

# EDS-G4008 Series

## 8G-port full Gigabit managed Ethernet switches



### Features and Benefits

- Turbo Ring and Turbo Chain (recovery time < 50 ms @ 250 switches), and RSTP/STP for network redundancy
- Wide range of power input options for flexible deployment
- Compact and flexible housing design to fit into confined spaces
- Supports MXstudio for easy, visualized industrial network management
- IEC 62443-4-2 Security Level 2 certified

### Certifications



### Introduction

The EDS-G4008 Series is equipped with 8 Gigabit Ethernet ports, making it ideal for upgrading an existing network to Gigabit speed or building a new full Gigabit backbone. Gigabit transmission speed increases bandwidth for higher performance and transfers large amounts of triple-play services across a network quickly.

Redundant Ethernet technologies such as Turbo Ring, Turbo Chain, and RSTP/STP increase the reliability of your system and improve the availability of your network backbone. The EDS-G4008 Series is designed specifically for demanding applications such as video and process monitoring, ITS, and DCS systems, all of which can benefit from a scalable backbone construction.

### IEC 62443-4-2 Security Level 2 Certified

EDS-(G)4000 Series models are IEC 62443-4-2 Security Level 2 certified (<https://certificates.iecee.org/#/deliverables/CERT/1605016/view>), helping our customers meet the requirements of secure industrial networks.

### Specifications

|                                            |                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet Interface                         |                                                                                                                                                                                                                                                                                                                                                                      |
| 10/100/1000BaseT(X) Ports (RJ45 connector) | 8<br>Auto MDI/MDI-X connection<br>Auto negotiation speed<br>Full/Half duplex mode                                                                                                                                                                                                                                                                                    |
| Standards                                  | IEEE 802.3 for 10BaseT<br>IEEE 802.3u for 100BaseT(X)<br>IEEE 802.3ab for 1000BaseT(X)<br>IEEE 802.3x for flow control<br>IEEE 802.3ad for Port Trunk with LACP<br>IEEE 802.1Q for VLAN Tagging<br>IEEE 802.1D-2004 for Spanning Tree Protocol<br>IEEE 802.1w for Rapid Spanning Tree Protocol<br>IEEE 802.1p for Class of Service<br>IEEE 802.1X for authentication |
| Ethernet Software Features                 |                                                                                                                                                                                                                                                                                                                                                                      |
| Industrial Protocols                       | EtherNet/IP<br>Modbus TCP<br>PROFINET IO Device                                                                                                                                                                                                                                                                                                                      |
| Management                                 | IPv4/IPv6<br>Flow control<br>Back Pressure Flow Control<br>DHCP Server/Client                                                                                                                                                                                                                                                                                        |

|                      |                                                                                                                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | ARP<br>RARP<br>LLDP<br>Port Mirroring (SPAN, RSPAN)<br>Linkup Delay<br>SMTP<br>SNMP Trap<br>SNMP Inform<br>SNMPv1/v2c/v3<br>RMON<br>TFTP<br>SFTP<br>HTTP<br>HTTPS<br>Telnet<br>Syslog<br>Private MIB<br>Fiber check |
| Filter               | GMRP<br>GVRP<br>GARP<br>802.1Q VLAN<br>IGMP Snooping v1/v2/v3<br>IGMP Querier                                                                                                                                       |
| Redundancy Protocols | STP<br>RSTP<br>Turbo Ring v2<br>Turbo Chain<br>Ring Coupling<br>Dual-Homing<br>Link Aggregation<br>MRP<br>MSTP                                                                                                      |
| Security             | Broadcast storm protection<br>Rate Limit<br>Trust access control<br>Static Port Lock<br>MAC Sticky<br>HTTPS/SSL<br>SSH<br>RADIUS<br>TACACS+<br>Access control list<br>Login and Password Policy<br>DHCP Snooping    |
| Time Management      | SNTP<br>NTP Server/Client<br>NTP Authentication<br>IEEE 1588v2 PTP (hardware-based)<br>Supported power profiles: IEEE 1588 Default 2008, IEC 61850-9-3-2016, IEEE C37.238-2017                                      |

|           |                                                                                                                                                                                                     |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protocols | IPv4/IPv6<br>TCP/IP<br>UDP<br>ICMP<br>ARP<br>RARP<br>TFTP<br>DNS<br>NTP Client<br>DHCP Server<br>DHCP Client<br>802.1X<br>QoS<br>HTTPS<br>HTTP<br>Telnet<br>SMTP<br>SNMPv1/v2c/v3<br>RMON<br>Syslog |
| MIB       | P-BRIDGE MIB<br>Q-BRIDGE MIB<br>IEEE8021-SPANNING-TREE-MIB<br>IEEE8021-PAE-MIB<br>IEEE8023-LAG-MIB<br>LLDP-EXT-DOT1-MIB<br>LLDP-EXT-DOT3-MIB<br>SNMPv2-MIB<br>RMON MIB Groups 1, 2, 3, 9            |

#### Switch Properties

|                    |               |
|--------------------|---------------|
| MAC Table Size     | 16 K          |
| Jumbo Frame Size   | 9.216 KB      |
| Max. No. of VLANs  | 256           |
| VLAN ID Range      | VID 1 to 4094 |
| IGMP Groups        | 512           |
| Priority Queues    | 4             |
| Packet Buffer Size | 1 MB          |

#### LED Interface

|                |                                                      |
|----------------|------------------------------------------------------|
| LED Indicators | PWR1, PWR2, STATE, FAULT, MSTR/HEAD, CPLR/TAIL, SYNC |
|----------------|------------------------------------------------------|

#### Serial Interface

|              |                                                      |
|--------------|------------------------------------------------------|
| Console Port | RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1) |
|--------------|------------------------------------------------------|

#### USB Interface

|               |                       |
|---------------|-----------------------|
| USB Connector | USB Type A (Reserved) |
|---------------|-----------------------|

#### Input/Output Interface

|                        |                                                                                 |
|------------------------|---------------------------------------------------------------------------------|
| Alarm Contact Channels | 1, Relay output with current carrying capacity of 1 A @ 24 VDC                  |
| Digital Input Channels | 1                                                                               |
| Digital Inputs         | +13 to +30 V for state 1<br>-30 to +3 V for state 0<br>Max. input current: 8 mA |
| Buttons                | Reset button                                                                    |

## DIP Switch Configuration

|              |                                      |
|--------------|--------------------------------------|
| DIP Switches | Turbo Ring, Master, Coupler, Reserve |
|--------------|--------------------------------------|

## Power Parameters

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection                  | 2 removable 4-contact terminal block(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Pre-installed Power Module  | -LV/-LV-T models: PWR-100-LV<br>-HV/-HV-T models: PWR-105-HV-I                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Note                        | <p>The EDS-G4008 Series supports modular power supplies. The model names and power parameters are determined by the installed power module.</p> <p>For example:<br/>EDS-G4008-T + PWR-100-LV = EDS-G4008-LV-T<br/>EDS-G4008-T + PWR-105-HV-I = EDS-G4008-HV-T</p> <p>If you install a different power module, refer to the specifications of the corresponding model. For example, if you replace the power module of the EDS-G4008-LV-T with the PWR-105-HV-I, refer to the specifications of the EDS-G4008-HV-T.</p> |
| Input Voltage               | -LV/-LV-T models: 12/24/48 VDC, Redundant dual inputs<br>-HV/-HV-T models: 110/220 VDC/VAC, Single input                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating Voltage           | -LV/-LV-T models: 9.6 to 60 VDC<br>-HV/-HV-T models: 88 to 300 VDC, 85 to 264 VAC                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Input Current               | -LV/-LV-T models: 12-48 VDC, 1.50-0.40 A or 24 VDC, 0.70 A<br>-HV/-HV-T models: 110-220 VAC, 50-60 Hz, 0.30-0.20 A or 110-220 VDC, 0.30-0.20 A                                                                                                                                                                                                                                                                                                                                                                         |
| Overload Current Protection | Supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Reverse Polarity Protection | Supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Power Consumption (Max.)    | EDS-G4008-LV(-T) models: 8.84 W<br>EDS-G4008-HV(-T) models: 10.73 W                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Physical Characteristics

|              |                                                        |
|--------------|--------------------------------------------------------|
| IP Rating    | IP40                                                   |
| Dimensions   | 55 x 140 x 120 mm (2.17 x 5.51 x 4.72 in)              |
| Weight       | 859.5 g (1.89 lb)                                      |
| Installation | DIN-rail mounting<br>Wall mounting (with optional kit) |
| Housing      | Metal                                                  |

## Environmental Limits

|                                        |                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------|
| Operating Temperature                  | Standard models: -10 to 60°C (14 to 140°F)<br>Wide temp. models: -40 to 75°C (-40 to 167°F) |
| Storage Temperature (package included) | -40 to 85°C (-40 to 185°F)                                                                  |
| Ambient Relative Humidity              | 5 to 95% (non-condensing)                                                                   |

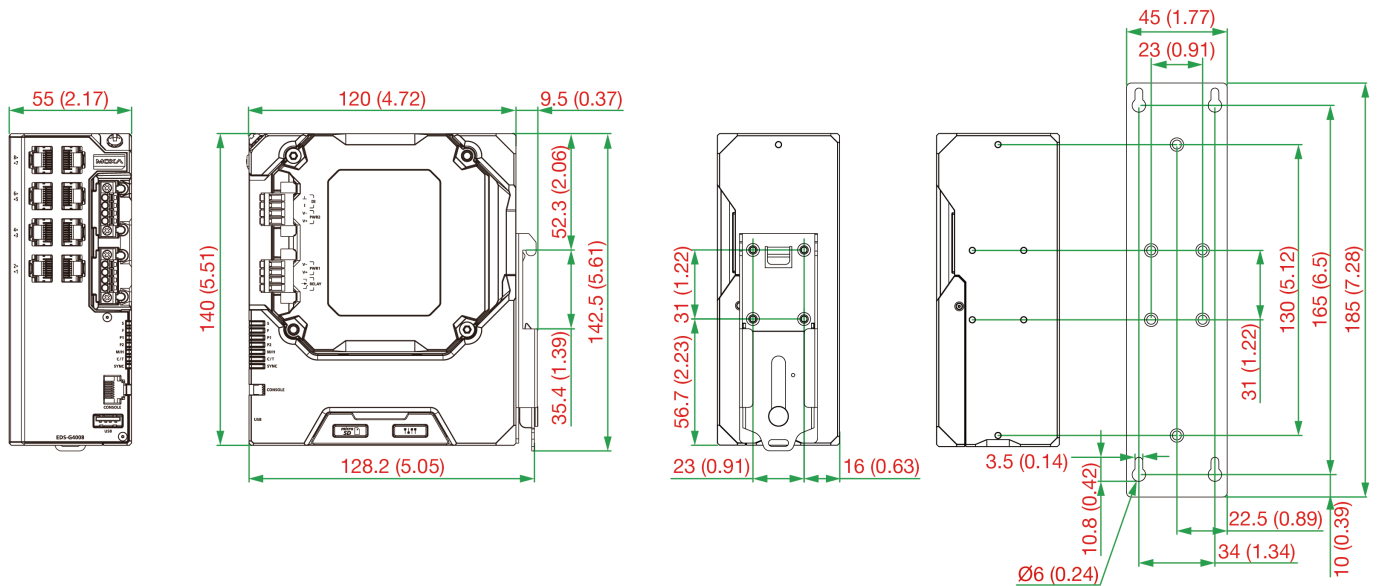
## Standards and Certifications

|                          |                                    |
|--------------------------|------------------------------------|
| Industrial Cybersecurity | IEC 62443-4-2 Security Level 2     |
| Safety                   | UL 61010-2-201<br>EN 62368-1 (LVD) |
| EMC                      | EN 55032/35<br>EN 61000-6-2/-6-4   |
| EMI                      | CISPR 32, FCC Part 15B Class A     |

|                         |                                                                                                                                                                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMS                     | IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m<br>IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV<br>IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV<br>IEC 61000-4-6 CS: 10 V<br>IEC 61000-4-8 PFMF |
| Maritime                | -LV/-LV-T models: DNV, ABS, NK, LR                                                                                                                                                                                                          |
| Vibration               | IEC 60068-2-6                                                                                                                                                                                                                               |
| Shock                   | IEC 60068-2-27                                                                                                                                                                                                                              |
| Freefall                | IEC 60068-2-32                                                                                                                                                                                                                              |
| Railway                 | EN 50121-4                                                                                                                                                                                                                                  |
| Traffic Control         | NEMA TS2                                                                                                                                                                                                                                    |
| Power Substation        | IEC 61850-3<br>IEEE 1613 Class 1                                                                                                                                                                                                            |
| Hazardous Locations     | -LV/-LV-T models:<br>ATEX<br>IECEX<br>Class I Division 2                                                                                                                                                                                    |
| <b>MTBF</b>             |                                                                                                                                                                                                                                             |
| Time                    | EDS-G4008-LV/-LV-T models: 1,098,085 hrs<br>EDS-G4008-HV/-HV-T models: 511,204 hrs                                                                                                                                                          |
| Standards               | Telcordia Standard SR-332                                                                                                                                                                                                                   |
| <b>Warranty</b>         |                                                                                                                                                                                                                                             |
| Warranty Period         | 5 years                                                                                                                                                                                                                                     |
| Details                 | See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>                                                                                                                                                                        |
| <b>Package Contents</b> |                                                                                                                                                                                                                                             |
| Device                  | 1 x EDS-G4008 Series switch                                                                                                                                                                                                                 |
| Documentation           | 1 x quick installation guide<br>1 x product notice, Simplified Chinese<br>1 x product certificates of quality inspection, Simplified Chinese<br>1 x warranty card                                                                           |

## Dimensions

Unit: mm (inch)



## Ordering Information

| Model Name     | 10/100/1000BaseT(X) Ports, RJ45 Connector | Operating Voltage            | Pre-installed Power Module | Operating Temp. |
|----------------|-------------------------------------------|------------------------------|----------------------------|-----------------|
| EDS-G4008-LV   | 8                                         | 9.6 to 60 VDC                | PWR-100-LV                 | -10 to 60°C     |
| EDS-G4008-LV-T | 8                                         | 9.6 to 60 VDC                | PWR-100-LV                 | -40 to 75°C     |
| EDS-G4008-HV   | 8                                         | 88 to 300 VDC, 85 to 264 VAC | PWR-105-HV-I               | -10 to 60°C     |
| EDS-G4008-HV-T | 8                                         | 88 to 300 VDC, 85 to 264 VAC | PWR-105-HV-I               | -40 to 75°C     |

## Accessories (sold separately)

### Storage Kits

|                  |                                                                                                                                                                                          |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ABC-02-USB       | Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, 0 to 60°C operating temperature                        |
| ABC-02-USB-T     | Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, -40 to 75°C operating temperature                      |
| ABC-03-microSD-T | MicroSD-based configuration backup and restoration tool, firmware upgrades, and log file storage tool for managed Ethernet switches and WLAN products, -40 to 85°C operating temperature |

### Power Supplies

|            |                                                                                                                                      |
|------------|--------------------------------------------------------------------------------------------------------------------------------------|
| HDR-60-24  | 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature  |
| NDR-120-24 | 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature |
| NDR-120-48 | 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature |
| NDR-240-48 | 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature |
| MDR-40-24  | DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature                |
| MDR-60-24  | DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature                |

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