

# LSM100A SDK

## Quick Start Guide

Rev 1.1

SJI

JAN. 28. 2022

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## History

Date	Contents	Version	
2021-12-21	Create	V1.0	
2022-01-28	Update sample SDK	V1.1	

# 1. SDK Download

## 1.1 SDK Github URL

<https://github.com/Support-SJI/LSM100A/tree/main>

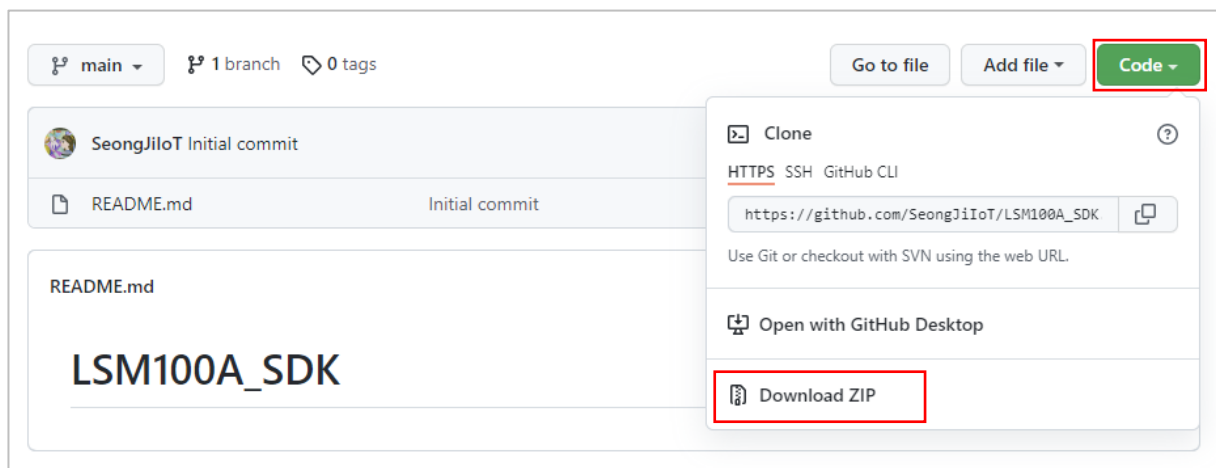
Please choose one of the three download solutions below and follow it

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

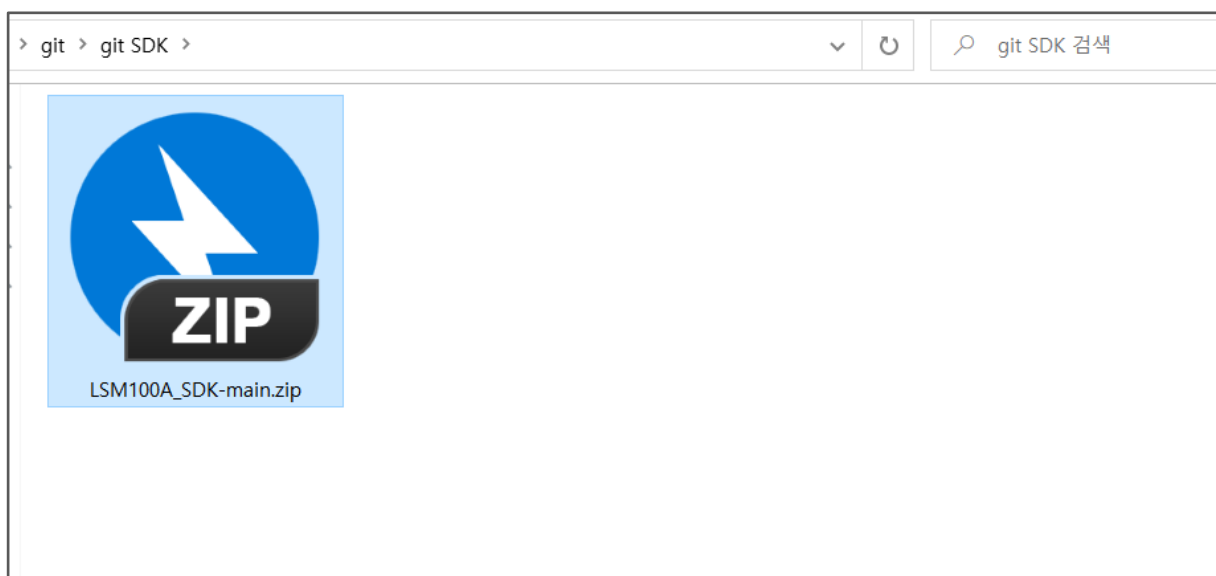
## 1.2 Download using github website

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/SeongJiloT/LSM100A\\_SDK.git](https://github.com/SeongJiloT/LSM100A_SDK.git) in bash window

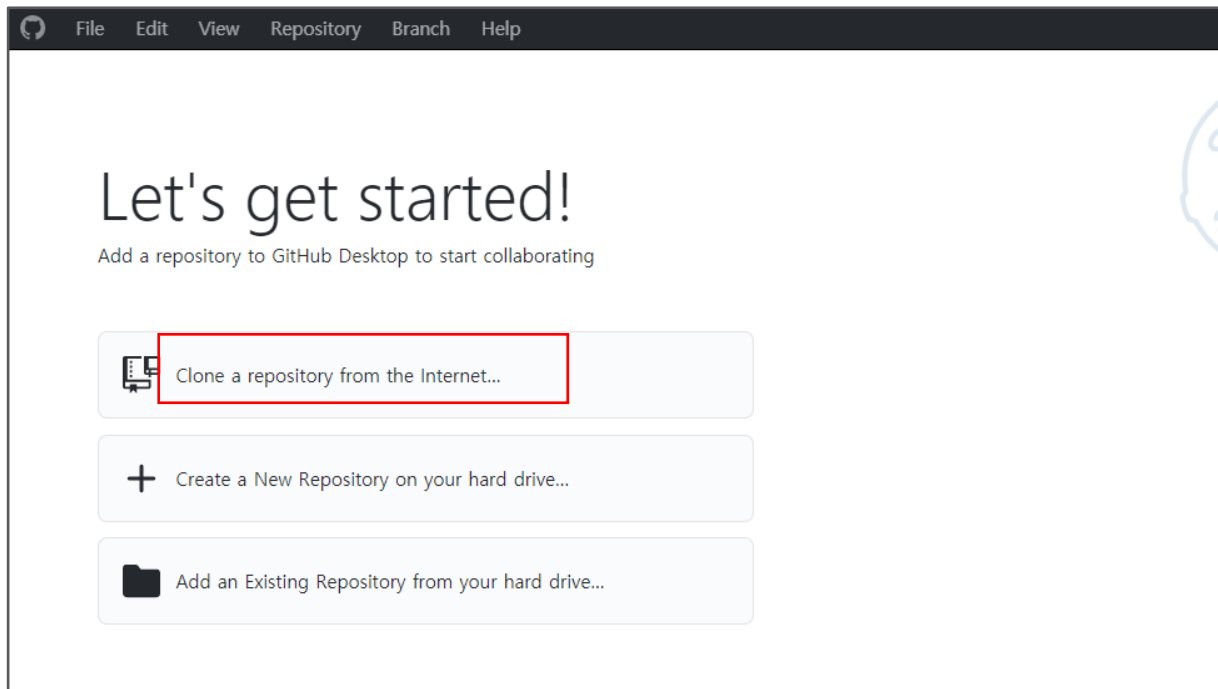
3) Download check

## 1.4 Download using github desktop

Github desktop download link: <https://desktop.github.com/>

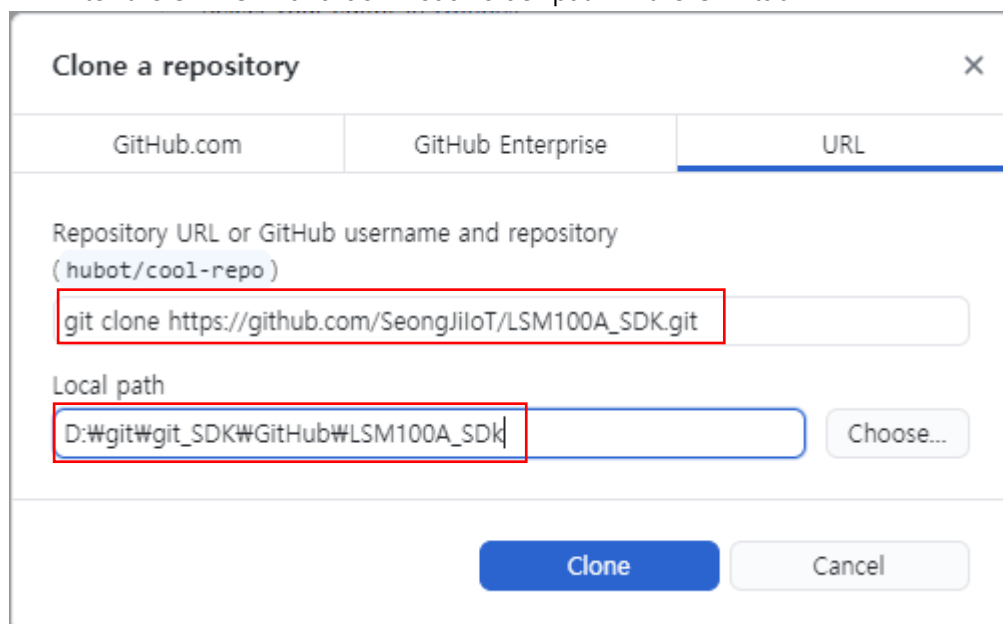
### 1) Run gethub desktop

- Clone a repository from the internet... click



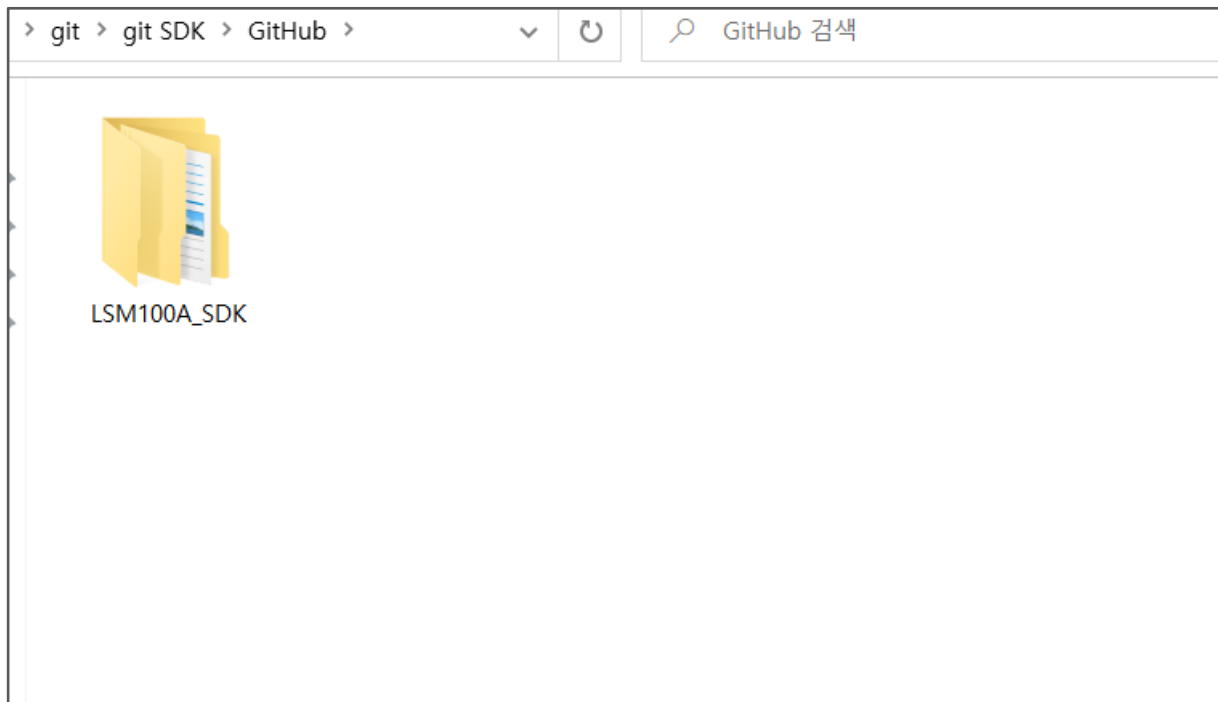
### 2) Enter URL

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








### 3) Download check

- Check Downloads in "Download folder pathWGitHub"



## 2. Architecture of the SDK

 Document
 Drivers
 Middlewares
 Projects/NUCLEO-WL55CC/Applicati...
 Utilities

### 2.1 Document

Documentation provided by SJI

- Certification
  - **CE, LoRa, Sigfox Certificates**
- User Manual
  - **[SJI]\_LSM100A\_UserManual.pdf**
- SDK quick guide
  - **[SJI]\_LSM100A\_SDK\_Quick\_start\_guide.pdf**
- FW download guide
  - **[SJI]\_LSM100A\_FW\_Download\_Guide.pdf**
- HW datasheet
  - **DS\_LSM100A\_R00(PRELIMINARY)\_211110.pdf**
  - CLI Command Interface manual
    - **[SJI]\_LSM100A\_LoRa\_CLI\_Command\_Interface\_Manual.pdf**
    - **[SJI]\_LSM100A\_Sigfox\_CLI\_Command\_Interface\_Manual.pdf**
  - API manual
    - **[SJI]\_LSM100A\_LoRa\_API\_Mode\_Manual.pdf**
    - **[SJI]\_LSM100A\_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-WL55CC/Applications/LoRaWAN\_Sigfox/LSM100A

- Core
- LoRaWAN
- Sigfox

## 2.5 Utilities

PC program

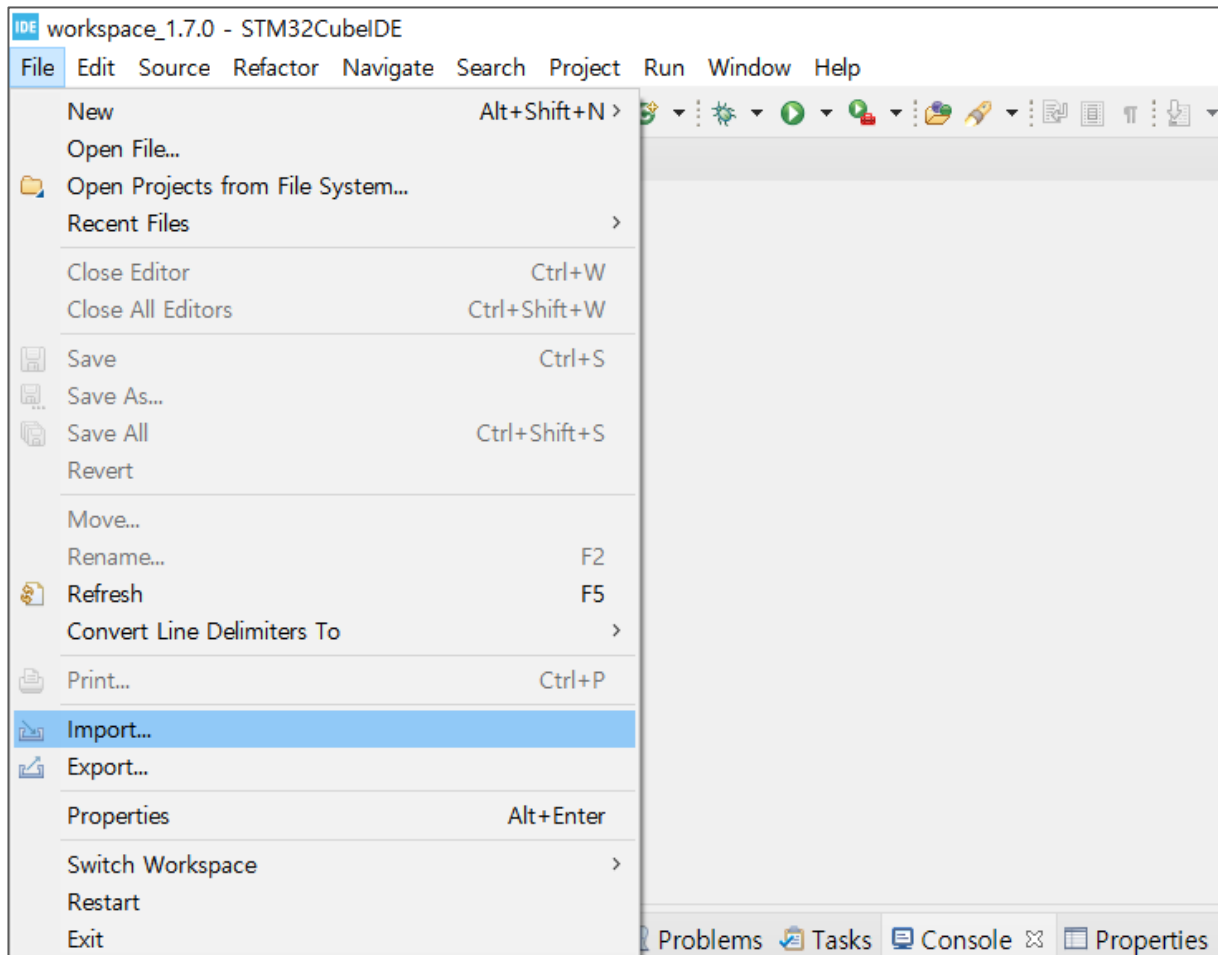
- AT Command GUI for LoRa
- AT Command GUI for Sigfox



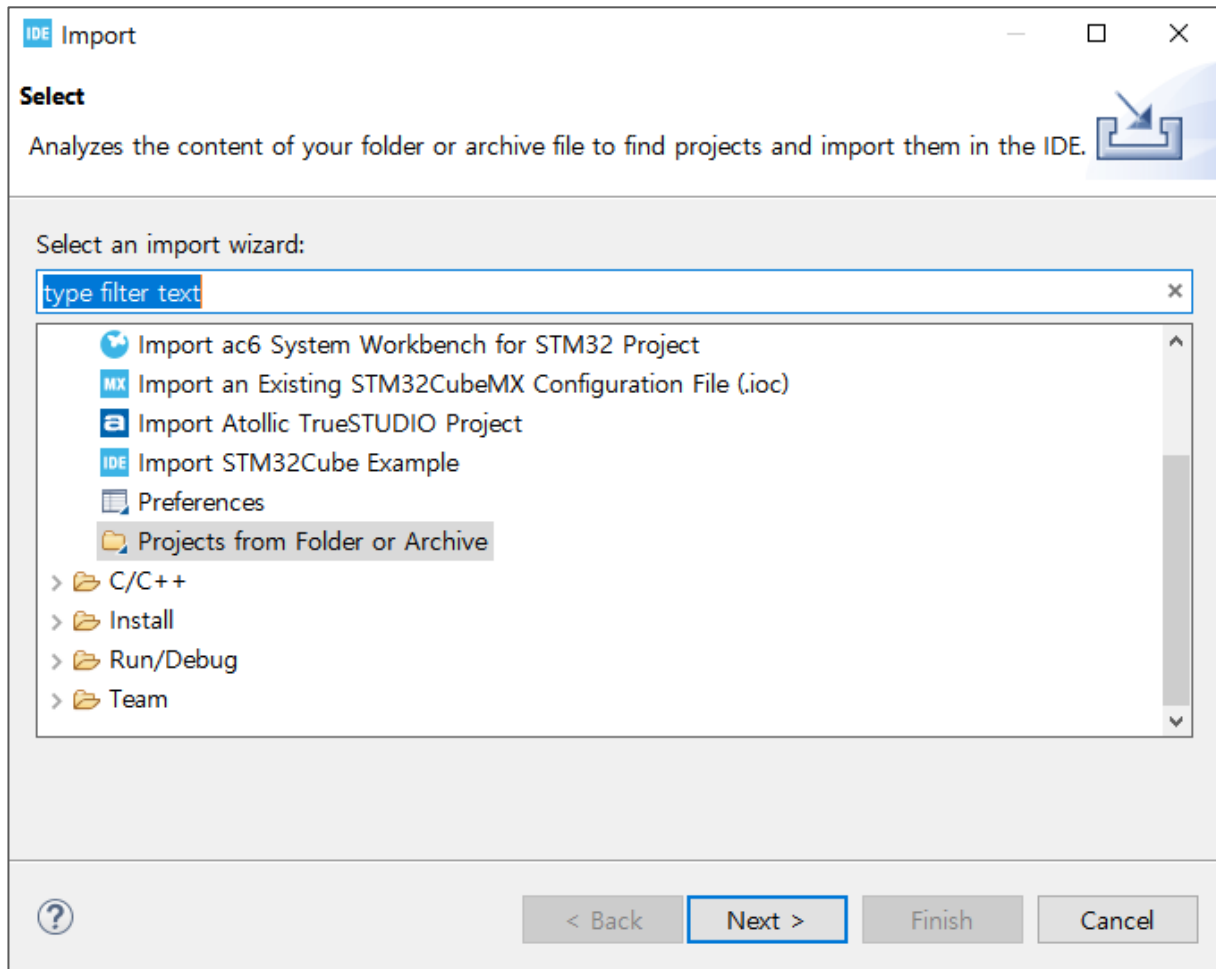
## 3. SDK Build using STM32CubeIDE

### 3.1 Import SDK

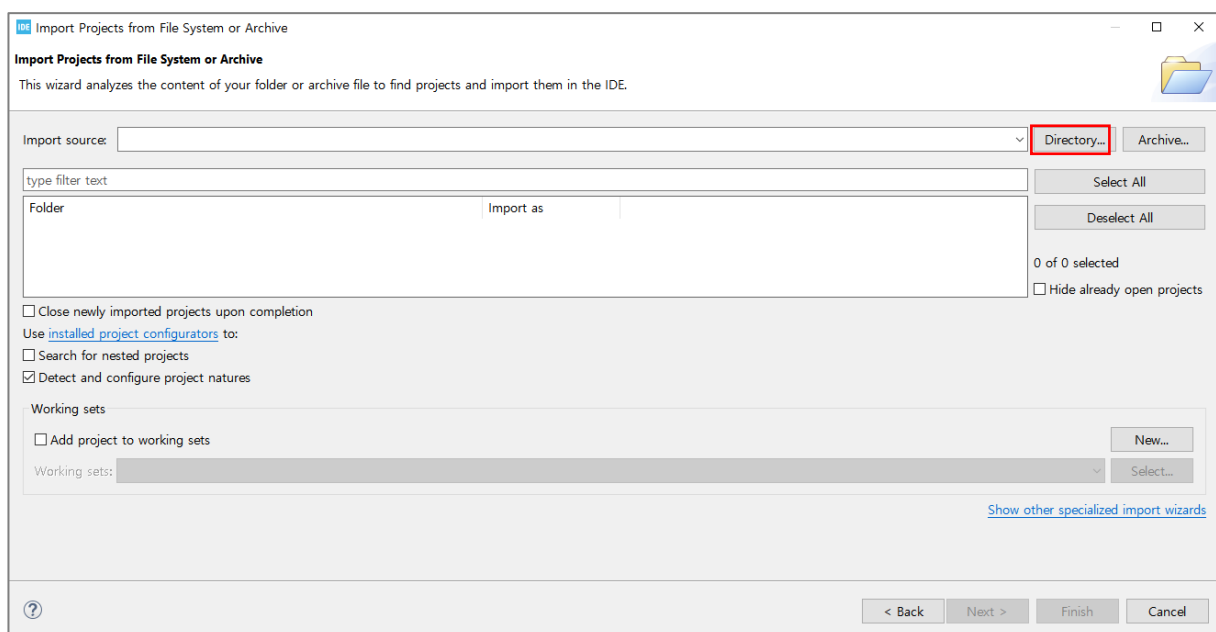
1) After running STM32CubeIDE, import SDK on File manu.

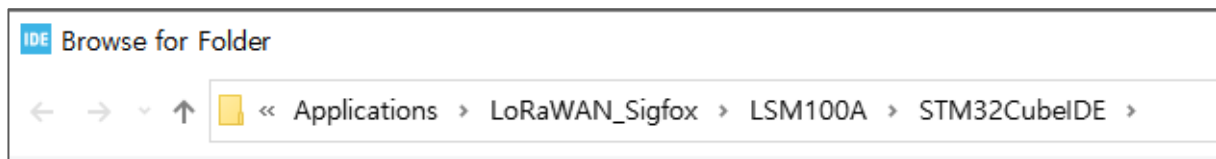


2) Select "Projects from Folder or Archive" and then click next

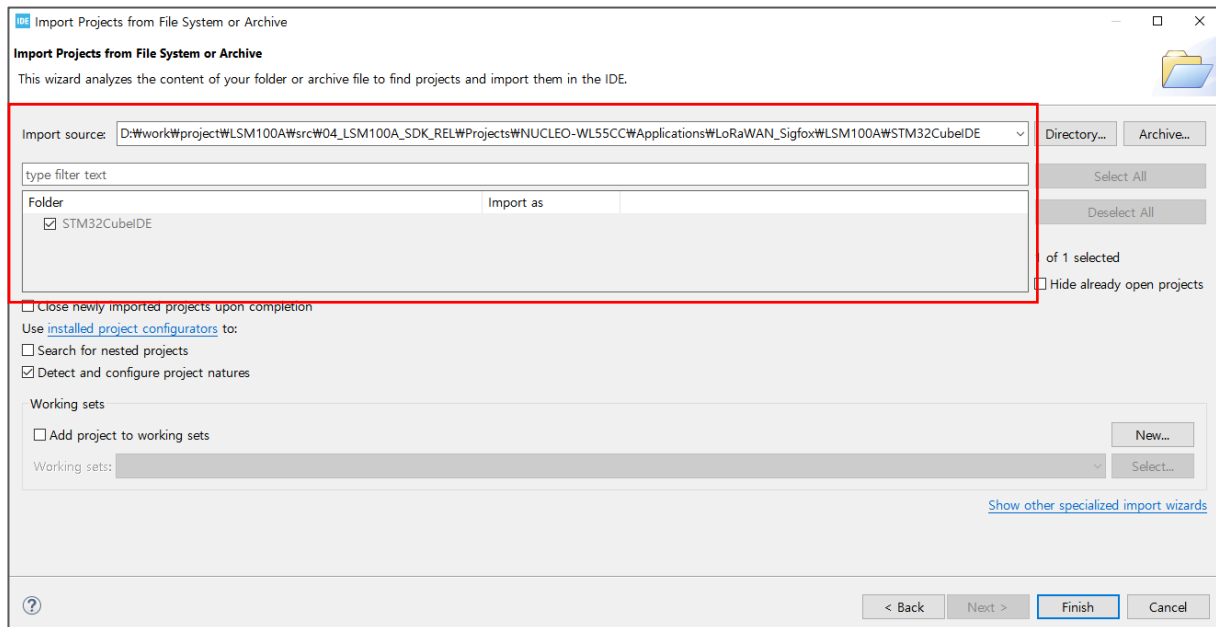


3) Open Directory and then select project folder



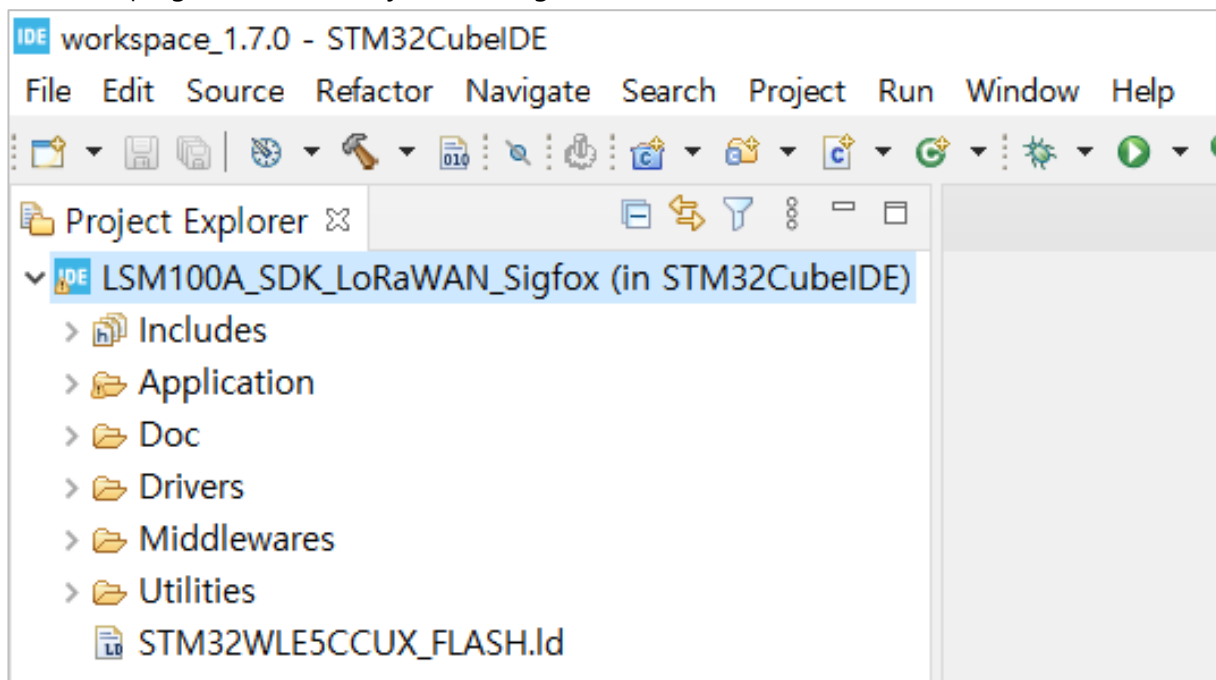


#### 4) Click Finish button



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

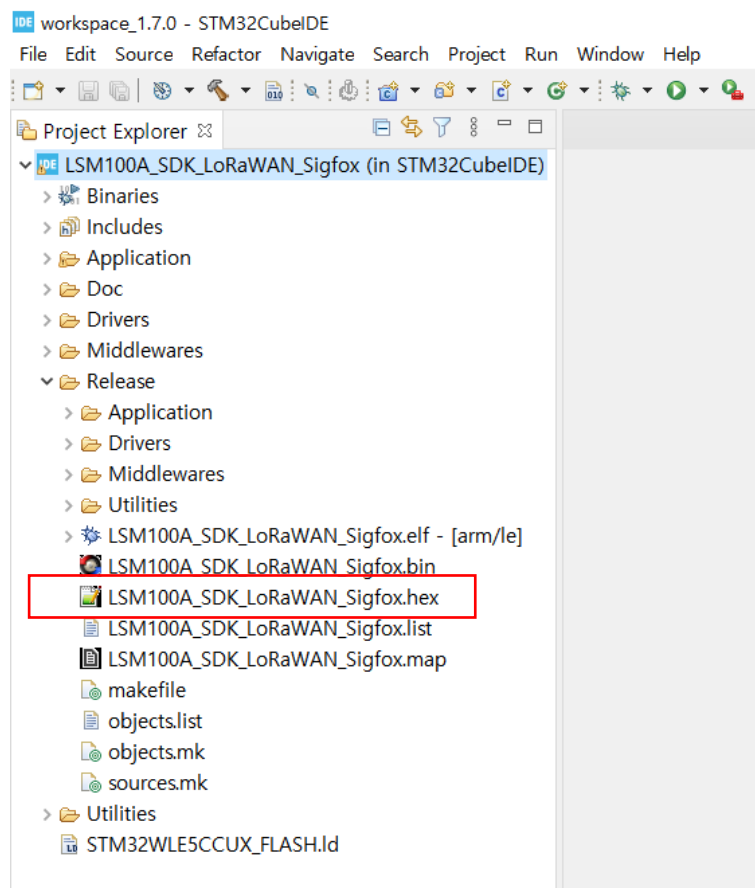
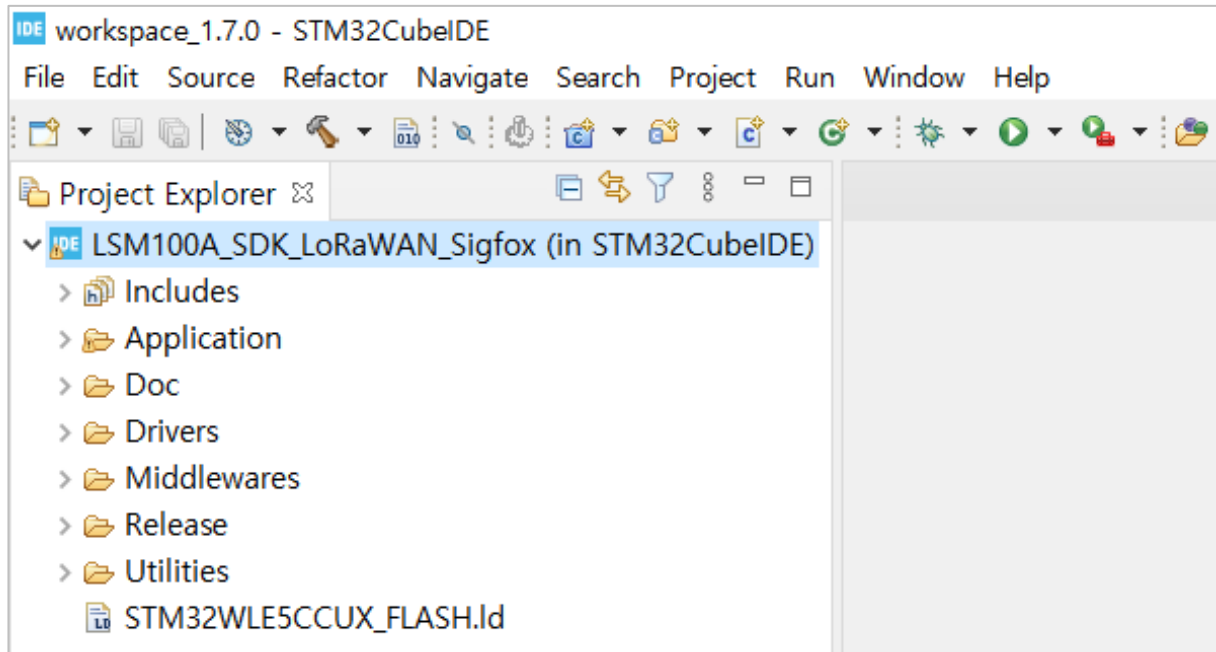
The program name is subject to change.



## 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 LSM100A\_SDK\Document

- [SJI]\_LSM100A\_Sigfox\_API\_manual.pdf
- [SJI]\_LSM100A\_LoRa\_API\_manual.pdf