

# JetNet 3706f / 3706f-w

## Industrial 6-port Web-Managed PoE Plus Fiber Switch



- Four 10/100 TX Power over Ethernet ports and two redundant 100 FX 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™), back up system recovery time up to 5ms
- Built-in hardware watchdog timer for system auto-reset
- Aluminum rugged enclosure with IP-31 grade protection
- -10~60°C operating temperature for hazardous environment application (JetNet 3706f-w -25~60°C)

### Overview

JetNet 3706f is designed for industrial PoE applications, such as IP surveillance or wireless access points, where 30W per port and DC 24V PoE is required. JetNet 3706f is in compliance with both IEEE 802.3af PoE as well as the pioneer standard of IEEE802.3at PoE Plus design (enhancement of 802.3af) for boosting PoE up to 30W in each of the four PoE ports. Redundant

24~55VDC power inputs guarantees your operation will not be stopped due to power disruption. JetNet 3706f can auto-detect 24V & 48V power input and deliver 24V & 48V PoE output, allowing more applications where DC 48V is not an option. The award winning IP31 rigid aluminum flat casing and wide operation temperature range ensure reliable operation for mass transit vehicles or outdoor usage.

### 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.



## Easy PoE Configuration

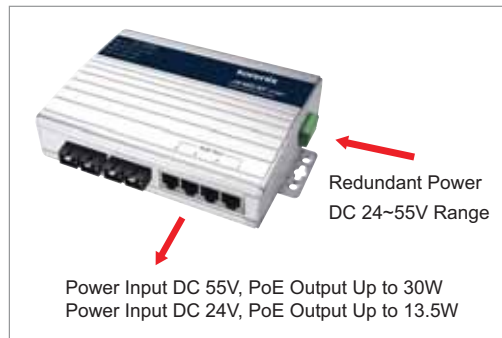
The four PoE ports can be configured to enable, disable, or schedule PoE function by the web interface. The Power mode provides Standard mode for IEEE 802.3af PD, Manual mode for user configuration of the power limit to IEEE 802.3af standard PD, or Ultra mode for user configuration to perform at the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



## Wide Range Power Input / Output Voltage

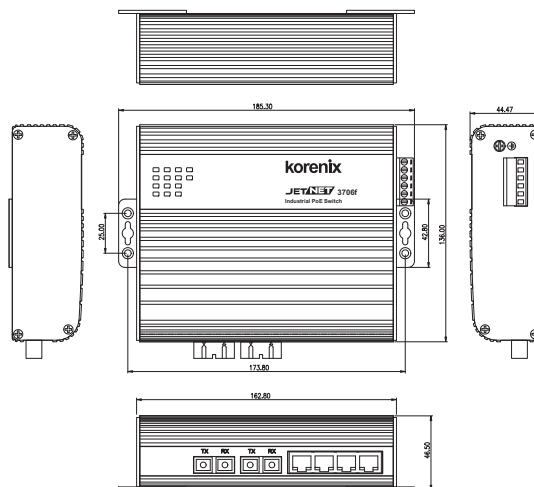
IEEE802.3af defines nominal power supply at 48V. As a result, most PSE receive 48V power input and then deliver power to PD at the operation range from 44V to 57V. However, for many industrial environments without 48V mains power system, this rule is not applicable. It is neither applicable to those 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.

## Dimensions (Unit –mm)



## Specification

### Technology

#### Standard:

IEEE 802.3 10Base-T  
 IEEE 802.3u 100Base-T/100 Base FX  
 IEEE 802.1p Class of Service  
 IEEE 802.3af Power Over Ethernet(PoE)  
 IEEE 802.3at High Power PoE

### 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

**Quality of Service:** Meets IEEE802.1p, per port provides 4 priority queues with WRR packet forwarding mechanism

**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: Over-current protection by PD class.

### Management

**Management interface:** Web browser, JetView

**Firmware upgrade:** TFTP, HTTP and JetView

**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

**Network Redundancy:** Supports Multiple Super Ring function for network redundancy with 5ms network recovery time. JetNet 3706f 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 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 Scheduling Control:** Each PoE port can be activated and powered scheduling with different rule. It supports weekly scheduling by hourly basis

### Interface

#### Number of Ports:

Four 10/100Base-TX with PoE injector  
 Two 100Base-FX Uplink Ports

#### Connectors:

10/100TX: RJ-45  
 100Base-FX: SC Connector  
 Power: 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 cable, EIA/TIA-568 100-ohm(100m)  
 100Base-FX: Multi-mode fiber: 50~62.5/125um; Single-mode fiber: 8~10/12um

#### Fiber Transceiver:

JetNet 3706f-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 3706f-s, Single-mode: 30KM max. distance  
 Wave-length:1310nm  
 Max Tx Power:-8dBm  
 Min Tx Power:-15dBm  
 Min Rx Sensitivity:-34dBm  
 Link budget:19dBm

#### 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)

**Reset Button:** For system reboot and factory default setting

### Power Requirements

**System Power:** Support positive or negative power system with DC 24~50V power input range and polarity reverse protection

#### Power Consumption:

8Watts @ 48V (Maximum) without PD loading

### Mechanical

**Installation:** DIN-rail mount or Wall mount or Desktop

**Case:** IP-31 grade aluminum metal case

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

#### Weight:

0.68kg with package  
 0.64kg without package

# Industrial PoE Switch

## Environmental

**Operating Temperature:** -10 ~ 60°C  
(JetNet 3706f-w -25~60°C)  
**Operating Humidity:** 5% ~ 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;

## 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:** 272,306 Hours, MIL-HDBK-217F GB standard  
**Warranty:** 5 years

## Ordering Information

**JetNet 3706f-m Industrial 6-port Web-Managed PoE Plus Fiber Switch, 2 SC/Multi-mode, 2KM**  
**JetNet 3706f-s Industrial 6-port Web-Managed PoE Plus Fiber Switch, 2 SC/Single-mode, 30KM**  
**JetNet 3706f-w Industrial 6-port Web-Managed PoE Plus Fiber Switch, -25~60°C**

Includes:

- JetNet 3706f-m / JetNet 3706f-s / JetNet 3706f-w
- Quick Installation Guide
- 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

## Industrial PoE Switch

IP67/68  
Ethernet Switch

Rackmount  
Managed  
Switch

Gigabit Switch

Redundant  
Switch

Entry-Level  
Switch

Networking  
Computer

Communication  
Computer

Ethernet  
I/O Server

Serial Device  
Server

Media  
Converter

Multiport  
Serial Card

SFP Module

Din Rail  
Power Supply