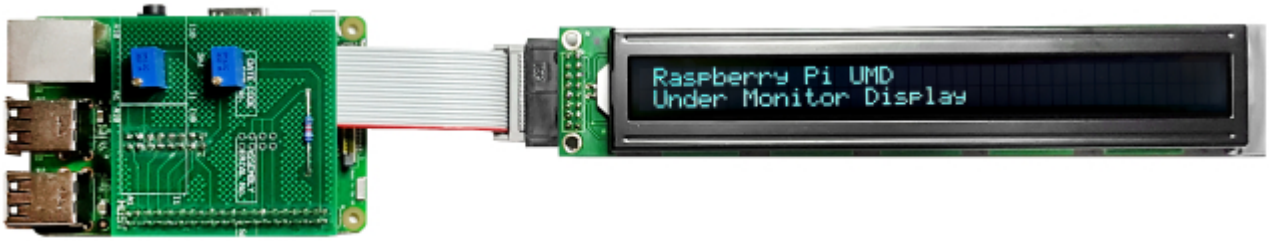
What this project requires



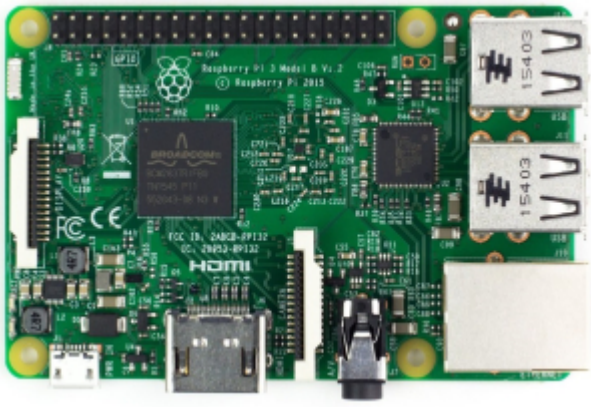
Hardware

This project has three main hardware components.

1. The Raspberry Pi
2. The LCD
3. The Driver Board

The Raspberry Pi

The <Raspberry Pi> in this project is the RPi 3 Model B. Now this will work with a model 2 or 1 (the driver board will not fit the one, so you would have to create a new design). This project also works with the RPi Zero.



All of the Raspberry Pi Models have enough power to run the web server, which does very little work, and to runt he LCD, which only refreshes once a second.

The Raspberry LCD

The LCD is a HD44780 compatible display. The LCD is two line and has 40 characters per line. This LCD was used because we have many of these at Ericsson, because this LCD has been used in recent receiver models.

The LCD is very simple to operate, in this project our LCD will be running in 4bit mode. There are other LCDs that run using I2C, these require much less wiring, but the libraries can be harder to obtain.

The LCD has a very simple DC backlight, some other LCDs have backlights that require PWM to operate, which means more circuitry.

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