

ECS3510-28T

L2 Fast Ethernet Standalone Switch



Product Overview

The Edge-Core 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.

The IEEE 802.1Q-in-Q VLAN Tag is purpose to expand the VLAN space by tagging the tagged 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 configuration of the switch.

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.

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

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

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: 12.8Gbps
- Forwarding Rate: 9.5Mpps
- Packet Buffer Size: 8Mb
- MAC Address Table: 16K

L2 Features

- Auto-negotiation for port speed and duplex mode
- Flow Control:
 - IEEE 802.3x for full-duplex mode
 - Broadcast storm control
- 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)
- VLANs:
 - Supports 4K IEEE 802.1Q VLANs
 - Port-based VLANs
 - IEEE 802.1v Protocol-based VLANs
 - Private VLAN
 - GVRP
 - Supports Q-in-Q
 - Support Voice VLANs
- Link Aggregation:
 - Static Trunk
 - IEEE 802.3ad Link Aggregation Control Protocol
 - Trunk groups: 8, 2-8 ports trunk for FE and 4 ports trunk for GE
- IGMP Snooping:
 - IGMP v1/v2/v3 snooping
 - IGMP Querier and Filtering MVR (Multicast VLAN Registration)
- Supports jumbo frames up to 10KB

IPv6 Features

- IPv4/IPv6 Dual Protocol stack
- IPv6 Address Types Stack: Unicast
- IPv6 Neighbor Discovery
- SNMP over IPv6
- HTTP over IPv6
- Remote IPv6 ping
- IPv6 source guard*
- DHCPv6 snooping*
- DHCPv6 option 37*

QoS Features

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

Security

- Port security
- Support multiple IEEE 802.1X port based and MAC access control
- Dynamic VLAN Assignment, Auto QoS, Auto ACL
- MAC based authentication, Web authentication
- Voice VLAN, Guest VLAN
- RADIUS authentication
- TACACS + authorization and accounting
- TACACS+ 3.0
- L2/L3/L4 Access Control List
- SSH (v1.5/v2.0)
- SSL
- MAC Filter

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
- Supports RMON (groups 1, 2, 3 and 9)
- Supports BOOTP, DHCP client for IP address assignment
- Supports DHCP Option 82, DHCP Snooping
- Supports SNTF
- Event/Error Log/Syslog, SMTP
- Supports LLDP (802.1ab)
- Support IP Source Guard
- (Optional) Eview Pro, a powerful network management software that maximizes the managed capabilities of Edge-Core devices with:
 - Topology Management
 - Performance Management
 - Configuration Management
 - Event Management
 - SNMP Management

Features

Electromagnetic Compatibility

CE
FCC Class A
VCCI Class A
EN55022: 2010, Class A
EN 61000-3-2: 2006/A1:2009/A2:2009
EN 61000-3-3: 2008
EN55024: 2010

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)

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

Warranty

Please check www.edge-core.com for the warranty terms in your country.

For More Information

To find out more about Edge-Core Networks products and solutions, visit www.edge-core.com

About Edge-Core Networks

Edge-Core Networks is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edge-Core Networks delivers the software and systems that transform the way the world connects. Edge-Core Networks serves customers and partners worldwide. Additional information can be found at www.edge-core.com.

To purchase Edge-Core Networks solutions, please contact your Edge-Core Networks representative at 886 3 563 8888 or authorized reseller.

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Ordering Information

Optional Accessories

ET4201-SX
ET4201-LX
ET4201-LHX
ET4201-ZX
ET4202-SX
ET4202-LX
ECView Pro

* Future Release

Product Description

1Gbps, Small Form Factor Pluggable (Distance: 500m; Wavelength: 850nm)
1Gbps, Small Form Factor Pluggable (Distance: 10km; Wavelength: 1310nm)
1Gbps, Small Form Factor Pluggable (Distance: 40km; Wavelength: 1310nm)
1Gbps, Small Form Factor Pluggable (Distance: 80km; Wavelength: 1550nm)
Small Form Factor Pluggable (1000BASE-SX; Distance: 500m; Wavelength: 850nm,DDM)
Small Form Factor Pluggable (1000BASE-SX; Distance: 10km; Wavelength: 1310nm,DDM)
SNMP Network Management Software