

## EHG7604 EHG7608 Series

## 4 or 8-Port Industrial Layer-3 Managed Gigabit PoE Switch



### FEATURE HIGHLIGHTS

- Up to 8 10/100/1000 BASE-T(X) RJ45 ports or 1000 BASE-X SFP slots.
- Up to 8 802.3af/ 802.3at Power over Ethernet ports, with maximum 30W PoE power per port and maximum 240 W device power budget.
- Powerful Layer-3 Switching, supporting IPv4 Static, RIPv1/v2 and OSPFv2
- Layer-2 Redundancy, with ERPS, RSTP, STP, MRP (Client) and more.
- Profinet CC-B conformance and EtherNet/IP Ready
- EN50155 / EN50121-4 Certified for Railway applications
- IEEE 1588v2 Precision Time Protocol Hw-Based Transparent clock
- CE/FCC/UL and NEMA TS-2 Certified for Traffic Control Applications
- Operational between -20°C~70°C; up to 4,000m in elevation

### PRODUCT DESCRIPTION

**The EHG7604/EHG7608 Series is an Industrial Grade Layer-3 Managed Gigabit Ethernet PoE Switch.** Designed to provide a highly reliable, fault-tolerant, extremely fast network connection in harsh environments, EHG7604/EHG7608 Series equips two terminal blocks to provide dual redundant power inputs with Reverse Polarity Protection and allows field engineers to build up a stand-alone fault alarm system. **EHG76XX family is UL, CE, FCC and NEMA TS-2 certified, allowing the use in Traffic Control Applications.**

Within its compact DIN-Rail housing design, the EHG7604/EHG7608 series **allows you to choose between different port combinations:** 10/100/1000 BASE-T(X) RJ45 port, 1000 BASE-X SFP port and IEEE 802.3af/at complaint PoE RJ45. EHG7604/08 provide, in its 8-PoE-Port Version, up to **240W power budget.**

**Layer-3 routing support IPv4 static routing, RIP v1/v2 and OSPFv2.**

This is the right choice if you want to set up a Reliable network environment with its intelligent features and keep equipment connected all the time, even in case of temporary network breakdowns through **RSTP, ERPS Rings and MRP (client) redundancy.** **And that's not all. Designed specifically for Automation, it conforms with Profinet CC-B v2.33 and is EtherNet/IP compatible, MAC-based Black List/White List, IEEE 802.1x, RADIUS, TACACS+, etc., and keep your network safe.**

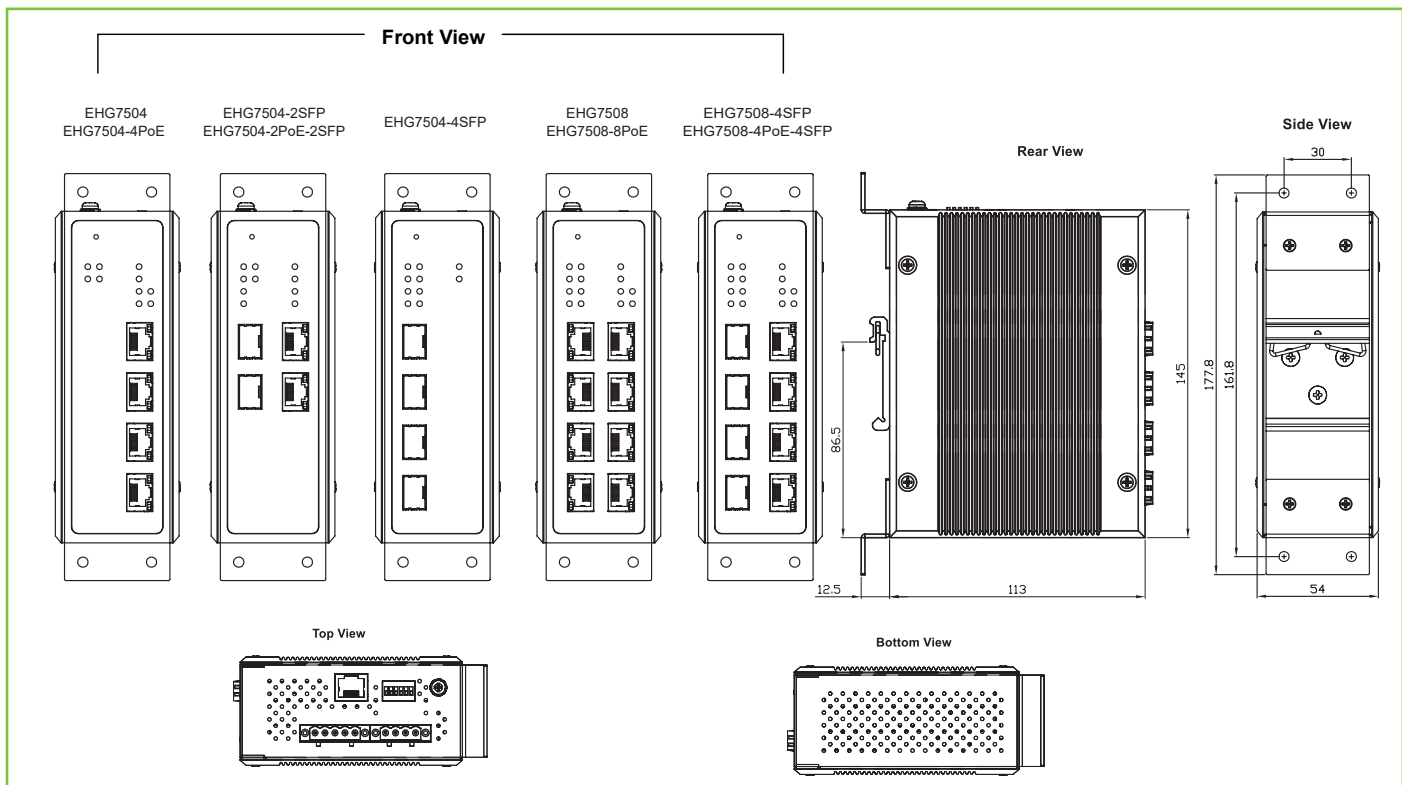
The RHG7528 Series is fully **EN50155-certified** to ensure reliable performance under a wide range of power supply conditions, and it complies with essential sections of **EN50121-4** for ground equipment.

## SPECIFICATIONS

| Technical Specifications |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model Name               | EHG7604/ EHG7608                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Switch Properties        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Priority Queues          | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| VLAN Table               | 4096                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| MAC-Based VLAN           | 512                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| VLAN ID Range            | VID 1 to 4094                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Trunk Group              | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Static IGMP Groups       | 128                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Dynamic IGMP Groups      | 256                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| MAC Table Size           | 16K                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Packet Buffer Size       | 1.5 MB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Jumbo Frame              | 9216 Byte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Ethernet                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Standards                | IEEE 802.3af / 802.3at for Power-over-Ethernet<br>IEEE 802.3 for 10BASE-T<br>IEEE 802.3u for 100BASE-T(X)<br>IEEE 802.3ab for 1000BASE-T<br>IEEE 802.3z for 1000BASE-X<br>IEEE 802.3x for Flow Control<br>IEEE 802.1d-2004 for Spanning Tree Protocol<br>IEEE 802.1w for Rapid Spanning Tree Protocol<br>IEEE 802.1s for Multiple Spanning Tree Protocol<br>IEEE 802.1q for VLAN Tagging<br>IEEE 802.1p for Class of Service<br>IEEE 8021x for Authentication<br>IEEE 802.3ad for Port Trunk with LACP<br>IEEE 802.3az for Energy Efficient Ethernet |
| Protocols                | IPv4, IPv6, IGMPv1/v2/v3, IGMP Snooping, GARP, GMRP, GVRP, SNMPv1/v2c/v3, SNMP Inform, ICMP, Telnet, SSH, DHCP Server/Relay/Client, DHCP Option 66/67/82, BootP, RARP, TFTP, NTP Server/Client, SNTP, SMTP, SMTP (Gmail), RMON, HTTP, HTTPS, Syslog, MRP (Client), LLDP, IEEE 1588 PTP V1/V2, IEEE 1588 Hardware Transparent Clock, 802.1x, EAP, RADIUS, TACACS+, Mirror port, QoS, ACL, Serial Console, U-Ring, STP, RSTP, MSTP, Compatible Ring                                                                                                    |
| Layer-3 Protocols        | Routing: IPv4 Unicast static routing, RIP v1/v2, OSPFv2,<br>Multicast: IGMPv1/v2/v3, DVMRP, PIM-DM, PIM-SM, PIM-SSM<br>Routing Redundancy: VRRP (Virtual Router Redundancy Protocol)                                                                                                                                                                                                                                                                                                                                                                 |
| Automation Profiles      | Profinet CC-B v2.33 conformance, EtherNet/IP ready, Modbus/TCP status registers                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SNMP MIB                 | MIB II, IF-MIB, SNMPv2 MIB, BRIDGE-MIB, RMON MIB Group 1,2,3,9, RFC<br>RFC 1157, RFC 1213, RFC 1215, RFC 1493, RFC 1643, RFC 1757, RFC 2011,<br>RFC 2012, RFC 2013, RFC 2233, RFC 2571, RFC 2742, RFC 2819, RFC 2863,<br>RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 2674                                                                                                                                                                                                                                                                  |
| Power                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Input Voltage            | 9-57 VDC for Non-PoE models<br>45-57 VDC for 802.3af mode<br>51-57 VDC for 802.3at mode                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                                                                                                         |                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Current (System)                                                                                  | Max. 1.4A @ 9VDC (without PoE)<br>Max. 2.9A @ 45VDC (Support up to 8 ports at 15.4W per PoE port)<br>Max. 5.0A @ 51VDC (Support up to 8 ports at 30W per PoE port)                                                                                                                                               |
| Power Consumption (System)                                                                              | Max 12.6 W @9 VDC (without PoE)<br>Max 130.5 W @45VDC (802.3af, with 15.4W PoE per port for 8 ports)<br>Max 255 W @51VDC (802.3at, with 30W PoE per port for 8 ports)                                                                                                                                            |
| Connector<br>Reverse Polarity Protection                                                                | 5-Pin 5.08mm Lockable Terminal Block<br>Yes                                                                                                                                                                                                                                                                      |
| <b>Interfaces</b>                                                                                       |                                                                                                                                                                                                                                                                                                                  |
| RJ45 Ports<br>Fiber Optics Ports<br>LED Indicators<br>Console<br>Relay Output<br>DIP Switches<br>Button | Up to 8 10/100/1000BASE-T(X) auto negotiation speed<br>Up to 4 1000BASE-X SFP slot<br>PWR1, PWR2, Alarm, Run, Ring, Ring Master, RJ-45 Link/Speed, SFP Link, PoE<br>RS232 (RJ45 connector)<br>2 relay outputs with current carrying capacity of 1A @ 24 VDC<br>Ring Control and Profinet Setting<br>Reset Button |
| <b>Physical Characteristics</b>                                                                         |                                                                                                                                                                                                                                                                                                                  |
| Housing<br>Dimension (W x H x D)<br>Weight<br>Installation                                              | IP30 aluminum housing<br>54 x 113 x 145 mm<br>800g<br>DIN-Rail , Wall mount (optional kit)                                                                                                                                                                                                                       |
| <b>Environmental Limits</b>                                                                             |                                                                                                                                                                                                                                                                                                                  |
| Operating Temperature<br>Storage Temperature<br>Ambient Relative Humidity                               | -20°C~70°C (-4°F~158°F)<br>-40°C~85°C (-40°F~185°F)<br>5%~95%, 55°C (Non-condensing)                                                                                                                                                                                                                             |

## DIMENSIONS & LAYOUT



## REGULATORY APPROVALS

| Regulatory Approvals       |                                                                                                                |                   |                     |       |
|----------------------------|----------------------------------------------------------------------------------------------------------------|-------------------|---------------------|-------|
| Safety                     | UL 60950-1 2nd Ed. /CSA C22.2 No.60950-1-07 2nd Ed. / EN 60950-1 / CB                                          |                   |                     |       |
| EMC                        | FCC Part 15, Subpart B, Class A<br>EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4, |                   |                     |       |
| Test                       | Item                                                                                                           |                   | Value               | Level |
| IEC 61000-4-2              | ESD                                                                                                            | Contact Discharge | ±6kV                | 3     |
|                            |                                                                                                                | Air Discharge     | ±8kV                | 3     |
| IEC 61000-4-3              | RS                                                                                                             | 80-1000MHz        | 10(V/m)             | 3     |
|                            |                                                                                                                | 1.4-2.0GHz        | 3(V/m)              | 3     |
|                            |                                                                                                                | 2.0-2.7GHz        | 10(V/m)             | 3     |
| IEC 61000-4-4              | EFT                                                                                                            | AC Power Port     | ±2.0kV              | 3     |
|                            |                                                                                                                | DC Power Port     | ±2.0kV              | 3     |
|                            |                                                                                                                | Signal Port       | ±1.0kV              | 3     |
| IEC 61000-4-5              | Surge                                                                                                          | DC Power Port     | Line-to Line±1.0kV  | 3     |
|                            |                                                                                                                | DC Power Port     | Line-to Earth±2.0kV | 3     |
|                            |                                                                                                                | Signal Port       | Line-to Earth±2.0kV | 3     |
| IEC 61000-4-6              | CS                                                                                                             | 0.15-80MHz        | 10V rms             | 3     |
| IEC 61000-4-8              | PFMF                                                                                                           | Enclosure         | 30 V/m              | 4     |
| IEC 61000-4-11             | DIP                                                                                                            | AC Power Port     | -                   | A     |
| Shock<br>Drop<br>Vibration | MIL-STD-810G Method 516.5<br>MIL-STD-810F Method 516.5<br>MIL-STD-810F Method 514.5 C-1 & C-2                  |                   |                     |       |
| Rail Traffic               | EN50155 / EN50121-4                                                                                            |                   |                     |       |
| Traffic Control            | NEMA TS-2                                                                                                      |                   |                     |       |
| High Altitude              | Certified for altitudes up to 4,000m, according to IEC 60068-2-13                                              |                   |                     |       |
| RoHS II                    | Yes                                                                                                            |                   |                     |       |

## ORDERING INFORMATION

### Ordering information

| Model name        | Part Number     | RJ45 (non-PoE) | RJ45 (PoE) | SFP |
|-------------------|-----------------|----------------|------------|-----|
| EHG7604           | 1P1EHG76040001G | 4              | 0          | 0   |
| EHG7604-4PoE      | 1P1EHG76040002G | 0              | 4          | 0   |
| EHG7604-2SFP      | 1P1EHG76040003G | 2              | 0          | 2   |
| EHG7604-4SFP      | 1P1EHG76040004G | 0              | 0          | 4   |
| EHG7604-2PoE-2SFP | 1P1EHG76040005G | 0              | 2          | 2   |
| EHG7608           | 1P1EHG76080001G | 8              | 0          | 0   |
| EHG7608-8PoE      | 1P1EHG76080002G | 0              | 8          | 0   |
| EHG7608-4SFP      | 1P1EHG76080003G | 4              | 0          | 4   |
| EHG7608-4PoE-4SFP | 1P1EHG76080004G | 0              | 4          | 4   |

### Optional Accessories

| Model name               | Part Number     | Description                                                             |
|--------------------------|-----------------|-------------------------------------------------------------------------|
| WMK-450-Black            | 70100000000052G | Aluminum wall mount kit                                                 |
| CBL-RJ45(8P)-DB9(F)-90-C | 50891971G       | RJ45 to DB9 Female Cross Over Console Cable, 90cm                       |
| SDR-75-24                | 50500752240001G | 75W/3.2A DIN-Rail 24VDC power supply 88~264VAC / 124~370VDC input       |
| SDR-240-48               | 50502401480001G | 240W/5A DIN-Rail 48VDC power supply 88~264VAC / 124~370VDC input        |
| LM28-C3S-TI-N            | 50708031G       | SFP Transceiver, 1250Mbps, 850nmVCSEL, Multi-mode, 550m, 3.3V, -20~85°C |
| LM38-C3S-TI-N            | 50709411G       | SFP Transceiver, 1250Mbps, 1310nmFP, Multi-mode, 2km, 3.3V, -40~85°C    |
| LS38-C3S-TI-N            | 50709391G       | SFP Transceiver, 1250Mbps, 1310nmFP, Single-mode, 10km, 3.3V, -40~85°C  |
| LS38-C3L-TI-N            | 50709441G       | SFP Transceiver, 1250Mbps, 1310nmDFB, Single-mode, 30km, 3.3V, -40~85°C |