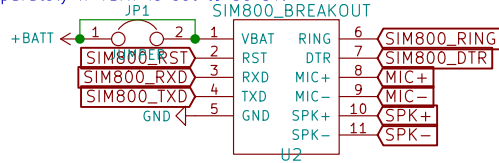
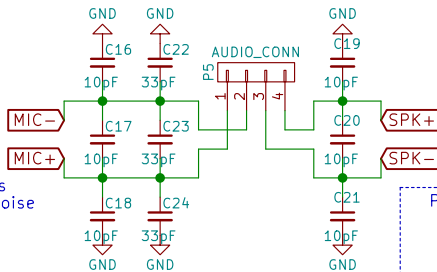


There's a NC jumper to disconnect GSM modem from VBAT if needed, to allow using the GSM modem with another power supply attached separately if VBAT is set to be 5V.

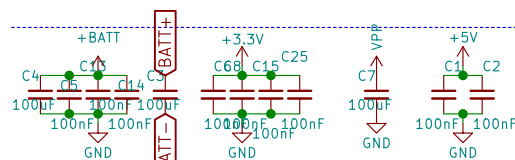
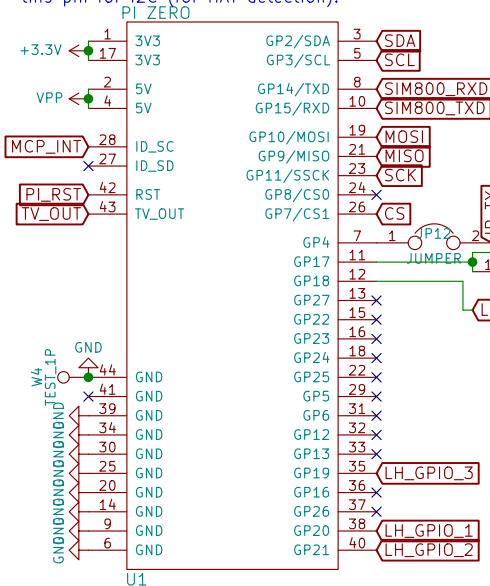


All the SIM800 signals available on the breakout are connected to GPIOs. The SIM800 library is not yet complete, and it's unclear what pins we'll actually need, so I'm staying safe.

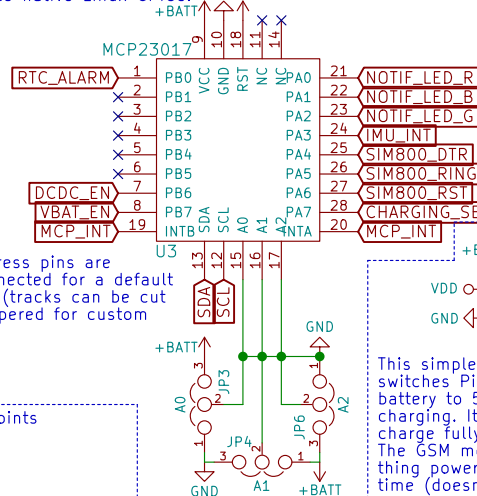


Audio filtering. Is optional but solves problems with GSM noise affecting audio.

While ID_SC is polled by Pi GPU before Linux boots, it should be safe to connect it to MCP interrupt output because both are open-collector when GPU is using this pin for I2C (for HAT detection).

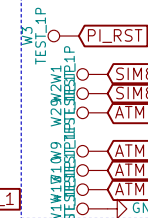


MCP23017 is a cheap way to get more GPIOs for RPi, and it has kernel drivers and Raspberry Pi Device Tree blobs, so it can appear as native Linux GPIOs.

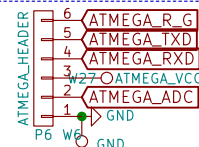


The address pins are interconnected for a default address (tracks can be cut and jumpered for custom address)

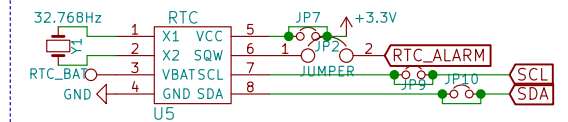
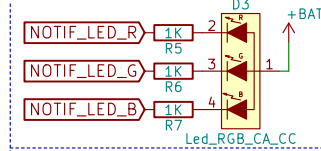
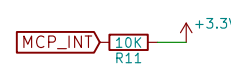
Pins on testpoints



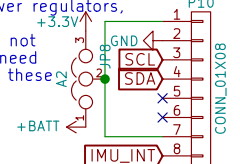
Big expansion header with SPI, 4 GPIOs, with I2S/SPI alt f., 5V/3.3V and TV-OUT.



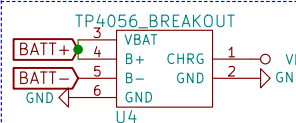
A header that can be used to program the ATmega – or to extend the capabilities of the phone, if necessary. 3.3V is not connected, but brought on a testpoint.



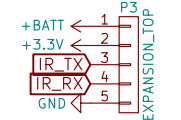
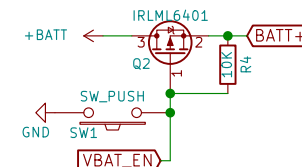
A footprint for popular MPU-9050/9150 IMU breakouts. Those breakouts can have different power regulators, so they might work good from 3.3V, or need VBAT, which is why the voltage is not hard-wired. Also, I2C pullup resistors need to be removed – they're too strong on these boards, usually either 2K2 or 4K7.



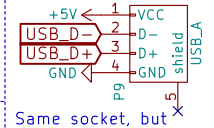
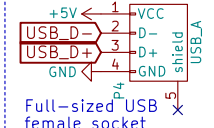
A resistor divider to sense when charger is plugged in.



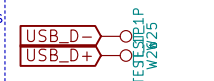
Small headers with I2C, 3.3V, +5V, one GPIO, VIN and ADC. +3.3V Can be useful for small analog and I2C sensors.



Header with 2 GPIOs for IR receiver or transmitter (or anything else)



Same socket, but installable in another direction.



The board has a cutout, you solder wires from these testpoints to Pi USB testpoints, wires go through the cutout.

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Title:

Size: A4
KiCad E.D.A. kicad 4.0.6

Rev:
Id: 1/1