

Industrial Fast Ethernet to Fiber Rail Media Converter

JetCon2301S Slim Media Converter



- One port 10/100 TX to 100 FX media converter
- Auto Link Loss Forwarding for fault detection
- Supports Multi-forwarding mode : switch mode, modify cut-through, pure converter and converter with auto-change mode
- System Fault Relay Output
- Supports Auto MDI/MDI-X, Auto Negotiation
- Supports Multi-mode 2KM, Single-mode 30KM
- Extreme Low Data Forwarding Latency- 1.6×10^{-6} S
- Redundant Wide range 10-60V DC Power inputs with DC polarity protection
- IP-31 grade protection
- Supports 1.5KV Hi-Pot isolation protection
- -40-75°C operating temperature for hazardous environment applications

Overview

JetCon 2301S is a single port Fast Ethernet to Fiber media converter, compliant with EN61000-6-4, EN50121-1, and EN 50121-4 Railway standards to provide excellent performance under harsh environments featuring intensive vibration/shock and severe electromagnetic interference. Users can benefit from the Single-mode and Multi-mode fiber optic ports of the media converter for providing extended distance transmission of up to 30KM.

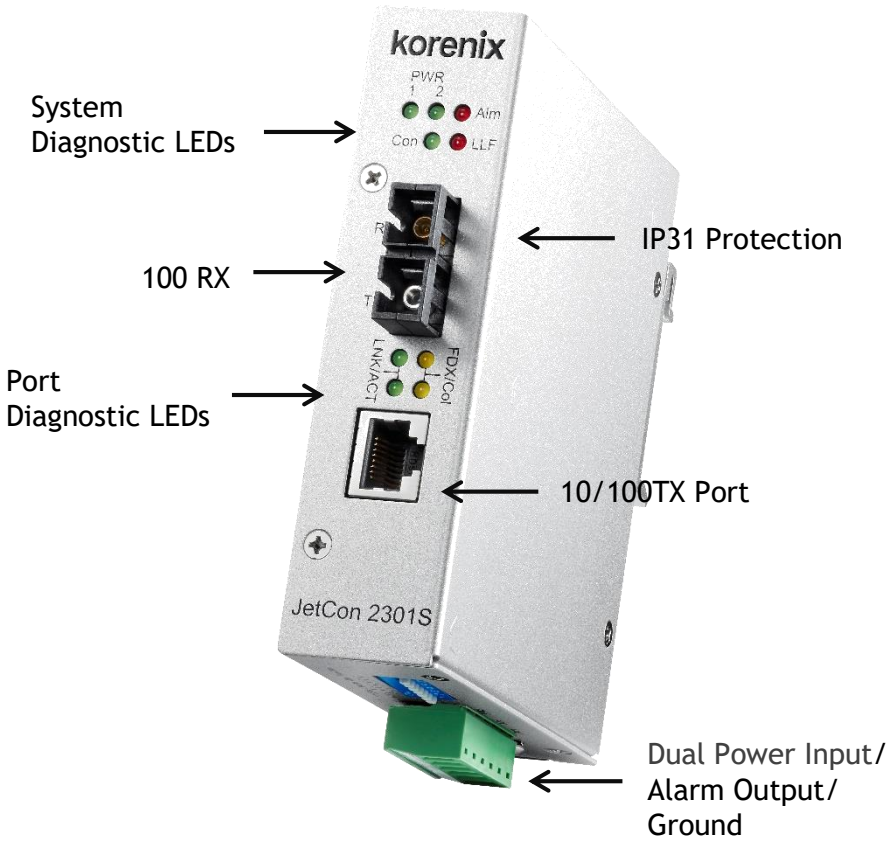
The JetCon 2301S supports 4 types of forwarding modes - store and forward, modify cut-through, pure converter and converter with auto-change modes for fulfilling extreme low latency requirements - Fieldbus and EtherCAT, with invariant forwarding latency in 64-1600 bytes packet length. To forward link status changes for alerting remote or central management systems, JetCon 2301S features remote Link Loss Forwarding technology as a result providing easy maintenance and greatly saving time.

Users can easily activate forwarding mode and LLF functions by adjusting the DIP switch and resetting the converter to apply reconfigurations. Moreover, the device provides alarm relay to trigger out a real alarm signal for port or power events.

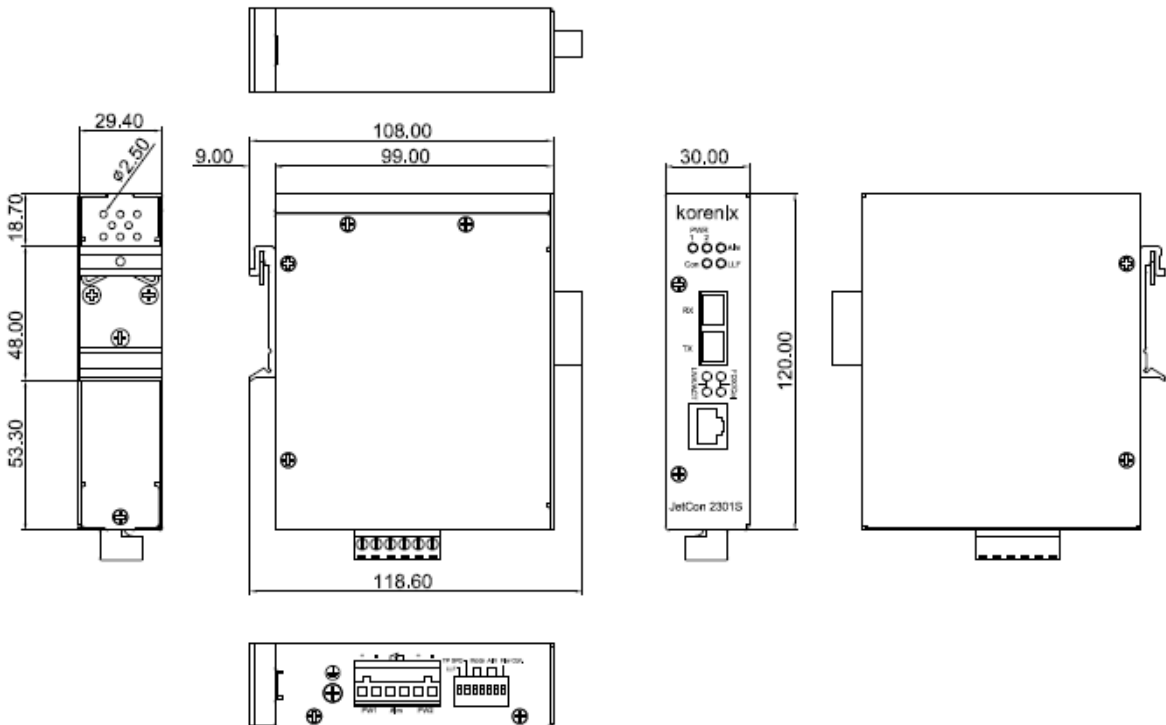
JetCon 2301S power redundancy with wide range DC10-60V inputs and built-in reverse polarity protection for ensuring the power continuity in the system.

Combining 1.5KV Hi-PoT isolation protection and -40-70°C wide operating temperature range, JetCon 2301S withstands vibration and shock in heavy machinery industry and interferes electromagnetic alluring power substation environments while keeping your applications running non-stop.

Appearance



Dimension



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	
Forwarding Technology	Supports 4 types of forwarding mode, store and forward, modify cut-through, pure converter and converter with auto-change mode. This feature is selected by DIP-switch.
Link Lose Forward	Supports Bi-directional Link Loss Forwarding function
Forwarding Latency	Store and Forward: 250 x 10-6S Modify Cut-Through: 17 x 10-6S Converter : 1.6 x 10-6S
TX Auto Sensing/ Forced	RJ-45 port supports auto-negotiation and forced mode - 100Mbps/Full Duplex.
Packet Length	64-1600Bytes @ Pure-Converter mode.
IEEE 802.3x flow control /back-pressure	Enabled by DIP Switch
Event Alarm	Supports port link down and power event alarm relay output, controlled by DIP switch.
Digital Output	Dry Relay Output with 1A @24V DC ability
Interface	
Ethernet Port - RJ-45	10/100TX ports with Auto MDI/MDI-X, Auto Negotiation.
Ethernet Port - Fiber	100Mbps Fiber port, SC JetCon 2301S-m/JetCon 2301S-mw: 2KM (Max.) - Wave-length: 1310nm - Min TX Power:-19dBm - Max TX Power:-14dBm - Min RX Sensitivity:-14dBm - Max RX Sensitivity:-31dBm - Link budget:12dB JetCon 2301S-s/JetCon 2301S-sw: 30KM (Max.) - Wave-length:1310nm - Max TX Power:-8dBm - Min TX Power:-15dBm - Max RX Sensitivity:-34dBm - Min RX Sensitivity:-8dBm - Link budget: 19dB JetCon 2301-s (WDM-A): Single-mode: 30KM (Max.) - Wave-length: TX 1310nm, RX 1550nm - Min TX Power:-14dBm - Max TX Power:-8dBm - Min RX Sensitivity: 0 dBm - Max RX Sensitivity:-31dBm - Link budget:17dBm JetCon 2301-s (WDM-B): Single-mode: 30KM (Max.) - Wave-length:TX 1550nm, RX 1310nm - Max TX Power:-14dBm - Min TX Power:-8dBm - Max RX Sensitivity: 0 dBm - Min RX Sensitivity:-31dBm - Link budget: 17dBm
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 2301S-m: 2KM distance, 50-62.5/125um Multi-mode fiber Cable. JetCon 2301S-s: 30KM distance,8-10/125um Single-mode fiber cable.

Diagnostic LEDs	<ul style="list-style-type: none"> - System Power (Green on) : Power 1 , 2 - Relay Alarm: Active (Red) - Link Loss Forwarding : Far end fault event occurred (Red on) - Op. Mode: Convert (Green on) (Controlled by DIP Switch 4) - Fiber Ethernet Port: Link/Activity (Green on/Blinking), Full Duplex/Collision (Yellow on/Yellow Blinking) - Ethernet Port: Link/Activity (Green on/Blinking), Full Duplex/Collision (Yellow On/ Yellow Blinking)
DIP Switch	<p>DIP Switch 1: LLF Enable/Disable, default disable (DIP 1 off)</p> <p>DIP Switch 2: TX port Auto-Negotiation (OFF)/Force_100F (ON), default disable (DIP 2 off)</p> <p>DIP Switch 3 & 4: Forwarding Mode Selection, default store & forward mode (DIP 3,4 off)</p> <p>DIP Switch 5: Power Alarm, default disable (DIP 5 off)</p> <p>DIP Switch 6: Port Alarm, default disable (DIP 6 off)</p> <p>DIP Switch 7: Flow Control, default enable (DIP 7 off)</p>
Power Connector	Removable Terminal Block
Digital Output	Removable Terminal Block
Power Requirement	
Power	Redundant Power DC 10-60V with polarity reverses correction. Supports Positive/Negative power system
Power Consumption	5 Watts / DC 24V
Mechanical	
Enclosure Protection	Ingress Protection code - 31
Mounting	DIN Rail installation
Dimension	99(D) x30(W)x 120(H) mm (Without Din-rail kit)
Weight	400g Without package
Environmental	
Operating Temperature	-40°C-75°C
Operating Humidity	0% - 95% non-condensing
Storage Temperature	-40°C-85°C
Storage Humidity	0%- 95% non-condensing
Approvals	
EMI	EN55022 CLASS A, IEC/EN 61000-6-4
EMS	CE/ EN 55024, IEC/EN 61000-6-2, IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN61000-4-6, IEC/EN 61000-4-8, IEC/EN 61000-4-9, IEC 61000-4-11
Railway	EN50121-4
Safety	Hi-pot Testing - AC 1.5KV
Warranty	5 years
Ordering Information	
JetCon 2301S-s	Industrial Fast Ethernet to Fiber Rail Media Converter in Slim Case, SC, Single-mode/30KM, -25-75°C
JetCon 2301S-m	Industrial Fast Ethernet to Fiber Rail Media Converter in Slim Case, SC, Multi-Mode/2KM, -25-75°C
JetCon 2301S-sw	Industrial Fast Ethernet to Fiber Rail Media Converter in Slim Case, SC, Single-mode/30KM, -40-75°C
JetCon 2301S-mw	Industrial Fast Ethernet to Fiber Rail Media Converter in Slim Case, SC, Multi-Mode/2KM, -40-75°C
JetCon 2301S-s WDM-A	Industrial Fast Ethernet to Fiber Rail Media Converter in Slim Case, Single-mode/30KM, WDM A Tx1310/Rx1550
JetCon 2301S-s WDM-B	Industrial Fast Ethernet to Fiber Rail Media Converter in Slim Case, Single-mode/30KM, WDM B Tx1550/Rx1310
Includes	<ul style="list-style-type: none"> - JetCon 2301S with DIN Rail Clip *1 - Quick Installation Guide * 1