

# Configuring SpotSensor Device Lora Modules via BLE

## UART\_V1\_en

### Tools required:

One smartphone (ios/android) and one Mac.

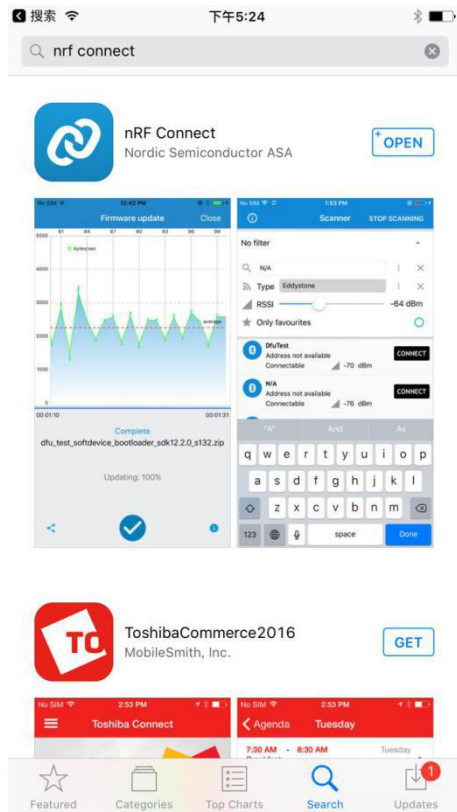
### Preparations:

1. Download the zip file ble-uart-setup-master.zip from <https://github.com/SpotSensors/ble-uart-setup> and unzip it. Load the folder “firmware files” to the phone. The file in this folder must stay as a zip file without decompression. Load ble-uart.js, package.json, uart\_terminal.js to the Mac.

Code for configuring SpotSensor device Lora/3G modules via BLE UART

2 commits		1 branch	0 releases	1 contributor
Branch: master		New pull request	Find file	Clone or download
janekm adding firmware files		Latest commit 93698fc an hour ago		
firmware files	adding firmware files	an hour ago		
ble-uart.js	Initial commit	an hour ago		
package.json	Initial commit	an hour ago		
uart_terminal.js	Initial commit	an hour ago		

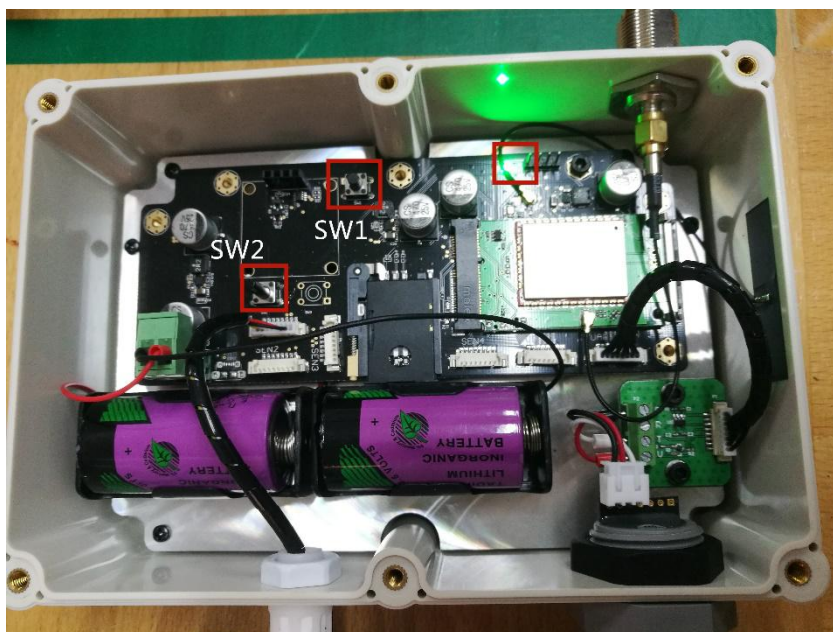
2. Install the APP “ nRF connect” on the phone.



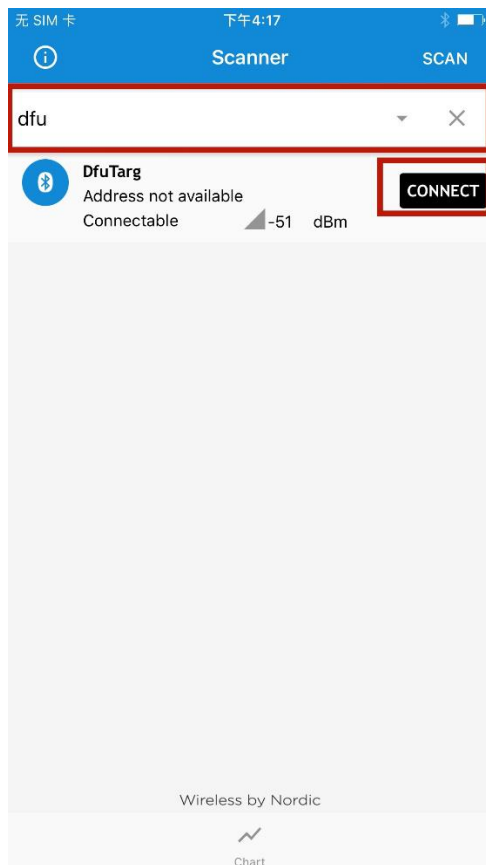
3. Install node ( <https://nodejs.org/en/>) on the Mac.

## Firmware download and Lora parameter setting

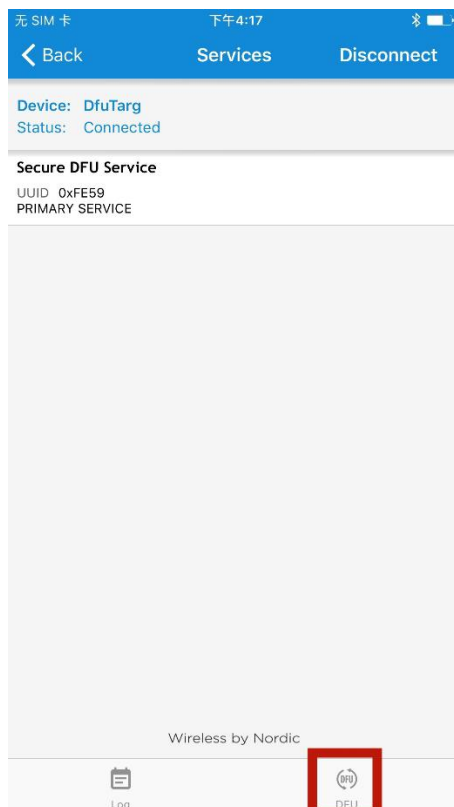
1. Download Lora param setting firmware to the device.
  - a) Supply power to the device. Press and hold SW2, press and release SW1, the led should be lighting constantly. The device entered bootloader mode.



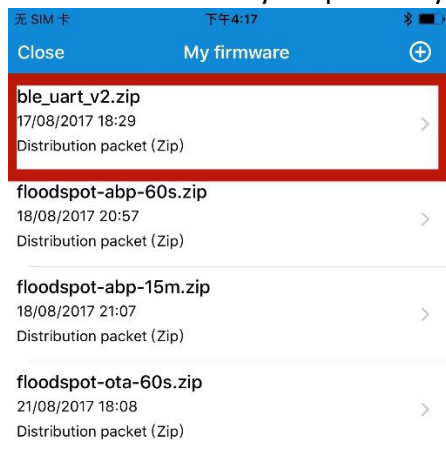
b) Turn on Bluetooth on the smartphone. Open the APP nRF Connect. Press SCAN at the upper right. Search a device called DfuTarg and press CONNECT. If there are too many Bluetooth devices nearby, try use the filter function on top by typing “dfu”.



c. Press DFU at the bottom right.



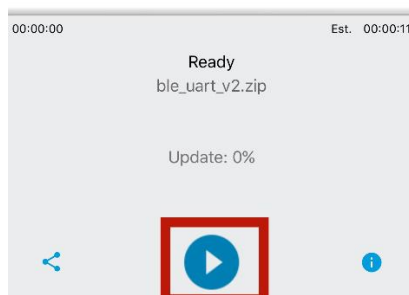
d. Press the file ble\_uart\_v2.zip . For the first time you may need to import it from the file location on your phone by pressing the “+” sign at the upper right.



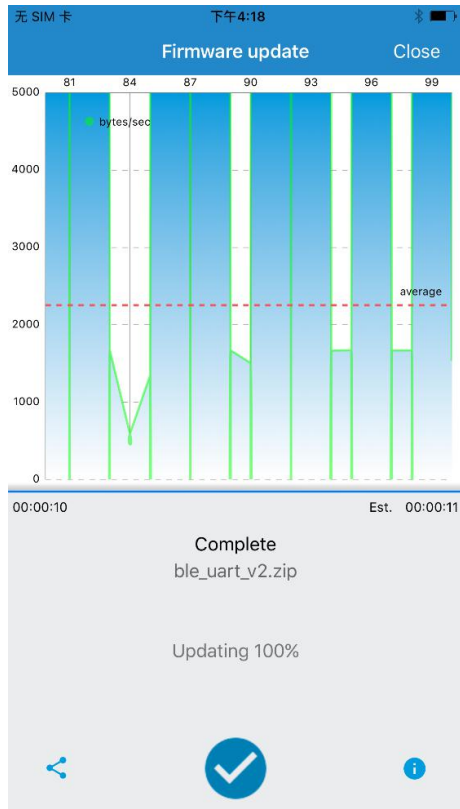
e) Press the start button at the bottom.



Press start to update



f) When the progress bar goes from 0% to 100% and you see the page below , that means download is completed.



g) Press SW1 (RESET) on the PCB. Program starts to execute.  
(Note: Sometimes it will fail unreasonably, just try it again. )

2. Use terminal on the Macintosh to enter where the file `uart_terminal.js` is located, run command `"node uart_terminal.js"`. Then you can use the AT command as below to set up ID and KEY directly.

```
AT+ID=DevEui, "BE7A0000000004DF"
```

```
AT+ID=DevAddr, "485F27EF"
```

```
AT+KEY=NWKSKEY, "FB6CF7D8ECA558A602FBD3B6D8C9F2BA"
```

```
AT+KEY=APPSKEY, "0176679B442F22CB7BA1570B651B8AA0".
```

`AT+CMMSG="hello"` can be used to test whether message is sent successfully.

```
Janeks-MacBook-Pro:readSerial janek$ node uart_terminal.js
radio status: poweredOn
Connected to device.
+LOWPOWER: AUTOOFF
at
+AT: OK
AT+ID=DevEui, "BE7A000000000501"
+ID: DevEui, BE:7A:00:00:00:00:05:01
AT+ID=DevAddr, "00382B6E"
+ID: DevAddr, 00:38:2B:6E
AT+KEY=NWKSKEY, "414CD81301C237CB0BC16D856739B490"
+KEY: NWKSKEY 41 4C D8 13 01 C2 37 CB 0B C1 6D 85 67 39 B4 90
AT+KEY=APPSKEY, "E21FF174DD66924527CF302059297C2E"
+KEY: APPSKEY E2 1F F1 74 DD 66 92 45 27 CF 30 20 59 29 7C 2E
at+cmmsg="hello"
+CMMSG: Please join network first
at+mode=lwabp
+MODE: LWABP
> at+cmmsg="hello"
+CMMSG: Start
+CMMSG: TX "hello"
+CMMSG: Wait ACK
+CMMSG: ACK Received
+CMMSG: MACCMD: "06 "
+CMMSG: RXWIN1, RSSI -117, SNR 0.3
+CMMSG: Done
```

### 3. Download application firmware.

Repeat step 1 , choose the application firmware( floodspot-abp-15m.zip or floodspot-ota-15m.zip) instead of ble\_uart\_v2.zip when step 1.d.

Any question , please send email to [support@spotsensors.com](mailto:support@spotsensors.com).

SpotSensors  
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