

PK200-ES3

3.5" Open Frame Touch Panel kit

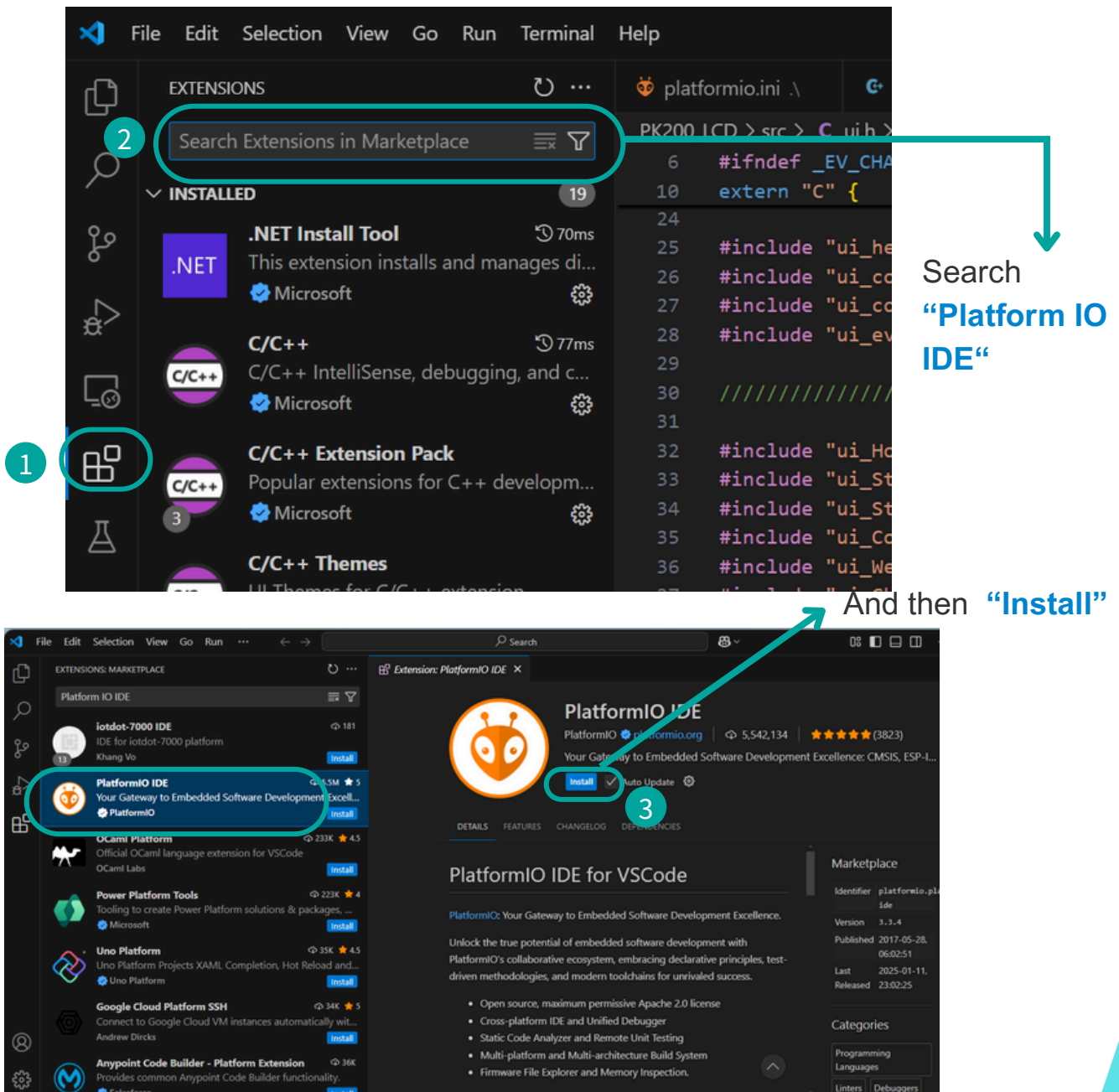
Quick Start Guide

1. Install “Visual Studio Code”



2. Install Platform Extension

Open Visual Studio Code, go to the Extensions panel, search for PlatformIO IDE, and install it.

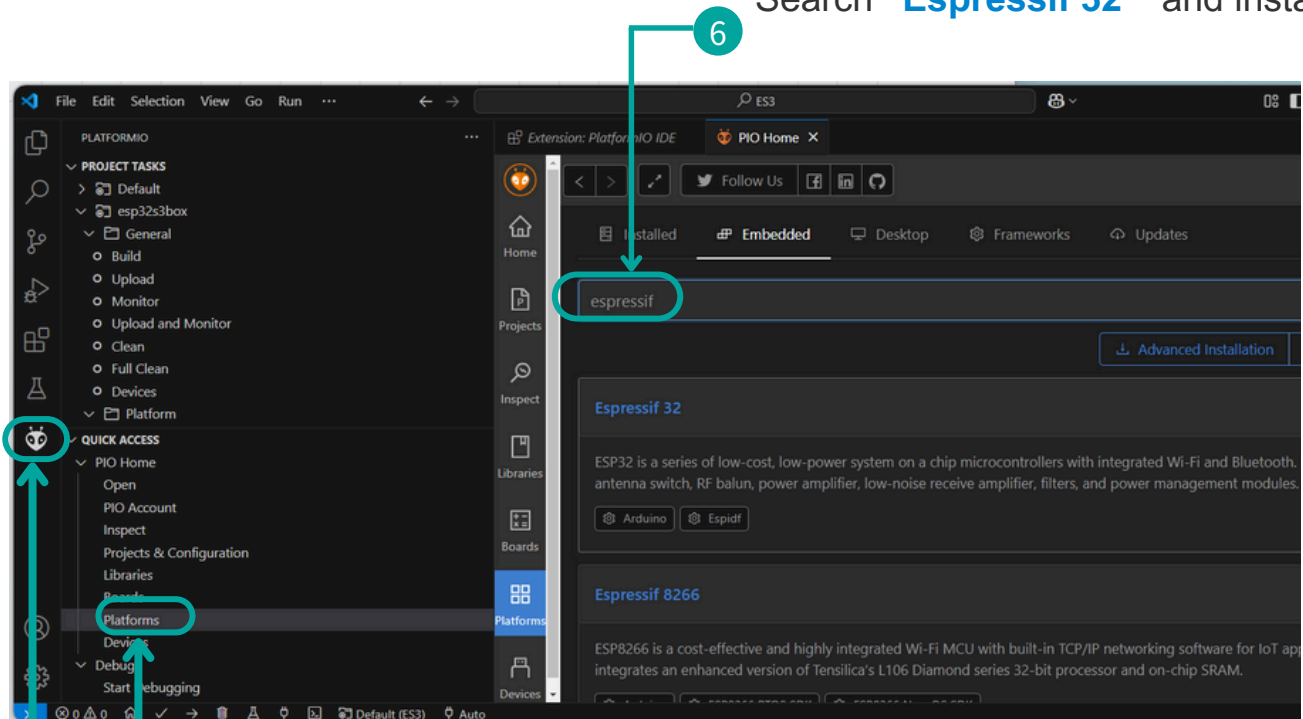


The image shows two screenshots of the Visual Studio Code interface. The top screenshot shows the Extensions panel with the search bar highlighted by a red circle and the number 2. The search bar contains the text "Search Extensions in Marketplace". The Extensions panel lists several installed extensions, including ".NET Install Tool", "C/C++", "C/C++ Extension Pack", and "C/C++ Themes". The bottom screenshot shows the PlatformIO IDE extension details page. The extension is highlighted by a red circle and the number 3. The details page shows the extension name "PlatformIO IDE", the publisher "PlatformIO", and the "Install" button. A red arrow points from the search bar in the top screenshot to the search bar in the bottom screenshot, and another red arrow points from the "Install" button in the bottom screenshot to the text "And then 'Install'".

Search
“Platform IO
IDE”

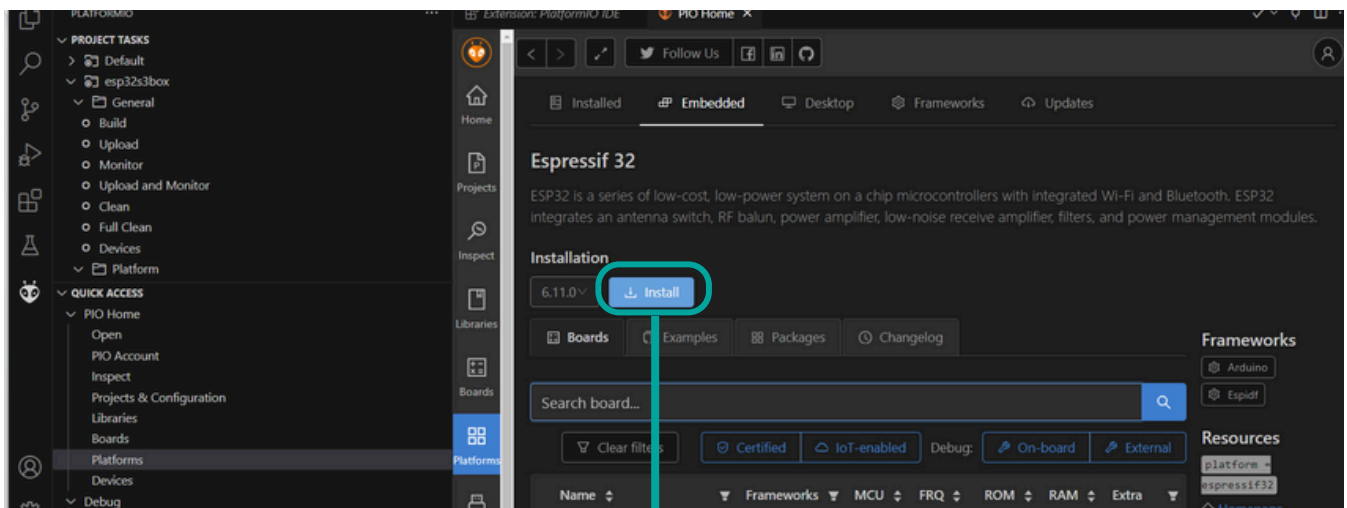
And then “Install”

Search “**Espressif 32**” and install



Go to “**QUICK ACCESS/PIO HOME/Platforms**” and click “**Platform**” icon

Click “**Platform IO**” on the left panel



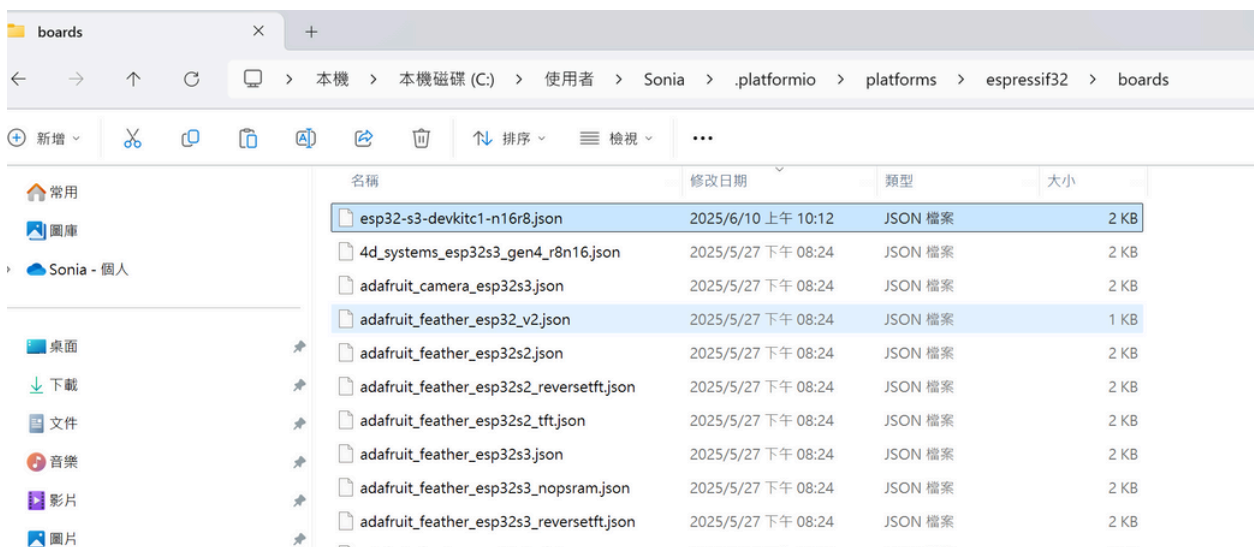
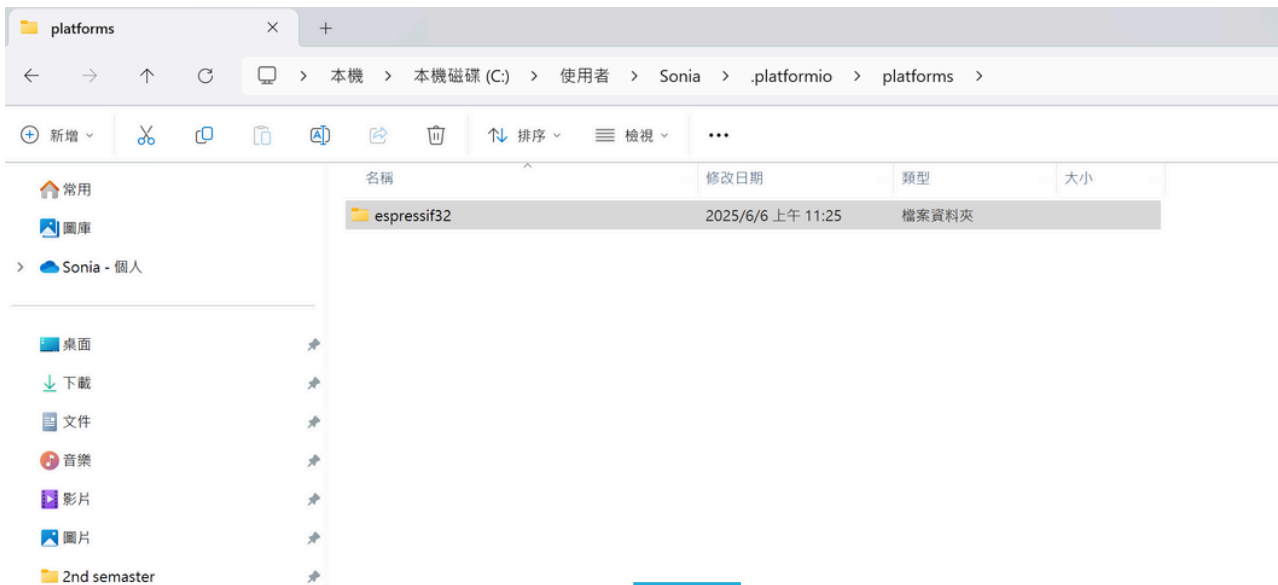
Click “**Install**” and keep the default setting

3. Unzip the PK200-LCD example project

4. Copy `esp32-s3-devkitc1-n16r8.json` to the following path:

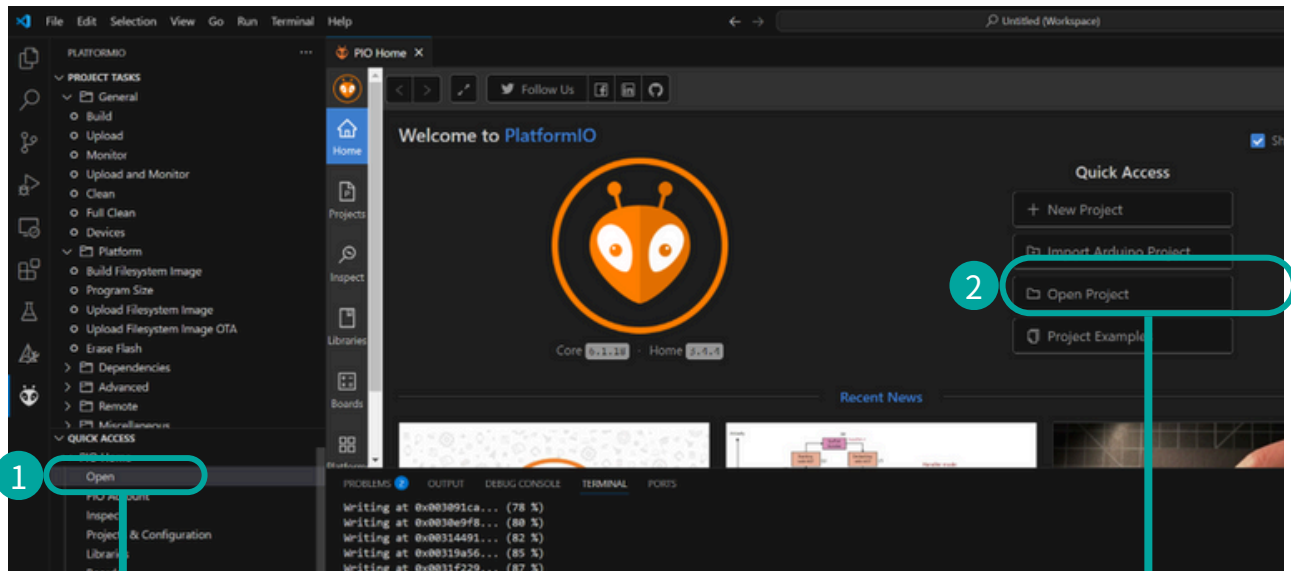
`C:\Users\XXXX\.platformio\platforms\espressif32\boards`

Note: Replace XXXX with your actual Windows user account name.



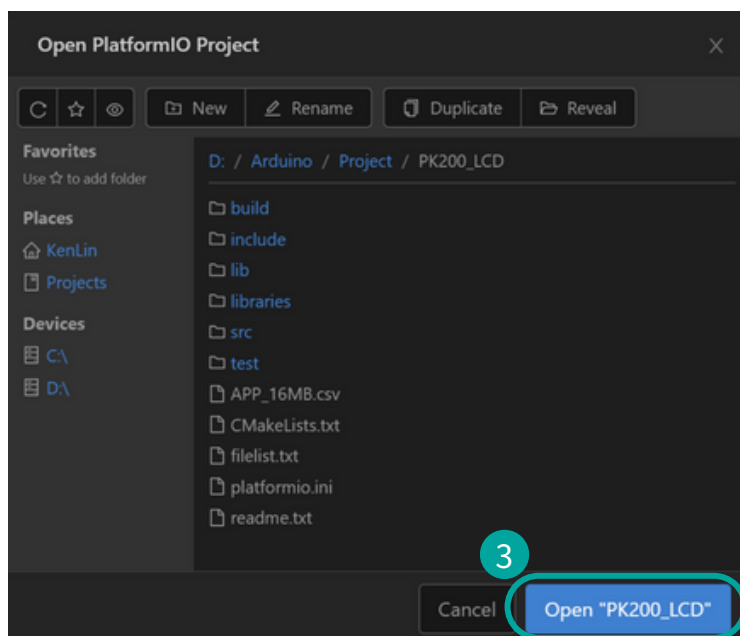
5. Start and Build the Project

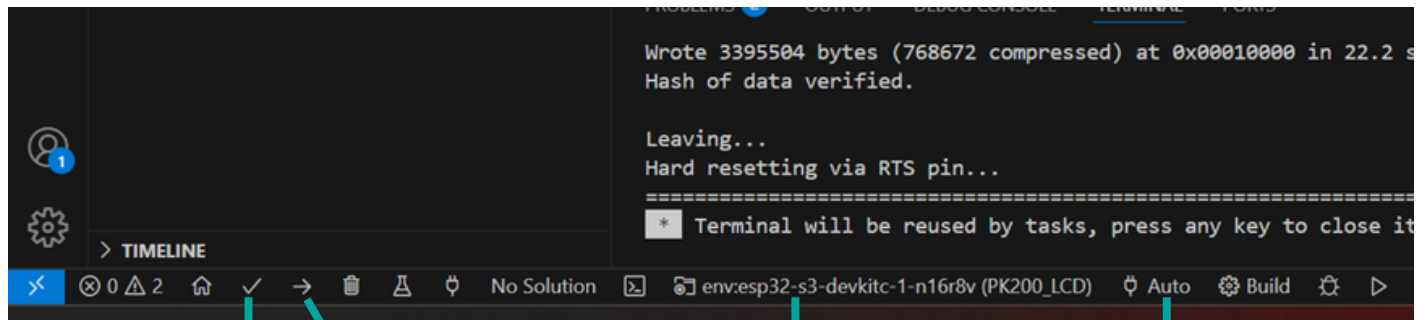
In the PlatformIO Home screen, click **“Open”** and then select the unzipped PK200-LCD example folder.



Click

Select the project folder;
For example: PK200_LCD

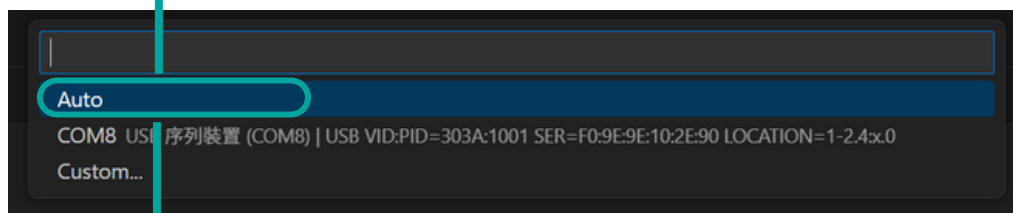




Build Build & Upload

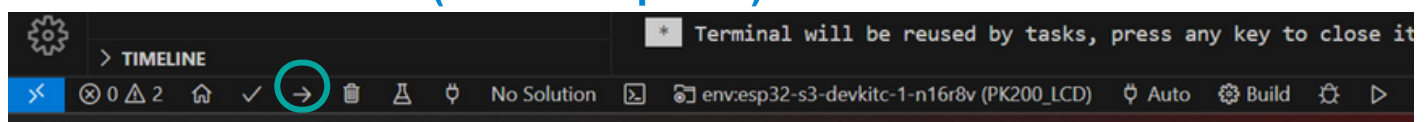
Target
Project

Port: Choose "Auto";
When PK200_LCD is connected
to the PC via USB, the COM port
will appear in the VS Code
status bar. (As below)

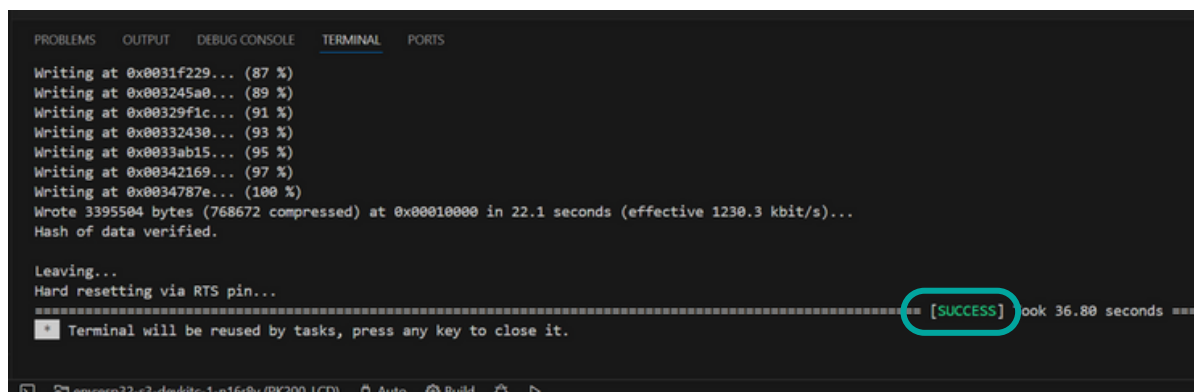


COMx: The COMx number will vary depending on your system configuration.

6. Please Click " → " (Build & Upload)



7. The appearance of the following message confirms that the firmware has been flashed successfully and PK200_LCD has rebooted. The environment setup is now complete.



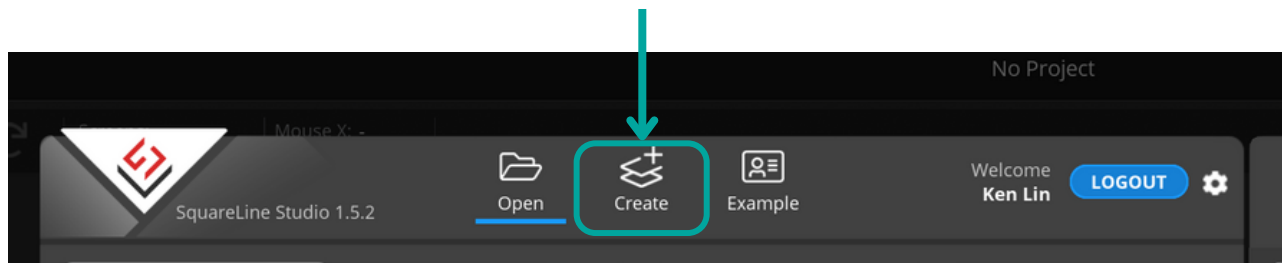
Start Your First LVGL UI

1. Go to <https://squareline.io/> , register and download **SquareLine Studio**



2. After installation, open **SquareLine Studio**
3. Start to create a **new project**

Create a new project



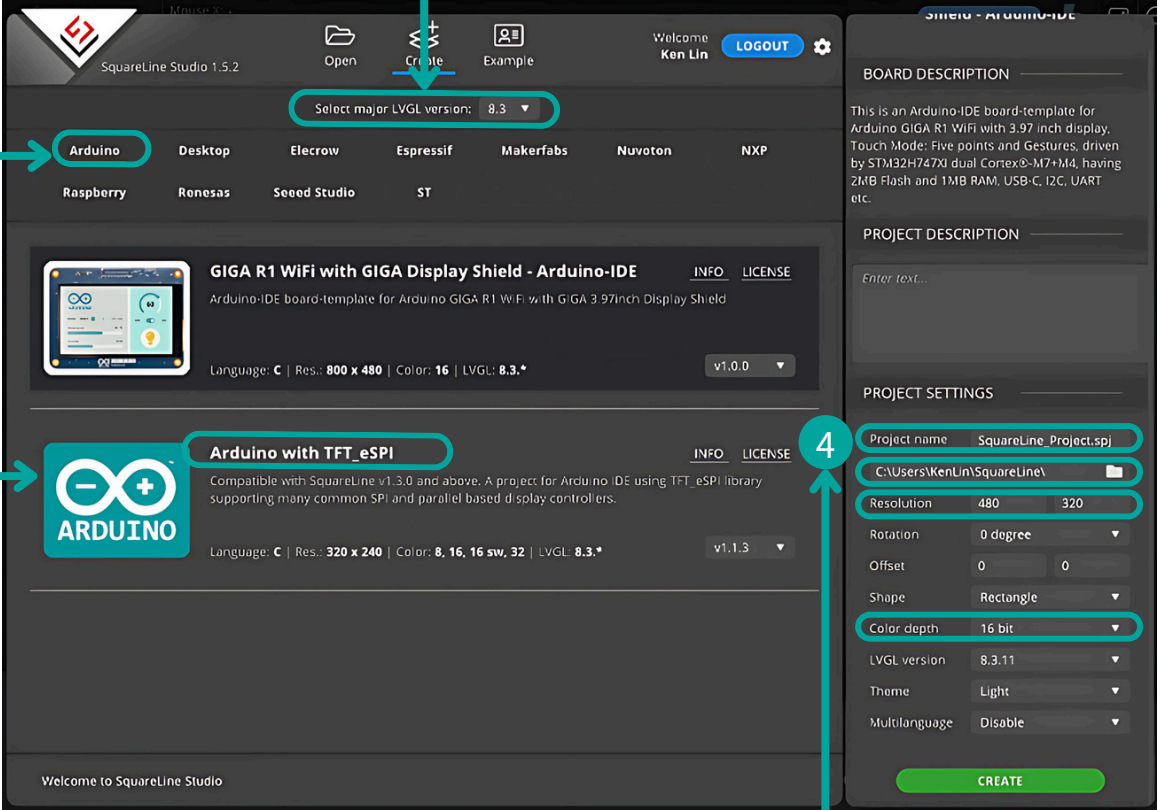
4. SLS Initial Configuration

1 LVGL Version: **8.3**

2 Choose **Arduino**

3 Choose **TFT_eSPI**

4

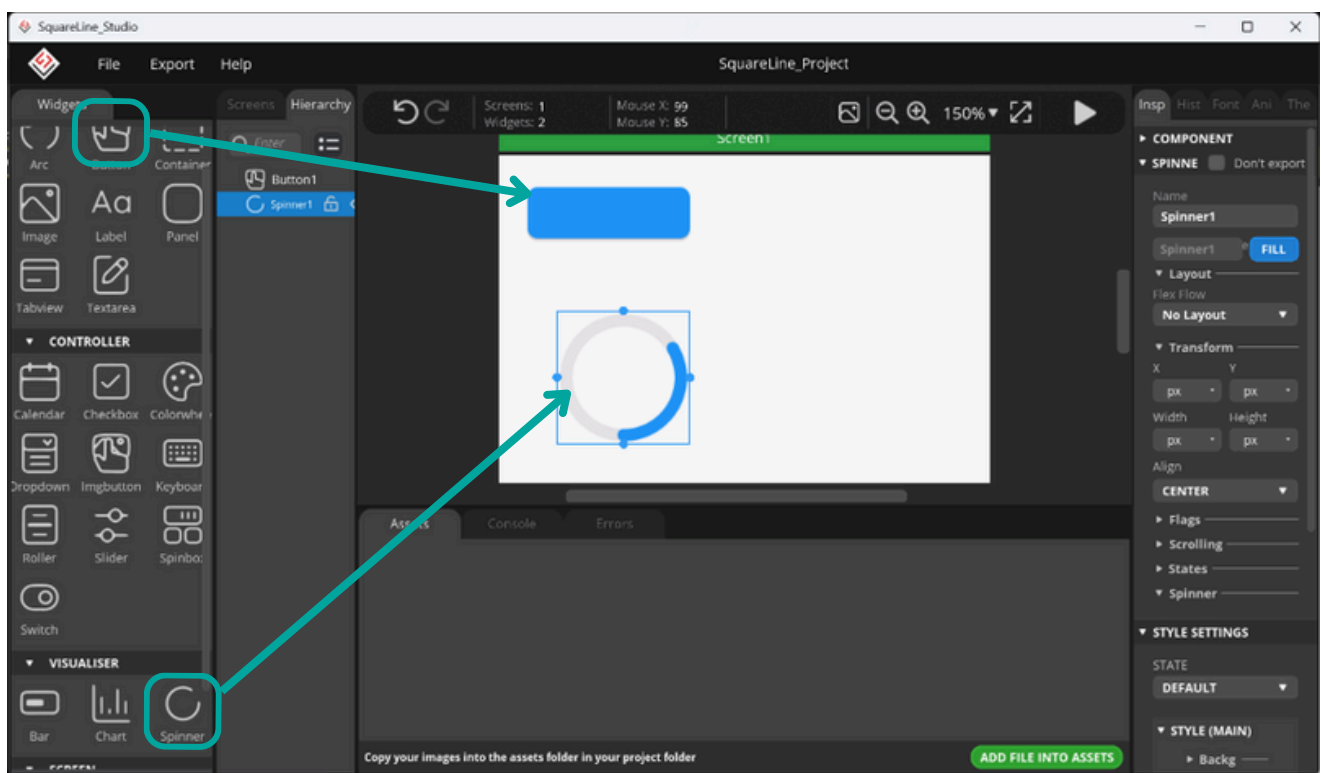


The screenshot shows the SquareLine Studio 1.5.2 interface. The top bar has 'Open', 'Create', and 'Example' buttons. A dropdown menu for 'Select major LVGL version' is set to '8.3'. The 'Arduino' category is selected in the board list. The 'Arduino with TFT_eSPI' board template is chosen. The right sidebar shows project settings: Project name 'SquareLine_Project.spj', save path 'C:\Users\KenLin\SquareLine\', Resolution '480 x 320', Color depth '16 bit', and LVGL version '8.3.11'. A 'CREATE' button is at the bottom right.

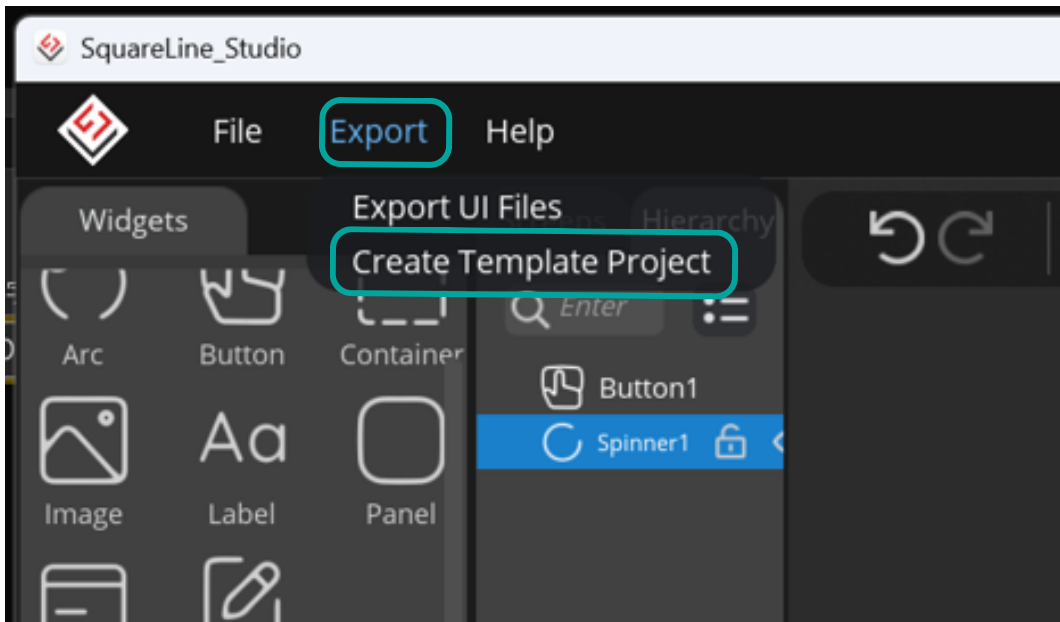
Set the project name and the save path.
Resolution setting: **480x320**
Color depth setting: **16bit**

Start Designing Your UI

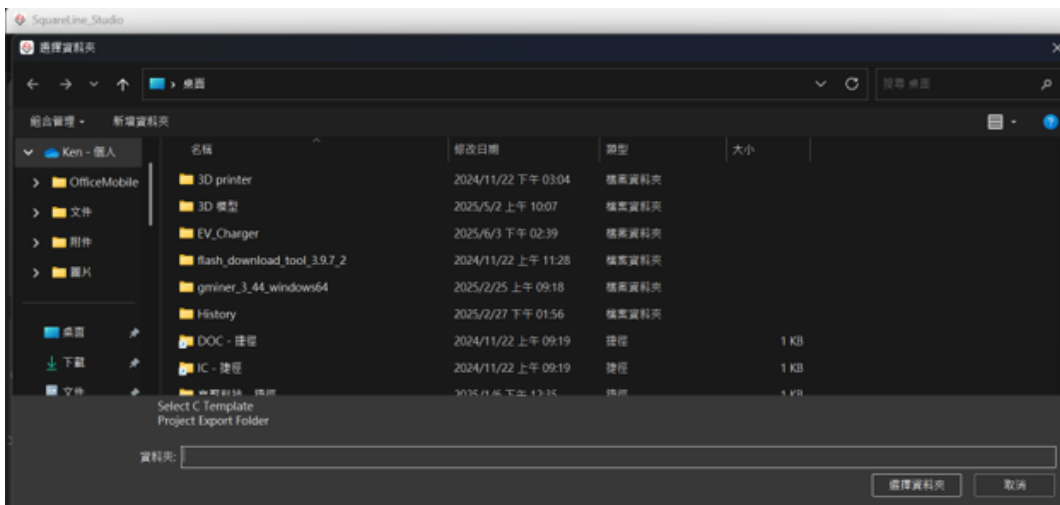
- You can watch the tutorial video at the following link:
https://www.youtube.com/watch?v=9qp3Lmc8r-Q&list=PLaKCTGp44qf0_PaXDxMNZqnLEvRu3iM21
- Refer to the example shown in the video to begin your UI design.
 1. Drag-**“Button”** and **“Spinner”** into Screen1 , and resize them as you need.



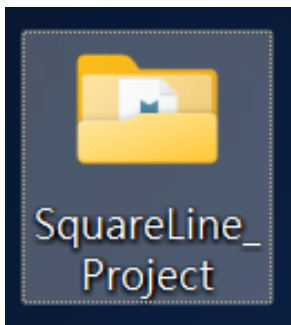
2. Click **“Export”** and choose **“Create Template Project”**



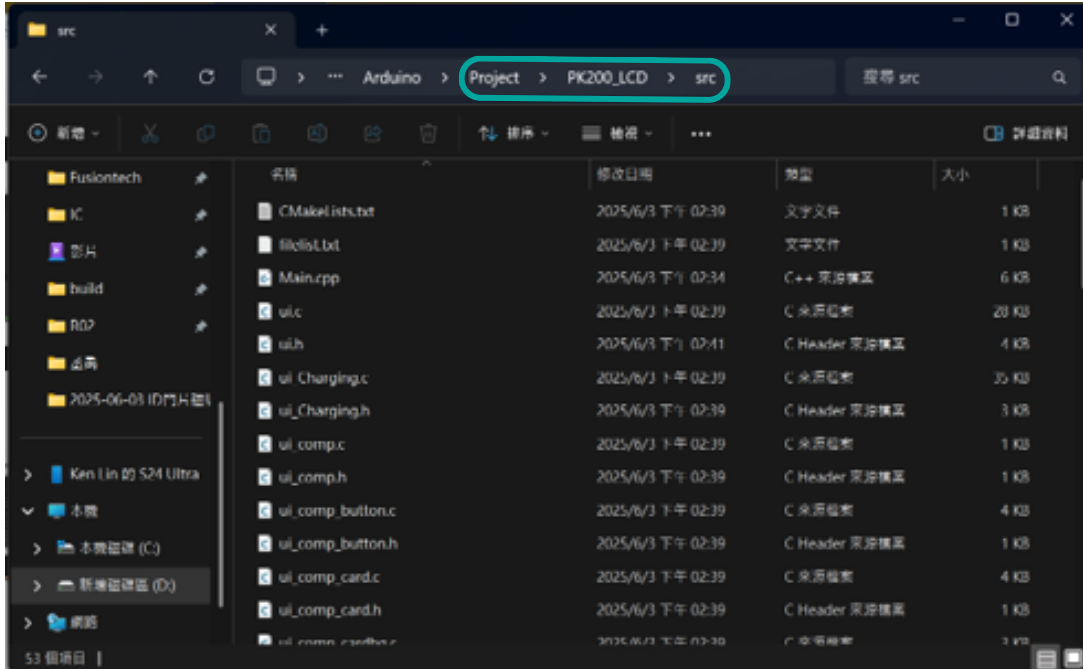
3. Select the export directory; in this example, it is placed on the **“Desktop.”**



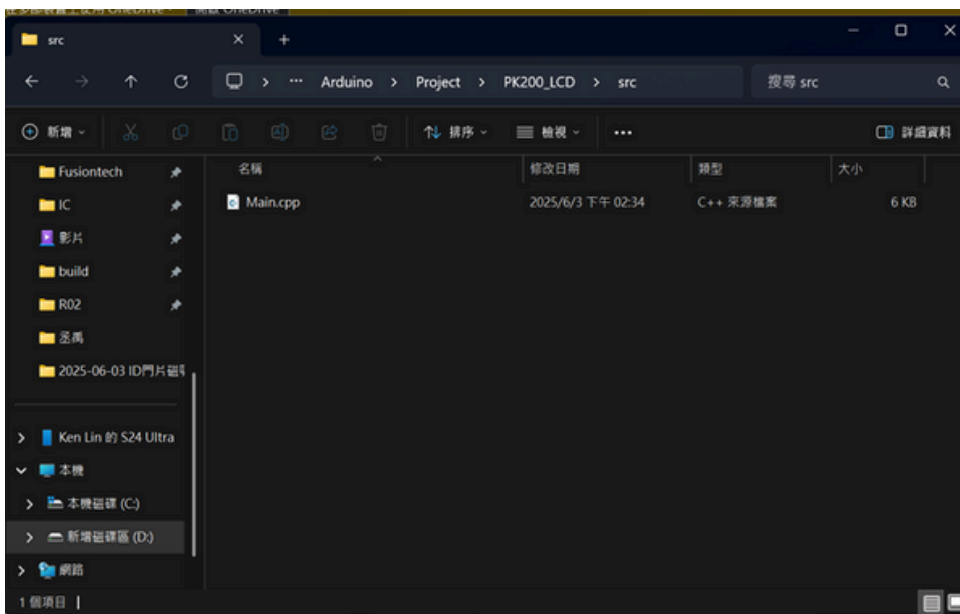
After the export is completed, a folder named **“SquareLine_Project”** will be generated in the specified directory (as shown below).



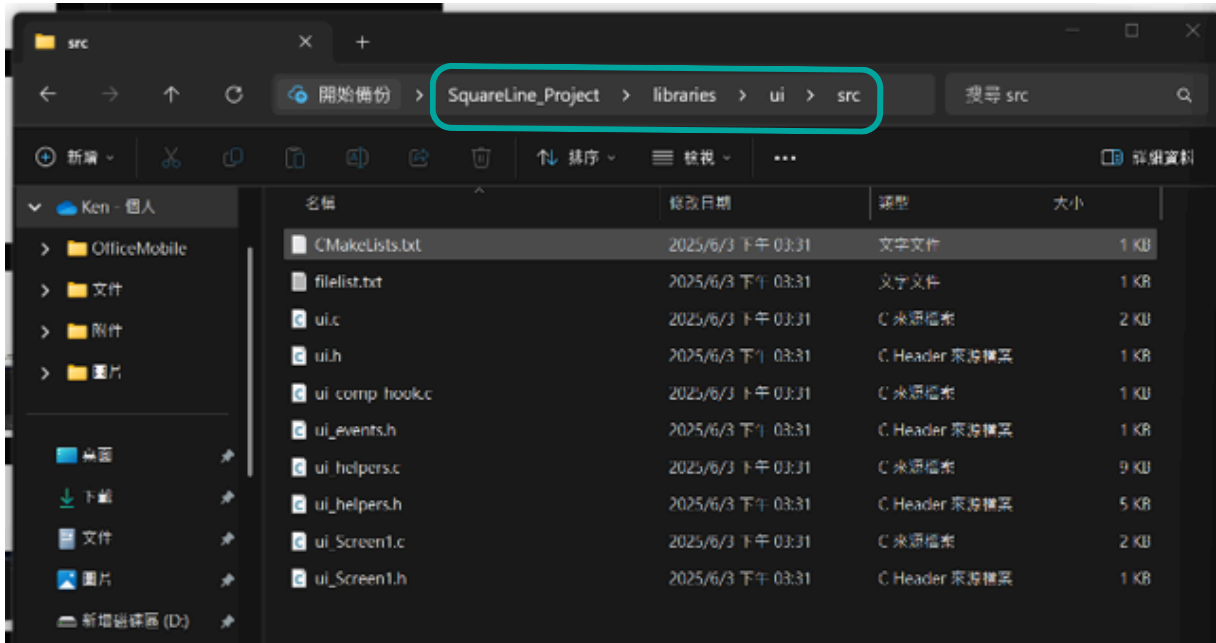
4. Use File Explorer to open the PK200-LCD directory and navigate to the src folder.



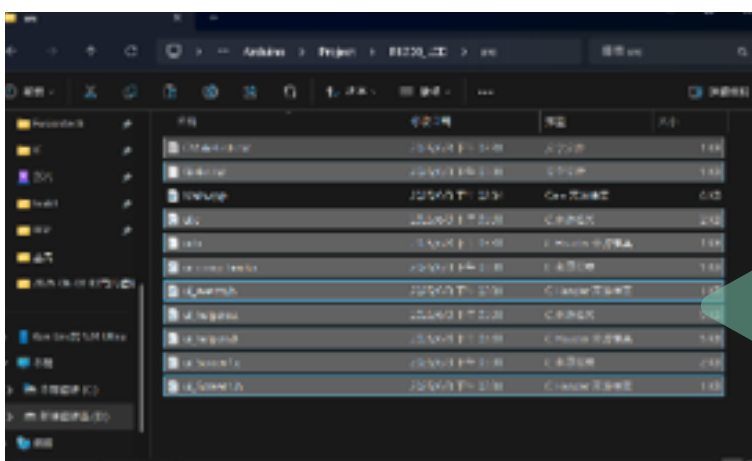
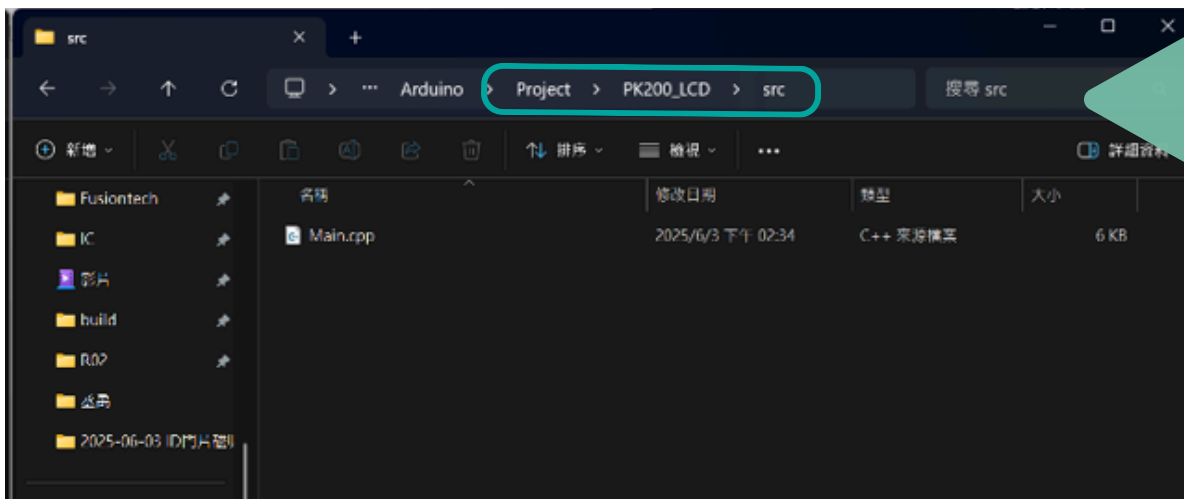
5. Delete all files inside the src folder except for main.cpp. (As shown below)



6. Use File Explorer to open the **SquareLine_Project** directory, then navigate to **libraries\ui\src**.



7. Copy all files from libraries\ui\src and paste them into the **PK200-LCD/src** folder. (As shown below)



8. Return to VS Code and click **“Build and Upload”** in PlatformIO to compile and flash the project.

9. You can now successfully compile and flash the firmware. (As shown below)



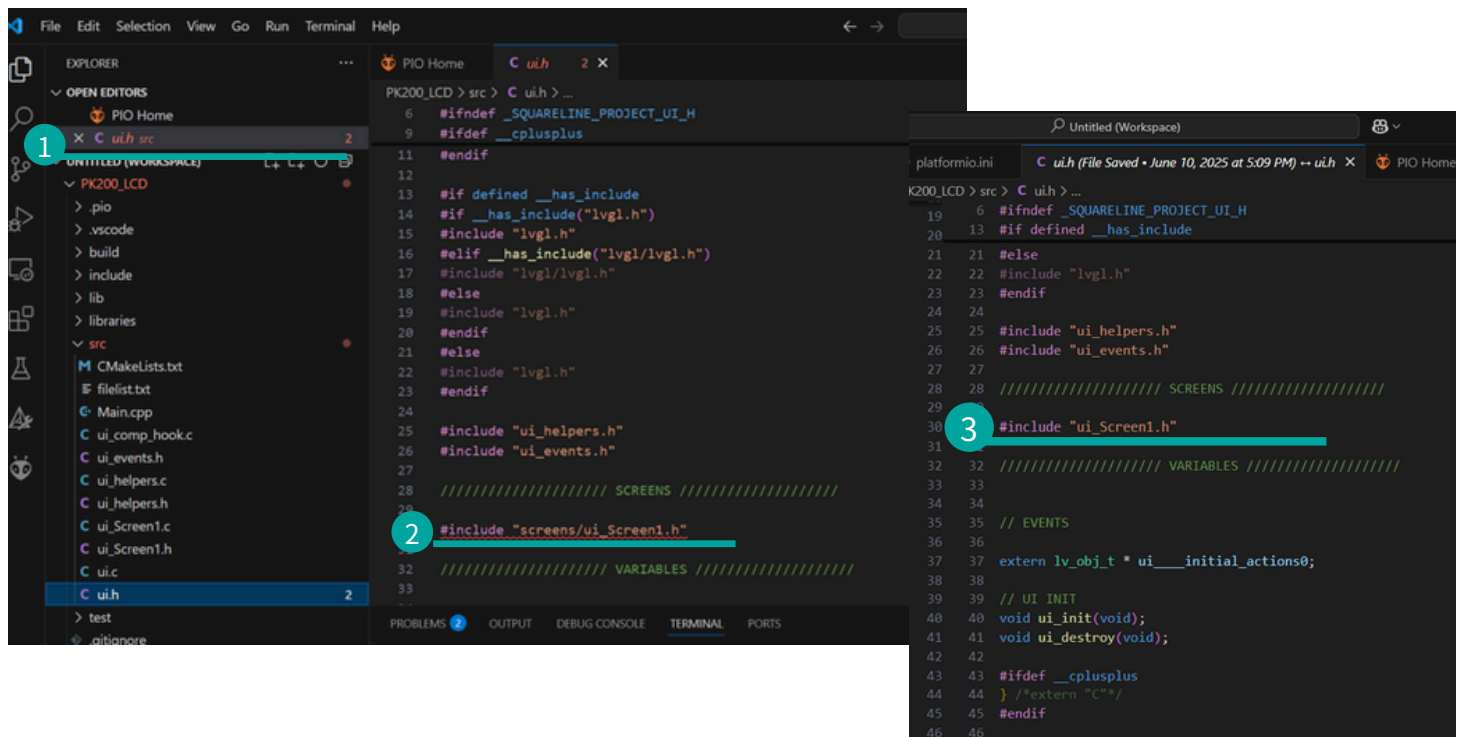
⚠ Known Bug in SquareLine Studio v1.5.2 (This does not occur in v1.5.1.)

If you're using SquareLine Studio v1.5.2, there's a known issue where the generated ui.h file references screen headers incorrectly.

To fix it, open “ui.h” and change the line from

“#include “screens/ui_Screen1.h” to **#include “ui_Screen1.h”**

And then save the file.



ENJOY YOUR PROGRAMMING JOURNEY!