MES5000 Series

1U Rack Mounting

28-port 100M/Gigabit Layer 2 Managed Electricity Industrial Ethernet Switch

- Support 4 gigabit fiber ports (SFP slot) and 24 100M fiber/copper ports

- Conform to IEC61850 and IEEE1613 industrial standards

- Adopt SW-Ring patent technology, support single ring, coupling ring, chain ring, Dual-homing ring network function, automatic recovery time of network failure < 20ms

- Support dual power supply input, input voltage: 90 ~ 264VAC or 36~72VDC

- Support -40~75℃ wide operating temperature range

CE FC U.S.A RoHS SW-Ring <20ms RECOVERY Industrial Grade +85℃ -40℃ IEC 61850

Introduction

MES5000 series are 28-port 100M/gigabit layer 2 managed industrial Ethernet switches. This series have seven types of products and adopt modular design, which supports 3 4-port 100M fiber/copper port modules. They provide various interfaces like 100M copper port, 100M fiber port and gigabit SFP slot and adopt 1U rack mounting, which can meet the requirements of different scenes.

Network management system supports various network protocols and industrial standards, such as STP/RSTP, 802.1Q VLAN, QoS, LLDP, IGMP Static Multicast, Port Trunking, Port Mirroring, etc. It also possesses complete management functions, including Port Configuration, Port Statistics, Access Control, Network Diagnosis, Rapid Configuration, Online Upgrading and so on, and supports CLI, WEB, Telnet, SNMP and other access methods. It can provide users with good experience with friendly design of network management system interface, simple and convenient operation.

The products are up to the industrial standards of IEC61850 and IEEE1613, and have acquired SGCC's (State Grid Corporation of China) Class A authentication and CSG's (China Southern Grid) type test. When power supply or port has link failure, ALARM indicator will be bright and send out alarm, meanwhile, alarm device connected to the relay will send out alarm for rapid scene troubleshooting. Hardware adopts fanless, low power consumption, wide temperature and voltage design and has passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It is designed for power industry and can be widely used in the controller layer and process layer network of substations.
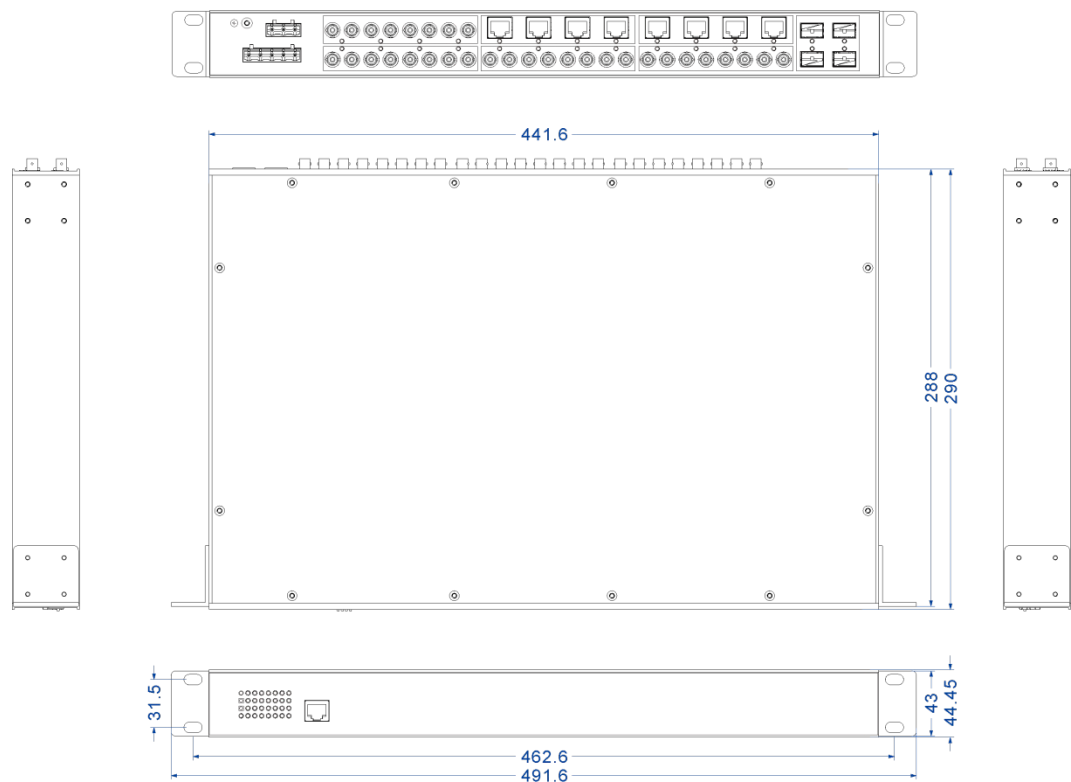
Features and Benefits

- SNMPv1/v2c is used for network management of various levels
- Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging
- QoS supports real-time traffic classification and priority setting
- LLDP can achieve automatic topology discovery, which is convenient for visual management
- DHCP sever and DHCP client could be used for allocating IP address of different strategies
- File management is convenient for rapid configuration and online upgrade of the device
- Log management records boot information, operation information and connection information
- Port statistics can be used for the port real time traffic statistics
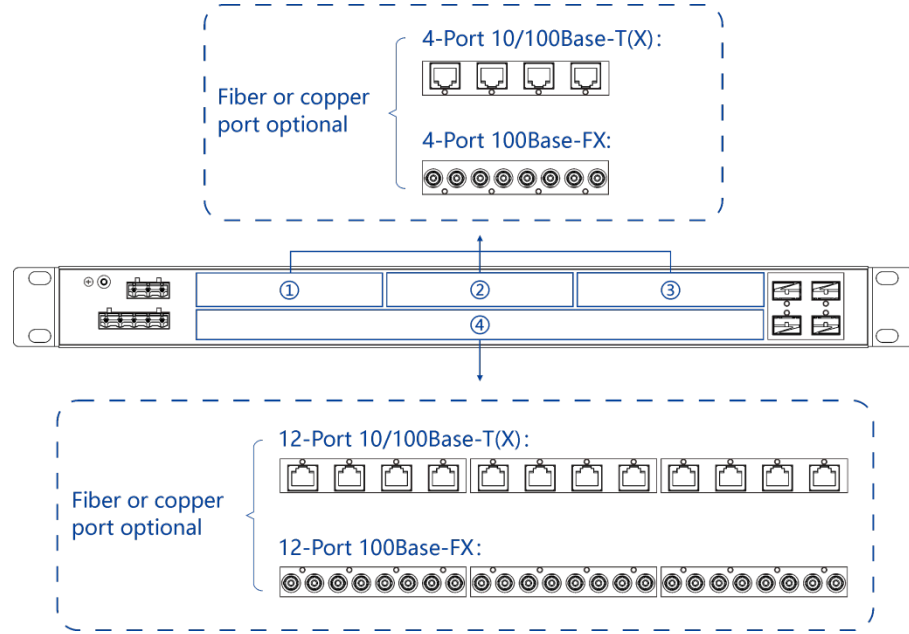- User password can conduct user hierarchical management to improve the device administrative security

- ⊙ MAC port locking could enhance the flexibility and security of network
- ⊙ E-mail alarm is convenient for discovering faults in time during remote management
- ⊙ Relay alarm is convenient for troubleshooting of construction site
- ⊙ Storm suppression can restrain broadcast, unknown multicast and unknown unicast
- ⊙ VLAN can simplify the network planning
- ⊙ Port trunking can increase network bandwidth and the reliability of network connection to achieve optimal bandwidth utilization
- ⊙ Bandwidth management and flow control can reasonably distribute network bandwidth, preventing unpredictable network status
- ⊙ IGMP-snooping, GMRP and static multicast can be used for filtering multicast traffic to save the network bandwidth
- ⊙ SW-Ring and STP/RSTP can achieve network redundancy, preventing network storm

Dimension

Unit:mm

Modular design of interface

4-Port 10/100Base-T(X)：

Fiber or copper port optional

4-Port 100Base-FX：

① ② ③ ④

12-Port 10/100Base-T(X)：

Fiber or copper port optional

12-Port 100Base-FX：

Specification

Standard & Protocol	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3z for 1000Base-X IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol EEE 802.1Q for VLAN IEEE 802.1p for CoS IEEE 802.1AB for LLDP
Management	SNMP v1/v2c Centralized Management of Equipment, Port Mirroring, QoS, LLDP, DHCP Server, DHCP Client, File Management, Port Statistics
Security	Classification of User Permissions, Port Alarm, Power Supply Alarm, E-mail Alarm
Switch Function	802.1Q Vlan, Static Port Aggregation, Bandwidth Management, Flow Control
Unicast / Multicast	Static Multicast, GMRP, IGMP-Snooping
Redundancy Protocol	SW-Ring, STP/RSTP

Time Management	SNTP
Interface	Copper port: 10/100Base-T(X), RJ45, Automatic Flow Control, Full/Half Duplex Mode, MDI/MDI-X Autotunning Fiber port: 100Base-FX, SC/ST/FC optional SFP slot: 1000Base-SFP Console port: CLI command line management port(RS-232), RJ45 Alarm port: 2-pin 7.62mm pitch terminal blocks, support 1 relay alarm output, current carrying capacity is 5A@30VDC or 10A@125VAC
LED Indicator	Running Indicator, Port Indicator, Power Supply Indicator, Alarm Indicator
Switch Property	Transmission mode: store and forward MAC address: 8K Packet buffer size: 3Mbit Backplane bandwidth: 12.8G Switch time delay: <10µs
Power Requirement	Dual power supply redundancy, AC or DC power supply optional AC power supply: 90~264VAC, support 8A over-current protection DC power supply: 36~72VDC, support 5.5A over-current protection
Power Consumption	No-load: 19.4W@220VAC Full-load: 21.9W@220VAC
Environmental Limit	Operating temperature: -40~75℃ Storage temperature: -40~85℃ Relative humidity: 5% ~ 95%(no condensation)
Physical Characteristic	Housing: IP40 protection, metal Installation: 19-inch 1U rack mounting Dimension (W x H x D): 441.6mm×290mm×44.45mm Weight: 4.5kg
Industrial Standard	IEC 61000-4-2 (ESD), Level 4 ● Air discharge: ±15kV ● Contact discharge: ±8kV IEC 61000-4-3 (RS), Level 3 ● Test level: 20V/m ● Frequency range: 80MHz~1000MHz

	IEC 61000-4-4 (EFT), Level 4
	● Power supply: ±4kV
	● Ethernet port: ±2kV
	● Relay: ±2kV
	IEC 61000-4-5 (Surge), Level 4
	● Power supply: common mode±4kV, differential mode±2kV
	● Ethernet port: ±2kV
	IEC 61000-4-6 (CS), Level 3
	● Test level: 10V
	● Frequency range: 150kHz-80MHz
	IEC 61000-4-8 (PFMF), Level 5
	● Stable magnetic field: 100A/m
	IEC 61000-4-9, Level 5
	● Magnetic field strength: 1000A/m
	IEC 61000-4-10, Level 4
	● Magnetic field strength: 30A/m
	● Test frequency: 100kHz and 1MHz
	IEC 61000-4-12, Level 5
	● Test level: common mode 2.5kV, differential mode 1kV
	● Test frequency: 1MHz, 100kHz
	IEC 61000-4-29
	● Voltage interrupts: 0%U_T
	● Duration: 100ms, 3 次
	Shock: IEC 60068-2-27
	Free fall: IEC 60068-2-32
	Vibration: IEC 60068-2-6
Certification	CE, FCC, RoHS, IEC61850, IEEE1613, Class A of SGCC(Test standards: Q/GDW 11202.4-2014, Q/GDW 1429-2012, DL/T 1241-2013), CSG(Type test)
Warranty	5 years

Ordering Information

Available Models	Gigabit SFP Slot	100M Fiber Port	100M Copper Port	Power Supply
MES5000-4GS-24T	4	–	24	
MES5000-4GS-20T4F	4	4	20	
MES5000-4GS-16T8F	4	8	16	90~264VAC or
MES5000-4GS-12T12F	4	12	12	36~72VDC
MES5000-4GS-8T16F	4	16	8	dual power supply
MES5000-4GS-4T20F	4	20	4	
MES5000-4GS-24F	4	24	–	