

I-7514U

Isolated 4-channel RS-485 Repeater/Hub/Splitter

Features

- True RS-485 Star Wiring Hub
- Independent RS-485 driver for each channel
- LEDs for indicating RS-485 TxD/RxD activity
- Auto Switching baud rate, 300 ~ 115200 bps and fixed baud rate setting via rotary switch, 1200 ~ 115200 bps
- Hubs can be daisy chained for 256 channels
- 120 Ω termination resistor for each channel

Introduction

RS-485 Active Star Wiring Hub

The I-7514U is a 4-ch RS-485 active star wiring hub, it has 4 independent RS-485 output channels and one RS-485 input channel. Each output channel is equipped with an individual driver. The data from a master to the input channel will simultaneously be forwarded to all the four output channels.

Baud Rate Setting

The I-7514U provides 2 modes of baud rate setting, one is Self-Tuner mode and the other is fixed baud rate mode. The Self-Tuner mode can support Multiple Baud Rate and Multiple Data Format. The Self-Tuner design is exactly the same as I-7513 and I-7510 series. The Fixed baud rate mode offers a better quality for data transmission over long or lossy lines or electrically noisy environments.

RS-485 Short-Circuit

The Short-circuit protection can automatically shut off the breakdown channel, this kind of design can suffice to protect the communication system. When a connected RS-485 equipment breaks down, the breakdown channel will be isolated to ensure that other equipments work normally.

Termination resistors

In some critical environments, you may need to add termination resistors to prevent the reflection of serial signals. The I-7514U includes a 120 Ω termination resistor for each channel by jumper selectable (Default disable).

LED Indicators

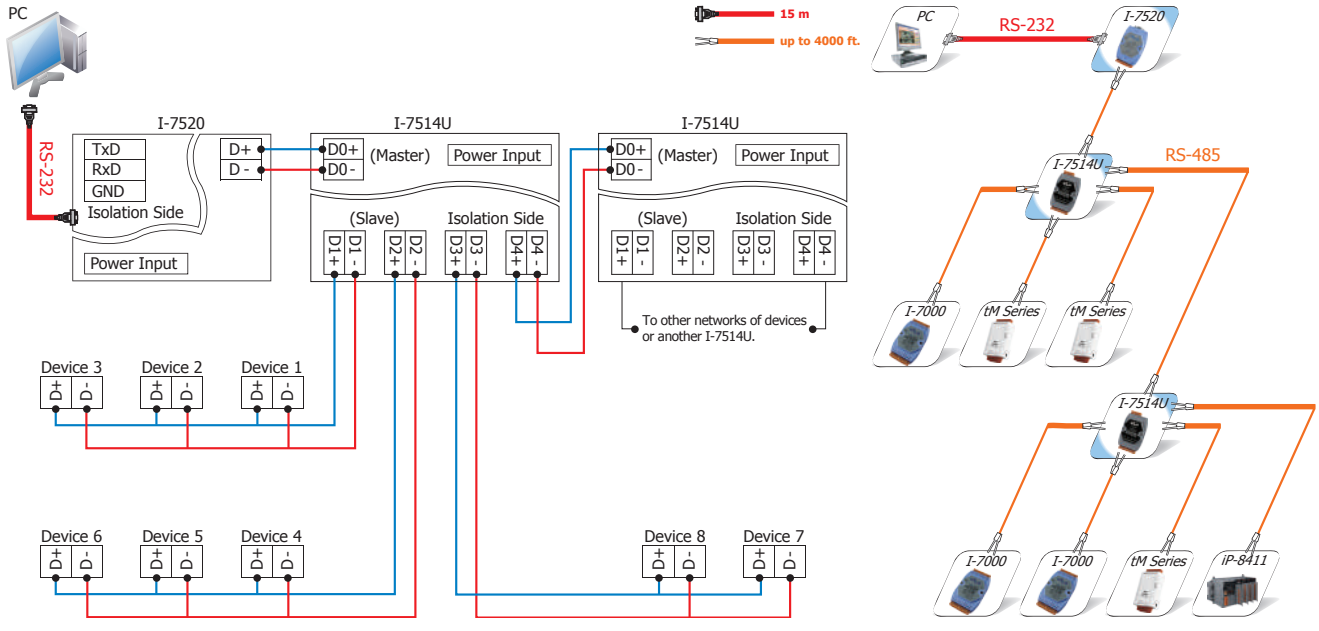
The I-7514U has 6 LED to indicate the power status and network traffic. The TxD/RxD LED will flash when the unit is being sent out or received data.

System Specifications

Interface	
Input (Master)	1 RS-485 Channel: Data+, Data-
Output (Slave)	4 RS-485 Channels: Data+, Data-
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
Speed	300 ~ 115200 bps via Self-Tuner mode; 1200 ~ 115200 bps via Fixed Baud Rate mode
ESD Protection	Yes
2500 VDC Isolation on CH1 ~ CH4	2-way Isolation
Connector	Removable 10-Pin Terminal Block x 1; Removable 6-Pin Terminal Block x 1
LED Indicators	
Power/Communication	Yes
Power	
Input Voltage Range	+10 VDC ~ +30 VDC (Non-isolated)
Power Consumption	1.3 W
Mechanical	
Casing	Plastic
Dimensions (W x L x H)	72 mm x 35 mm x 120 mm
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +75 °C
Humidity	10 ~ 90% RH, non-condensing

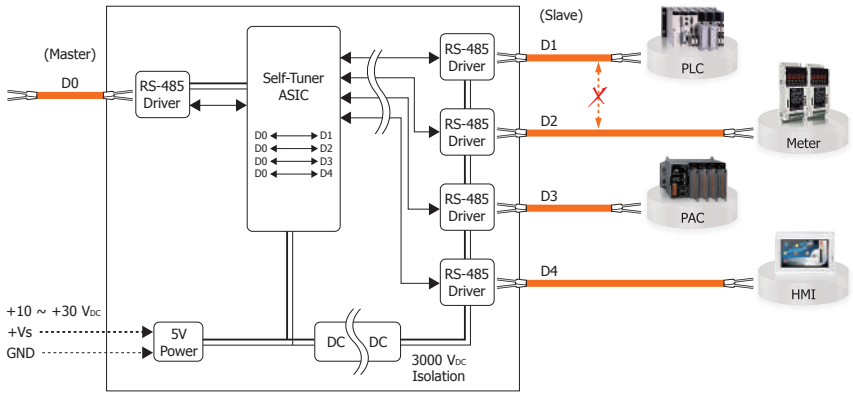
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Applications

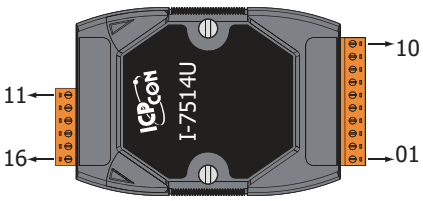


RS-485 Splitter

The following block diagram shows how I-7514U was designed as independent channel. Data coming from the master input will be transmitted to all four RS-485 slave channels. But data coming from the slave channels will be returned to the master input only. Thus reduces the possibility of interference between each RS-485 slave loop and makes the RS-485 networks more robust and reliable.

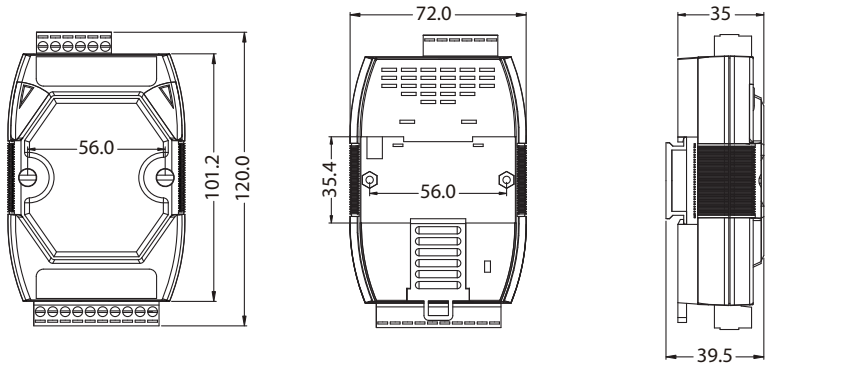


Pin Assignments



Terminal No.	Pin Assignment	
01	D1+	CH1
02	D1-	
03	D2+	CH2
04	D2-	
05	D3+	CH3
06	D3-	
07	D4+	CH4
08	D4-	
09	N.C.	
10	ISO.GND	
11	D0-	CH0
12	D0+	
13	D0-	
14	D0+	
15	(R)+Vs	
16	(B)GND	

Dimensions (Units: mm)



Front View | Rear View | DIN-Rail Mounting Bracket

Ordering Information

I-7514U-G CR	Isolated 4-channel RS-485 Repeater/Hub/Splitter (Gray Cover) (RoHS)

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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