ESP32 Developer Timer Hardware Build V1.0 B 05/02/2024

Building the Developer Timer should be relatively easy. Below are some hints & advise on the build.

Refer to the ESP32 Wiring Guide schematic documents, for connections. Note. Schematics show a bare board, rather than it sitting in the breakout board.

All of the boards can be purchased from eBay, Amazon or AliExpress, which is by far the cheapest. Details of the parts required are detailed in the Parts List document

All of the boards are pre-soldered, you will not have to solder the components yourself. Most boards will also the header pins pre-soldered.

There is a choice of two processor boards to use. These are detailed in the parts document. The Lolin board has the advantage of battery backup, but does require the heard pins to be soldered.

Using DuPont jumper wires, the boards can be connected together. You will need two packs of 20cm Dupont wires to get the correct colour match. Optionally also using a pack of 10cm wires for the shorter wire runs, will make a neater build.

Additionally, there are more Brown and Black wires used, so one pack of each, 20cm Brown & Black wires will be required.

There are many 3.3V (Brown)& GND (Black) power connections. These will not all fit into the breakout board screw-terminals. It will be necessary to connect them in groups with a choc-block or similar, then to the screw terminal. Alternately use the header pin specified in the parts document, although this will require soldering.

When fully built & tested, consider using a little hot-glue on the connectors, to stop them working loose.

ESP32 comes in either 30 or 38 pin boards. The parts list specifies the 38 pin nodeMCU32 and compatible 38 pin breakout board or the Lolin D32 board, which is 32 pin.

Ensure you pay particular attention to the polarity of the connections. The boards are clearly marked.
The breakout board is also marked for the nodeMCU32, but these do not match the Lolin board, so be very careful that the correct connections are made.

The TFT is marked VDD (3.3V) and GND (0V). The tft board LED pin is also connected to 3.3V

The Encoder is marked 5V (connect this to 3V) and GND (0V)