

EDS-828 Series

24+4G-port layer 3 Gigabit modular managed Ethernet switch



- > Layer 3 switch, static routing and RIP V1/V2 supported
- > 4 Gigabit plus 24 fast Ethernet ports for copper and fiber
- > Gigabit Turbo Ring and RSTP/STP (IEEE 802.1w/D) for Ethernet redundancy
- > QoS, IGMP snooping/GMRP, VLAN, LACP, SNMP V1/V2c/V3, RMON supported
- > IEEE 802.1X and https/SSL to enhance network security
- > ABC-01 (Automatic Backup Configurator) for system configuration backup

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



Introduction

The EDS-828 is a high-performance Layer 3 switch designed for network routing, and the improved hardware technology built into the EDS-828 replaces the software logic used by traditional routers, offering better performance, and making the switch ideal for large-scale local area networks (LANs). In addition to Layer 3 features, the EDS-828 also supports Layer 2 management features, including QoS, IGMP snooping/

GMRP, VLAN, LACP, SNMP V1/V2c/V3, RMON, IEEE 802.1X, and https/SSL. In order to meet the demands of any industrial application, the EDS-828 uses a modular design that allows users to install up to 4 Gigabit Ethernet ports and 24 fast Ethernet ports, providing a high degree of flexibility for network expansion.

Features and Benefits

- Static routing, RIP V1/V2 to move data and information across networks
- Redundant Gigabit Ethernet ring and RSTP/STP (IEEE 802.1w/D)
- IGMP snooping and GMRP for filtering multicast traffic from industrial Ethernet protocols
- IEEE 802.1Q VLAN and GVRP protocol to ease network planning
- QoS-IEEE 802.1p/1Q and TOS/DiffServ to increase determinism
- Port Trunking for optimum bandwidth utilization
- IEEE 802.1X and https/SSL to enhance network security
- SNMP V1/V2c/V3 for different levels of network management
- RMON for efficient network monitoring and proactive capability
- Bandwidth management prevents unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address
- Port mirroring for online debugging
- Automatic warning by exception through email, relay output
- Digital inputs for integrating sensors and alarms with IP networks
- Redundant, dual DC power inputs
- Rugged, IP30-rated, high-strength housing
- DIN-Rail or panel mounting capability

Specifications

Modular Managed Layer 3 Switch System, EDS-82810G



Technology

Standards: IEEE 802.3 for 10BaseT,
 IEEE 802.3u for 100BaseT(X) and 100Base FX,
 IEEE 802.3ab for 1000BaseT(X),
 IEEE 802.3z for 1000BaseSX/LX/LHX/ZX,
 IEEE 802.3x for Flow Control,
 IEEE 802.1D for Spanning Tree Protocol,
 IEEE 802.1w for Rapid STP,

IEEE 802.1Q for VLAN Tagging,
 IEEE 802.1p for Class of Service,
 IEEE 802.1X for Authentication,
 IEEE 802.3ad for Port Trunk with LACP

Protocols: IGMP V1/V2/V3 device, GMRP, GVRP, SNMP V1/V2c/V3, DHCP Server/Client, DHCP Option 82, BootP, TFTP, Sntp, SMTP, RARP, RMON, RIP V1/V2

MIB: MIB-II, Ethernet-like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9

Flow Control: IEEE 802.3x flow control, back pressure flow control

Switch Properties

Priority Queues: 4

Max. Number of Available VLANs: 64

VLAN ID Range: VID 1 to 4094

IGMP Groups: 256

Interface

Fast Ethernet: 6 slots for any combination of 4-port Interface Module with 10/100BaseT(X) or 100BaseFX

Gigabit Ethernet: 2 slots for any combination of 2-port Interface Module with 10/100/1000BaseT(X), or 1000BaseSX/LX/LHX/ZX (SFP slot, LC connector)

Console: RS-232 (RJ45)

System LED Indicators: STAT, PWR1, PWR2, FAULT, MASTER, COUPLER, T.RING

Module LED Indicators: LNK/ACT, FDX/HDX, RING PORT, COUPLER PORT, SPEED

Alarm Contact: Two relay outputs with current carrying capacity of 1A @ 24 VDC

Digital Inputs: Two inputs with the same ground, but electrically isolated from the electronics

- +13 to +30V for state “1”
- -30 to +3V for state “0”
- Max. input current: 8 mA

Power Requirements

Input Voltage: 24 VDC (12 to 45 VDC), redundant dual inputs

Input Current (@ 24 V): 0.96A

Connection: Two removable 6-pin terminal blocks

Overload Current Protection: Present

Reverse Polarity Protection: Present

Physical Characteristics

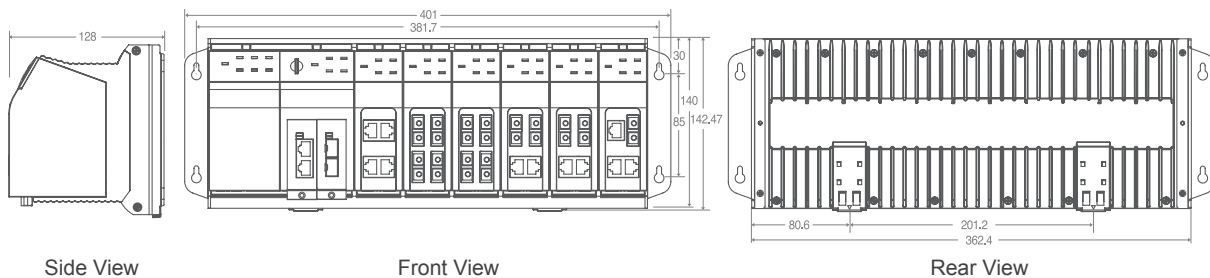
Housing: IP30 protection

Dimensions (W x H x D): 362.4 x 142.47 x 128 mm (14.27 x 5.61 x 5.04 in.)

Weight: 1950 g

Installation: DIN-Rail mounting, wall mounting (optional kit)

Dimensions (unit = mm)



Environmental Limits

Operating Temperature: 0 to 60°C (32 to 140°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Regulatory Approvals

Safety: UL508 (Pending), UL60950-1, CSA C22.2 No. 60950-1, EN60950-1(Pending)

Hazardous Location: UL/cUL Class I, Division 2, Groups A, B, C, and D (Pending); ATEX Class I, Zone 2, Ex nC IIC (Pending)

Maritime: DNV (Pending), GL (Pending)

EMI: FCC Part 15, CISPR (EN55022) class A

- EMS:** EN61000-4-2 (ESD), level 3
 EN61000-4-3 (RS), level 3
 EN61000-4-4 (EFT), level 3
 EN61000-4-5 (Surge), level 3
 EN61000-4-6 (CS), level 3
 EN61000-4-8
 EN61000-4-11
 EN61000-4-12

Shock: IEC 60068-2-27

Freefall: IEC 60068-2-32

Vibration: IEC 60068-2-6

**Please check Moxa's website for the most up-to-date certification status.*

MTBF: 160,000 hrs

Database: Telcordia (Bellcore), GB

Warranty

5 years (see www.moxa.com/warranty for details)

Ordering Information

Step 1: Select switch system

EDS-82810G



Step 2: Select interface modules

IM series
(Gigabit or fast Ethernet)

** The EDS-82810G switch system is delivered without interface module. Please see page 3-14 for product information of IM series Gigabit and fast Ethernet interface modules.*

Modular Managed Layer 3 Switch System, EDS-82810G

Modular managed layer 3 switch system with 6 slots for 4-port fast Ethernet interface modules and 2 slots for 2-port Gigabit interface modules, up to 24+4G ports.

Optional Accessories

- **ABC-01:** Industrial RS-232, RJ45-based, automatic backup configurator
- **EDS-SNMP OPC Server Pro:** CD with EDS-SNMP OPC server software and manual
- **DR-4524:** 45W/2A DIN-Rail 24 VDC power supply, 85 to 264 VAC input
- **DR-75-24:** 75W/3.2A DIN-Rail 24 VDC power supply, 85 to 264 VAC input
- **DR-120-24:** 120W/5A DIN-Rail 24 VDC power supply, 88 to 132 VAC/176 to 264 VAC input by switch
- **WK-32:** Wall mounting kit for EDS-728/828 series
- **RK-4U:** 4U-high 19" rack mounting kit