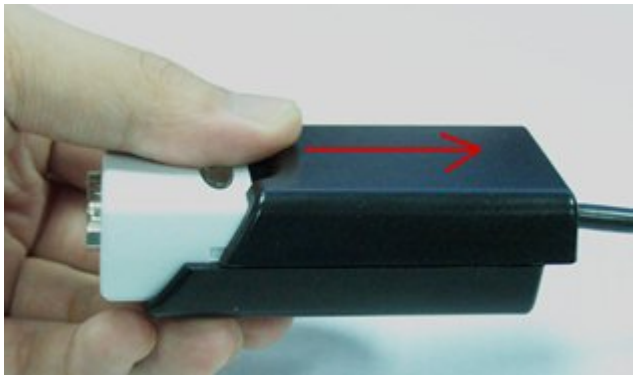
Hardware Setting & Mode Configuration

Inside the unit, there is one 4-pin DIP switch which is set to select the mode of operation. You need to push down the upper case, and slide it open by following the direction of the arrow in the illustration below. You can set the switch settings to RS-232 mode, RS-422 mode, or RS-485 mode, as per the requirements of your application. After setting of switches, you then proceed to insert the driver CD and start driver installation.

The RS-232 & RS-422 & RS-485 Mode Block Configuration Settings are listed as follows.

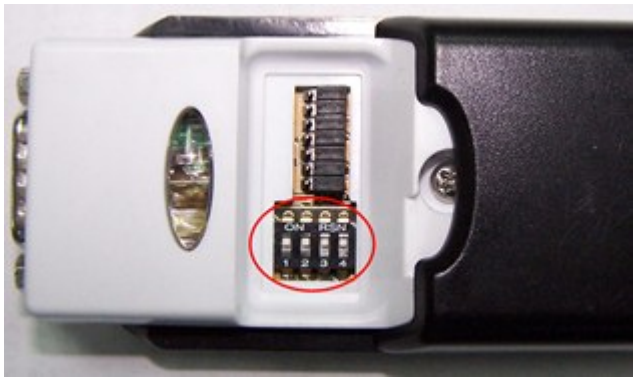


Push down the upper case and slide it to open

RS-232 & RS-422 & RS-485 Mode Block Configuration

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



4-pin DIP switch for operating mode selection

Inside the unit, there is one 3 x 7 (21 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.

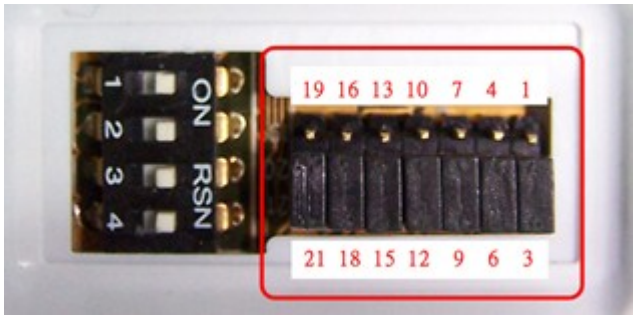
Settings are listed as follows:

Jumper		Function
1-2	enable	Tx Termination of 120 Ohm.
2-3	disable	This jumper should always be populated for RS-485 mode.
4-5	enable	Pull-up Tx+ to VCC by 750 Ohm Bias resistor.
5-6	disable	This jumper should be populated for pull-up Tx+.
7-8	enable	Pull-down Tx- to GND by 750 Ohm Bias resistor.
8-9	disable	This jumper should be populated for pull-down Tx- .
10-11	enable	Rx Termination of 120 Ohm.
11-12	disable	This jumper should always be populated for RS-422 mode.
13-14	enable	Pull-up Rx+ to VCC by 750 Ohm Bias resistor.
14-15	disable	This jumper should be populated for pull-up Rx+.
16-17	enable	Pull-down Rx- to GND by 750 Ohm Bias resistor.
17-18	disable	This jumper should be populated for pull-down Rx-.
19-20	enable	CTS Termination of 120 Ohm.
20-21	disable	This jumper should always be populated for RS-422 mode.

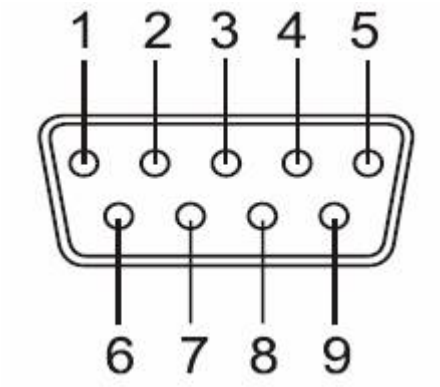
Note: Sometimes, when operating in RS-422 or RS-485, it is necessary to configure termination and biasing of the data transmission lines. Generally this must be done in the cabling, since this depends on the installation of connections. Before applying the option, check your cable specification for proper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

Biasing of data lines must only occur at a single point anywhere in the cabling. USB-COMi + provides biasing for ease of installation. Please be sure to disable this inside the unit, if your cabling already provides biasing.

Termination must not be installed in the middle of the cable. It is only permitted at both ends. Since a computer controlled serial port is almost always at one end of the cable, termination is disabled by default.



7x3 header block for enable the termination and biasing resistors



RS-232 Signal Pin-outs of DB-9 Male

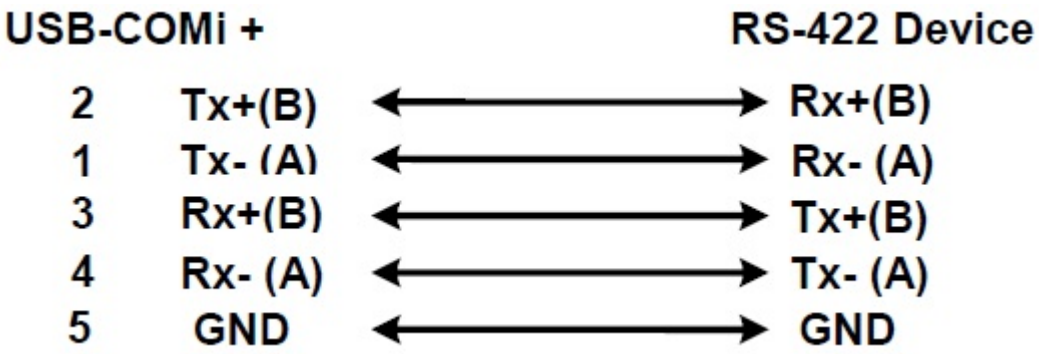
Pin 1	DCD
Pin 2	RxD
Pin 3	TxD
Pin 4	DTR
Pin 5	GND
Pin 6	DSR
Pin 7	RTS
Pin 8	CTS
Pin 9	RI

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

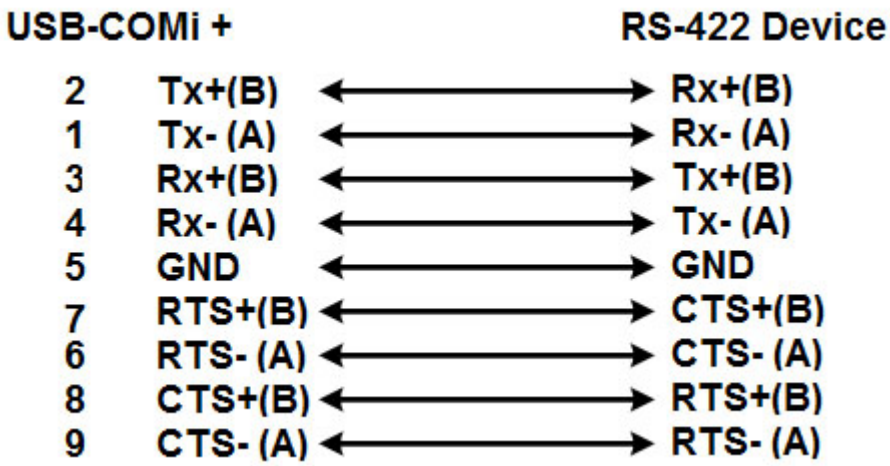
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx- (A)
Pin 5	GND
Pin 6	RTS- (A)
Pin 7	RTS+(B)
Pin 8	CTS+(B)
Pin 9	CTS- (A)

RS-422 Signal 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

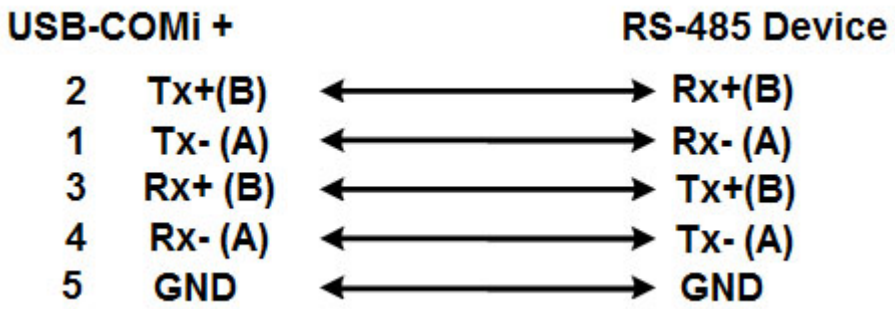
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx-(A)
Pin 5	GND

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**