

SICOM6416G

12G+4*10G port layer 3 managed DIN-Rail switches



» Overview

SICOM6416G is a layer 3 managed industrial Ethernet switch designed to operate reliably in electrically harsh and climatically demanding industrial environments. SICOM6416G supports up to four 10 gigabit ports, twelve gigabit ports. SICOM6416G is a DIN rail device. SICOM6416G supports many Layer 2 software features such as port, VLAN, multicast, QoS, fast redundant ring and Layer 3 functions such as RIP, OSPF, PIM-SM, PIM-DM. It supports Console, Telnet, Web management and network management software based on SNMP. At present, the product is widely used at the backbone networks in many industrial communication systems.

» Key Features

Supports Max four 10 gigabit ports, complies with 2.5 gigabit ports, twelve gigabit ports

Supports DT-Ring, DRP/DHP, STP/RSTP/MSTP and VRRP for network redundancy

Supports Layer 3 Static routing and routing protocols such as RIP v1/v2 and OSPF

Supports SFP Digital Diagnostics Monitoring

Supports NAT

Supports PTPv2

CE, FCC

» Product Specifications**>Software functions****-Switching function**

Supports VLAN , PVLAN

Supports GVRP

Supports port aggregation

Supports flow control

Supports ingress port rate limit

Supports broadcast storm suppression

-Redundancy protocol

Supports DRP/DHP with recovery time<20 ms

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

Supports STP/RSTP/MSTP

Supports VRRP

-Multicast protocol

Supports GMRP

Supports IGMP snooping

-Routing protocol

Supports static routing

Supports RIPv1/v2

Supports OSPFv2

Supports IGMP

Supports PIM SM and PIM DM

-Security

Supports IEEE 802.1x

Supports HTTPS/SSL

Supports SSH

Supports RADIUS

Supports TACACS+

Supports user grading

Supports port isolate

Supports MAC address filter

Supports IP source guard

-Service quality management

Supports ACL

Supports traffic control and limit based on port or protocol

Supports 802.1p and TOS/DiffServ

Supports priority remark

Supports traffic shaping

Supports SP and WRR queuing

-Management and maintenance

Supports Console, Telnet, and Web management methods

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

Supports config file upload/download and software update over FTP/TFTP/HTTP

Supports the IP/MAC address conflict alarm, power failure alarm, CPU and memory alarm, port link down alarm, port traffic alarm, CRC and packet loss alarm, Sfp port rx power alarm, transceiver alarm and ring alarm

Supports RMON

Supports local and remote port mirroring

Supports Syslog

Supports LLDP

Supports DDM

-IP address management

Supports DHCP Server/Relay/Snooping/Client/Option 61/Option 82

Supports NAT

-Clock management

Supports SNTP Client

Supports NTP Client

Supports PTPv2, synchronization precision ± 100 ns

Supports time zone and DST

>Technical specifications

-Standard

IEEE 802.3i(10Base-T)

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

IEEE 802.3ab(1000Base-T)

IEEE 802.3z(1000Base-SX/LX)

IEEE 802.3ae(10GBase-X)

IEEE 802.3ad (port aggregation)

IEEE 802.3x (flow control)

IEEE 802.1p (priority)

IEEE 802.1Q(VLAN)

IEEE 802.1w(RSTP)

IEEE 802.1s(MSTP)

IEEE 802.1x

IEEE 1588

-Switch properties

Priority queue: 8

Number of VLANs: 4K

VLAN ID: 1–4093

Number of multicast groups: 1K

Routing table: 4K

MAC table: 32K

Packet buffer: 32Mbit

Packet forwarding rate: 155 Mpps

-Interface

10 Gigabit ports: 10GBase-X, SFP+ port

Gigabit ports: 1000Base-X, SFP port; 10/100/1000Base-T(X), RJ45 port

Console port: RS232,RJ45

Alarm: 3-pin 5.08mm-spacing plug-in terminal block, 250 VAC/220 VDC Max, 2A Max, 10A@1s, 60W Max

-LED

Alarm LED: Alarm

Running LED: Run

Power LED: PWR1, PWR2

Ring Role LED: Ring

Port LED: Link/ACT

-Power Requirements

Power input: 220VAC/DC(85-264VAC/77-300VDC), 24VDC(18-36VDC), 48VDC(36-72VDC)

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

Power consumption: < 35 W

Overload protection: Support

Reverse connection protection: Support

Redundancy protection: Support

-Physical Characteristics

Housing: Metal

Cooling: Natural cooling, fanless

Protection Class: IP40

Dimensions(W×H×D): 120mm×154mm×154mm

Weight: < 3 Kg

Mounting: DIN-Rail

-Environmental limits

Operating temperature: -40°C to +75°C

Storage temperature: -40°C to +85°C

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

-Quality assurance

MTBF: >300000h

Warranty: 5 years

-Approvals

CE, FCC

EMC: EN 55032, EN 55035, EN 61000-6-4, EN 61000-6-2

Rail Traffic: EN 50121

IEC61850-3, IEEE1613

-Industry standard

EMI

FCC CFR47 Part 15,EN55032/CISPR22,Class A

EMS

IEC61000-4-2(ESD) $\pm 6kV$ (contact), $\pm 8kV$ (air)

IEC61000-4-3(RS) 80MHz-1000MHz: 10V/m and 20V/m, 1.4GHz-2.1GHz: 10V/m, 2.1GHz-2.5GHz: 5V/m

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

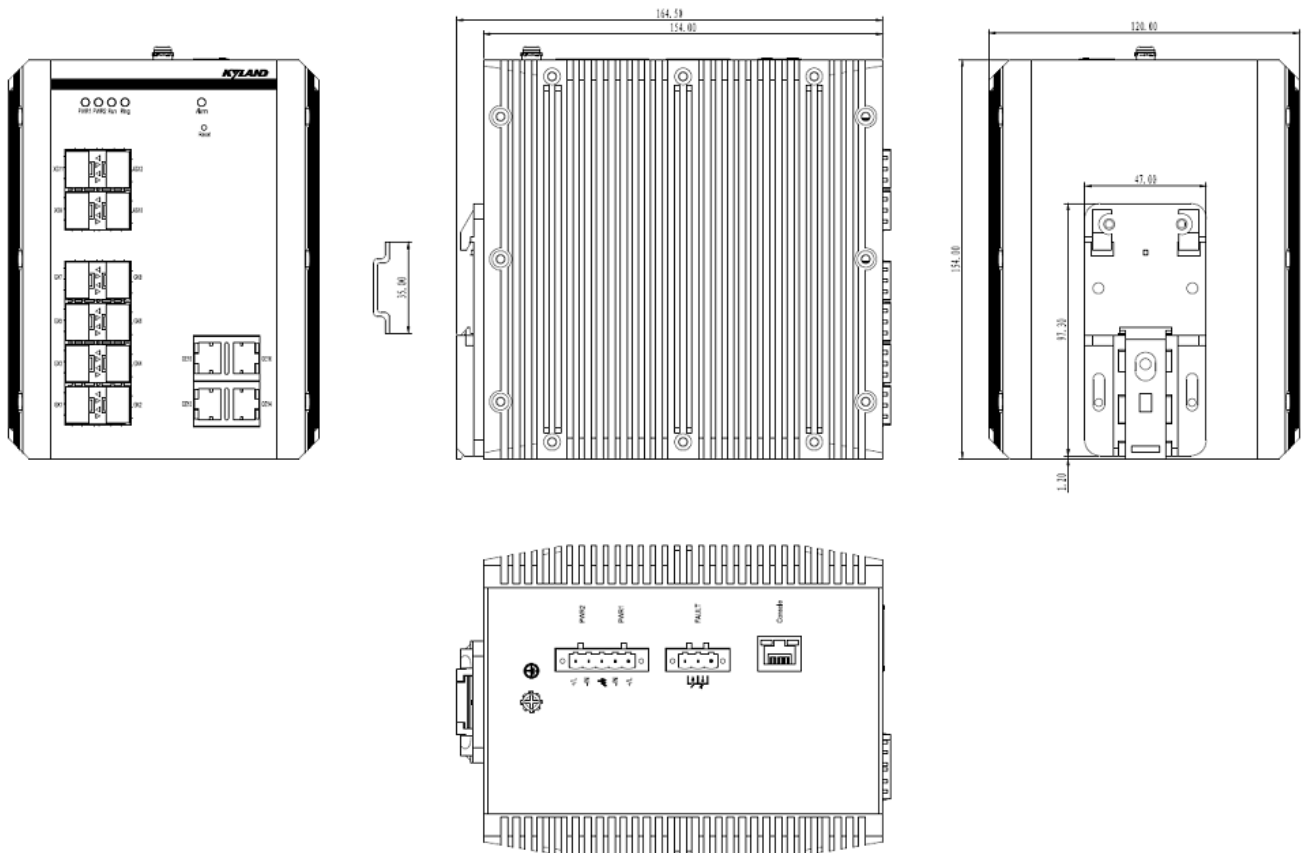
IEC61000-4-5(Surge) Power Line to line 1KV; Line to earth 2KV

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

Machinery

IEC60068-2-6 (vibration), IEC60068-2-27 (shock), IEC60068-2-32 (free fall)

» Mechanical Drawing



» Ordering Information

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Product Model	Description
SICOM6416G-4X4 GX8GE-L1-L1	4×10GBase-X SFP+ ports, 4×1000Base-X SFP ports, 8×10/100/1000Base-T(X) ports, 48VDC (36-72VDC), redundant power inputs
SICOM6416G-4X4 GX8GE-L3-L3	4×10GBase-X SFP+ ports, 4×1000Base-X SFP ports, 8×10/100/1000Base-T(X) ports, 24VDC (18-36VDC), redundant power inputs
SICOM6416G-4X4 GX8GE-HV	4×10GBase-X SFP+ ports, 4×1000Base-X SFP ports, 8×10/100/1000Base-T(X) ports, 220VAC/DC (85-264VAC/77-300VDC), single power input
SICOM6416G-4X8 GX4GE-L1-L1	4×10GBase-X SFP+ ports, 8×1000Base-X SFP ports, 4×10/100/1000Base-T(X) ports, 48VDC (36-72VDC), redundant power inputs
SICOM6416G-4X8 GX4GE-L3-L3	4×10GBase-X SFP+ ports, 8×1000Base-X SFP ports, 4×10/100/1000Base-T(X) ports, 24VDC (18-36VDC), redundant power inputs
SICOM6416G-4X8 GX4GE-HV	4×10GBase-X SFP+ ports, 8×1000Base-X SFP ports, 4×10/100/1000Base-T(X) ports, 220VAC/DC (85-264VAC/77-300VDC), single power input

Accessories

Accessory Model	Description
Gigabit SFP module	See the selection table of industrial gigabit SFP module.
10 Gigabit SFP+ module	See the selection table of industrial 10 gigabit SFP+ module.
DT-FCZ-RJ45-01	Single-port RJ45 dust plug

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