4.4. RS-232/RS-422/485 Converters

PCISA-7520R/PCISA-7520AR

PCISA-7520R: Isolated RS-232 to RS-485 Converter Card
PCISA-7520AR: Isolated RS-232 to RS-422/485 Converter Card

Features

- No External Power Supply required
- No Driver installation required
- Auto Switching Baud Rate, 300 ~ 115200 bps
- 3000 V$_{DC}$ Isolation Protection
- ESD Protection for the RS-232/422/485 Data Line
- Transmission Speed of up to 115200 bps
- Can be used in an ISA Bus, a PCI Bus or any system with an RS-232 Interface

Introduction

The PCISA-7520A series is exactly the same as I-7520A series except for the PCI and ISA Interface and is designed for easy installation. The PCISA-7520A series is equipped with both an RS-232 serial port and an RS-485 serial port. The RS-232 port is designed to communicate with the local Host PC, the RS-485 is designed to communicate with the remote IO module.

Applications
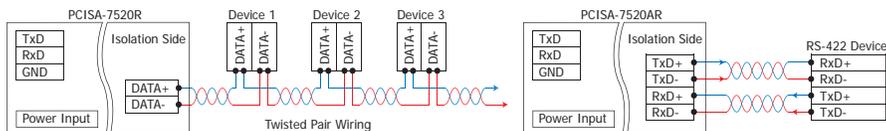
Specifications

Models		PCISA-7520R	PCISA-7520AR
Interface			
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), when different cables are used, the transmission distance may change	
Transfer Distance		Max. 1,200 m at 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	
Isolated Voltage		3000 V$_{DC}$ on the RS-232 side	
Connection	RS-232	9-Pin Female D-Sub x 1	
	RS-422/485	9-Pin Male D-Sub x 1	
Power			
Input Voltage Range		+5 V$_{DC}$ from the PC	
Power Consumption		1.0 W	
Mechanical			
Dimensions (L x W x D)		118 mm x 72 mm x 22 mm	
Environment			
Operating Temperature		0 °C ~ +50 °C	
Storage Temperature		-20 °C ~ +70 °C	
Humidity		0 ~ 90% RH, non-condensing	

◪ Pin Assignments

PCI Bus

PCISA-7520R
PCISA-7520AR

CN1
(For RS-232)

CN2

1 5

6 9

CN2
(For RS-422/485)

ISA Bus
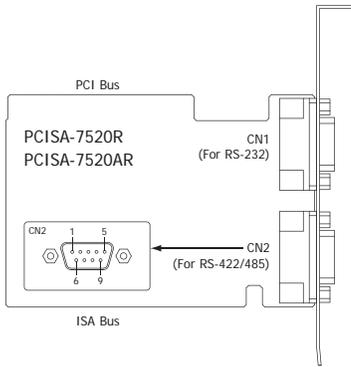
PCISA-7520R

Pin	2-wire for RS-485
01	DATA+
02	
03	NC
04	
05	
06	DATA-
07	
08	NC
09	

PCISA-7520AR

Pin	2-wire for RS-485	4-wire for RS-422
01	DATA+	Tx+
02		
03	NC	
04	NC	Rx+
05		
06	DATA-	Tx-
07		
08	NC	Rx-
09		

◪ Dimensions (Unit: mm)

118

105.1

71.2

111

22

121

10.5

18.4
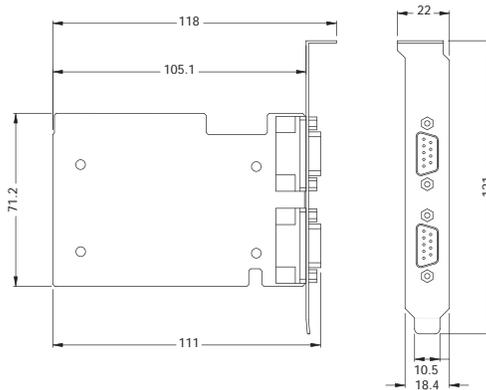
◪ Ordering Information

PCISA-7520R CR	Isolated RS-232 to RS-485 Converter Card (RoHS)
PCISA-7520AR CR	Isolated RS-232 to RS-422/485 Converter Card (RoHS)

◪ Accessories

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