JetNet 4706

Industrial 6-Port Managed PoE Plus Switch

- Four 10/100 TX Power over Ethernet ports and two redundant 10/100 TX uplink ports
- DC 24V Power Input for DC 22V output through Ethernet (Non-standard PoE)
- DC 48V Power Input for IEEE 802.3af 48V PoE output
- Up to 30W per port for High Power solution by Power Input DC 55V (IEEE 802.3at)
- UP to 100W for total power budget (IEEE 802.3at)
- Forced mode powering
- 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^{TM}), back up system recovery time up to 5ms
- Patented Rapid Dual Homing (RDH^{TM}) 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
- Aluminum rugged enclosure with IP-31 grade protection
- -25~60°C operating temperature for hazardous environment application

Overview

JetNet 4706, 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 4706 is designed for industrial PoE applications such as IP surveillance or wireless access points, 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. JetNet 4706 is compliant to both IEEE 802.3af PoE as well as the pioneer standard of IEEE802.3at PoE Plus design (enhancement of 802.3af) for boosting PoE delivery up to 30W in each of the four PoE ports. JetNet 4706 can auto-detect both 24V and 48V power inputs from PD and determine to deliver 24V or 48V PoE outputs, which enables the applications where request 24V instead of 48V.

The two uplink ports of JetNet 4706 series can be configured as Rapid Super Ring ports recovering network failure in less than 5ms, or RSTP ports integrating with other standard switches. Full network management features such as SNMP v3, QoS, IGMP snooping v3, are all supported. If the powered device fails to respond after a pre-configured time interval, JetNet 4706 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 4706. The award-winning IP-31 rigid aluminum flat casing and wide operation temperature range ensure a reliable operation in places such mass transit vehicles or outdoor usage.

Easy PoE Configuration

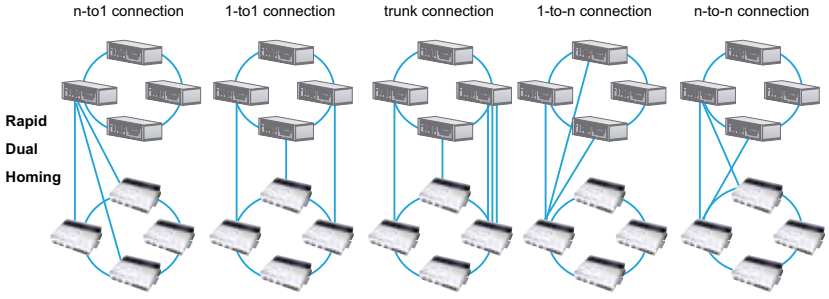
The four PoE ports can be configured to enable, disable, or schedule PoE function by the web interface. The Power mode provides Standard mode for IEEE 802.3af PD, Manual mode for user configuration of the power limit to IEEE 802.3af standard PD, or Ultra mode for user configuration to perform at the 30w power limitation. After configuration, the real-time status of PoE is shown in web interface.

PoE Port Schedule

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 economic power management, security, or customer-specific requirements.

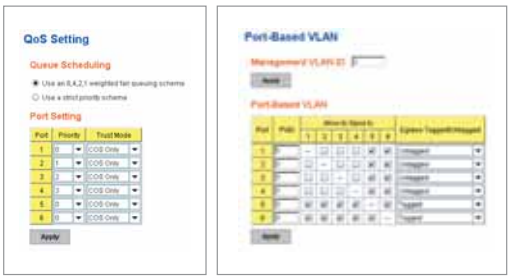
A Non-Stop Transmission Network with PoE Function – MSR™ & RDH™

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



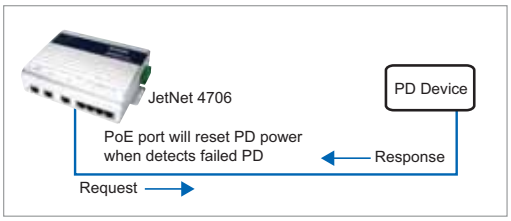
Quality of Service & Port Based VLAN

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. In 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 to monitor real-time status of connected PD's. 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.



Versatile Management Interfaces

JetNet 4706 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 4706 supports quick installation by JetView, which is Korenix multi-platform utility for device discovery, IP setting, configuration back-up & restore, and firmware upgrade functions.

Forced Powering

Korenix provides advanced forced powering control to deliver power to those non-standard PoE devices that cannot be detected as valid PD's. 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 cant recognized the PD, thus, it will not forward the power. The forced powering ability solves this problem and enables all your PD's.

Wide Range Power Input / Output Voltage

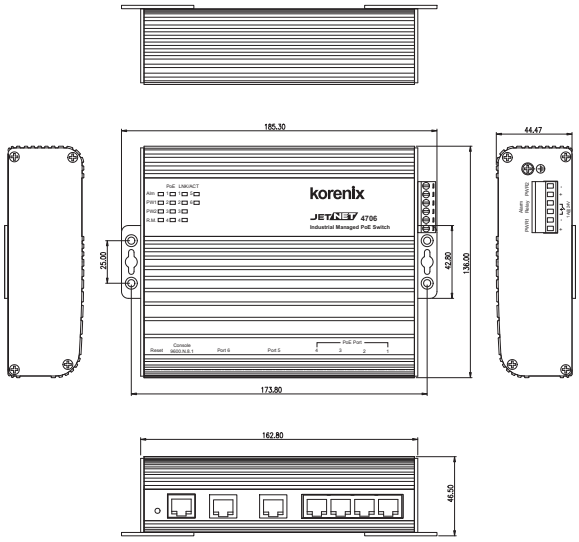
IEEE802.3af defines nominal power supply at 48V. As a result, most PSE receive 48V power input and then deliver power to PD at the operation range from 44V to 57V. However, for many industrial environments without 48V mains power system, this rule is not applicable. It is neither applicable to those 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. This is especially useful, for example, to power a 24V nonstandard PD or to power existing non-PoE apparatus with an accessorial PoE splitter in the public transportation system that has 24V system only.

Redundant Power
DC 24~55V Range

Power Input DC 55V, PoE Output Up to 30W
Power Input DC 24V, PoE Output Up to 13.5W

Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE 802.3 10Base-T
IEEE 802.3u 100Base-T
IEEE 802.1p Class of Service
IEEE 802.3af Power Over Ethernet(PoE)
IEEE 802.3at High Power PoE
IEEE 802.3 Flow Control and Back-pressure
IEEE 802.1d Spanning Tree
IEEE 802.1w Rapid Spanning Tree

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 30W 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, JetView and CLI Management
Management Security: 4 entries for web, telnet, SNMP management security
SNMP Trap: Provides Cold start, Warm start, Port event, Power event, Authentication failure, PoE trap and Korenix private trap for proprietary functions
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
Firmware upgrade: TFTP, HTTP and JetView
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 Snooping: Supports IGMP Snooping v1/v2/v3 and IGMP Query v1/v2
Network Redundancy: Supports Rapid Super Ring function for network redundancy with 5ms network recovery time; To inter-operate with other higher level switches, JetNet 4706 provides Dual Homing II technology to conform with RSTP protocol.
JetNet 4706 also comforms with IEEE802.1D 2004 edition for RSTP and STP standard protocols
PoE 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 30W Hi-power or forced powering mode for Non-standard PD. The maximum DC power delivery on each PoE port is 12.9W@DC 24V input or 30W @ DC55V input
PoE Schedule Control: Each PoE port can be activated and powered scheduling with different rule. It supports weekly schedule on hourly basis
IP Security: IP security to prevent unauthorized access

Interface

Number of Ports:
4 x 10/100Base-TX with PoE Injector
2 x 10/100Base-TX ports
1 x RS-232 Console
Connectors:
10/100TX: RJ-45
Console: RJ-45
Power & Relay Alarm: 6-pin Terminal Block
Cable:
10Base-T: 4-pair UTP/STP Cat. 3, 4, 5 cable, EIA/TIA-568 100-ohm(100m)
100Base-TX: 4-pair UTP/STP Cat.5, Cat.5E/Cat.6 cable, EIA/TIA-568 100-ohm(100m)
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 24~55V 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: IP-31 grade aluminum metal case
Dimension:
46.5 mm (H) x 147.8 mm (W) x 136 mm (D) without DIN-rail clip
Weight:
0.72 kg with package
0.65 kg without package

Environmental

Operating Temperature: -25 ~ 60°C
Operating Humidity: 0% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 80°C
Storage Humidity: 5%~ 95%, (non-condensing)

Regulatory Approvals

Safety: UL60950-1, 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, Surge
EN61000-4-6:1996, CS
EN 50155 Railway: compliance
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 324,345 Hours, MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 4706 Industrial 6-port Managed PoE Plus Switch

Includes:

- JetNet 4706
- 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