

# SICOM3000TSN

12G+2\*10G port layer 2 managed DIN-Rail TSN switches



## » Overview

SICOM3000TSN is TSN ready Layer 2 Managed Industrial Ethernet Switch, supports 2×10GBase-X SFP+, 4×100/1000Base-X SFP, 8×10/100/1000Base-T(X) RJ45, Auto-detection, Full/Half Duplex, MDI/MDI-X. SICOM3000TSN supports standard TSN protocols: IEEE 802.1AS PTP/IEEE 802.1Qbv/IEEE 802.1Qcc/ 802.1Qav. SICOM3000TSN supports IEEE1588 PTPV2, DRP (recovery time<20ms), RSTP/MSTP, VLAN, Multicast, QoS, SSH and many other Layer 2 software features, and supports CLI, Telnet, Web management methods, Network management software centralized management based on SNMPv1/v2c/v3. SICOM3000TSN is especially designed for harsh environments with wide operating temperature range, EMC level 4, IP40 protection class, strong vibration-resistant mounting clip for DIN-Rail installation, and can be deployed in Industrial automation, Power, Automotive electronics, Transportation and many other industrial applications.

## » Key Features

Supports 2×10GBase-X SFP+, 4×100/1000Base-X SFP, 8×10/100/1000Base-T(X) RJ45, Auto-detection, Full/Half

Duplex, MDI/MDI-X

Supports standard TSN protocols: IEEE 802.1AS PTP/IEEE 802.1Qbv/IEEE 802.1Qcc/ 802.1Qav

Supports RSTP/MSTP, DRP

Supports CNC centralized network configuration

Supports IP40

Operation Temperature: -40°C ~ 85°C

Supports EMC Level 4 and IEC61850-3

## Product Specifications

### > Software Functions

#### -TSN Time Sensitive Network Standards

Supports IEEE 802.1AS PTP

Supports IEEE 802.1Qbv

Supports IEEE 802.1Qcc

Supports IEEE 802.1Qav

#### -Switching

Supports VLAN, PVLAN

Supports Flow Control

Supports Port Rate Limit, Broadcast, Multicast, Unknown Unicast Storm protection

Supports static and dynamic MAC address aging

#### -Redundancy

Supports RSTP/MSTP

Supports DRP, network recovery time <20ms

Supports LACP (IEEE802.3ad)

#### -Multicast

Supports IGMP snooping

Supports GMRP

Supports Static Multicast

#### -Security

Supports IEEE 802.1x

Supports HTTPs/SSL

Supports SSH

Supports local RADIUS server, remote RADIUS Server forwarding

Supports TACACS+

Supports unicast MAC filter

#### **-QoS**

Supports ACL

Supports Port based or protocol based QoS

Supports 802.1p TOS/DiffServ, Supports SP, WRR

#### **-Maintenance & Management**

Supports Console, Telnet, WEB

Supports SNMPv1/v2c/v3

SNMPv3 Supports DES & AES

Supports TCP/UDP, Ping, Trace route

Supports firmware upgrade and configuration backup via FTP/TFTP/SFTP/HTTP/HTTPs

Supports port mirroring and remote port mirroring

Supports LLDP and LLDP MIB (802.1ab)

Supports configurable MTU

#### **-Diagnosis**

Supports hardware self-diagnosis

Supports IP/MAC conflict alarm, power alarm, port alarm and Ring alarm

Supports Syslog

#### **-IP Management**

Supports IPv4

Supports DHCP server/option12

Supports Port Security over DHCP

Supports DHCP-relay-agent/option 82/61/66/67

Supports BOOTP/Bootstrap

Supports DHCP Relay Agent Information Option, Supports DHCP Client

Supports ARP

**-Time Management**

Supports hardware based IEEE1588 PTP

Supports SNTP client

Supports NTP client

**>Technical Specifications**

**-Standard**

IEEE 802.3i (10Base-T)

IEEE 802.3u (100Base-T and 100Base-FX)

IEEE 802.3ab (1000Base-T)

IEEE 802.3z (1000Base-SX/LX)

IEEE1588 (PTP V2)

IEEE 802.1AS

IEEE 802.1Qbv

IEEE 802.1Qcc

IEEE 802.1Qav

**-Switching**

Priority Queue: 8

Number of VLANs: 4K

VLAN ID 1~4094

Number of Multicast Groups 8K

MAC Table 16K

Packet Buffer 1Mbit

Packet Forwarding Rate 47.6Mpps

Switching Delay <5 $\mu$ s

Jumbo Frame 9.6Kbytes

**-Interface**

2 $\times$ 10GBase-X SFP+;4 $\times$ 100/1000Base-X SFP; 8 $\times$ 10/100/1000Base-T(X) RJ45

Console: RS232 RJ45

Alarm contact: 3-pin 5.08mm terminal block,250VAC/220VDC Max, 2A Max

**-LED**

Running LED: Run

Alarm LED: Alarm

Power LED: PWR1,PWR2

Ring LED: Ring

Interface LED: Link/ACT, Speed (RJ45 port); Link/ACT(Fiber port)

#### **-Button**

Reset: Reboot and restore default configuration

#### **-Power**

Power input voltage:

L2 = 24-48VDC(18-72VDC)

HV = 100-240VAC,50/60Hz;110-220VDC(85-264VAC/77-300VDC)

Power Terminal

5-pin 5.08 mm-spacing plug-in terminal block (L2)

3-pin 7.62 mm-spacing plug-in terminal block (HV)

Power Consumption <25W

Overload Protection Support

Reverse Protection Support

Redundancy Protection Support

#### **-Physical Characteristics**

Housing: Metal

Cooling Natural convection, fanless

Protection Class IP40

Weight: <1.25Kg

Mounting DIN-Rail or Panel Mounting

#### **-Environmental Limit**

Operating Temperature -40°C ~ +85°C

Storage Temperature -40°C ~ +85°C

Ambient Relative Humidity 5 ~ 95% (non-condensing)

#### **-Warranty**

MTBF >300000h

Warranty 5 years

**-Industrial Standard**

EMI

FCC CFR47 Part 15,EN55022/CISPR22,Class A

EMS

IEC61000-4-2(ESD)  $\pm 8\text{kV}$ (contact), $\pm 15\text{kV}$ (air)

IEC61000-4-3(RS) 10V/m(80MHz ~ 2GHz)

IEC61000-4-4(EFT) Power Port:  $\pm 4\text{kV}$ ;Data Port:  $\pm 2\text{kV}$

IEC61000-4-5(Surge) Power Port:  $\pm 2\text{kV}/\text{DM}$ , $\pm 4\text{kV}/\text{CM}$ ;Data Port:  $\pm 2\text{kV}$

IEC61000-4-6(CS) 10V(150kHz ~ 80MHz)

Mechanical

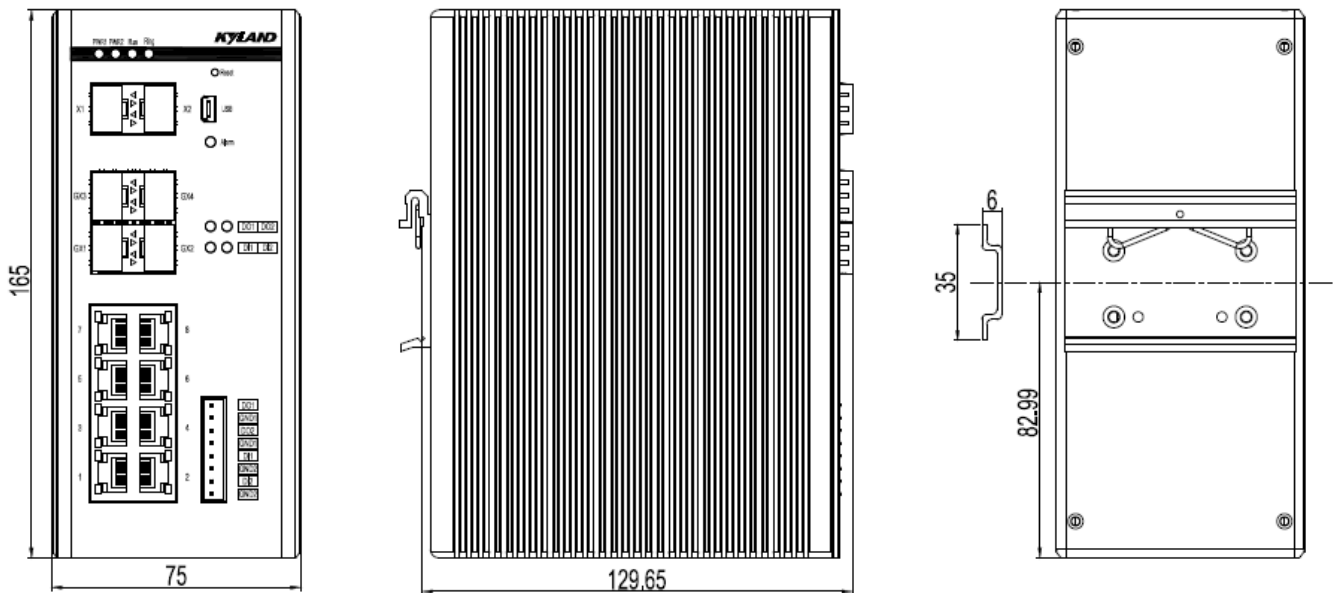
IEC60068-2-6(vibration)

IEC60068-2-27(shock)

IEC60068-2-32(free fall)

IEC61850-3

**» Mechanical Drawing**



**» Ordering Information**

Model	SICOM3000TSN-Ports-PS1-PS2
Ports	2X4GX8GE=2×10GBase-X SFP+ ports, 4×100/1000Base-X SFP ports, 8×10/100/1000Base-T(X) RJ45 ports

PS1-PS2	L2-L2=24-48VDC (18-72VDC), redundant power inputs HV=100-240VAC,50/60Hz;110-220VDC(85-264VAC/77-300VDC), single power input
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