

POWER

The schematic diagram illustrates the power supply section for the AMS1117. The circuit is powered by a 5V_VIN input, which is connected to the VIN pin of the AMS1117. The VOUT(TAB) pin of the AMS1117 is connected to a 3V3 output, which is also connected to the CSI_RST pin through a 4.7K resistor (R9). The ADJ(GND) pin of the AMS1117 is connected to GND. The 3V3 output is filtered by capacitor C18 (10uf) and C19 (22uf). The 3V3 line continues to the CSI_POW pin through a 10K resistor (R7) and a MOSFET (Q4) driver circuit. The MOSFET is controlled by the CSI_RST pin through a 10K resistor (R12). The MOSFET's drain is connected to the VIN pin of the XC2V8 and XC1V2 FPGAs. The FPGAs' VOUT pins are connected to their respective VSS pins. The FPGAs are powered by 2.8V and 1.2V regulators, which are connected to the 3V3 line through capacitors C20 (0.1uf) and C21 (10uf). The 2.8V regulator is connected to the CSI_2.8 pin, and the 1.2V regulator is connected to the CSI_1.2 pin. The 3V3 output is also connected to the TWI_SCK and TWI_SDA pins through 4.7K resistors (R10 and R11).

[illegible]

MIC

The diagram shows a MIC module connected to a microcontroller. The MIC module has pins 1 through 8. Pin 1 is connected to GND. Pin 2 is labeled NC. Pin 3 is labeled N/C. Pin 4 is labeled WS. Pin 5 is labeled CHIPEN. Pin 6 is labeled L/R. Pin 7 is labeled SD. Pin 8 is labeled VDD. A 3V3 supply is connected to pin 8. A 0.1uF capacitor (C1) is connected between pin 8 and GND. The MIC DATA pin (7) is connected to the microcontroller's SD pin (7). The MIC CLK pin (6) is connected to the microcontroller's SCK pin (6).

The diagram illustrates the wiring for a USB-to-UART module (FT232RL) connected to a microcontroller. The module is represented by a large rectangle with pins labeled on the right: GND, VBUS, SBU2, CC1, DP1, DN1, DP2, DN2, SBU1, CC2, VBUS, and GND. The microcontroller pins on the left are labeled A1 through A12. The connections are as follows:

- VBUS:** Connected to the VBUS pin of the module and the A1 microcontroller pin. It is also connected to a 5V supply through a diode (D1) and a resistor.
- D-** Connected to the A2 microcontroller pin.
- D+** Connected to the A3 microcontroller pin.
- D-** Connected to the A4 microcontroller pin.
- D+** Connected to the A5 microcontroller pin.
- D-** Connected to the A6 microcontroller pin.
- D+** Connected to the A7 microcontroller pin.
- D-** Connected to the A8 microcontroller pin.
- D+** Connected to the A9 microcontroller pin.
- D-** Connected to the A10 microcontroller pin.
- D+** Connected to the A11 microcontroller pin.
- D-** Connected to the A12 microcontroller pin.

The module's GND pins are connected to the common ground. The 5V supply is labeled 5V_VIN.

AutoDown

The diagram illustrates the AutoDown circuit. It consists of two NPN transistors, Q1 and Q2. The base of Q1 is connected to the DTR signal line through a 10K resistor R1. The base of Q2 is connected to the RTS signal line through a 10K resistor R2. The emitter of Q1 is connected to the collector of Q2, which is then connected to the GPIO0 pin. The collector of Q1 is connected to the CHIP_EN pin. Both transistors have their emitters grounded.

USB

GND

VBUS

USB D-

USB D+

USB D-

USB D+

GND

A1

A2

A3

A4

A5

A6

A7

A8

A9

A10

A11

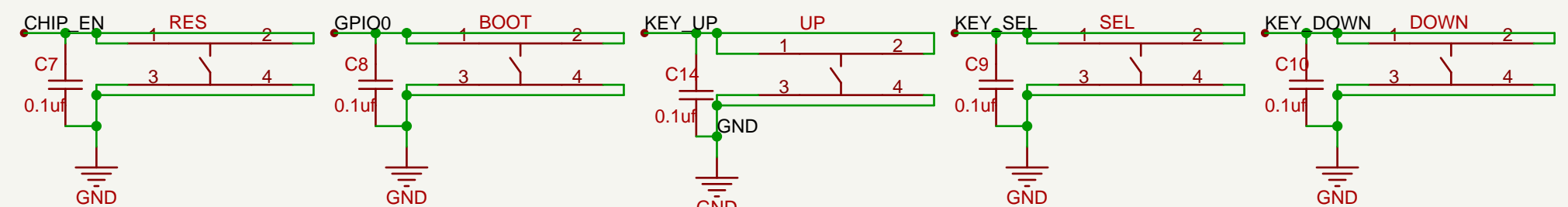
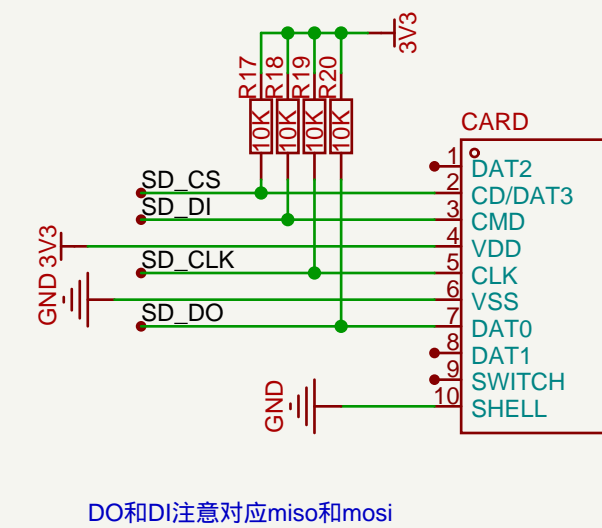
A12


GND

EH

1

GND



Schematic	Sch			Update Date	2023-01-06		
				Create Date	2022-11-24		
Page	P1			Part Number			
Drawed		ESP32S3_Speak_Mqtt_Prjct					
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