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JetCon 1900 Industrial Optical Bypass Switch Quick Installation Guide V1.0

Overview

The JetCon 1900 Optical Bypass Switch is an ideal of optical bypass solution for optical-node in a daisy-chain or ring network infrastructure. In the traditional optical network topology, the optical path may break to several segments that caused by the node system crash or node power-down. With the bypass and recovery technology, the JetCon 1900 will bridge both of previous and next nodes immediately when node-down occurred. It prevents and saves the communication from the danger of node-crash. It is commonly used in some of major optical network, like railway communication system, factory automation, power substation where can't bear any communication interruption.

This QIG will introduce how to install and configure the JetCon 1900. About the product specification, please refer to JetCon 1900 data sheet which can be downloaded from Korenix Web site: www.korenix.com.

Package Check List

- ▶ JetCon 1900
- ▶ Quick Installation Guide
- ▶ Wall Mounting kits



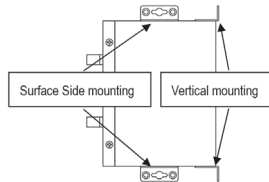
Installation

Mount the unit

Din-Rail mount: Uses DIN Rail Clip to mounting on EN50022 DIN Rail.

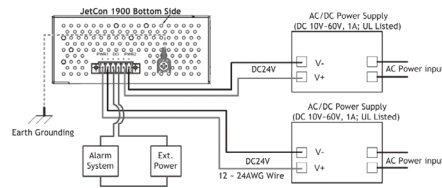
Vertical Wall Mounting: Uses wall mounting plate to install device on the cabinet wall vertically if there is no DIN Rail.

Surface Side Mounting: Uses wall mounting plate to install device by side surface mounting to save space for the optical fiber installation.



Wiring Power input, Relay Output and Chassis/Earth Grounding

There is one 6-pin removable terminal block connector on the bottom side of JetCon 1900. It includes 2 redundant power input, and Dry Relay Alarm output. Following diagram



shows the connection of power input, dry relay output and also the earth grounding.

1. System recommended operating voltage is DC 24V, the voltage range is from DC 10V to DC 60V. The DC power source is recommended to use UL listed AC/DC switching power supply.

2. The contactor ability of Dry Relay output is 1A current in 30V DC external alarm power source.
3. To provide better noise immunity, please connect the system grounding screw with Earth Grounding System.

Connect the Optical Fiber to Line and Device

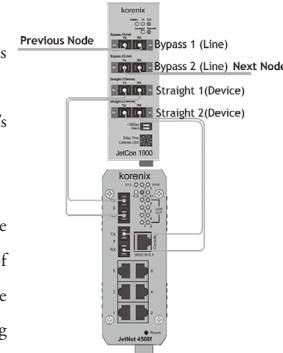
The JetCon 1900 support 4 Duplex SC connectors for Bypass/Line and Straight/Device connection.

Bypass/Line port: connected to the fiber cables coming from previous and next stations.

Straight/Device port: connected to the local device's fiber redundant/ring ports.

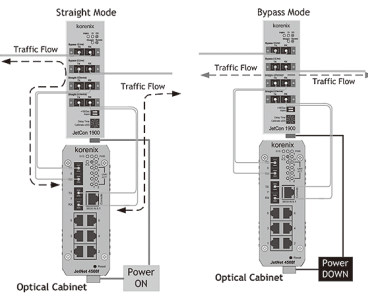
Note:

- (1) the connection of optical fiber interface should be TX connected to RX. (2) Ensure the strength of optical signal that from previous and next nodes can be received by each other when JetCon 1900 is working at Bypass mode.
- (2) Bypass-1 (Line) connects to Straight-1 (device) internally, Bypass-2 (Line) connects to Straight-2 (device) internally.



Optical Signal /Traffic Path - Straight Mode

In normal status (stable power supply), the optical signal from previous Node would be transferred to local device through Bypass-1 and Straight-1 ports, the local device then forward optical signal to next Node through Straight-2 and Bypass-2 ports (refers to Straight mode diagram).



Optical Signal /Traffic Path - Bypass Mode

In abnormal status (Power off), the internal optical path switch will switch the optical path and connects both nodes of previous and next (refers to Bypass mode diagram).

Configure the Restoration Time Delay

The restoration Time delay is configured by Rotary Switch and DIP-Switch. The delay time can be set from 0 to 360 seconds, and the system will count down the delay time then switch optical path to Straight mode.

Rotary Switch (0-9)	DIP Switch (+ 180 Sec)	Restoration Delay Time
(1-9) x 20 Sec	Off (Default)	(1-9) x 20 Sec
(1-9) x 20 Sec	On (+ 180Sec)	(1-9) x 20 Sec + 180 Sec

Support

5 Years Warranty

Each of Korenix's product line is designed, produced, and tested with high industrial standard. Korenix warrants that the Product(s) shall be free from defects in materials and workmanship for a period of five (5) years from the date of delivery provided that the Product was properly installed and used.

This warranty is voided if defects, malfunctions or failures of the warranted Product are caused by damage resulting from force measure (such as floods, fire, etc.), other external forces such as power disturbances, over spec power input, or incorrect cabling; or the warranted Product is misused, abused, or operated, altered and repaired in an unauthorized or improper way.

Attention! To avoid system damage caused by sparks, please DO NOT plug in power connector when power is on.

The product is in compliance with Directive 2002/95/EC and 2011/65/EU of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronics equipment(RoHS Directives & RoHS 2.0)

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导言

JetCon 1900是一款光切换开关，在链状或环形网络拓扑中，是Bypass解决方案的理想选择。传统的光纤网络拓扑网络中，当某一节点出现死机或节点掉电，光纤链路将被打破为几段。通过Bypass快速恢复技术，JetCon 1900将链路立即重新建立起连接。从而不受损坏节点的影响，确保通讯继续正常工作。这通常适用于不容许任何通讯的中断主干网络，例如铁路通讯系统、工厂自动化、变电站等。

本QIG将介绍如何安装和配置JetCon 1900。有关JetCon 1900详细规格和参数，请查阅手册。下载网址：www.korenix.com.cn

产品清单

- ▶ JetCon 1900
- ▶ 快速安装手册
- ▶ 壁挂安装套件

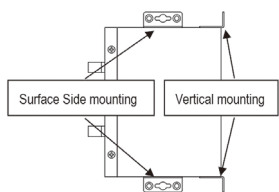


安装

导轨安装：使用JetCon 1900机身背后的导轨夹将设备卡上导轨。

垂直墙安装：如果没有DIN导轨，用壁挂安装套件将JetCon 1900垂直安装到墙上。

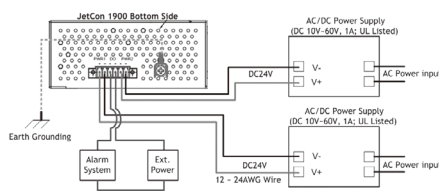
侧板安装：用壁挂安装套件将JetCon 1900侧面安装到墙上。为光口安装节省空间。



电源连接，继电器输出和设备接地

在JetCon 1900底部一侧，有一个6 pin接口，包括两组电源（冗余）输入，干继电器报警输出。

如左图所示：电源、继电器、接地端子。



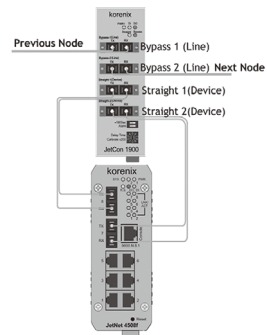
1. 工作电压：推荐工作电压为DC 24V（输入电压工作范围：DC 10V—60V）。使用UL正规供电电源。
2. 继电器输出：支持1A电流，DC30 V电压。
3. 请将接地端子正确接地，确保设备安全，防止电气干扰。设备未接地，因自然因素造成损害，将不予以修复。

光纤到线路和设备的接线

JetCon1900支持4对SC接口，用于Bypass/Line和Straight/Device连接

Bypass/Line 端口：连接光纤从前一个节点到下一个节点

Straight/Device 端口：连接到本地设备的光口冗余/环端口



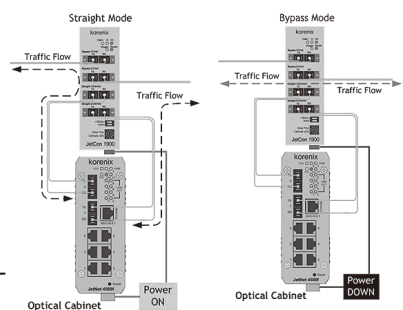
注意：

(1) 光口连接应为TX到RX交叉互联。(2) 当JetCon 1900工作在ByPass模式下，确保两个节点之间的距离在允许范围之内。

(2) Bypass-1 (Line) 内部连接 Straight-1 (device), Bypass-2 (Line) 内部连接Straighe-2 (device)

Optical Signal /Traffic Path - 正常模式

在正常状态下（设备供电正常），光信号通过Bypass-1和Straight-1端口由上一节点设备传输到本地设备；本地设备与下一节点设备通讯则是通过Bypass-2和Straight-2端口（如正常模式图示）。



Optical Signal /Traffic Path - Bypass 模式

在非正常状态下（设备掉电时），光切换开关将自动进行光口通路切换，保证前后两个节点正常通讯（如Bypass模式图示）。

延时时间设置

延时时间是通过旋转开关和DIP拨码开关进行设置。延时时间可设置0-360秒，如下表所示：

Rotary Switch (0-9)	DIP Switch (+ 180 Sec)	Restoration Delay Time
(1-9) x 20 Sec	Off (Default)	(1-9) x 20 Sec
(1-9) x 20 Sec	On (+ 180Sec)	(1-9) x 20 Sec + 180 Sec

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注意! 请勿于电源开启时插拔接线端子，以避免产生火花造成系统损坏。

此产品保证完全符合欧盟2003年1月27日电气和电子设备有害物质限制委员会所提出的限用指令2002/95/EC(RoHS禁令)及2011/65/EU(RoHS 2.0)。

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CPQ000V1900000

Patent No. (Taiwan):
Granted Invention: I 313547
Granted Invention: I 321415
Granted Invention: I 344766
Granted Invention: I 346480
Granted Invention: I 356616
Granted Invention: I 364684
Granted Invention: I 376118
Granted Invention: I 393317
Granted Invention: I 398066
Granted Invention: I 398125
Utility Model: M 339841
Utility Model: M 339840