

# ECS3810-26T

## L2 Fast Ethernet Carrier Grade Switch



### Product Overview

The Edge-Core ECS3810-26T is a Carrier Ethernet access switch ideal for Ethernet service demarcation, extension and aggregation. It allows service providers to deliver managed converged services such as voice, video and data over virtual Ethernet and IP networks. With flexible QoS, advanced operation, administration and maintenance (OAM), and support for extended temperature range environments; the ECS3810-26T adds value to your network, and builds differentiated services over Carrier Ethernet networks.

### Key Features and Benefits

#### Carrier-class Design

The Edge-Core ECS3810-26T is a carrier grade aggregation switch consisting of 24 Fast Ethernet ports with 2 Gigabit combination ports.

All interfaces of the ECS3810-26T are located on the same panel, including CIT (Craft Interface Terminal) out-of-band management port, external alarm input /output interface, and power outlet.

The ECS3810-26T switch provides dual power inputs (AC and DC) with an operating temperature range from 0°~ 65°C.

The fan-less design of the ECS3810-26T ensures noiseless operation and increases the reliability of the system.

The ECS3810-26T is designed for high energy efficiency. The cutting edge switch controller chipset and Green Ethernet power saving features significantly reduce power consumption.

When a loss of power is detected, the dying gasp support allows 200 msec for the switch to notify the system administrator by an SNMP trap.

#### Continuous Availability

The ECS3810-26T supports G.8032 Ethernet Ring Protection Switching providing the ability for the network to detect and recover from incidents without impacting users, and meeting the most demanding quality and availability requirements. Rapid recovery time when problems do occur, is as low as 50ms.

#### Service Monitoring and Management

The ECS3810-26T supports IEEE 802.1ag Connectivity Fault Management (CFM) and ITU-T Y.1731, allowing service providers to monitor end-to-end services, identify connectivity and performance issues, and isolate problems from a remote location without having to dispatch an engineer to the site.

The switch also provides the capability to monitor service availability, delay and dropped packets, for verifying SLA conformance for billing purposes, and providing advance indication of performance degradation before a service outage occurs.

#### Comprehensive QoS

ECS3810-26T supports Single Rate Three Color Marker and Policing: Committed Information Rate (CIR) Two rate: CIR + Peak Information Rate (PIR) Traffic Policing: Drop or remark priority tags of packets that exceed burst size.

#### Virtual Private Network

The ECS3810-26T supports L2 VPN by using Q-in-Q functions where an 802.1Q tag from a customer VLAN (called CE-VLAN ID) is encapsulated in a second 802.1Q tag from a service-provider network (called an SP-VLAN ID). Supports the rewrite of the VLAN tag of egress traffic when the ingress traffic is VLAN tagged.

Supports L2 Protocol Tunneling for STP, CDP, LLDP, VDP, and PVST+, with Cisco proprietary multicast address (01-00-0c-cd-cd-d0) replacement.

Layer 2 PDU filtering allows a service provider to specify which Layer 2 PDUs are to be dropped at an ingress interface on a provider edge switch.

## Features

### Physical Ports

- 24 10/100BASE-TX ports and 2 Gigabit combination ports (RJ-45/SFP)
- Dual power input with 1 AC and 1 DC Power Connector
- 1 out-of-band 1000 Mbps RJ-45 Management Port
- 1 RJ-45 Console Port
- 1 DB15 Alarm Port

### Performance

- Switching Capability: 52 Gbps
- Packet Buffer Size: 8 Mbits
- MAC Address Table: 16K

### L2 Features

- Tri-speed (10/100/1000BASE-T) copper interfaces
- Auto-negotiation for port speed and duplex mode
- Dual-speed (100M and 1000M) fiber interfaces
- SFP port support 1000BASE-SX/LX/LHX/ZX transceivers
- Digital Diagnostic Monitoring (DDM)
- 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)
  - BPDU Guard
  - BPDU filtering
  - Root Guard
  - BPDU transparent
  - Loopback detection
- ITU-T G.8032 Ethernet Ring Protection
  - Sub 50 msec convergence
  - Revertive operation mode
  - Multiple-ring network
- VLANs:
  - Supports 4K VLAN
  - Port-based VLAN
  - IEEE 802.1Q VLAN
  - IEEE 802.1v Protocol-based VLAN and Subnet-based VLAN
  - MAC-based VLAN
  - Traffic Segmentation
  - GVRP
- L2 Virtual Private VLAN
  - Q-in-Q
  - Selective Q-in-Q
  - L2 Protocol tunneling (xSTP, CDP, LLDP, VDP & PVST+)
  - CDP/PVST+ Filtering
  - Support Voice VLAN
- Link Aggregation:
  - Static Trunk
  - IEEE 802.3ad Link Aggregation Control Protocol
  - Trunk groups: 12, up to 8 ports per group
- IGMP Snooping:
  - IGMP: v1/v2/v3 snooping; Proxy reporting; Filtering; Throttling; Immediate Leave; IGMP Querier
  - MVR (Multicast VLAN Registration)
  - Support 5 Multicast VLANs
  - Port Mirroring
  - Supports jumbo frames up to 10KB

### OAM

- IEEE 802.3ah Link
- IEEE 802.1ag Connectivity Fault Management
  - Connectivity check
  - Loopback
  - Linktrace
- ITU-T Y.1731 Performance and Throughput Management
  - Frame Delay
  - Frame Delay variation

### IPv6 Features

- IPv4/IPv6 Dual Protocol stack
- IPv6 Address Types Stack: Unicast; IPv6 Neighbor Discovery
- SNMP over IPv6
- HTTP over IPv6
- Remote IPv6 ping

### Management Features

- 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
- RMON (groups 1, 2, 3 and 9)
- BOOTP, DHCP client for IP address assignment
- DHCP dynamic provision option 66, 67\*
- SNTP
- Event/Error Log/ Syslog, SMTP
- Supports LLDP (802.1ab)
- UPnP
- IP clustering
- (Optional) Network Management System, 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
- Cable Diagnostics

### QoS Features

- Priority Queues: 8 hardware queues per port
- Traffic classification
  - IEEE 802.1p CoS
  - IP Precedence
  - DSCP
  - MAC Access control list (Source/Destination MAC, Ether type, Priority ID/ VLAN ID )
  - IP standard access control list (Source IP)
  - IP extended access control list (Source/Destination IP, Protocol, TCP/UDP port number)
- Traffic Scheduling
  - Strict Priority
  - Weighted Round Robin
  - Strict + WRR traffic scheduling
- Weighted Random Early Detection
- Two rate Three Color Marker
- Ingress traffic policing
- Egress traffic shaping
- Marking/remarking
- Rate Limiting (Ingress and Egress, per port base)
  - GE: Resolution 64 Kbps ~ 1000 Mbps
- Bundle Rate Control

### Security

- Port security
- IEEE 802.1X port based and MAC based authentication
- Dynamic VLAN Assignment, Auto QoS, Auto ACL
- MAC authentication, Web authentication
- Voice VLAN, Guest VLAN
- L2/L3/L4 Access Control List
  - MAC Access control list (Source/Destination MAC, Ether type, Priority ID/ VLAN ID )
  - IP Standard access control list (Source IP)
  - IP extended access control list (Source/Destination IP, Protocol, TCP/UDP port number)
- IPv6 ACL
- DHCP: Snooping; Option 82
- IP Source Guard
- Dynamic ARP Inspection
- Login Security
- RADIUS authentication
- TACACS+ authorization and accounting
- TACACS+ 3.0
- Management Security
- SSH (v1.5/v2.0)
- SSL for HTTPS
- SNMPv3

## Features

### Electromagnetic Compatibility

CE Mark  
FCC Class A  
CISPR Class A

### Environmental Specifications

Temperature:  
■ IEC 68-2-14  
■ 0° to 60°C (Standard Operating)  
■ -40° to 70°C (Non-Operating)  
Humidity: 10% to 90% (Non-condensing)  
Vibration: IEC 68-2-36, IEC 68-2-6  
Shock: IEC 68-2-29  
Drop: IEC 68-2-32

### Green Ethernet

Saves power when ports are not connected  
Reduces power for short cable runs

### Mechanical

Dimensions (H x W x D): 44 x 252 x 440 mm (1.73 x 9.92 x 17.32 in.)  
LED Indicators: Port, Uplink, System, Diagnostic  
Weight: 3.2 kg (7.05 lbs)

### Power Supply

Dual power input  
■ AC input: 100 to 240V, 50~60 Hz, 0.33A  
■ DC input: -42 to -56V, 0.57A  
■ Internal, auto-ranging transformer: 100 to 240 VAC, 50 to 60 Hz  
Power Consumption  
■ 16.1 Watts maximum  
Dying gasp

### Safety

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

### 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 Edge-Core Networks products and solutions, visit [www.edge-core.com](http://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](http://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

Pluggable Optics

ET4201-SX  
ET4201-LX  
ET4201-LHX  
ET4201-ZX

Network Management System

### Product Description

1 Gbps, Small Form Factor Pluggable Transceiver (Distance: 500 m; Wavelength: 850 nm)  
1 Gbps, Small Form Factor Pluggable Transceiver (Distance: 10 km; Wavelength: 1310 nm)  
1 Gbps, Small Form Factor Pluggable Transceiver (Distance: 40 km; Wavelength: 1310 nm)  
1 Gbps, Small Form Factor Pluggable Transceiver (Distance: 80 km; Wavelength: 1550 nm)

ECView Pro Network Management Software

\* Future Release