

ECS3510-28T

L2 Fast Ethernet Standalone Switch



Product Overview

The Edgecore ECS3510-28T is a high-performance Fast Ethernet Layer 2/4 switch featuring 28 ports; 24 10/100BASE-TX ports and four combination Gigabit Ethernet RJ-45/SFP (Small Form Factor Pluggable) ports. It is ideal for desktop Fast Ethernet connectivity and wiring closet installations. This switch is packed with features and is a cost-effective solution that brings continuous availability, enhanced security and advanced QoS to the network edge, while maintaining simplicity of management.

Key Features and Benefits

Performance and Scalability

With 12.8 Gbps switching capacity, the ECS3510-28T delivers wire-speed switching performance on all Gigabit ports, allowing users to take full advantage of existing high-performance, Gigabit integrated servers, PCs and laptops by significantly improving the responsiveness of applications and file transfer times.

The device also has four Gigabit Ethernet combination ports for uplink flexibility, allowing copper or fiber uplinks to servers or the network backbone.

Continuous Availability

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.

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 sends 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.

Support for IEEE 802.1Q-in-Q VLAN tags expands the VLAN space by double tagging packets.

Comprehensive QoS

Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number, 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 ensures access to switch ports based on MAC address, limits the total number of devices from 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. User authentication is carried out using any standard-based RADIUS server, with support for dynamic VLAN assignment and a guest VLAN.

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

TACACS+ 3.0 authentication for applications, such as network access or IP mobility, enables centralized control of the switch and prevents unauthorized users from altering the switch configuration.

Private VLANs isolate edge ports to ensure user privacy.

Simple Management

An industry-standard command-line interface (CLI), accessed through the console port or Telnet, provides a convenient way to configure and troubleshoot the switch.

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

If you run out of ACLs, IP Source Guard can be enabled on a trunk port with a large number of VLANs that have DHCP snooping enabled.

DHCP Option 82 is a feature that adds device information to client TCP/IP configuration requests, which are relayed to a DHCP server.

L2 Fast Ethernet Standalone Switch

Features

Physical Ports

24 RJ-45 10/100BASE-TX ports
 4 Combo Gigabit (RJ-45/SFP) ports
 1 RS-232 DB-9 console port

Performance

Switching Capability: 12.8 Gbps
 Forwarding Rate: 9.5 Mpps
 Packet Buffer Size: 8 Mbit
 MAC Address Table: 16K

L2 Features

Auto-negotiation for port speed and duplex mode
 Broadcast/multicast/unknown unicast storm control
 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)
 Spanning Tree Fast Forwarding
 Loopback Detection
 Auto Edge Port
 BPDU Filter/Guard
 Root Guard
 VLANs:
 Supports 4K IEEE 802.1Q VLANs
 Port-based VLANs
 IEEE 802.1v protocol-based VLANs
 Private VLAN
 GVRP
 Q-in-Q
 Voice VLANs
 MAC-based
 IP-based
 VLAN trunking
 Link Aggregation:
 Static Trunk
 IEEE 802.3ad Link Aggregation Control Protocol
 Trunk groups: 16, 2~8 ports trunk for FE and 4 ports trunk for GE
 Traffic balance over trunking port
 IGMP Snooping:
 IGMP v1/v2/v3 snooping
 IGMP v1/v2 querier support
 IGMP Immediate Leave
 IGMP Filtering/Throttling
 IGMP SNP Leave Proxy
 IGMP v1/v2/v3 Proxy
 G.8032v2 (ERPS)
 MVR (Multicast VLAN Registration)
 Jumbo frames up to 10KB
 MAC VLAN with MASK and priority
 IGMP SNP Forward with priority
 MAC learning can be configured
 Auto Traffic Control (ATC) (software rate limiting)
 Non-STP loopback detection
 UniDirectional Link Detection (UDLD)

OAM

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

IPv6 Features

IPv4/IPv6 dual protocol stack
 IPv6 Address Types Stack: Unicast
 IPv6 Neighbor Discovery
 Duplicate address
 Address resolution
 Unreachable neighbor detection
 SNMP over IPv6
 HTTP over IPv6
 SSH over IPv6
 IPv6 Telnet support
 IPv6 DNS Resolver
 MVR6
 Remote IPv6 ping
 IPv6 source guard
 DHCPv6 snooping
 DHCPv6 option 37
 Stateless autoconfiguration
 Manual configuration
 IPv6 Syslog support
 IPv6 SNTP support
 IPv6 TFTP support
 IPv6 Source Guard
 RA Guard
 IPv6 ND Snooping
 MLD Snooping v1/v2

QoS Features

Priority Queues: 4 hardware queues per port
 Traffic classification based on IEEE 802.1p CoS, IP Precedence,
 DSCP, TCP/UDP port number
 Support WRR, Strict scheduling and Hybrid
 Rate Limiting (ingress and egress, per port base)
 FE: Resolution 64 Kbps ~ 100 Mbps
 GE: Resolution 64 Kbps ~ 1000 Mbps
 Diffserv

Security

Port security
 Static port security (MAC-based)
 Dynamic port security (MAC-based)
 Support multiple IEEE 802.1X port- and MAC-based access control
 Dynamic VLAN Assignment
 QoS Assignment
 ACL Assignment
 MAC-based authentication, Web authentication
 Voice VLAN, Guest VLAN
 RADIUS authentication and authorization
 TACACS+ authentication, authorization, and accounting
 TACACS+ 3.0
 L2/L3/L4 Access Control List
 SSH (v1.5/v2.0)
 SSL
 MAC filter
 MAC limitation per port
 Supplicant support
 EAPOL frames pass-through
 ACL
 Time-based
 Intrusion Lock (link detection)
 PPPoE Intermediate Agent

Features

Management

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

Firmware and Configuration:
 Firmware upgrade via TFTP/HTTP/FTP
 Multiple configuration files
 Configuration file upload/download via TFTP/HTTP

RMON (groups 1, 2, 3 and 9)
 BOOTP, DHCP client for IP address assignment
 DHCP Option 82, DHCP Snooping
 Sntp event/error log/syslog, SMTP
 LLDP (802.1ab)
 IP Source Guard
 MIB I/II
 Dynamic provision (via Option 66,67)
 Dynamic ARP inspection
 Port mirroring
 MAC flush
 (Optional) ECView Pro, a powerful network management software that maximizes the managed capabilities of Edgecore devices with:
 Topology management
 Performance management
 Configuration management
 Event management
 SNMP management
 Remote port mirroring (RSPAN)
 MAC-based mirror
 ACL mirror
 VLAN mirror
 CPU protection
 Cable Diagnostics/TDR

Electromagnetic Compatibility

CE
 FCC Class A
 VCCI Class A
 BSMI
 EN55022: 2010/AC: 2011, Class A
 EN61000-3-2: 2014
 EN61000-3-3: 2013
 EN55024: 2010 + A1 : 2015
 RoHS compliant

Safety

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

Environmental Specifications

Temperature:
 0 °C to 55 °C (32 °F to 131 °F) standard operating
 -20 °C to 70 °C (-40 °F to 158 °F) non-operating
 Humidity: 10% to 95% non-condensing
 Vibration: IEC 68-2-36, IEC 68-2-6
 Shock: IEC 68-2-29
 Drop: IEC 68-2-32

Mechanical

Dimensions (H x W x D): 4.3 x 44 x 17.1 cm (1.69 x 17.32 x 6.73 in.)
 LED Indicators: Port, Uplink, System, Diagnostic
 Weight: 2 kg (4.4 lbs)
 19 inch rack space

Power

AC power cord
 100 to 240 V, 50-60 Hz, 1.0A
 Power supply
 Internal, auto-ranging transformer: 100 to 240 VAC, 50 to 60 Hz
 Power consumption
 20 Watts maximum

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.

© Copyright 2016 Edgecore Networks Corporation. The information contained herein is subject to change without notice. This document is for informational purposes only and does not set forth any warranty, expressed or implied, concerning any equipment, equipment feature, or service offered by Edgecore Networks Corporation. Edgecore Networks Corporation shall not be liable for technical or editorial errors or omissions contained herein.

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: 550 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