Bluetooth V5.2 BLE RS-485 Serial Adapter V2.0
Model: S2B5485IV2 (Internal Antenna)
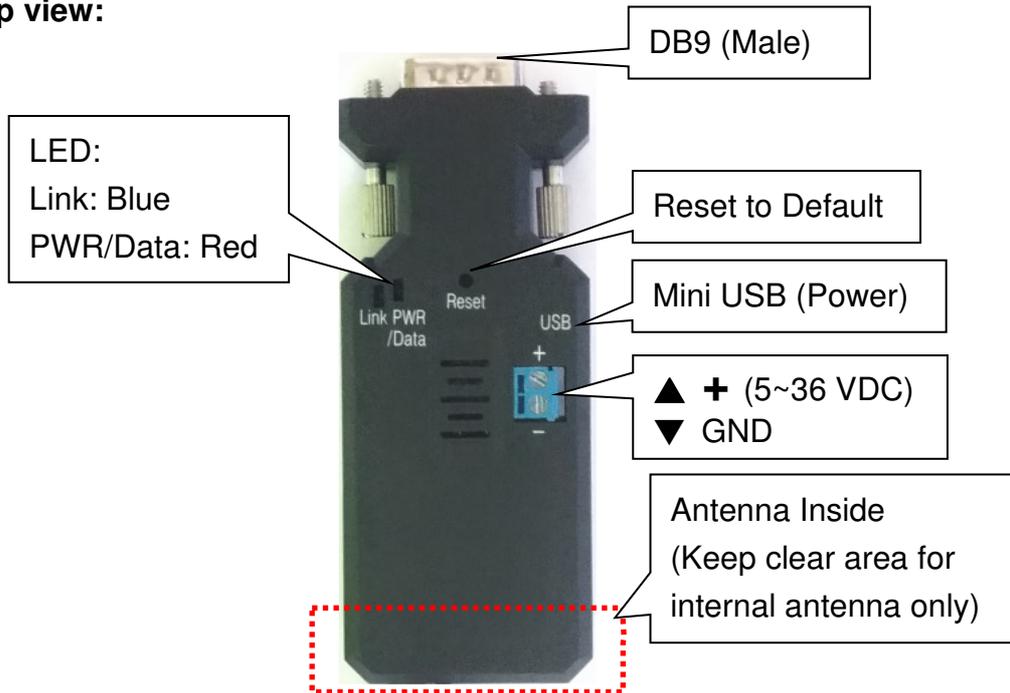## Model: S2B5485EV2 (External Antenna)

1. Package content:

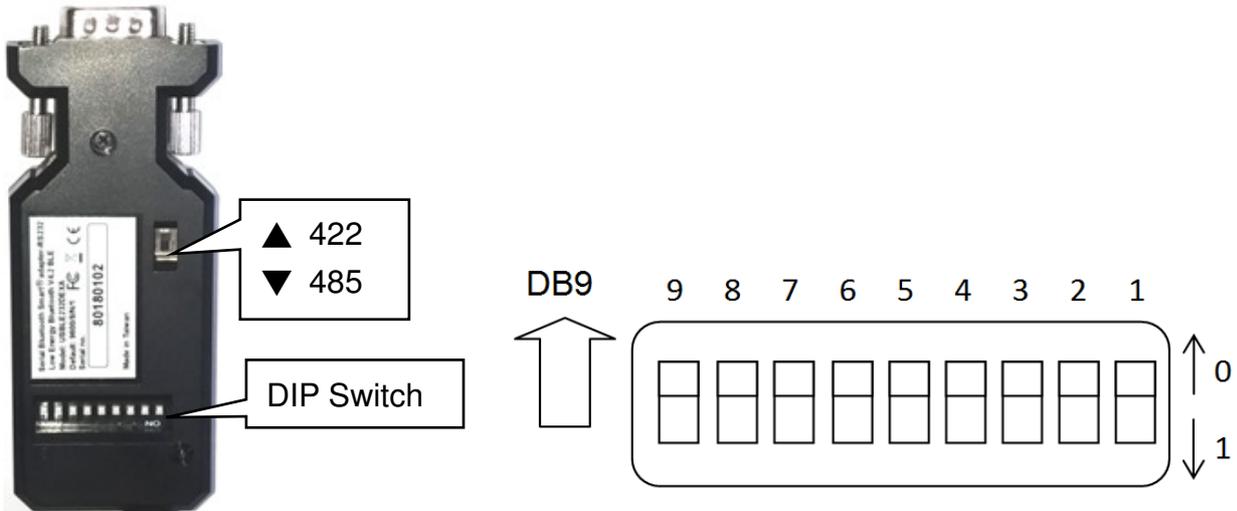| BLE V5.0 RS-485 adapter	Package Contents:
White Box: 11 x 6 x 5 (cm) Total Package Weight: 106g (Internal Antenna), 114g (External Antenna)	● BLE V5.2 RS-485 adapter x 1 ● A4 User manual x 1 ● Mini USB Cable x 1 ● DB9 to 6P Terminal Block

2. Profile:

2.1 Top view:

DB9 (Male)

LED:
Link: Blue
PWR/Data: Red

Reset to Default

Mini USB (Power)

▲ ✚ (5~36 VDC)
▼ GND

Antenna Inside
(Keep clear area for
internal antenna only)

LED Status	Description
Data LED flash	Data transmission
Data LED solid on	No data transmission
Link LED solid on	BLE Link
Link LED flash	No Link
Data & Link LED solid on	DFU/OTA Mode

2.2 Rear Side:

Switch configuration:

Setup	Modbus	Stop bit	Parity	Role	Baud Rate
9	8	7	6-5	4	3-2-1
0: AT commands or APP. 1: DIP Switches	**0: None** 1: RTU	**0: 1** 1: 2	**00: None** 01: Odd 10: Odd 11: Even	**0: Peripheral** 1: Central (Auto link with peripherals)	110:2400 111:4800 **000:9600** 001:19200 010:38400 011:57600 100:115200 101:230400

Remark:

1. 000000000 by default, in **red bold** character

2. If your setting is not supported by the DIP switch, please use the command or APP.

3. The setting is available when the Central role enabled. The un-paired new peripherals will be scanned and listed when connect with the terminal software via RS-485 connector.

2.3 DB9 Pin definition

No.	Function	Remark
1	A (RX+)	D+, A=Y (RS-485)
2	B (RX-)	D-, B=Z (RS-485)
3	Y (TX+)	
4	Z (TX-)	
5	GND	
6	Vin-1	5-28 VDC, Vin-1 or Vin-2 choose one
7	Terminal	Short Pin 7 and Pin 8 Terminal 120Ω
8	Terminal	
9	Vin-2	5-28 VDC, Vin-1 or Vin-2 choose one

2.4 DB9 to 6P block terminal connector:

Please follow the pin definition to connect the external device.

3. Power supply:

3.1 Voltage: 5~28 VDC, **Don't exceed the limit.**

3.2 There're 3 ways to power the adapter: Mini USB, 2P Terminal Block (Blue) and pin9 of DB9, please choose one. **Don't power the adapter by more than one source.**

3.3 The mini USB to type A cable is inside the standard package.

4. Specifications:

4.1 Default value:
- Baud rate: 9,600 bps
- Data bit: 8
- Parity: none
- Stop bit: 1
- Modbus: Disable
- Device Name: BLE485 V2
- Group ID: 0000

4.2 Serial Port:
- Baud Rate: 1.2/2.4/4.8/9.6/19.2/38.4/57.6/115.2/230.4 Kbps
- Parity: none/even/odd
- Stop bit: 1,1.5,2
- Data bit: 8 only
- Modbus: None (Default) or RTU

4.3 Range: max. 100 m in open space (The range depends on the real environment.)

4.4 TX Power: Max. 6 dBm

4.5 106.7 dBm sensitivity @ 125 kbps GFSK

4.6 7.5 mA radio transmit current @ 6 dBm output power
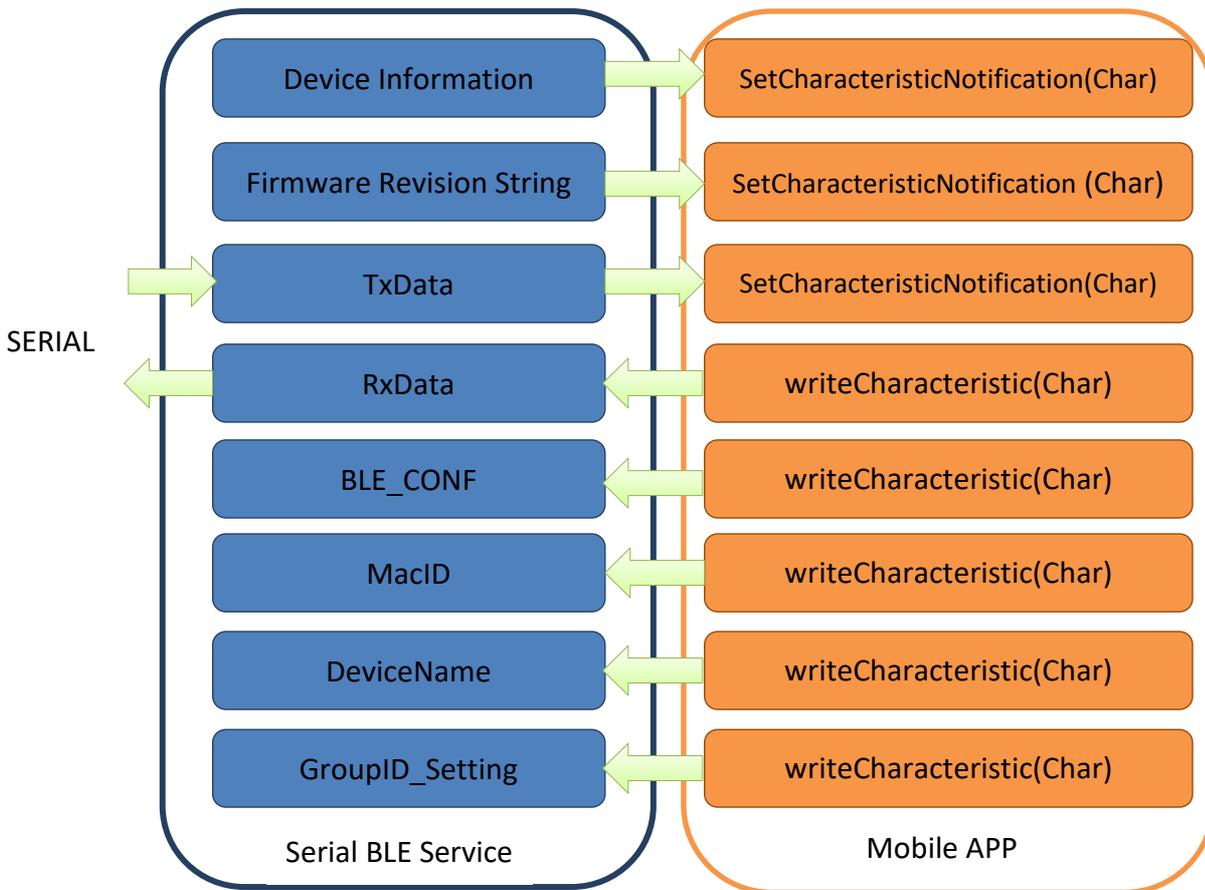
4.7 Operation Temperature: –40 ℃ to +85 ℃

4.8 Dimensions: 87 mm (L) x 34 mm (W) x 18 mm (H)

4.9 Antenna Gain: max. 2 dB (Default)

Remark: All contents are subject to change without notice.

5. GATT Service:

5.1 Architecture:

5.2 UUID_1800_SERV = ("00001800-0000-1000-8000-00805F9B34FB")

● UUID = 2A00, Device name, Default: BLE232

5.3 UUID_180A_SERV = ("0000180A-0000-1000-8000-00805F9B34FB")

● UUID= 2A26, Firmware version, Format: x.x.x, ASCII/read only

● UUID= 2A24, BLE version, Format: x.x, ASCII/read only, Value: 4.2 or 5.0

5.4 UUID_BLE_SERV = ("0003ABCD-0000-1000-8000-00805F9B0131") (Self defined UUID)

● UUID_BLE5DATA = ("00031201-0000-1000-8000-00805f9b0130"), Data from BLE232_TxData (Notification)

● UUID_BLE5SENT = ("00031202-0000-1000-8000-00805f9b0130"),//Data to BLE232_RxData max244bytes/package(write only)

● UUID_BLE5CONF = ("00031203-0000-1000-8000-00805f9b0130"), Configuration, 4bytes, (read/write)

UUID_BLE_Config (4 bytes): 00031203-0000-1000-8000-00805F9B0130			
Byte0 (Read Only)	Byte1	Byte2	Byte3
Product model	Baud Rate & connections	Port setting	
0xAA: RS232 0xAF: RS485/422	0x00: 1200 bps 0x01: 2400 bps 0x02: 4800 bps 0x03: 9600 bps 0x04: 19200 bps 0x05: 38400 bps 0x06: 57600 bps 0x07: 115200 bps 0x08: 230400 bps 0x09: 460800 bps 0x0A: 921600 bps 0x0F: Customize 0x00: 1 connect 0x10: 2 0x20: 3 0x30: 4 0x40: 5 0x50: 6 0x60: 7 0x70: 8 0x80: 9 0x90: 10 ……….. 0xF0: 16	Bit0=0 Bit0=1 Bit1=0 Bit1=1 Bit2=0 Bit2=1 bit 3: Break(0:N 1:Y) bit 4:Break Level (0:L 1:H) bit5:NA Bit6=0 Bit6=1 Bit7=0 Bit7=1	bit 0: Parity (0: NONE 1: EVEN) bit 0: Parity (0: ODD 1: ODD) bit 1: Flow control (0: Disabled 1: RTS+CTS) (for RS232 model Only) bit 1: Flow control (0: RTS 1: CTS) (for RS232 model Only) bit 2: Modem control(0:NONE 1:DTR+DSR) bit 2 Modem control(0: DTR 1:DSR) bit 3: Port Type (0: RS485 1: RS422) (Available on RS485 model only) bit 4: BLE Role (0: Peripheral 1: Central) (indication Only) bit 5: ControlSet (0: set by APP or command 1: set by 9P switch) (indication Only) bit 6: stopbit(0:1 1:2) bit 6: stopbit(0:1.5 1:1.5) bit 7: Modbus(0:NONE 1:RTU) bit 7: Modbus(0:ASCII 1:ASCII)

- UUID_BLE5ADDR = ("00031204-0000-1000-8000-00805f9b0130"), Target Peripheral Mac. Address, 6bytes,(read/write)
- UUID_BLE5NAME = ("00031205-0000-1000-8000-00805f9b0130"), Device name, Max. 15bytes, UTF-8,(read/write)
- UUID_BLE5Group   = ("00031206-0000-1000-8000-00805f9b0130"), Group ID, 4bytes, (read/write)
- UUID_BLE5RBT   = ("00031210-0000-1000-8000-00805f9b0130");Reboot, 2bytes, (read/write)

    0xaa10 = Reset to Default

    0xaa11 = Reboot

- UUID_BLE5CUSTOM = ("00031211-0000-1000-8000-00805f9b0130"); Customize, 6bytes,
  BYTE 0~3 Baud_rate   (600~1000000)
  BYTE 4~5 Break_time (0~1000)

6. Command set via COM port: (Both upper and lower case is available)

Command	Value	Description
AT		Check the connection status between control terminal and the RS-422/485 adapter. Response: "OK" when the connection is ok. Response: "ERROR" when the connection is not ok.
GROUP=		The same group ID will link together automatically.
(Default)	0000	
	0001~9999	
LINK=		The central will link to multi-peripherals. Or, the peripheral will be connected by multi-centrals.
(Default)	4	1 central adapter will link up to 4 peripheral adapters with the same group ID automatically. The peripheral adapter will be connected by more than 1 smartphone.
	1~16	Max. link no. is 16.
MODBUS=		The adapter supports the Modus protocol.
(Default)	N	None
	R	RTU
NAME=		This command is used to specify a device name for the adaptor. You can specify a friendly name using 0 to 9, A to Z, a to z, space and –, which are all valid characters. Note that "first space or -, last space or – isn't permitted".
(Default)	BLE485 V2	Default device name
	xx….xx	Max. 14 Character
PORT=		This command is used set the serial port.
(Default)	9600,N,1	9600: Baud rate 9,600 bps N: None parity 1: Stop bit
		Baud rate: 80~1,000,000 bps Parity: None (n/N), Even(e/E), Odd (o/O) Stop bit: 1, 1.5, 2
ROLE=		The role of the adapter.
(Default)	P	Peripheral or slave
	C	Central or master
STATUS=		Inquire all the current setting of the adapter.
	?	Display the current setting of the adapter

7. Central and Peripheral: (Similar like the Master and Slave roles)

By DIP switches: The central will pair the slave automatically.

- Switch DIP-9 to 1 (Configuration by DIP Switch)
- Switch DIP-4 to 1 (Central)
- The central will link with the neighboring peripheral automatically. The blue LED will be

solid on. The central will link with the paired peripheral next time when powered on.

- Please reset to default and follow above procedure if you want to link with other BLE devices.

By AT command:

- Set "role=c" or "ROLE=C" in one adapter.
- The central will link with the neighboring peripheral automatically. The blue LED will be solid on. The central will link with the paired peripheral next time when powered on.
- Please reset to default and follow above procedure if you want to link with other BLE devices.

The APP is used for configuring the parameters and can also be used for data transmission tests.

Android: The Android app can be downloaded from the Google Play Store:
https://play.google.com/store/apps/details?id=tw.com.uconnect.ble232
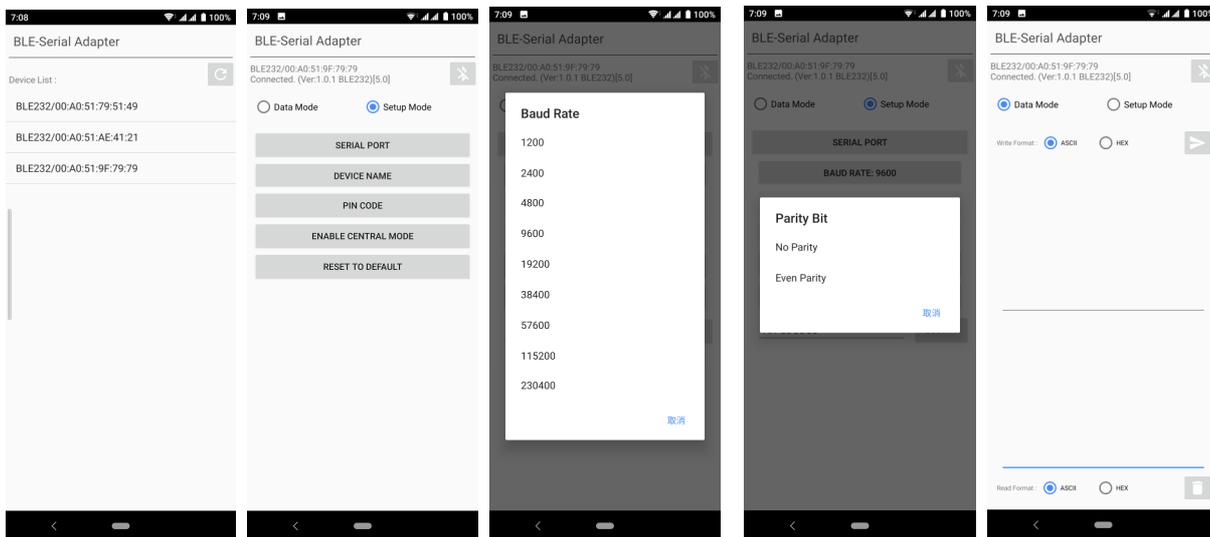
iOS: The same configuration procedures as Android version. The app for iOS can be downloaded from the Apple Play Store:

https://itunes.apple.com/us/app/ble-to-serial-terminal/id1238004134?l=zh&ls=1&mt=8

Download: Please contact the supplier for the APP download or the sample code.
Android: iOS: