECS2020 Series is a range of web-smart switches designed for the SMB market. The switches can be deployed in different target network topologies, from small to large. Besides powerful software features, the switches provide a complete solution including both non-PoE and PoE options.

The ECS2020-10P/28P is a cost-effective PoE switch from 70 W to 190 W. with powerful software and security features. The switch all can be mounted in a rack. The ECS2020-10P is a fan-less design switch, it supports up to 4 ports at 15.4 W, or 2 ports at 30 W to meet the increasing power demands of users. The ECS2020-28P is fan design and it could delivers 190 W power budget to support PD devices like IP cameras, IP telephones, or access points.

Multi Management

The ECS2020 Series supports Web, SNMP v1/v2c/v3, and Telnet management to provide multiple network management access. The switch supports a private MIB for detailed information. This new Edgecore switch also supports management functions through both IPv4 and IPv6.

Continuous Availability

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

IEEE 802.1Q VLAN-segmented broadcast domains reduce broadcast traffic and increase LAN security and performance. IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and provides load balancing and fault tolerance for uplink connections

Smart Network Deployment

Voice / Surveillance VLAN for quick deployment of VoIP, and automatic Video VLAN to help deploy your IP-based surveillance system.

Enhanced Security

Port Security allows access to a switch port based on MAC address. This limits the total number of devices from using a switch port and protects from MAC flooding attacks.

IEEE 802.1X port-based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using a standards-based RADIUS server.

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

Secure Shell (SSH) and Secure Sockets Layer (SSL/HTTPS) encrypts Telnet and web access to the switch, providing secure network management.

DHCP snooping provides security by filtering un-trusted DHCP messages and by building and maintaining a DHCP snooping binding table.

Dynamic VLAN assignment for user authentication and location-independent access to the network.

Comprehensive QoS

Eight egress queues per port enables differentiated management of up to eight traffic types.
Traffic is prioritized according to 802.1p or DSCP, giving optimal performance to 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.

ECS2020 Series Product Specifications

Features

Product Model	ECS2020-10T	ECS2020-28T
Product Image		

		ECS2020-10T	ECS2020-28T
Port	RJ-45 10/100/1000 Ports	8	24
	100/1000 SFP Ports	2(1G)	4(1G)
	POE Port	0	0
	RJ-45 Console Port	No	No
Performance	Switching Capacitny	20 Gbps	56 Gbps
	Forwarding Rate	14.9 Mpps	41.7 Mpps
	Flash Memory	16MB	16MB
	DRAM	128MB	128MB
	Packet Buffer	4.1Mbits	4.1Mbits
	MAC Address Table Size	8K	8K
	Jumbo Frames	10KB	10KB
	Heat Dissipation	27.39 (BTU/H)	N/A
	Acoustic Noise	0 dB(A)	0 dB(A)
Power Supply	100-240 VAC , 50-60 Hz	O	O
	Max System Power Consumption (W)	8.03W	N/A
PoE	IEEE 802.3af/802.3at	X	X
	PoE Power Budget	X	X
	PoE Timer	X	X
Mechanical	Rack Space	9"	19"
	Form Factor	Rackmount	Rackmount
	Dimension (W x D x H)	216*133*42 mm	440 * 208 *44 mm
	Weight	814g	X
Environment	Operating Temperature	0ºC to 50ºC	-0ºC to 50ºC
	Storage Temperature	-40ºC to 70ºC	-40ºC to 70ºC
	Operating Humidity (non-condensing)	10% to 90%	10% to 90%
	Storage Humidity (non-condensing)	10% to 90%	10% to 90%
	Altitude	3000m	3000m
Certification	FCC Class A	Yes	Yes
	CE	Yes	Yes
	Safety Compliance: CB	Yes	Yes
	Safety Compliance: UL	Yes	Yes

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DS_ECS2020 Series DS

ECS2020 Series Product Specifications

Features

Product Model	ECS2020-10P	ECS2020-28P
Product Image		
Port RJ-45 10/100/1000 Ports	8	24
100/1000 SFP Ports	2(1G)	4(1G)
POE Port	8	24
RJ-45 Console Port	No	No
Performance Switching Capacitny	20 Gbps	56 Gbps
Forwarding Rate	14.9 Mpps	41.7 Mpps
Flash Memory	16MB	16MB
DRAM	128MB	128MB
Packet Buffer	4.1Mbits	4.1Mbits
MAC Address Table Size	8K	8K
Jumbo Frames	10KB	10KB
Heat Dissipation	267.95 (BTU/H)	N/A
Acoustic Noise	0 dB(A)	N/A
Power Supply 100-240 VAC , 50-60 Hz	O	O
Max System Power Consumption (W)	80W	N/A
PoE IEEE 802.3af/802.3at	Yes	Yes
PoE Power Budget	70W	190W
PoE Timer	Yes	Yes
Mechanical Rack Space	13”	19”
Form Factor	Rackmount	Rackmount
Dimension (W x D x H)	294*180*44 mm	N/A
Weight	2.0 Kg	N/A
Environment Operating Temperature	0ºC to 50ºC	-0ºC to 50ºC
Storage Temperature	-40ºC to 70ºC	-40ºC to 70ºC
Operating Humidity (non-condensing)	10% to 90%	10% to 90%
Storage Humidity (non-condensing)	10% to 90%	10% to 90%
Altitude	3000m	3000m
Certification FCC Class A	Yes	Yes
CE	Yes	Yes
Safety Compliance: CB	Yes	Yes
Safety Compliance: UL	Yes	Yes

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DS_ECS2020 Series DS

Features

L2 Features

SFP port support :
IEEE 802.3z (1000BASE-SX/LX/LHX/ZX) transceivers
Digital Diagnositc Monitoring (DDM) in 1G SFP port

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 Rapid Spanning Tree Protocol (MSTP)
Loopback Detection
BDPU Filter
BDPU Forward
Root Guard

VLANs:
Supports 4K IEEE 802.1Q VLANs
Port-Based VLANs
Management VLAN
Guest VLAN
Voice / Surveillance VLAN

Link Aggregation:
Static Trunk
IEEE 802.3ad Link Aggregation Control Protocol (LACP)

IGMP Snooping:
IGMP v2/v3 snooping
IGMP Filtering/Throttling
IGMP Queries
IGMP Immediate leave
MLD Snooping
LLDP/LLDP-MED

Green-Saving :
IEEE 802.3az
Cable Length
No Link Power-Saving

Jumbo Frame :10K
Cable Diagnostic

IPv6 Features

IPv6 Management:
IPv6 over Ethernet (RFC2464)
IPv6 Dual Stack (RFC 4213)
IPv6 Neighbor Discovery (RFC 4861)
IPv6 Address/ Mask/ Gateway
IPv6 Ping /Trace
IPv6 Telnet
IPv6 Syslog
HTTP/ SNMP over IPv6

Security Features

DDOS Protection
CPU Guard (CPU Protection)
Port Isolation
Port Mirror (One to One, One to Many)
IEEE 802.1X

Storm Control:
Broadcast/Multicast/Unknown Storm Control

ACL:
Ingress Only
L2/L3/L4
ACL entry: 256
IPv4/IPv6
TCP/UDP-Based, MAC-Based ACL

Port Security
MAC Filter
Port max count per port
Dynamic ARP Inspection
AAA (RADIUS/TACACS+)
SSH v1.5/v2.0
SSL v1/v2/v3
SSL IPv4/IPv6

POE Features

ECS2020-10P (70W)
ECS2020-28P (190W)
PoE Timer
Dynamic Power Allocation.

Features

Management Features

Switch Management :

Cisco-like CLI via telnet

WEB-based management

SNMP v1, v2c, v3

DHCP:

Client

Relay

Snooping

Option82

SNMP:

SNMP Trap

SNMP v1/v2/v3

SNMP Standard/Private MIB *

System Status

Device info/status

Ethernet port status

PoE status

System password protection

NTP

Dual Configuration

Software Upgrade/Restore by HTTP/TFTP

Configuration Upgrade/Restore by HTTP/TFTP

RMON1 (1,2,3,9 group)

Memory Flash Log

Event/Error Log

Syslog

* future release

QoS Features

Rate-limiting

8 Priority queues per port

Traffic Scheduling :
■ SPQ (Strict Priority Queuing)

■ WRR (Weighted Round Robin)

■ Hybrid

Port-Based QoS

IPv4/IPv6 DSCP

DiffServ

HW Queues (8 queues)

Regulatory

Safety :

CSA(CSA C22.2 NO 60950-1 & UL 60950-1)

CB (IEC / EN60950-1)

Electromagnetic Compatibility:

CE Mark

FCC Class A

EN 55022 (CISRP 22) Class A

EN61000-3-2/3

VCCI

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.

To purchase Edgecore Networks solutions, please contact your Edgecore Networks Corporation representatives at +886 3 563 8888 (HQ) or
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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)
ET4201-RJ45	1000BASE-T RJ45 transceiver, 100 m
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: 1310 nm, DDM)

V1.0 (Draft)