

SICOM3028GP SICOM3424P

Layer 2 28G/24+4G Port Full Gigabit Managed Rack Mountable Modular IEC61850 Switch



- 1U modular design for easy expansion, and supports max 28 Gigabit ports or 4 Gigabit ports and 24 fast Ethernet ports
- Supports IEC62439-6, DT-Ring protocols and MSTP
- Provides Mini USB Console port, supports setting backup and recovery through USB
- Supports VCT (Virtual Cable Test)
- Exceeds IEC61850-3 and IEEE1613
- KEMA (pending), CE, FCC certificates



Overview

SICOM3028GP/SICOM3424P are members of Kyland intelligent modular platform SICOM GPT series which is an All-in-One solution integrating IEEE1588v2, SyncE, 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.

SICOM3028GP/SICOM3424P are equipped with Kyland patent IEC62439-6/DRP ring protocol which enables less than 20ms recovery time. It also supports DT-Ring, RSTP/STP and MSTP. Mini USB console port enables configuration easy backup and restore. SICOM GPT series is fully compliant with IEC61850-3 and IEEE1613 standards (KEMA certification in progress).

Supporting up to 28 Gigabit/100M Ethernet ports, the SICOM3028GP/SICOM3424P series has one 1U Gigabit slot for 4 Gigabit uplink ports, and 6 0.5U slots with 4 Gigabit or 100M ports on each module. With all high density ports being on rear panel, Kyland GPT series is 1U height with only 360mm depth. Fully modular design offers the maximum flexibility for easy expansion. SICOM3028GP/SICOM3424P deliver great bandwidth, SFP expansions, network redundancy technology, management features, a fanless design, a wide operating temperature range of -40 to 85°C, and future proof protection of your industrial network.

Features & Benefits

- Redundancy Technology: supports IEC62439-6 (recovery time<20ms), DT-Ring protocols (recovery time<50ms) and MSTP
- Multicast Protocol: supports IGMP Snooping, GMRP and static multicast
- Network Partition: supports VLAN, GVRP, PVLAN
- 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/v3, RMON, LLDP, SNMP, DHCP
- Network Security: supports MAC address binding with port, IEEE802.1X, SSH, SSL, TACACS+, RADIUS, ACL
- Device Management: supports FTP/TFTP upgrade, also supports Syslog upload and download
- Device Maintenance: supports port mirroring, VCT (Virtual Cable Test)
- Alarm Output: supports IP/MAC conflicts, power, temperature, port and ring alarms
- Special Function: supports Link Check and Loop Status Check

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, IEEE802.1X, IEC62439-6

Protocols

DT-Ring, DT-Ring+, DT-VLAN, MSTP, DRP;
IGMP Snooping, GMRP;
VLAN, GVRP, PVLAN;
Telnet, HTTP, HTTPS, SNMPv1/v2/v3, RMON, LLDP, Bootp, DHCP server/snooping/client, DHCP Option 82;
SNTP, RTC;
SSH, SSL, TACACS+, RADIUS, ACL;
FTP, TFTP, Syslog;
ARP, Modbus TCP, QoS, LACP

Switch Properties

Priority Queues: 4
Number of VLANs: 256
VLAN ID: 1-4094
Number of Multicast Groups: 256
MAC Table: 16K
Packet Buffer: 12Mbit
Packet Forwarding Rate: 41.7Mpps (SICOM3028GP), 9.5Mpps (SICOM3424P)
Switching Delay: <5μs

Interface

1 1U slot for 4-port Gigabit interface module (1000Base SFP, 10/100/1000Base-TX)
6 0.5U slots for 4-port Gigabit/Fast Ethernet interface modules
Gigabit Ethernet Ports: max 28 1000Base SFP slots or 28 10/100/1000Base-TX RJ45 ports
Fast Ethernet Ports: max 24 100Base-FX, SM/MM ports, FC/SC/ST connector or 24 10/100Base-TX RJ45 ports
Console Port: Mini USB
USB Interface: USB2.0
Alarm Contact: 3-pin 5.08mm-spacing plug-in terminal block, 250VAC/220VDC Max, 2A Max, 60W Max

LED

1) LEDs on Front Panel:
Running LED: Run
Alarm LED: Alarm
Power LED: PWR1, PWR2
Interface LED: Link/ACT, Speed
2) LEDs on Rear Panel:
Interface LED: Link/ACT
Port Speed LED: Speed

Transmission Distance

Twisted Pair:
100m (Standard CAT5, CAT5e network cable)
Multi Mode Fiber:
1310nm, 5km (100M)
850nm, 550m (1000M)
Single Mode Fiber:
1310nm, 40km/60km (100M)
1550nm, 60km/80km (100M)
1310nm, 10km/40km (1000M)
1550nm, 60km/80km (1000M)

Power Requirements

Power Input:
24VDC (18-36VDC), 48VDC (36-72VDC), 220VAC/DC (85-264VAC/77-370VDC)
Power Terminal:
5-pin 5.08mm-spacing plug-in terminal block
Power Consumption:
<26W (full RJ45 ports); <40W (full fiber ports)

Overload Protection: Support
Reverse Connection Protection: Support
Redundancy Protection: Support

Physical Characteristics

Housing: Metal, fanless
Protection Class: IP40
Dimensions (WxHxD):
482.6x44x360 mm (19x1.73x14.17 in.)
Weight: <10kg (22.046 pound)
Mounting: 19 inch 1U Rack 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

359,000 hrs

Warranty

5 years

Approvals

KEMA (pending), CE, FCC

Industrial Standard

EMI:
FCC CFR47 Part 15, EN55022/CISPR22, Class A

EMS:

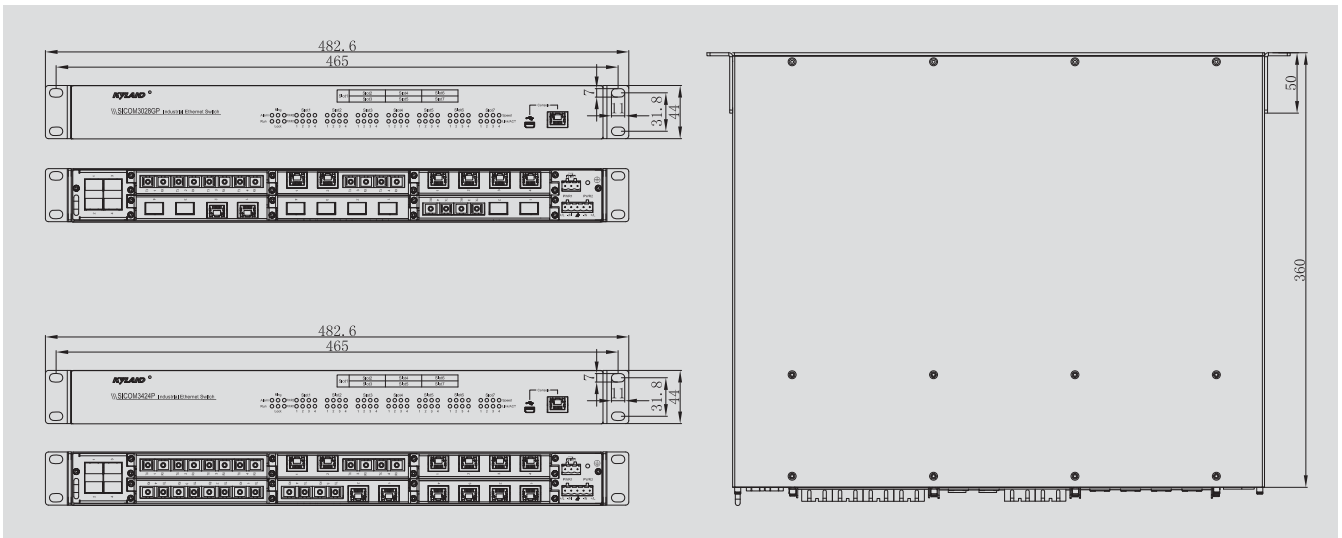
IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air)
IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)
IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV
IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±2kV
IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)
IEC61000-4-8 (Power frequency magnetic field): 100A/m (cont.), 1000A/m (1s-3s)
IEC61000-4-9 (Pulsed magnetic field): 1000A/m
IEC61000-4-10 (Damped oscillation): 100A/m
IEC61000-4-12 (Oscillatory wave): 2.5kV/CM, 1kV/DM
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
Power: IEC61850-3, IEEE1613
Railway: EN50155, EN50121-4
Traffic Control: NEMA TS-2

➤ Mechanical Drawing



➤ Ordering Information

Slot 1	Slot 2	Slot 4	Slot 6	PS
	Slot 3	Slot 5	Slot 7	

Model Chassis S1 S2 S3 S4 S5 S6 S7

Model Chassis: Chassis and Power Supplies

SICOM3028GP-24-XX = SICOM3028GP-MB-24DC-V1.0, SICOM3028GP Chassis with 24VDC(18-36VDC) power supply

SICOM3028GP-24-24 = SICOM3028GP-MB-24DC-24DC-V1.0, SICOM3028GP Chassis with dual redundant 24VDC(18-36VDC) power supplies

SICOM3028GP-48-XX = SICOM3028GP-MB-48DC-V1.0, SICOM3028GP Chassis with 48VDC(36-72VDC) power supply

SICOM3028GP-48-48 = SICOM3028GP-MB-48DC-48DC-V1.0, SICOM3028GP Chassis with dual redundant 48VDC(36-72VDC) power supplies

SICOM3028GP-HI-XX = SICOM3028GP-MB-220AC/DCW-V1.0, SICOM3028GP Chassis with 85-264VAC/77-370VDC power supply

SICOM3028GP-HI-HI = SICOM3028GP-MB-220AC/DCW-220AC/DCW-V1.0, SICOM3028GP Chassis with dual redundant 85-264VAC/77-370VDC power supplies

SICOM3424P-24-XX = SICOM3424P-MB-24DC-V1.0, SICOM3424P Chassis with 24VDC(18-36VDC) power supply

SICOM3424P-24-24 = SICOM3424P-MB-24DC-24DC-V1.0, SICOM3424P Chassis with dual redundant 24VDC(18-36VDC) power supplies

SICOM3424P-48-XX = SICOM3424P-MB-48DC-V1.0, SICOM3424P Chassis with 48VDC(36-72VDC) power supply

SICOM3424P-48-48 = SICOM3424P-MB-48DC-48DC-V1.0, SICOM3424P Chassis with dual redundant 48VDC(36-72VDC) power supplies

SICOM3424P-HI-XX = SICOM3424P-MB-220AC/DCW-V1.0, SICOM3424P Chassis with 85-264VAC/77-370VDC power supply

SICOM3424P-HI-HI = SICOM3424P-MB-220AC/DCW-220AC/DCW-V1.0, SICOM3424P Chassis with dual redundant 85-264VAC/77-370VDC power supplies

S1: 1U Module

XX = None

4GX1U = SM6.6-4GX-1U-V1.0, 1U Module with 4 Gigabit SFP ports

4GE1U = SM6.6-4GE-1U-V1.0, 1U Module with 4 Gigabit 10/100/1000Base-TX RJ45 ports

2GX2GE1U = SM6.6-2GX-2GE-1U-V1.0, 1U module with 2 Gigabit SFP ports and 2 10/100/1000Base-TX RJ45 ports

S2-S7: 0.5U Module

XX = None

4GX = SM6.6-4GX-0.5U-V1.0, 0.5U Module with 4 Gigabit SFP ports (Only available for SICOM3028GP)

4GE = SM6.6-4GE-0.5U-V1.0, 0.5U Module with 4 Gigabit 10/100/1000Base-TX RJ45 ports (Only available for SICOM3028GP)

2GX2GE = SM6.6-2GX-2GE-0.5U-V1.0, 0.5U Module with 2 Gigabit 10/100/1000Base-TX RJ45 ports and 2 Gigabit SFP ports (Only available for SICOM3028GP)

4T = SM6.6-4T-0.5U-V1.0, 0.5U Module with 4 10/100Base-TX RJ45 ports

4SSC = SM6.6-4S-SC-1310-40-0.5U-V1.0, 0.5U Module with 4 100Base-FX single mode fiber ports, 1310nm, 40km, SC connector

4SST = SM6.6-4S-ST-1310-40-0.5U-V1.0, 0.5U Module with 4 100Base-FX single mode fiber ports, 1310nm, 40km, ST connector

4SFC = SM6.6-4S-FC-1310-40-0.5U-V1.0, 0.5U Module with 4 100Base-FX single mode fiber ports, 1310nm, 40km, FC connector

4SSC60 = SM6.6-4S-SC-1310-60-0.5U-V1.0, 0.5U Module with 4 100Base-FX single mode fiber ports, 1310nm, 60km, SC connector

4SSC80 = SM6.6-4S-SC-1550-80-0.5U-V1.0, 0.5U Module with 4 100Base-FX single mode fiber ports, 1550nm, 80km, SC connector

4MSC = SM6.6-4M-SC-1310-5-0.5U-V1.0, 0.5U Module with 4 100Base-FX multimode fiber ports, 1310nm, 5km, SC connector

4MST = SM6.6-4M-ST-1310-5-0.5U-V1.0, 0.5U Module with 4 100Base-FX multimode fiber ports, 1310nm, 5km, ST connector

4MFC = SM6.6-4M-FC-1310-5-0.5U-V1.0, 0.5U Module with 4 100Base-FX multimode fiber ports, 1310nm, 5km, FC connector

2GX2SSC = SM6.6-2GX-2S-SC-1310-40-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX single mode fiber ports, 1310nm, 40km, SC connector (Only available for SICOM3028GP)

2GX2SST = SM6.6-2GX-2S-ST-1310-40-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX single mode fiber ports, 1310nm, 40km, ST connector (Only available for SICOM3028GP)

2GX2SFC = SM6.6-2GX-2S-FC-1310-40-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX single mode fiber ports, 1310nm, 40km, FC connector (Only available for SICOM3028GP)

2GX2SSC60 = SM6.6-2GX-2S-SC-1310-60-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX single mode fiber ports, 1310nm, 60km, SC connector (Only available for SICOM3028GP)

2GX2SSC80 = SM6.6-2GX-2S-SC-1550-80-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX single mode fiber ports, 1550nm, 80km, SC connector (Only available for SICOM3028GP)

2GX2MSC = SM6.6-2GX-2M-SC-1310-5-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX multi mode fiber ports, 1310nm, 5km, SC connector (Only available for SICOM3028GP)

2GX2MST = SM6.6-2GX-2M-ST-1310-5-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX multi mode fiber ports, 1310nm, 5km, ST connector (Only available for SICOM3028GP)

2GX2MFC = SM6.6-2GX-2M-FC-1310-5-0.5U-V1.0, 0.5U Module with 2 Gigabit SFP ports and 2 100Base-FX multi mode fiber ports, 1310nm, 5km, FC connector (Only available for SICOM3028GP)

2SSC2T = SM6.6-2S-SC-1310-40-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX single mode fiber ports, 1310nm, 40km, SC connector and 2 10/100Base-TX RJ45 ports

2SST2T = SM6.6-2S-ST-1310-40-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX single mode fiber ports, 1310nm, 40km, ST connector and 2 10/100Base-TX RJ45 ports

2SFC2T = SM6.6-2S-FC-1310-40-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX single mode fiber ports, 1310nm, 40km, FC connector and 2 10/100Base-TX RJ45 ports

2SSC602T = SM6.6-2S-SC-1310-60-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX single mode fiber ports, 1310nm, 60km, SC connector and 2 10/100Base-TX RJ45 ports

2SSC802T = SM6.6-2S-SC-1550-80-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX single mode fiber ports, 1550nm, 80km, SC connector and 2 10/100Base-TX RJ45 ports

2MSC2T = SM6.6-2M-SC-1310-5-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX multimode fiber ports, 1310nm, 5km, SC connector and 2 10/100Base-TX RJ45 ports

2MST2T = SM6.6-2M-ST-1310-5-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX multimode fiber ports, 1310nm, 5km, ST connector and 2 10/100Base-TX RJ45 ports

2MFC2T = SM6.6-2M-FC-1310-5-2T-0.5U-V1.0, 0.5U Module with 2 100Base-FX multimode fiber ports, 1310nm, 5km, FC connector and 2 10/100Base-TX RJ45 ports

Accessories

DT-GPS-ANT-01 = GPS Antenna

DT-SP-01 = GPS Surge Protection AR21T

DT-LMR400-20-TNC-BNC = 20m coaxial cable with BNC(male) to TNC(male) adaptor

DT-LMR400-2-TNC-BNC = 2m coaxial cable with BNC(male) to TNC(male) adaptor
GPT Module Puller

DT-XL-Mini-USB-USB-2m = 2M USB Console Cable

Patch Cord Organizers (One Pair)

DT-BNC(K)-TNC(K) = BNC (female) to TNC (female) connector

Example Order Codes

SICOM3028GP-HI-HI-4GX1U-4GX-4GX-4GX-4GX-4GX

SICOM3028GP with 28G SFP ports and dual redundant 85-264VAC/77-370VDC power supplies