



8 ports Advanced Industrial Ethernet Switches

ST-9022/23-FI

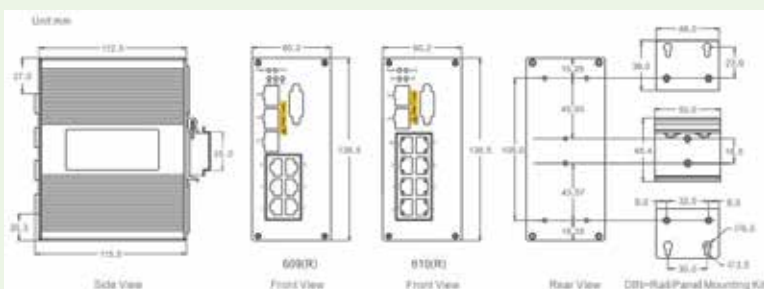
Fiber Industrial Switches

Overview

ST-9022/23-FI series managed Industrial Ethernet switches are equipped with up to 8 Ethernet ports. The "Fi Ring" redundant Ring (recovery time < 20ms), RSTP/STP can increase system reliability and your network availability. The superb hardware reliability is especially suitable for industrial applications.

- Reliable hardware design is suitable for industrial applications
- 2 Gigabit ports for redundant ring and 1 Gigabit port for uplink
- 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°C operating temperature and redundant power inputs
- IP40 dust-proof standard

Dimensions



Features

- ST-9022-FI : 6x10/100BaseTX ports+3x1000BaseX (SFP slots)
- ST-9023-FI : 7x10/100BaseTX ports+1 x10/100/1000BaseTX
- ST-9022-FI R: 6x10/100BaseTX ports + 3x1000BaseX(SFP slots)+
- ST-9023-FI R: 7x10/100BaseTX ports + 1x10/100/1000BaseTX
- Command Line Interface (CLI) for quickly configuration major managed functions
- IEEE1588 PTP V2(PrecisionTime Protocol) for precise time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- FMC Ring Protocol "Fi Ring" (recovery time \< 20 ms), RSTP, STP and MSTP for network redundancy
- Port-based VLAN, IEEE 802.1Q VLAN, and GVRP to ease network planning
- Support Ethernet/IP and Modbus/TCP protocols for device management and monitoring
- IGMP snooping and GMRP for filtering multicast traffic
- Support port mirroring
- Support traffic control of multicast and broadcast
- QoS and ToS/DiffServ to increase determinism
- Port Trunking for optimum bandwidth utilization
- SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- Support TACACS+

Features

- SNMPv1/v2c/v3 for different levels of network management
- RMON for efficient 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
- **Interface :**
 - Fiber Ports: 1000BaseX (SFP slots)
 - RJ45 Ports: 10/100BaseTX or 10/100/1000BaseTX 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: 0.24A@24VDC
 - Overload Current Protection: Present
 - Reverse Polarity Protection: Present
 - Connector: 6-contact terminal blocks

Specifications

- **Standards:**
 - IEEE 802.3
 - IEEE 802.3u
 - IEEE 802.1D-2004 for STP
 - IEEE 802.1w for Rapid STP
 - IEEE 802.1s Multiple 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, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Client, TFTP, SMTP, RMON, HTTP, HTTPS, Telnet, Syslog, DHCP Option 66/67/82, SSH, SNMP Inform, LLDP, IEEE 1588 PTP V2, Ipv6, Sntp 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: 1 Mbit
- **Mechanical Properties:**
 - Housing: Metal, IP40 protection
 - Dimensions: 60.2 x 115.5 x 138.5 mm
 - Weight: 750g
 - Installation: DIN-Rail mounting, wall mounting
- **Environmental Limits:**
 - Operating Temperature:
 - Standard Models: 0 to +60°C (32 ~ 140°F)
 - Wide Temp. Models: -40 to +75°C (-40 to 167°F)
 - Storage Temperature: -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) Level 3, 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