



## I-7520/I-7520A I-7520R/I-7520AR

I-7520: Isolated RS-232 to RS-485 Converter  
 I-7520A: Isolated RS-232 to RS-422/485 Converter  
 I-7520R: RS-232 to Isolated RS-485 Converter  
 I-7520AR: RS-232 to Isolated RS-422/485 Converter

### Features

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



### Introduction

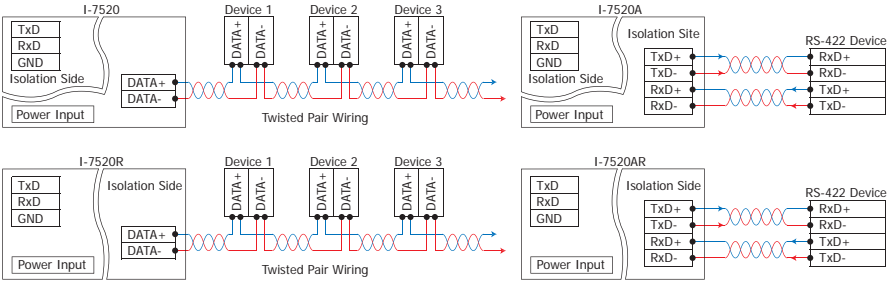
Most industrial computer systems provide standard RS-232 serial ports. Though widely accepted, RS-232 has limited transmission speed, range, and networking capabilities. The RS-422 and RS-485 standards overcome these limitations by using differential voltage lines for data and control signals, which transparently converts RS-232 signals into isolated RS-422 or RS-485 signal with no need to change any hardware or software. The I-7520/I-7520A lets you easily build an industrial grade, long-distance communication system using standard PC hardware.

The design of the isolation between the I-7520 and the I-7520R/AR is different. If the user wants to supply power from the PLC/PC, the I-7520R/AR should be used, otherwise the isolation will be broken. Refer to the I-7000 bus converter manual for detailed information.

### Specifications

Models	I-7520	I-7520R	I-7520A	I-7520AR
<b>Interface</b>				
Serial Interface	RS-232	TxD, RxD, GND		
	RS-422	-		TxD+, TxD-, RxD+, RxD- The RS-422 and RS-485 cannot be used simultaneously
	RS-485	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			
Transfer Distance	Max. 1,200 m for at speed 9.6 kbps; Max. 400 m at 115.2 kbps			
Max. Devices Supported	256 (Without repeater)			
Self-Tuner ASIC Inside	Yes			
Speed	300 – 115200 bps			
ESD Protection	Yes			
3000 V <sub>DC</sub> Isolated Voltage	On RS-232 side	On RS-485 side	On RS-232 side	On RS-485 side
Connection	RS-232	9-Pin Female D-Sub		
	RS-422/485	Removable 10-Pin Terminal Block		
<b>LED Indicators</b>				
Power/Communication	Yes			
<b>Power</b>				
Input Voltage Range	+10 V <sub>DC</sub> – +30 V <sub>DC</sub> (Non-isolated)			
Power Consumption	1.2 W			
<b>Mechanical</b>				
Casing	Plastic			
Flammability	Fire Retardant Materials (UL94-V0 Level)			
Dimensions (W x H x D)	72 mm x 118 mm x 35 mm			
Installation	DIN-Rail			
<b>Environment</b>				
Operating Temperature	-25 °C – +75 °C			
Storage Temperature	-30 °C – +75 °C			
Humidity	10 – 90% RH, non-condensing			

**Applications**



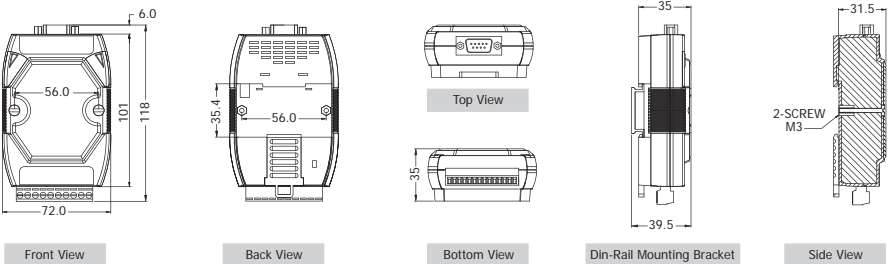
**Pin Assignments**

I-7520/I-7520R				
Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
RS-485 01	DATA+		05	09
02	DATA-		04	08
03	--		03	07
04	--		02	06
05	--		01	05
06	--			
07	--			
08	--			
09	(R)+Vs			
10	(B)GND			



I-7520A/I-7520AR				
Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
RS-485 01	DATA1+		05	09
02	DATA1-		04	08
03	--		03	07
04	TxD+		02	06
RS-422/485 05	TxD-		01	05
06	RxD+/DATA2+			
07	RxD-/DATA2-			
08	--			
09	(R)+Vs			
10	(B)GND			

**Dimensions (Unit: mm)**



**Ordering Information**

I-7520 CR	Isolated RS-232 to RS-485 Converter (RoHS)
I-7520A CR	Isolated RS-232 to RS-422/485 Converter (RoHS)
I-7520-G CR	Isolated RS-232 to RS-485 Converter (Gray Cover) (RoHS)
I-7520A-G CR	Isolated RS-232 to RS-422/485 Converter (Gray Cover) (RoHS)
I-7520R CR	RS-232 to Isolated RS-485 Converter (RoHS)
I-7520AR CR	RS-232 to Isolated RS-422/485 Converter (RoHS)
I-7520R-G CR	RS-232 to Isolated RS-485 Converter (Gray Cover) (RoHS)
I-7520AR-G CR	RS-232 to Isolated RS-422/485 Converter (Gray Cover) (RoHS)

**Accessories**

GPSU06U-6	24 V <sub>DC</sub> /0.25 A, 6 W Power Supply
DIN-KA52F	24 V <sub>DC</sub> /1.04 A, 25 W Power Supply with Din-Rail Mounting
I-7510 CR	Isolated RS-485 Repeater (RoHS)
I-7510A CR	Isolated RS-422/485 Repeater (RoHS)
CA-0915	9-Pin Male-Female D-Sub Cable, 1.5 m