Outside the unit, there are eight 3-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
RS-422	4 wire with Handshaking	ON	ON	ON
RS-485	Full Duplex (4 wire)	OFF	ON	ON
	Half Duplex (2 wire) - with Echo	OFF	OFF	ON
	Half Duplex (2 wire) - without Echo	OFF	OFF	OFF

JP3 (Port-1), JP4 (Port-2), JP5 (Port-3), JP6 (Port-4)
JP7 (Port-5), JP8 (Port-6), JP9 (Port-7), JP10 (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.
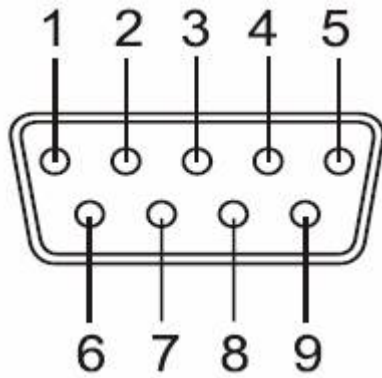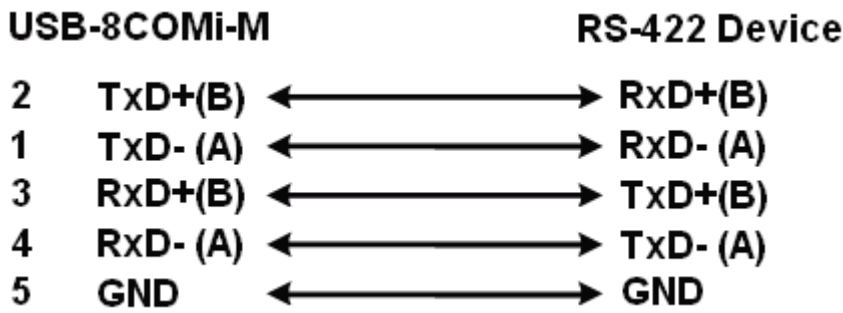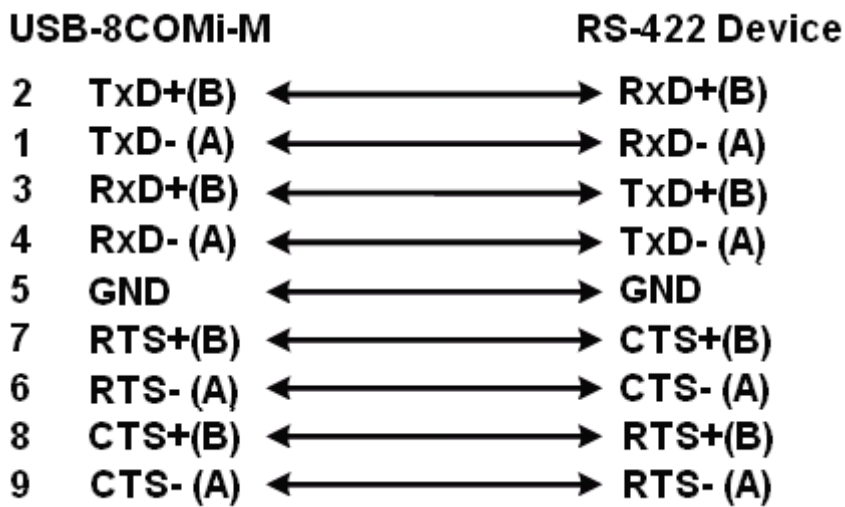
RS-422 Signal Pin-outs of DB-9 Male

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

USB-8COMi-M			RS-422 Device
2	TxD+(B)	←——————→	RxD+(B)
1	TxD- (A)	←——————→	RxD- (A)
3	RxD+(B)	←——————→	TxD+(B)
4	RxD- (A)	←——————→	TxD- (A)
5	GND	←——————→	GND

● RS-422 with Handshaking

USB-8COMi-M			RS-422 Device
2	TxD+(B)	←——————→	RxD+(B)
1	TxD- (A)	←——————→	RxD- (A)
3	RxD+(B)	←——————→	TxD+(B)
4	RxD- (A)	←——————→	TxD- (A)
5	GND	←——————→	GND
7	RTS+(B)	←——————→	CTS+(B)
6	RTS- (A)	←——————→	CTS- (A)
8	CTS+(B)	←——————→	RTS+(B)
9	CTS- (A)	←——————→	RTS- (A)

RS-485 4-Wire (Full duplex) Signal Pin-outs of DB-9 Male
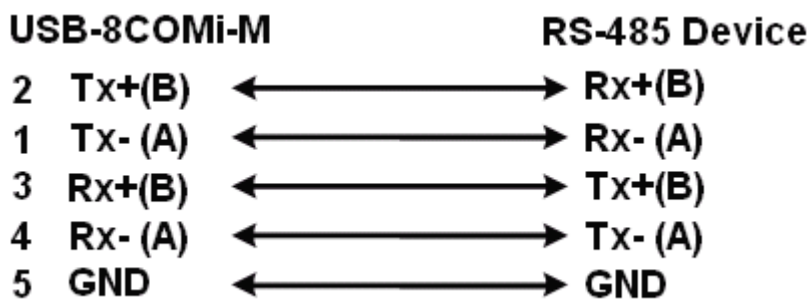
Pin 1	Tx- (A)
Pin 2	Tx+(B)
Pin 3	Rx+(B)
Pin 4	Rx-(A)
Pin 5	GND

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

```
USB-8COMi-M                    RS-485 Device
2   Tx+(B)   ←—————————→   Rx+(B)
1   Tx- (A)  ←—————————→   Rx- (A)
3   Rx+(B)   ←—————————→   Tx+(B)
4   Rx- (A)  ←—————————→   Tx- (A)
5   GND      ←—————————→   GND
```

● Multidrop RS-485 2-Wire Half-duplex

```
USB-8COMi-M                    RS-485 Device
2   Data+(B)  ←————————→   Data+(B)
1   Data- (A) ←————————→   Data- (A)
5   GND       ————————→   GND
                               ┊
                               ┊
                         RS-485 Device x
                          Data+(B)
                          Data- (A)
                          GND
```