

SICOM3048

48+4G Port Managed Industrial Ethernet Switch



CE, FCC, UL

Overview

SICOM3048 is a high-performance network-managed industrial Ethernet switch specially designed by KYLAND for industrial applications. Its high-performance switch engine, solid and closed case design, high-efficiency single-rib shape case heat dispersion surface without fans, over-current, over-voltage and EMC protection at power input side, and excellent EMC protection of RJ45 port allows SICOM3048 applicable in harsh and dangerous industrial environments. The redundant function of optical fiber network, independent entire network management channel, redundant power input function, and powerful entire network real-time management system provides multiplex guarantee for reliable operation of the system.

Features

- DT-Ring, recovery time < 50ms
- Support Max 24 FE fiber ports and 4 GE fiber ports
- Support IGMP, TRUNK, Port Mirroring, QoS, VLAN
- Broadcasting storm control
- Hyper terminal (CLI), TELNET, WEB management software, SNMP-based network management
- Support OPC supervision
- Store and forward switching mode
- Flexible combination of ring, star and tangent network topology
- Backplane switching capacity: 32G
- Able to monitor the flow, status of each port (RMON (statistics, history, alarm, event))
- EMC industrial level 4, complies with IEC61850 standard, Goose message transmission priority and reliability
- Modularized industrial design
- Uniform network management software of SICOM3000/4000/6000: Kyvision 3.0
- Operating temperature: -40 to 75°C (-40 to 167°F)
- Ribbed Aluminum housing for heat dissipation (patent), fanless
- IP40 protection class

Functions**LED Indicator**

The LEDs (front panel) indicate the port status correctly including transmission rate, link status and system status.

Layer-2 Switching

Switches work in two ways: Cut-Through and Store-and-Forward. In Cut-Through, a data packet is immediately relayed further after detecting the target address; in Store-and-Forward, a data packet is first read-in completely and checked for errors before the switch relays the same. SICOM3048 employs Store-and-Forward – a switching mode widely used.

VLAN

VLAN will divide one network into multiple logical subnets. Data packets cannot be transmitted between different VLANs so as to control the broadcast domain and segment flow and improve reliability, security and manageability. SICOM3048 series supports IEEE802.1q VLAN tag. It can be divided up into 4094 VLANs based on ports. The VLAN division can be realized via WEB, CLI, and Kyvision3.0 software.

QoS Priority

IEEE 802.1p is the most popular priority solution in the LAN environment. SICOM3048 series supports 802.1p standard, by which you can configure the port-based priority when the terminal does not support 802.1p or different priority for the ports is desired.

Port Trunking

In SICOM3048, multiple physical ports can be aggregated into one logic port, which has the same rate, duplex and VLAN ID. Port Trunking can be configured in one single switch for max 7 ports. In this way, the pressure of network traffic is reduced.

Port Mirroring

The data of one port can be mapped to another port, allowing the user to monitor the communication in real-time.

Configure Port Working Modes

SICOM3048 is able to configure the working mode of all ports through management: full/half duplex adaptive, enforced full/half duplex, 10M/100M adaptive, enforced 100M full-duplex for 10M/100M fiber ports, enforced 1000M full-duplex for 1000M fiber/TP ports.

Configure Port Traffic Flow

You can configure the TX and RX rate of all ports via the management software of SICOM3048. For port of 100Mbps, it can be set as 128K, 256K, 512K, 1M, 2M, 10M, 50M, or 100M. For Gigabit port, it can be set as 100M, 500M, 1000M.

IGMP

IGMP stands for Internet Group Multicast Protocol. SICOM3048 series offers IGMP monitor and query functions. Data packets can be transmitted to multiple necessary host computers to prevent overloading. This solves the problems of occupied bandwidth when broadcasting.

Broadcasting Storm Control

SICOM3048 series offers broadcast storm protection ensuring the smooth communication platform of the switch network. The switch will filter out the over flow once the bandwidth of broadcast flow exceeds the limit.

DT-Ring

Each Ethernet port or fiber port of SICOM3048 series is able to configure as a redundant mode. It allows the formation of different Gigabit or 100M redundant rings easily and flexibly. The recovery time is less than 50ms.

IEC61000-4-5(Surge): ±4KV(line/earth),±4KV (line/line)power line, ±2KV data line
IEC61000-4-6(CS):3V(10KHZ~150KHZ),10V(150KHZ~80KHZ)

EMC emitted immunity:
FCC CFR47 Part15: FCC CFR47 Part 15 Class A
EN55022: EN55022 Class A
UL60950, CE, FCC

MTBF

35 years

Warranty

5 Years

Technical Specifications

Standard

IEEE802.3Z
IEEE 802.3U
IEEE 802.3
IEEE802.3X
IEEE802.1P
IEEE802.1D/W
IEEE802.1Q

Store and forward switching mode

Network

Ring, chain, star and tangent ring network topology.

Interface

Gigabit port: Max 4 × 1000Base-X(Fiber or TP cable)

100M fiber port: Max 24 × 100Base-FX (FC/SC/ST connector)

100M RJ45 port: Max 48 × 10/100Base-TX

CONSOLE interface: RS232, RJ45

Performance

Store-and-Forward speed: 1488100 bps

Max. filtering speed: 1488100 bps

MAC Address Table Size: 32K

Backplane switching capacity: 32G

Power Requirements

Power input: 24VDC (18-36VDC) dual redundant, 110VDC, 220VDC, 220VAC

Power consumption: <45W

Physical Characteristics

Casing: IP40 protection

Ribbed Aluminum housing fanless design

Dimensions(WxHxD): 482.6x88x245mm (19x3.46x9.65 in.)

Weight: 8000g (17.637 pounds)

Installation: Rack mounting

Environmental Limits

Operating Temperature: -40 to 75°C(-40 to 167°F)

Storage Temperature: -45 to 85°C (-49 to 185°F)

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

Approvals

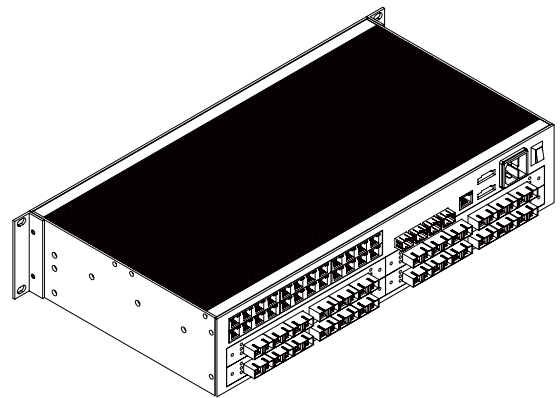
EMC interference immunity:

IEC61000-4-2(ESD): ±8KV contact discharge, ±15KV air discharge

IEC61000-4-3(RS): 10V/M (80-1000MHz)

IEC61000-4-4(EFT): ±4KV power line, ±4KV data line

Mechanical Drawing



Ordering Information

Model	Description
Sicom3048-4GX	4GX+24T
SM3-6FS (M)	6 × 100Base-FX, S (M)
SM3-1TX-5FS (M)	5 × 100Base-FX, S (M) M, 1 × 10/100Base-TX
SM3-2TX-4FS (M)	4 × 100Base-FX, S (M) M, 2 × 10/100Base-TX
SM3-3TX-3FS (M)	3 × 100Base-FX, S (M) M, 3 × 10/100Base-TX
SM3-4TX-2FS (M)	2 × 100Base-FX, S (M) M, 4 × 10/100Base-TX
SM3-5TX-1FS (M)	1 × 100Base-FX, S (M) M, 5 × 10/100Base-TX
SM3-6TX	6 × 10/100Base-TX
SM-SFP-RJ45	SFP interface module with 1 × 1000M port, RJ45 connector
SM-SFP-LX/LC	SFP interface module with 1 × 1000M port, LC connector 10Km supported
SM-SFP-LH/LC-40	SFP interface module with 1 × 1000M port, LC connector 40Km supported
SM-SFP-LH/LC-80	SFP interface module with 1 × 1000M port, LC connector 80Km supported