

WSSFM10R Series

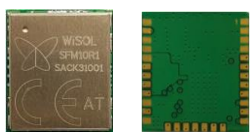
The SFM10R Sigfox Only mode module series is a miniaturized module (13.0 x 15.0 x 2.21 mm) for Zone1/3 and (13.0 x 20.0 x 2.21 mm) for Zone2/4. The module has an integrated MCU as well as an integrated RF transceiver and supports UART for external communication.

Complimentary Voice from Customers

- Good Lifetime and Reliability with TCXO Component
- Facilitated Design Process with Pin-to-Pin Compatibility for All Zones
- Supports UART for external communication.
- Very Low Current Consumption for Extended Battery Life
- Controllable Tx Power Level for Full Optimization (for RCZ1 and RCZ3)



- RCZx Common EVK
- under MP now



- WSSFM10R1AT (RC1)
- 13 x 15 x 2.21[mm]
- under MP now



- WSSFM10R2AT (RC2)
- 13 x 20 x 2.21[mm]
- under MP now



- WSSFM10R3AT (RC3)
- 13 x 15 x 2.21[mm]
- under MP now



- WSSFM10R4AT (RC4)
- 13 x 20 x 2.21[mm]
- under MP now

▪ All zone modules got Sigfox Verified Certification and all type of approval Certification.

WSSF20R Series

The WSSF20R series is a type of Sigfox Quad-mode Module. It is integrated with Sigfox, WiFi, BLE, GPS and Accelerometer all together for user application. Each connectivity engine acts as standalone module and the main host ARM@Cortex M4 controls each module through API integration via our user-friendly SDK.



WSSF20R1AT (RC1)



WSSF20R2AT (RC2)



WSSF20R3AT (RC3)



WSSF20R4AT (RC4)

- **Module Size : 21.0 x 29.0 x 2.3[mm]**
- **Input Power : 3.2[V] ~ 5[V]**
- **under MP now**



EVBSFM20Rx (RCx)

- **All zone modules got Sigfox Verified Certification and all type of approval Certification.**

WSSFM60R Series

Key feature and Schedule

Solution	Compatibility
Sigfox+GPS+BLE+Accelerometer	Pin-to-Pin and Same SDK with WSSFM20R

Easy Migration from WSSFM20R to WSSFM60R



WSSFM60R1AT(RC1)



WSSFM60R2AT(RC2)



WSSFM60R3AT(RC3)



WSSFM60R4AT(RC4)

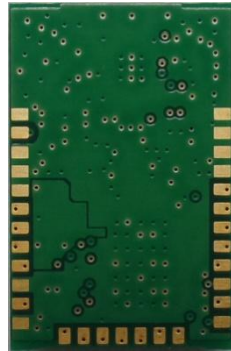


▪ WSSFM60R/RCZx Common EVK

- All zone modules got Sigfox Verified Certification and all type of approval Certification.

RC2/RC4 Dual-Band Module

WSSF11R2D (Sigfox Only Module)

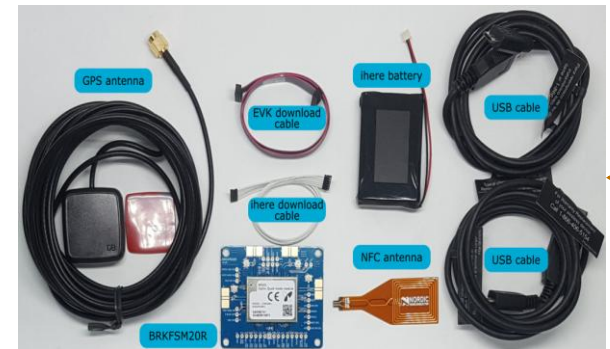


- WSSF11R2D
 - ✓ Dual-Band module(RCZ2/RCZ4) (excludes NZ)
 - ✓ Same size with RCZ2 & RCZ4
 - ✓ Sigfox Verified (P1) certification : Done
 - ✓ FCC, Anatel Certification are Done
 - ✓ Under MP now

- It can be changed each Zone through AT command Set
- New Zealand(RCZ4) can not used because Extra Band Testing for type of approval
 - ✓ New Zealand must use only RCZ4 module

DVK for WSSFM20R Series

DVK is Ready



iHere Reference Platform

iHere(Tracker) Reference Platform is ready: WSSFM20R integrated

- PoC or white-brand policy to support customer development



Sigfox Quad mode module
Programmable multi-wireless communication module is inside **ihere**



ARM Cortex M4F

512kB Flash / 64kB RAM
Location algorithm with GPS, WiFi and BLE advertising is applied



Sigfox

Sigfox network enables always connection



Bluetooth 4.2

FOTA programming support
Easy connection through BLE
Configure device setting



GPS

Real location positioning using GPS
Cold start 30sec, Warm start 3sec



WiFi

Indoor positioning using BSSID scan result



Accelerometer

Motion/shock interrupt can be used as wakeup condition from sleep to reduce battery consumption



NFC-A tag

User Programmable NFC tag support
Easy Bluetooth pairing with NFC tagging
• Product information can be saved in NFC tag



Battery

Rechargeable Li-ion battery



Temperature sensor

Sensing temperature
High/Low temperature alert



Magnetic sensor

Magnetic REED switch can trigger device using external magnet

PBA

Optimized antennas for Sigfox, BLE, WiFi and GPS



PRODUCT DISCLAIMER:

This product is intended for **white-label and reference purposes only**.

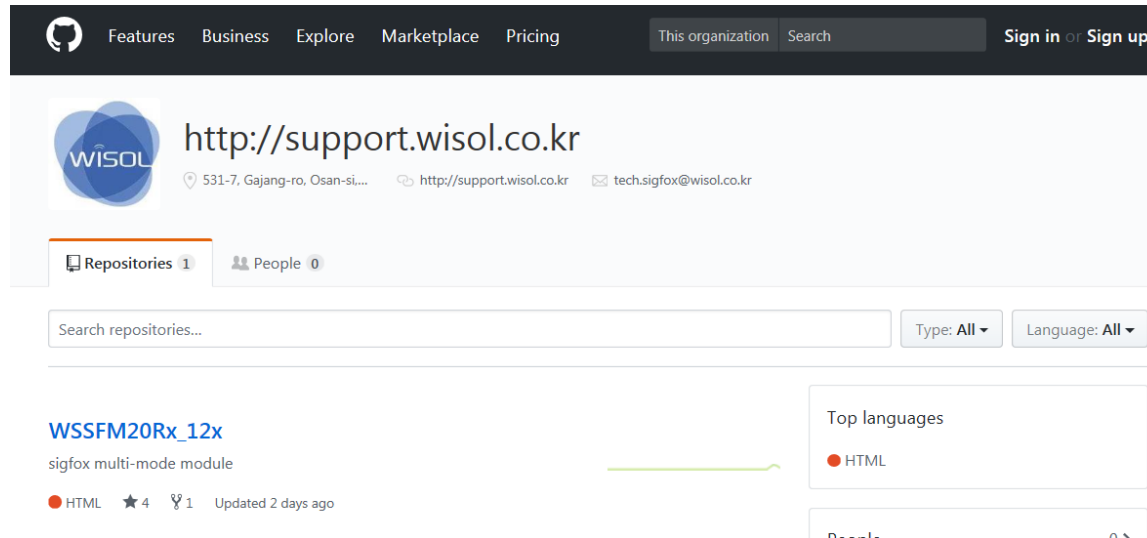
Its sole purpose is to be used by device makers as a platform for creating products with minimal costs and expedite development time.

SDK of WSSFM20R/60R

GitHub.com – **Public Open Policy !**

▪ Open our WSSFM20R/60R SDK and Documents in GitHub.com to support our valuable customers for a smoother development process with our Sigfox modules.

- **github URL (All Wisol Project)** : <https://github.com/wisol-SFM>
- **WSSFM20R/60R SDK repository** : https://github.com/wisol-SFM/WSSFM20Rx_12x
- **Documents** : developmentWsigfox_cfg2Wdocumentation
- **EVK schematic&gerber** : developmentWsigfox_cfg2WdocumentationWschemasWweb_ver_2_0
- **Datasheet** : <http://support.wisol.co.kr/en/>



The screenshot shows the GitHub organization page for 'http://support.wisol.co.kr'. The organization profile includes the Wisol logo, the website URL, and contact information. Below the profile, there is a search bar for repositories and a list of repositories. The first repository listed is 'WSSFM20Rx_12x', which is a sigfox multi-mode module. It has 4 stars and 1 fork, and was updated 2 days ago. The top languages section shows HTML as the primary language.

Technical support (1/2)

➤ [http:// support.wisol.co.kr](http://support.wisol.co.kr)

The screenshot shows the website's navigation bar with the following elements:

- WISOL SIGFOX SUPPORT logo
- Products
- Technical Support (highlighted with a red box and labeled (2))
- Global Distribution
- Language:
- Approval Certification Documents
- Log In Register (highlighted with a red box and labeled (1))

The main content area is titled "SIGFOX SUPPORT Product Information" and displays three product images:

- WSSFM10R1**: Most compact size module for RCZ1
- WSSFM10R2**: Most compact size module for RCZ2
- WSSFM10R3**: Most compact size module for RCZ3

Technical support (2/2)

➤ [http:// support.wisol.co.kr](http://support.wisol.co.kr)

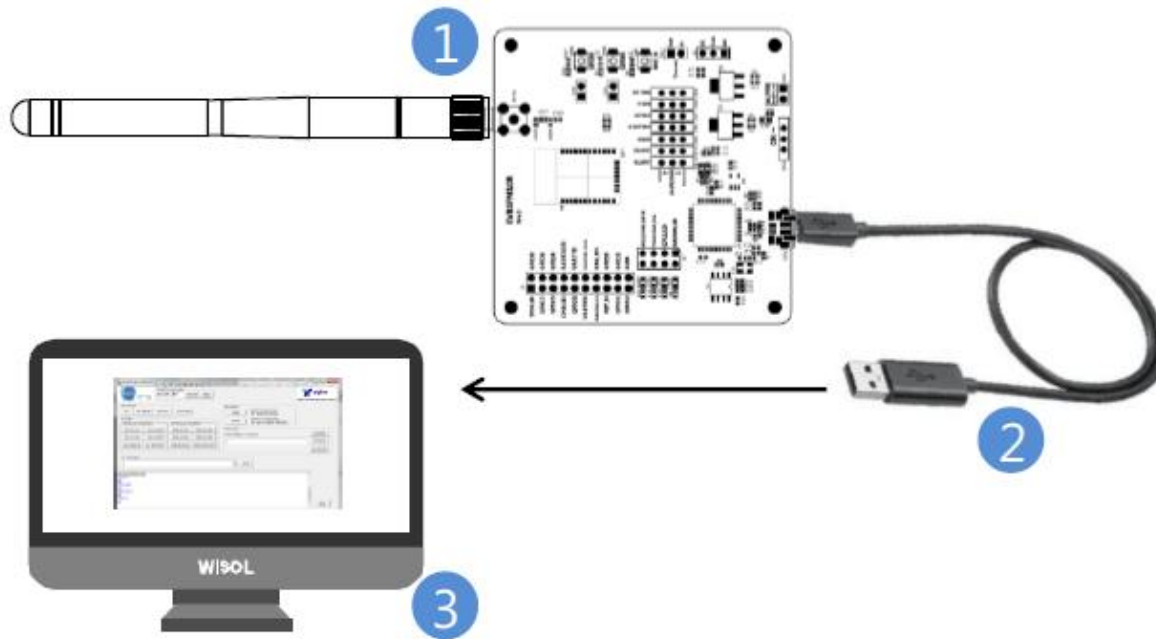
The screenshot shows the Sigfox Support website. At the top right, there are links for 'Log Out' and 'Register'. The main navigation bar includes 'Products', 'Technical Support', 'Global Distribution', 'Language: [UK Flag]', and 'Approval Certification Documents'. Below this, there are four main menu items: 'TECHNICAL FORUMS' (with a sub-link 'SIGFOX Only module'), 'DOCUMENTS & SOFTWARE' (with sub-links 'Documents' and 'Software'), 'CERTIFICATION DOCUMENTS', and 'ASK A QUESTION'. The 'DOCUMENTS & SOFTWARE', 'CERTIFICATION DOCUMENTS', and 'ASK A QUESTION' items are highlighted with red rounded rectangles. Below the navigation bar, the page is divided into two main sections. The left section is titled 'Product Forum Category' and features a product image of a 'SIGFOX Only module' (a small green PCB component). Below the image, the text reads 'SIGFOX Only module' and 'SIGFOX single mode module for EU and US region'. The right section is titled 'Popular Questions' and lists several questions with their respective askers: 'Serial Parameter for WSSFM10Rx AT module asked by evol77', 'Sigfox PCB Antenna asked by r', 'How to read ID and PAC number asked by evol77', 'design guide vs. evb schematic : RF output asked by pierrepeulpe', and 'if AT\$GI? x,y do AT\$RC, what does it do? asked by tonyp12'. Below this, there is a 'Latest Questions' section with one question: 'How to switch key asked by evol77, 17.10.18'.

How to WSSF10R Module (1/3)

Test Program

Evaluation board Connection

1. EVBSFM10R connect to Window PC by USB cable.

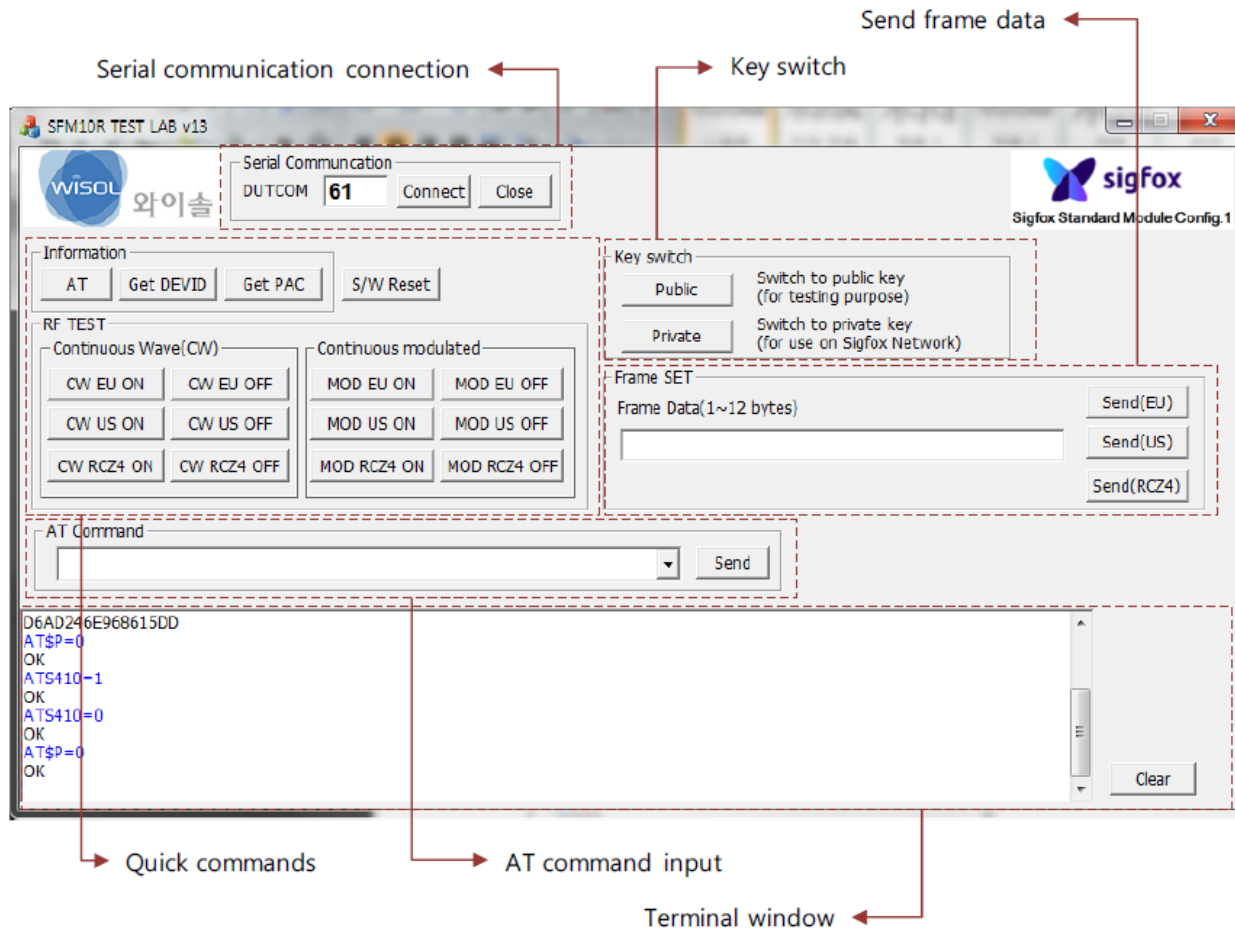


- (1) EVBSFM10
- (2) Micro USB cable
- (3) Windows PC

[Fig. EVBSFM10R connection]

How to WSSF10R Module (2/3)

Test program Description



[Fig. Screen of execute Test program(v13)]

How to WSSF10R Module (3/3)

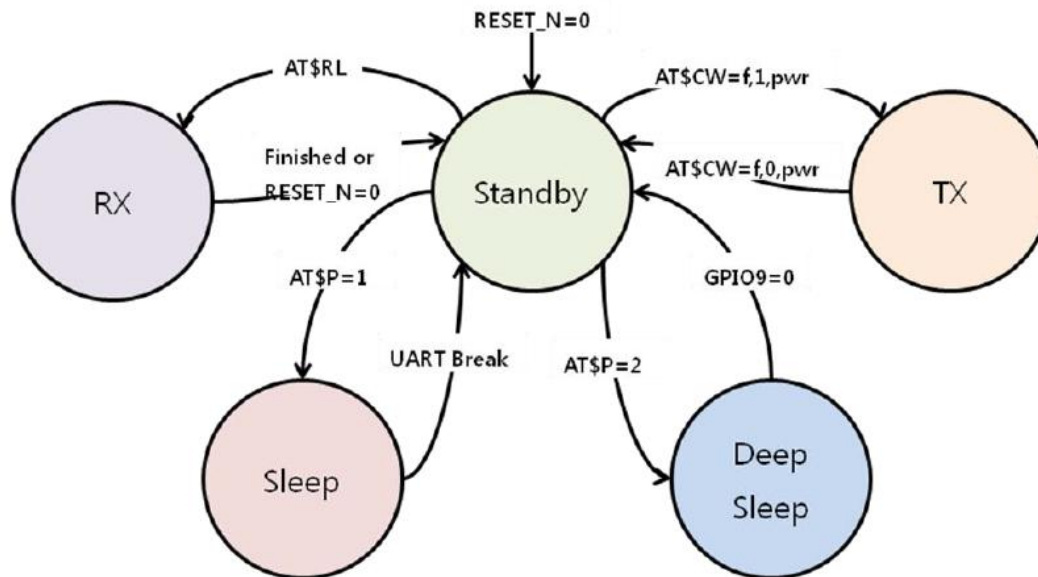
All Commands are in User manual

AT command complete set

A typical serial terminal emulator can also be used to control the EVK instead of the proposed test SW. In that case the following parameters should be used:

- Speed : 9600 bauds
- Data bits: 8
- Stop bits: 1
- Parity: None

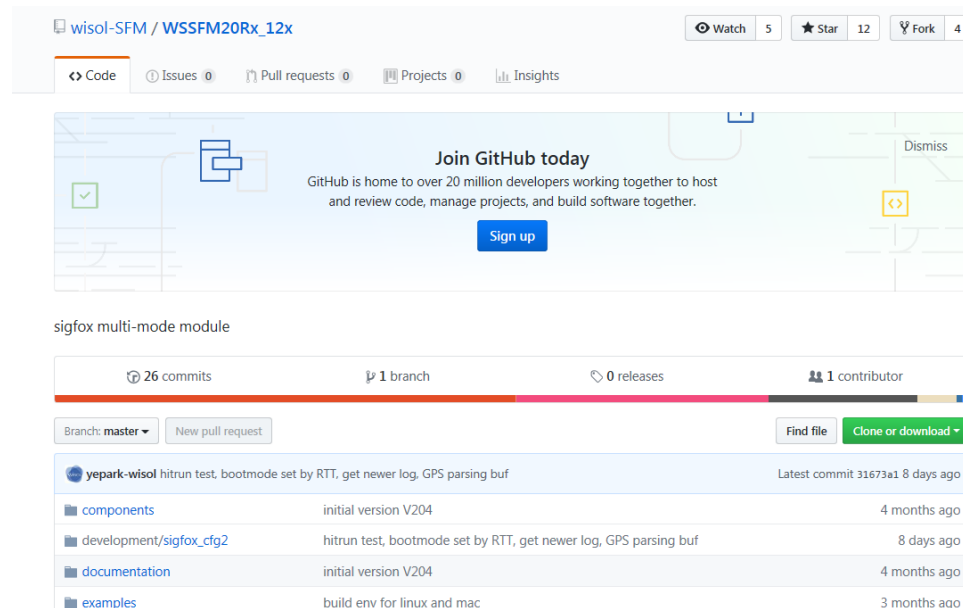
Power Mode (described in D/S)



How to WSSFM20R Development (1/3)

DOWNLOAD SDK, TOOLCHAIN

- SDK, DOCs : https://github.com/wisol-SFM/WSSFM20Rx_12x
- Toolchain
 - ✓ Keil(MDK-Lite) : <http://www2.keil.com/mdk5>
 - ✓ GCC : \WSSFM20Rx_12x-master\development\sigfox_cfg2\tools
 - ✓ J-Link : <https://www.segger.com/downloads/jlink/>



wisol-SFM / WSSFM20Rx_12x

Watch 5 Star 12 Fork 4

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sigfox multi-mode module

26 commits 1 branch 0 releases 1 contributor

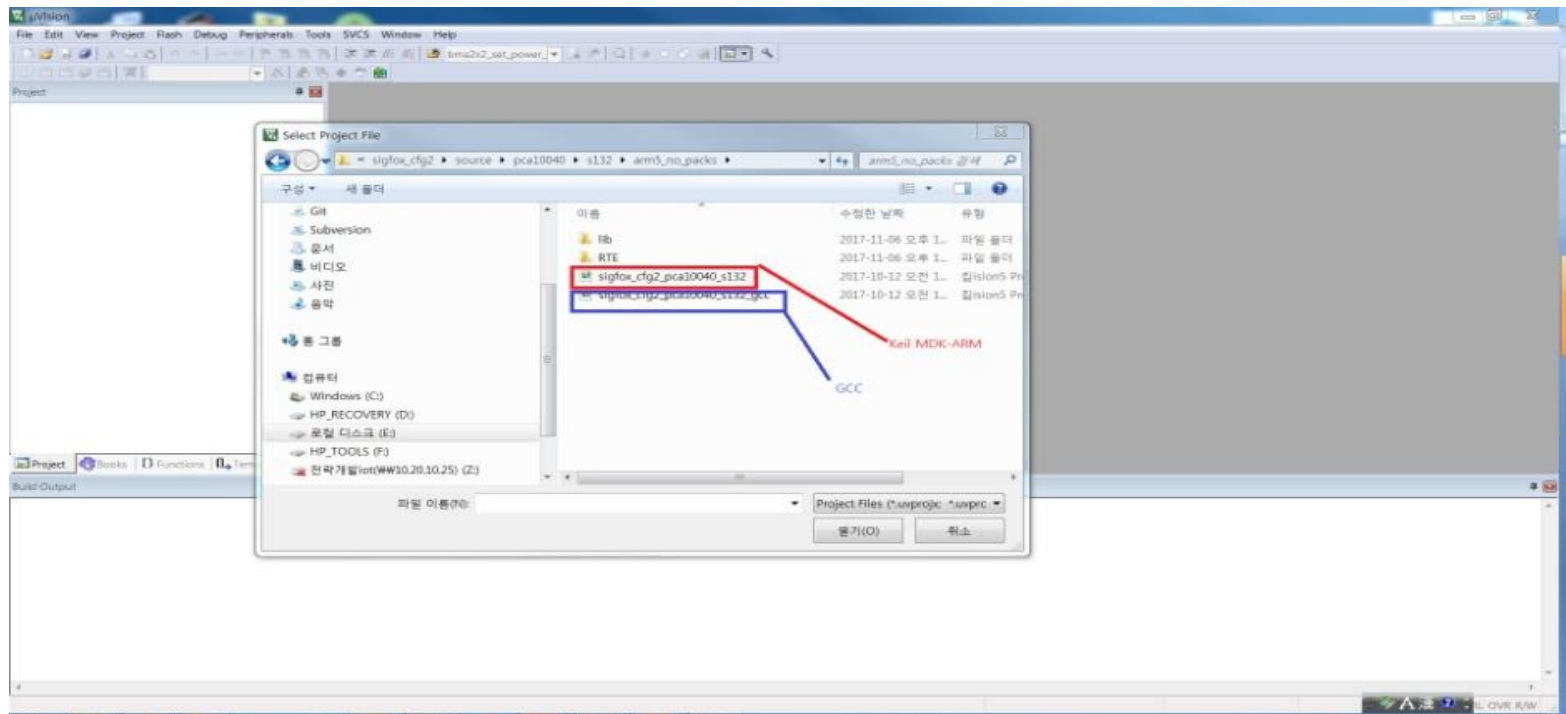
Branch: master New pull request Find file Clone or download

File	Commit Message	Latest commit
components	initial version V204	4 months ago
development/sigfox_cfg2	hitrun test, bootmode set by RTT, get newer log, GPS parsing buf	8 days ago
documentation	initial version V204	4 months ago
examples	build env for linux and mac	3 months ago

How to WSSFM20R Development (2/3)

SETUP WSSFM20R Project

- Open project
- Compile
 - ✓ Users don't have to set any additional config.



How to WSSF20R Development (3/3)

Flashing of WSSF20R EVB

- **make factory image**
 - ✓ development\sigfox_cfg2\source\pca10040\s132\arm5_no_packs\sigfox_cfg2_make_factory_image.bat
- **factory write**
 - ✓ \development\sigfox_cfg2\binary\SFM20R_factory_write.bat
- **FOTA**
 - ✓ \development\sigfox_cfg2\binary\SFM20R_app_dfu_package_204_EVB.zipcopy it to mobile phone.
- **Reference of Youtube**
 - ✓ refer to <https://www.youtube.com/watch?v=YftrZyONju8>

