

SICOM6000

Layer 3 24+4G Port Managed Din-Rail Modular IEC61850 Backbone Switch



- Modular DIN-Rail design for easy expansion
- 4 Gigabit SFP slots and 24 Fast Ethernet fiber/RJ45 optional ports
- Supports multiple layer 3 routing protocols
- Embedded serial data server, and supports max 12 RS232/RS485 ports
- Supports DT-Ring protocols, MSTP and VRRP
- Patented heat dissipation technology, fanless design
- IP40 protection class



Overview

SICOM6000 is 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 Kyvision3.0, 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 & 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, STMP, LLDP, DHCP
- Network Security: supports 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, STMP, DHCP server/relay/client;
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

1 slot for master switching module
1 slot for power module
1 slot for 4-port Gigabit Combo interface module
3 slots for 8-port Fast Ethernet interface modules or 4-port serial interface modules
Gigabit Ethernet Ports: 4 combo 1000Base SFP slots or 10/100/1000Base-TX ports
Fast Ethernet Ports: max 24 100Base-FX SFP slots or 24 10/100Base-TX RJ45 ports
Serial Port: max 12 RS232/RS485 ports, 20-pin 3.81mm-spacing plug-in terminal block in each serial interface module
Console Port: RS232 (RJ45 connector)
Alarm Contact: 3-pin 3.81mm-spacing plug-in terminal block, 250VAC/350VDC Max, 2A Max, 60W Max

LED

LEDs on Front Panel:
Running LED: Run
Alarm LED: Alarm
Power LED: PWR1, PWR2
LEDs showing the connection status of interface modules: L1 to L4
Interface LED: Link/ACT, TX1-TX4 (serial port), RX1-RX4 (serial port)

Transmission Distance

Serial Cable: RS232, 15m; RS422/RS485, 1200m
Twisted Pair: 100m (Standard CAT5, CAT5e network cable)
Multi Mode Fiber: 1310nm, 2km (100M)
850nm, 550m (1000M)
Single Mode Fiber: 1310nm, 40km (100M)
1310nm, 10km/40km (1000M)
1550nm, 60km/80km (1000M)

Power Requirements

Power Input: 12VDC (9-18VDC), 24VDC (18-36VDC), 48VDC (36-72VDC)
Power Terminal: 5-pin 5.08mm-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): 320×165.5×236 mm (12.60×6.52×9.29 in.)
Weight: <7kg (15.432 pound)
Mounting: DIN-Rail or panel 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

251,487 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)
IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)

Machinery:

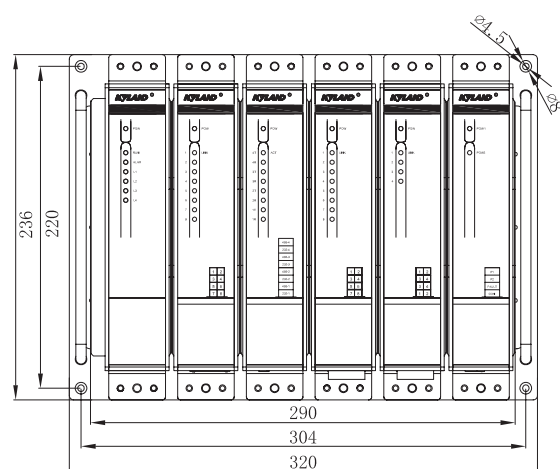
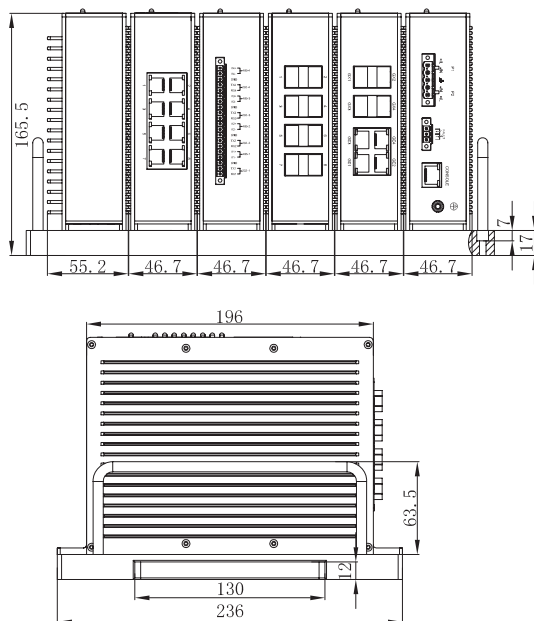
IEC60068-2-6 (Vibration)
IEC60068-2-27 (Shock)
IEC60068-2-32 (Free Fall)

Industry: IEC61000-6-2

Railway: EN50155, EN50121-4

Traffic Control: NEMA TS-2

Mechanical Drawing



Ordering Information

| Model | Slot | | | | Power Supply | | |
|-------------------|-----------------------|----------------------------------|---------------------------------------------------|--------------------------------------------|--------------|----------|----------|
| | Slot for Power Module | Slot for Master Switching Module | Slot for Fast Ethernet or Serial Interface Module | Slot for Gigabit Ethernet Interface Module | 9-18VDC | 18-36VDC | 36-72VDC |
| SICOM6000-Chassis | 1 | 1 | 3 | 1 | | | |

Please Select

| Interface Module | Gigabit Ethernet Port | Fast Ethernet Port | | Serial Port | Remark |
|------------------|-----------------------|--------------------|---------------|-----------------|--------------------|
| | 1000M Combo | 100Base-FX SFP | 10/100Base-TX | | |
| SM6.1-Power-12 | -- | -- | -- | -- | 12VDC power module |
| SM6.1-Power-24 | -- | -- | -- | -- | 24VDC power module |
| SM6.1-Power-48 | -- | -- | -- | -- | 48VDC power module |
| SM6.1-4GX/GE | 4 | -- | -- | -- | -- |
| SM6.1-8T | -- | -- | 8 | -- | -- |
| SM6.1-8FX-SFP | -- | 8 | -- | -- | -- |
| SM6.1-4FX-SFP-4T | -- | 4 | 4 | -- | -- |
| SM6.1-4D-232/485 | -- | -- | -- | 4 (RS232/RS485) | -- |

Accessories

| Model | Description |
|--------------------|---------------------------------------------|
| Gigabit SFP module | Refer to Kyland industrial Gigabit SFP list |
| 100M SFP module | Refer to Kyland industrial 100M SFP list |
| DT-FCZ-RJ45-01 | RJ45 dustproof shield |

Order Codes

SICOM6000 - - - - -

G S1 S2 S3 PS

G: Gigabit Ports

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

S1 to S3: Slots for fast Ethernet interface modules

8T= SM6.1-8T, 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

4F4T= SM6.1-4FX-SFP-4T, Interface module with 4 x 100Base SFP slots and 4 x 10/100Base-T(X) RJ45 ports

4D= SM6.1-4D-232/485, Interface module with 4 x RS232/RS485 serial ports

XX= None

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-48, 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 supports 4 Gigabit combo ports, 1x SM6.1-8T 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 (18-36VDC) dual power inputs.