

## Hardware Setting and Mode Configuration

Outside the unit, there are eight 4-pin DIP switches which are set to select the mode of operation. You will need to set the switch settings to RS-232 mode, or RS-422, or RS-485 mode as per the requirements of your application.

You need to install driver first, prior to hardware installation. After the setting of DIP switches and connecting power cord to the adapter, you then plug the adapter to USB port to start driver installation.

The Mode Block Configuration Settings are listed as follows:

**SW1 (Port-1), SW2 (Port-2), SW3 (Port-3), SW4 (Port-4)**  
**SW5 (Port-5), SW6 (Port-6), SW7 (Port-7), SW8 (Port-8)**

	Operation Mode	S1	S2	S3	S4
<b>RS-232</b>	Standard RS-232 Mode	<b>OFF</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>
<b>RS-422</b>	4 wire with Handshaking	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>
<b>RS-485</b>	Full Duplex (4 wire)	<b>ON</b>	<b>OFF</b>	<b>ON</b>	<b>ON</b>
	Half Duplex (2 wire) - with Echo	<b>ON</b>	<b>OFF</b>	<b>OFF</b>	<b>ON</b>
	Half Duplex (2 wire) - without Echo	<b>ON</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>

## JP1 (Port-1), JP2 (Port-2), JP3 (Port-3), JP4 (Port-4) JP5 (Port-5), JP6 (Port-6), JP7 (Port-7), JP8 (Port-8) for Termination and Biasing Option Configuration

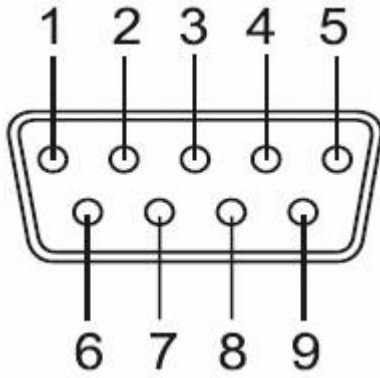
Inside the unit, there are eight 2 x 7 (14 pin) header blocks which are jumpered to enable Tx, Rx, CTS 120 Ohm termination resistors and Tx, Rx 750 Ohm BIASing resistor.

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	Tx Termination of 120 Ohm. This jumper should always be populated for RS-485 mode.
3-4	Pull-up Tx+ to VCC by 750 Ohm Bias resistor. This jumper should be populated for pull-up Tx+.
5-6	Pull-down Tx- to GND by 750 Ohm Bias resistor. This jumper should be populated for pull-down Tx- .
7-8	Rx Termination of 120 Ohm. This jumper should always be populated for RS-422 mode.
9-10	Pull-up Rx+ to VCC by 750 Ohm Bias resistor. This jumper should be populated for pull-up Rx+
11-12	Pull-down Rx- to GND by 750 Ohm Bias resistor. This jumper should be populated for pull-down Rx- .
13-14	CTS Termination of 120 Ohm. This jumper should always 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-232 Signal Pin-outs of DB-9 Male**

Pin 1	DCD
Pin 2	RxD
Pin 3	TxD
Pin 4	DTR
Pin 5	GND
Pin 6	DSR
Pin 7	RTS
Pin 8	CTS
Pin 9	RI

## RS-422 Signal Pin-outs of DB-9 Male

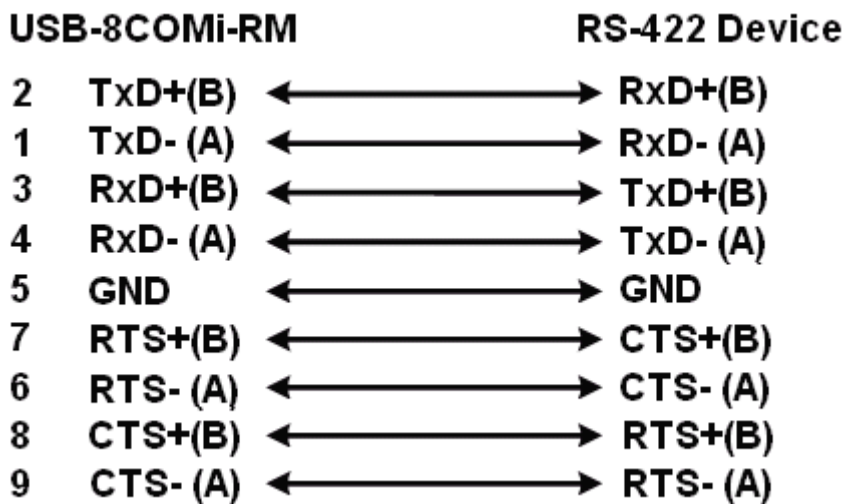
Pin 1	TxD- (A)
Pin 2	TxD+(B)
Pin 3	RxD+(B)
Pin 4	RxD-(A)
Pin 5	GND
Pin 6	RTS- (A)
Pin 7	RTS+(B)
Pin 8	CTS+(B)
Pin 9	CTS- (A)

## 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

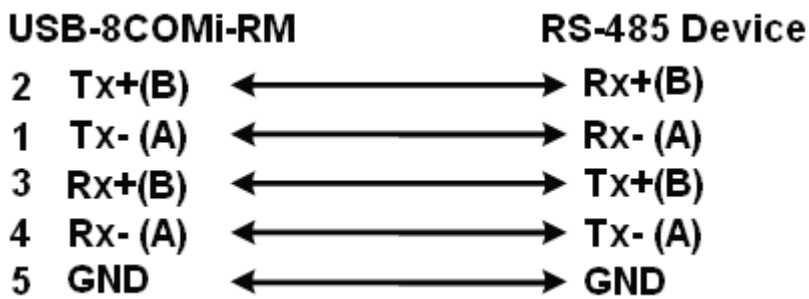
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx-(A)
Pin 5	GND

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

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

## RS-485 Signal Wiring

- **Point-to-Point 4-Wire Full Duplex**



- **Multidrop RS-485 2-Wire Half-duplex**

