

I-2541/I-2542 Series

RS-232/422/485 to Fiber Optic Converter

Features

- Automatic RS-485 Direction Control
- Avoids lightning strikes and EMI/RFI interference
- ESD Protection for the RS-232/422/485 Data Line

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 and is the perfect solution for applications where transmission must be protected from electrical exposure, surges or chemical corrosion.

The I-2542 series of Single-Strand Fiber Converters supports Wavelength Division Multiplexing (WDM) technology that allows two independent data communication channels to transmit and receive over one standard, single mode, fiber optic line. This not only doubles your existing bandwidth, but also effectively reduces the cost of creating a new fiber optic infrastructure.The I-2542-A and I-2542-B is a pair.

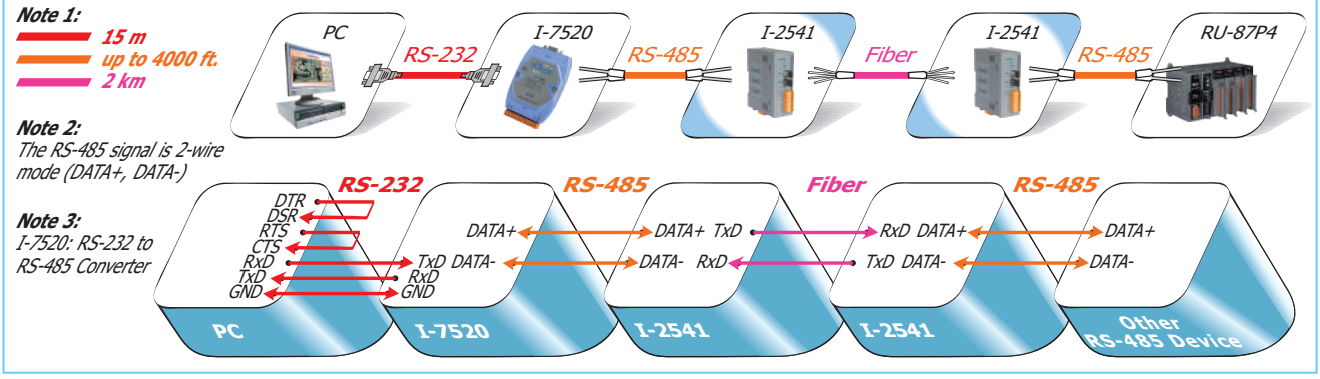
System Specifications

Models			I-2541	I-2542 Series
Interface				
Fiber Interface	Fiber Port		Multi-Mode; ST connector	Single-Mode; SC connector
	Wavelength		850 nm	TX: 1310, RX: 1550 nm for I-2542-A/I-2542-A25 TX: 1550, RX: 1310 nm for I-2542-B/I-2542-B25
	Fiber Cable		50/125, 62.5/125, 100/140 µm	8.3/125, 8.7/125, 9/125 or 10/125 µm
	Distance		2 km, (62.5/125 µm recommended)	15 km for I-2542-A/I-2542-B 25 km for I-2542-A25/I-2542-B25 (9/125 µm recommended)
Serial Interface	RS-232	The RS-232, RS-422 and RS-485 cannot be used simultaneously	TxD, RxD, GND	
	RS-422		TxD+, TxD-, RxD+, RxD-	
	RS-485		Data+, Data-	
RS-422/485 Transmission Distance			Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)	
Self-Tuner Asic Inside			Yes	
Baud Rate			300 ~ 115200 bps	1200 ~ 115200 bps
ESD Protection			Yes	
RS-232/422/485 Connector			Removable 8-Pin Terminal Block	
LED Indicators				
Power / Communication			Yes	
Power				
Input Voltage Range			+10 VDC ~ +30 VDC (Non-isolated)	
Power Consumption			1.5 W	2 W
Mechanical				
Casing			Plastic	
Dimensions (W x L x H)			33 mm x 89 mm x 107 mm	33 mm x 88 mm x 107 mm
Installation			DIN-Rail Mounting	
Environment				
Operating Temperature			-25 °C ~ +75 °C	
Storage Temperature			-30 °C ~ +75 °C	
Humidity			10 ~ 90% RH, non-condensing	

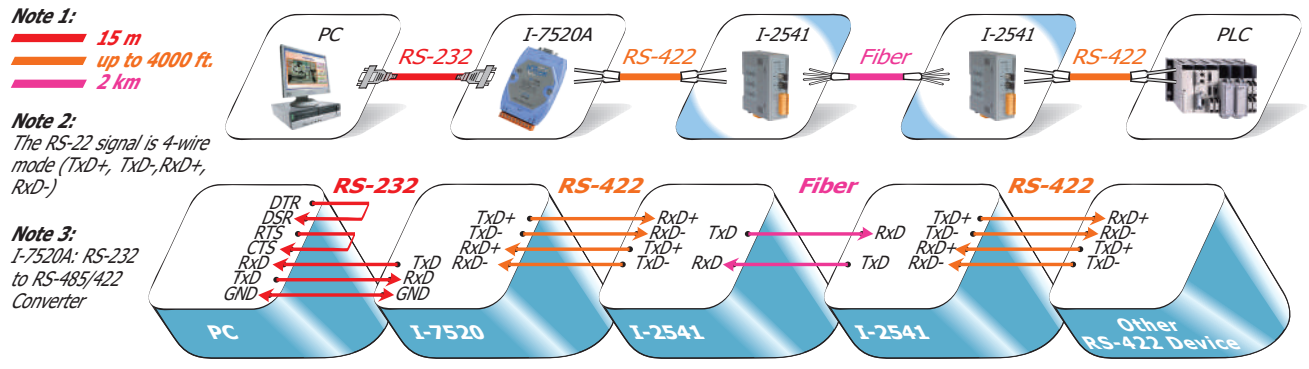
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Applications

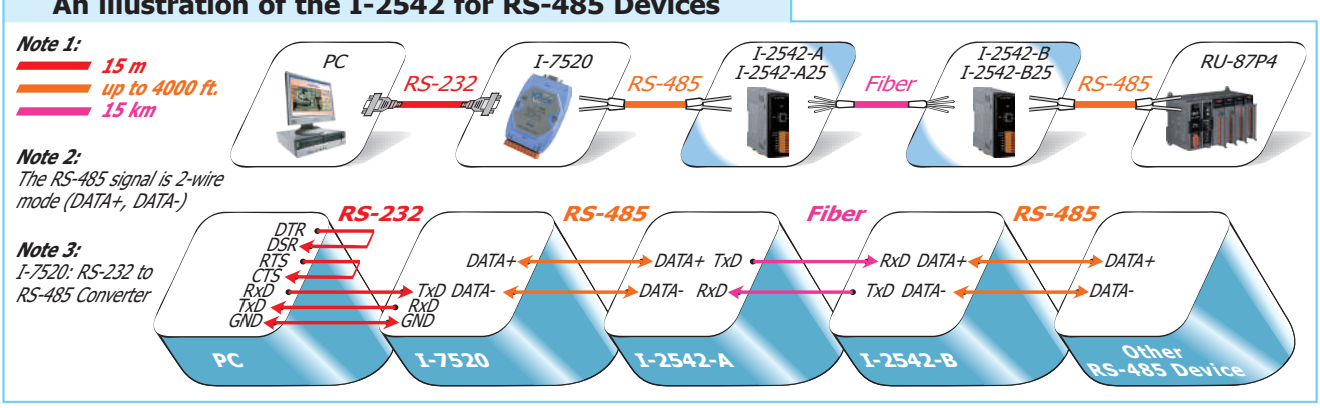
An illustration of the I-2541 for RS-485 Devices



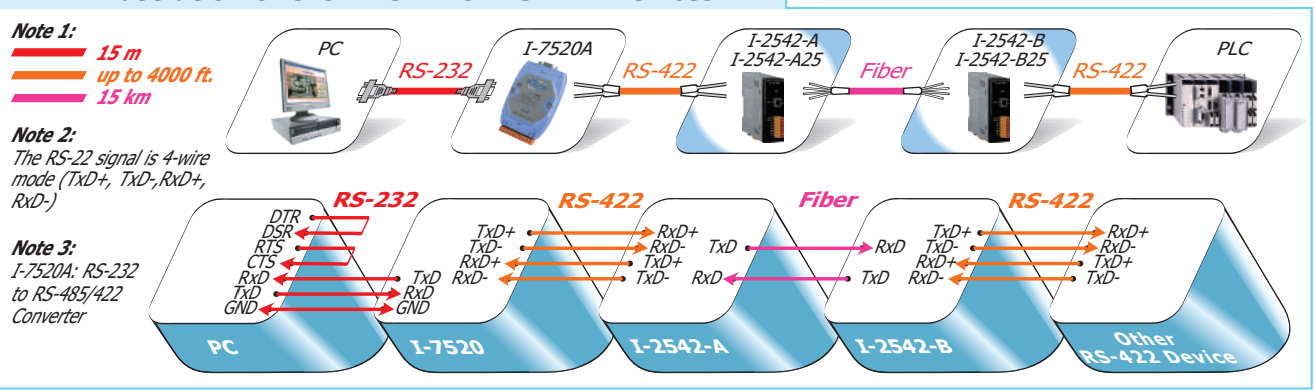
An illustration of the I-2541 for RS-422 Devices



An illustration of the I-2542 for RS-485 Devices

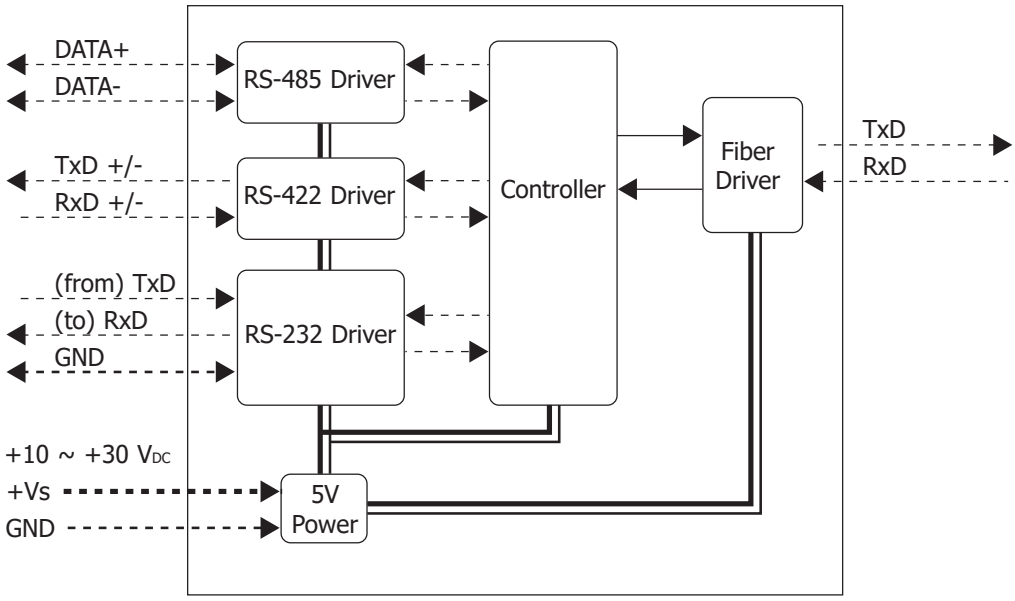


An illustration of the I-2542 for RS-422 Devices



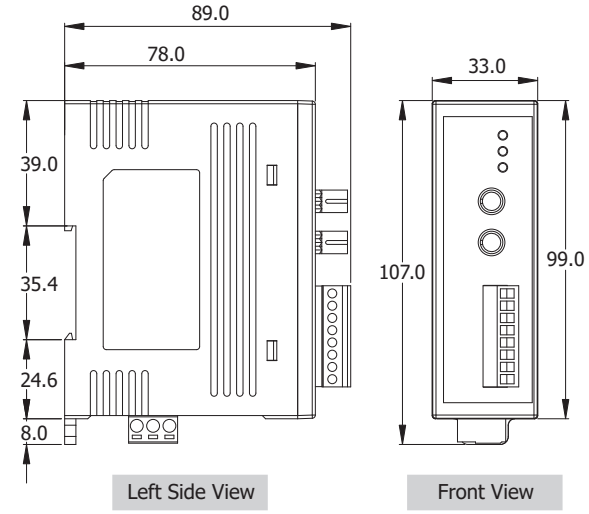
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Internal I/O Structure

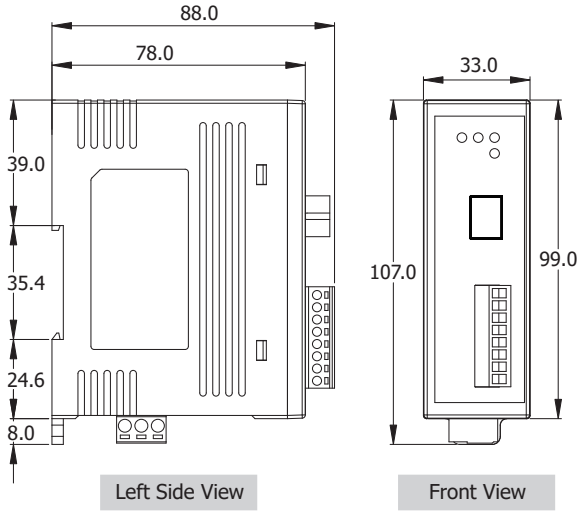


Dimensions (Units: mm)

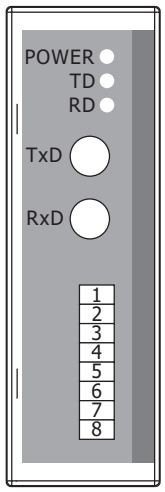
I-2541



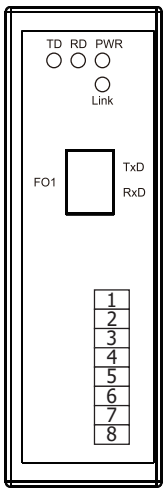
I-2542 Series



Pin Assignments



Terminal No.	Pin Assignment
TxD	Fiber TxD
RxD	Fiber RxD
1	TxD+/DATA+
2	TxD-/DATA-
3	RxD+
4	RxD-
5	N/A
6	GND
7	TxD
8	RxD



Ordering Information

I-2541 CR	RS-232/422/485 to Multi-Mode 2 Km, ST Fiber optic converter (RoHS)
I-2542-A CR	RS-232/422/485 to Single-Mode 15 Km, SC Fiber optic converter, TX 1310 nm, RX 1550 nm (RoHS)
I-2542-B CR	RS-232/422/485 to Single-Mode 15 Km, SC Fiber optic converter, TX 1550 nm, RX 1310 nm (RoHS)
I-2542-A25 CR	RS-232/422/485 to Single-Mode 25 Km, SC Fiber optic converter, TX 1310 nm, RX 1550 nm (RoHS)
I-2542-B25 CR	RS-232/422/485 to Single-Mode 25 Km, SC Fiber optic converter, TX 1550 nm, RX 1310 nm (RoHS)

Important Note:
You must purchase both **I-2542-A + I-2542-B** or **I-2542-A25 + I-2542-B25** since these products work as a pair.

Accessories

GPSU06U-6 CR	Power Supply, 110~240 VAC to 24 VDC/0.25 A, 6 W, two pins USA plug (RoHS)

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