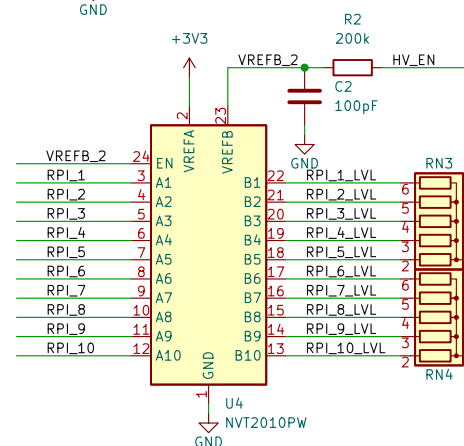
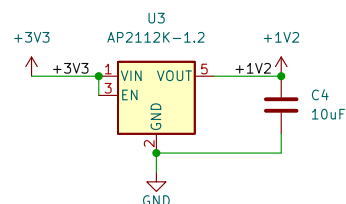
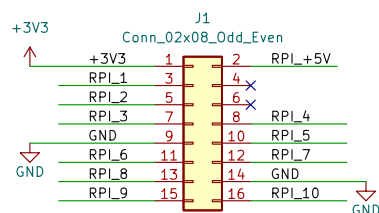


The schematic diagram illustrates the power supply section of the RPi3. It features two voltage regulators: the AP2112K-1.8 (U2) and the NVT2010PW (U1). The AP2112K-1.8 (U2) is a low-dropout regulator that takes a +3V3 input and provides a +1V8 output. The NVT2010PW (U1) is a low-dropout regulator that takes a +1V8 input and provides a +5V output. Both regulators are decoupled with capacitors: C1 (100pF) for U2 and C3 (10uF) for U1. A 200k resistor (R1) is connected between the +1V8 output and the LV\_EN pin of the RPi3. The RPi3's pins are connected to the regulators as follows: RPI\_1\_LVL (3) to VREFB, RPI\_2\_LVL (4) to VREFB, RPI\_3\_LVL (5) to A1, RPI\_4\_LVL (6) to A2, RPI\_5\_LVL (7) to A3, RPI\_6\_LVL (8) to A4, RPI\_7\_LVL (9) to A5, RPI\_8\_LVL (10) to A6, RPI\_9\_LVL (11) to A7, and RPI\_10\_LVL (12) to A8. The RPi3's internal voltage regulators (RN1, RN2) are also shown, with their inputs connected to the +1V8 output and their outputs connected to the RPi3's pins.



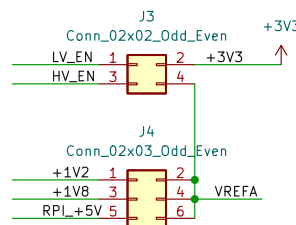
J2  
Conn\_02x08\_Odd\_Even

RPI_1_LVL	1	2	RPI_4_LVL
RPI_2_LVL	5	6	RPI_5_LVL
RPI_3_LVL	7	8	RPI_7_LVL
GND	9	10	RPI_5_LVL
RPI_6_LVL	11	12	RPI_7_LVL
RPI_8_LVL	13	14	GND
RPI_9_LVL	15	16	RPI_10_LVL

VREFA should  
connect to pin 1,  
but no space to route it

**LV is less than 3.3V**  
**HV is greater than 3.3V**

**USE 1.2V, 1.8V or RPI 5V**



**ONE JUMPER ONLY**

**ONE JUMPER ONLY**

VREFA is strong enough  
to power the slave device.  
Use Jumper wire from pins  
2, 4 or 6

U1 is for Levelshifting to lower voltage  
U4 is for Levelshifting to higher voltage

VREFA can be driven externally when no jumper on J4 (connect to pin 2 or 4 or 6)

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