

**SICOM6424SM**

24+4G Port Layer3 Modular Managed Industrial Ethernet Switch

CE, FCC, RoHS  
Chinese State Grid Certification  
IEC61850-3 & IEEE1613**Overview**

SICOM6424SM is layer 3 managed modular industrial Ethernet switch with up to 24 ports of 100Base-FX or 10/100Base-TX, and 4 Gigabit modules of SFP TP/fiber ports or 4 10/100/1000Base-TX ports. Offering layer 3 switching of hardware wire speed, they can support static/dynamic routing to optimize the network. They provide high performance and reliable solutions for industrial projects with modular design.

**Features**

- Up to 24x100M fiber ports, 4xGigabit fiber ports
- Support DT-Ring Suite (recovery time<50ms) and STP/ RSTP/ MSTP/ VRRP
- Support Qos, Vlan, SNMP MIB V1/V2/V3 and RMON(Group 1,2,3 and 9)
- Support static routing protocol and dynamic routing protocols such as RIP v1/v2, OSPF v2 and BGP v4
- Support multicast routing protocols such as PIM-SM, PIM-DM and DVMRP
- Support network time protocols such as NTP and SNTP
- 36Gbps backplane bandwidth, hardware routing, layer-three line-speed switching rate of 19.6Mpps
- Powerful ACL, support data filtering from L2 to L7
- Broadcast storm auto-detection and control; support the detection of IGMP V1/V2/V3 message to effectively prevent the spreading of broadcasting message
- Support full/half duplex flow control with the speed limitation of 64K
- Support QinQ to realize double VLAN security
- Support DHCP, BOOTP and other address-attaining ways
- Abundant power supply options, able to provide redundant power supply
- Operating temperature: -40 to 85°C(-40 to 185°F)
- Ribbed Aluminium heat dissipation (patent), fanless design
- Rack-mounting (19 Inch 1U)
- IP40 protection class

**Functions****Layer 3 Switching Technology and Routing Function**

Large backplane bandwidth, hardware routing, wire-speed layer-3 switching; support static routing and dynamic routing

such as RIP v1/v2, OSPF v2, BEIGRP, BGP v4 and so on; support various multicasting routing protocols such as PIM-SM, PIM-DM, DVMRP and so on.

**Redundant Ring Network (DT-Ring, RSTP)**

Each Ethernet port can be set as either an ordinary one or a redundant one. Users can freely choose to build a Gigabit or 100Mbps redundant ring network. The recovery time of DT-Ring is less than 50ms.

**Multi-Ring Coupling System (DT-Ring+)**

The DT-Ring+ protocol is able to realize double ring network redundant backup function and multi-chain network redundant function.

**PTP (Precision Time Protocol or IEEE1588)**

PTP is Precision Time Protocol and IEEE1588, within synchronous precision of the sub-microsecond range. It's used for limited network requiring the highest precision of time synchronization. No special needs for synchronous communication when distributing control tasks, making it possible to separate communication time mode from program operation time mode.

Being representative and open is another advantage of IEEE1588. Lots of controlling system suppliers have applied this standard in their products. With different devices manufacturers following the same standard, a solid synchronization is sustained among them.

**Broadcasting Storm Control**

When broadcasting and multicasting messages in the network reach a certain limitation, the network will be blocked. Our products are capable of eliminating those overfull messages.

**VLAN**

Based on the fact that data packets cannot be transmitted between different VLANs, one network will be divided by VLAN into multiple logical subnets to control the broadcast domain and segment flow as well as improve the reliability, security and manageability of the network. SICOM6000 series supports IEEE802.1q VLAN tag. It can be divided up into 4094 VLANs based on ports, while the VLAN section can be easily realized through Console or WEB Network Management Station.

**QoS Priority**

IEEE802.1p is the most popular priority scheme in LAN environment. With different port operation distributed with different levels of priorities, this function can configure port-based priority

**Alarm Function**

SICOM6000 series offers the alarm functions for power failure, port line and network. Through management software, all the alarm functions can be configured functionally. The alarming information is shown either through alarm contact or from management interface.

**Various Configurations for Working Mode of Ports**

SICOM6000 Series is able to configure the working mode of all TP ports through management: Full/half duplex, adaptive, enforced full/half duplex, 10/100M adaptive, enforced 100M full duplex for 100M fiber ports, enforced 1000M full duplex for 1000M fiber/TP ports.

**Port Rate Configuration**

SICOM6000 series is able to configure the rate of all ports through management as any integer multiple of 32 kbps.

**RMON Network Monitor**

RMON network management expands to the physical layer, making it possible to collect data of devices independently. The built-in monitor offers the limited ability to analyze the whole flow without occupying network resources (bandwidth). It supports four groups including statistics, history, alarm and event. Meanwhile, it permits the network management station to configure the grouping of multiple variables in the way of expression to enhance the effectiveness of transmitting management messages and to reduce the working load of the network management station, which will definitely satisfy your requirements of network segment monitoring function and enable you to manage a large network easily and effectively.

**IGMP to Improve Network Communication Efficiency**

IGMP is Internet Group Multicast Protocol. SICOM6000 Series offers IGMP monitoring and querying functions. Data packets can be transmitted only to multiple host computers which need them. This can prevent overloading and therefore solve the problems of occupied bandwidth when broadcasting.

**OPC Uniform Management of Network Devices**

In the SCADA software of industrial automation, OPC offers a bridge between hardware manufacturers and software developers. With the OPC Server interfaces provided by communication device suppliers and hardware producers, the software developers can get the information from hardware without having to worry about the differences between them and integrate all the information by the top level software for reference of decision-makers.

**Configuration of CLI/SNMP-based Network Management Software**

SICOM6000 Series support the configuration of CLI (command line) and SNMP-based network management software, enabling the users to configure the switches more flexible.

**Technical Specifications****Standard**

IEEE802.3  
IEEE 802.3u  
IEEE 802.3x  
IEEE802.3z  
IEEE802.3ab  
IEEE802.3ae  
IEEE802.3ad  
IEEE802.1p/q  
IEEE802.1d  
IEEE802.1w  
IEEE802.1x

Store and forward switching mode

**Interface**

Gigabit Ports: 4x10/100/1000Base-T(X) or 4xGigabit SFP ports  
Fast Ethernet: 3xSlots, each of which support 8 100Base-FX or 100Base-TX ports or 4 100Base-FX and 4 100Base-TX  
CONSOLE interface: RS232,RJ45  
Alarm ports: 3-core 3.81mm spacing terminals,250VAC/220VDC  
Max; 2A Max; 60W Max

**Performance**

Backplane switching capacity: 36G  
Layer 3 forwarding rate: 19.6Mpps at line rate  
Routing address table: 30K  
MAC address table: 16K  
802.1Q VLAN: any division from 1 to 4094  
Routing Management: static routing, RIP v1/v2, OSPF v2, BEIGRP, BGP v4, IP-based strategic routing  
Management: CLI, Telnet, SNMPv1/v2, and Kyvision 3.0

**Cable**

Twisted Pair:0-100m  
Multi Mode Fiber: 1310nm, 0-5km (100Base-FX); 1310nm 0-2km (1000Base-FX)  
Single Mode Fiber: 1310nm, 0-40km; 1550nm, 0-80km

**Power Requirements**

Power input: 24VDC(18-36VDC),48VDC(36-72VDC),110VDC(82-185VDC), 220VAC/DC(85-264VAC/120-370VDC), redundant input  
Input interface: 3-core 9.5mm space inserting interface  
Power consumption:<40W

**Physical Characteristics**

Casing: Ribbed Aluminum housing fanless design  
Protection Class: IP40  
Dimensions(WxHxD): 482.6x44x420mm (19x1.73x16.53 in.)  
Installation: Rack-mounting (19 Inch 1U)  
Weight:5kg (11.02 Pound)

**Environmental Limits**

Operating Temperature: -40 to 85°C(-40 to 185°F)  
Storage Temperature: -40 to 85°C(-40 to 185°F)  
Ambient Relative Humidity: 0 to 95% (non-condensing)

**Approvals**

EMC interference immunity:  
IEC61000-4-2(ESD): ±8KV contact discharge, ±15KV air discharge  
IEC61000-4-3(RS): 10V/M (80-1000MHz)  
IEC61000-4-4(EFT): power line±4KV, data line±2KV  
IEC61000-4-5(Surge): power line ±4KV CM/±2KV DM, data line±2KV  
IEC61000-4-6(CS):3V(10KHZ-150KHZ),10V(150KHz-80MHz)  
IEC61000-4-8(Power frequency magnetic field):100A/m cont. 1000A/m, 1s to 3s  
IEC61000-4-12/18(Damped oscillatory wave):2.5KV CM, 1KV DM  
IEC61000-4-10(Damped oscillatory):30A/m  
IEC61000-4-16(Common mode conduct):20V cont. 300V, 1s  
FCC CFR47 Part 15/EN55022: Class A&B  
IEC61000-6-2(Industrial Standards), IEC61850-3(Substations), IEEE1613(Electric Power Substations), EN50121-4(Railway Applications)

CE,FCC,ROHS, Chinese State Grid Certification

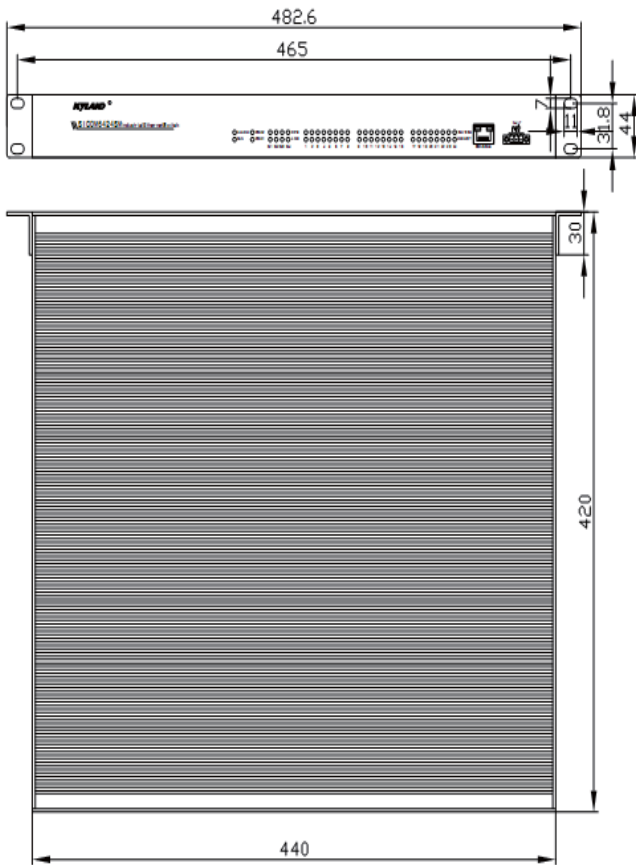
**MTBF**

35 years

**Warranty**

5 Years

### Mechanical Drawing



### Ordering Information

Model	Description
SICOM6424SM	3x10/100M expansion slots,1x1000m expansion slot
SM6.2-8TX	8x10/100Base-TX, RJ45 connector
SM6.2-8S(M)	8x100Base-FX,SM/MM (FC/SC/ST connector)
SM6.2-4S(M)-4TX	4x100Base-FX, SM/MM (FC/SC/ST connector), 4x10/100Base-TX, RJ45 connector
SM6.2-4GX	4x1000M SFP ports
SM6.2-4GT	4x10/100/1000Base-TX

Power supply: 24VDC,48VDC,110VDC,220VAC/DC

Optional SFP module:

SM-GSFP-TX/RJ45: SFP Interface Module with 1x1000M port, RJ45,100M

SM-GSFP-LX/LC-550: SFP Interface Module with 1x1000M Multi Mode Port, LC connector, 1310NM, 550M supported

SM-GSFP-LX/LC-10: SFP Interface Module with 1x1000M Single Mode port, LC connector, 1310NM, 10KM supported

SM-GSFP-LH/LC-40: SFP Interface Module with 1x1000M Single Mode port, LC connector, 1310NM, 40KM supported

SM-GSFP-LH/LC-60: SFP Interface Module with 1x1000M Single Mode port, LC connector, 1550NM, 60KM supported

SM-GSFP-ZX/LC-80: SFP Interface Module with 1x1000M Single Mode port, LC connector, 1550NM, 80KM supported