

Overview

JetCon 2301 is a single port Fast Ethernet to Fiber media converter, supporting 4 types of forwarding modes – Store and Forward, Modified Cut-through, Pure Converter and Converter with auto-change modes. The JetCon 2301 adopts rugged aluminum case with IP31 grade enclosure and 1.5KV Hi-Pot isolation protection to operate in harsh environments with severe electromagnetic interference and -25~70°C (JetCon 2301) or -40~75°C (JetCon 2301-w). It features Link Loss Forwarding to forward link status changes for alerting remote or central management systems when a remote fault occurs. It also adopts one relay output to alarm users if a port link fails or if the power fails. Alarms can be enabled/ disabled by dip switch. JetCon 2301 has redundant power inputs with wide range DC10~60V through the 6-pin removable terminal block. The fiber port supports Single-mode or Multi-mode for providing up to 30KM extended distance transmission.

Package Check List

- ▶ JetCon 2301 Industrial Media Converter
- ▶ Quick Installation Guide



Installation

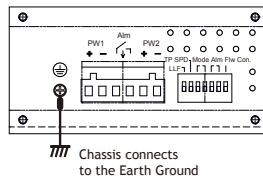
Mount the unit

Din-Rail mount: Mount the din-rail clip on the rear of JetCon 2301 on the DIN rail. For information about the DIN Rail installation, please refer to user's manual.



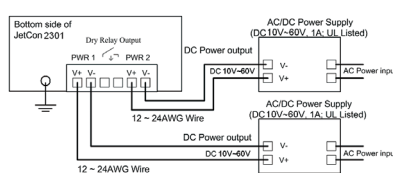
Grounding JetCon 2301

There is one grounding screw on the bottom side of JetCon 2301. Connect the frame grounding of JetCon 2301 to the grounding surface to ensure safety and prevent noise for communication interference.



Wiring the Power Inputs

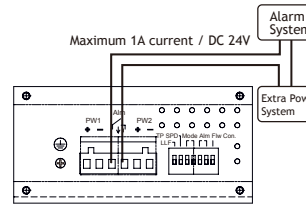
1. Insert the positive and negative wires into the V+ and V- contact on the terminal block connector.
2. Tighten the wire-clamp screws to prevent the power wires from being loosened.



Note: The recommended working voltage is DC 24V (Input range: DC10~ 60 V)

Wiring the Relay Output

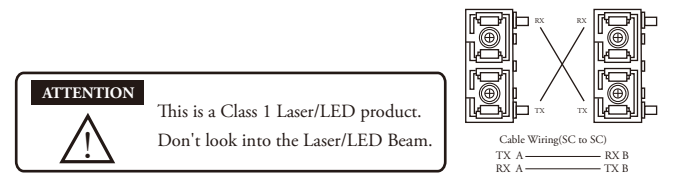
The relay output contacts are in the middle of the terminal block connector as shown in figure below. By inserting the wires and by setting the DIP switch of the respective alarm function to “ON”, relay output alarm will detect port or power fault, and form a short circuit. The alarm relay output is “Normal Open”. For detailed information, please refer to chapter 2-5 of the User's Manual.



Note: The relay contact supports only 1A current, DC 24V. It is not recommended to apply higher voltage and current higher than this specification.

Connecting to Network

1. **Connecting the Ethernet Port:** Connect one end of an Ethernet cable into the UTP port of JetCon 2301, while the other end is connected to the attached networking device. UTP port supports auto MDI/MDIX function. The LNK / ACT LED will turn on and start flashing to indicate RJ-45 port links and the packets received and transmitted from RJ-45.
2. **Connecting the Fiber Port:** Connect the fiber port of your JetCon 2301 to another Fiber Ethernet device, by following the figure below. Wrong connection or wrong fiber cable type will cause the fiber port not working properly.



3. For different link distances, the JetCon 2301 provides JetCon 2301-m” for multi-mode fiber and “JetCon 2301-s” for single-mode fiber.
4. The table below illustrates fiber transceiver specification.

Modul	Fiber (um)	Connector	Wavelength(um)	TXPwr (Min)	TXPwr (Max)	RxPwr (Min)	RxPwr (Max)	LinkBudg(dBm)	Distance(km)
JetCon 2301-m	Multi-Mode 50-62.5/125	SC	1310nm	-20dBm	-14dBm	-31dBm	0dBm	11dBm	2KM
JetCon 2301-s	Single-Mode 8-10/125	SC	1310nm	-15dBm	-8dBm	-34dBm	8dBm	19dBm	30km

xPwr(Min):Minimum Launch Power TxPwr(Max):Maximum Launch Power

RxPwr(Min):Maximum Receive Sensitivity RxPwr(Max):Minimum Receive Sensitivity

Link Budget=Minimum Launch Power –Maximum Receive Sensitivity

Note: To ensure your fiber converter can transmit/receive data between the 2 nodes, the attenuation of the optical fiber cable should be smaller than the fiber converter's Link Budget.

DIP Switch Setting

Pin No. #	Status	Description
DIP 1	On	Enable Link Loss Forwarding function.
	Off	Disable Link Loss Forwarding function (Default)
DIP 2	On	Set TX port in 10 Mbps Half Duplex mode
	Off	Set TX port in Auto-Negotiation mode (Default)
DIP 5	On	Enable power alarm
	Off	Disable power alarm (default)
DIP 6	On	Enable port alarm
	Off	Disable port alarm (default)
DIP 7	On	Disable Flow control
	Off	Enable Flow control (default)

DIP 3	DIP 4	Description
Off	Off	Store and Forward forwarding mode (default mode)
Off	On	Pure Converter forwarding mode
On	Off	Modify Cut-Through forwarding mode
On	On	Converter mode with Auto-Change forwarding mode

Note: After adjusting the DIP-switch, please reboot the unit to activate the new settings.

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 2301是一款单口快速光电信号转换器，支持4种转发模式：存储转发，修改直通，纯转换和转换模式。JetCon 2301配备铝合金外壳，可适应-25~70°C恶劣工作环境，并提供-40~75°C宽温版本可选，而且可以抵御严重的电磁干扰影响。它满足IP-31工业防护等级，支持1.5KV Hi-Pot高压隔离保护。JetCon 2301支持LLF(Link Loss Forwarding)远程故障检测技术，一旦远程发生断线就会触发报警，此外，它还装备有一路继电器报警输出，可针对断线断电事件进行报警。继电器报警可以通过DIP拨码开关启动或关闭。

JetCon 2301支持DC10~60V宽范围冗余电源输入，配备6-pin可拆卸接线槽。光口支持单模或多模两种机型满足不同传输距离的要求，最大传输距离可达30KM。

产品清单

- JetCon 2301工业信号转换器
- 快速安装向导



安装

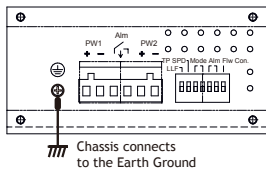
安装配件

导轨安装：将导轨夹固定在JetCon 2301的背面，然后卡上导轨。更多导轨安装信息，请参考用户操作手册。



JetCon 2301设备接地

在JetCon2301的底部有一个接地螺丝。将JetCon 2301的接地螺丝接地，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。



电源连接

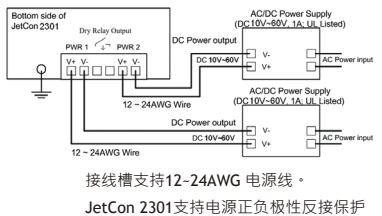
- 将电源的正负极分别接入设备底部接线槽的V+ 和V- 接口。
- 拧紧电源接线螺丝，防止电源线脱落。

备注: 建议工作电压为DC 24V (供电范围: DC10~ 60 V)

继电器报警连线

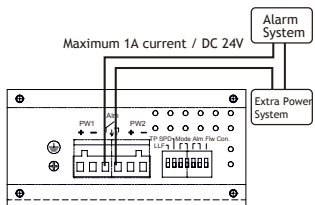
如图所示，继电器报警触点位于电源接线槽的中间位置。将报警线路接入固定，并将DIP拨码开关“ON”启动报警功能，继电器报警系统会自动检测端口及电源断连情况并组成一个闭合回路。继电器报警线路默认是开路。欲了解更多信息，请参看用户手册chapter 2-5。

备注:继电器报警触点仅支持1A 电流，DC 24V电压。不建议在此线路中使用更高电压和电流。



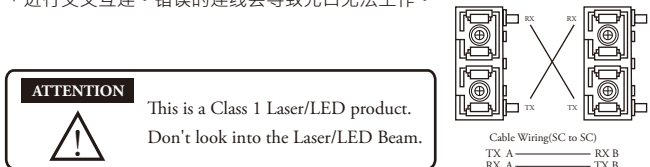
接线槽支持12-24AWG 电源线。

JetCon 2301支持电源正负极性反接保护



网络连接

- 网口连线: 将UTP双绞线的一端连接到JetCon 2301的电口，另一端连接到相关网络设备。UTP端口自适应MDI/MDIX。LNK / ACT LED指示灯会亮起并闪烁，表示RJ-45端口已连接并正在收发数据。
- 光口连线: 如图所示，将光纤的一端连接到JetCon 2301，另一端连接到相关设备，进行交叉互连。错误的连线会导致光口无法工作。



- 针对不同传输距离，JetCon 2301 提供“JetCon 2301-m”多模光口机型和“JetCon 2301-s”单模光口机型。
- 以下图表为光收发器规格

机型	Fiber (um)	接头	波长(um)	TXPwr (Min)	TXPwr (Max)	RxPwr (Min)	RxPwr (Max)	LinkBudg(dBm)	传输距离(km)
JetCon 2301-m	Multi-Mode 50-62.5/125	SC	1310nm	-20dBm	-14dBm	-31dBm	0dBm	11dBm	2M
JetCon 2301-s	Single-Mode 8-10/125	SC	1310nm	-15dBm	-8dBm	-34dBm	8dBm	19dBm	30km

TxPwr(Min): 最小发射功率 TxPwr(Max): 最大发射功率

RxPwr(Min): 最小接收灵敏度 RxPwr(Max): 最大接收灵敏度

Link Budget=最小发射功率-最大接收灵敏度

备注: 为了确保光电转换器在2节点间能够正常收发数据，光纤线材的衰减值一定要低于转换器的Link Budget值。

DIP拨码开关设定

Pin No. #	状态	描述
DIP 1	On	启动LLF(Link Loss Forwarding)功能
	Off	关闭LLF(Link Loss Forwarding)功能 (默认)
DIP 2	On	将TX端口设置为10 Mbps半双工模式
	Off	将TX端口设置为自动协商模式(默认)
DIP 5	On	启动电源报警
	Off	关闭电源报警 (默认)
DIP 6	On	启动端口报警
	Off	关闭端口报警 (默认)
DIP 7	On	关闭流控制
	Off	启动流控制(默认)

DIP 3	DIP 4	
Off	Off	存储转发模式(默认模式)
Off	On	纯转换模式
On	Off	Modify Cut-Through转发模式
On	On	转换Auto-Change模式

备注: 更改DIP拨码开关设置以后，请重启设备让新设置生效。

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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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CPQ000V2301001

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