XtraNET

12-Port Gigabit L2 Management Industrial Ethernet Switch

《Product Specification》

XILS6000-8G4FM

XtraVision
INTEGRATED FIRE AND SECURITY SOLUTIONS

<u>Overview:</u>

The XILS6000-8G4FM is an 8-port industrial **Smart Managed** Gigabit Ethernet switch that provides 8 Gigabit RJ45 ports, 4 Gigabit optical ports. It is designed from corrugated high-strength aluminum and supports IP40 grade, low power design, seismic rail mounting and -40℃-75℃ work temperature for any harsh environments, certified to EMC Industry Level 4 protection

The XILS6000-8G4FM supports rich network management functions: RUN-Ring (**self-healing time <50ms**), RSTP, VLAN, QoS, SNMPv1/v2c/v3, IEEE802.1X, SSH/SSL, port mirroring, port aggregation, etc. Switching and security management features make it a reliable solution for smart traffic, video surveillance and other harsh industrial environments

<u>Software Features</u>

· Supports IEEE 802.1Q VLANs, MAC VLANs, IP VLANs, and voice VLANs.

· Supports GVRP to implement dynamic VLAN distribution, registration, and attribute propagation. This reduces manual configuration and ensures correct configuration.

· Supports VLAN VPN function. The public network access device encapsulates the outer VLAN tag for the private network packets of the user, so that the packets carry two VLAN tags across the public network.

· Support QoS, support port-based, 802.1P-based and DSCP-based three priority modes and WFQ, SP, WRR, SP+WRR four queue scheduling algorithms.

· Supports ACLs by configuring matching rules, processing operations, and time permissions to filter packets and provide flexible security access control policies.

· Supports IGMP V1/V2 multicast protocol and supports IGMP Snooping to meet the requirements of multi-terminal HD video surveillance and video conference access.

· Support hardware watchdog, the device has a suspended animation state and automatically restarts to resume normal working state.

· Support IPV6 Ping, IPv6 Traceroute, IPv6 Telnet IPV6 SSH IPv6 SSL.

<u>Security Mechanism</u>

· Supports IP address, MAC address, and port ternary binding to filter packets.

· Supports ARP protection, and protects against ARP spoofing and ARP flood attacks, such as gateway spoofing and man-in-the-middle attacks.

· Support IP source protection to prevent illegal address spoofing including MAC spoofing, IP spoofing, and MAC/IP spoofing.

· Supports DoS protection and supports attacks such as Land Attack, Scan SYNFIN, Xmascan, and Ping Flooding.

· Supports 802.1X authentication, provides authentication functions for LAN computers, and controls the authorization status of controlled ports based on the authentication results.

· Supports port security. When the port learns the maximum number of MAC addresses, it stops learning to prevent MAC address attacks and control port network traffic.

· Support DHCP Snooping to effectively prevent private DHCP servers and ensure the validity of the DHCP server.

Reliability Protection

· RUN-Ring technology Ring network self-healing time can reach 10ms, while supporting public Ethernet multi-ring protection technology (ERPS).
· STP/RSTP/MSTP production tree protocol to eliminate Layer 2 loops and implement link backup.
· Spanning tree security to prevent devices in the spanning tree network from creating loops on the network
· Static aggregation and dynamic aggregation, which effectively increases link bandwidth, implements load balancing, link backup, and improves link reliability.

Hardware Features

· The full range of switches are based on industrial-grade hardware device support platforms, and component reliability is significantly higher than commercial devices under the same conditions.
· It adopts fan less cooling energy loop design, and it has the same heat dissipation structure, such as built-in heat sink and heat-dissipating adhesive, which can consistently perform in various harsh environments with an operating temperature range of -40 to 75 °C.
· Support DC power supply dual redundant power supply or dual DC/AC redundant power supply to meet the power requirements in different power supply environments.
· Supports anti-vibration and dustproof and complies with the IP40 IP protection standard.
· Support high-level electromagnetic compatibility protection, support electrostatic discharge immunity, support radiation electromagnetic field anti-interference, support electric fast transient pulse group anti-interference, support surge immunity, support 6KV high voltage lightning protection.
· Support rail mount.

Operation and Maintenance

· Supports various management and maintenance methods such as Web network management, CLI command line (Console, Telnet), and SNMP (V1/V2/V3).
· Supports encryption methods such as HTTPS, SSL V3, and SSHV1/V2 for more secure management.
· Support RMON, system log, and port traffic statistics for network optimization and transformation.
· Supports cable detection, ping detection, and Traceroute detection operations to easily analyze failed network nodes.
· Support LLDP to facilitate the network management system to query connected LLDP enabled devices.
· Supports CPU monitoring, memory monitoring, ping detection, Traceroute detection, and cable detection.

Characteristics

Standards

IEEE 802.3: Ethernet Media Access Control (MAC) Protocol

IEEE 802.3i:10BASE-T Ethernet

IEEE 802.3u:100BASE-TX Fast Ethernet

IEEE 802.3ab:1000BASE-T Gigabit Ethernet

IEEE 802.3z:1000BASE-X Gigabit Ethernet (optical fiber)

IEEE 802.3ad: Standard method for performing link aggregation

IEEE 802.3x: Flow control

IEEE 802.1p: LAN Layer 2 QoS/Cos protocol for traffic prioritization (multicast filtering)

IEEE 802.1q: VLAN Bridge Operation

IEEE 802.1d:STP Spanning Tree

IEEE 802.1s: MSTP Spanning Tree

IEEE 802.1w: RSTP Spanning Tree

Exchange characteristics

MAC address: 8K

Port Cache: 2Mbit

100 Mbps forwarding speed: 178560pps

Gigabit forwarding speed: 1785600pps

100M maximum filter speed: 178560pps

Gigabit maximum filtration speed: 1785600pps

Transmission method: store and forward

Backplane bandwidth: 24Gbps

Switching Delay: <5us

Ports

Optical port: 4 1000Base-X (SFP)

RJ45 port: 8 10/100/1000Base-Tx RJ45 ports

Front panel indicator

Power indicator: P1,P2

System indicator: SYS

Alarm indicator: ALM

Interface indicator: Link & Act X1~X4

Network port indicator: RJ45, Link & Act 1~8

Power supply

Input voltage: 12- 56V DC

Input method: plug-in 5-core 5.08mm pitch terminal block

Support dual DC power backup, built-in over current protection

Power supply anti-reverse connection

Power consumption (optional)

No-load power: 6W

Full load power: 18W

Physical characteristics

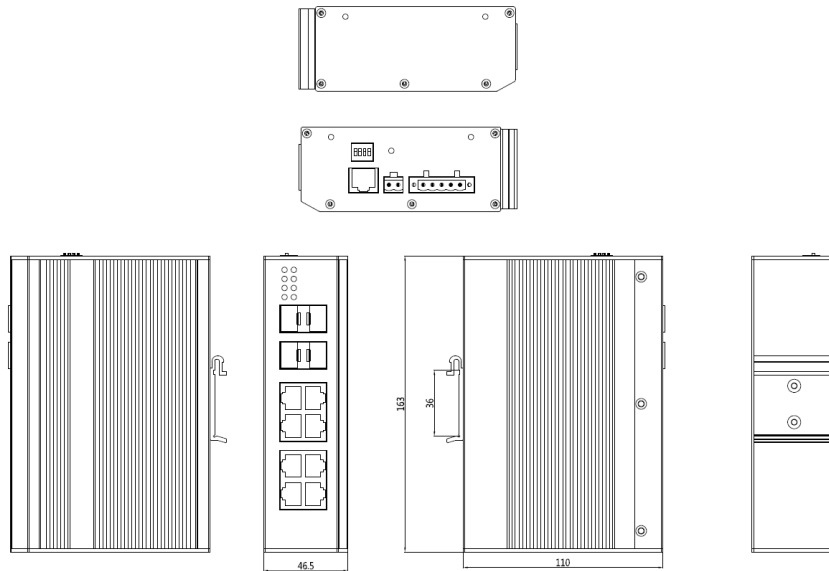Housing: IP40 grade protection, corrugated high strength metal housing

Installation: DIN rail mounting

Dimensions (length × width × height): 163mm×46.5mm×110mm

Weight: 2.0kg

Industry 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: ±6kV

IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)

IEC60068-2-6 (Vibration)

IEC60068-2-27 (Shock)

IEC60068-2-32 (Free Fall)

Working environment

Working temperature: -40～75℃

Storage temperature: -40～75℃

Relative humidity: 5%～95%（no condensation)

Certification: CE, FCC, RoHS

Mean time between failures: 360,000 hrs.

 Warranty: 3 years

Installation method:

Before installation, confirm the operating environment of the equipment: power supply voltage, installation space and installation method.

Carefully confirm the following installation requirements:

Check if there are cables and connectors required for installation

Check whether the cable is in place (not more than 100m) according to reasonable configuration requirements.

The product does not provide installation components. Users need to prepare components of the selected installation type: screws, nuts and tools to ensure reliable installation.
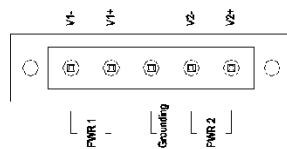
Power requirement: 12~56VDC

Environmental requirements:

Working temperature: -40 to 75 ° C

Storage temperature: -40 to 75 ° C

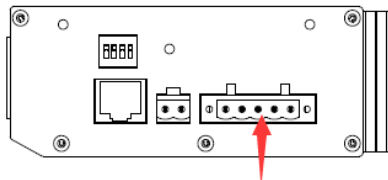Relative humidity: 5% to 95% (no condensation)

Power access:

5pin 5.08mm terminal
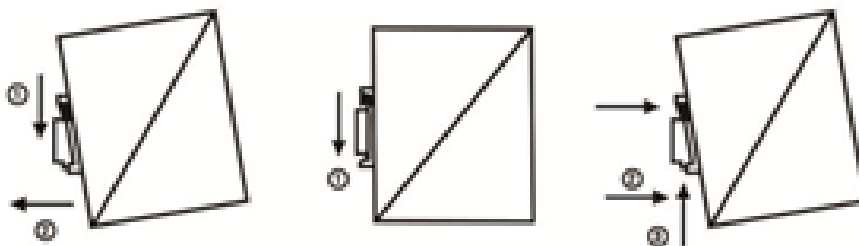
Input range: 12-56VDC

P1&P2 dual redundant power supply,

Support reverse connection protection

Ground protection:

Connect the ground port to

Rail mounting: