

JetCon 2401 / 2401-mw / 2401-sw

Industrial Serial to Fiber Media Converter



CE FC  RoHS

- 3-in-1 RS232/422/485 to serial fiber media converter
- Easy mode change without resetting
- Supports Multi-mode 5KM, Single-mode 40KM
- PTP or SFR transmission mode for serial fiber ring communication
- Auto baud rate and direction control
- High level immunity with 15KV ESD protection
- Two-way 120 ohm line terminator embedded
- Dual modes for power input, AC 24V(12~32V)/ DC 24V(12~48V)
- -20~70°C operating temperature for hazardous environment applications (JetCon 2401-mw/2401-sw: -40~70°C, available by request)

Overview

JetCon 2401 is a 1-port RS232/422/485 serial to fiber media converter with extended fiber transmission. Single-mode and Multi-mode fiber optic ports meet your needs for long distance transmission up to 40KM. JetCon 2401 will automatically detect the data baud rate of the connected full-duplex serial device, ranging from 300 to 921,600bps. By moving up the DIP switch, JetCon 2401 supports an auto setting function without system power reset to change serial interface, fiber wiring architecture and termination of receiver and transmission line. Also JetCon 2401 is specially designed for applications requiring

good immunity of EMI/EMS such as power distribute substation, rail and traffic control signification systems under severe electromagnetic interference and wide temperature range from -40 ~ 70°C.

When you are ready to install JetCon 2401, you will find out that it can be easily wall mounted and be mounted directly on DIN rail. AC 24V(12~32V) or DC 24V(12~48V) is available for different operating environments. With IP 30 rigid aluminum case, stronger CE/FCC regulatory approvals, and 5-year global warranty, JetCon 2401 is your reliable choice for hazardous applications.

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

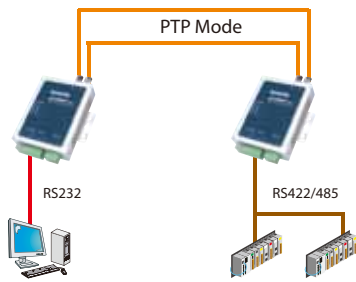
Din Rail
Power Supply

Application

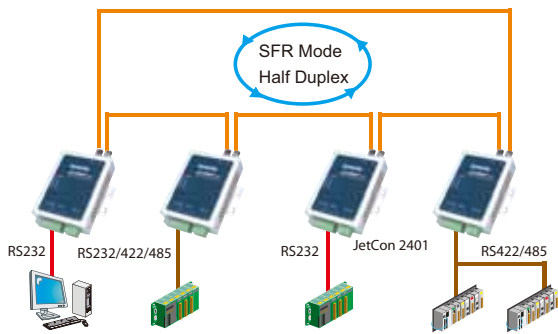
The JetCon 2401 supports two transmission configurations, Peer to Peer in full duplex and Serial Fiber Ring (SFR) in half duplex. In a Peer-to-Peer configuration, two fibers are required between the

two converters, one for data in each direction (RX and TX). To expand the number of connected serial devices and connect the fiber transmitter to the rest of the slaves and eventually back to the master node.

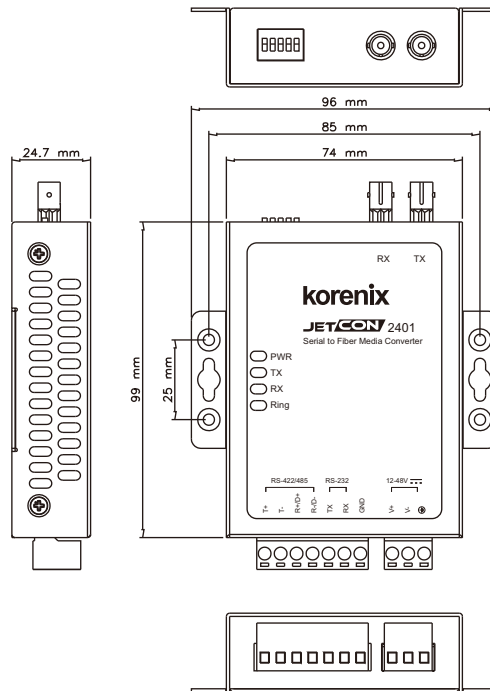
Peer to Peer Serial Communication (PTP)



Serial Fiber Ring Communication (SFR)



Dimensions (Unit –mm)



Specification

Technology

Standard:

EIA/TIA-232 RS-232 (ITU-T v.28)
EIA/TIA-422 RS-422 (ITU-T v.11)
EIA/TIA-485 RS-485 (ISO/IEC8284)

Serial Interface:

RS-232 2-wires, RS-422 4-wires, RS-485 2/4-wires

Architecture: PTP mode: Peer To Peer wiring in Full or Half Duplex

SFR mode: Serial Fiber Ring in Half Duplex

Interface

Number of Ports:

1 x RS-232/RS-485/RS-422 serial port
1 x Fiber Transmit port, 1 x Fiber receive port

Connectors:

Serial port: 7-pin removable terminal block
Fiber port: 1 x Duplex ST
Power input: 3-pin removable terminal block with earth ground

Transmit Baud Rate: 300bps to 921.6Kbps

Link distance:

RS-232: 50 feet
RS-422: 4000 feet
RS-485: 4000 feet
Multi-mode fiber: 50/125um or 62.5/125um, max. distance 5KM
Single-mode fiber: 8/125um, 9/125um max. distance 40KM

Fiber Transceiver:

JetCon2401-m, Multi-mode:
Distance: 5KM @ 62.5/125um multi mode cable with 3dbm/km attenuation
Wave-length: 820nm
TX Power: -12dBm (Min) ~ -9dBm (Max)
RX Sensitivity: -28dBm (Min)
Link budget: 16dBm
JetCon2401-s, Single-mode:
Distance: 40KM @ 9/125um single mode cable with 0.35dbm/km attenuation
Wave-length: 1310nm
TX Power: -9dBm (Min) ~ -8dBm (Max)
RX Sensitivity: -27dBm (Min)
Link budget: 18dBm

Serial signal:

RS-232: TxD, RxD, Signal Ground.
RS-422: TxD+, TxD-, RxD+, RxD-, Signal Ground
RS-485 4 wires: TxD+, TxD-, RxD+, RxD-, Signal Ground.
RS-485 2 wires: Data+, Data-, Signal Ground.

Configuration DIP Switch:

Switch 1 and 2: serial interface mode select.
Switch 3: RX 120ohm terminator Disable (off)/Enable (on)
Switch 4: TX 120ohm terminator Disable (off)/Enable (on)
Switch 5: PTP mode (off) / SFR mode (on).

Diagnostic LED:

Power LED: Power 1 (Green)
TX (Green): Serial port is on transmitting data.
RX (Yellow): Serial port is on receiving data.
Ring mode (Green): Working on SFR (Serial Fiber Ring) mode.

Power Requirements

System Power: Positive or negative power system.
DC 24V (12~48V) with reverse polarity protection.
AC 24V (AC12~32V, 50/60Hz)
Provides 0.65A over current protection

Power Consumption: 1.5Watts @ 24V(Maximum)

Mechanical

Installation: DIN-Rail mount or desktop
Case: IP-30 grade aluminum metal case
Dimension: 24.7mm(H) x 96mm (W) x 99mm (L) with DIN
Weight:
0.24kg with package
0.135kg without package

Environmental

Operating Temperature: -20 ~70°C
(JetCon 2401-mw/2401-sw -40~70°C)
Operating Humidity: 5% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 80°C
Storage Humidity: 5%~ 95% (non-condensing)

Regulatory Approvals

EMI: FCC Class B; CE/EN55022:2003, class B; CE/EN61000-3-2:2001 Harmonic Test CE/EN61000-3-3:1995 Flicker test

EMS:

EN61000-4-2:1998, ESD Testing, Level 3
EN61000-4-3:1998, RS testing, Level 3
EN61000-4-4:1995, EFT testing, Level 3
EN61000-4-5:1995, Surge test, Level 3
EN61000-4-6:1996, CS testing, Level 3

Safety: CE/EN60950

Shock: IEC60068-2-27

Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32

Warranty: 5 Years

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SFP Module

Din Rail
Power Supply

Ordering Information

JetCon 2401-m Industrial Serial to Fiber Media Converter, ST, Multi-mode/5KM

JetCon 2401-s Industrial Serial to Fiber Media Converter, ST, Single-mode/40KM

Includes:

- JetCon 2401-m / 2401-s
- Quick Installation Guide