

29-MAY-2018 56312E31

RYB080I

lite User Guide





RYB0801_lite User Guide **REYAX**

STEP 1. INSTALL THE SOFTWARES

1.) Download the USB to RS232 driver (CP210x_VCP_Windows.zip)

https://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx

(After installing the driver, plug the USB cable, and then check the COM port number from Device Manager)

- Processors
- Software devices
- Universal Serial Bus controllers
- ⊿ 🦞 Ports (COM&LPT)
 - 🚏 Silicon Labs CP210x USB to UART Bridge (COM3)
- Mice and other pointing devices
- 2.) Download *Access Port*, which is a serial port monitoring tool for Windows. http://www.sudt.com/en/ap/
- 3.) Download App *REYAX BLE UART* for Android smartphones <u>http://reyax.com/products/ryb080i/</u>
- 4.) Download App *LightBlue* for iPhones. <u>https://itunes.apple.com/us/app/lightblue-explorer-bluetooth/id557428110?mt=8</u>



LightBlue – Bluetooth Low Energy By Punch Through

Description

2.2.2 iPhone 6 screen size compatibility Numerous bug fixes

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STEP 2. CONNECTION SETTING

- 1.) Plug USB cable to connect the EVB and the PC.
- 2.) Open the software Access Port : Tools \rightarrow Configuration
- 3.) Set the COM port number and the baud rate (Default is 9600bps).

General Event Control Flow Control Timeout Control Monitor Control	Custom Baud Rate			
	Serial Port Settings			
	Port: COM3			
	Baud Rate: 9600 🗸			
	Parity Bit: NONE 🗸			
	Data Bit: 8			
	Stop Bit: 1			
	Buffer Size: 8192 🗸			
	Send display Receive display			
	Char Format			
	O Hex Format			
	AutoSend Enable auto send Cycle 1000 ms			
2	Advanced Auto open port when application start			
<i>—</i> •				
OK	Prompt for saving when application exit			
Cancel	Remind me when update is available			

<u>a</u>	AccessPort - C	OM3(9600,N,8,1)	Opened	– 🗆 🗙
File Edit View Monitor To	ools Operation	Help		
🍫 🕑 🔁 📃 🕇	۵			
Terminal Monitor				
🖬 🛛 🔛 Hex 🛛 ab 🖾 🗠				
+READY +ENTER=1 +V1.0				
Send-> 🔘 Hex 💿 Char	Plain Text	✓ Real Time Send	Clear	Send DTR RTS
				~
Comm Status CTS DSR	RING	LSD (CD) CTS Hold	DSR Hold	RLSD Hold XOFF H
Ready		Tx 0	Rx 25	COM3(9600,N,8,1) (:

4.) Press the RESET button on the EVB, then it can be connected by a smartphone.

STEP 3. COMMUNICATION TEST WITH SMARTPHONES

[For Android smartphones **]**

- 1.) Open the Bluetooth function of your smartphone and the App *REYAX BLE UART*, search and connect to the device. (The default broadcast name is BLE_MODULE)
- 2.) Send "Hi(+ENTER)" from the HyperTerminal on PC, and then send "I am here!" from the smartphone App.

REYAX BLE UART	REYAX BLE UART
Connect	Disconnect
REYAX BLE UART	[下午4:48:02] Connected to: BLE_MODULE
Select a device (i)	[]`T 4.40.15] NA. HI
BLE_MODULE Rssi = -55 EC:24:B8:23:2E:61	
Scan	
Send	I am here! Send
Device: <select a="" device=""></select>	Device: BLE_MODULE - ready

AccessPort - COM3(9600,N,8,1) Opened -	×
File Edit View Monitor Tools Operation Help	
🎭 🕘 🔁 🍃 🥝	
Terminal Monitor	
+READY +ENTER=1	
+V1.0 (BLE is connecting) ++++++ (Sent" Hi " to the smartphone App) +>>>> (Received the message sent from the smartphone App) am here!	
end-> 🔿 Hex 💿 Char Plain Text 🗸 🗌 Real Time Send Clear Send 🗋 DTR 🗌 RTS Max Size < 64KB	
li	< >
Comm Status CTS DSR RING RLSD (CD) CTS Hold DSR Hold RLSD Hold XOFF Hold	
Ready Tx 0 Rx 25 COM3(9600,N,8,1)	
	(

[For iPhones]

- 1.) Open the Bluetooth function of the smartphone and the App *LightBlue*, search and connect to the device. (The default broadcast name is BLE_MODULE)
- 2.) Enter the Characteristic 4 item to receive the messages which are sent from the HyperTerminal on PC, or enter Characteristic 1 item to send messages to the HyperTerminal.

Info	LightBlue	+	LightBlue Perip	heral Clon
Peripherals	Nearby		<010d0000 001001>	
BLE 8 1 ser	_MODULE	>	UUID: FFF0	
Virtual Peri	pherals		Characteristic 1 Properties: Read Write UUID: FFF1	Sender UUID
			Characteristic 2 Properties: Read UUID: FFF2	2
			Characteristic 3 Properties: Write UUID: FFF3	2
			Characteristic 4 Properties: Notify UUID: FFF4	Receiver UUI
			Characteristic 5 Properties: Read UUID: FFF5	2

3.) Enter the Characteristic 4 item, click "Listen for notifications " button to receive the messages. And click "Hex" button to change the character format to "UTF-8 String".

Kert Back OxFFF4 Hex	Cancel Characteristic Format
BLE_MODULE	BLE_MODULE
Characteristic 4 UUID: FFF4 Connected	Characteristic 4
	0x123456 ✓
Listen for notifications	004432126 _{Octal}
DESCRIPTORS	0b000100100011010001010110 Binary
Client Characteristic Configuration Characteristic 4 Characteristic Isor Description	"4V" UTF-8 String
PROPERTIES	Byte Count: ∞ 📃 +
Notify	Endianness: Big Little

- 4.) Send "Hi(+ENTER) "to the smartphone App from the HyperTerminal on PC, it will show as below.
- 5.) Then enter the Characteristic 1 item. Click "Hex" button to change the character format to "UTF-8 String" first, and click "Write new value " button.

Kack 0xFFF4 UTF-8	Kack 0xFFF1 UTF-8
BLE_MODULE	BLE_MODULE
Characteristic 4 UUID: FFF4 Connected	Characteristic 1 UUID: FFF1 Connected
NOTIFIED VALUES	READ VALUES
Stop listening	Read again
"Hi 16:35:37.217	" C " 16:35:48.767
DESCRIPTORS	WRITTEN VALUES
0 Client Characteristic Configuration	Write new value
Characteristic 4	DESCRIPTORS
PROPERTIES	Characteristic 1 Characteristic User Description
Log	Log

6.) Send the message to the HyperTerminal on PC. It will show the transmitting records.

CoxFFF1 Edit Value	✓ Back 0xFFF1 UTF-8
UTF-8 String	BLE_MODULE
I am here!	Characteristic 1 UUID: FFF1 Connected
	READ VALUES
	Read again
	" <u>I</u> "
	16:36:24.318 "O"
	16:35:48.767
	WRITTEN VALUES
- / : ; () \$ & @ "	Write new value
#+= . , ? ! ' 🗙	"I am here!" 16:36:24.206
ABC Done	Log

7.)	You could als	so check the o	communication	information on	PC as below.
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AccessPort - COM3(9600,	N,8,1) Opened – 🗖 🗙
File Edit View Monitor Tools Operation Help	
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Terminal Monitor	
🖬 🔛 Hex ab 🖾 🤮	
+READY +ENTER=1	
+V1.0 ++++++ (BLE is connecting) +>>>> (Sent" Hi "to the smartphone App) I am here! (Received the message sent from the smartphone App)	
Send-> 🔿 Hex 💿 Char 🦳 Plain Text 🗸 🗌 Real Time Send	Clear Send DTR RTS Max Size < 64KB
Ні	· · · · · · · · · · · · · · · · · · ·
Comm Status CTS DSR RING RLSD (CD) CTS Hold	DSR Hold RLSD Hold XOFF Hold
Ready	Tx 0 Rx 25 COM3(9600.N.8.1) (



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