



**Industrial Port-Powered RS232 ⇔ RS422 Converter**  
**(Part Number: CVT-422-1)**

CE



***<http://www.CommFront.com>***

**Part Number: CVT-422-1****■ INTRODUCTION**

The CVT-422-1 is a compact, rugged, industrial-grade, port-powered RS-232 to RS-422 converter, which can be used to convert any standard RS-232C port into a four-wire full-duplex RS422 port and vice versa. The unit is efficiently powered from the RS-232 data line; it also supports data direction auto-turnaround. Therefore, no external power, software drivers or flow control is required.

**■ FEATURES**

- Port-powered, no external power is required.
- Supports 128 nodes of RS-422 devices.
- Operates reliably from 300 to 115,200 baud.
- Industrial grade enclosed in a rugged, rustless ABS housing.
- Plug and play (hot-pluggable, data format auto-sensing and self-adjusting).
- Data direction auto-turnaround, no software drivers or flow control is required.
- Operating temperature: -40°F to 185°F (-40°C to 85°C).
- Built-in 600W surge protection, 15kV static protection and circuit protection.
- ALL-IN-ONE rugged terminal block with optional 120Ω terminator and 5VDC input.
- Surface Mount Technology manufactured to RoHS and ISO-9001 standards.
- Safety: Strictly certified by TUV (Cert No. SG-CE-090012).
- 5-year manufacturer's warranty.

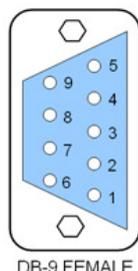
**■ SPECIFICATIONS**

Compatibility:	EIA/TIA RS-232C standard and RS-422 standard
Power Source:	Port power from RS-232 data line
Current Consumption:	Less than 10mA
Baud Rates:	300 to 115,200bps (auto-sensing and self-adjusting)
Distance:	RS-232 side: 16ft (5m); RS-422 side: Depending on power from RS-232 port, will transmit up to 4000ft (1.2km) at 19,200bps
Connector:	RS-232 side: DB-9 Female; RS-422 side: DB-9 Male; Termination Board: DB-9 Female and a 6-Way Terminal Block
Maximum number of drops:	128
End-of-Line Terminator:	120Ω (built-in, selectable)
Surge Protection:	600W
Static Protection (ESD):	Up to 15KV
Dimensions (H x W x D):	0.63 x 1.3 x 3.5 in (16 x 32 x 90 mm) (with termination board)
Weight:	1.4 oz (40 g) (with termination board)
Operating Temperature:	-40°F to 185°F (-40°C to 85°C)
Operating Humidity:	Up to 90% RH (no condensation)

**■ PIN ASSIGNMENT**

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

Pin:	1	4	6	7	8	2	3	5
Signal:	DCD	DSR	DTR	CTS	RTS	TX	RX	GND
Function:	tied together			tied together		TX	RX	GND

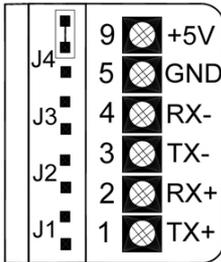


Note: Some software requires handshake line acknowledgements. To satisfy the requirements, the CVT-422-1's handshake lines (RS232 side) are tied together (DCD, DSR, and DTR tied together, CTS and RTS tied together). Therefore, you don't have to modify your existing software.

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

DB-9 Pin:	1	2	3	4	5	9	8	4
Terminal Block/Function:	TX+	RX+	TX-	RX-	GND	Optional +5V DC Input	Terminate/remove J4 to turn ON/OFF the 120Ω end-of-line terminator	

ALL-IN-ONE Rugged Terminal Block:



- The numbers on the left indicate the pin assignment of DB-9 male connector (RS-422 side).
- The unit will function correctly only when the voltage on +5V pin is around +5VDC (when RS232 port is connected). Otherwise, please check the connection. External 5VDC regulated power supply is accepted.
- The unit comes with a built-in selectable 120Ω end-of-line terminator; connect it when the data rate is over 19.2kbps or the RS422's distance exceeds 660ft (200m).

■ CONNECTIONS

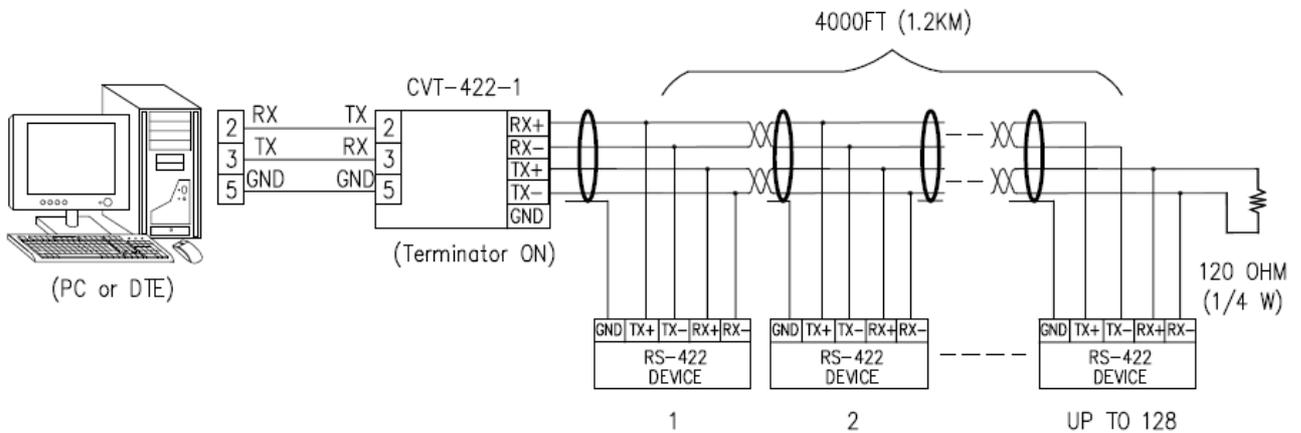


FIGURE 1: MASTER-SLAVE MULTI-DROP CONNECTIONS

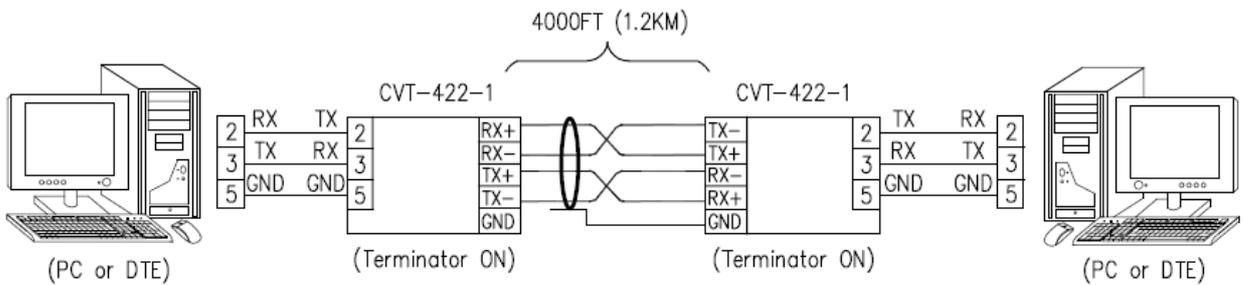


FIGURE 2: EXTENDING FULL-DUPLEX RS-232 DISTANCE (DATA ONLY)

