JetNet 4005f

Industrial 5-port Web-Managed Ethernet Switch

- Redundant Ethernet Super Ring
- Supports VLAN / QoS / IGMP Snooping
- Supports online Port Mirroring and IP Security
- Web-based configuration
- Alarm Relay Output for port break and power failure
- Redundant DC power inputs
- Rigid aluminum case design complies with IP30 standard
- DIN-Rail / Wall-Mounting / Desktop installation
- Supports one Single / Multi-mode fiber port

Overview

JetNet 4005f is a 5-port Web-Managed Industrial Switch, which supports all powerful features for industrial Ethernet applications, such as Redundant Super Ring, port VLAN, Quality of Service, IGMP (Internet Group Management Protocol) Snooping and failure alarm by relay output. JetNet 4005f has four 10/100Base-TX ports and one 100Base-FX port for extending communication distance from 2,000 meters (multi-mode fiber) to 30 km (single-mode fiber). JetNet 4005f also has redundant DC power inputs for power supply redundancy. With the web-based configuration interface, JetNet 4005f ensures an easy installation and management of your switches. The IP30 robust aluminum case and 300,000 hours of MTBF make JetNet 4005f the best solution to enhance your industrial networking automation.

Super Ring-Recovery Time < 300ms

One of the main topics in Industrial Automation field is to ensure your system will run non-stop. A minor failure in the communication process may cause the whole system to break down. As a result, you might suffer from substantial damage in terms of extra time and monetary losses. JetNet 4000 Series Switches are your ultimate solution. With Super Ring (Self-healing Redundant) technology, JetNet 4000 provides you with a self-recovery mechanism. If any segment of your primary communication path is broken or disconnected, Super Ring technology allows JetNet 4000 to self-reconfigure and to provide a redundant path in the network. With its ultra fast recovery time, which is less than 300ms, your mission-critical applications are protected from any network interruptions or temporary malfunctions. With the recovery time that fast, you won't even notice a network failure.

Advanced Management Features

In addition to Super Ring, JetNet 4000 provides more advanced features for management. JetNet 4000 supports QoS, Quality of Service, which classifies the importance of each packet and prioritizes the tasks. Ethernet packets, such as control messages, will be dealt with first, and then low priority packets, such as collected data. QoS provides ideal solutions for real-time systems.

With port-based VLAN function, devices are put into logical subgroups within a local area network regardless of the physical LAN segment they are attached. Devices from a different VLAN cannot communicate or access your LAN, providing extra security to the entire network. VLAN function also can restrain the traffic within a VLAN and thus improve network performance in a large scale.

JetNet 4000 IGMP Snooping can restrain multicasting traffic in a switched network. By filtering the multicasting traffic and sorting it to the corresponding group of devices, JetNet 4000 forwards messages only to the devices that are interested in the messages. It will reduce the total amount of traffic on the entire network substantially.

Specifications

Technology

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1p class of service
IEEE 802.1Q VLAN
Processing: Store and Forward architecture
Packet Filter: Broadcast packet filtering

Interface

Number of Ports: 4 x 10/100 Base-Tx, Auto MDI/MDIX, 1 x 100 Base-Fx
Network Cable:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable, EIA/TIA-568 100-ohm (100m)
100Base-TX: 2-pair UTP/STP Cat. 5 cable, EIA/TIA-568 100-ohm (100m)
Optical Cable:
SC (Multi Mode): 50/125um to 62.5/125um
SC (Single Mode): 9/125um to 10/125um
Available distance: 2km (Multi Mode) / 30km (Single Mode)
Wavelength: 1310nm (Multi Mode/ Single Mode)
LED Indicators:
Per port: Link/Activity (Green), Full duplex/Collision (Green)
Per unit: Power x 3 (Green), Fault (Red), R.M (Orange)
Alarm: Relay output for port break and power failure

Redundancy

Network Redundancy:
Super Ring with recovery time less than 300ms
RSTP, STP
Power Redundancy: Dual power inputs 24 VDC

Management

Protocols: IGMP V1 & Query mode, DHCP/Client, TFTP, SNTP
Configuration:
Web-interface management
Default button is provided to restore default settings
VLAN:
Supports Port-based VLAN and IEEE802.1Q Tag VLAN
Quality of Service: Four priority queues per port
Port Mirroring: Online traffic monitoring on selected ports
IP Security: IP addresses are used to define access levels

Performance

Transfer Rate:
14,880 pps for Ethernet port and 148,800 pps for Fast Ethernet port
Transfer packet size: 64 bytes to 1522 bytes (with VLAN tag)
MAC Address: 2K MAC address table
Memory Buffer: 1Mbits
Back-plane: 1.0 Gbps

Power Requirements

Power Supply:
Input Voltage: 24VDC(12 to 48 VDC), dual inputs
Reverse Polatiry Protection: Present
Power Consumption: 3.5 Watts

Mechanical

Installation: DIN-Rail kit and wall mounting ears
Casing: IP-30 protection, aluminum case
Dimensions: 53 mm (W) x 135 mm (H) x 105mm (D)

Environmental

Operating Temperature: -10 to 70°C (14 to 158°F)
Operating Humidity: 5% to 95% (Non-condensing)
Storage Temperature: -40 to 85°C (-40 to 185°F)

Regulatory Approvals

EMI: FCC Class A, EN55022 Class A
EMC:
EN61000-4-2, EN61000-4-3, EN61000-4-4
EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: UL, cUL, EN60950
Shock: IEC 60068-2-27
Free Fall: IEC 60068-2-32
Vibration: IEC 60068-2-6
MTBF: 297,077 hours * MIL-HDBK-217F GB (MILITARY HANDBOOK) standard
Warranty: Global 5 years

Ordering Information

JetNet 4005f-m Industrial 5-Port Web-Managed Ethernet Rail Switch with one Multi Mode 100Base-FX
Includes:
- 4 x 10/100 Base-Tx, 1 x Multi Mode 100Base-Fx Switch
- Quick Installation Guide
- Documentation CD-ROM
- Wall mounting plate and six screws

JetNet 4005f-s Industrial 5-Port Web-Managed Ethernet Rail Switch with one Single Mode 100Base-FX
Includes:
- 4 x 10/100 Base-Tx, 1 x Single Mode 100Base-Fx Switch
- Quick Installation Guide
- Documentation CD-ROM
- Wall mounting plate and six screws