

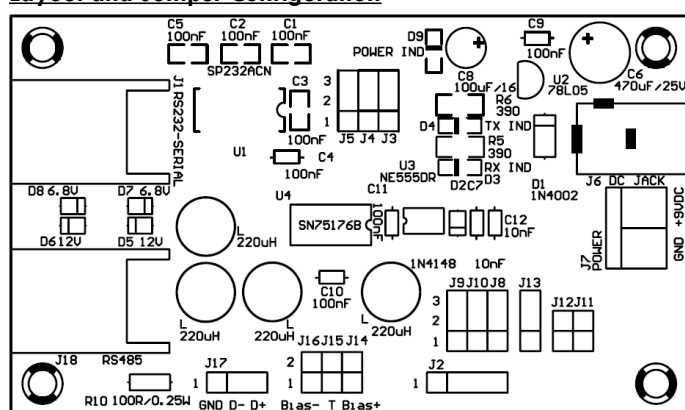
DT-I/O RS232-RS485 CONVERTER

RS232-RS485 Converter is a two way level converter between RS232/TTL and RS485. This module can be functioned as a communication line between computers or microcontrollers with a UART RS232 interface and a module or network with a UART RS485 interface.

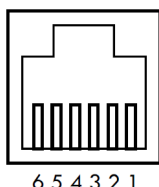
Specifications

1. Converts RS232/TTL level into RS485 and vice versa.
2. Accommodates baudrate from 300 bps up to 115200 bps.
3. Can be configured as a DCE (Data Communication Equipment) or DTE (Data Terminal Equipment).
4. Data direction on the RS485 lines can be controlled manually (RS232/TTL side uses 2 data lines & 1 control line) or automatically (RS232/TTL side only uses 2 data lines).
5. Bias+, terminator, and bias- for RS485 lines can be configured manually.
6. Requires a + 9VDC voltage as a power source.

Layout and Jumper Configuration

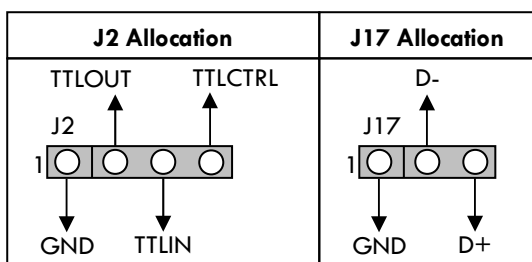


RJ12 (Female) pin connector order:



RJ12 (J1) Allocation		
Pin	Name	Function
1	CTS	Data direction controller (Depending on jumper J5 & J8)
2	RTS	
3	COM	Ground Reference Line
4	TXD	In/out data line (Depending on jumper J3, J4, J9, & J10)
5	RXD	
6	DSR	Not Used

RJ12 (J18) Allocation		
Pin	Name	Function
1	COM	Reference Line
2	D-	B RS485 Line
3	D-	
4	D+	A RS485 Line
5	D+	
6	COM	Reference Line



J3, J4, dan J5 (RS232) Configuration		
1	J3	RXD (J1) Pin is used as a data output line from this module (DCE)
1	J3	TXD (J1) Pin is used as a data output line from this module (DTE)
1	J4	TXD (J1) Pin is used as a data input line from this module (DCE)
1	J4	RXD (J1) Pin is used as a data input line from this module (DTE)
1	J5	RTS (J1) Pin is used to control the direction of data flow (DCE)
1	J5	CTS (J1) Pin is used to control the direction of data flow (DTE)

J8, J9, dan J10 Configuration		
1	J8	TTLCTRL (J2) Pin is used to control the direction of data flow
1	J8	CTS or RTS (J1) Pin is used to control the direction of data flow (depending on jumper J5)
1	J9	TTLOUT (J2) Pin is used as a data output line from this module
1	J9	RXD or TXD (J1) Pin is used as a data output line from this module (depending on jumper J3)
1	J10	TTLIN (J2) Pin is used as a data input line from this module
1	J10	TXD or RXD (J1) Pin is used as a data input line from this module (depending on jumper J4)

J13 Configuration		
1	J13	Data flow will be controlled automatically (with no regards of jumper J5 and J8's position)
1	J13	Data flow will be controlled manually (depends on jumper J5 and J8)

If jumper J13 is in 1-2 position, then one of J11 or J12 jumper must be connected (but don't connect both J11 and J12 at the same time).

J11 connected: for baud rate \geq 19200 bps

J12 connected: for baud rate \leq 9600 bps

Jumper J14, J15, and J16 is used as bias and terminator. In a circuit, there can only be one bias+, one bias-, and 2 terminators (each in the two ends of the circuit).

J14 connected : D+ (J17 and J18) connected to bias+

J15 connected : D+ and D- (J17 and J18) connected by terminator

J16 connected : D- (J17 and J18) connected to bias-

The serial cable configuration found on the module package (functions as DCE):

COM port Computer DB9	RS232-RS485 Converter (J1)
RX (pin 2)	RX (pin 5)
TX (pin 3)	TX (pin 4)
GND (pin 5)	GND (pin 3)
RTS (pin 7)	RTS (pin 2)

♦ Thank you for your confidence in using our products. If there are difficulties, questions, or suggestions regarding this product, please contact our technical support:

support@innovativeelectronics.com