

ES3526S

L2 Fast Ethernet FTTH Switch



Product Overview

The Edge-Core ES3526S is a Fast Ethernet Layer 2/4 Standalone FTTH switch featuring 26 ports; 24 100Base-FX WDM ports and 2 combo GE RJ-45/SFP ports. The EC3002 is a Fast Ethernet fiber to copper Media Converter with 1 10/100 RJ-45 port and 1 100BaseFX WDM port. Optical fiber ports can support lengths of up to 15km and are TTC TS-1000 standard compliant for maintenance capabilities and system management, ideal for Fiber to the Building, Fiber to the home deployment.

Key Features and Benefits

Performance and Scalability

With 8.8Gbps switching capacity, the Edge-Core FTTH Switch ES3526S can be placed in the Central Office of Internet Service Providers (ISP) to deliver wire-speed switching performance on all ports to subscribers over a single fiber.

At the subscriber site, the optical signal is converted into an electrical signal using the Media Converter EC3002.

The linking distance between the FTTH Switch and the Media Converter can be up to 15Km.

It is ideal for ISPs providing Fiber to the Home or Fiber to the Building broadband services with up to 100Mbps upstream and downstream data rate. Using the ES3526/EC3002 solution, high-speed data and high quality voice and video services are a reality.

The ES3526S and EC3002 are fully compliant to TTS TC-1000 OAM standards. The Central Office can do loop back tests to the subscriber's Media Converter to troubleshoot network connectivity for easy maintenance.

Continuous Availability

IGMP snooping prevents flooding of IP multicast traffic and limits bandwidth intensive voice and video traffic to only the subscribers.

Broadcast storm control prevents faulty end stations from degrading overall system performance.

Optional Redundant Power Supply provides uninterrupted power

Comprehensive QoS

4 egress queues per port enable differentiated management of up to 4 traffic types.

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

Private VLAN isolates edge ports to ensure user privacy, which is especially important for subscribers who don't want to share information with their neighbor.

Port Security ensures access to a switch port 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 access control ensures all users are authorized before being granted access to the network using any standards-based RADIUS server.

Access Control Lists (ACLs) restrict access to sensitive network resources by denying packets based on source and destination MAC addresses, IP addresses, TCP/UDP ports.

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

TACACS+/RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

Simple 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. Embedded user friendly web interface helps user to quickly and simply configure switches.

Four groups RMON are supported for traffic management, monitoring and analysis. While upgrading firmware or fine tuning, dual software images and multiple configuration files can be used for backup or restoration.

TFTP can be used to backup and restore firmware and configuration files.

ES3526S Product Specifications

Features

Physical Ports

- ES3526S
- 24 100Base-FX single fiber ports
 - 2 Combo G (RJ-45/SFP) ports
 - 1 RJ-45 management port
 - 1 RS-232 DB-9 console port
 - 1 Redundant Power Supply Connector

- EC3002
- 1 100Base-FX single fiber port
 - 1 10/100Base-TX RJ-45 port

Performance

- Switching Capability: 8.8Gbps
Forwarding Rate: 6.6Mpps
MAC Address Table Size: 8K (ES3526S) / 2K (EC3002)
Packet Buffer Size: 32MB

L2 Features

- Auto-negotiation for port speed and duplex mode
Flow Control: IEEE 802.3x and Back-Pressure
Dip switch for full/half duplex, 10/100 Mbps, MDI/MDIX control (EC3002)
Spanning Tree Protocol:
 - IEEE 802.1D Spanning Tree Protocol (STP)
 - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)VLANs:
 - Supports 255 IEEE 802.1Q VLANs, Port-based VLAN, GVRP
 - Private VLANLink Aggregation:
 - Static Trunk
 - IEEE 802.3ad Link Aggregation Control Protocol
 - Trunk groups: 6, Trunk links: 2~8IGMP Snooping:
 - IGMP v1 and v2 snooping, IGMP Querier

Optical Features

- The CO Switch wavelength: Transmit-1550nm, Receive-1310nm
- The CPE wavelength: Transmit-1310nm, Receive-1550nm
- Cable: 9/125um Single Mode Fiber (ITU-T G.652)
- Connector: Single SC Connector
- Transmitting Power Range: -8 ~ -14dBm
- Receiving Power Range: -8 ~ -30dBm

QoS Features

- Priority Queues: 4 hardware queues per port
Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP, TCP/UDP port number, Access Control List
Supports WRR and Strict scheduling
Bandwidth Control:
 - Egress rate limiting
 - Ingress rate limiting

Security

- Supports IEEE 802.1X port-based access control
RADIUS/TACACS+ authentication
Access Control List
SSH (v1.5/v2.0), SSL

Management

- Switch Management:
 - CLI via console port or Telnet
 - WEB management
 - SNMP v1, v2cDual firmware images and multiple configuration files
Firmware & Configuration file upgrade/backup via TFTP server
Supports RMON (groups 1, 2, 3 and 9)
Supports BOOTP, DHCP for IP address assignment
Supports SNTP
Event/Error Log/Syslog

Operation Administration Monitoring (OAM)

- Subscriber Port Monitoring:
 - Remote Power Status
 - Optical Signal Status
 - Remote Link Status
 - Converter Fault Status
 - Link Speed
 - Half/Full Duplex
 - Auto Negotiation Enable/Disable

Mechanical

- Dimensions (H x W x D): 44 x 440 x 415 mm (1RU),
35 x 110 x 180 mm (EC3002)
LED Indicators: Port, Uplink, System, Diagnostic
LED indicators (EC3002): Power, Optical Link, UTP Link/Activity/Bit rate/Half/Full, Loop back testing

Safety

- CSA/NRTL (UL60950, CSA60950)
TUV/GS (EN60950)

Electromagnetic Compatibility

- CE Mark
FCC Class A
VCCI Class A
CISPR Class A

Environmental Specifications

- Temperature:
 - IEC 68-2-14
 - 0°C to 40°C (Standard Operating)
 - -40°C to 70°C (Non-Operating)Humidity: 5% to 95% (Non-condensing)
Vibration: IEC 68-2-36, IEC 68-2-6
Shock: IEC 68-2-29
Drop: IEC 68-2-32

Power

- Power Consumption: 50W maximum
Power Supply: 1A at +12V (External power adapter 10/60Hz 100-120V AC included)

Warranty

- Limited lifetime warranty

Ordering Information

Optional Accessories

- RPS600WA
ET4201-SX
ET4201-LX
ET4201-LHX
ET4201-ZX
ECview

Product Description

- 4 DC output redundant power supply connectors (Supports max. power output 150W/12V per port)
Small Form Factor Pluggable (Distance: 500m; Wavelength: 850nm)
Small Form Factor Pluggable (Distance: 10km; Wavelength: 1310nm)
Small Form Factor Pluggable (Distance: 40km; Wavelength: 1310nm)
Small Form Factor Pluggable (Distance: 80km; Wavelength: 1550nm)
SNMP Network Management Software