ESP32 Shutter Tester wiring guide V1

Wiring of the modules is easily acclompished using Dupont wires. They come in a variety of lengths with terminals being male-male, female-female or male-female.

Using a screw-terminal breakout board, male-female are most suitable. Shorter lengths can be used for the LCD & buttons, to make wiring neater.

There is only one 5V output on the board, one 3.3V and two 0V (or GND). It will not be be possible to fit all of these wires into a single screw terminal. Do not use the GND terminal between pins 19 & 21

One solution is to gather all the 5V ends together, cut off the connector and remove a small pice of the insulation. Terminate all of the wires into a choc-bloc and then just one wire from the choc-bloc will go to the screw-terminal on the breakout board. The same is then done with the 0V wires.

For a neater build, the wires can be daisy chained between the modules, as shown in the schematic below, but would require additional connectors or soldering skills.

For the prototype, wires taken from an Ethernet cable were soldered directly to the sensors & daisy-chained for a neater build. Thes are the red, black, white & blue wires shown in the photgraphs below.

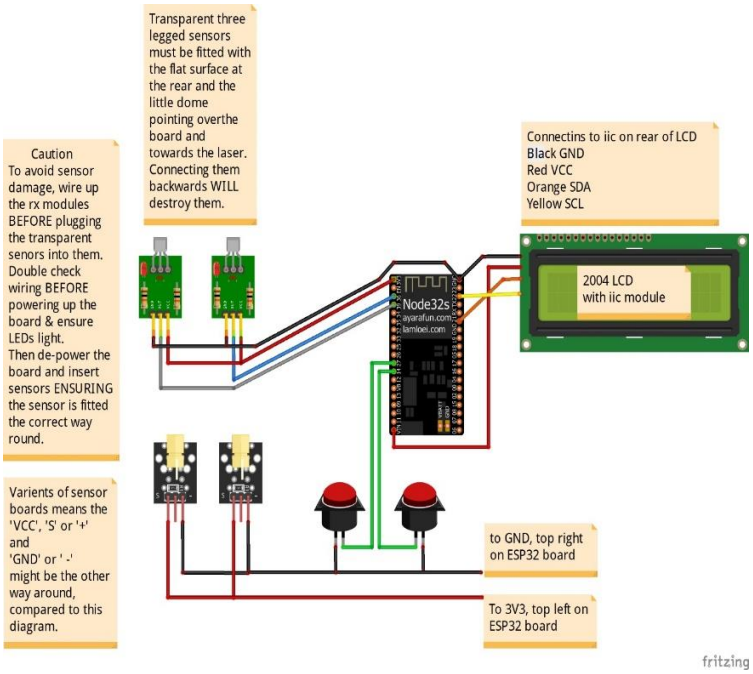
There are three hardware versions.

Legacy. This uses two sensors and a LCD. This is no longer supported, or code availailable.

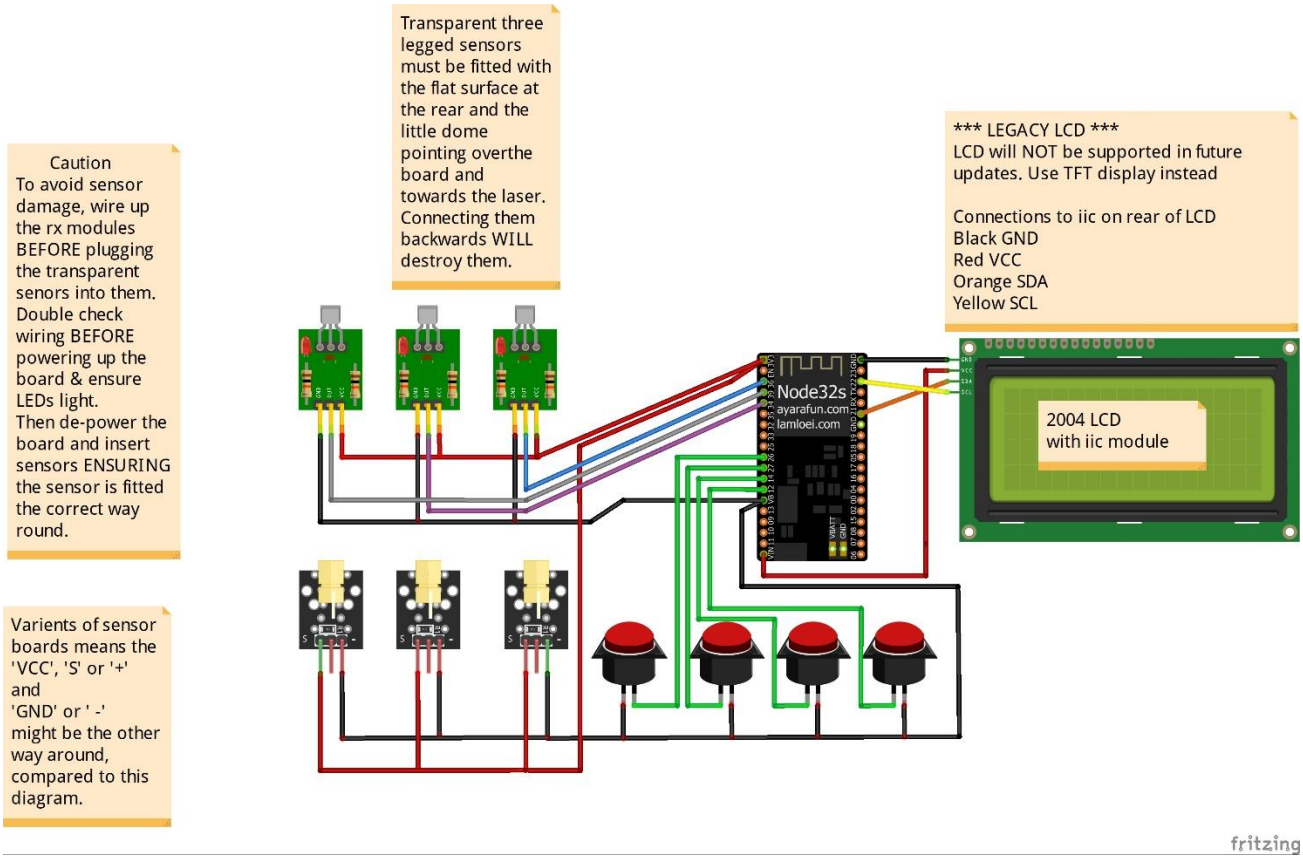
Version 2 with third Laser and four input buttons.
Note:- The middle Laser is not currently in use, but will become live in future firmware releases, so ensure the hardware build includes all three Lasers

Version 3 using a tft display instead of the LCD.
The LCD can also be connected, (wire as per the previous wiring diagram) but in later versions it may not be supported. A further two Lasers and receivers will be added, for vertical shutter testing.

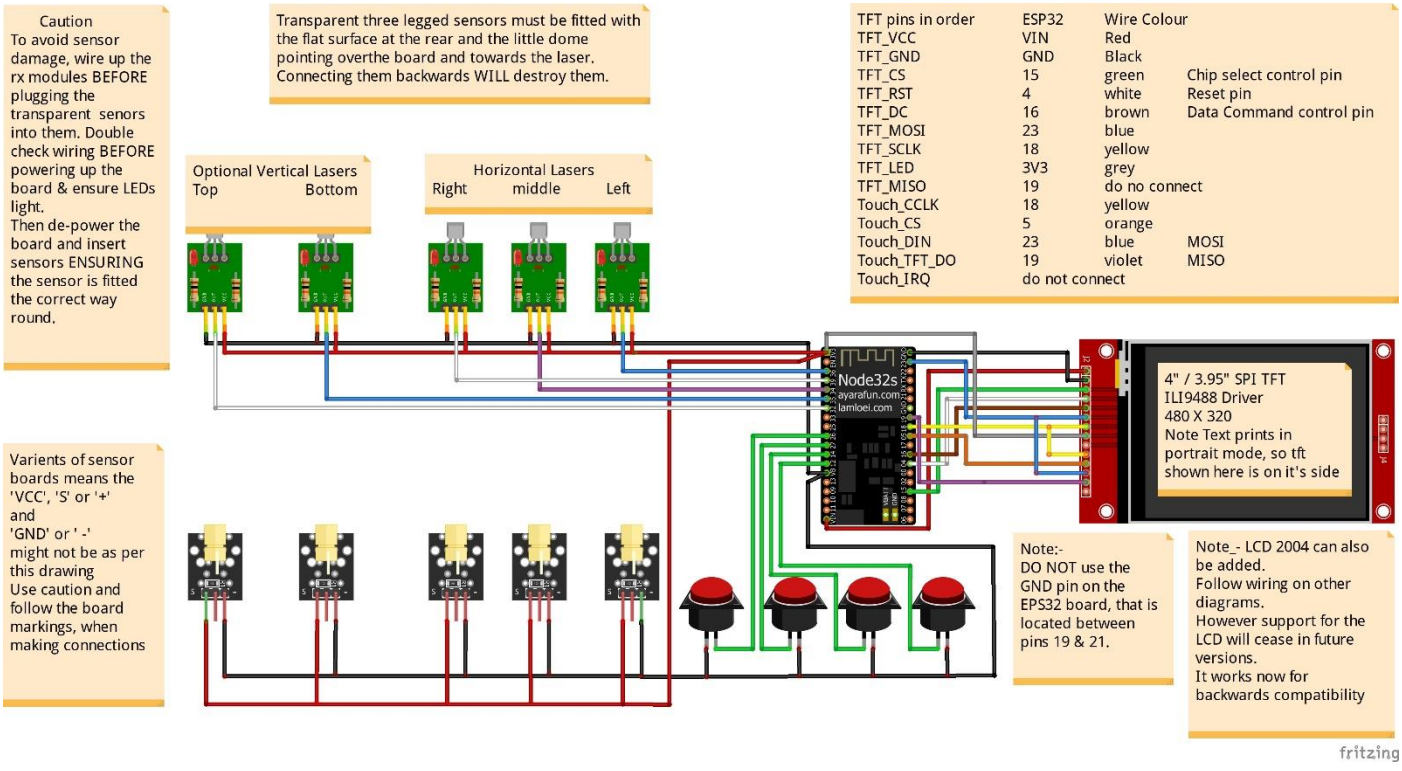
Legacy



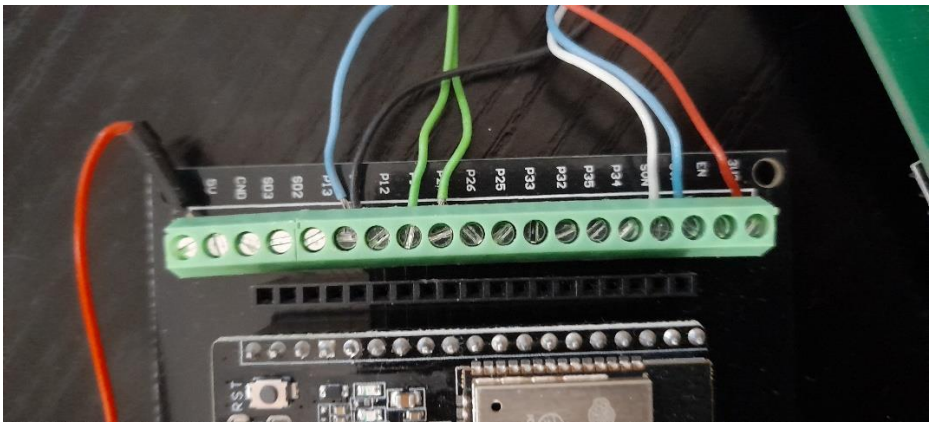
Version 2 (with centre Laser, not currently in use)

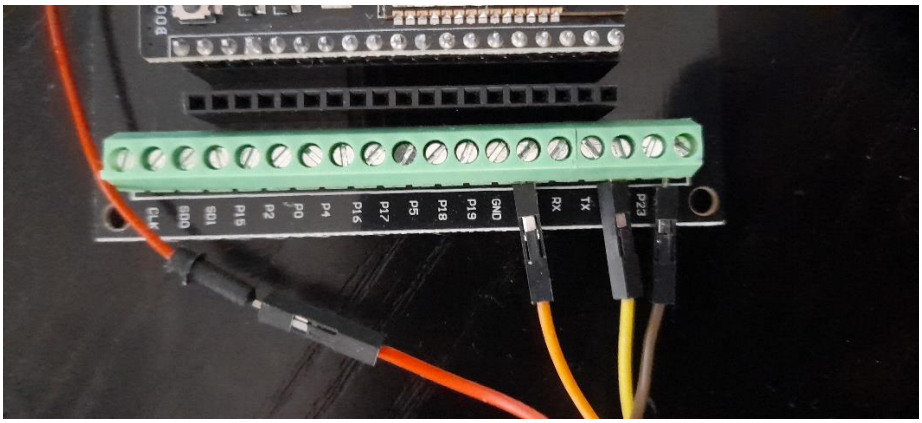


Version 3 with tft screen. Note Middle laser & optional lasers for vertical shutter testing are not currently supported, but will be enabled in future firmware builds.



Legacy version.





Note only two switches (green wires) and two laser (blue and) white are connected.

LCD connections