

4.6. RS-232/422/485 to Fiber Optic Converters



Features

- Auto Switching Baud Rate, 300 ~ 115200 bps
- 3000 V_{DC} Isolation Protection on the RS-232 side
- ESD Protection for the RS-232/422/485 Data Line
- Transmission Speed of up to 115200 bps
- Power Input of +10 ~ +30 V_{DC}
- Supports Operating Temperatures from -25 °C ~ +75 °C
- DIN-Rail



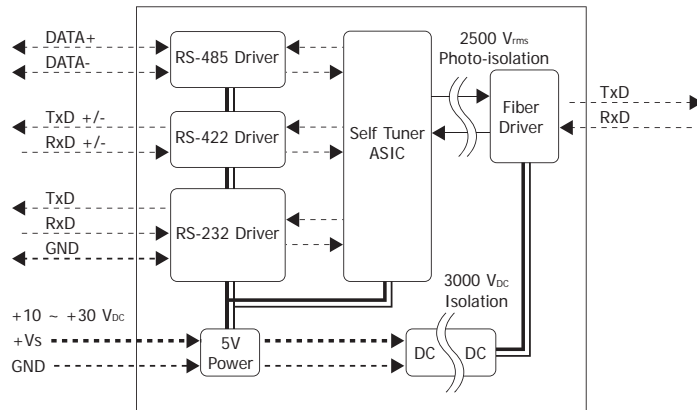
Introduction

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, lightning or chemical corrosion.

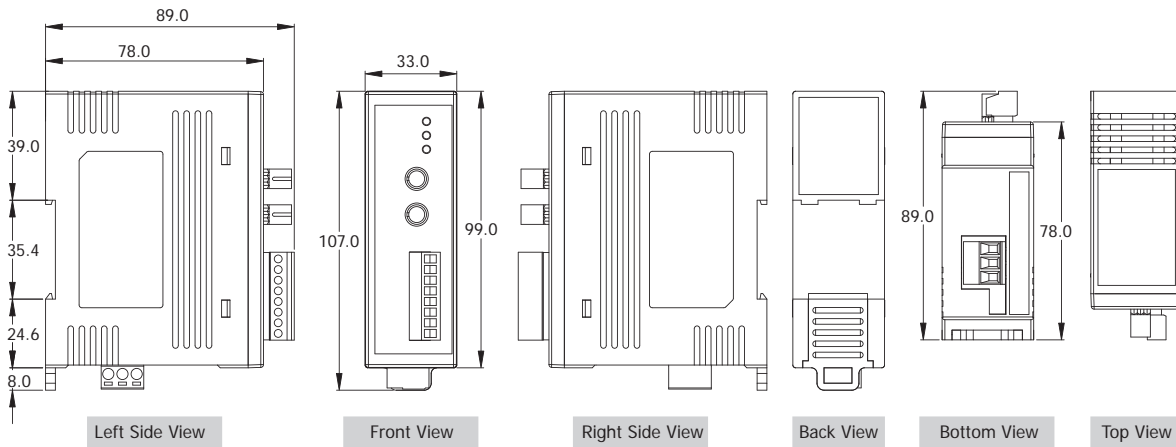
Specifications

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-422	TxD+, TxD-, RxD+, RxD-
	RS-485	Data+, Data-
		The RS-232, RS-422 and RS-485 cannot be used simultaneously
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	
Isolated Voltage	3000 V _{DC} on the RS-232 side	
RS-232/422/485 Connection	Removable 8-Pin Terminal Block	
LED Indicators		
Power/Communication	Yes	
Power		
Input Voltage Range	+10 V _{DC} ~ +30 V _{DC} (Non-isolated)	
Power Consumption	1.9 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	

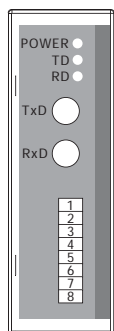
Internal I/O Structure



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 V _{dc} /0.25 A, 6 W Power Supply
DIN-KA52F	24 V _{dc} /1.04 A, 25 W Power Supply with Din-Rail Mounting

Applications

