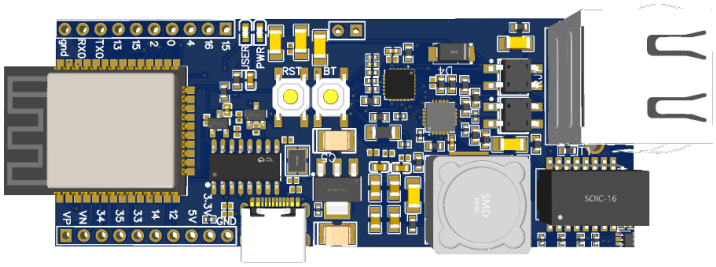
ESP32 POWER OVER ETHERNET ACTIVE BOARD DATASHEET

Introduction

ESP32-POE-A is a low-cost development kit for ESP32 with Active Power Over Ethernet support. The board uses LAN8720A chip for ethernet and CH340G USB-UART converter for communication with PC and programming. The board supports programming via SWDIO and SWCLK pins using for example ST-LINK programmer.



Features

- ESP32-Wroom module.
- USB-C connector.
- 17 GPIO pins are available.
- UART pins are available.
- LAN8720A chip for Ethernet.
- Si3404 for POE.
- CH340G USB-UART converter.
- POE-LED, USER-Led (GPIO2).
- Reset button and User button(GPIO0).
- Accepts power through:
    - USB
    - External source (1.8V-5V)
    - Active POE
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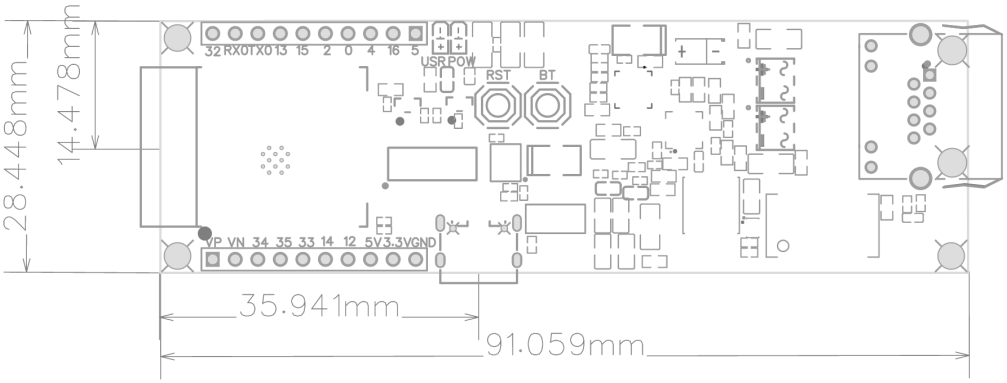
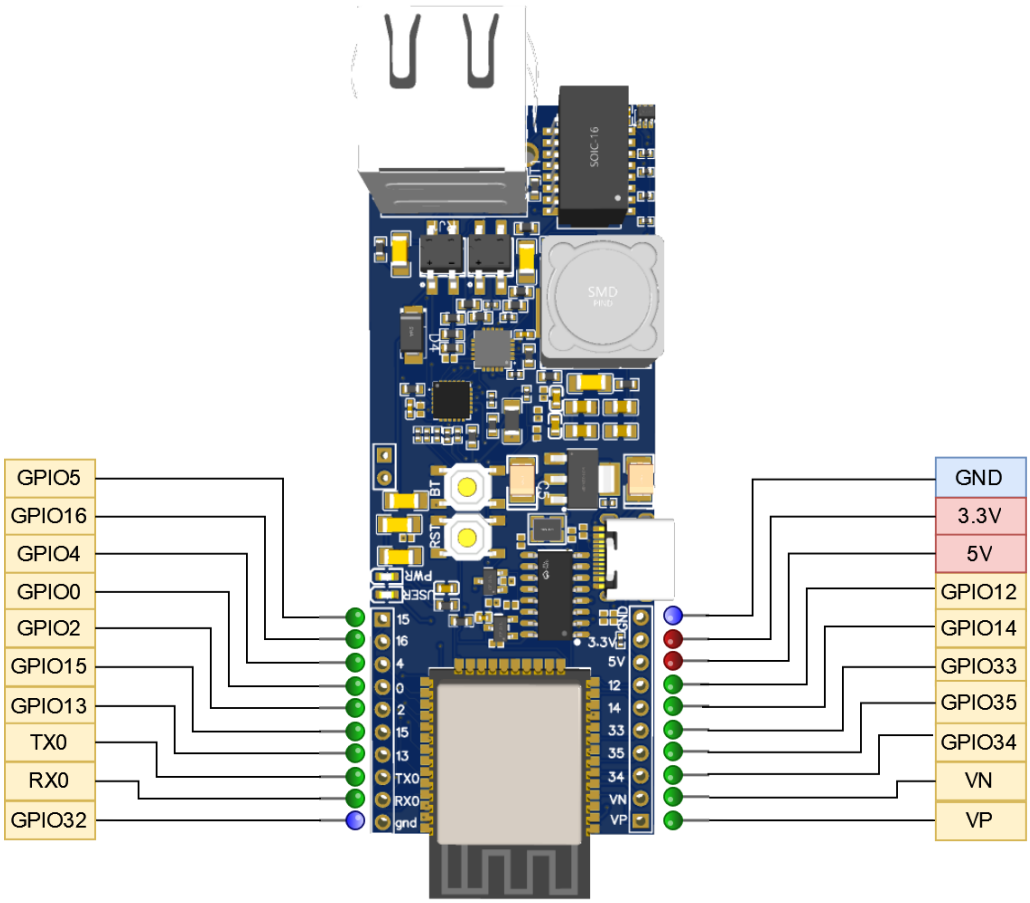
Dimensions



Pinout



POE

The POE-Jumper should be on to supply 3.3V to ESP32 via POE.

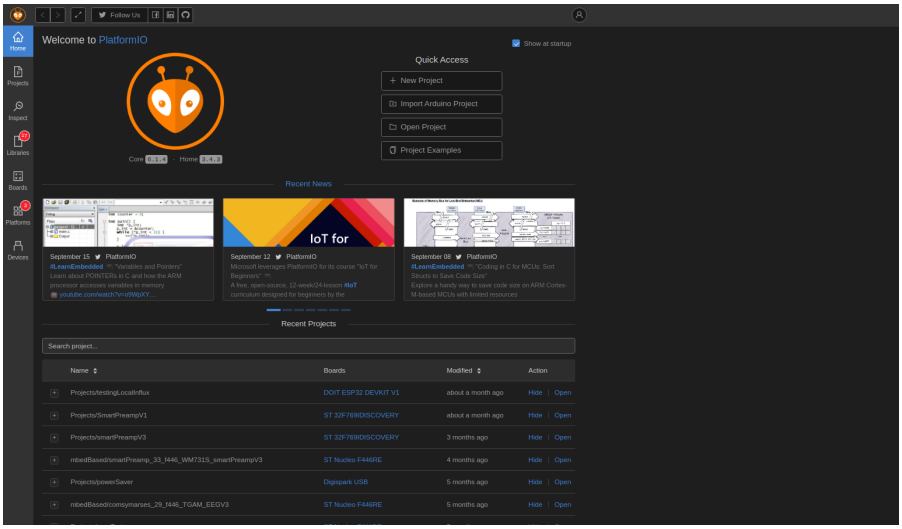
Important Notice!

There is no galvanic isolation, so the board should not be connected to POE while programming. Disconnect POE jumper or use non-POE cable and supply power via USB.

Programming options

Using Vscode Platformio and mbed/Arduino/Zephyr OS

1) Open Vscode and Platformio extension. Create a new project.



2) Choose …ESP… as a board. Choose framework “Esperssif IoT Development Framework” or “Arduiono”.
3) Write your code.
4) Connect the computer and the Esp32-POE-A board with a USB-C cable.
5) Establish Serial Connection with ESP32.
6) If the PC did not recognize the connected USB device, install the driver CH340 USB-UART drivers and software or from the project repository.
7) After connection press ctrl-alt-u (upload) to compile and upload the code.

Uploading example project

For example project in Vscode IDE Platformio go to:
https://github.com/prokyber/ESP32-POE-A-PlatformIO-Example

For example project in Arduino IDE go to: https://github.com/prokyber/ESP32-POE-A-ArduinoIde-Example