# NES\_EMU\_ESP32 (Installation instructions down below)

NES emulator with ESP32 and ILI9488



Yet another NES emulator for the ESP32

This one is fully working! :-)

It is running on Intel's makers platform but can be easily ported to run with any ESP32 with an ILI9488 (480x320) + Touch screen (not mandatory).

This module is similar to what we use on our platform:

<https://www.buydisplay.com/lcd-3-5-inch-320x480-tft-display-module-optl-touch-screen-w-breakout-board>

You will need to provide controls, we are using an analog joystick + 2 physical buttons, select and start are input from the touch screen.

Audio is driven through DAC25 and DAC26, you will need an amplified speaker (PC speakers for example)

It contains 8 ROMs within the code from which you can choose what to launch.

You will need few more libraries located here:

<https://github.com/giltal/GIL_TAL_ARDUINO_LIBS>

Just locate them in the Arduino library folder.

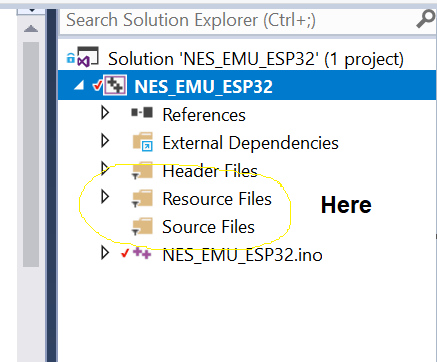
The modified **SPI.h\c** should be copied to the ESP32 location:

c:\Users\**giltal**\AppData\Local\arduino15\packages\esp32\hardware\esp32\1.0.4\libraries\SPI\src\

**giltal** is the specific user.

How to compile the project: Visual Studio + Visual Micro

1. Create new project with visual micro (under visual studio) and call it NES\_EMU\_ESP32
2. Copy the src folder, TV.h, NESrom.h and NES\_EMU\_ESP32.ino (from the zip file you have downloaded from the GIT) to the project’s folder
3. Update the libraries from my GIT if needed
4. Drag the src folder into the visual studio workspace project



1. Compile and load and don’t forget to have fun 😊
2. For **select** touch the right side of the screen
3. For **start** touch the left side of the screen

How to compile the project: Arduino SDK (application)

1. Create new project in the Arduino SDK (application)
2. Copy the src folder, TV.h, NESrom.h and NES\_EMU\_ESP32.ino (from the zip file you have downloaded from the GIT) to the project’s folder
3. Update the libraries from my GIT if needed
4. Compile and load and don’t forget to have fun 😊
5. For **select** touch the right side of the screen
6. For **start** touch the left side of the screen