

# 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



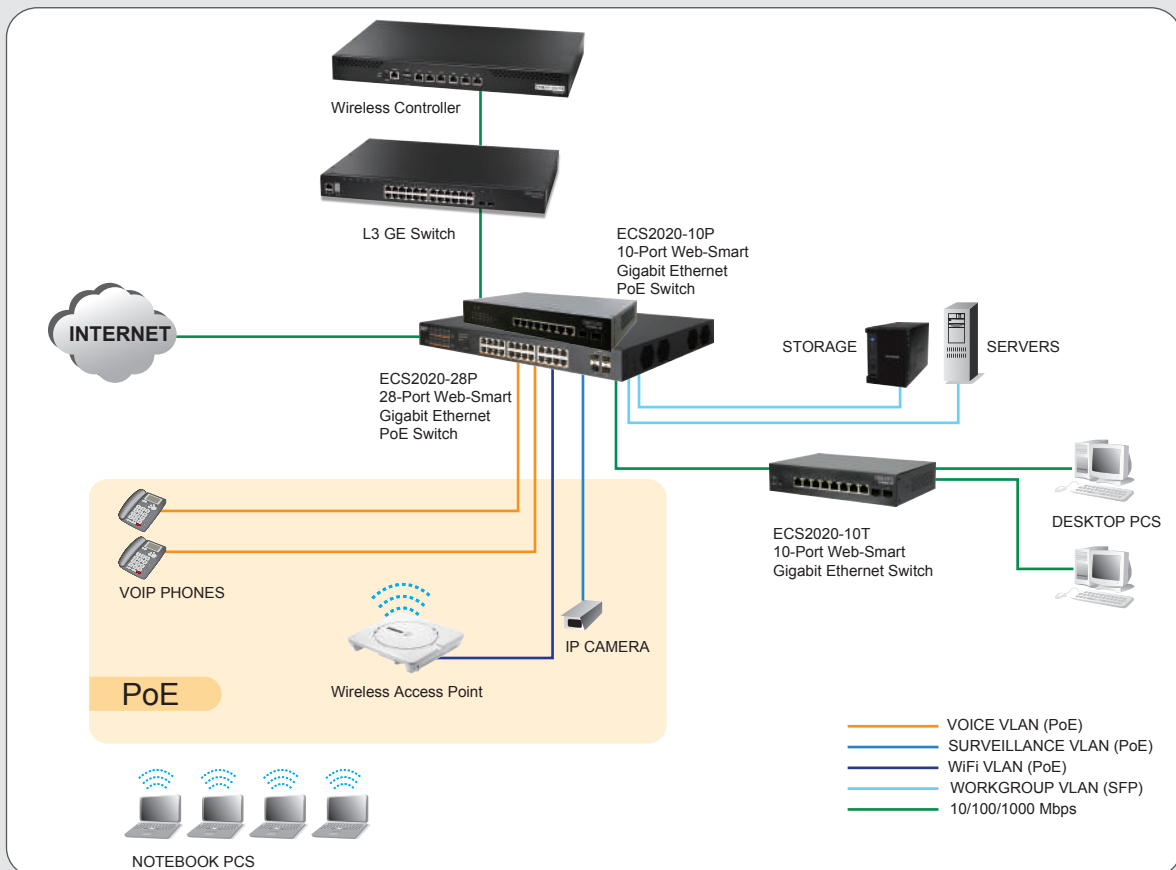
### Product Overview

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



Gigabit Web-Smart Switches

## 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.

## 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.



# 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 Humidity (non-condensing)	10% to 90%	10% to 90%
Certification	CE/FCC	Yes	Yes
	UL/BSMI	Yes	Yes
	Safety Compliance: CB	Yes	Yes

# ECS2020 Series Product Specifications

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Product Model	ECS2020-10P	ECS2020-28P
<b>Product Image</b>		
<b>Port</b>		
RJ-45 10/100/1000 Ports	8	24
100/1000 SFP Ports	2 (1G)	4 (1G)
PoE Ports	8	24
Console Port	No	No
<b>Performance</b>		
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
<b>Power Supply</b>		
100-240 VAC, 50-60 Hz	Yes	Yes
Max System Power Consumption (Watts)	80 W	210.2 W
<b>PoE</b>		
IEEE 802.3af/802.3at	Yes	Yes
PoE Power Budget	70 W	190 W
PoE Timer	Yes	Yes
<b>Mechanical</b>		
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)
<b>Environmental</b>		
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 Humidity (non-condensing)	10% to 90%	10% to 90%
Altitude	3000 m	3000 m
<b>Certification</b>		
CE/FCC	Yes	Yes
UL/BSMI	Yes	Yes
Safety Compliance: CB	Yes	Yes

## 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)



## 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](http://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](http://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](http://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)
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)