

JetCon 2302

Industrial 2-Channel Fast Ethernet to Fiber Media Converter



CE FC RoHS

3.2Gbps	LLF	Dual 10~60VDC
2 Fiber	-25~75°C	

- Two Channels 10/100 TX to 100 FX media converter
- Two 10/100TX with 2 100FX Fast Ethernet Fiber Switch
- Supports Auto MDI/MDI-X, Auto Negotiation
- Supports Multi-mode 2KM, Single-mode 30KM
- 3.2Gbps Non-Blocking Switch Fabric
- Auto Link Loss Forwarding (LLF) for fault detection
- Power and Port event alarm
- Redundant 10~60V DC Power inputs with DC polarity protection
- NEMA -TS2 Compliance (applying)
- Aluminum case with IP-31 grade protection
- Supports 1.5KV Hi-Pot isolation protection
- Operating temperature -25~75°C for hazardous environment application (-40~75°C wide operating temperature model available by request)

Overview

JetCon 2302 is not only a compact 4-port switch, but also a 2 channel RJ45 to fiber media converter - an ideal model that would physically fit in harsh environments with intensive severe electromagnetic interference. In switch mode, JetCon 2302 is an Industrial 4-port 10/100Mbps Fast Ethernet Fiber Switch, incorporating 3.2Gbps switching fabric with non-blocking store and forward technology to fulfill the high transmission performance requirements. In converter mode, JetCon 2302 is an Industrial 2-channel 10/100 TX to 100 FX media converter, featuring remote Link Loss Forwarding technology to provide easy and cost-effective maintenance. By adjusting the DIP switch and resetting the device, users can easily change operation mode and activate LLF function.

Moreover, JetCon2302 provides alarm relay to trigger out a real alarm signal for port or power events. To avoid interferences as well as to extend the network coverage, Single-mode or Multi-mode fiber optic ports meet your needs for up to 30KM long distance transmission.

In addition, to withstand under hazardous environmental conditions, JetCon 2302, compliant with NEMA-TS2 standard, has dual redundant power inputs with wide DC10~60V range, 1.5KV Hi-Pot isolation protection and wide operating temperature for avoiding any power interruption and providing reliable network performance. With IP31 rigid aluminum case, CE/FCC regulatory approvals and 5-year global warranty, JetCon2302 is your reliable choice for industrial field site applications.

Two Channels Media Converter and 4 Ports Fiber Switch

The JetCon2302 can be configured by DIP switch in two different operation modes: media converter or fiber switch. In media converter operation mode, JetCon2302 has 2 channels 10/100 TX to 100 FX. For traditional media converter, it only has one channel TX to FX. Therefore, JetCon2302 can be used to substitute two traditional media converters as a result saving the cost and power use. The Link Loss Forwarding Technology can only be implemented in this mode.

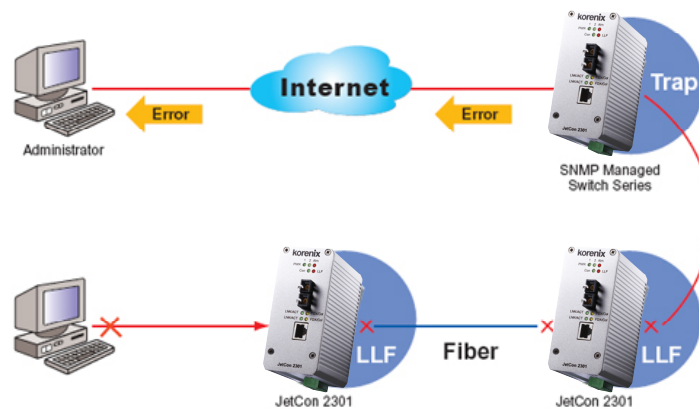
In switch operation mode, JetCon2302 becomes an Industrial 4-port 10/100Mbps Fast Ethernet Switch

with 2 100Mbps fiber ports for use in applications where greater distances need to be spanned. It implements fiber ports with multi-mode 2KM or single-mode 30KM transceivers to avoid interferences and achieve stable data transmission in extended field site installations. Incorporating 3.2Gbps switching fabric with non-blocking store and forward technology, JetCon2302 fulfills the high bandwidth industrial communication requirements of full wire transmission with its excellent data exchange performance. The updated configuration will be available after resetting the device.

Link Loss Forwarding Technology

When using traditional fiber converters, users often encounter the following problem: a fiber converter acting like an ordinary unmanaged 2-port switch. When one of the fiber converter's ports fails (e.g. the TX port), the other one (e.g. FX port) continues to receive data via the media (e.g. fiber), confusing the device on the other end of the media by indicating that the connection is still intact. But, by the time the disconnection is found, this error causes a great amount of data loss.

Link Loss Forwarding technology solves the problem: if a port loses the connection for any reason, it will activate Link Loss Forwarding to shut down the other port; hence, allowing the device on the other end of the media to detect the disconnection. The administrator over the network can be informed of the disconnection immediately, and therefore can react promptly to the situation, greatly reducing loss caused by link failure.



Wide Range Redundant Power Inputs & True Reliability

In field site applications, unstable power input always impacts on the reliability of system and causes an interruption of communication. To provide a higher reliability, JetCon 2302 has a wide range redundant power input 10~60VDC that meets

the NEMA-TS2 requirements for power variation. In addition, with -25~75°C and -40~75°C (JetCon 2302-w model) wide operating temperature range, the JetCon 2302 can ensure high performance data transmission under harsh environments.

Specification

Technology

Standard:

IEEE 802.3 10Base-T
 IEEE 802.3u 100Base-TX
 IEEE 802.3u 100Base-FX
 IEEE 802.3x Flow Control and Back Pressure

Performance

Switch Technology: 3.2 Gbps Store and Forwarding Technology

System forwarding performance: 1.19 Mega packets per second, 64 bytes packet size. (Switch Mode)

14880 pps for 10Base-T

148810 pps for 100Base-TX/ FX

Mac address: 1K MAC address entries with automatic learning and aging (Switch Mode only)

Packet Buffer: 512Kbits shared memory

Forwarding Technology: Store and Forward

Link Lose Forward: Supports Bi-directional Link Loss Forwarding function (Converter mode only)

Operating Mode:

Converter/Switch mode selected by DIP switch

Switch Mode: data exchange on 4 ports (Channel A, B exchange)

Converter mode: data forwarding on independent channel (A, B)

Digital Output: Dry Relay Output with 1A @24V DC ability

Interface

Ethernet copper port: 2 × 10/100TX ports with Auto MDI/MDI-X, Auto Negotiation

Fiber port:

2 × 100Mbps Fiber port, SC or ST (optioned).

JetCon 2302f-mm: Multi-mode (Channel A,B)

JetCon 2302f-ss : Single-mode (Channel A,B)

JetCon 2302f-ms : Multi-mode (Channel A),

Single-mode (Channel B)

Ethernet Copper Cable: RJ-45 Ethernet port : 100 Meters
 10Base-T: 2-pairs UTP/STP Cat-3,4 TIA/EIA 568-B cable
 100Base-TX : 2/4 pairs UTP/STP Cat.5 TIA/EIA 568-B cable

Ethernet Fiber Cable:

JetCon 2302-m: 2KM distance, 50~62.5/125um

Multi-mode fiber Cabel.

JetCon 2302-s: 30KM distance,8~10/125um

Single-mode fiber cable.

Diagnostic LEDs:

System Power (Green on) : Power 1 , 2

Relay Alarm: Active (Red)

Link Loss Forwarding : Enable (Green on)

Op. Mode: Convert (Green on)

Fiber Ethernet Port(Channel A/B): Link/Activity (Green on/ Yellow Blinking)

Ethernet Port: Link/Activity (Green on/Yellow Blinking)

Reset Button: For Operating mode change & LLF function activation

DIP Switch: DIP Switch 1: CH. B Fiber link event alarm control, Enable(On)/ Disable (Off)

DIP Switch 2: CH. A Fiber link event alarm control, Enable(On)/ Disable (Off)

DIP Switch 3: CH. B Copper link event alarm control, Enable(On)/ Disable (Off)

DIP Switch 4: CH. A Copper link event alarm control, Enable(On)/ Disable (Off)

DIP Switch 5: Operating mode select, Converter mode (On)/ Switch mode (Off)

DIP Switch 6: Link Loss Forwarding control, Enable(On)/ Disable (Off)

DIP Switch 7: Power Event Alarm Control, Enable(On)/ Disable (Off)

Power Connector: Removable Terminal Block

Digital Output: Removable Terminal Block

Power Requirements

System power: DC 10~60V with polarity reverses correction. Supports Positive/Negative power system

System power consumption: 6Watts / DC 24V

Mechanical

System Installation: DIN Rail installation

Enclosure protection: Ingress Protection code - 31

Dimensions: 99 (D) x55(W)x 120(H), unit:mm (without Din-rail kit)

Weight: To Be Update.

Environmental

Operating Temperature:

-25 ~75°C / -40~75°C (wide operating temperature model)

Operating Humidity: 0% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 75°C

Storage Humidity: 0%~ 95% non-condensing

Regulatory Approvals

EMI: CE/EN 55022 class A, FCC Class A,

Compliance with EN 50155 EMI

EN 61000-3-2:2006, EN 61000-3-3, EN 61000-6-2

EMS: CE/ EN 55024, EN 61000-6-4,

Compliance with EN 50155 EMS

IEC 61000-4-2,IEC61000-4-3, IEC61000-4-4,IEC61000-4-5,

IEC61000-4-6, IEC61000-4-8

Safety: Hi-pot Testing – AC 1.5KV

Shock: IEC 60068-2-27

Vibration: IEC 60068-2-6

Free fall: IEC 60068-2-32

Ordering Information

JetCon 2302-m Industrial 2-Channel Fast Ethernet to Fiber Media Converter, SC, Multi-mode/ 2KM

JetCon 2302-s Industrial 2-Channel Fast Ethernet to Fiber Media Converter, SC, Single-mode/ 30KM

Includes:

- JetCon 2302-m / 2302-s
- Quick Installation Guide