



**Industrial RS-232 to RS-485/422 converter, 300bps~38.4Kbps, 2500V Opto-isolation,
Port-Powered**

➤ Features

- Support RS-232 to RS-485/RS-422 Converter;
- Port-powered, no external power is required;
- Plug and play (hot-pluggable);
- Built-in 600W surge protection, 15kV static protection and circuit protection;
- Supports high-speed serial data rates: 300 to 38.4Kbps;
- Support 2500V optical isolation;
- Supports up to 128 nodes of RS-485/RS-422 devices;
- External 5VDC regulated power is acceptable if the port power is insufficient;
- Data direction auto-turnaround, no software drivers or flow control is required;
- Built-in selectable 120Ω end-of-line terminator for system reliability and easy installation;
- Working temperature range:-40~85°C;
- Warranty:5years



➤ Introduction

The UP-485-C4 is a compact, rugged, industrial-grade, port-powered, 2500V Opto-isolation RS-232 to RS-485/RS-422 converter, which can be used to convert any standard RS-232C port into a two-wire half-duplex RS-485 port or a four-wire full-duplex RS-485/RS-422 and vice versa. It supports multi-drop RS-485/RS-422 networks and can be used to communicate with one loop of up to 128 units of RS-485/RS-422 devices, it requires no external power, software drivers, or flow control.

UP-485-C4 is port-powered or DC5V external power supply, which has small size, long distance, stable performance and other characteristics. the device is easy to install and meet the needs of industrial field serial port data conversion, and are widely used in intelligent power management, power system automation, water conservancy monitoring, industrial automation, distributed data acquisition and other occasions.

➤ Application Industries

- Industrial Automation
- Intelligent transportation supervisory system (ITS)
- Long-distance broadcast television transmission system
- Electric Power Industry
- Rail transportation industry
- Power system automation
- Water conservancy monitoring
- Distributed data acquisition

➤ Specification

Technical parameters	
Standard	Compliant with EIA RS-232, RS-485/RS-422
Connector	RS232: DB-9 Female
	RS-485/RS-422 Side: DB-9 Male
	Termination Board: DB-9 Female and a 4-Way Terminal Block
Baud Rate	300bps~38.4Kbps
Power	
Power Supply	Serial Port Powered, External supply DC5V
Interface	DB9 interface, industrial terminal block
Lightning protection	600W
Static protection	15KV
Optical Isolation	2500V
Physical Characteristics	
Shell	DB9 plastic case
Dimension	87mm×17mm×33mm (H*D*W)
Weight	30g
Transmission distance	
Serial port line	RS-232, 15m@9600bps
	RS-485/RS-422, 1.2km@9600bps
Working Environment	
Working Temp	-40~85°C
Storage Temp	-40~85°C
Relative Humidity	5%~95% (no-condensation)
Warranty	
Warranty	5 Years
Certification	CE, FCC, RoHS

➤ Application

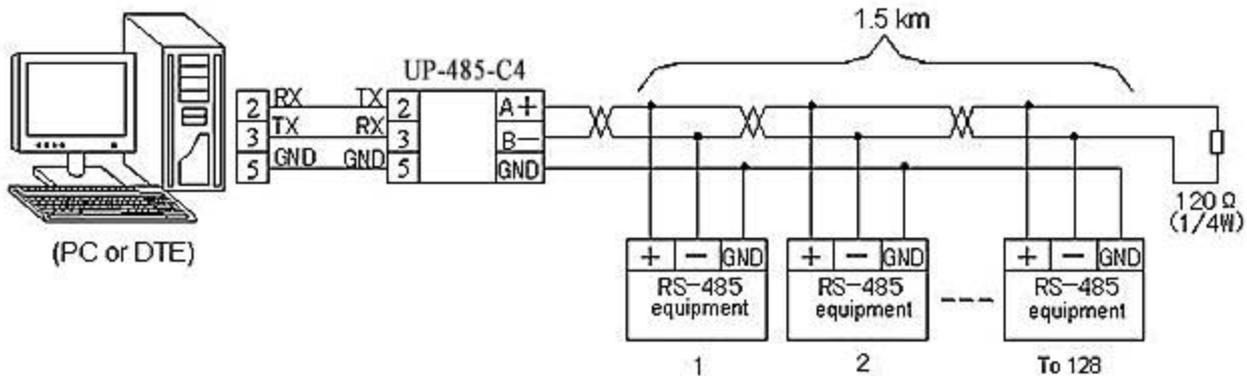


Chart 1 : Master-Slave and half duplex communication

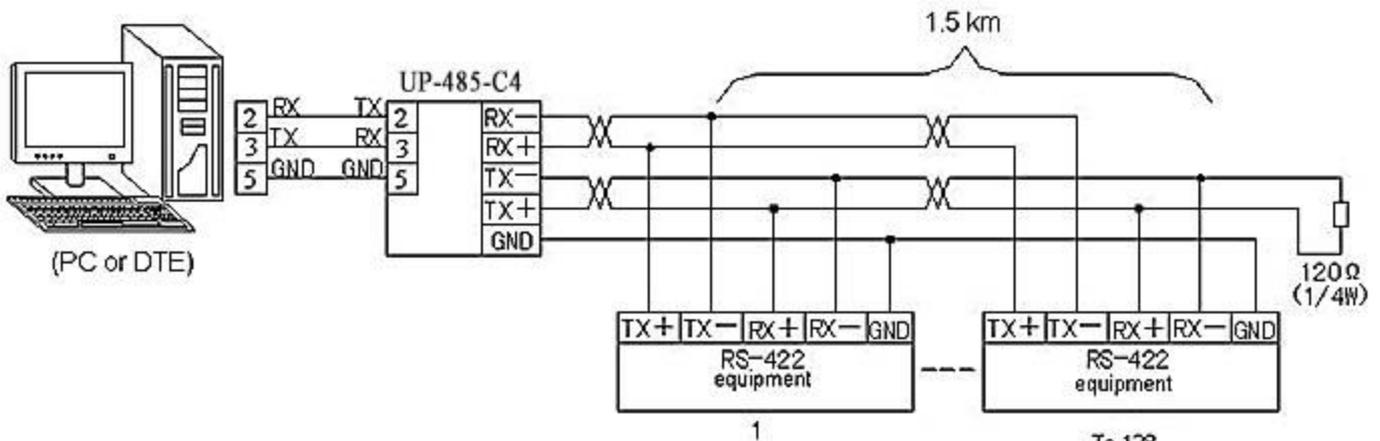


Chart 2 : Master-Slave and half duplex communication

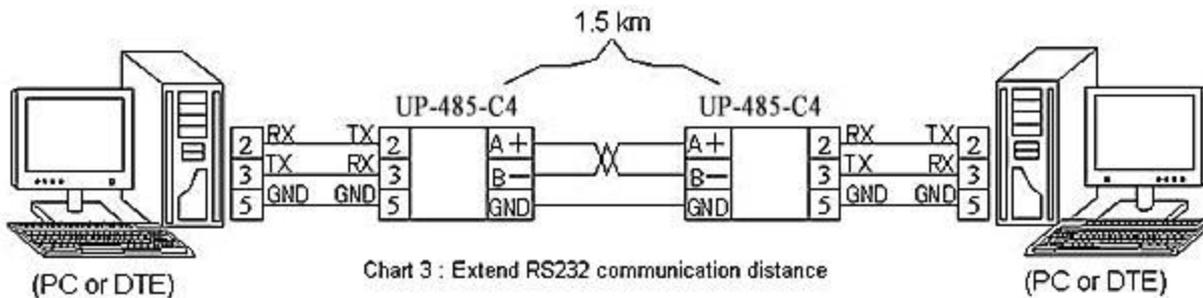


Chart 3 : Extend RS232 communication distance

➤ PIN setting

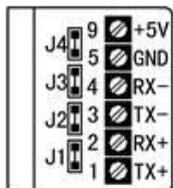
RS-232 Side (DB-9 Female Connector):

PIN	1	4	6	7	8	2	3	5
Define	short circuit			short circuit		TX	RX	GND

RS-485/RS-422 Side (DB-9 Male Connector / Terminal Block) :

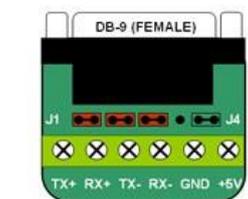
PIN	1	2	3	4	5	6	7	8	4
Jumper	J2		J3			J1		J4	
RS-485	A+(J2 ON)		B-(J3 ON)		GND	J1 (ON)		Terminate/remove Jumper J4 to turn ON/OFF the 120Ω end-of-line terminator	
RS-422	(J2 OFF)		(J3 OFF)		GND	J1 (OFF)			
	TX+	RX+	TX-	RX-					

ALL-IN-ONE Rugged Terminal Block:

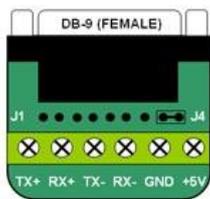


1. The numbers on the left indicate the pin assignment of DB-9 male connector (RS-485/RS-422).
2. The unit will function correctly only when the voltage on +5V pin is around +5VDC.
3. The unit comes with a built-in selectable 120Ω end-of-line terminator.

RS-485/RS-422 MODE SETTING

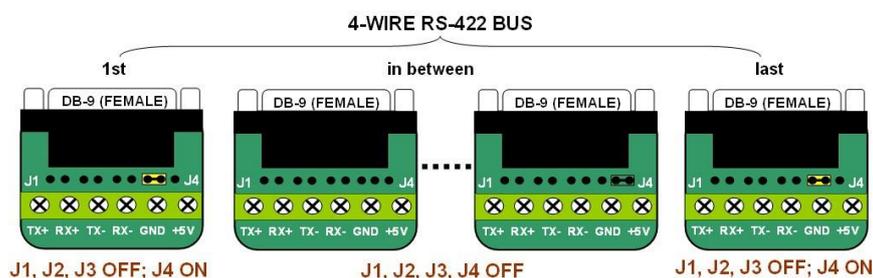
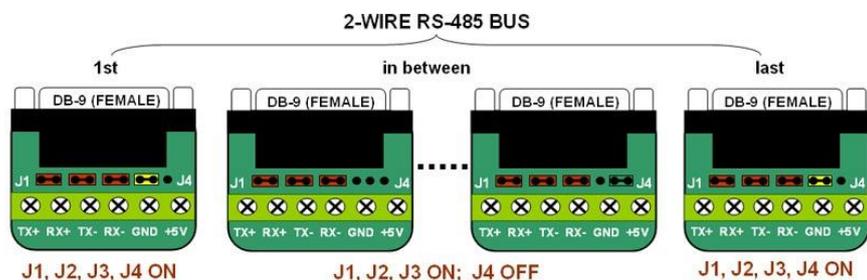


2-WIRE RS-485: J1, J2, J3 ON



4-WIRE RS-422: J1, J2, J3 OFF

120-OHM END-OF-LINE TERMINATION



➤ Ordering Information

Model NO.	Description
UP-485-C1	Commercial RS-232 to RS-485 converter, 300bps~115.2Kbps, non-isolated, Port-Powered
UP-485-C2	Industrial RS-232 to RS-485 converter, 300bps~115.2Kbps, non-isolated, Port-Powered
UP-485-C3	Industrial RS-232 to RS-485/422 converter, 300bps~115.2Kbps, non-isolated, Port-Powered
UP-485-C4	Industrial RS-232 to RS-485/422 converter, 300bps~38.4Kbps, 2500V Opto-isolation, Port-Powered
UP-485-C8	Industrial RS-232 to RS-485/422 converter, 2500V Opto-isolation, 300bps~115.2Kbps, DC5V/DC9-30V

➤ Packing List

- Industrial RS-232 to RS-485/RS-422 Converter *1
- User manual * 1
- Certificate of quality * 1
- Warranty card * 1