Bluegiga Forums / Community Forums / Bluetooth Smart

BLE112 Module Interface with PC/MCU through UART (no flow control)

Answered

Anh Trinh
asked this on September 17, 2014, 11:15

Dir Sir/Madam,
I want to interface my BLE112 with my MCU using UART without flow control (not use CTS and RTS pin). At first, I try to config firmware for the Module as my purpose. I flash it to the Module with BLE Update Tool using CC-debuger.Then, I connect BLE112 Module with a UART Module(use FTDI chip) and connect it with PC by cable. Next, I use BG GUI as your document to try to make transactions between PC and the BLE112 Module, but I can not receive any reponse from this Module as data from the RX pin. I also refer to some topics in your forum, but not solve my problem. I need you help!
I attached my configuration project for the BLE112 Module, please refer it for more detail.
Thank you and best Regards,

ble_config.rar

0 people would like this to be answered. Be the first!

Comments

Jeff Rowberg
Bluegiga Technologies

Hello Anh,

It appears from your configuration that you are using USART0/Alt2 at 57600 for BGAPI with packet mode enabled:

```
<usart channel="0" alternate="2" baud="57600" endpoint="api" flow="false" mode="packet" />
```

You also have sleep mode disabled, so there should not be any requirement for using the wake-up pin. The above configuration uses the following pins:

- P1_5 = TXD, connect to host RXD
- P1_4 = RXD, connect to host TXD
- P1_3 = RTS (disabled)
- P1_2 = CTS (disabled)

You should see the "system_boot" event come from **P1_5** every time you boot or reset the module. This is a 16-byte packet which will begin with **[80 0C 00 00 ...]**. Can you confirm that you do see this event when you reset the module?

September 17, 2014, 16:03

Anh Trinh

Hello Mr.Rowberg,

Thank you for your support. I confirm that I saw the 16-byte packet when I reset this Module.

September 17, 2014, 19:39

Anh Trinh

Can you help me for my problem? I still not solve it yet!

September 19, 2014, 07:00

Jeff Rowberg
Bluegiga Technologies

Hi Anh,

Since you can see the **system_boot** event correctly, this means that the UART interface is functioning correctly. What happens if you send the binary packet **[06 00 02 01 06 02 02]** for the packet-mode formatted "gap_set_mode(2, 2)" command? This is 7 bytes total including the prepended "length" value that is required when sending commands in packet mode. It should cause the module to start advertising.

September 19, 2014, 15:57

Hi Mr.Rowberg,

I don't see any reponse when I send this packet. But, can you confirm that my configuration for my purpose is correct or not?

Support

Anh Trinh

September 20, 2014, 20:08

Jeff Rowberg
Bluegiga Technologies

Hello Anh,

Your configuration is correct. Can you confirm that P1_4 is correctly connected to your host device, and that there are no other devices connected to that same pin which would be affecting the ability of the host to communicate? Can you check with a logic analyzer or a separate receiving UART device to make sure that the host is in fact sending out the data that you expect?

September 22, 2014, 16:07

Anh Trinh

Hello Mr.Rowberg,

Thank you very much! I confirm that the P1_4 was connected correctly and have no other devices connected to that same pin. However, I have a question that I try to send **ble_cmd_gap_set_mode discovery** to the BLE112 Module by BGGUI2 and I have to press "**detach**" button (as the attached picture) then my android app scan and recognize this Module. I think that I have to press "**detach**" button then a command will be sent . I still don't explain this.

Screenshot (2).png (quick view)

September 23, 2014, 19:33

Jeff Rowberg
Bluegiga Technologies

Hello Anh,

Answer

BLEGUI always opens its serial port with hardware flow control enabled. If you are trying to communicate with a BLE module that does not have flow control enabled or connected, then you need to use a hardware flow control bypass on the host side, which means either connect the host's CTS pin to GND (if at 3.3v TTL levels) or connect the host's CTS pin to its own RTS pin (if at RS232 levels). Otherwise, no data will ever leave BLEGUI since it will be permanently waiting for flow control signals which never come.

September 23, 2014, 20:07

Anh Trinh

Hello Mr.Rowberg,

Thank you for making my problem clearly. I appreciate your support. Now, I am still working with the BLE112 Module, and interface with MCU. I hope that I will receive your support in the next time.

Thank you and best Regards!

September 24, 2014, 05:28

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