

This is a detailed PCB layout for an Arduino-Teesny41-PLUS-ESP-r10 board, designed by Chris Burgess. The board is divided into several functional sections, each with its own schematic and component placement.

USB-HOST

The USB-HOST section (top left) shows the connection of a USB cable to the board. It includes a USB connector (J1) and a USB-to-UART bridge (U2). The USB+5V pin is connected to the VIN pin of the USB-to-UART bridge. The USB-D+ and USB-D- pins are connected to the D+ and D- pins of the bridge. The USB-GND pin is connected to the GND pin of the bridge.

TEESNY 4.1

The TEESNY 4.1 section (top center) shows the connection of the Teesny 4.1 module to the board. It includes a Teesny 4.1 module (U1) and a 5V fuse (F1). The 5V-FUSE pin is connected to the VIN pin of the Teesny 4.1 module. The TEESNY_3V3 pin is connected to the 3V3 pin of the Teesny 4.1 module. The VUSB pin is connected to the VUSB pin of the Teesny 4.1 module. The VBAT pin is connected to the VBAT pin of the Teesny 4.1 module. The PGM pin is connected to the PGM pin of the Teesny 4.1 module. The GND pin is connected to the GND pin of the Teesny 4.1 module.

INPUT/OUTPUT

The INPUT/OUTPUT section (top right) shows the connection of various input and output pins to the board. It includes a 3x2M pin header (J2) and a 3V3 pin header (J3). The 3x2M pin header is connected to the D12/MISO/MQSL, D13/SCK/LED, and D11/MQSL pins. The 3V3 pin header is connected to the +3V3 and GND pins.

LEDS

The LEDS section (middle left) shows the connection of various LEDs to the board. It includes a yellow LED (LED10), a red LED (LED13), and a green LED (LED14). The yellow LED is connected to the STA_LED_TRC pin. The red LED is connected to the D13/SCK/LED pin. The green LED is connected to the D13/SCK/LED pin.

CAN BUSES

The CAN BUSES section (middle center) shows the connection of two CAN buses to the board. It includes two CAN modules (IC3 and IC4) and two CAN pin headers (JP6 and JP7). The CAN modules are connected to the CANH and CANL pins of the pin headers. The CAN modules are also connected to the 5V-FUSE and GND pins.

ESP-02

The ESP-02 section (middle right) shows the connection of an ESP-02 module to the board. It includes an ESP-02 module (U3) and a 3V3 pin header (J4). The 3V3 pin header is connected to the +3V3 and GND pins. The ESP-02 module is connected to the RST, TX, RX, and GND pins.

POWER

The POWER section (bottom left) shows the connection of the power supply to the board. It includes a power supply (U1) and a 5V fuse (F1). The power supply is connected to the VIN and GND pins. The 5V fuse is connected to the VIN and GND pins.

ETHERNET

The ETHERNET section (bottom center) shows the connection of an Ethernet module to the board. It includes an Ethernet module (U2) and an Ethernet pin header (J3). The Ethernet module is connected to the RX+, RX-, TX+, TX-, LED, and GND pins. The Ethernet pin header is connected to the RX+, RX-, TX+, TX-, LED, and GND pins.

DESIGN NOTES

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Arduino-Teesny41_PLUS_ESP_r10
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APPLICATION NOTES:
TEENSY INPUTS USE 3.3V LOGIC-LEVEL
THEY ARE NOT 5V TOLERANT
DO NOT PUT 5V INTO ANY PIN

INPUT/OUTPUT

ESP-02

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