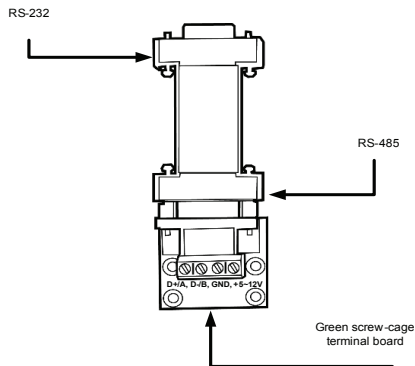


Frequently asked questions (FAQs)

1. Data communication failure
 - a. Check if RS-232 interface connection is correct;
 - b. Check if RS-232 output signal is correct;
 - c. Check if connection poles are properly connected
2. Data loss or mistake
 - a. Check if data rate and format is consistent on both communication equipments.



How to Contact Us: Sales and Support

All ProSoft Technology products are backed with unlimited technical support.

Asia Pacific

+603.7724.2080, asiapc@prosoft-technology.com
Languages spoken include: Chinese, Japanese, English

Europe

+33 (0) 5.34.36.87.20, europe@prosoft-technology.com
Languages spoken include: French, English

North America

+1.661.716.5100, support@prosoft-technology.com
Languages spoken include: English, Spanish

Latin America (Sales only)

+1.281.298.9109, latinam@prosoft-technology.com
Languages spoken include: Spanish, English

Brasil

+55-11.5084.5178, eduardo@prosoft-technology.com
Languages spoken include: Portuguese, English



USER'S GUIDE

1455-RS232

RS-232 to RS-485 Passive Converter

ProSoft Technology's Passive Converter is compatible with RS-232 and RS-485 standards. It helps communications between various standard series ports of computers, external equipment and intelligent instruments by converting these signals first.

It is able to convert a RS-232 signal to a RS-485 balanced differential signal, and extend the communication distance to 3,937 ft. (1.2 km).

It is passive and doesn't require external power. It uses a particular pump to gain power from RS232 signals (RTS, DTR, TXD) without initializing the RS-232 series interface. An internal transceiver and circuit automatically controls the data stream direction instead of handshake signals (such as RTS, DTR, etc).

In RS-232 half-duplex mode, the software keeps the same function under RS-485 without any change. The transmission rate between host computers, host computers and its external equipment is 300-115200 bps. This forms point to point or point to multi-points networks.

It is widely used in industrial automation, such as door locks, all-in-one cards, bus charging, and highway toll gates etc.

Features

1. Interface: Compatible with EIA/TIA RS-232C standard and RS-485 standard.
2. Electronic Interface: DB9 female connector is located on side of RS-232. The RS-485 has a DB9 male connector on the side, with connection board.
3. Working mode: Asynchronous, half-duplex, differential transmission.

- 4. Transmission media: Twisted pair or shielded twisted pair (STP).
- 5. Transmission rate: 300-115200 bps.
- 6. Mechanical dimension: 3.7 in *1.3 in*.67in or 95mm*33mm*17mm
- 7. Working Environments: 32-158 F (0-70 C), relative humidity 5%-95%
- 8. Transmission distance: 3,937 ft (1200m) for RS-485, 16.404 ft (5m) for RS-232

Connector and signal definition:

- 1. RS-232C connector:

DB9 Female	RS-232C signal
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

- 2. RS-485 connector:

PIN number	DB9 Male	RS-485 connection board
1	D-/B	D+ /A
2	D+ /A	D-/B
3	—	GND
4	—	+5V~+12V
5	GND	
6	+5V~+12V	
7	—	
8	—	
9	—	

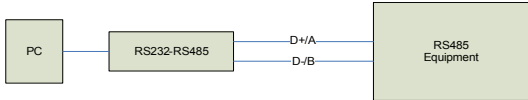
Hardware installation and application

- 1. Uses DB9 female and male connectors

- 2. Output connection board has four poles
- 3. Can use twisted pair (TP) or shielded twisted pair (STP)
- 4. Easy to assemble and disassemble
- 5. D+/A is a positive signal, D-/B is negative signal
- 6. +5V/+6V is external power input if needed
- 7. GND is public ground wire
- 8. Communication needs at least 2 connections (D+ /A, D-/B)
- 9. Connecting the same polarity signals together
- 10. If you use STP, the GND signal must be connected too.

Converter supports two (2) communication modes as shown below:

- 1. Point to point, 2 wires, half-duplex



- 2. Point to multi-points, 2 wires, half-duplex.

Note: When this converter is used at the end of the network, it needs to install a terminal resistance (normally 120 ohms, 1/4 W), for preventing signal reflection and interference.

Network illustration

- 1. Point to multi-points, 2 wires, half-duplex

