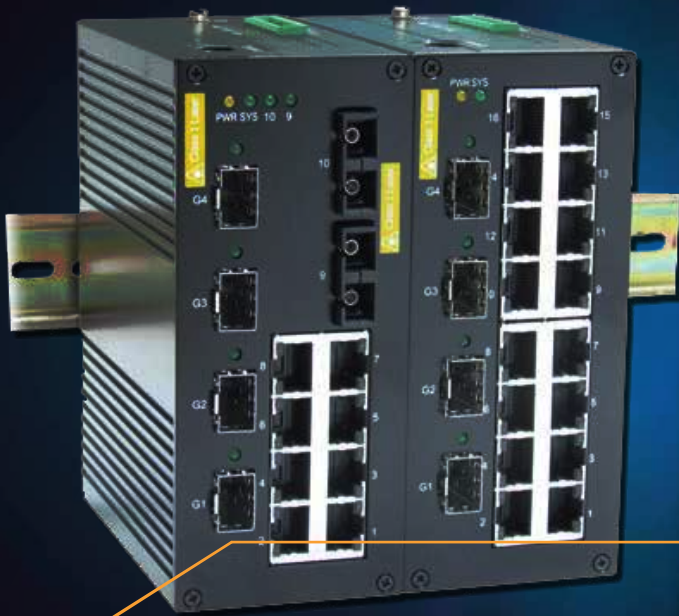


4G ports Gigabit Advanced Managed Industrial Ethernet Switches

ST-9021-FI



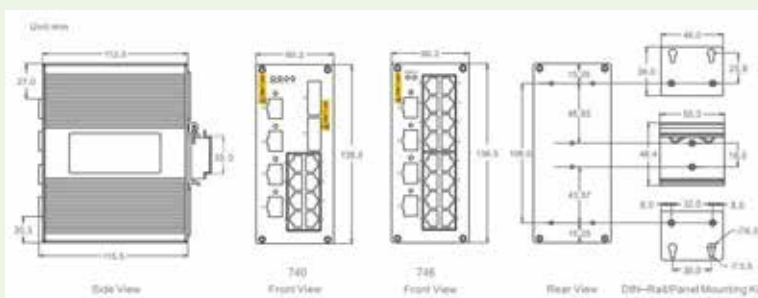
Fiber Industrial Switches

Overview

ST-9021-FI series are designed to meet the demands of power substation automation systems(IEC 61850-3, IEEE 1613).4Gigabit Ethernet ports are ideal for building dual Gigabit redundant ring. The "Fi Ring" redundant Ring (recovery time < 20ms), RSTP and STP can increase system reliability and your network availability.

- 4 Gigabit ports for building dual Gigabit redundant rings
- Proprietary Protocol "Fi Ring" (recovery time <20ms) and RSTP/STP for network redundancy
- SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network
- Easy network management through web browser, CLI, Telnet /serial console, Windows utility, SNMP
- Industrial-grade design with -40 to +75 operating temperature and redundant power inputs

Dimensions



Features

- ST-9021-FI: 8x10/100BaseTX ports + 2x100BaseFX+ 4x1000BaseX(SFP slots)
- ST-9021-FI:16x10/100BaseTX ports + 4x1000BaseX (SFP slots)
- Command Line Interface (CLI) for quickly configuration majormanged functions
- FMC Ring Protocol "Fi Ring" (recovery time < 20 ms), RSTPand STP for network redundancy
- IGMP snooping for filtering multicast traffic
- Port-based VLAN, IEEE 802.1Q VLAN, and GVRP to easenetwork planning
- Support port mirroring
- Support Access Control List(ACL)
- Storm control for any combination of multicast,broadcast andDLF traffic control
- QoS and ToS/DiffServ to increase determinism
- Port Trunking for optimum bandwidth utilization
- SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- SNMPv1/v2c/v3 for different levels of network management
- RMON for ef<001F>ficient network monitoring and proactive capability
- Bandwidth management prevents unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address
- Automatic alarm through e-mail, relay output

Specifications

● Standards:

IEEE 802.3
IEEE 802.3u
IEEE 802.3z
IEEE 802.1D-2004 for STP
IEEE 802.1w for Rapid STP
IEEE 802.1Q for VLAN Tagging
IEEE 802.1p for Class of Service
IEEE 802.1X for Authentication
IEEE 802.3ad for Port Trunk with LACP
IEEE 802.3x for Flow Control

● Protocols:

IGMPv1/v2, GVRP, SNMPv1/v2c/v3, DHCP Client,
TFTP, SMTP, RMON, HTTP, HTTPS, Telnet, Syslog,
SSH, SNMP Inform, SNT Server/Client

● MIB:

MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Q-BRIDGE MIB,
Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9

● Flow Control:

IEEE 802.3x flow control, back pressure flow control

● Switch Properties:

Priority Queues: 4
Max. Number of Available VLANs: 256
VLAN ID Range: VID 1 to 4094
IGMP Groups: 256
MAC Table Size: 8K
Packet Buffer Size: 2 Mbit

● Interface :

Fiber Ports: 1000BaseX (SFP slots), 100BaseFX
RJ45 Ports: 10/100BaseTX auto negotiation
Console Port: RS-232(RJ45 connector)
Alarm Contact: 2 relay outputs with current carrying
capacity of 1A@24V

● Power Requirements:

Input Voltage: 24 VDC (18 to 36VDC), redundant dual inputs
Input Current:
OnAccess 740: <0.55A@24VDC
OnAccess 746: <0.55A@24VDC
Overload Current Protection: Present
Reverse Polarity Protection: Present
Connector: 6-contact terminal blocks

● Mechanical Properties:

Housing: Metal, IP30 protection
Dimensions: 60.2 x 115.5 x 138.5 mm
Weight: 760g
Installation: DIN-Rail mounting, wall mounting

● Environmental Limits:

Operating Temperature:
Standard models: 0 ~ +60°C (32 ~ 140°F)
Wide Temp. models: -40 to +85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

● Standards and Certifications:

Safety: UL 60950-1
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 3, EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level3, EN 61000-4-5 (Surge) Level 3,
EN 61000-4-6 (CS) Level 3, EN 61000-4-8 Level 3
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6