

# SICOM6424SM

Layer 3 24+4G Port Managed Rack Mountable IEC61850 Switch



- Internal modular design with flexible port combinations
- 4 Gigabit fiber/RJ45 optional ports, 24 Fast Ethernet fiber/RJ45 optional ports
- RIP, OSPF, BGP layer 3 routing protocols
- DT-Ring protocols, MSTP and VRRP
- Kyvision network management software, network topology auto-generation
- Exceeds IEC61850-3 & IEEE1613
- IP40 protection class



## Overview

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

## Features & Benefits

- Redundancy Technology: supports DT-Ring protocols (recovery time<50ms), MSTP and VRRP
- Multicast Protocol: supports IGMP, IGMP Snooping, PIM-SM, PIM-DM, DVMRP
- Routing Protocol: supports RIPv1/v2, OSPFv2, BGPv4 and static routing protocol
- Network Partition: supports VLAN, GVRP
- Service Quality: supports QoS
- Bandwidth Management: supports port trunking, port speed limit, broadcast storm control
- Network Management and Monitoring: supports CLI, Telnet, WEB management methods, Kyvision centralized management, SNMPv1/v2, RMON, LLDP, SNMP, DHCP
- Network Security: supports DT-Psec, ACL
- Device Management: supports FTP/TFTP upgrade, also supports Syslog upload and download
- Device Maintenance: supports port mirroring
- Alarm Output: supports port, power and ring alarms

## Technical Specifications

### Standard

IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE802.3ac, IEEE 802.3ad, IEEE 802.3z, IEEE 802.3x, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1s

### Protocols

DT-Ring, DT-Ring+, DT-VLAN, MSTP, VRRP;  
IGMP, IGMP Snooping, PIM-SM, PIM-DM, DVMRP;  
RIPv1/v2, OSPFv2, BGPv4;  
VLAN, GVRP;  
Telnet, HTTP, SNMPv1/v2, RMON, LLDP, BootP, SNMP, DHCP server/relay/client;  
DT-Psec, ACL;  
FTP, TFTP, Syslog;  
ARP, QoS, LACP

### Switch Properties

Priority Queues: 8  
Number of VLANs: 4K  
VLAN ID: 1-4094  
Number of Multicast Groups: 256  
Routing Table: 30K  
MAC Table: 16K  
Packet Buffer: 512Mbit  
Packet Forwarding Rate: 9.5Mpps  
Switching Delay: <5μs

### Interface

Gigabit Ethernet Ports: 4 1000Base SFP slots or 4 10/100/1000Base-TX RJ45 ports  
Fast Ethernet Ports: max 24 100Base-FX, SM/MM ports, FC/SC/ST connector or 24 10/100Base-TX RJ45 ports  
Console Port: RS232 (RJ45 connector)  
Alarm Contact: 3-pin 3.81mm-spacing plug-in terminal block, 250VAC/220VDC Max, 2A Max, 60W Max

### LED

LEDs on Front Panel:  
Running LED: Run  
Alarm LED: Alarm  
Power LED: PWR1, PWR2  
Interface LED: Link/ACT (Fast Ethernet port), Speed (Fast Ethernet port), DPX (Gigabit Ethernet port), Link (Gigabit Ethernet port)

### Transmission Distance

Twisted Pair: 100m (Standard CAT5, CAT5e network cable)  
Multi Mode Fiber: 1310nm, 5km (100M)  
850nm, 550m (1000M)  
Single Mode Fiber: 1310nm, 40km/60km (100M)  
1550nm, 60km/80km (100M)  
1310nm, 10km/40km (1000M)  
1550nm, 60km/80km (1000M)

### Power Requirements

Power Input: 24VDC (18-36VDC), 48VDC (36-72VDC), 110VDC (82-185VDC), 220VAC/DC (85-264VAC/120-370VDC)  
Power Terminal: 3-pin 9.5mm-spacing plug-in terminal block  
Power Consumption: <35W  
Overload Protection: Support  
Reverse Connection Protection: Support  
Redundancy Protection: Support

### Physical Characteristics

Housing: Aluminum, fanless  
Protection Class: IP40  
Dimensions (W×H×D): 482.6×44×420 mm (19×1.73×16.54 in.)  
Weight: 5kg (11.023 pound)  
Mounting: 19 inch 1U Rack mounting

### 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: 5 to 95% (non-condensing)

### MTBF

365,000 hrs

### Warranty

5 years

### Approvals

CE, FCC

### Industrial Standard

EMI: FCC CFR47 Part 15, EN55022/CISPR22, Class A

### EMS:

IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air)  
IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)  
IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV  
IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±2kV  
IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)  
IEC61000-4-8 (Power frequency magnetic field): 100A/m (cont.), 1000A/m (1s-3s)  
IEC61000-4-9 (Pulsed magnetic field): 1000A/m  
IEC61000-4-10 (Damped oscillation): 100A/m  
IEC61000-4-12 (Oscillatory wave): 2.5kV/CM, 1kV/DM  
IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)

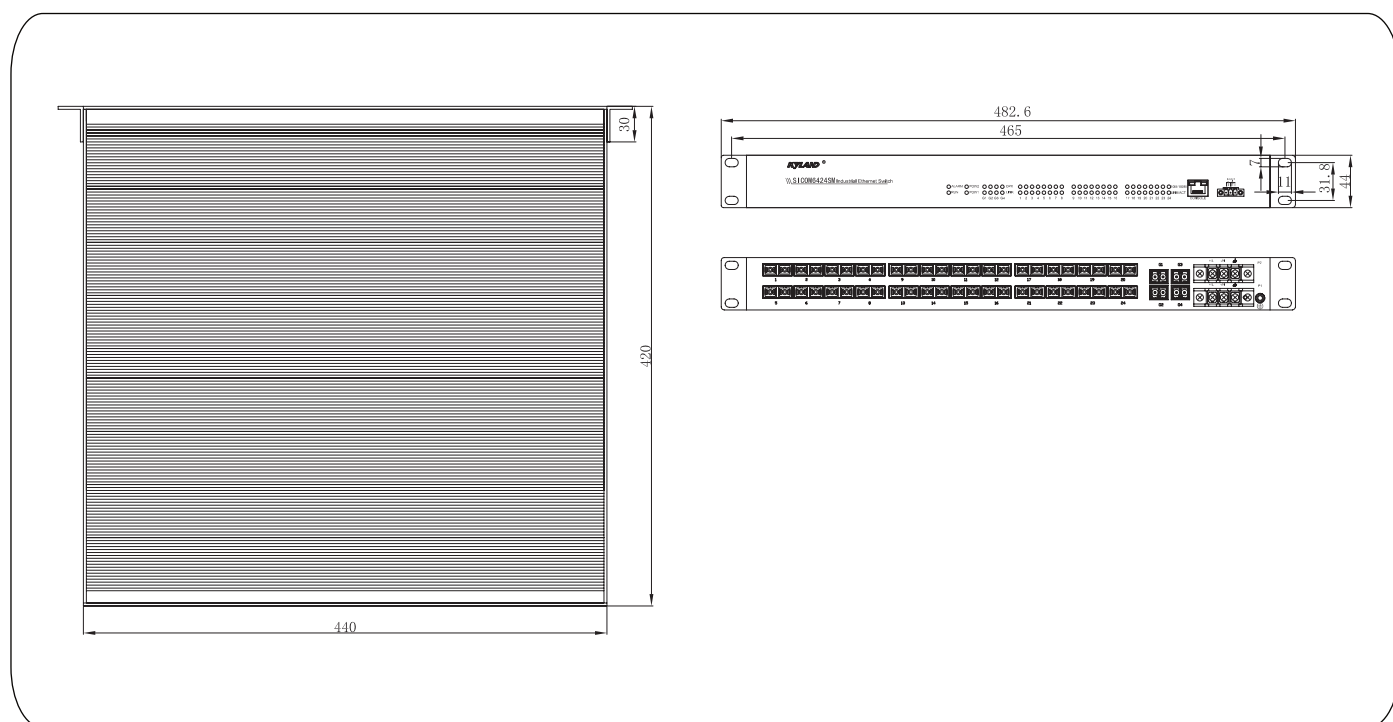
### Machinery:

IEC60068-2-6 (Vibration)  
IEC60068-2-27 (Shock)  
IEC60068-2-32 (Free Fall)

### Industry: IEC61000-6-2

Power: IEC61850-3, IEEE1613  
Railway: EN50155, EN50121-4  
Traffic Control: NEMA TS-2

## Mechanical Drawing



## Ordering Information

Model	Gigabit Port	Fast Ethernet Port			Fiber Connector			Power Supply			
	1000Base SFP or 10/100/1000Base-TX	100Base-FX Single Mode	100Base-FX Multi Mode	10/100Base-TX	SC	ST	FC	18-36VDC	36-72VDC	82-185VDC	85-264VAC/120-370VDC
SICOM6424SM-4GX(E)-4S-20T	4	4	--	20							
SICOM6424SM-4GX(E)-4M-20T	4	--	4	20							
SICOM6424SM-4GX(E)-8S-16T	4	8	--	16							
SICOM6424SM-4GX(E)-8M-16T	4	--	8	16							
SICOM6424SM-4GX(E)-12S-12T	4	12	--	12							
SICOM6424SM-4GX(E)-12M-12T	4	--	12	12							
SICOM6424SM-4GX(E)-16S-8T	4	16	--	8							
SICOM6424SM-4GX(E)-16M-8T	4	--	16	8							
SICOM6424SM-4GX(E)-20S-4T	4	20	--	4							
SICOM6424SM-4GX(E)-20M-4T	4	--	20	4							
SICOM6424SM-4GX(E)-24S	4	24	--	--							
SICOM6424SM-4GX(E)-24M	4	--	24	--							
SICOM6424SM-4GX(E)-24T	4	--	--	24	--	--	--				

Please Select

Note: Models without Gigabit ports are also available.

## Accessories

Model	Description
Gigabit SFP module	Refer to Kyland industrial Gigabit SFP list
DT-FCZ-RJ45-01	RJ45 dustproof shield

## Order Codes

SICOM6424SM -          -          -          -          -          -          -         

**G      FX      Connector      Distance      TX      PS1      PS2**

### G: Gigabit Ports

4GX=4 Gigabit SFP ports

4GE=4 10/100/1000Base-TX RJ45 ports

None=No Gigabit ports

(Please refer to the order information on available port combinations.)

**FX: Fiber Ports**

4M= 4 multi mode fiber ports  
8M= 8 multi mode fiber ports  
12M= 12 multi mode fiber ports  
16M= 16 multi mode fiber ports  
20M= 20 multi mode fiber ports  
24M= 24 multi mode fiber ports  
4S= 4 single mode fiber ports  
8S= 8 single mode fiber ports  
12S= 12 single mode fiber ports  
16S= 16 single mode fiber ports  
20S= 20 single mode fiber ports  
24S= 24 single mode fiber ports  
(Total 24 100Base TX or FX ports, fiber ports + copper ports = 24)

**Connector: Fiber Connector**

FC= FC connector  
SC= SC connector  
ST= ST connector  
SD= single fiber bi-direction, only for single mode, only SC connector (different price)

**Distance: Fiber Distance**

2= multi mode, 850nm, 2km  
5 (or None)= multi mode, 1310nm, 5km (multi mode default)  
40 (or None)= single mode, 1310nm, 40km (single mode default)  
60= single mode, 1310nm, 60km (different price)  
60L= single mode, 1550nm, 60km (different price)  
80L= single mode, 1550nm, 80km (different price)  
5T3R= single fiber bi-direction, 1550T/1310R, 20km (different price)  
5R3T= single fiber bi-direction, 1550R/1310T, 20km (different price)  
40/5T3R= single fiber bi-direction, 1550T/1310R, 40km (different price)  
40/5R3T= single fiber bi-direction, 1550R/1310T, 40km (different price)  
80/5T3R= single fiber bi-direction, 1550T/1310R, 80km (different price)  
80/5R3T= single fiber bi-direction, 1550R/1310T, 80km (different price)

**TX: Copper Ports**

4T= 4 10/100Base-T(X) ports, RJ45 connector  
8T= 8 10/100Base-T(X) ports, RJ45 connector  
12T= 12 10/100BaseT(X) ports, RJ45 connector  
16T= 16 10/100BaseT(X) ports, RJ45 connector  
20T= 20 10/100BaseT(X) ports, RJ45 connector  
24T= 24 10/100BaseT(X) ports, RJ45 connector  
(Total 24 100Base TX or FX ports, fiber ports + copper ports = 24)

**PS1 and PS2: Power Supply 1 and 2**

24= 24VDC (18-36VDC)  
48= 48VDC (36-72VDC)  
110= 110VDC (82-185VDC)  
220A=220VAC/220VDC (85-264VAC/120-370VDC)  
XX=No power supply (PS2 only)

**Example Order Codes**

SICOM6424SM-4GX-4S-SC-20T-24-24  
4 Gigabit SFP ports, 4 single mode fiber ports with SC connector, 1310nm 40km, 20 10/100Base TX RJ45 ports, and dual redundant 18-36VDC power supplies.

Note: Please contact sales for different prices.