

BLE FW Update Guide

Amp'ed RF Technology, Inc.

Details for updating the firmware on a BLE60-M module.

Tools needed:

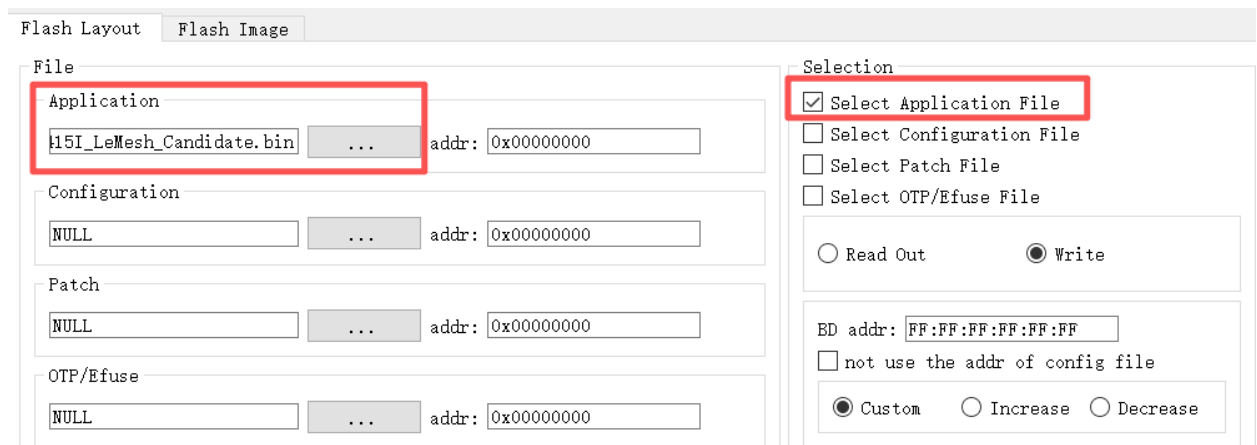
- OmBleispStudio Rev2.0.3.21-Beta.exe
- Windows PC
- COM port on PC
- Level shifter for RS232

Steps:

1. Connect UART0, pins 5 & 6, to PC using a RS232 level shifter with common ground, and power on the module.
2. Run "OmBleispStudio Rev2.0.3.21-Beta.exe" on PC.
3. Com Port: Select the correct port , and set the baudrate 921600.



4. Select an application file:



5. Apply pin 9, low with GND.
6. Apply reset signal to pin 10: set to GND. The module goes into boot mode.
7. Click "Connect" button. Message prompt "Get the value of flash status register successfully, and the value is 0x0"

Parameters

Port

COM Port COM3

Baudrate 921600

Flash

Location

☒ inner
 ☐ out

width

☐ MISO
 ☒ Dual
 ☐ Quad

clock(MHz)

6

delay(0~15):

0

HOLD Pin

255

Secure

☐ JTAG/SWD Lock
 ☐ Code Encryption
 ☐ Read Out Protection
 ☐ Flash Verify

Display

FlashID

15H/35H/05H

Connect

Flash Layout

Flash Image

File

Application

15I_LeMesh_Candidate.bin

...

addr: 0x00000000

Configuration

NULL

...

addr: 0x00000000

Patch

NULL

...

addr: 0x00000000

OTP/Efuse

NULL

...

addr: 0x00000000

Selection

☐ Select Application File
 ☐ Select Configuration File
 ☐ Select Patch File
 ☐ Select OTP/Efuse File

☐ Read Out
 ☒ Write

BD addr: FF:FF:FF:FF:FF:FF

☐ not use the addr of config file
 ☒ Custom
 ☐ Increase
 ☐ Decrease

[10:53:52.360]Connecting to the chip. Please wait for a moment.

[10:53:52.994]Get the value of uid register successfully, and the value is :42 50 30 4B 38 34 34 05 01 0E 4E 1C 56 02 23 78

[10:53:52.997]Connected to the chip successfully, flash id=0x856013, rom id=0x6621CC20

[10:53:53.000]Get the value of flash status register successfully, and the value is 0x0

0%

WRSR

RDSR

Erase

Start

8. Click "Erase" to erase the whole data in flash.

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Parameters

Port

COM Port COM3

Baudrate 921600

Flash

Location

☒ inner
 ☐ out

width

☐ MISO
 ☒ Dual
 ☐ Quad

clock(MHz)

6

delay(0~15):

0

HOLD Pin

255

Secure

☐ JTAG/SWD Lock
 ☐ Code Encryption
 ☐ Read Out Protection
 ☐ Flash Verify

Display

FlashID

856013

15H/35H/05H

0

Disconnect

Flash Layout

Flash Image

File

Application

15I_LeMesh_Candidate.bin

Configuration

NULL

Patch

NULL

OTP/Efuse

NULL

Selection

☒ Select Application File
 ☐ Configuration File
 ☐ File
 ☐ Fuse File

☒ Write

BD addr:

FF:FF:FF:FF:FF:FF

☐ not use the addr of config file

☒ Custom
 ☐ Increase
 ☐ Decrease

Warning

The Erase operation will erase the whole data in flash excluding the FT data. Please be careful.

Yes

No

0%

WRSR

RDSR

Erase

Start

[11:24:30.592]Connecting to the chip. Please wait for a moment.

[11:24:31.409]Get the value of uid register successfully, and the value is :42 50 30 4B 38 34 34 05 01 0E 4E 1C 56 02 23 78

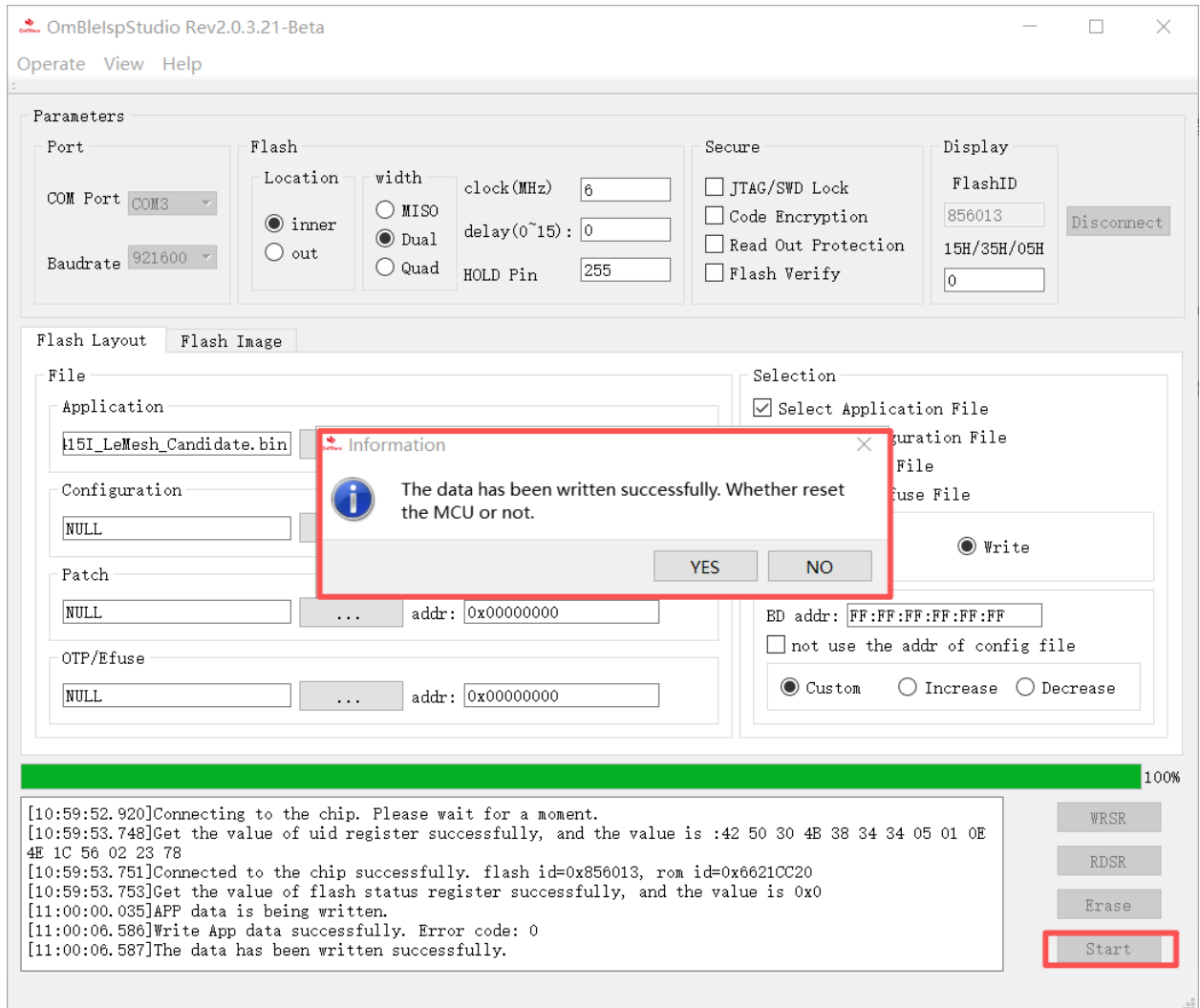
[11:24:31.412]Connected to the chip successfully. flash id=0x856013, rom id=0x6621CC20

[11:24:31.430]Get the value of flash status register successfully, and the value is 0x0

- Click "Start" to begin the download, and continue until a message prompt appears indicating successful completion.

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10. Open Term,exe and connect the module to the PC using pins 13 and 14, UART 1.
 11. Reset again using pin 10.
 12. Set BD Address: at+ab SetBDAddress 00043exxxxxx. Use the address from the QR label on the module. This command can only be used 1 time.
- Firmware update successful!

A - COM3: 115200 Baud - Amp'ed RF Firmware Test Tool - 5.2

```

at+ab reset
AT-AB ResetPending
AT-AB -CommandMode-
AT-AB BDAddress 00043e2600a2
at+ab SetBDAddress 00043e8fccc7
AT-AB ResetPending
AT-AB -CommandMode-
AT-AB BDAddress 00043e8fccc7
at+ab config
var01 BuildVersion      = 240415I
var02 BD_ADDR           = 00043e8fccc7
var03 DeviceName        = Amp'ed Up
var04 StreamControl     = true
var05 PIN               = 123456
var06 UartBaudrate       = 115200
var07 UartParity         = none
var08 UartDataBits       = 8
var09 UartStopBits       = 1
var10 SleepEnable       = false
var11 GPIO_KeepAwake     = none
var12 EnableEncryption   = false
var13 HostEvents         = true
var14 ProfileRole        = all
var15 AdvIntMin          = 256
var16 AdvIntMax          = 512
var17 ScanInt            = 32
var18 ScanWindow         = 18
var19 ConnectIntMin      = 912
  
```

Profile: A

LR71_LoraAudio_251215.bi

☐ Binary Mode
☐ Stay On Top

CTS/RTS Enabled

Rx: 2102 Speed: 0

Commands