

SICOM600024+4G Port Modular Layer 3 Managed
Industrial Ethernet Switch

CE, FCC, RoHS

Overview

SICOM6000 is a modular layer 3 managed industrial Ethernet switch for DIN-Rail installation. It offers 4 combo Gigabit SFP slots or 10/100/1000Base-T(X) ports, 24 100M copper/fiber ports or 12 RS232/RS485 serial ports. SICOM6000 also comes with EMC industrial level 4 design and complies with IP40 protection class. Based on Kyvision 3.0, CLI, WEB interface, it offers concentrated management. The state-of-the-art OPC software enables the switch's management embedded in various industrial systems.

Features

1. Modular design, 4 combo Gigabit SFP slots or 10/100/1000Base-T(X) ports, 24 100M copper/fiber ports or 12 RS232/RS485 serial ports
2. Supports DT-Ring protocols (recovery time < 50ms), STP/RSTP/MSTP/VRRP
3. Supports SNTP (Simple Network Time Protocol)
4. Supports IGMP Snooping, port mirroring, QoS, VLAN and link aggregation
5. Supports static routing and dynamic routings such as RIP v1/v2, OSPF v2, BEIGRP, BGP v4
6. Supports multicast routing protocols: PIM-SM, PIM-DM, DVMRP
7. Powerful ACL, hardware supports data filtering from L2-L7
8. Supports DHCP, BOOTP and other address-attaining ways
9. Broadcast storm auto-detection and control, supports IGMP V1/V2 message detection, effectively preventing broadcasting overflow
10. Supports full and half duplex flow control with the speed limitation of the step of 64K
11. Supports QinQ to realize double VLAN security
12. Improves network monitoring ability through RMON (group 1, 2, 3 and 9)
13. Supports multiple management methods including CLI, TELNET, WEB, SNMP V1/V2/V3, OPC
14. Flexible RS232/485 access
15. Complies with EMC industrial level 4 regulated in IEC61850-3
16. Unified network management software for SICOM series: Kyvision3.0
17. Relay alarm output for the loss of power
18. Operating temperature: -40 to 85°C (-40 to 185°F)

19. Ribbed aluminum case for heat dissipation (patent), fanless
20. DIN-Rail and wall mounting
21. IP40 protection class

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

Network

Ring, chain, star and tangent ring network topology

Interface

Gigabit Ethernet Ports: One Gigabit pluggable module and the module supports 4 combo Gigabit SFP slots or 10/100/1000Base-T(X) ports for 1000Base-SX/LX/LH/ZX, LC or 10/100/1000Base-T(X), RJ45 interface module
Fast Ethernet Ports: 3 100M pluggable modules and each module supports 8 100M copper/fiber ports
Serial Ports: Each module supports 4 RS232/RS485 serial ports, 20-Pin 3.81mm-spacing terminal block
CONSOLE Interface: RS232, RJ45
Alarm Contact: 3-Pin 3.81mm-spacing plug-in terminal block, 250VAC/220VDC Max; 2A Max; 60W Max
LED Indicator: RUN, ALARM, PWR1, PWR2, L1-L4; LINK, ACT (G1-G4, 1/1-8, 2/1-8, 3/1-8); TX1-TX4, RX1-RX4 (RS232/485)

Performance

Backplane switching capacity: 36G
Layer 3 switching and forwarding rate: 19.6Mpps
Routing address table size: 30K
MAC Address table size: 16K

Cable

Twisted Pair: 0-100m (Standard CAT5, CAT5e network cable)
Multi Mode Fiber: 1310nm, 0-5km (100Mbps); 1310nm 0-2km (1000Mbps)
Single Mode Fiber: 1310nm, 0-40km; 1550nm, 0-80km

Power Requirements

Power input: 12VDC (9-18VDC), 24VDC (18-36VDC), 48VDC (36-72VDC) dual redundant power inputs
Power terminal: 5-Pin 5.08mm-spacing plug-in terminal block
Power consumption: <35W

Physical Characteristics

Casing: Ribbed aluminum case (fanless)
Protection class: IP40
Installation: DIN-Rail or wall mounting
Dimensions (WxHxD): 320x165.5x236mm (12.60x6.52x9.29 in.)
Weight: 7kg (15.432 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

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): 30V 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)

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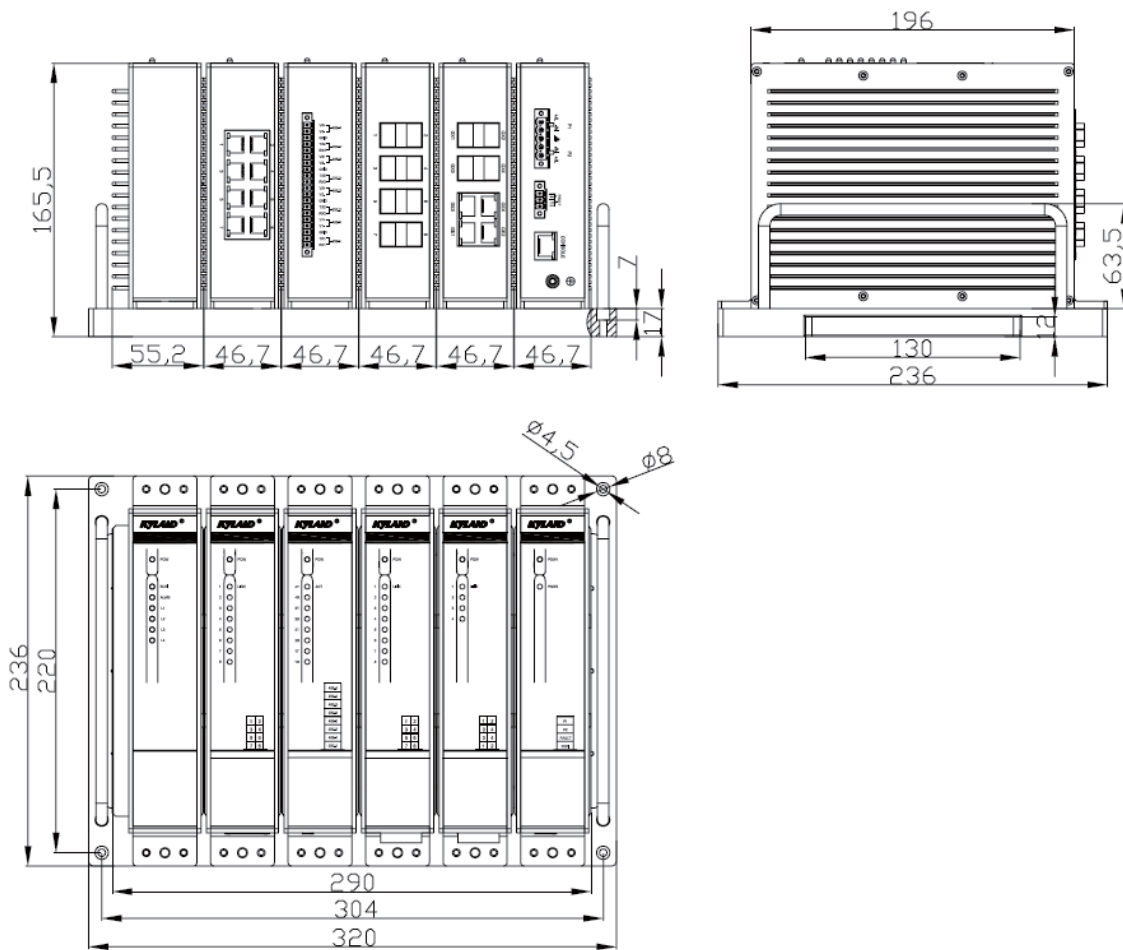
MTBF

35 years

Warranty

5 years

Mechanical Drawing



Ordering Information

Model	Description
SICOM6000-Chassis	Layer 3 modular managed industrial Ethernet switch system with slots for 1 master switching module, 1 Gigabit interface module, 1 power supply module and 3 service modules for a total of up to 24+4G ports, -40 to 85°C operating temperature
SM6.1-POWER-24	Power supply module of 24VDC, dual redundant power inputs
SM6.1-POWER-48	Power supply module of 48VDC, dual redundant power inputs
SM6.1-4GX/GE-SFP/RJ45	Interface module with 4 combo Gigabit SFP slots or 10/100/1000Base-T(X) RJ45 ports
SM6.1-8FE-RJ45	Interface module with 8 x 10/100Base-T(X) ports, RJ45 connector
SM6.1-8FX-SFP	Interface module with 8 x 100Base SFP slots
SM6.1-4FX-SFP-4FE-RJ45	Interface module with 4 x 100Base SFP slots and 4 x 10/100Base-T(X) RJ45 ports
SM6.1-4D-232/485	Interface module with 4 x RS232/RS485 serial ports

SFP Modules

SM-FSFP-FX/LC-2: SFP module with 1 x 100M multimode port, LC, 1310nm
 SM-FSFP-EX/LC-40: SFP module with 1 x 100M single mode port, LC, 1310nm, 40km
 SM-GSFP-TX/RJ45: SFP module with 1 x 10/100/1000M port, RJ45, 100m
 SM-GSFP-SX/LC-550: SFP module with 1 x 1000M multimode port, LC, 850nm, 550m
 SM-GSFP-LX/LC-550: SFP module with 1 x 1000M multimode port, LC, 1310nm, 550m
 SM-GSFP-LX/LC-10: SFP module with 1 x 1000M single mode port, LC, 1310nm, 10km
 SM-GSFP-LX/LC-15: SFP module with 1 x 1000M single mode port, LC, 1310nm, 15km
 SM-GSFP-LH/LC-40: SFP module with 1 x 1000M single mode port, LC, 1310nm, 40km
 SM-GSFP-ZX/LC-40: SFP module with 1 x 1000M single mode port, LC, 1550nm, 40km
 SM-GSFP-ZX/LC-60: SFP module with 1 x 1000M single mode port, LC, 1550nm, 60km
 SM-GSFP-ZX/LC-80: SFP module with 1 x 1000M single mode port, LC, 1550nm, 80km

Order Codes

SICOM6000 - - - - -
 G **S1** **S2** **S3** **PS**

G: Gigabit Ports

4G= SM6.1-4GX/GE-SFP/RJ45, Interface module with 4 combo Gigabit SFP slots or 10/100/1000Base-T(X) RJ45 ports
 None=No Gigabit port

S1 to S3: Service Slots

8T= SM6.1-8FE-RJ45, Interface module with 8 x 10/100Base-T(X) ports, RJ45 connector
 8F= SM6.1-8FX-SFP, Interface module with 8 x 100Base SFP slots
 4T4F= SM6.1-4FX-SFP-4FE-RJ45, Interface module with 4x100Base SFP slots and 4x10/100Base-T(X) RJ45 ports
 4D= SM6.1-4D-232/485, Interface module with 4 x RS232/RS485 serial ports
 XX=Empty

PS: Power Supply

12= SM6.1-POWER-12, Power supply module of 12VDC (9-18VDC), dual redundant power inputs
 24= SM6.1-POWER-24, Power supply module of 24VDC (18-36VDC), dual redundant power inputs
 48=SM6.1-POWER-24, Power supply module of 48VDC (36-72VDC), dual redundant power inputs

Example Order Codes

SICOM6000-4G-8T-8F-4D-24

1x SM6.1-4GX/GE-SFP/RJ45 supports 4 Gigabit combo ports, 1x SM6.1-8FE-RJ45 supports 8 10/100Base-TX RJ45 ports, 1x SM6.1-8FX-SFP supports 8 100Base-FX SFP ports, 1x SM6.1-4D-232/485 supports 4 RS232/RS485 serial ports, 1x SM6.1-POWER-24 supports 24VDC dual power inputs.

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