



Ethernet switch ESN410

ESN410 is a Layer 2 Gigabit Ethernet switch also supporting Layer 3 functionalities such as IP routing. ESN410 is an aggregation switch for the Layer 2 network for both ECN320 and ESN310.

Description

ESN410 is a 12-port 10/100/1000 Ethernet routing stand-alone switch that supports IP routing. As a routing switch it combines the speed and low cost of a Layer 2 switch, with the ability to route at Layer 3. Comprehensive network management functions are provided, such as Spanning Tree protocol for standard bridging, GVRP for VLAN configuration, SNMP, RMON and Web management are also standard features.

ESN410 is prepared for both ETSI and 19" rack mounting and has built-in fan units that can be replaced without service interruption.

Great Fault-Tolerance

Great Fault-Tolerance Spanning Tree Protocol (STP) is a link management protocol that provides path redundancy while preventing undesirable loops in the network. ESN410 delivers IEEE802.1D protocol Spanning Tree Protocol (STP) IEEE802.1s Multiple Spanning Tree (MST) and IEEE802.1w Rapid Spanning Tree Protocol (RSTP).

Advanced network security mechanism

As networks grow and branch out to remote locations, network security increases in importance and administration complexity. Customers need to protect networks and network services from unauthorized access by remote users. ESN410 provides multiple

security algorithms such as Port Security, SSL, Web management Encryption, RADIUS and TACACS+ as well as management in dedicated VLANs to protect data communication and ensure data privacy.

Full range of Interface Choice Used SFP

Instead of providing lots of expansion modules options, ESN410 offers SFP for covering great cabling and distance requests based on customers' need. A great advantage for vendors is that it saves modules inventory management.

Eliminate network bottlenecks

To secure the bandwidth for highly bandwidth demanded traffic, ESN410 offers IEEE 802.3ad Link Aggregation. Users can choose the way they prefer or used to configure the system. This is a user-friendly design to meet the customer's preference.

Great performance

The ESN410 offers high performance at a very attractive price. It boosts Layer 3 switching performance and eliminates network bottlenecks with wire-speed switching capability. In addition to wire-speed switching, it also offers rich software feature sets to manage and secure the whole network communication.

Switching features

- Provides 8 1000Base-X SFP and 4 Gigabit combo ports (RJ45/SFP).

- The 10/100/1000Base-TX ports support auto-sensing, auto-negotiation.
- Supports Jumbo frame up to 9KB
- Provides wire speed L2/L3 switch
- Supports up to 16K MAC address entries
- Flow Control supported:
 - Full duplex mode
 - Back pressure flow control half duplex mode
- Provides store-and-forward forwarding scheme
- Provides Head of Line (HoL) blocking prevention
- Provides broadcast storm protection
- VLANs support, GVRP, IEEE802.1Q, IEEE802.1v
- Supports IGMP snooping
- Provides 8-level priority in switching
- Provides Spanning Tree (IEEE 802.1D)
- Fast forwarding mode supported (802.1s, 802.1w)
- Provides Link Aggregation (802.3ad with LACP)

Advanced features

- Provides IPv4 routing at wire speed
- Provides up to 2K IP address entries
- Provides static IP routes (1K entries)
- Provides Multi-netting
- Provides Super-netting (CIDR)
- Provides RIP I (RFC1058) and RIP II (RFC2453)
- Provides OSPF (RFC2328) routing
- Provides IP Multicast Routing: IGMP, DVMRP, PIM-DM
- IP Redundancy - VRRP (RFC 2338) supported
- ARP (RFC 826) supported
- Provides DHCP/BOOTP (RFC 951) relay
- Provides DHCP server (RFC 2131)/client
- DNS support (proxy) server

Quality of Service features

- Provides DiffServ
- Rate Limiting
- Traffic and Bandwidth Management

Management features

- Provides 1 Male DB9 RS-232C console interface configured as DTE
- Supports Cisco-liked Command Line Interface (CLI) using VT-100 style terminal, 4 sessions
- Supports Telnet management
- Supports Embedded Web-based Management
- Supports software upgrade/download via XMODEM or TFTP

- Supports configuration download/upload via TFTP
- Supports Port Mirroring
- Supports BOOTP/DHCP client for IP address assignment
- Supports ARP Proxy
- Supports Remote Ping
- Supports dual copies of code
- Supports multiple copies of configuration
- Supports System/Crash/Error log
- Supports SNTP (RFC 2030)
- Supports SNMPv1/v2c/v3*
- Supports RFC 2819 RMON group (1,2,3 & 9)

Security features

- User/Password protected system management terminal
- L2/L3/L4 access control list
- RADIUS
- TACACS+
- Secure Shell (SSH/Secure Telnet)
- HTTPS/SSL
- IEEE 802.1x
- Separate Management VLAN

Technical data

VALID FOR THE FOLLOWING RELEASES

- EDA 2.1 and EDA 2.2

GENERAL

- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX
- IEEE 802.3z 1000Base-SX
- IEEE 802.3x flow control support
- IEEE 802.1D (Bridging), 1993
- IEEE 802.1Q (Virtual LAN), 1998
- IEEE 802.3ad (LACP)
- IEEE 802.1s
- IEEE 802.1w

INTERFACES

Ports

- 8 1000Base-X SFP ports
- 4 Giga combo port-RJ45/ SFP
- 1 RS232 port
- 1 Redundant Power (DC) connector
- 1 RJ-45 management port

MANAGEMENT

- SNMP v1/v2c/v3
- RFC1213 MIB-2
- RFC2863 Interface MIB
- RFC2665 Ether-Like MIB
- RFC1493 Bridge MIB
- RFC2674 Extended Bridge MIB (P-bridge, Q-bridge)
- RFC2819 RMON MIB (groups 1,2,3,9 only)
- RFC2737 Entity MIB
- RFC2621 RADIUS Client MIB

PERFORMANCE

- Switch fabric: 24Gbps
- MAC addresses: 16K

POWER

- Nominal Input Voltages: -48 V
- Power consumption: 34 max

DIMENSIONS

- HxWxD: 44 x 440 x 230 mm

ELECTROMATIC COMPATIBILITY

- EN 300 386 V1.3.2:2003
- EN 55022:1998 + A1:2000 + A2:2003, Class A
- EN 61000-3-2: 2000, Class A (Not applied)
- EN 61000-3-3: 1995 + A1:2001 (Not applied)
- EN 61000-4-2:2001
- EN 61000-4-3:2002 + A1:2002
- EN 61000-4-4:1995 + A1:2000 + A2:2001
- EN 61000-4-5:2001
- EN 61000-4-6:2001
- EN 61000-4-11:2001 (Not applied)

SAFETY

- CSA/NRTL (UL1950, CSA 22.2.950)
- TUV/GS (EN60950)
- CB

ENVIRONMENTAL

- Temperature: IEC 68-2-14
- -5-50°C (Standard operating)
- -40-70°C (Non-operation)
- 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

Subject to change without notice