



## 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 BGPv4, IPv4 Static, RIPv1/v2 and OSPFv2
- Layer-2 Redundancy, with ERPS, RSTP, STP, MRP (Manager/ Client) and more.
- 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 to +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 PoE RJ45. EHG7604/08 provide, in its 8-PoE-Port Version, up to **240W power budget.**

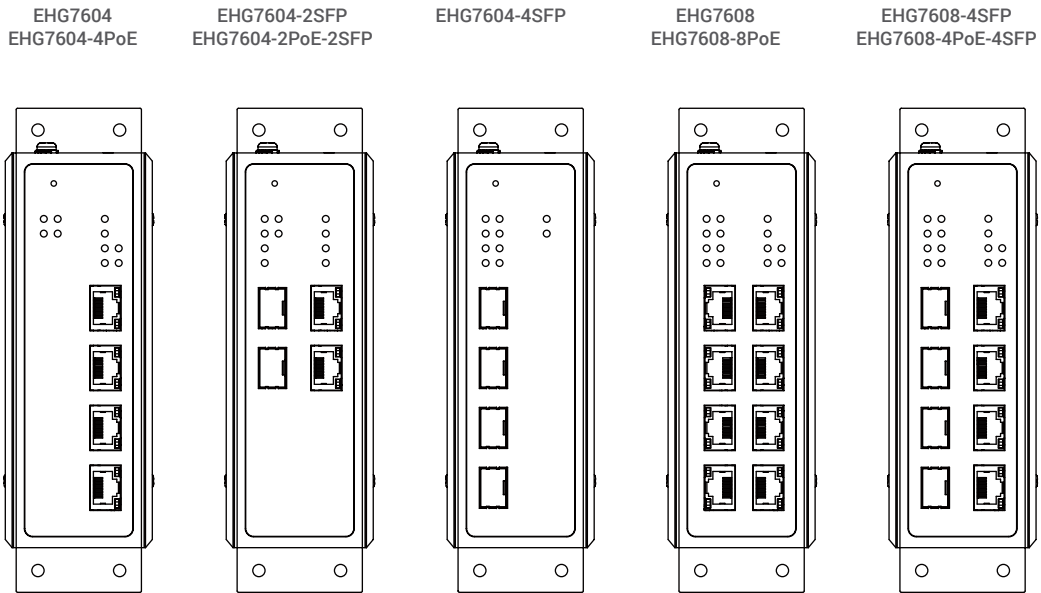
**Layer-3 routing support BGPv4, IPv4 static routing, RIP v1/v2 and OSPFv2.**

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 breakdown, through **RSTP, ERPS Rings and MRP (Manager/ Client) redundancy. And that's not all.** Designed specifically for Automation, it conforms with MAC-based Black List/White List, IEEE 802.1x, RADIUS, TACACS+, etc., to keep your network safe.

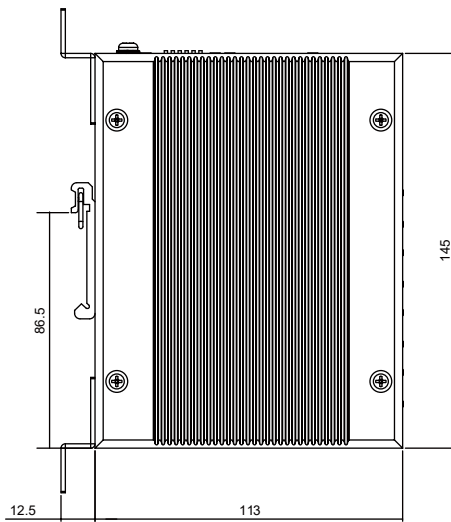
The EHG7604/EHG7608 Series is fully **EN50155-certified** to ensure reliable performance under a wide range of power supply conditions, and it complies with essential sections of **EN50121-4** for ground equipment.

# DIMENSIONS & LAYOUT

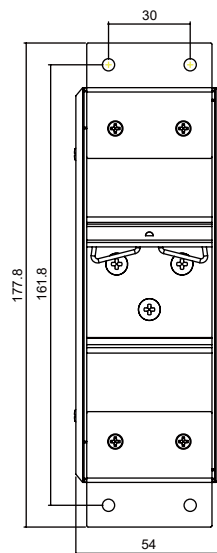
Front View



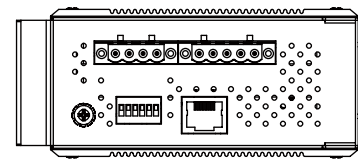
Rear View



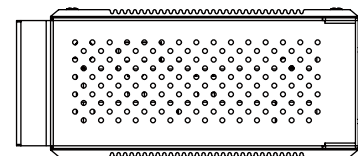
Side View



Top View



Bottom View



## 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 IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-T(X) IEEE 802.3ab for 1000BASE-T IEEE 802.3z for 1000BASE-X IEEE 802.3x for Flow Control IEEE 802.1d-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 8021x for Authentication IEEE 802.3ad for Port Trunk with LACP 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, SMTP, SMTP (Gmail), RMON, HTTP, HTTPS, Syslog, MRP (Manager/ Client), LLDP,802.1x, EAP,RADIUS, TACACS+, Mirror port, QoS, ACL, BGPv4, DHCP Snooping, ARP Spoof Prevention, Dynamic ARP Inspection, MLD, UDLD, IP Source Guard, sFlow	
Layer-3 Protocols	Routing: IPv4 Unicast static routing, RIP v1/v2, OSPFv2, BGPv4 Multicast: IGMPv1/v2/v3, DVMRP, PIM-DM, PIM-SM, PIM-SSM Routing Redundancy: VRRP (Virtual Router Redundancy Protocol)	
Redundancy	ITU-T G.8032 ERPS Ring, STP, RSTP, MSTP, MRP(Manager/Client), Compatible Ring/Chain, U-Ring	
Time Synchronization	Network Synchronization	NTP Server/Client, SNTP
	Precision Network Synchronization	IEEE1588v1 OC/BC (Software) IEEE1588v2 E2E TC (Hardware) - ns acc. IEEE1588v2 OC/BC (Software)
Automation Profiles	Modbus/TCP status registers	
SNMP MIB	MIB II, IF-MIB, SNMPv2 MIB, BRIDGE-MIB, RMON MIB Group 1,2,3,9, RFC RFC 1157, RFC 1213, RFC 1215, RFC 1493, RFC 1643, RFC 1757, RFC 2011, RFC 2012, RFC 2013, RFC 2233, RFC 2571, RFC 2742, RFC 2819, RFC 2863, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 2674	

Power	
Input Voltage	9-57 VDC for Non-PoE models 45-57 VDC for 802.3af mode 51-57 VDC for 802.3at mode
Input Current (System)	Max. 1.4 A @ 9 VDC (without PoE) Max. 3.1A @ 45VDC (Support up to 8 ports at 15.4 W per PoE port) Max. 5.1A @ 51VDC (Support up to 8 ports at 30 W per PoE port)
Power Consumption (System)	Max 12.6 W @9 VDC (without PoE) Max 139.5 W @45 VDC (802.3af, with 15.4W PoE per port for 8 ports) Max 260 W @51VDC (802.3at, with 30W PoE per port for 8 ports)
Connector Reverse Polarity Protection	5-Pin 5.08mm Lockable Terminal Block Yes
Interfaces	
RJ45 Ports Fiber Optics Ports LED Indicators Console Relay Output DIP Switches Button	Up to 8 10/100/1000BASE-T(X) auto negotiation speed Up to 4 1000BASE-X SFP slot PWR1, PWR2, Alarm, Run, Ring, Ring Master, RJ-45 Link/Speed, SFP Link, PoE RS232 (RJ45 connector) 2 relay outputs with current carrying capacity of 1 A @ 24 VDC Ring Control Reset Button
Physical Characteristics	
Housing Dimension (W x H x D) Weight Installation	IP30 aluminum housing 54 x 113 x 145 mm 800g DIN-Rail , Wall mount (optional kit)
Environmental Limits	
Operating Temperature Storage Temperature Ambient Relative Humidity	-20°C to +70°C (-4°F to +158°F) -40°C to +85°C (-40°F to +185°F) 5% to 95% (Non-condensing test @55°C)

## REGULATORY APPROVALS

Regulatory Approvals				
Safety	UL 60950-1 2nd Ed. /CSA C22.2 No.60950-1-07 2nd Ed. / CB (IEC/EN62368-1 & IEC/EN60950-1)			
EMC	FCC Part 15, Subpart B, Class A EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4,			
Traffic Control	NEMA TS-2			
Rail Traffic	EN50155 - EN50121-4			
Test	Item		Value	Level
IEC 61000-4-2	ESD	Contact Discharge	±6 kV	3
		Air Discharge	±8 kV	3
IEC 61000-4-3	RS	80-1000MHz	10 (V/m)	3
		1.4-2.0GHz	3 (V/m)	3
		2.0-2.7GHz	1.0(V/m)	3
IEC 61000-4-4	EFT	DC Power Port	±2.0 kV	3
		Signal Port	±1.0 kV	3
IEC 61000-4-5	Surge	DC Power Port	Line-to-Line ± 1.0 kV	3
		DC Power Port	Line-to-Earth ± 2.0 kV	3
		Signal Port	Line-to-Earth ± 2.0 kV	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	-	N/A
Shock Drop Vibration	MIL-STD-810G Method 516.5 MIL-STD-810F Method 516.5 MIL-STD-810F Method 514.5 C-1 & C-2			
RoHS II	Yes			
MTBF	20 Years			

## ORDERING INFORMATION

Ordering information		
Model name	Part Number	Description
EHG7604 Managed Switch	1P1EHG76040001G	4P*1000TX RJ45
EHG7604-4PoE Managed Switch	1P1EHG76040002G	4P*1000TX RJ45/PoE
EHG7604-2SFP Managed Switch	1P1EHG76040003G	2P*1000TX RJ45; 2P*1000FX SFP
EHG7604-4SFP Managed Switch	1P1EHG76040004G	4P*1000FX SFP
EHG7604-2PoE-2SFP Managed Switch	1P1EHG76040005G	2*1000TX RJ45/PoE; 2P*1000FX SFP
EHG7608 Managed Switch	1P1EHG76080001G	8P*1000TX RJ45
EHG7608-8PoE Managed Switch	1P1EHG76080002G	8P*1000TX RJ45/PoE
EHG7608-4SFP Managed Switch	1P1EHG76080003G	4P*1000TX RJ45; 4P*1000FX SFP
EHG7608-4PoE-4SFP Managed Switch	1P1EHG76080004G	4P*1000TX RJ45/PoE; 4P*1000FX SFP

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
AXGD-5854-0513	522AXGD5854001G	SFP Transceiver, 1250Mbps, 850nm, Multi-mode, 550m, 3.3V, -40 to +85°C, DDMI
AXGD-1354-0523	522AXGD1354001G	SFP Transceiver, 1250Mbps, 1310nm, Multi-mode, 2km, 3.3V, -40 to +85°C, DDMI
AXGD-1354-0533	522AXGD1354011G	SFP Transceiver, 1250Mbps, 1310nm, Single-mode, 10km, 3.3V, -40 to +85°C, DDMI
AXGD-3354-0593	522AXGD3354001G	SFP Transceiver, 1250Mbps, 1310nm, Single-mode, 40km, 3.3V, 40 to +85°C, DDMI