


Power Supply

The diagram illustrates a multi-stage power supply circuit for a Raspberry Pi 4B, designed to provide stable 5V, 3.3V, 2.8V, and 1.2V outputs from a single +5V input.

Components and Connections:

- U3 (AMS1117-3.3):** A 3.3V LDO regulator. VIN is connected to +5V. VOUT is connected to +3V3. VSS/ADJ is connected to GND. A 22uF capacitor (C8) is connected between +5V and GND. A 2k resistor (R10) is connected between +5V and the output of U3. A 22uF capacitor (C9) is connected between +3V3 and GND.
- Q4 (SM3407SRL):** A MOSFET used as a buffer. The gate is connected to +3V3 through a 10k resistor (R19). The source is connected to GND through a 1k resistor (R20). The drain is connected to the output of U3.
- U13 (XC6206P282MR):** A 2.8V LDO regulator. Vin is connected to the output of Q4. Vout is connected to +2.8V. GND is connected to GND. A 10uF capacitor (C13) is connected between Vin and GND. A 10uF capacitor (C14) and a 100pF capacitor (C16) are connected between +2.8V and GND.
- U14 (XC6206P122MR-G):** A 1.2V LDO regulator. Vin is connected to +2.8V. Vout is connected to +1.2V. VSS is connected to GND. A 10uF capacitor (C15) is connected between +2.8V and GND. A 10uF capacitor (C15) and a 100pF capacitor (C17) are connected between +1.2V and GND.
- LED1:** A status LED connected between +5V and GND through a 2k resistor (R10).
- Capacitors:** C8 (22uF), C9 (22uF), C12 (10uF), C13 (10uF), C14 (10uF), C15 (10uF), C16 (100pF), C17 (100pF).
- Resistors:** R10 (2k), R19 (10k), R20 (1k).

Micro USB

Schematic	Schematic1			Update Date	2024-11-21
				Create Date	2024-10-11
Page	PMU/BMS			Part Number	JLCPCB-002
Drawn	EasyEDA	SmartGlasses			
Reviewed	EasyEDA				
		VER	SIZE	PAGE	2 OF 2
		V0.1	A4	EasyEDA.com	