JETPOE

JetNet 4706f

Industrial 6-port Managed High Power PoE Fiber Switch

IT Award

- Four 10/100 TX Power over Ethernet ports and two redundant 100 FX uplink ports
- Two Fiber links for long distance transmission
- Supports Multi-mode 2KM, Single-mode 30KM
- DC 48V Power Input for IEEE 802.3af 48V PoE output
- Up to 25W per port for High Power solution by Forced powering mode
- Up to 80W for total power budget
- Support IEEE 802.3af for PoE detection and PoE classification resistors
- PoE control and schedule by hour/weekly basis
- Auto-detect Powered Device status for device auto-reset (LPLD)
- Patented Multiple Super Ring technology (MSR™), up to 5ms recovery time
- Patented Rapid Dual Homing (RDH™) technology
- SNMP v1/v2c/v3, IGMP snooping v1/v2/v3, RMON, VLAN, QoS
- Network security by IP/MAC address, SSL and SSH
- Built-in hardware watchdog timer for system auto-reset
- -40~60°C wide operating temperature

CE FC cULus LISTED RoHS

| Dual Fiber | High Power PoE | 80W |
| MSR < 5ms | LLDP & Korenix NMS | -40~60°C |

Overview

JetNet 4706f, the full managed industrial PoE switch, is the advanced version from the winner of Best Choice of Computex Taipei 2007 Award, the JetNet 3705/3705f. JetNet 4706f features four 30-Watts 10 / 100 Power over Ethernet Ports with two redundant fiber ports, is an ideal model for distant networking such as IP surveillance, wireless access point.etc, where power source is not conveniently located. It supports intelligent PoE control and schedule management; each of the four PoE ports can be configured in a weekly schedule by hourly basis and PoE on/off can be remote controlled via SNMP and Web. Compliant to IEEE 802.3af PoE standard, JetNet 4706f can deliver up to 25W power per port and 80W per unit (@60°C) by the forced powering mode. The two uplink ports of JetNet 4706f can be configured as Rapid Super Ring ports recovering network failure in less than 5ms, or RSTP ports for integrating with other standard switches. Full network management features such as LLDP, Korenix NMS, SNMP v3, QoS, IGMP snooping v3, are all supported. If the powered device fails to respond after a pre-configured time interval, JetNet 4706f will reboot the powered device and continue to monitor the powered device in every pre-configured time interval. Simply put, the unmanaged powered devices can be managed through JetNet 4706f. The award winning IP31 rigid aluminum flat casing and wide operating temperature range both ensure a reliable operation in remote network site such as public transportation station or outdoor usage.

Easy PoE Configuration

The four PoE ports can be configured to enable, disable, or schedule PoE function by the web interface. The Power mode provides Standard mode for IEEE 802.3af PD, Manual mode for user configuration of the power limit to IEEE 802.3af standard PD, or Ultra mode for user configuration to perform at the 25W power limitation. After configuration, the real-time status of PoE is shown in web interface.

Forced Powering Mode

Korenix provides advanced forced powering control to deliver power to those non-standard PoE devices that cannot be detected as valid PDs. In the early days PoE products that were circulating the market prior to the ratification of PoE standard 802.3af did

not comply with the current standard and did not support PD detection and classification. The PoE switch cannot recognized the PD, thus, it will not forward the power. The forced powering ability solves this problem and enables all your PDs.

PoE Port Scheduling

Korenix provides an hourly/weekly scheduling mechanism for advanced power control. Each PoE port can be configured as on/off by hourly basis. This feature meets economical power management, security, or customer-specific requirements.
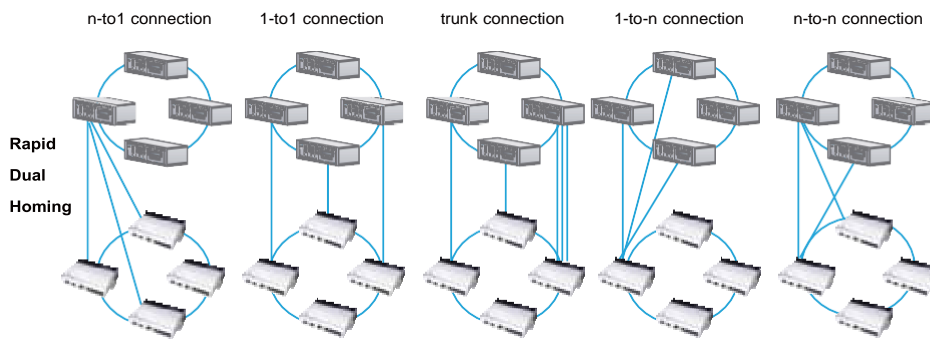
## A Non-Stop Transmission Network with PoE Function – MSR^{TM}&RDH^{TM}

The two uplink 10/100TX ports allow users to build Redundant Ring architecture with other High-End Switches by RSTP or Korenix Multiple Super Ring (MSR^{TM}). The MSR^{TM} Topology brings the backup network in less than 5ms when the main path is disconnected. To integrate with Core Switches, JetNet 4706f provides Rapid Dual Homing function which merges MSR^{TM} and RSTP protocol in one redundant port.

n-to1 connection   1-to1 connection   trunk connection   1-to-n connection   n-to-n connection

Rapid Dual Homing

Quality of Service & Port-based VLAN

In video surveillance applications, JetNet 4706 supports Port-based VLAN to limit a broadcast domain to specific members of a group by physically grouping the members together. I n addition, JetNet 4706 supports QoS function to enhance transmission performance if needed. These features guarantee real time service by segmentation and prioritization.
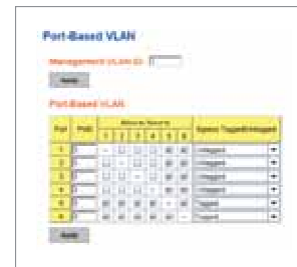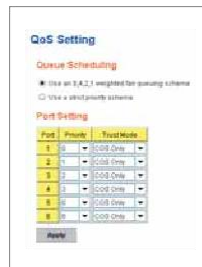
Smart Powered Device Alive-Check

Korenix PoE switches can be configured by korenix patented PoE "Partner Lin Detect" technology to monitor real-time status of connected PDs. Once the PD fails, it will reset the PoE port to bring the PD back to a working state. This greatly enhances the reliability that the PoE port will reset the PD power and reduces your management burden.

PD Device

PoE port will reset PD power when failed PD is detected   Response

Request
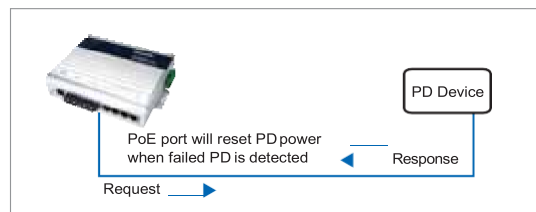
Auto Topology Discovery & Efficient Management through LLDP and Korenix NMS

JetNet 4706f supports topology discovery or LLDP (IEEE 802.1AB Link Layer Discovery Protocol) function that can help users to discover multi-vendor's network devices on the same segment by an NMS system, which support LLDP function. With LLDP function, NMS can easily maintain the topology map, display port ID, port description, system description, VLAN ID, etc.. Once a link failure happens, the topology changed events are updated to the NMS to help users easily maintain the network system. Besides the SNMP and LLDP protocols, JetNet 4706f series efficiently works with the Korenix patented Korenix NMS, which in addition to the auto-topology discovery, also delivers MSR™ group management, group IP assignment, firmware upgrade, configuration file backup/ restore ,SNMP MIB Browser /
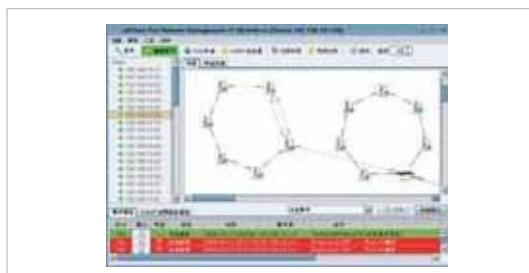
compile, etc. Furthermore, users can export the topology map to diverse formats, such as JPG, BMP, PNG and PDF, for easily managing and trouble-shooting the network. The user-friendly software allows administrators to discover devices automatically and efficiently manage the performance of the industrial network.
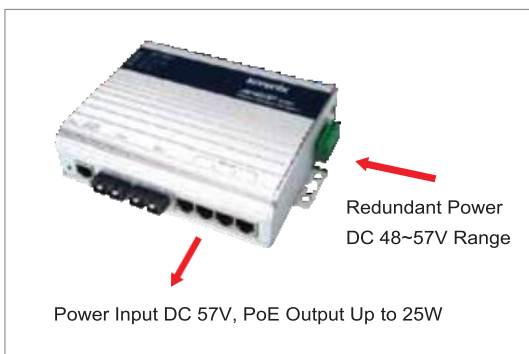
Versatile Management Interfaces

JetNet 4706f supports versatile management interfaces including HTTPS secured web console, SSH console, SNMP v1/v2c/v3, and RS232 CLI console. Real-time status such as port status, PoE status, PD status are all shown in all management consoles. JetNet 4706f supports quick installation by Korenix View, which is Korenix multi-platform utility for device discovery, IP setting, configuration back-up & restore, and firmware upgrade functions.

Wide Range Power Input / Output Voltage

IEEE802.3af defines nominal power supply at 48V. As a result, most PSE receive 48V power input and then deliver power to PD at the operation range from 48V to 57V. However, for many industrial environments without 48V main power system, this rule is not applicable. It is neither applicable to those nonstandard PDs that do not work within the standard operation range.

Korenix's PoE switch equips a mechanism that can accept wide range of power input voltages and deliver a correspondent level of power.

Redundant Power
DC 48~57V Range

Power Input DC 57V, PoE Output Up to 25W

Dimensions (Unit = mm)

korenix

JETNET 4706f
Industrial Managed PoE Switch
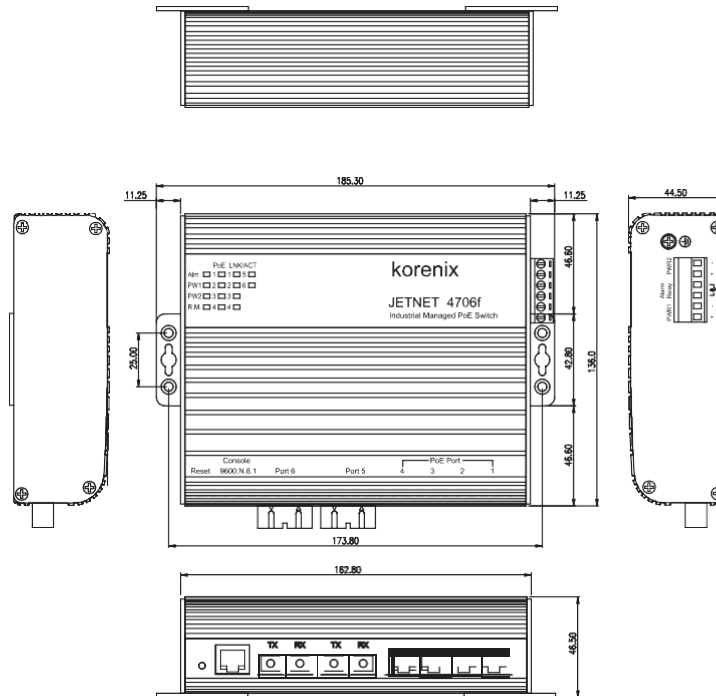
Specification

Technology

Standard:
IEEE 802.3 10Base-T
IEEE 802.3u 100Base-TX/FX
IEEE 802.1p Class of Service
IEEE 802.3af Power Over Ethernet (PoE)
IEEE 802.1d Spanning Tree
IEEE 802.1w Rapid Spanning Tree
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

Performance

Switch Technology:
Store and Forward Technology with 3.2Gbps wire-speed non-blocking Switch Fabric
System Throughput: 1.785Mpps
MAC Address: 2000
Packet Buffer: Embedded 1Mbits shared buffer
Transfer performance: 14,880pps for Ethernet and 148,800 for Fast Ethernet and transfer packet size from 64 to 1522Bytes
PoE Technology: End-Span wiring architecture
PD classification detection, class ID 0~3 follow IEEE802.3af standard, and 25W High power deliver procedures for class ID 4.
Pin assignment: V+ (RJ-45 Pin 4,5), V- (RJ-45 Pin 7,8), TX (RJ-45 Pin 1,2), RX (RJ-45 Pin 3,6)
Protection: Provides over-current protection by PD class ID

Management

Management interface: SNMP v1, v2c and v3, Web browser, Korenix View, Korenix NMS, and CLI Management
Management Security: 4 entries for web, telnet, SNMP management security
SNMP MIB: RFC 1213 MIBII, RFC 1493 Bridge MIB, RFC 1757 RMON MIB, RFC 2674 VLAN MIB, RFC 1643 Ethernet like MIB, RFC1215 Trap MIB, RFC 3621 Power Ethernet MIB, Korenix Private MIB
SNMP Trap: Provides Cold start, Warm start, Port event, Power event, Authentication failure, PoE trap and Korenix private trap for proprietary functions**Korenix Utility:** Supports Korenix View and Korenix NMS with IEEE 802.1AB Link Layer Discovery Protocol for device and link auto-topology discovery
Firmware upgrade: TFTP, HTTP and Korenix View
System Log: 1000 system entries for system or remote log server
Event Alarm Relay: 1A @24V Dry Relay Contact output for port link down, PoE and System power events.
Quality of Service: Quality of Service determined by port, Tag and IPv4 Type of Service
Class of Service: IEEE802.1p class of service, with 4 priority queues
DHCP: Supports DHCP Cilent and DHCP Server function with specified IP exclusion and MAC binding function

Timer: Supports Network Time Protocol (NTP) to synchronize time from NTP Server

VLAN: Port based VLAN

IGMP: Supports IGMP Snooping v1/v2/v3 and IGMP Query v1/v2

Network Redundancy: Supports Multiple Super Ring function for network redundancy with 5ms network recovery time; To inter-operate with other higher-level switches, JetNet 4706f provids RapidDual Homing II technology to conform with RSTP protocol.
JetNet 4706f also conforms with IEEE802.1D 2004 edition for RSTP and STP standard protocols

PoE Port Control: Supports user configuration for PoE enable disable, or based on schedule

Power Limit Control: The control mode supports IEEE802.3af standard, Manual and Ultra mode for 25W Hi-power or forced powering mode for Non-standard PD. The maximum DC power delivery on each PoE port is 12.9W @DC 48V input or 25W @ DC57V input

PoE Scheduling Control: Each PoE port can be activated and powered scheduling with different rule. It supports weekly scheduling by hourly basis.

LPLD function: The Link Partner Line Detect function (LPLD) is available on PoE ports. With the LPLD function, the PoE port can keep attached PD alive

IP Security: IP security to prevent unauthorized access

Interface

Number of Ports:
4 x 10/100Base-TX with PoE Injector
2 x 100Base-FX ports
1 x RS-232 Console

Connectors:
10/100TX: RJ-45
100Base-FX: SC
Console: RJ-45
Power & Relay Alarm: 6-pin Terminal Block

Power Consumption:
8 Watts @ 50V (Maximum) without PD loading

Cable:
10Base-T: 4-pair UTP/STP Cat. 3, 4, 5 cable, EIA/TIA 568B 100-ohm(100m)
100Base-TX: 4-pair UTP/STP Cat. 5 cable, EIA/TIA 568B 100-ohm(100m)
100Base-FX: Multi-mode 50~62.5/125um; Single-mode 8~10/125um

Fiber Transceiver:
JetNet4706f-m, Multi-mode: 2KM max. distance
Wave-length: 1310nm
Min Tx Power:-19dBm
Max Tx Power:-14dBm
Min Rx Sensitivity:-30dBm
Link budget:11dBm

JetNet 4706f-s, Single-mode: 30KM max. distance
Wave-length:1310nm
Max Tx Power:-8dBm
Min Tx Power:-15dBm
Min Rx Sensitivity:-34dBm
Link budget:19dBm

Reset Button: For system reboot and factory default setting

Diagnostic LED:
Power LED: Power 1/Power 2 (Green)
Fast Ethernet Port 1~4: Link(Green)/
Activity (Green blinking),
PoE Powering (Yellow on), PoE Detect (Yellow blinking),
PoE Disable (Yellow off), PoE Powering failure (Yellow fast blinking)
Fast Ethernet Port 5,6: Link(Green)/Activity (Green blinking)
Alarm (Red): Port link down or power failure occurred

Power Requirements

System Power: Support positive or negative power system with DC 48~57V power input range and polarity reverse protection

Power Consumption:
8 Watts @ 50V (Maximum) without PD loading

Mechanical

Installation: DIN-Rail mount or desktop or wall mount

Case: IP31 grade aluminum metal case

Dimension:
46.5 mm (H) x 174.8 mm (W) x 136 mm (D)
without DIN-rail mount

Weight:
0.72 kg with package

0.65 kg without package

Environmental

Operating Temperature: -40 ~ 60℃

Operating Humidity: 0% ~ 95%, (non-condensing)

Storage Temperature: -40 ~ 80 ℃

Storage Humidity: 5%~ 95%, (non-condensing)

Regulatory Approvals

Safety: UL/cUL60950-1, CSA C22.2 No.60950-1-03

EMI:
FCC Class A; CE/EN55022:2003 Class A
CE/EN61000-3-2:2001 Harmonic Test
CE/EN61000-3-3:1995 Flicker test

EMS:
EN61000-4-2:1998, ESD
EN61000-4-3:1998, RS
EN61000-4-4:1995, EFT
EN61000-4-5:1995
EN61000-4-6:1996

Shock: IEC60068-2-27

Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32

MTBF: 272,306 Hours, MIL-HDBK-217F GB standard

Warranty: 5 years

Ordering Information

JetNet 4706f-m Industrial 6-port Managed High Power PoE Fiber Switch, 2 SC/Multi-mode, 2KM

JetNet 4706f-s Industrial 6-port Managed High Power PoE Fiber Switch, 2 SC/Single-mode, 30KM

Includes:

- JetNet 4706f-m / JetNet 4706f-s
- Quick Installation Guide
- RS-232 Serial cable
- CD User Manual
- DIN Rail Mount Kit

Optional Accessories

- DC 48V Din-Rail Power: DR-75-48
- DC 48V Din-Rail Power: MDR-100-48

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