JetNet 4706

Industrial 6-Port Managed PoE Switch

RoHS

- Four 10/100 TX Power over Ethernet ports and two redundant 10/100 TX uplink ports
- Dual mode PoE design to support both DC 48V and DC 24V
- Up to 30W per port for High Power solution
- PoE control and schedule by hour/weekly basis
- Auto-detect Powered Device status for device auto-reset (LPLD)
- Patented Rapid Super Ring technology (RSR), back up system recovery time less than 5ms
- SNMP v1/v2c/v3, IGMP snooping v1/v2/v3, RMON, LACP, 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

Overview

JetNet 4706, an improved and strengthen manageable industrial PoE switch, is the successor of Best Choice of Computex Taipei 2007 Award winner, 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 24V & 48V power input and deliver 24V & 48V PoE output allows more applications where 48VDC is not an option.

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 v3, LACP port trunk 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. Also, unmanageable powered devices can be managed through JetNet 4706 software. 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.

Scheduling PoE Control

The concept from UPS power scheduling control is used for JetNet 4706 PoE power delivery. JetNet 4706 can follow the weekly schedule on an hourly basis to power on/off on any given PoE port. Each PoE port can apply to different schedules. This feature helps you to save time and money for power on/off maintenance.

A Non-Stop Transmission Network with PoE Function - R.S.R. & Dual Homing II

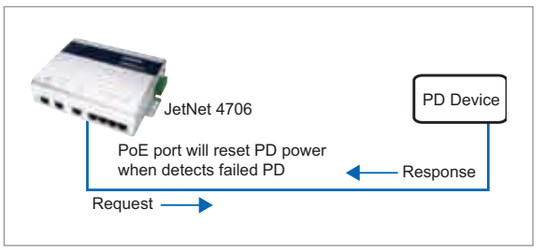
The two uplink 10/100TX or 100FX ports allow users to build Redundant Ring architecture with other High-End Switches by RSTP or Korenix Rapid Super Ring (R.S.R.). The RSR Topology brings the back-up network in less than 5ms when the main path is disconnected. To integrate with Core Switches, JetNet 4706 provides Dual Homing II function which merges R.S.R. 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

JetNet 4706 can be configured to run linking Powered Device alive check continuously to detect the real-time status. If the PD fails to respond, JetNet 4706 will turn-off and then turn-on the PD's power to trigger remote PD cold start process. The connected PD can be automatically managed and reboot by JetNet 4706.



Versatile Management Interfaces

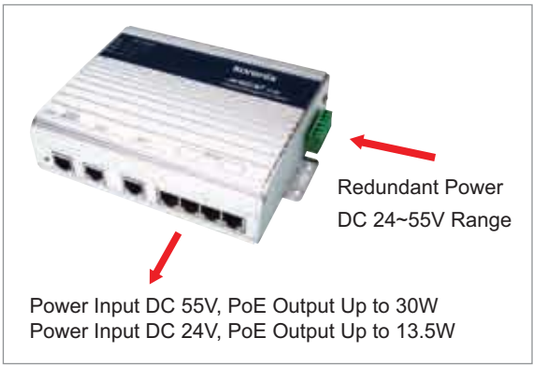
JetNet 4706 supports versatile management interfaces including HTTPS secured web console, SSH console, SNMP v1/v2c/v3, and RS232 CLI console. Real-time status such as port status, PoE status, PD status are all shown in all management consoles. JetNet 4706 supports quick installation by JetView, which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

DC 24V & DC 48V Power Over Ethernet System

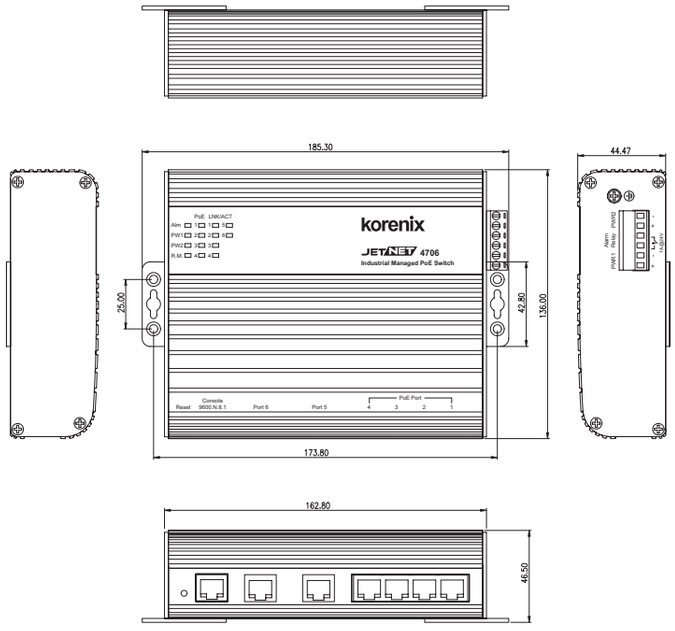
JetNet 4706 accepts dual-mode PoE by 24V or 48VDC. JetNet 4706 is able to detect different input power voltages and to perform powered devices detection, classification, powering and disconnection processes automatically. The dual-mode PoE powering is very useful for public transportation systems with DC24V power supply, or any applications without DC48V power source.

High Power Forwarding System

The IEEE802.3af Power over Ethernet standard specifies 15.4w power budget for PD system. However, 15.4w is not enough for some applications. JetNet 4706 follows two PoE mechanisms, IEEE802.3af and High Power pre-standard IEEE802.3at for 30W power budget. To recognize the PD classification ID, a powerful micro-processor is used in JetNet 4706 for power detection, classification, powering and disconnection processes. The JetNet 4706 can power PD with different PD classification ID. For the IEEE802.3af standard PD, the JetNet 4706 supports maximum 61.4W power forwarding ability with DC 48V power.



Dimensions



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, Local file and JetView
System Log: 1000 system entries for system or remote log server
Event Alarm Relay: 1 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 standand protocoes
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. 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
Port Security: Port security to assign authorized MAC to specifc port

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)
Rest 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: -20 ~ 60°C
Operating Humidity: 5% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 80°C
Storage Humidity: 5%~ 95%, (non-condensing)

Regulatory Approvals

Safety: CE/EN60950
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
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 Ethernet Switch

Includes:

- JetNet 4706, 4 PoE Injectors plus 2 10/100TX ports
- Quick Installation Guide
- RS-232 Serial Cable
- CD User Manual
- DIN Rail Mount Kit

Optional Accessories

- 48VDC Din-Rail Power: DR-75-48
- 48VDC PoE Splitter: PD1205