

ECS3510-52T

L2 Fast Ethernet Standalone Switch



Product Overview

The Edge-Core ECS3510-52T is a high-performance Fast Ethernet Layer 2/4 switch featuring 52 ports; 48 10/100Base-TX ports and 4 combo 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

High Availability

It's a great entry level managed with 17.6Gbps switching capacity delivers wire-speed switching performance to take full advantage of existing high-performance on PCs and laptops by significantly improving the responsiveness of applications and file transfer times .

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

The ECS3510-52T supports G.8032 Ethernet Ring Protection Switching, with the ability for the network to detect and recover from incidents without impacting users, meeting the most demanding quality and availability requirements. Rapid recovery time when problems do occur is as low as 50 msec.

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 is using 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 allowing 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 dynamic VLAN assignment with RADIUS server by 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, TCP/UDP ports. This is done by hardware, so switching performance is not compromised.

Security Shell (SSHv1.5/v2.0) and Secure Sockets Layer (SSL/HTTPS) encrypt network management information via Telnet and web, providing secure network management.

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

Private VLAN isolates edge ports to ensure user privacy.

Simplified Management

Industry standard Command Line Interface (CLI) via console port or Telnet provides a common user interface and command set for users to manipulate the switch.

IP Source Guard is enabled on a trunk port with a large number of VLANs that have DHCP snooping enabled, you might run out of ACL

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

DHCP Option 82 is feature has a device add information to client TCP/IP configuration requests that it relays to a DHCP server.

Features

Physical Ports

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

Performance

Switching Capability: 17.6Gbps
 Forwarding Rate: 13.1Mpps
 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
- 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)
- Loopback Detection
- BPDU Filter/Guard
- Root Guard

 ITU-T G.8032 Ethernet Ring Protection Switch
 VLANs:

- Supports 4K IEEE 802.1Q VLANs
- Port-based VLANs
- IEEE 802.1v Protocol-based VLANs
- Private VLAN
- GVRP
- Supports QinQ
- Support Voice VLANs

 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

 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
 SSH over IPv6
 Remote IPv6 ping
 IPv6 source guard
 IPv6 Telnet Support
 IPv6 DNS Resolver
 DHCPv6 snooping
 DHCPv6 option 37
 MVR6

OAM (Operations Administration Maintenance) Features

IEEE 802.3ah Ethernet Link OAM
 IEEE 802.1ag Connectivity Fault Management

- Connectivity check
- Loopback

 ITU-T Y.1731 Performance and Throughput Management

- Frame Delay
- Frame Delay variation

 UDLD: Unidirectional Link Detection

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 mutple 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, v2, v3

 Firmware & Configuration:

- Firmware upgrade via TFTP server
- Multiple configuration files
- Configuration file upload/download via TFTP server

 Support RMON (groups 1, 2, 3 and 9)
 Support MIB I/II
 Support BOOTP, DHCP client for IP address assignment
 Support DHCP Option 82
 Support Layer 2 DHCP Relay
 Support Dynamic Provision (via Option 66,67)
 Support DHCP Snooping
 Support Dynamic ARP inspection
 Support SNTp
 Event/Error Log/Syslog, SMTP
 Support LLDP (802.1ab)
 Support IP Source Guard
 Support Port Mirroring
 Support MAC Flush
 (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
BSMI
EN55022: 2010, Class A
EN 61000-3-2: 2006/A1:2009/A2:2009
EN 61000-3-3: 2008
EN55024: 2010
RoHS Compliant

Environmental Specifications

Temperature:
■ 0°C to 55°C (Standard Operating)
■ -20°C to 70°C (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

Safety

UL(CSA 22.2. NO 60950-1 & UL60950-1)
CB (IEC60950-1)

Mechanical

Dimensions (H x W x D): 4.3 x 44 x 23 cm
LED Indicators: Port, Uplink, System, Diagnostic
Weight: 3kg (6.6lbs)
19" Rack Space

Power Supply

AC Power code
■ 100 to 240 V, 50-60 Hz
Power Supply
■ Internal, auto-ranging transformer: 100 to 240 VAC, 50 to 60 Hz, 1.5A

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.

© Copyright 2013 Edge-Core Networks Corp. 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 Edge-Core Networks. Edge-Core Networks shall not be liable for technical or editorial errors or omissions contained herein.

Ordering Information

Optional Accessories

ET4201-SX
ET4201-LX
ET4201-LHX
ET4201-ZX
ET4201-RJ-45
ET4202-SX
ET4202-LX
ECView Pro

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)
1000BASE-T Copper SFP transceiver
Small Form Factor Pluggable (1000BASE-SX; Distance: 500m; Wavelength: 850nm,DDM)
Small Form Factor Pluggable (1000BASE-LX; Distance: 10km; Wavelength: 1310nm,DDM)
SNMP Network Management Software