

4.7. RS-232/422/485 to Fiber Optic Converter

I-2541

RS-232/422/485 to Fiber Optic Converter



Features ▶▶▶▶

- Automatic RS-485 Direction Control
- Avoids lightning strikes and EMI/RFI interference
- Power Input, +10 ~ +30 VDC
- DIN-Rail
- Optical fibers enable transmission of 2 km
- ESD Protection for the RS-232/422/485 Data Line
- Operating Temperatures, -25 °C ~ +75 °C

Introduction

The I-2541 is an RS-232/422/485 to fiber optic converter that secures data transmission by using fiber optic transmission to provide immunity from EMI/RFI interference. The I-2541 is used for RS-232/422 point-to-point connections and RS-485 multi-drop applications for transmitting a signal up to 2 km (6,600 ft) and is the perfect solution for applications where transmission must be protected from electrical exposure, surges or chemical corrosion.

System Specifications

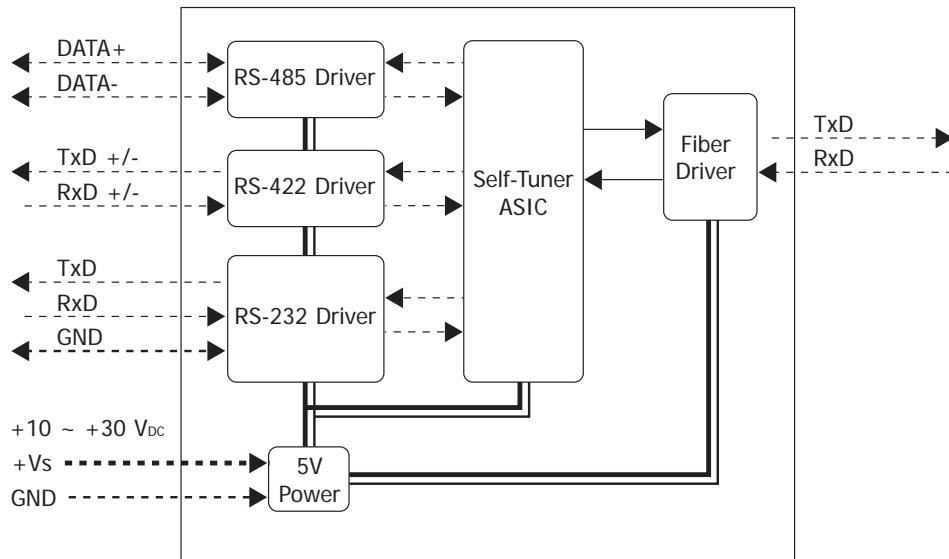
Interface		
Fiber Interface	Fiber Port	Multi Mode; ST Connector
	Wavelength	850 nm
	Fiber Cable	50/125, 62.5/125, 100/140 μm
	Distance	2 km, (62.5/125 μm recommended)
Serial Interface	RS-232	TxD, RxD, GND
	RS-232	TxD+, TxD-, RxD+, RxD-
	RS-232	Data+, Data-
2-wire Cabling/4-wire Cabling		Belden 8941 (2P twisted-pair cable)/Belden 8942 (4P twisted-pair cable), if different cables are used, the transmission distance may change
RS-422/485 Transfer Distance		Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps
Maximum Supported RS-485 Devices		256 (Without repeater)
Self-Tuner Asic Inside		Yes
Speed		300 ~ 115200 bps
ESD Protection		Yes
RS-232/422/485 Connection		Removable 8-Pin Terminal Block
LED Indicators		
Power		Yes
Power		
Input Voltage Range		+10 Vdc ~ +30 Vdc (Non-isolated)
Power Consumption		1.5 W
Mechanical		
Casing		Plastic
Flammability		Fire Retardant Materials (UL94-V0 Level)
Dimensions (W x L x H)		33 mm x 89 mm x 107 mm
Installation		DIN-Rail
Environment		
Operating Temperature		-25 °C ~ +75 °C
Storage Temperature		-30 °C ~ +75 °C
Humidity		10 ~ 90% RH, non-condensing

4-7

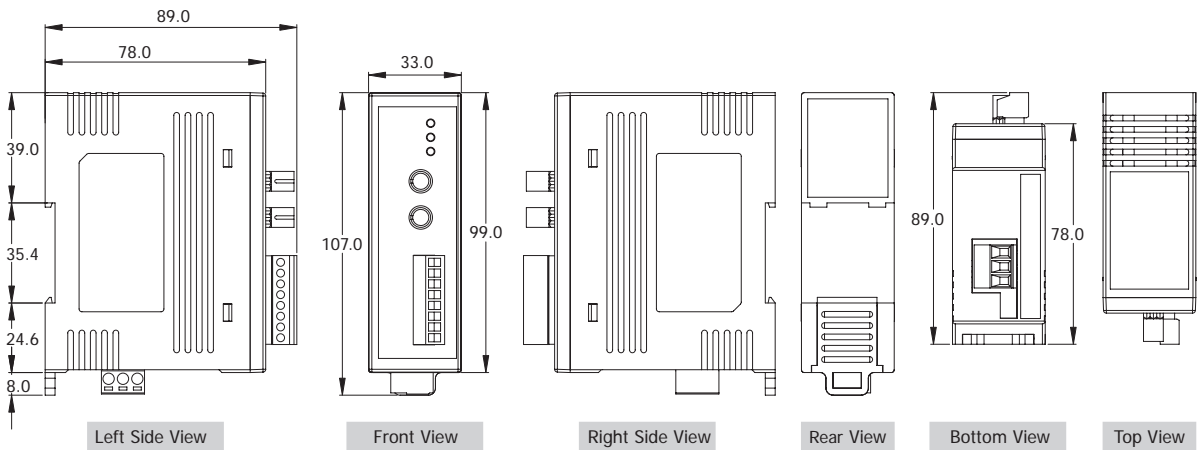
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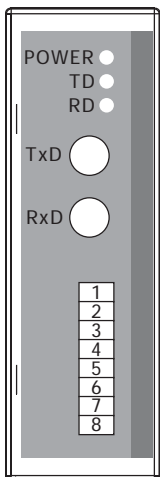
Internal I/O Structure



Dimensions (Unit: mm)



Pin Assignments



Terminal No.	Pin Assignment
TxD	Fiber TxD
RxD	Fiber RxD
01	TxD+ /DATA+
02	TxD- /DATA-
03	RxD+
04	RxD-
05	NC
06	GND
07	TxD
08	RxD

Ordering Information

I-2541 CR	RS-232/422/485 to Fiber Optic Converter
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Accessories

GPSU06U-6	24 Vdc/0.25 A, 6 W Power Supply
DIN-KA52F	24 Vdc/1.04 A, 25 W Power Supply with Din-Rail Mounting

I-2541

Applications

4-7

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