ECS2020 Series

10/28 Gigabit Web-Smart Ethernet Switch

Product Highlights

- 0°C to 50°C
- Voice/Surveillance VLAN
- IGMP/MLP Snooping
- 4K VLANs
- 8-Queue QoS
- IPv4/IPv6
- DDOS protection
- CPU guard
- Dual configuration
- Standard MIB/Private MIB
- Energy-efficient technology
- 4KV Surge Protection

Gigabit Web-Smart Switches

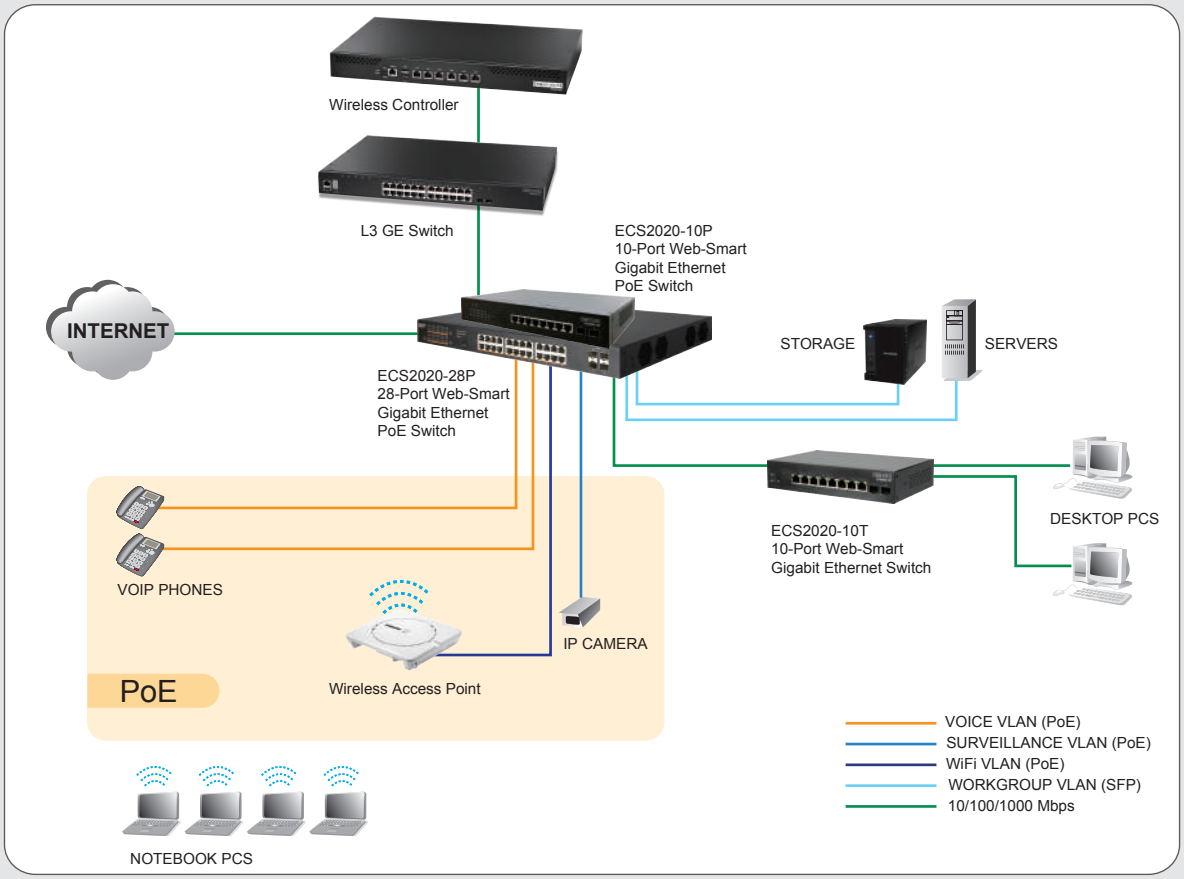
Product Overview

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-ports, including both non-PoE and PoE options. The switches comply with the IEEE 802.3az Energy Efficient Ethernet standard. Support for IPv4 and IPv6 management and features ensures your network can upgrade from IPv4 to IPv6.

The ECS2020 Series offers complete PoE solutions from 70 W to 190 W. All the switches are rack mountable. The ECS2020-10P is a fanless design PoE switch that 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 Standard PoE	The ECS2020 Series PoE switches all support IEEE 802.3af and 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: 70 W ECS2020-28P: 190 W
Fanless design and operating temperature	The ECS2020 series can operate at a temperature from 0-50°C. The ECS2020-28P includes cooling fans, whereas the ECS2020-10T/10P/28T are fanless designs.
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 CLI 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). Enables all users to easily operate the switch.

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ECS2020 Series Product Specifications

Key Features

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.

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.

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

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.

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.

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

PoE Support
The ECS2020-10P/28P is a cost-effective PoE switch from 70 W to 190 W with powerful software and security features. The switch can be mounted in a rack. The ECS2020-10P is a fanless 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 includes cooling fans and it can deliver its 190 W power budget to support PD devices like IP cameras, IP telephones, or access points.

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ECS2020 Series Product Specifications

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Product Model		ECS2020-10T	ECS2020-28T
Product Image			
Port	RJ-45 10/100/1000 Ports	8	24
	100/1000 SFP Ports	2 (1G)	4 (1G)
	PoE Ports	No	No
	Console Port	No	No
Performance	Switching Capacity	20 Gbps	56 Gbps
	Forwarding Rate	14.9 Mpps	41.7 Mpps
	Flash Memory	16 MB	16 MB
	DRAM	128 MB	128 MB
	MTBF	324,089 hrs	149,992 hrs
	Packet Buffer	4.1 Mbits	4.1 Mbits
	MAC Address Table	8 K	8 K
	Jumbo Frames	10 K	10 K
	Heat Dissipation	27.297 (Btu/H)	59.34 (Btu/H)
	Acoustic Noise	0 dB (A)	0 dB (A)
Power Supply	100-240 VAC, 50-60 Hz	Yes	Yes
	Max System Power Consumption (Watts)	8.03 W	18.9 W
Mechanical	Rack Space	9"	19"
	Form Factor	Rackmount	Rackmount
	Dimension (W x D x H)	21.6 x 13.3 x 4.2 cm (8.5x 5.2 x 1.6 in)	44.0 x 20.8 x 4.4 cm (17.3 x 8.2 x 1.7 in)
	Weight	814 g (1.81 lb)	2.4 kg (5.29 lb)
Environmental	Operating Temperature	0 ~ 50°C	0 ~ 50°C
	Storage Temperature	-40 ~ 70°C	-40 ~ 70°C
	Altitude	3000 m	3000 m
	Operating Humidity (non-condensing)	10% to 90%	10% to 90%
	Storage Temperature (non-condensing)	10% to 90%	10% to 90%
Certification	CE/FCC	Yes	Yes
	UL/BSMI	Yes	Yes
	Safety Compliance: CB	Yes	Yes

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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 Ports	8	24
	Console Port	No	No
Performance	Switching Capacity	20 Gbps	56 Gbps
	Forwarding Rate	14.9 Mpps	41.7 Mpps
	Flash Memory	16 MB	16 MB
	DRAM	128 MB	128 MB
	MTBF	118,824 hrs	83,923 hrs
	Packet Buffer	4.1 Mbits	4.1 Mbits
	MAC Address Table	8 K	8 K
	Jumbo Frames	10 K	10 K
	Heat Dissipation	267.95 (Btu/H)	657.83 (Btu/H)
	Acoustic Noise	0 dB (A)	N.A
Power Supply	100-240 VAC, 50-60 Hz	Yes	Yes
	Max System Power Consumption (Watts)	80 W	210.2 W
PoE	IEEE 802.3af/802.3at	Yes	Yes
	PoE Power Budget	70 W	190 W
	PoE Timer	Yes	Yes
Mechanical	Rack Space	13"	19"
	Form Factor	Rackmount	Rackmount
	Dimension (W x D x H)	29.4 x 18.0 x 4.4 cm (11.6 x 7.0 x 1.7 in)	44 x 20.8 x 4.4 cm (17.3 x 8.2 x 1.7 in)
	Weight	2.0 kg (4.4 lb)	4.5 kg (9.9 lb)
Environmental	Operating Temperature	0 ~ 50°C	0 ~ 50°C
	Storage Temperature	-40 ~ 70°C	-40 ~ 70°C
	Operating Humidity (non-condensing)	10% to 90%	10% to 90%
	Storage Temperature (non-condensing)	10% to 90%	10% to 90%
	Altitude	3000 m	3000 m
Certification	CE/FCC	Yes	Yes
	UL/BSMI	Yes	Yes
	Safety Compliance: CB	Yes	Yes

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Features

L2 Features

- SFP port support:
  - IEEE 802.3u (100BASE-FX) transceivers
  - IEEE 802.3z (1000BASE-SX/LX/LHX/ZX) transceivers
- Digital Diagnostic Monitoring (DDM) on 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: 10 K
- Cable Diagnostic

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)

IPv6

- 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

PoE

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

Security

- 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

Management

- Switch Management :
  - Cisco-like CLI via telnet
  - Web-based management
  - SNMP v1, v2c, v3
- DHCP:
  - Client
  - Snooping
  - Option82
- SNMP:
  - SNMP Trap
  - SNMP v1/v2c/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

Safety

- CSA (CSA 22.2 NO 60950-1 & UL 60950-1)
- CB (IEC/EN60950-1)

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Features

Electromagnetic Compatibility

CE Mark
FCC Class A
EN 55022 (CISRP 22) Class A
EN 61000-3-2/3
VCCI
BSMI

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.

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)

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