

Hardware Setting & Mode Configuration

Outside the unit, there is one 4-pin DIP switch which is set to select the mode of operation. You will need to set the switch settings to RS-422, or RS-485 mode as per the requirements of your application.

After the setting of DIP switch, you then plug the adapter to USB port to start driver installation. The Mode Block Configuration Settings are listed as follows

SW (External DIP Switch)

	Operation Mode	S1	S2	S3	S4
RS-422	4 wire with Handshaking	ON	ON	OFF	OFF
RS-485	Full Duplex (4 wire)	ON	OFF	OFF	OFF
	Half Duplex (2 wire) - with Echo	OFF	OFF	OFF	ON Note
	Half Duplex (2 wire) - without Echo	OFF	OFF	ON	ON Note

Note : In the most common situation , an 120 Ohm termination resistor of TxD (S4 is ON) is required in RS485 Half Duplex configuration. Otherwise it is rarely used.

JP1 for Termination and Biasing Option Configuration

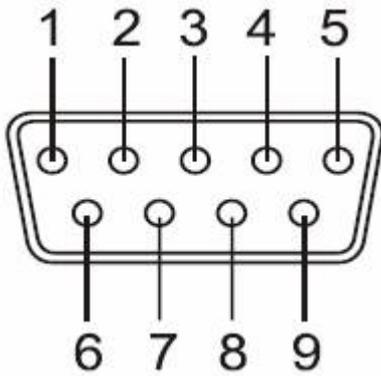
Inside the unit, there is one 2 x 6 (12 pin) header blocks which are jumpered to enable Rx, CTS 120 Ohm termination resistors and Tx, Rx 750 Ohm BIASing resistor.

You will need to open up the metal case and set the jumper setting for RS-422 mode or RS-485 mode as per the requirements of your application.

Settings are listed as follows:

Jumper	Function
1-2	Pull-up Tx+ to VCC by 750 Ohm Bias resistor. This jumper should be populated for pull-up Tx+.
3-4	Pull-down Tx- to GND by 750 Ohm Bias resistor. This jumper should be populated for pull-down Tx- .
5-6	Rx Termination of 120 Ohm. This jumper should always be populated for RS-422 mode.
7-8	Pull-up Rx+ to VCC by 750 Ohm Bias resistor. This jumper should be populated for pull-up Rx+
9-10	Pull-down Rx- to GND by 750 Ohm Bias resistor. This jumper should be populated for pull-down Rx- .
11-12	CTS Termination of 120 Ohm. This jumper should be populated for RS-422 mode.

Note : Sometimes, when operating in RS-422 or RS-485, it is necessary to configure termination and biasing of the data transmission lines. Generally this must be done in the cabling, since this depends on the installation of connections. Before applying the option, check your cable specification for proper impedance matching.



RS-422 Signal Pin-outs of DB-9 Male (CN2)

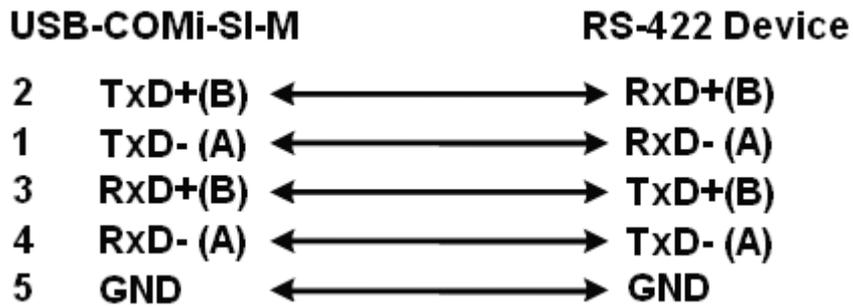
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx- (A)
Pin 5	GND
Pin 6	RTS- (A)
Pin 7	RTS+(B)
Pin 8	CTS+(B)
Pin 9	CTS- (A)

RS-422 Signal Pin-outs of Terminal Block (TB1)

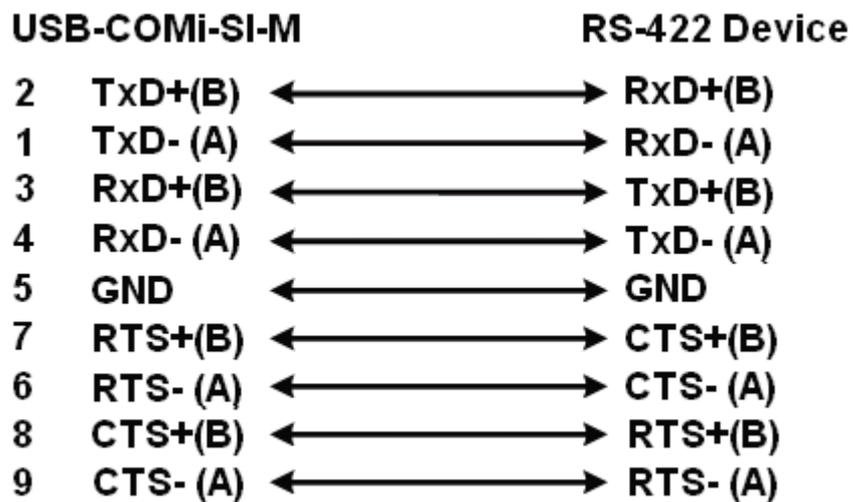
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx-(A)
Pin 5	GND
Pin 6	GND

RS-422 Signal Wiring

● Point-to-Point 4-Wire Full Duplex



● RS-422 with Handshaking



RS-485 4-Wire (Full duplex) Signal Pin-outs of DB-9 Male (CN2)

Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx-(A)
Pin 5	GND

RS-485 4-Wire (Full duplex) Signal Pin-outs of Terminal Block (TB1)

Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx-(A)
Pin 5	GND
Pin 6	GND

RS-485 2-Wire (Half duplex) Signal Pin-outs of DB-9 Male (CN2)

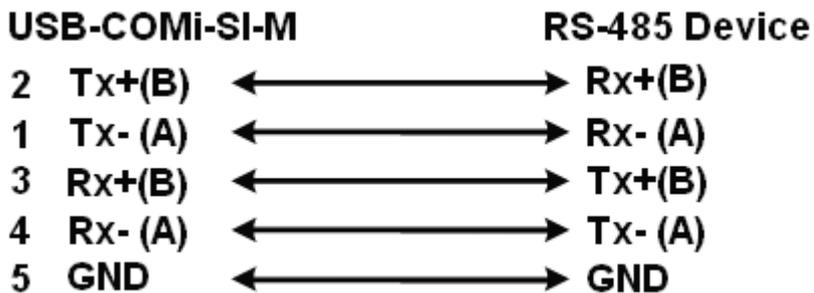
Pin 1	Data- (A)
Pin 2	Data+(B)
Pin 5	GND

RS-485 2-Wire (Half duplex) Signal Pin-outs of Terminal Block (TB1)

Pin 1	Data- (A)
Pin 2	Data+(B)
Pin 5	GND
Pin 6	GND

RS-485 Signal Wiring

● Point-to-Point 4-Wire Full Duplex



● Multidrop RS-485 2-Wire Half-duplex

