



Expansion

Diagram illustrating the Expansion header pin connections:

J20 (Left Header):

- Pin 1: VMM
- Pin 2: V3.3
- Pin 3: DBG RXD
- Pin 4: DBG TXD
- Pin 5: EXP IO1 P1.15
- Pin 6: EXP PWM1 RXD1 P2.5
- Pin 7: EXP PWM2 TXD1 P2.4
- Pin 8: EXP PWM3 Fan P2.3
- Pin 9: EXP PWM4 Buzzer P2.2
- Pin 10: EXP IO2 P1.0
- Pin 11: EXP IO3 P1.9
- Pin 12: EXP IO4 P1.10
- Pin 13: EXP IO5 P1.14
- Pin 14: (Empty)
- Pin 15: Expansion Polarity: P5.15 pin not used. Expansion Header have this pin blocked.

J18 (Right Header):

- Pin 1: *USB PPWR
- Pin 2: USB PWR
- Pin 3: USB D N
- Pin 4: USB D P
- Pin 5: EXP AD1 P1.31
- Pin 6: EXP IO6 P1.1
- Pin 7: EXP IO7 P1.4
- Pin 8: EXP IO8 P1.8
- Pin 9: EXP SSEL1 P0.6
- Pin 10: EXP SCK1 P0.7
- Pin 11: EXP MISO1 P0.8
- Pin 12: EXP MOSI1 P0.9
- Pin 13: EXP AD2 P0.25
- Pin 14: EXP AD3 AOUT P0.26
- Pin 15: (Empty)

Legend:

- Expansion Polarity: P5.15 pin not used. Expansion Header have this pin blocked.

Notes:

- There are several functions on Expansion:
- IO pin can be configured for Ethernet or UART
- PWM
- ADC
- A/D (DAC)
- SPI
- SSEL
- SCK
- MISO
- MOSI
- USB
- UART

Some pins accumulate functions on the board (PWM Fan and Buzzer).

Reset & Soft USB Boot

[illegible]

SD Card

J10

uSD Pin	Label	Connection
2	Data2	Connected to GND (marked with X)
3	CardDetec/Data3	SD SSEL0
4	Cmd	SD MOSI0
5	Vdd	V3.3
6	CLK	SD SCK0
7	Vss	SD MISO0
8	Data0	Connected to GND (marked with X)
9	Data1	Connected to GND (marked with X)
10	Shield	Connected to GND (marked with X)
11	Shield	Connected to GND (marked with X)

uSD

V3.3

V3.3

C57
47uF 6.3V

SD SSEL0

SD MOSI0

SD SCK0

SD MISO0

Power

The image displays three circuit diagrams related to power supply and regulation.

Left Diagram: A simple diode rectifier circuit. It features a 1A@30V diode (D19) connected to a 100uF 10V capacitor (C58). The output is connected to a 680R resistor (R98) and an orange LED (D13).

Middle Diagram: A voltage regulator circuit. It uses a 35V regulator (U6) with a 33uH 1.5Adc inductor (L13). The output is connected to a 25V@2A diode (D12). The circuit includes various capacitors (C49, C61, C67, C63) and resistors (R95, R101, R102).

Right Diagram: A 4-pin connector (J12) connected to ground.