

SICOM3028GPT-A

24G+4*10G port layer 2/3 managed rack mountable modular switches



Overview

SICOM3028GPT-A is a intelligent modular platform which is an All-in-One solution integrating IEEE1588v2, full gigabit, and both layer 2 & Layer 3 availability specifically designed to operate reliably in electrically harsh and climatically demanding utility substation and industrial environments. SICOM3028GPT-A supports up to 24 gigabit and 4 10gigabit ports or 28 gigabit ports, meets the IEC61850-3 and IEEE1613 standards. SICOM3028GPT-A is a 19-inch 1U rack mountable device and supports one 1U slot and six 0.5U slots which offers the maximum flexibility for easy expansion. SICOM3028GPT-A supports IEEE1588 PTPv2 with hardware time stamping and supports the BC, P2P TC, and E2E TC clock modes, it reaches a timing precision of 100 ns. It supports PTP Power Profile and supports many modules for time synchronous like HSR/PRP. SICOM3028GPT-A supports many Layer 2 software features such as port, VLAN, QinQ, multicast, QoS, DRP/DT-RING/MRP ring protocol, STP/RSTP/MSTP and Layer 3 functions such as VRRP, RIP, OSPF, IGMP and PIM. It supports Console, Telnet, Web management and network management software based on SNMP. At present, the product is widely used at the intelligent substation and many other industrial communication systems.

Key Features

Flexible modular design for easy expansion, supports max 24 gigabit and 4 10gigabit fiber/copper ports.

Supports DT-Ring, DRP, MRP, RSTP/MSTP and VRRP for network redundancy.

Supports Layer 3 routing protocols such as RIP and OSPF.

Supports IEEE1588v2 and the synchronization precision reaches ± 100 ns, with HW based PTP 1588.

Supports HSR/PRP module.

Supports Hot-Swappable Power Supplies.

Supports IEC61850 MMS.

Supports KyACB.

Support Profinet/Modbus TCP/ EthernetIP protocols.

Complies with the Cyber Security IEC62443-4-2.

Complies with IEC61850-3 and IEEE1613.

KEMA, CE, FCC

Product Specifications

>Software functions

-Switching function

Supports VLAN and PVLAN.

Supports GVRP

Supports port aggregation and LACP.

Supports flow control.

Supports broadcast storm suppression.

Supports QinQ

Supports MAC address management

-Redundancy protocol

Supports DHP and DRP and the recovery time < 20 ms.

Supports DT-Ring, DT-Ring+, and DT-VLAN and the recovery time < 50 ms.

Supports STP/RSTP/MSTP.

Supports MRP

-Multicast protocol

Supports IGMP v1/v2/v3.

Supports GMRP.

Supports static multicast.

-L3 function (part of sub-models support)

Support IPv6

Supports static routing.

Supports RIP v1/v2.

Supports OSPF v2.

Supports VRRP.

Supports PIM SM, PIM DM.

-Security

Supports IEEE 802.1x.

Supports HTTPS/SSL.

Supports SSH.

Supports SFTP client.

Supports RADIUS.

Supports TACACS+.

Supports user grading.

Supports MAC address binding.

Supports port isolate.

Supports security IP for Web/Telnet/SSH/SNMP service

Supports IEC62443-4-2.

-Service quality management

Supports ACL

Supports 802.1p(CoS), DSCP

Supports priority mapping.

Supports SP and WRR queuing.

-Management and maintenance

Supports Console, Telnet, and Web (HTTP or HTTPs) management methods.

Supports SNMPv1/v2c/v3 and can managed by Kyvision.

Supports IEC61850 MMS management.

Supports TFTP server/client.

Supports FTP server/client.

Supports file transfer and software update over FTP and TFTP.

Supports the IP/MAC address conflict alarm, power failure alarm, power alarm, temperature alarm, port linkdown alarm, port traffic alarm, CRC and packet lose alarm, CPU alarm, memory alarm, Sfp port rx power alarm, transceiver alarm and ring alarm

Supports Profinet, ModbusTCP, Ethernet/IP

Supports port mirroring.

Supports cable test.

Supports DDM.

Supports loop detection

Supports CRC protection

Supports Syslog.

Supports RMON

Supports LLDP.

Supports Link-check.

-IP address management

Supports Bootp.

Supports DHCP server/client.

Supports Up to 16 different IP addresses and VLAN for system management

-Time synchronization

Supports PTPv2 (IEEE1588-2008).

Supports Power profile (C37.238).

Supports NTP and SNTP.

>Product Specifications

-Standard

IEEE 802.3i (10Base-T)

IEEE 802.3u (100Base-T)

IEEE 802.3ab (1000Base-T)

IEEE 802.3ad (port aggregation)

IEEE 802.3z (1000Base-SX/LX)

IEEE 802.3x (flow control)

IEEE 802.1p (priority)

IEEE 802.1Q (VLAN)

IEEE 802.1w (RSTP)

IEEE 802.1s (MSTP)

IEEE1588-2008 (PTPv2)

-Switch properties

Priority queue: 8

Number of VLANs: 4K

VLAN ID: 1–4093

Number of multicast groups: 1024

Routing table: 8K (L2 chassis do not involve)

MAC table: 32K

Packet buffer: 48Mbit

Switching delay: < 10 μ s

Jumbo Frame Size: 10 KB

-Interface

Gigabit ports:

1000Base-X, SFP port, supports DDM

10/100/1000Base-T(X), RJ45 port

Fast Ethernet ports:

100Base-FX, single/multi mode, SC/ST connector

100Base-FX, SFP port(LC connector), supports DDM

10/100Base-T(X), RJ45 port

Console port: RJ45

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

10A@1s, 60 W Max

-LED

LED on front panel

Alarm LED: Alarm

Running LED: Run

Ring Role LED: Ring

KyACB LED: USB

Synchronization finish LED: Lock

Power LED: PWR1, PWR2

Port speed LED: Speed

Port LED: Link/ACT

LED on rear panel

Port LED: Link/ACT

Port speed LED: Speed

-Power Requirements

Power input:

24-48VDC (18-72 VDC)

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

Power terminal: 5-pin 5.08 mm-spacing plug-in terminal block

Power consumption: < 40 W

Overload protection: Support

Reverse connection protection: Support

Redundancy protection: Support

Hot Swappable: Support

-Physical Characteristics

Housing: Metal

Cooling: Natural cooling, fanless

Protection Class: IP40

Dimensions(W×H×D) : 482.6 mm × 44 mm × 359.7 mm

Weight: < 10 Kg

Mounting: 19 inch 1U rack mounting

-Environmental limits

Operating temperature: -40°C to +85°C

Storage temperature: -40°C to +85°C

Ambient Relative Humidity: 5% to 95% (non-condensing)

-Quality assurance

MTBF:

359000h (SICOM3028GPT-L2GT)

368000h (SICOM3028GPT-L3GT)

Warranty: 5 years

-Approvals

KEMA,CE

IEC 62368-1, EN 62368-1

IEC 62439-3

-Industry standard

EMI

FCC CFR47 Part 15, EN55022/CISPR22, Class A

EMS

IEC61000-4-2(ESD) ± 8 kV (contact), ± 15 kV(air)

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

IEC61000-4-4(EFT) Power Port: ± 4 kV; Data Port: ± 2 kV

IEC61000-4-5(Surge) Power Port: ± 2 kV/DM, ± 4 kV/CM; Data Port: ± 2 kV

IEC61000-4-6(CS) 3 V (10 kHz-150 kHz); 10 V (150 kHz-80 MHz)

IEC61000-4-8 (power frequency magnetic field) 100 A/m(cont.), 1000 A/m(1s-3s)

IEC61000-4-9 (pulsed magnetic field) 1000 A/m

IEC61000-4-10 (damped oscillation) 100 A/m

IEC61000-4-12 (oscillatory wave) 2.5 kV/CM, 1 kV/DM

IEC61000-4-16 (common mode conduction) 30 V(cont.), 300 V(1s)

Machinery

IEC60068-2-6 (vibration)

IEC60068-2-27 (shock)

IEC60068-2-32 (free fall)

Climatic environmental

IEC60068-2-1 Cold test

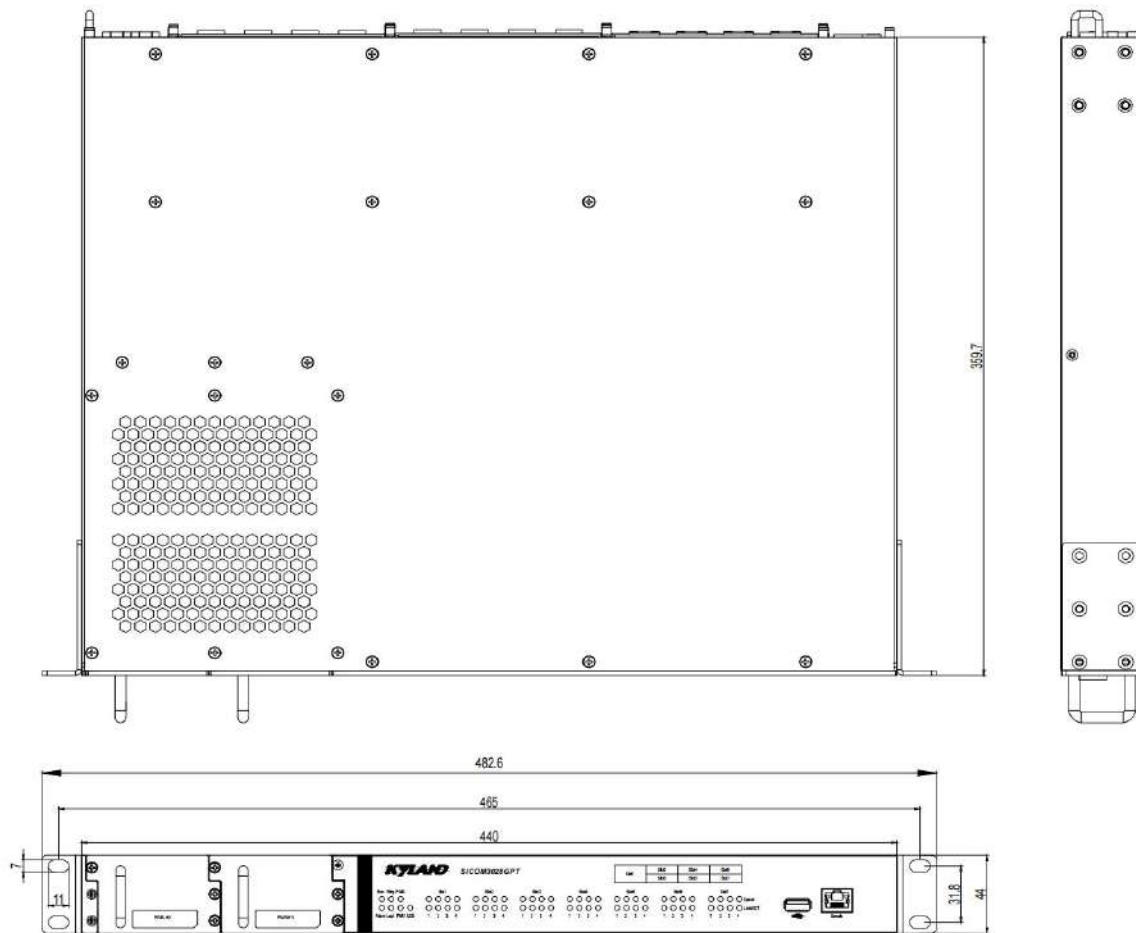
IEC60068-2-2 Dry heat test

IEC60068-2-14 Change of temperature test

IEC60068-2-30 Damp heat cyclic test

IEC60068-2-78 Damp heat steady state test

➤ Mechanical Drawing



Ordering Information

Product selection table

Sub-model	Ethernet Ports
SICOM3028GPT-A-L2GT	Up to 28gigabit or 24gigabit+4*10gigabit ports, L2 chassis
SICOM3028GPT-A-L3GT	Up to 28gigabit or 24gigabit+4*10gigabit ports, L3 chassis

Ordering Information

Recommended model

Product Model	SICOM3028GPT-A-SM
SM: Sub-model	L2GT-MB: SICOM3028GPT 28G or 24G + 4*10G ports L2 chassis with timesynchronization L3GT-MB: SICOM3028GPT 28G or 24G + 4*10G ports L3 chassis with timesynchronization
Hot-Swappable Power Module	SM6.6-A-Power-PS
PS: power supply	HV=100-240VAC,50/60Hz;110-220VDC(85-264VAC/77-300VDC), 1U L2 =24-48VDC(18-72VDC), 1U

Slot 1:	SM6.6-A-Ports-1U
Ports:	4X = 4 x 10G Base-X, SFP+ ports, 1U 4GX = 4 x 1000Base-X, SFP ports, 1U 4GE = 4 x 10/100/1000Base-T(X) RJ45 ports, 1U
Slot2-Slot7:	SM6.6-A-Ports-Connector-0.5U
Ports:	4GX = 4 x 1000Base-X, 100Base-FX, SFP ports, 0.5U 4SFP = 4 x 100Base-FX SFP ports, 0.5U 4GE = 4 x 10/100/1000Base-T(X) RJ45 ports, 0.5U 4S = 4 x 100Base-FX, single-mode fiber ports, 0.5U 4M = 4 x 100Base-FX, multi-mode fiber ports, 0.5U 4T = 4 x 10/100Base-T(X) RJ45 ports, 0.5U
Connector: 100M fiber port specifications	SC05 = SC connector, multi-mode, 1310nm, 5km ST05 = ST connector, multi-mode, 1310nm, 5km SC40 = SC connector, single-mode, 1310nm, 40km ST40 = ST connector, single-mode, 1310nm, 40km
Slot2-Slot7:	Function Module
	SM6.6-A-HSR/PRP-GE-0.5U = Redbox module, 2 x 10/100/1000Base-T(X) RJ45 port SM6.6-A-HSR/PRP-GX-0.5U = Redbox module, 2 x 1000Base-X, 100Base-FX SFP port

Accessories

Accessory Model	Description
10Gigabit SFP+ module	See the selection table of industrial 10gigabit SFP+ module
Gigabit SFP module	See the selection table of industrial gigabit SFP module
100M SFP module	See the selection table of industrial 100M SFP module