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-232 mode, or RS-422, or RS-485 mode as per the requirements of your application.

The Mode Block Configuration Settings are listed as follows:

SW (External DIP Switch) for Mode Setting

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

JP1 for Termination and Biasing Option Configuration

Inside the unit, there is one 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.

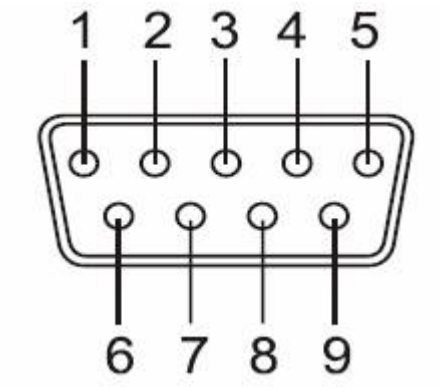
Note : Sometimes, when operating in RS-422 or RS-485, it is necessary to configure termination and biasing of the data transmission lines. Generally this must be done in the cabling, since this depends on the installation of connections. Before applying the option, check your cable specification for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

JP2 : Enable the +5V 150mA Power for External Device

The USB-COMi-M provides a unique feature of supplying power output of 5V/150mA through Pin-5 of terminal block to the serial device requiring power. By default, this feature is disabled. To enable the power, you need to open the metal case and set the jumper (JP2) to the position of "ON".

Jumper	Function
ON	Enable the Terminal Block Pin-5 to support a 5V 150mA power for external device requiring power
OFF	Disable the 5V 150mA power (Default)

RS-232/422/485 Pin-outs & Signal Wiring



RS-232 Signal Pin-outs of DB-9 Male (CN2)

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-232 Signal Pin-outs of Terminal Block (TB1)

Pin 1	DCD
Pin 2	RxD
Pin 3	TxD
Pin 4	DTR
Pin 5	+5V
Pin 6	GND

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

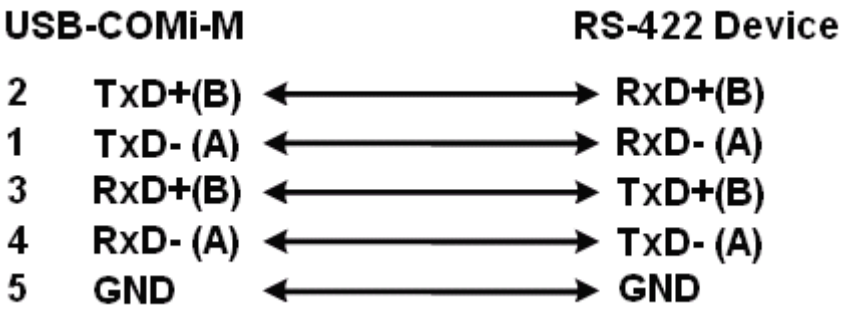
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx- (A)
Pin 5	GND
Pin 6	RTS- (A)
Pin 7	RTS+(B)
Pin 8	CTS+(B)
Pin 9	CTS- (A)

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

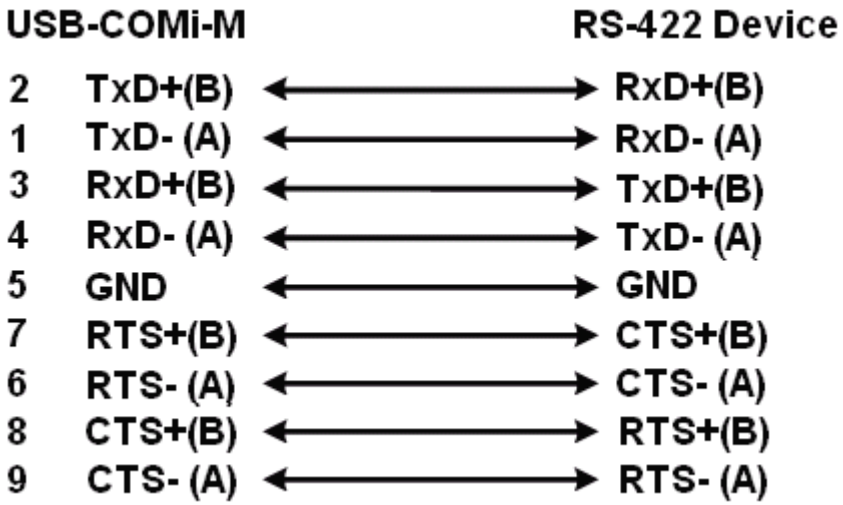
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx-(A)
Pin 5	+5V
Pin 6	GND

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	+5V
Pin 6	GND

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

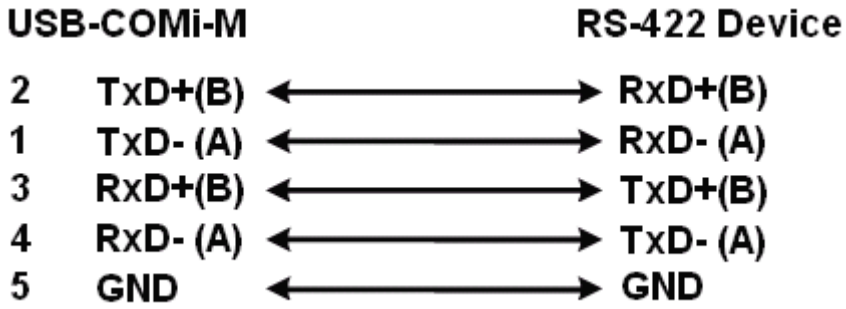
Pin 1	Data- (A)
Pin 2	Data+(B)
Pin 5	GND

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

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

RS-485 Signal Wiring

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



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