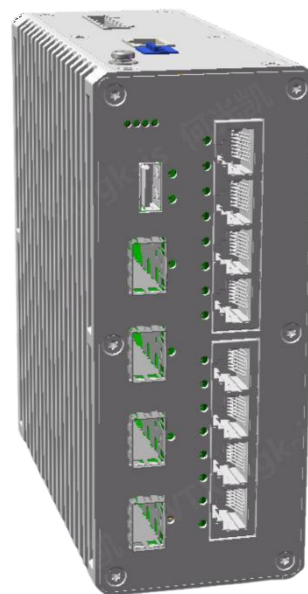
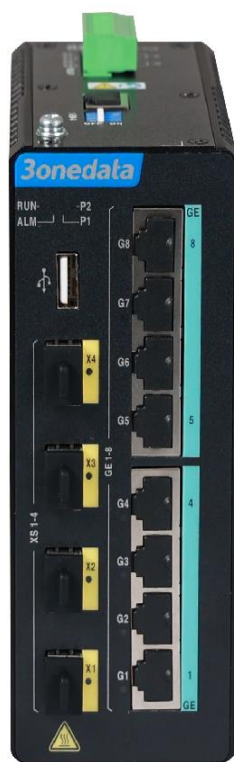




MES6400PHR Series

DIN-Rail Mounting

12-Port Industrial Gigabit/10Gigabit Layer 2 HSR/PRP Switch

- Support 4 10G SFP+ slots and 8 Gigabit copper ports
- Support Precision Time Protocol (PTPv2), provide sub-microsecond synchronization accuracy to meet requirements for high-precision time synchronization
- Support HSR and PRP redundancy protocols
- Support MRP ring network, reconfiguration time < 200ms
- Support -40~65°C wide operating temperature range



Introduction

MES6400PHR series products are 12-port Gigabit/10Gigabit HSR/PRP switches, and Layer 2 industrial Ethernet switches. This product provides 10Gigabit SFP+ slots and Gigabit copper ports, which can negotiate port rate and duplex mode with the device at the opposite end via auto-negotiation. It adopts DIN-Rail mounting to meet the requirements of different application scenes.

MES6400PHR series supports a variety of network protocols and industry standards, such as IPv6, PTPv2, Ring, STP/RSTP/MSTP, MRP, ERPS, VLAN, IGMP, DHCP Server/Relay, LLDP, LACP, port mirroring. It possesses complete management functions and supports SNMP centralized management, port statistics, storm suppression, network diagnosis, online upgrade, etc. CLI, HTTP, HTTPS, TELNET, and SSH can be supported.

The DC power supply has two independent power supply circuits which can ensure the normal operation of the device when one power supply fails. The design of DIP switch could implement device factory setting recovery. When power supply or port has link failure, ALM indicator will be bright and send out alarm, meanwhile, alarm device connected to the relay will send out alarm for rapid scene troubleshooting. The hardware adopts fanless, low power consumption and wide temperature design, which has passed rigorous industrial standard tests, and suits the industrial scene environment with harsh requirements for EMC. It can be widely used in power industry like substation and power distribution systems.

Features and Benefits

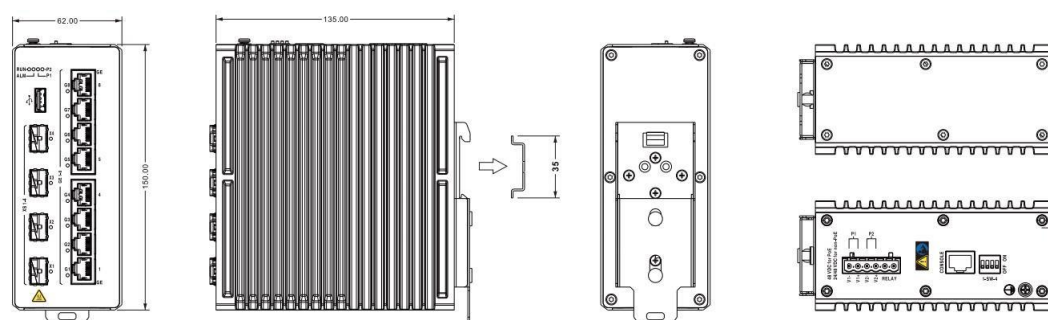
- ⦿ SNMPv1/v2c/v3 is used for network management of various levels
- ⦿ LLDP can achieve automatic topology discovery, which is convenient for visual management
- ⦿ DHCP server and DHCP client could be used for allocating IP address of different strategies
- ⦿ DHCP relay function can realize IP address, gateway, DNS configuration cross network segment
- ⦿ File management is convenient for the device rapid configuration and online upgrading
- ⦿ Log information and log server can record user operation, system failure, system security and other information locally and remotely
- ⦿ User privilege classification configuration can set user privilege level
- ⦿ SSH configuration and HTTPS configuration can improve device's management security and guarantee data access security
- ⦿ Ring, MRP, STP/RSTP/MSTP can achieve network redundancy, preventing network storm
- ⦿ EPRS function can realize link backup and improve the reliability of network
- ⦿ Relay alarm is convenient for troubleshooting of construction site
- ⦿ Storm suppression can restrain broadcast, unknown multicast and unicast

- ⦿ VLAN is used for simplifying network planning
- ⦿ Port Trunking and LACP can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
- ⦿ IGMP Snooping can be used for filtering multicast traffic to save the network bandwidth
- ⦿ ARP could be used for MAC address resolution
- ⦿ Loop detection could efficiently eliminate the influence caused by port loopback by detecting the existence of loopback
- ⦿ Network diagnosis and troubleshooting could be conducted via Ping, Traceroute, cable diagnosis, SFP DDMI
- ⦿ Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging

Dimension

Unit: mm

● MES6400PHR-8GT4XS-2LV



Specification

Standard & Protocol

IEEE 802.3 for 10Base-T
 IEEE 802.3u for 100Base-TX
 IEEE 802.3ab for 1000Base-T
 IEEE 802.3z for 1000Base-X
 IEEE 802.3ae for 10GBase-X
 IEEE 802.3x for Flow Control
 IEEE 802.1D for Spanning Tree Protocol
 IEEE 802.1w for Rapid Spanning Tree Protocol
 IEEE 802.1s for Multiple Spanning Tree Protocol
 ITU-T G.8032 for ERPS
 IEC 62439-2 for MRP
 IEC 62439-3 for HSR and PRP
 IEEE 802.1Q for VLAN
 IEEE 802.1AB for LLDP
 IEEE 802.3ad for LACP

Management	SNMP v1/v2c/v3 centralized managed equipment, Port Mirroring, LLDP, DHCP Server, DHCP Relay, port speed limit, port isolation, port statistics, file management, online upgrade, log information, Syslog server
Security	User privilege classification, SSH/HTTPS protocol authorization, link flap protection, port loop detection, port alarm and power alarm.
Switch Function	802.1Q VLAN, MAC, static aggregation, LACP, ARP, storm suppression
Unicast / Multicast	IGMP-Snooping v1/v2/v3, IGMP query
Redundancy Technology	Ring, MRP, STP/RSTP/MSTP, ERPS, HSR, PRP, HSR/PRP coupling
Troubleshooting	Ping, Traceroute, Network Cable Diagnosis, DDMI
Time Management	NTP Client, Time Zone Configuration, PTPv2
Interface	Gigabit copper port: 10/100/1000Base-T(X) self-adaption or forced mode, RJ45, Automatic Flow Control, Full/Half Duplex Mode self-adaption, MDI/MDI-X Autotuning 10Gigabit SFP+: 1G/2.5G/10G Base-X self-adaption or forced mode, SFP+ slot Console port: CLI command line management port (RS-232), RJ45 Alarm port: 6-pin 5.08mm pitch terminal blocks (relay occupies 2 pins), support 1 relay alarm output, the current load capacity is 1A@30VDC or 0.3A@125VAC
Indicator	Running Indicator, Alarm Indicator, Power Supply Indicator, Interface Indicator
Switch property	Transmission mode: store and forward MAC address: 16K Cache: 16Mbit Backplane bandwidth: 96G Switch delay: <10μs

Power Supply

- DC product
2 24~48VDC (18-60VDC), dual power supply redundancy, supports anti-reverse connection protection
- AC product
1 110/220VAC/DC (85-264VAC/77-300VDC), single power supply,

supports anti-reverse connection protection

Power Consumption

MES6400PHR-8GT4XS-2LV

- No-load: 18.2W@48VDC
- Full-load: 24W@48VDC

Working Environment

Operating temperature: -40~65°C
Storage temperature: -40~85°C
Relative humidity: 5%~95% (no condensation)

Mechanical Structure

Housing: IP40 protection, metal
Installation: DIN-Rail mounting
Dimension (W x H x D): 62mm×150mm×135mm

Industrial Standard

IEC 61000-4-2 (ESD, electronic static discharge), Level 4

- Air discharge: $\pm 15\text{kV}$
- Contact discharge: $\pm 8\text{kV}$

IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 4

- Power supply: $\pm 4\text{kV}$
- Relay: $\pm 4\text{kV}$
- Ethernet interface: $\pm 2\text{kV}$

IEC 61000-4-5 (Surge), Level 4

- Power supply: common mode $\pm 4\text{kV}$, differential mode $\pm 2\text{kV}$
- Relay: common mode $\pm 4\text{kV}$, differential mode $\pm 2\text{kV}$
- Ethernet interface: $\pm 4\text{kV}$

Shock: IEC 60068-2-27

Free fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

MTBF

320,000 hours

Certificate

CE, FCC, RoHS, IEC 61850-3, IEEE 1613

Warranty

5 years

Ordering Information

Model	Gigabit Copper Port	10Gigabit SFP+ Slot	Power Supply
MES6400PHR-8GT4XS-2LV	8	4	Dual 18~60VDC
MES6400PHR-8GT4XS-HV	8	4	85-264VAC/77-300VDC



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