

12-PORT GIGABIT ETHERNET SWITCH

Ericsson EDA 1200 – ESN410



ESN410 is a Layer 2 Gigabit Ethernet switch supporting Layer 3 functionalities such as IP routing. ESN410 is part of the EDA 1200 product portfolio and functions as traffic aggregation switch for the Layer 2 network and for the Ethernet Controller Node ECN330.

ESN410 is a 12-port stand-alone Ethernet 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.

ESN410 is designed for direct aggregation of Ethernet Controller Node ECN330 and Ethernet switch ESN108 with Gbps uplink. Combined with the ESN212 switch ESN410 can be used for traffic aggregation of VDSL2 nodes or combined ADSL/VDSL2 nodes (a typical VDSL2 node is a remote cabinet consisting of an ESN212 switch and EDN612/EDN312 IP DSLAMs).

EDA topologies

ESN410 supports the “EDA legacy topologies”. Examples of different scenarios are shown in the illustration below. Flexible topology allows unmanaged or 3rd party switches between the ECN330/ESN410 and the ESN212 aggregation switch.

In order to increase the uplink capacity, one or more ESN410 switches can be used for traffic aggregation.

ESN410 is prepared for both ETSI and 19” rack mounting.

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 the following protocols:

- IEEE802.1D protocol Spanning Tree Protocol (STP)
- IEEE802.1s Multiple Spanning Tree (MST)
- IEEE802.1w Rapid Spanning Tree Protocol (RSTP)

Advanced network security mechanism

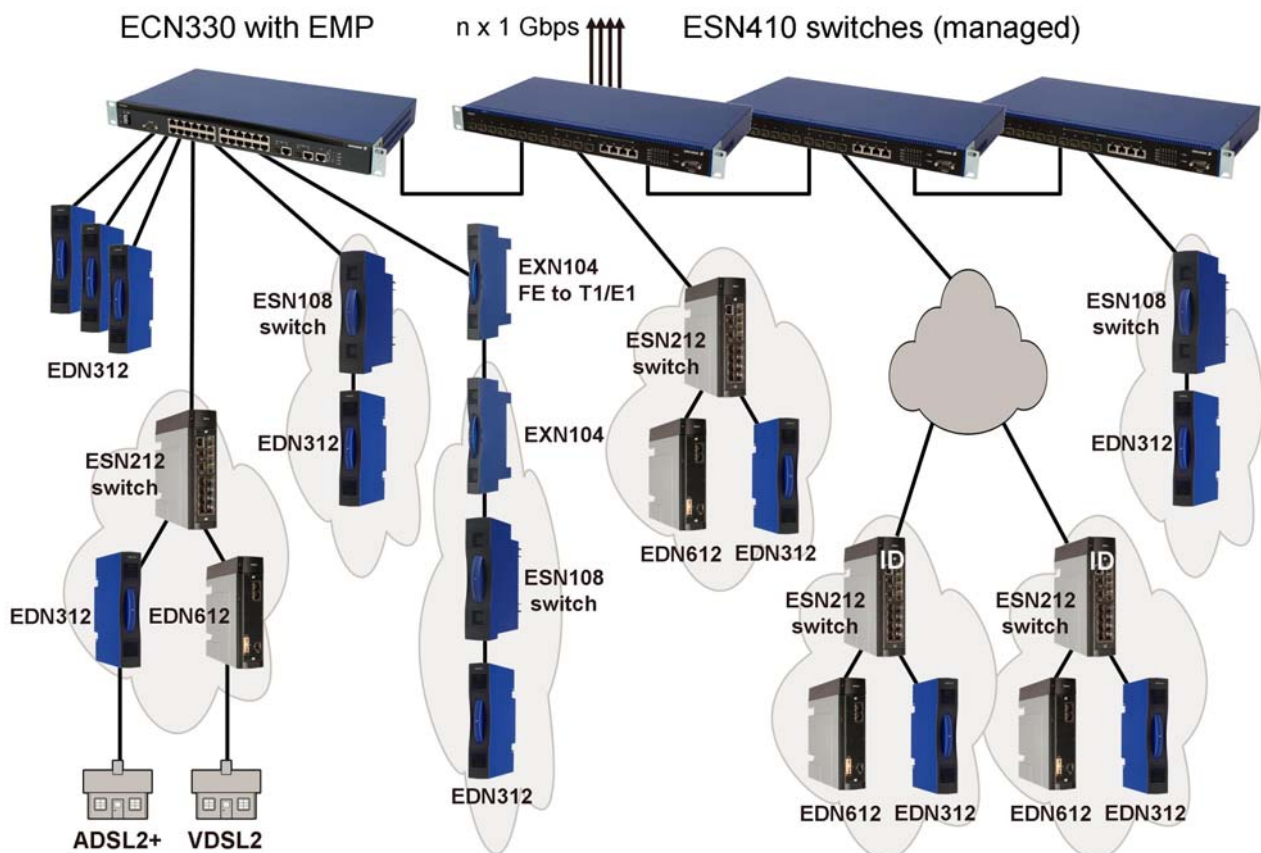
As networks grow and branch out to remote locations, network security increases in importance and administrative complexity. Customers need to protect networks and network services from unauthorized access by remote users. ESN410 provides multiple security algorithms such as Port Security, SSL, SSH, SNMP v3, and L2/L3/L4 access control list, Web Management Encryption, RADIUS and TACACS+. ESN410 also provides management in dedicated VLANs to protect data communication and ensure data privacy.

Full range of interface choice using SFP

Instead of providing lots of expansion modules options, ESN410 offers SFP for covering customer requests for extensive cabling and distances. A great advantage for vendors is that it saves modules inventory management.

Eliminate network bottlenecks

To secure the bandwidth for high bandwidth demanding traffic, ESN410 offers IEEE 802.3ad Link Aggregation, up to six trunks. This is a user-friendly design to meet the customers’ preferences, and each user can choose how they prefer to configure the system.



High 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 eight 1000Base-X SFP and four Gigabit combo ports (RJ45/SFP).
- The 10/100/1000Base-TX ports support auto-sensing, auto-negotiation.
- Supports Jumbo frame up to 9 KB
- Provides wire speed L2/L3 switch
- Supports up to 16,000 MAC address entries
- Supports up to 4,094 VLANs
- 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

Ethernet switch ESN410 provides:

- IPv4 routing at wire speed
- Up to 2,000 IP address entries
- Static IP routes (1,000 entries)
- Multi-netting
- Super-netting (CIDR)
- RIP I (RFC1058) and RIP II (RFC2453)
- OSPF (RFC2328) routing
- IP Multicast Routing: IGMP, DVMRP, PIM-DM
- IP Redundancy - VRRP (RFC 2338) supported
- ARP (RFC 826) supported
- DHCP/BOOTP (RFC 951) relay
- 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-like 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 SNMP (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 specifications

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 x 1000Base-X SFP ports
- 4 x Giga combo port RJ-45/SFP
- 1 x RS-232 port
- 1 x Redundant Power (DC) connector
- 1 x RJ-45 management port

PERFORMANCE

- Switch fabric: 24 Gbps
- MAC addresses: 16,000

POWER

- Nominal Input Voltages: -48 V
- Power consumption: 34 Watts maximum

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

ENVIRONMENTAL

- Temperature: IEC 68-2-14
- -5 to +55°C (Standard operating)
- -40 to +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

SAFETY

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

DIMENSIONS

- HxWxD: 44 x 440 x 230 mm
- Prepared for both ETSI and 19" rack mounting.

ELECTROMAGNETIC 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)