



## 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  $\Omega$  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  $\Omega$  termination resistor for each channel by jumper selectable (Default disable).

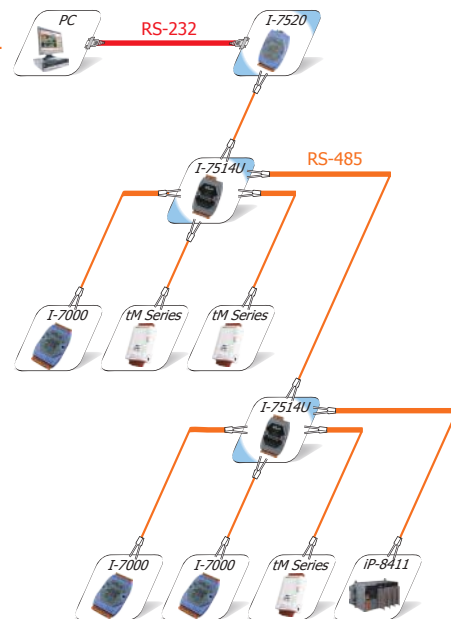
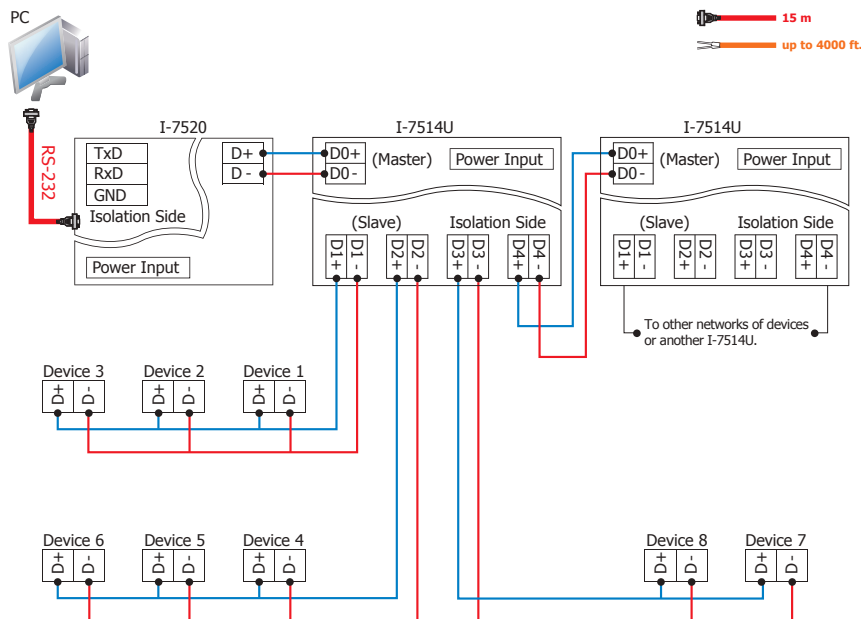
#### LED Indicators

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

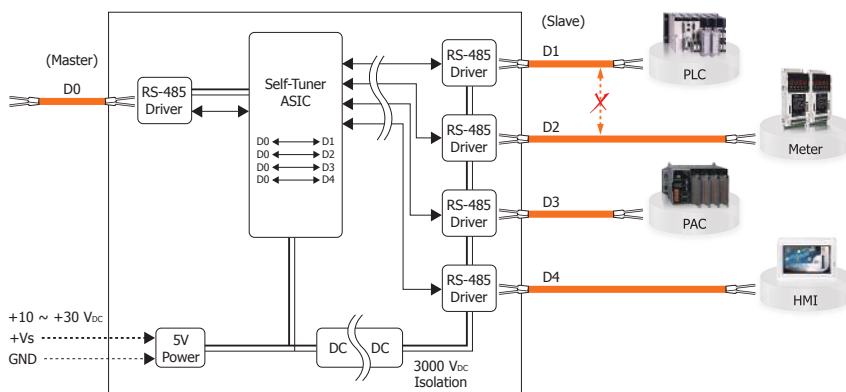
Interface	
Input (Master)	1 RS-485 Channel: Data+, Data-
Output (Slave)	4 RS-485 Channels: Data+, Data-
Transmission Distance	Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)
Self-Tuner Asic Inside	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 $^{\circ}$ C ~ +75 $^{\circ}$ C
Storage Temperature	-30 $^{\circ}$ C ~ +75 $^{\circ}$ C
Humidity	10 ~ 90% RH, non-condensing

## Applications

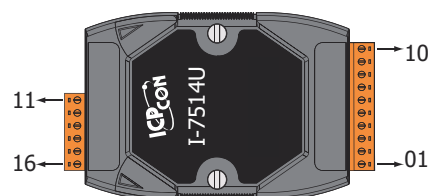


## RS-485 Splitter

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.

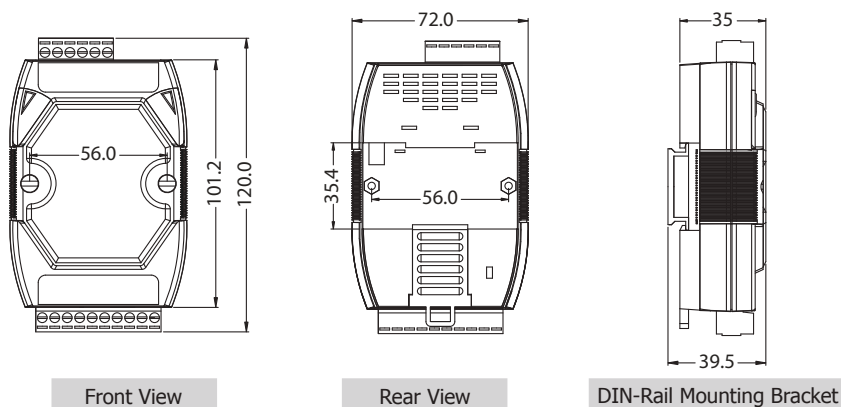


## Pin Assignments



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)



## 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)