

**SICOM6496**48G/96FE Port Modular Layer 3  
Managed Core Industrial Ethernet Switch

CE, FCC, RoHS

**Overview**

SICOM6496 is a modular layer 3 managed industrial Ethernet switch with 48 10/100/1000Base-T(X) ports or 48 Gigabit SFP slots, or up to 96 10/100/1000Base-T(X) ports, specially designed for core backbone network. It supports layer 3 data full wire-speed forwarding and full duplex or half duplex flow control. And SICOM6496 also supports DT-Ring protocols and the recovery time is less than 50ms.

**Features**

1. Modularized switch, supports 48 Gigabit SFP slots or 48 10/100/1000Base-T(X) RJ45 ports
2. Supports DT-Ring protocols (recovery time < 50ms), STP/RSTP/MSTP, VRRP
3. Supports IGMP Snooping, port mirroring, QoS, VLAN and link aggregation
4. Supports static routing protocol and dynamic routing protocols such as RIP v1/v2, OSPF v2, BEIGRP, BGP v4
5. Supports various multicast routing protocols such as PIM-SM, PIM-DM, DVMRP
6. Hardware and Layer 3 data message forwarding with full wire-speed
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. Highly reliable network with DAP (defense system against DOS attacks) function
13. Improves network monitoring ability through RMON (Group 1, 2, 3 and 9)
14. Multiple management methods such as CLI, TELNET, WEB, SNMP V1/V2/V3, OPC
15. Unified management software for SICOM series: Kyvision3.0
16. Complies with EMC industrial level 4 regulated in IEC61850-3
17. Operating temperature: -40 to 65°C (-40 to 149°F)
18. Ribbed aluminum case for heat dissipation (patent), dual fans
19. 8U rack mounting
20. IP30 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

**Interface**

Gigabit Ethernet Ports:

Supports 2 Gigabit pluggable master control boards, each control board supports:

- 1) 20 x 10/100/1000Base-T(X) RJ45 ports and 4 combo Gigabit SFP slots or 10/100/1000Base-T(X) ports
- 2) 20 x Gigabit SFP slots and 4 combo Gigabit SFP slots or 10/100/1000Base-T(X) ports
- 3) 12 x 10/100/1000Base-T(X) RJ45 ports and 12 x Gigabit SFP slots

(SFP slots support 1000Base-SX/LX/LH/ZX, LC interface modules)

Fast Ethernet Ports: Master control board supports max 48 x 10/100/Base-T(X) ports, RJ45

CONSOLE Interface: RS232, RJ45

LED Indicators: RUN, PWR1, PWR2; LINK/ACT (GE1-GE24); LINK, ACT (GX1-GX24)

**Performance**

Backplane switching capacity: 256G

Layer 3 switching and forwarding rate: 130Mpps

Routing address table size: 512K

MAC address table size: 512K

**Cable**

Twisted Pair: 0-100m

Multi Mode Fiber: 1310nm, 0-2km

Single Mode Fiber: 1310nm, 0-40km; 1550nm, 0-80km

**Power Requirements**

Power input: 48VDC (36~75VDC), 110VAC/220VAC/220VDC (85~264VAC/200~400VDC), dual redundant power supplies (optional)

Power terminal: 3-Pin 7.62mm-spacing plug-in terminal block

Power consumption: &lt;200W

**Physical Characteristics**

Casing: Ribbed aluminum case, dual fans

Protection class: IP30

Installation: Rack mounting

Dimensions (WxHxD): 482x356x456mm (including handles) (18.98x14.02x17.95 in.)

Weight: 20kg (44.092 pound)

**Environmental Limits**

Operating Temperature: -40 to 65°C (-40 to 149°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 0 to 95% (non-condensing)

### Approvals

- IEC61000-4-2 (ESD):  $\pm 8\text{KV}$  contact discharge,  $\pm 15\text{KV}$  air discharge
- IEC61000-4-3 (RS):  $10\text{V/M}$  (80-1000MHz)
- IEC61000-4-4 (EFT): power line  $\pm 4\text{KV}$ , data line  $\pm 2\text{KV}$
- IEC61000-4-5 (Surge): power line  $\pm 4\text{KV CM}/\pm 2\text{KV DM}$ , data line  $\pm 2\text{KV}$
- IEC61000-4-6 (CS):  $3\text{V}$  (10KHZ-150KHZ),  $10\text{V}$  (150KHz-80MHz)
- IEC61000-4-8 (Power frequency magnetic field):  $100\text{A/m}$  cont.  $1000\text{A/m}$ , 1s to 3s
- IEC61000-4-12/18 (Damped oscillatory wave):  $2.5\text{KV CM}$ ,  $1\text{KV DM}$
- IEC61000-4-10 (Damped oscillatory):  $30\text{A/m}$
- IEC61000-4-16 (Common mode conduct):  $30\text{V}$  cont.  $300\text{V}$ , 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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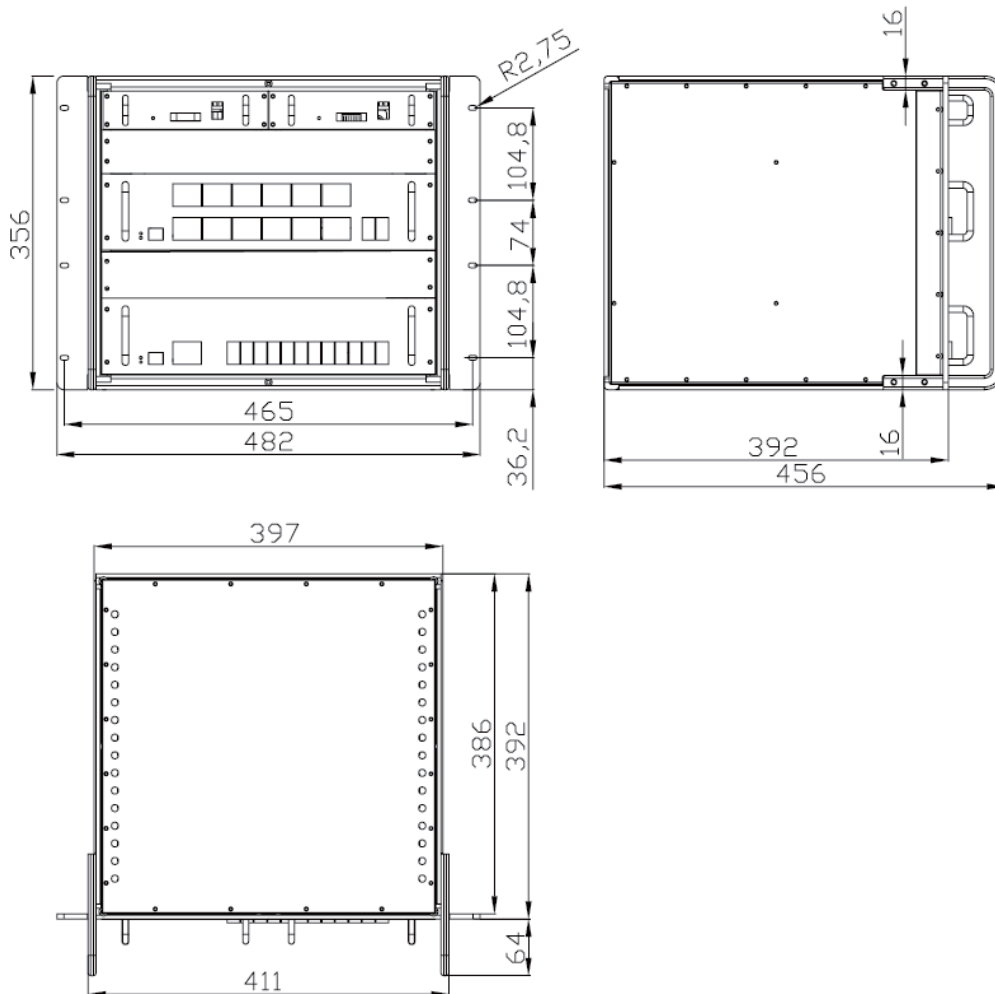
### MTBF

35 years

### Warranty

5 years

## Mechanical Drawing



## Ordering Information

SICOM6496	Descriptions
SM6496-CHASSIS	Up to 48 Gigabit Ethernet ports, Chassis of SICOM6496, offering system backboard, supports 4 expansion slots: 2 for master switching boards, 2 for power supply modules, -40 to 65°C operating temperature
SM6.3-POWER-220VAC	Power supply module of 110VAC/220VAC/220VDC (85-264VAC/200-400VDC)
SM6.3-POWER-48VDC	Power supply module of 48VDC (36-75VDC)
SM6.3-20GE-4GE/GX	Interface module with 20 x 10/100/1000Base-T(X) RJ45 ports, 4 Gigabit RJ45/SFP combo ports (10/100/1000Base-TX, 1000Base-X)
SM6.3-20GX-4GE/GX	Interface module with 20 Gigabit SFP slots, 4 Gigabit RJ45/SFP combo ports (10/100/1000Base-TX, 1000Base-X)
SM6.3-12GX-12GE	Interface module with 12 Gigabit SFP slots and 12 x 10/100/1000Base-T(X) RJ45 ports
SM6.3-4GX-48T	Interface module with 4 Gigabit SFP slots and 48 x 10/100Base-T(X) RJ45 ports
<b>SFP Modules</b>	
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

**SICOM6496-** \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
**Slot1 Slot2 PS1 PS2**

### Slot1 and Slot2: Modules for Slot1 and Slot2

20GE4Combo= SM6.3-20GE-4GE/GX, interface module with 20x10/100/1000Base-TX RJ45 ports, 4 Gigabit RJ-45/SFP combo ports (10/100/1000 Base-TX, 1000Base-X)

20GX4Combo= SM6.3-20GX-4GE/GX, interface module with 20 Gigabit SFP slots, 4 Gigabit RJ-45/SFP combo ports (10/100/1000 Base-TX, 1000Base-X)

12GX12GE= SM6.3-12GX-12GE, interface module with 12 Gigabit SFP ports and 12 x 10/100/1000Base-T(X) RJ45 ports (still not available)

4GX48T= SM6.3-4GX-48T, interface module with 4 Gigabit SFP slots and 48 x 10/100Base-T(X) RJ45 ports

XX= Empty

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

48=SM6.3-POWER-48VDC, power supply module of 48VDC (36-75VDC)

220A=SM6.3-POWER-220VAC, power supply module of 110VAC/220VAC/220VDC (85-264VAC/200-400VDC)

XX=No power supply (PS2 only)

### Example Order Codes

SICOM6496- 20GE4Combo-20GE4Combo-220A-XX

2 interface modules with 20x10/100/1000Base-TX RJ45 ports, 4 Gigabit RJ-45/SFP combo ports (10/100/1000 Base-TX, 1000Base-X), totally 40 Gigabit copper ports and 8 Gigabit combo ports, single 85-264VAC/200-400VDC power supply.

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