LSM1xA SDK

Quick Start Guide

Rev 1.0

SJI

MAY. 31. 2022

Contents

History

Date	Contents	Version	
2022-05-31	Create	V1.0	

1. SDK Download

1.1 SDK Github URL

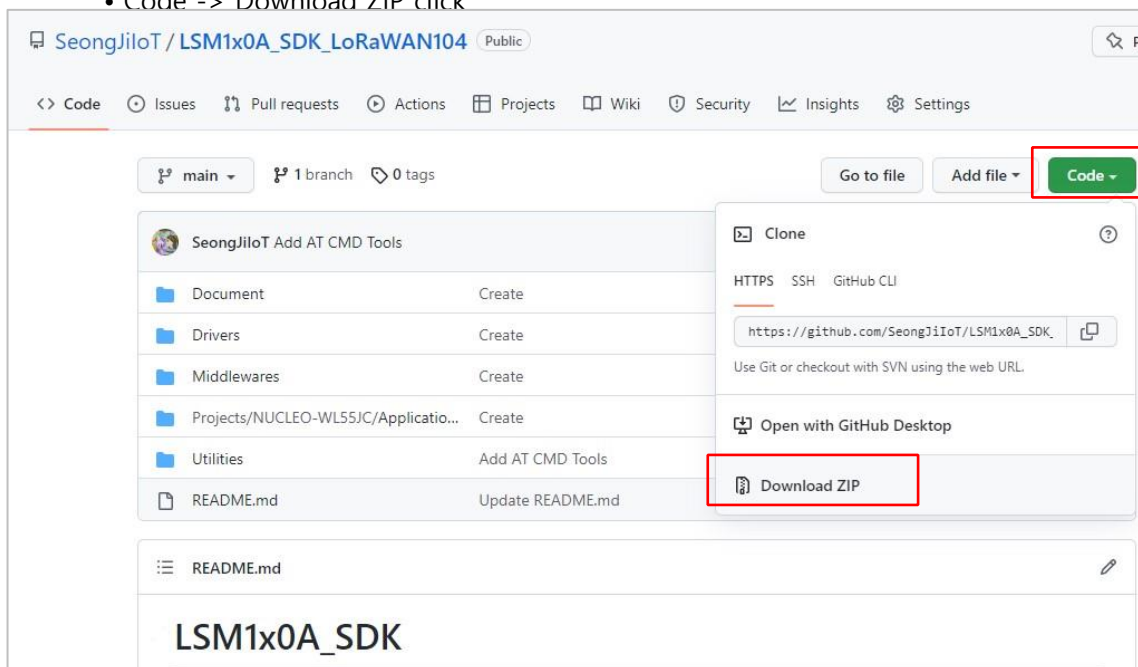https://github.com/Support-SJI/LSM110A

Please choose one of the three download solutions below and follow it

- Download using github website
- Download using git bash
- Download using github desktop

1.2 Download using github website

1) Access the website using the Github URL

- Code -> Download ZIP click

2) Unzip the downloaded .zip file and use it
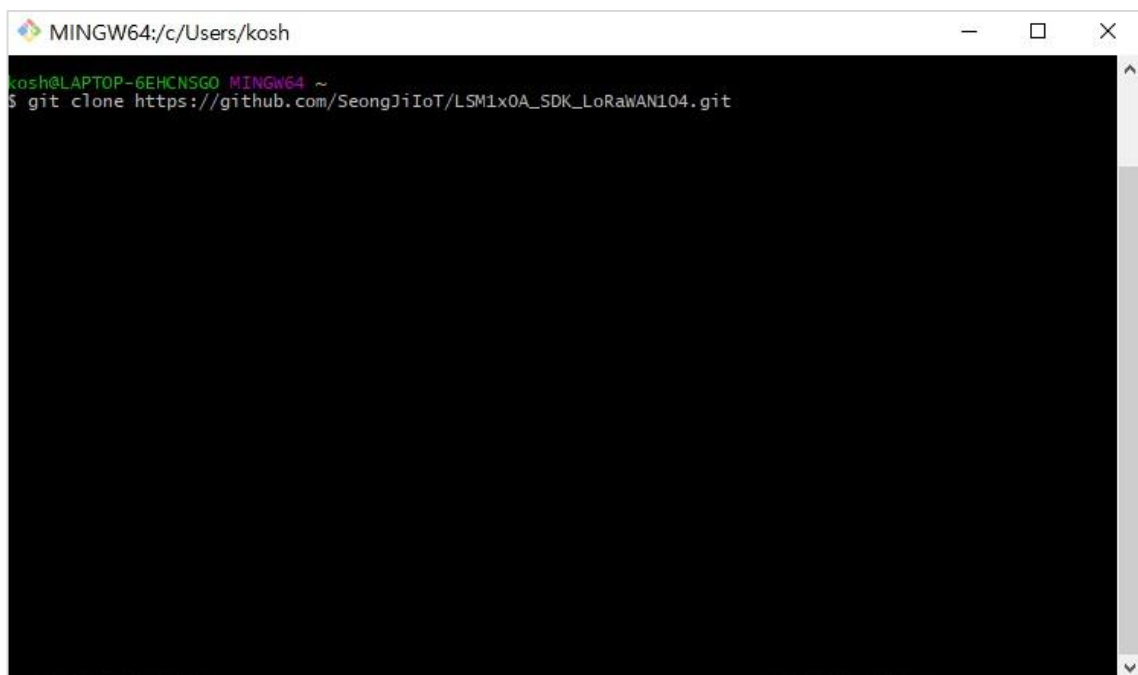
1.3 Download using git bash

Git bash download link: https://www.git-scm.com/download/win

1) Run git bash program

- Access the folder where you want to download the SDK using bash

2) Enter command

- Enter **git clone https://github.com/Support-SJI/LSM110A.git** in bash window

3) Download check

```
MINGW64:/c/Users/kosh

kosh@LAPTOP-6EHCNSGO MINGW64 ~
$ git clone https://github.com/SeongJiIoT/LSM1x0A_SDK_LoRaWAN104.git
Cloning into 'LSM1x0A_SDK_LoRaWAN104'...
remote: Enumerating objects: 6536, done.
remote: Counting objects: 100% (32/32), done.
remote: Compressing objects: 100% (17/17), done.
remote: Total 6536 (delta 13), reused 32 (delta 13), pack-reused 6504
Receiving objects: 100% (6536/6536), 89.14 MiB | 7.03 MiB/s, done.
Resolving deltas: 100% (2698/2698), done.
Checking out files: 100% (7417/7417), done.

kosh@LAPTOP-6EHCNSGO MINGW64 ~
$
```
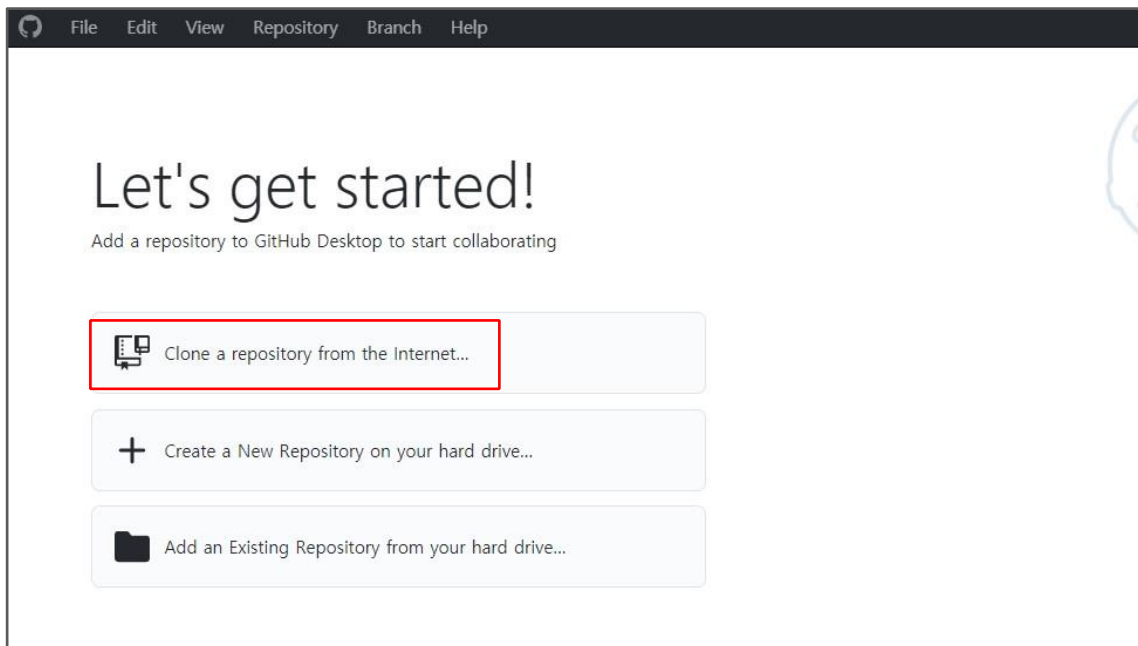
1.4 Download using github desktop
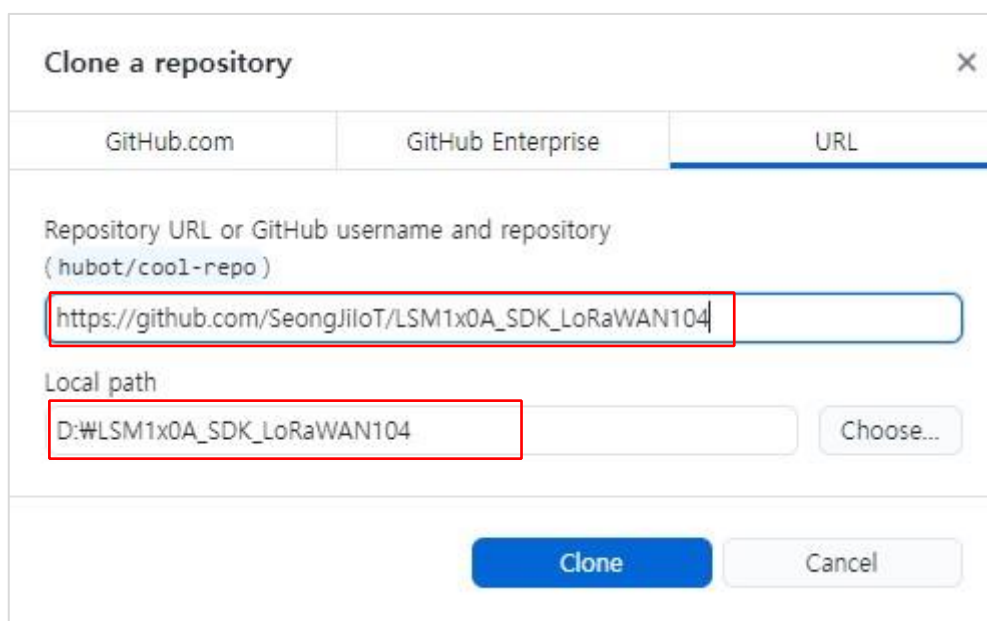
Github desktop download link: https://desktop.github.com/

1) Run gethub desktop

• Clone a repository from the internet… click

2) Enter URL

• Enter the SDK URL and download folder path in the URL tab

3) Download check

• Check Downloads in "Download folder"

2. Architecture of the SDK

2.1 Document

Documentation provided by SJI •

   Certification

   · **LoRa, Sigfox Certificates**

   • User Manual

   · **[SJI] _LSM110A_UserManual.pdf**

   • SDK quick guide

   · **[SJI]_LSM1x0A_SDK_Quick_start_guide.pdf**

   • FW download guide

   · **[SJI]_LSM1x0A_FW_Download_Guide.pdf**

   • CLI Command Interface manual

   · **[SJI]_LSM1x0A_LoRa_CLI_Command_Interface_Manual.pdf**

   · **[SJI]_LSM1x0A_Sigfox_CLI_Command_Interface_Manual.pdf**

   • API manual

   · **[SJI]_LSM1x0A_LoRa_API_Mode_Manual.pdf**

   · **[SJI]_LSM1x0A_Sigfox_API_Mode_Manual.pdf**

2.2 Drivers

System driver provided by ST

2.3 Middlewares

3rd Party software provided by ST

2.4 Projects

Application Source Path

NUCLEO-WL55JC/Applications/LoRaWAN_Sigfox/LSM1x0A

- Core
- LoRaWAN
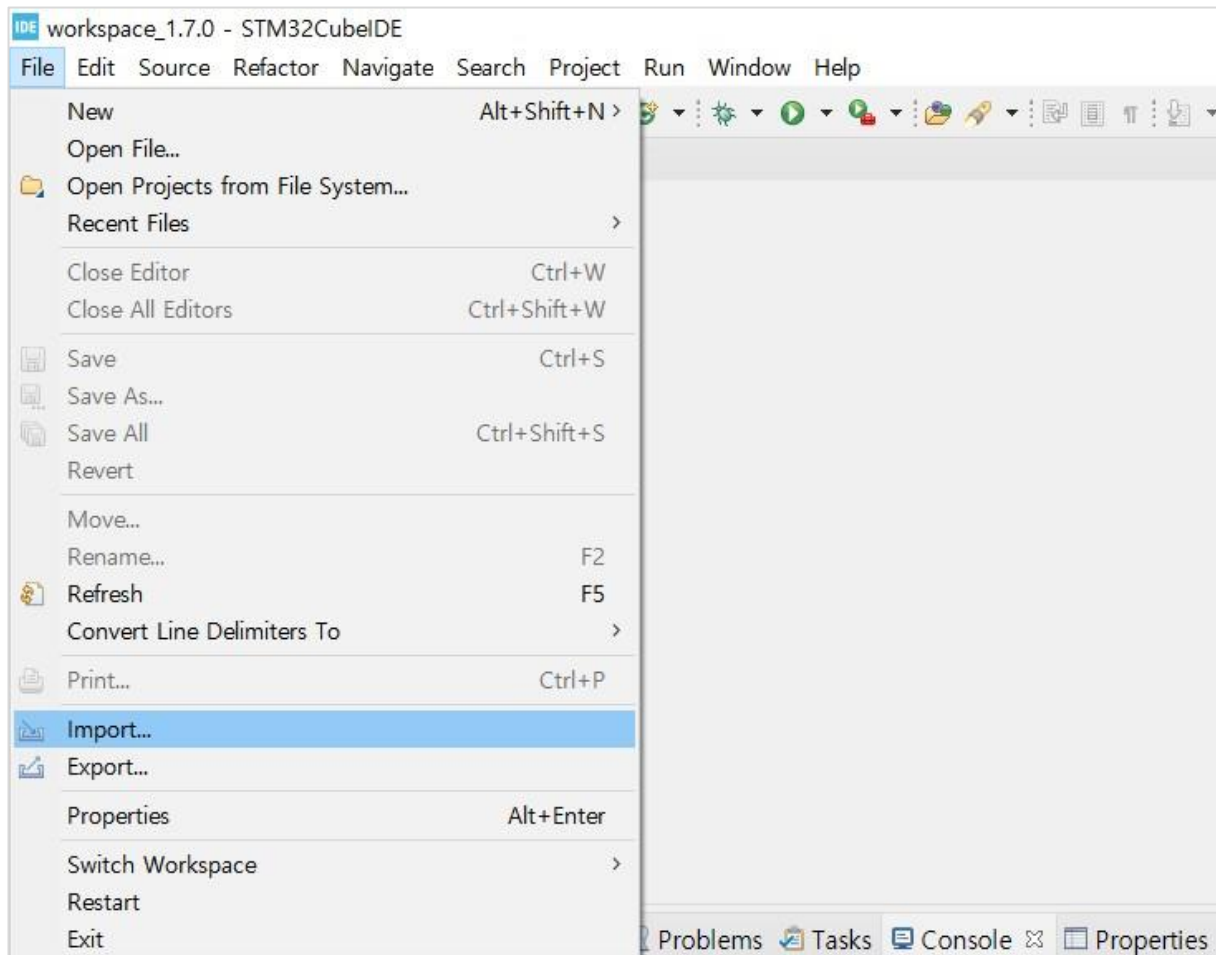- Sigfox

2.5 Utilities

1_SJITools

- FW Merge Tool
- AT Command GUI for LoRa
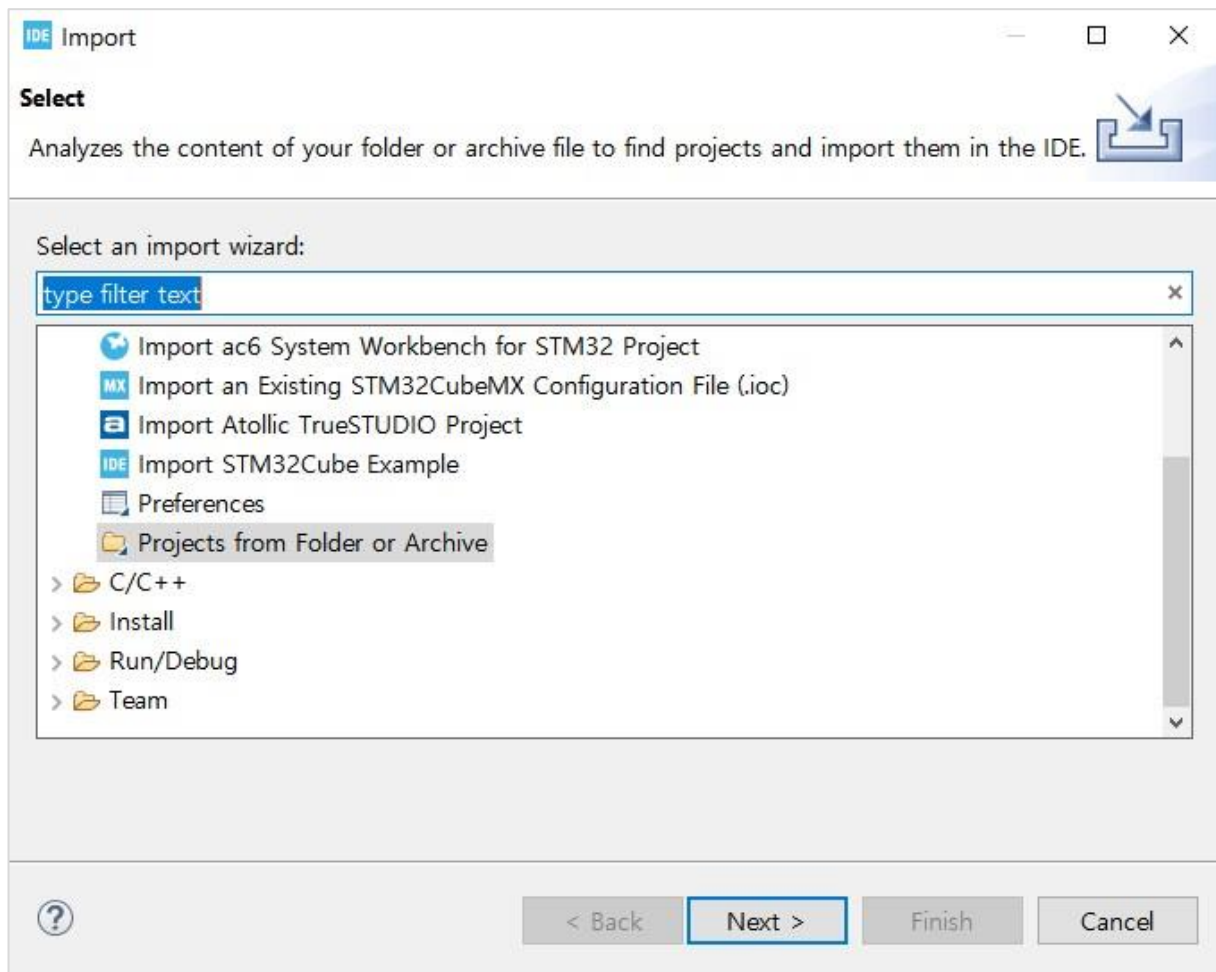- AT Command GUI for Sigfox

3. SDK Build using STM32CubeIDE
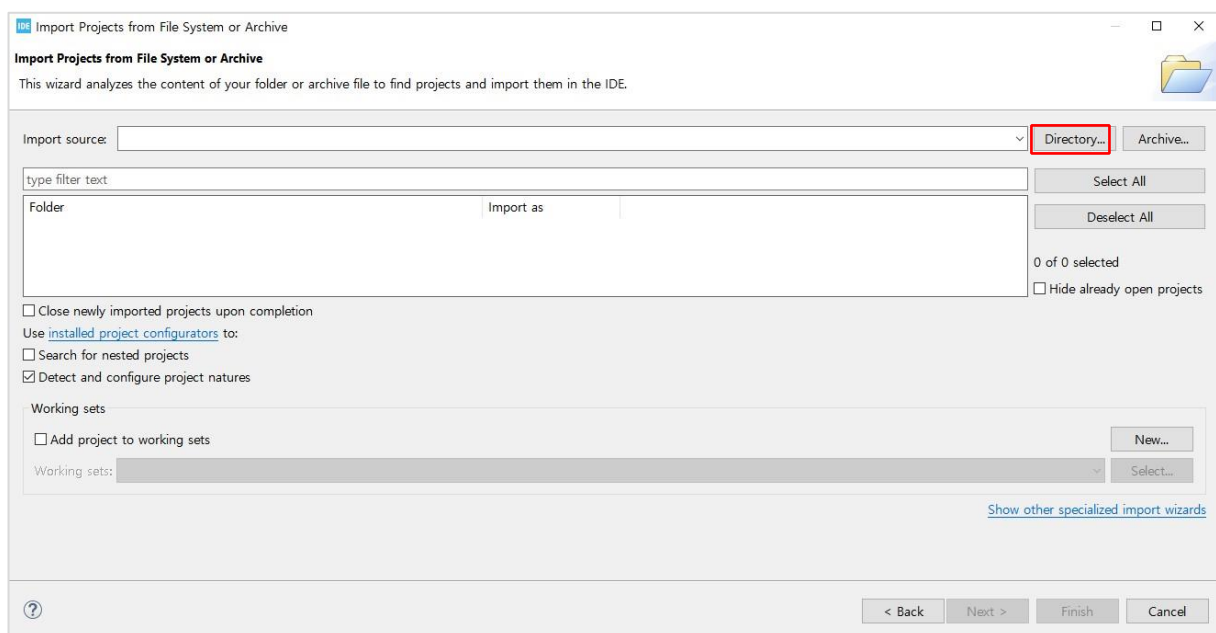
3.1 Import SDK

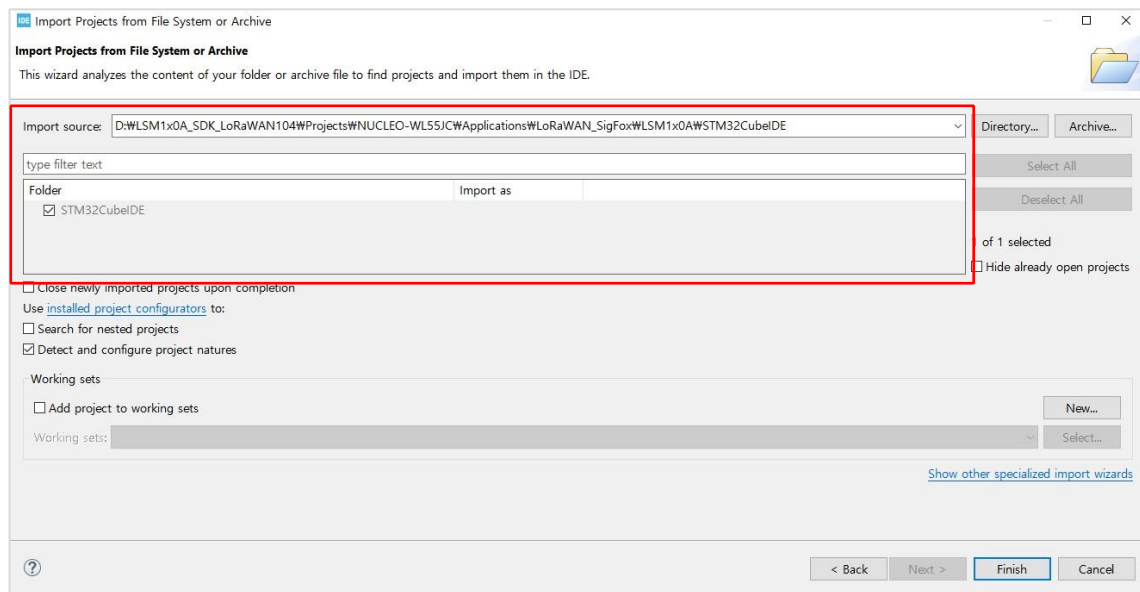1) After running STM32CubeIDE, import SDK on File manu.

2) Select "Projects from Folder or Archive" and then click next

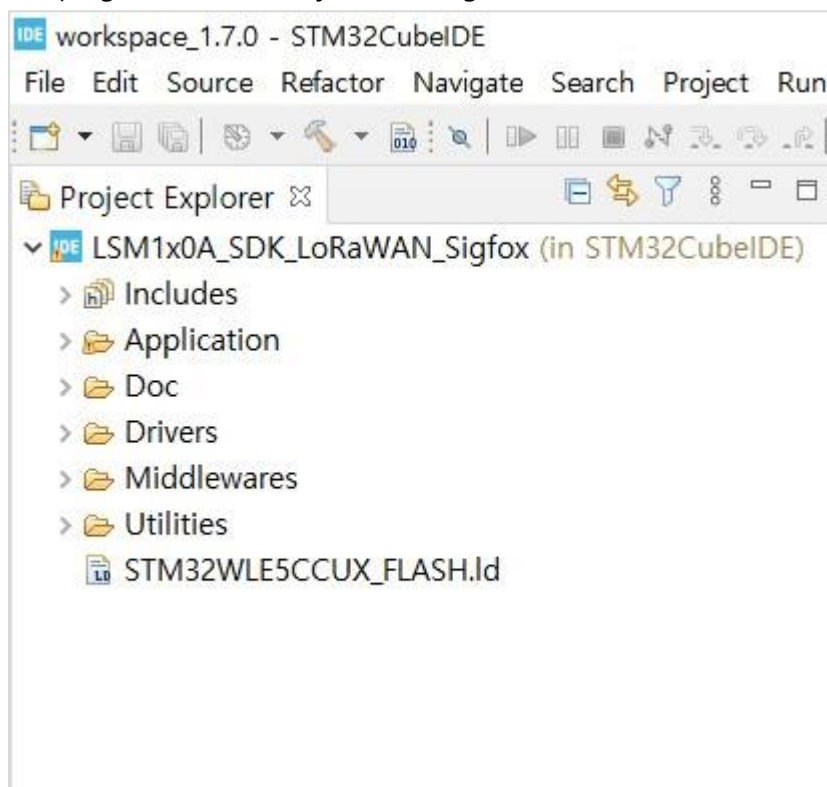3) Open Directory and then select project folder

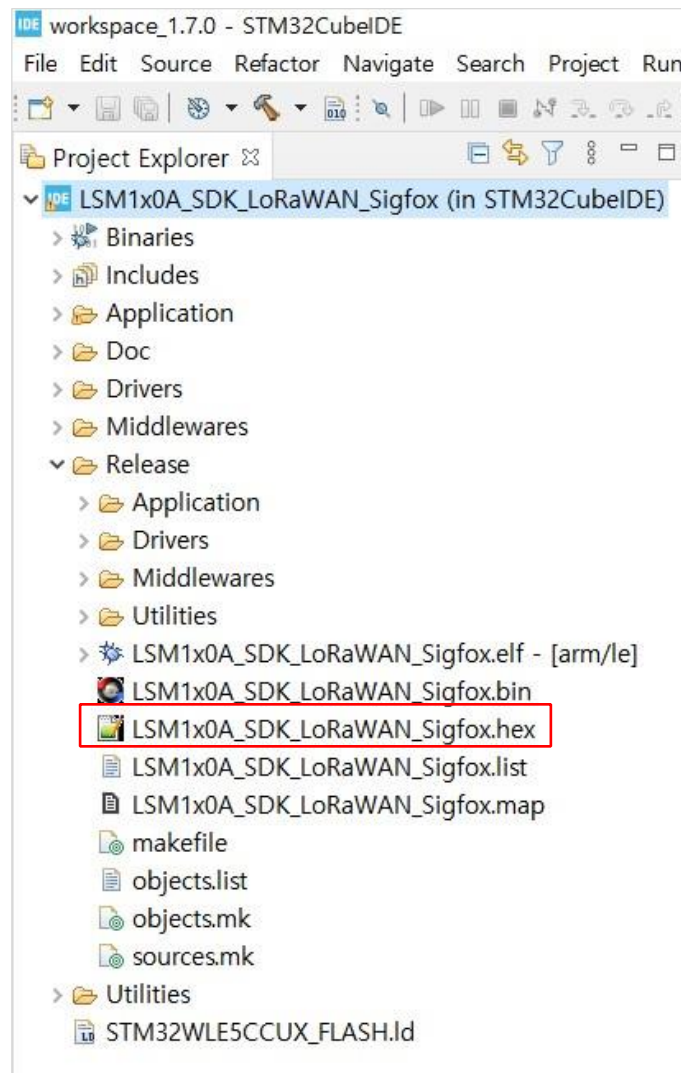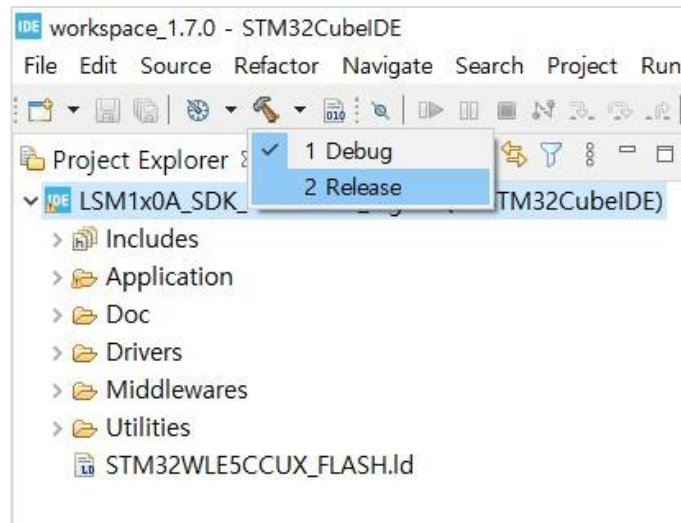5) After import, project is created in the left Project Explorer tab.

The program name is subject to change.

3.2 Build SDK

Run Build All from the Project menu.

After the build is completed, a hex file is created in the Release folder.

3.3 API Mode

Only the unit functions for transmit and receive are executed LoRaWAN or Sigfox protocol

1) Set API Mode

   Can be modified to enable API mode in sys_app.h file.

   ```
   #define FEATURE_LORA_API_MODE
   #define FEATURE_SIGFOX_API_MODE
   ```

2) Set Sigfox Rx, Tx Mode

   Sigfox API Mode is supported to TX and RX test.

   Can be modified to enable SIGFOX_MODE in sgfx_app.c file.

   Only one of TX and RX modes can be used.

   ```
   #define SIGFOX_MODE    SIGFOX_TX
   //#define SIGFOX_MODE    SIGFOX_RX
   ```

3) API Manual

   The API manual is located in LSM1x0A_SDK₩Document

   - [SJI]_LSM1x0A_Sigfox_API_manual.pdf
   - [SJI]_LSM1x0A_LoRa_API_manual.pdf