JETCON

spectra

JetCon 2401 / 2401-w

Industrial Serial to Fiber Media Converter

Best Buy

korenix

CE FC RoHS

SFR | PTP | AC 12~32V DC 12~48V

15KV ESD | -20~70°C

- 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
- Supports biasing resistor
- Dual modes for power input, AC 24V(12~32V)/ DC 24V(12~48V)
- -20~70°C operating temperature for hazardous environment applications (-40~70°C wide operating temperature 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 substation, rail and traffic control signification systems under severe electromagnetic interference and wide temperature range.
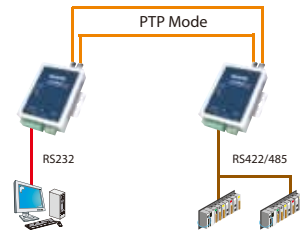
JetCon 2401 can be easily wall mounted as well as be mounted directly on DIN rail. AC 24V(12~32V) or DC 24V(12~48V) is available for different operating environments. With IP 30 rigid aluminum case, CE/FCC regulatory approvals, and 5-year global warranty, JetCon 2401 is your reliable choice for hazardous applications.

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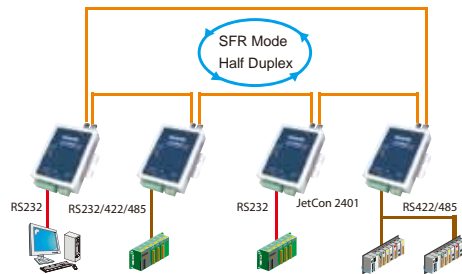www.spectra.ch   info@spectra.ch

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 users can apply the SFP configuration mode and connect the fiber transmitter to the rest of the slaves and eventually back to the master node.
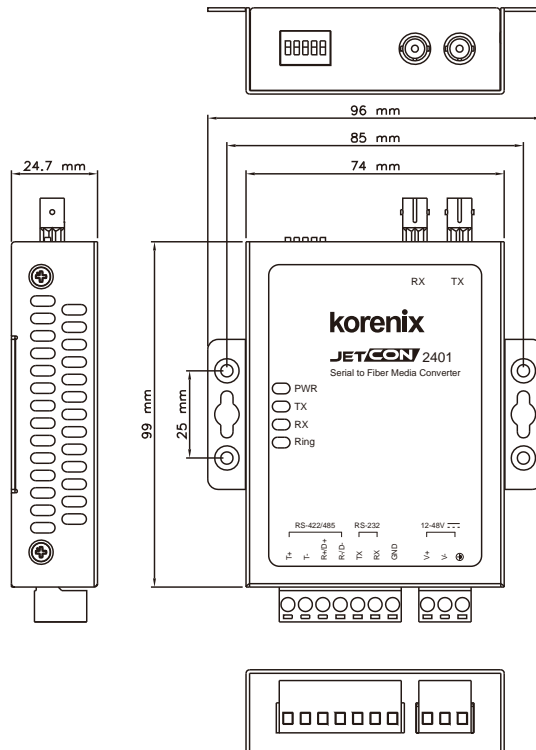
Peer to Peer Serial Communication (PTP)

PTP Mode

RS232   RS422/485

Serial Fiber Ring Communication (SFR)

SFR Mode
Half Duplex

RS232   RS232/422/485   RS232   JetCon 2401   RS422/485

Dimensions (Unit = mm)

96 mm
85 mm
74 mm
24.7 mm
99 mm
25 mm

RX   TX

korenix
JETCON 2401
Serial to Fiber Media Converter

PWR
TX
RX
Ring

RS-422/485   RS-232   12-48V

T+ T- Rx/D+ Rx/D- TX RX GND V+ V-

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 with full or half duplex mode.
SFR mode: Serial Fiber Ring with half duplex mode

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 74mm (W) x 99mm (D) with DIN
Weight:
0.24kg with package
0.135kg without package

Environmental
Operating Temperature: -20 ~70℃
(JetCon 2401-mw/2401-sw -40~70°C)
Operating Humidity: 5% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 80℃
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
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
Warranty: 5 Years

Ordering Information

Art. No. 114503   JetCon 2401-m Industrial Serial to Fiber Media Converter, ST, Multi-mode/5KM

Art. No. 125968   JetCon 2401-mw with Wide temperature

Art. No. 114505   JetCon 2401-s Industrial Serial to Fiber Media Converter, ST, Single-mode/40KM

Art. No. 121522   JetCon 2401-sw with Wide temperature

Includes:

■ JetCon 2401-m / 2401-s / JetCon 2401-mw / JetCon 2401-sw +   Quick Installation Guide