

## ■ INTRODUCTION

This USB ⇔ dual RS422/RS485 converter is a port-powered bi-directional USB to dual RS422 or RS485 converter, which can be used to convert any standard full-duplex USB port into two four-wire RS422/RS485 ports or two two-wire half-duplex RS485 ports and vice versa. The unit can be used to communicate with two loops of up to 2x 128 units of RS422/RS485 devices. The unit is powered from the USB port and it supports data auto-sensing & self-adjusting, no baud rate setting is required. And with the data direction auto-turnaround technology, no external power or flow control is required. The unit uses the latest FTDI chipset and is fully compatible with Windows 7/Vista/XP/Server2008/2003/2000/98 (32-bit), Windows 7/Vista/XP/Server2008/2003 (64-bit), Win CE, Mac, and Linux. Note: the latest drivers (chipset FT232B) are available at <http://www.ftdichip.com/drivers/vcp.htm>.

## ■ FEATURES

- Adds two RS-422 or RS-485 ports to your USB port.
- Communicate with two loops of up to 2x 128 units of RS422/RS485 devices.
- Built-in 120Ω end-of-line terminator for reliability and easy installation.
- Data direction auto-turnaround, no flow control is required.
- Supports 300 to 115,200 baud (auto-sensing and self-adjusting).
- Supports Windows 7/Vista/XP/Server2008/Server2003/2000/98 (32-bit), Windows 7/Vista/XP/Server2008/Server2003 (64-bit), Win CE, Mac, and Linux.
- Supports remote wakeup and power management.
- Plug and play (hot-pluggable, data format auto-sensing and self-adjusting).
- Port-powered, no external power required.
- No IRQs required, no IRQ conflicts.
- Surface Mount Technology manufactured to RoHS and ISO-9001 standards.
- Safety: Strictly certified by SGS/TUV (Cert no. SGS - EM2008/20062C; EM/2008/20063C; TUV - SG-CE-090012).
- 5-year manufacturer's warranty.

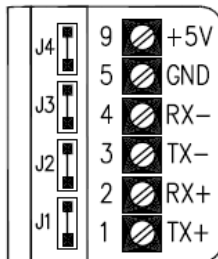
## ■ SPECIFICATIONS

Compatibility:	USB 2.0 (backward compatible), EIA/TIA RS422/RS485 standards
Power Source:	From USB port
Current Consumption:	Less than 100mA
Baud Rates:	300 to 115,200bps (auto-sensing and self-adjusting)
Distance:	USB side: 10ft (3m); RS-485/422 side: Depending on the power from USB port, will transmit up to 4000ft (1.2km) at 19,200bps
Connectors:	USB side: Type A female; RS-422/485 side: 2x DB-9 male; 2x Termination board: DB-9 female and a 6-way terminal block
Maximum Number of Drops:	2x 128
End-of-line Terminator:	120Ω (Built-in)
Dimensions (HxWxD):	0.9 x 2.8 x 6.2 in (24 x 72 x 158 mm) (excluding cable)
Cable Length:	2 ft (0.6 m)
Weight:	5.7 oz (163 g)
Operating Temperature:	32°F to 95°F (0°C to 35°C)
Operating Humidity:	Up to 90% RH (no condensation)

## PIN ASSIGNMENT

RS-485/422 side (DB-9 Male Connector / Termination Board):

DB-9 Pin:	1	2	3	4	5	6	7	8	4
Jumper:	J2 (default: ON)		J3 (default: ON)			J1 (default: ON)		J4 (default: ON)	
RS-485:	A+ (J2 ON)		B- (J3 ON)		GND	(J1 ON)		Terminate/remove Jumper J4	
RS-422:	(J2 OFF)		(J3 OFF)		GND	(J1 OFF)		to turn ON/OFF the 120Ω end-of-line terminator	
	TX+	RX+	TX-	RX-					



- The numbers on the left indicate the pin assignment of DB-9 male connector (RS-485/422 side).
- The +5V pin is for measurement only, no external power is necessary.
- The unit comes with a built-in 120Ω end-of-line terminator; connect it (Jumper J4 ON) when the data rate is over 19.2kbps or the RS422/RS485's distance exceeds 660ft (200m).

## CONNECTIONS

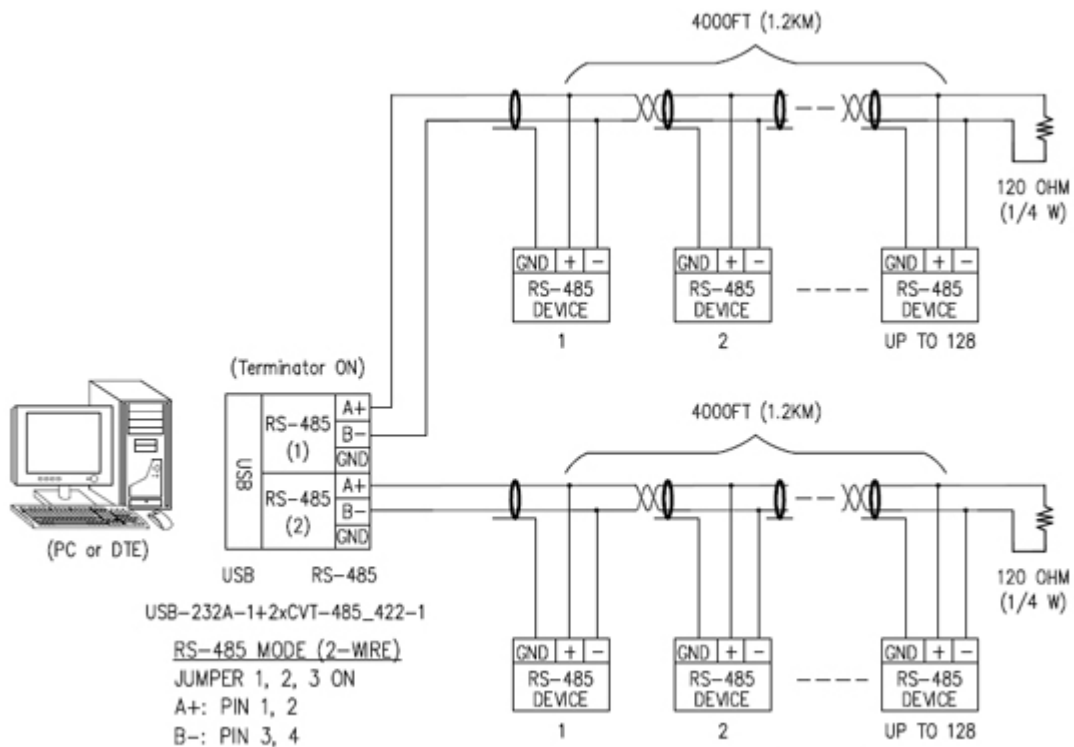


FIGURE 1: MASTER-SLAVE MULTI-DROP CONNECTIONS (RS-485)

