SICOM3216

Layer 2 16+2G Port Managed Din-Rail IEC61850 Switch

- Green Ethernet solution with ultra low power consumption design
- As low as 8 watts full load power consumption
- 2 Gigabit Combo ports, 14 10/100Base-TX ports and 2 Fast Ethernet fiber/RJ45 optional ports
- Supports IEC62439-6, DT-Ring protocols and MSTP
- Supports one-key recovery
- Provides Mini USB Console port, supports setting backup and recovery through USB
- Supports VCT (Virtual Cable Test)
- UL508 (pending), Class 1 Div 2 (pending), CE, FCC certificates

Overview

SICOM3216 is one of Kyland green low power consumption industrial Ethernet switch series which supports max 18 ports including 2 Gigabit combo ports, 14 10/100Base-TX ports and 2 Fast Ethernet fiber/RJ45 optional ports. It is specially designed for harsh environments with wide temperature range, EMC level 4, IP40 protection class, and can be deployed in wind power, distribution network automation, transportation, oil & gas and many other industrial applications. SICOM3216 series supports Kyland latest IEC62439-6/DRP ring protocol as well as DT-Ring/+ and MSTP.

Features & Benefits

1. Redundancy Technology: supports IEC62439-6 (recovery time<20ms), DT-Ring protocols (recovery time<50ms) and MSTP
2. Multicast Protocol: supports IGMP Snooping, GMRP and static multicast
3. Network Partition: supports VLAN, GVRP, PVLAN
4. Service Quality: supports QoS
5. Bandwidth Management: supports port trunking, port speed limit, broadcast storm control
6. Network Management and Monitoring: supports CLI, Telnet, WEB management methods, Kyvision centralized management, SNMPv1/v2/v3, RMON, LLDP, SNTP, DHCP
7. Network Security: supports MAC address binding with port, IEEE802.1X, SSH, SSL, TACACS+, ACL
8. Device Management: supports FTP/TFTP upgrade, also supports Syslog upload and download
9. Device Maintenance: supports port mirroring, VCT (Virtual Cable Test)
10. Alarm Output: supports IP/MAC conflicts, power, port and ring alarms
11. 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, IEEE 802.1X

Protocols

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

Switch Properties

Priority Queues: 4
Number of VLANs: 256
VLAN ID: 1-4094
Number of Multicast Groups: 256
MAC Table: 8K
Packet Buffer: 2Mbit
Packet Forwarding Rate: 5.4Mpps
Switching Delay: <5μs

Interface

Gigabit Ethernet Ports: 2 combo 1000Base SFP slots or 10/100/1000Base-TX ports
Fast Ethernet Fiber Ports: max 2 100Base-FX, SM/MM ports, FC/SC/ST connector
Fast Ethernet RJ45 Ports: max 16 10/100Base-TX RJ45 ports
Console Port: Mini USB
Alarm Contact: 3-pin 5.08mm-spacing plug-in terminal block, 250VAC/220VDC Max, 2A Max, 60W Max

LED
LEDs on Front Panel:
Running LED: Run
Alarm LED: Alarm
Power LED: PWR1, PWR2
Ring LED: Ring
Interface LED: Link/ACT, Speed (RJ45 port)

Reset Button
Reboot and restore default configuration

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:
24DCW (18-72VDC)
Power Terminal:
5-pin 5.08mm-spacing plug-in terminal block
Power Consumption:
SICOM3216-16T: 8.0W
SICOM3216-2S/M-14T: 8.6W
SICOM3216-2GX/GE-16T: 10.5W
SICOM3216-2GX/GE-2S/M-14T: 11.1W
Overload Protection: Support
Reverse Connection Protection: Support
Redundancy Protection: Support

Physical Characteristics
Housing: Metal, fanless
Protection Class: IP40
Dimensions (W×H×D):
88×135×137mm (3.46×5.31×5.39 in.)
Weight: 1.25kg (2.756 pound)
Mounting: DIN-Rail or panel 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
465,000 hrs

Warranty
5 years

Approvals
UL508 (pending), Class 1 Div 2 (pending), CE, FCC

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

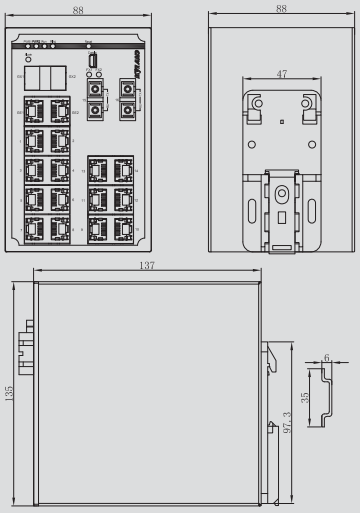
EMS:
IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air)
IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)
IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV
IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±2kV
IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)
IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)

Machinery:
IEC60068-2-6 (Vibration)
IEC60068-2-27 (Shock)
IEC60068-2-32 (Free Fall)

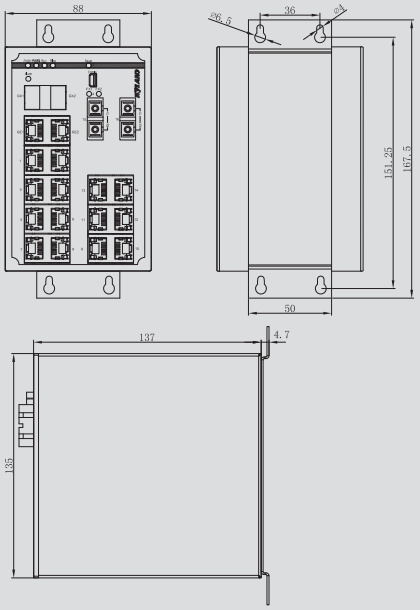
Industry: IEC61000-6-2
Railway: EN50155, EN50121-4
Traffic Control: NEMA TS-2

Mechanical Drawing

Din Rail Installation



Panel Mounting Installation



Ordering Information

SICOM3216 - _____ - _____ - _____ - ___
Ports Distance Connector PS

Ports
2GX/GE-16T = 2 Gigabit combo ports, 16 10/100Base-TX RJ45 ports
2GX/GE-2M-14T = 2 Gigabit combo ports, 2 100Base-FX multi mode fiber ports, 14 10/100Base-TX RJ45 ports
2GX/GE-2S-14T = 2 Gigabit combo ports, 2 100Base-FX single mode fiber ports, 14 10/100Base-TX RJ45 ports
16T = 16 10/100Base-TX RJ45 ports
2M-14T = 2 100Base-FX multi mode ports, 14 10/100Base-TX RJ45ports
2S-14T = 2 100Base-FX single mode ports, 14 10/100Base-TX RJ45 ports

Distance: Fiber Distance
1310-5 = 1310nm, 5km
1310-40 = 1310nm, 40km
1310-60 = 1310nm, 60km
1550-80 = 1550nm, 80km

Connector: Fiber Connector
SC = SC Connector
ST = ST Connector
FC = FC Connector

PS: Power Supply
24DCW = 18-72VDC, dual redundant power inputs

Example Order Codes
SICOM3216-2GX/GE-2M-14T-1310-5-SC-24DCW

2 Gigabit combo ports, 2 100Base-FX multi mode fiber ports, 14 10/100Base-TX RJ45 ports, 1310nm, 5km, SC connectors, 18-72VDC, dual redundant power inputs