ECS3510-52T

L2 Fast Ethernet Standalone Switch

Product Overview

The Edgecore 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.

L2 Fast Ethernet Standalone Switch

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 detected 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 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.

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 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.

ECS3510-52T Product Specifications

www.edge-core.com

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: 17.6 Gbps
Forwarding Rate: 13.1Mpps
Packet Buffer Size: 8 Mb
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
- Q-in-Q
- 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)
Jumbo frames up to 10 KB

OAM

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

Management

Switch Management:
- CLI via console port or Telnet
- Web management
- SNMP v1, v2, v3

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

RMON (groups 1, 2, 3 and 9)
MIB I/II
BOOTP, DHCP client for IP address assignment
DHCP Option 82
Layer 2 DHCP Relay
Dynamic Provision (via Option 66,67)
DHCP Snooping
Dynamic ARP inspection
SNTP event/error log/syslog, SMTP
LLDP (802.1ab)
IP source guard
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

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

Security

Port security
Support mutiple IEEE 802.1X port based and MAC access control
- Dynamic VLAN Assignment, QoS Assignment, ACL Assignment

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

TEL: +886-3-5638888 FAX: +886-3-6686111
No.1, Creation Rd. III, Hsinchu Science Park, Taiwan 30077
sales_ec@edge-core.com www.edge-core.com

TEL: +1 (949)-336-6801
20 Mason Irvine, CA 92618

ECS3510-52T Product Specifications

www.edge-core.com

Features

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
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 23 cm (1.69 x 17.32 x 9 in)
LED Indicators: Port, Uplink, System, Diagnostic
Weight: 3 kg (6.6 lb)
19 inch rack space

Power

AC power cord
100 to 240 V, 50-60 Hz, 1.5A
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 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 nformation 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: 850nm)
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-RJ-45	1000BASE-T Copper SFP transceiver
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: 1310nm, DDM)
ECView Pro	SNMP Network Management Software

TEL: +886-3-5638888 FAX: +886-3-6686111
No.1, Creation Rd. III, Hsinchu Science Park, Taiwan 30077
sales_ec@edge-core.com www.edge-core.com

TEL: +1 (949)-336-6801
20 Mason Irvine, CA 92618