

Bluegiga Forums / Community Forums / Bluetooth Smart

simple BGScript example should switch on a led, but it does nothing

Answered



David Portabella

asked this on October 9, 2013, 23:00

Share

Tweet

0

Like

0

I am trying to program a BLE112 chip with a very simple example.
 here there is a simple example: https://dl.dropbox.com/u/119539/toggle_led.rar that switches a led on and off every second.
 then I do as explained in their blog: <http://blog.bluetooth-smart.com/2012/09/16/programming-the-ble112-u...>

I do as follows:

- I unrar toggle_led.rar and I get the file toggle_led/out.hex.
- then I install and run the Texas Instruments SmartRF Flash Programmer: <http://www.ti.com/tool/flash-programmer>
- set the flash image path to the out.hex file,
- then click on "Actions: Erase and Program"
- then hit the "Perform Actions" button

this seems to run ok.

now, the LED that is connected to P0.7 on my BLE112 module should switch on and off every second, but nothing happens.

from this post: <http://www.sureshjoshi.com/development/bgscript-bglib-bgapi-explained/>

I understand the BGScript does not require BGLIB, and so programming the toggle_led/out.hex with the Texas Instruments SmartRF Flash Programmer should be enough.
 is that correct?

if so, what can be the problem? that is, why nothing happens, why my led is not switching on and off?

0 people would like this to be answered.

Be the first!

Comments



Sami Kaislasuo
Bluegiga
Technologies

Probably pin P0.7 is not capable of driving your LED, could you try either pins P1.0 or P1.1 which are capable of driving 20mA.

Answer

Following BGScript should do the trick:

```
event system_boot(major ,minor ,patch ,build ,ll_version ,protocol_version ,hw)

#Set timer to generate event every 1s
call hardware_set_soft_timer(32768, 1, 0)

# configure P1.1 as output
call hardware_io_port_config_direction(1, $02)

call hardware_io_port_write(1, $02, 0)

end

dim result
dim port
dim data

#Timer event listener
event hardware_soft_timer(handle)
call hardware_io_port_read(1, $02)(result, port, data)

if data & $02 then
call hardware_io_port_write(1, $02, 0)
else
call hardware_io_port_write(1, $02, $02)
end if
end
```

Also I would advise to use our BLE SW Update Tool to flash the module, as the TI's tools erase the license key from the module and the Bluetooth radio will not without the license. The license can be reinserted with the BLE SW Update Tool and, if the key is lost please issue a support ticket where the serial number is displayed, we will generate one for you.

Support

Cheers

October 10, 2013, 14:54



David Portabella

What is the BLE SW Update Tool? do you have a link? do you mean the DFUTool by USB, as explained in BLE_getting_started_v1.5.pdf, page 20?

In this same document, BLE_getting_started_v1.5.pdf, page 20, you recommend to use TI Flash programmer. So, we should use this TI tool or not?

We are very confused!

Regards,

David

October 10, 2013, 21:47

Sami Kaislasuo
Bluegiga
Technologies

The BLE_getting_started_v1.5 guide is quite outdated and there is a v1.7 available in the website.

Answer

The BLE SW Update Tool is included in the latest SDK release executable (v1.2.0), downloadable from product's download section:

<http://www.bluegiga.com/en-US/products/bluetooth-4.0-modules/ble112-bluetooth-smart-module/documentation/>

Cheers

October 11, 2013, 08:23



Ben R

^^^^ Can you post a link to the BLE_getting_started_v1.7 file? I cant find anything but the 1.5 version...

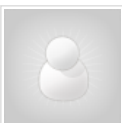
February 6, 2014, 23:12

Jeff Rowberg
Bluegiga
Technologies

Hi Ben,

The document that is available for download is actually the v1.7 doc (see the front page of the PDF), even though the filename has 1.5 in it. I am not sure why this is so, and I have asked to have it fixed.

February 6, 2014, 23:21



Ben R

Got it. I see that now. Thanks for clarifying.

February 6, 2014, 23:49



Ben R

So I am planning on attempting to accomplish this same task except with the BLE113. Will the BGScript code Sami Kaislasuo posted above work the same for the BLE113?

February 8, 2014, 00:41

Jeff Rowberg
Bluegiga
Technologies

Hi Ben,

Most project code will work without modification on either module, except in the case of USB (non-existent on the BLE113) and I2C (hardware on the 113, software on the 112). There is nothing module-specific in the code that Sami posted above, so it should work fine on either module.

For more detail on the difference between those two modules and the project source files between them, read this KB article:

- <https://bluegiga.zendesk.com/entries/24781536--HOW-TO-Convert-a-BLE112-project-to-a-BLE113-project>

February 8, 2014, 00:45



Ben R

Downloading the linked to .rar file from the OPs post and using the updated code Sami Kaislasuo posted above, Bluegiga BLE SW Update Tool is giving me the following error with a red background:

The firmware is meant for chip CC2540, but the connected device has CC2541.

So somewhere Im missing a reference to the BLE112 that needs to be changed to support the BLE113. What file in the project references handles this and what attribute needs to be changed?

```
<?xml version="1.0" encoding="UTF-8" ?>
<project>
  <gatt in="gatt.xml" />
  <hardware in="hardware.xml" />
  <script in="blinkled.bgs" />
  <usb_main in="cdc.xml" />
  <image out="blinkled.hex" />
</project>
```

Sorry for the total newb questions, but Im very new to this and desperately trying to figure it all out with the what seems at this point limited newb friendly resources. So thanks in advance for your help and support.

February 8, 2014, 01:13



Ben R

Scratch that, found this:

The main thing you have to change in your BLE project's main definition file (usually **project.xml** or **project.bgsproj**) is to add or modify the device type line. For projects meant for the BLE113, this file should include the following line:

```
<device type="ble113" />
```

Without this, it will not flash properly onto a BLE113. In many of our example projects, you will see two different project definitions files, one of which includes "113" somewhere in the name. This makes it easy to reuse the same set of XML files and BGScript files so that the same project can be easily flashed onto either kind of module.

The other change is to make sure that your **hardware.xml** definition and (if applicable) your BGScript source file do not enable or reference the USB port or endpoint, as this will not work.

February 8, 2014, 01:44



Ben R

Implemented those changes and it all worked :)

February 8, 2014, 01:45



Goutam Reddy

Is there a different tag to use for the ble113-a-m256k chips (i.e. the 256K versions of the BLE113)?

When I try the regular tag

```
<device type="ble113" />
```

I get the following error:

```
<!--StartFragment-->The firmware is meant for 128kB flash, but the device has 256kB of flash.<!--EndFragment-->
```

May 1, 2014, 06:08



Hi Goutam,

In BLE SDK v1.2.2-100, the required change is to add **memory="256"** on the **<device>** tag:

```
<device type="ble113" memory="256">
```

Jeff Rowberg
Bluegiga
Technologies

May 1, 2014, 08:16



Malcolm Rook

Hi

I have just updated the BLE Update tool so that I can work with BLE121LR devices and this works OK

I had to go back to an old project for a BLE112 and was unable to build. I got the message "The firmware is meant for chip CC2540, but the connected device has CC2541" when I tried to build.. I understood that the BLE112 has the CC2540 chip.

Do I need to make any changes ti the project files?

I tried fooling the system by falsely adding <device type=" ble113" /> (BLE113 has CC2541 chip) to the project file but this just produces a message "**The firmware is meant for device family BLE113, but the connected device's family is BLE112**"

Adding <device type=" ble112" /> has no effect.

I still have an older version of the BLE update tool on another computer and this works fine with the BLE112.

This means that for the time being I can get round the problem by using different machines according to which device I am working with. Unfortunately I will shortly lose the machine with the odler BLE update tool.

February 20, 2015, 15:21



Malcolm Rook

Sorry everyone. All has suddenly started working.

February 20, 2015, 16:21