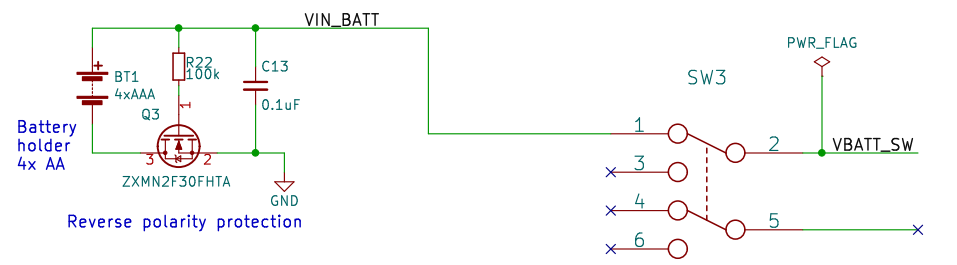
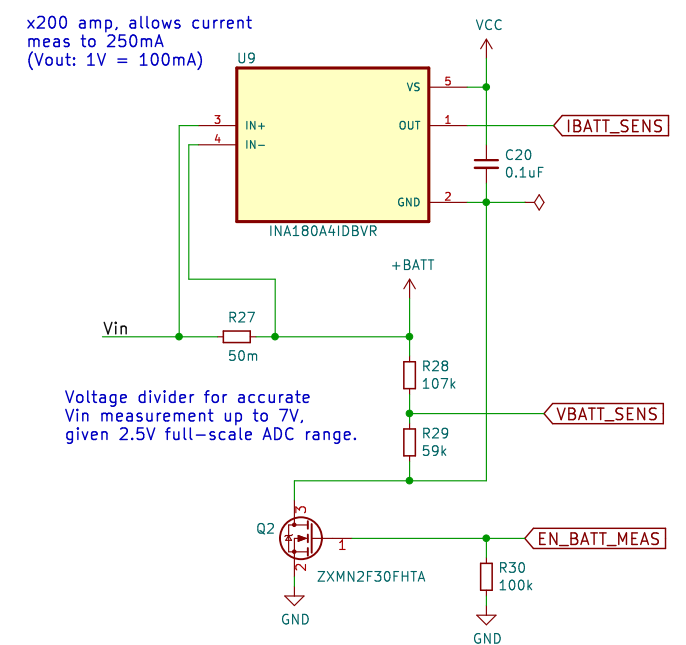


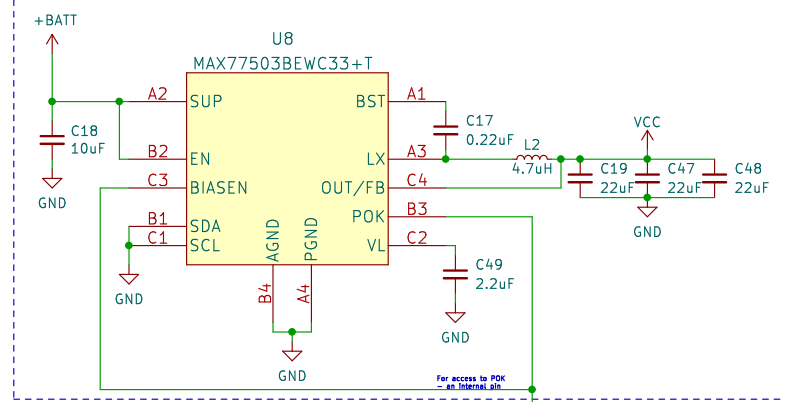
Battery Off Switch



Supply Voltage / Current Monitoring



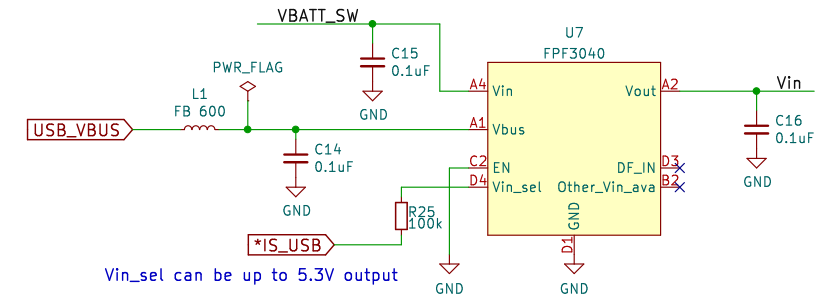
3.3V Buck Converter (1.5A)



Power Mux: Auto switch to USB when detected

Max Vbatt=10.5V

This is limiting part in Rev-C for Vbatt_max.

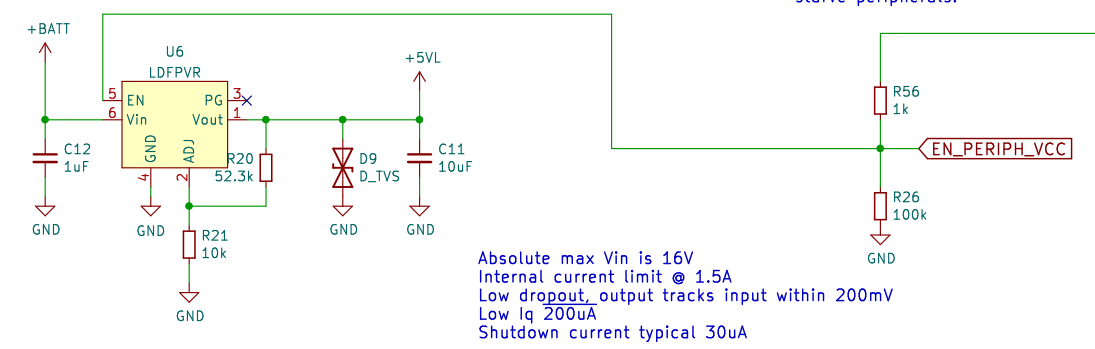


Iq from VBATT:
 33uA when VBATT > VBUS
 <2uA when VBATT < VBUS
 (FPF3040 is internally powered by max input voltage source)

Peripheral Supply

Need a "near 5V" rail, and with 4-cell pack we could see up to 6.4V with fresh batteries.
 * Neopixel absolute max is 5.3V
 * Audio amp absolute max is 6.0V

Pull EN_PERIPH_VCC high to allow "transient protection" control via POK output.
 DRIVE high to override protection, if you'd rather risk reboot than starve peripherals.



Absolute max Vin is 16V
 Internal current limit @ 1.5A
 Low dropout, output tracks input within 200mV
 Low Iq 200uA
 Shutdown current typical 30uA

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Sheet: /Power/
 File: codex-mk1-2.kicad_sch

Title: CodeX Mk1

Size: USLedge | Date: 2022-05-14
 KiCad E.D.A. kicad (6.0.6)

Rev: C
 Id: 2/4

CODEC and ESP pin mapping
per ESP-LyraT-8311A board.

Addr: 0x18

I2C_SDA
I2C_SCL

+3.3VA
C21 0.1uF
C22 0.1uF

I2S_MCLK
I2S_BCLK
I2S_SDI
I2S_LRCK
I2S_SDO

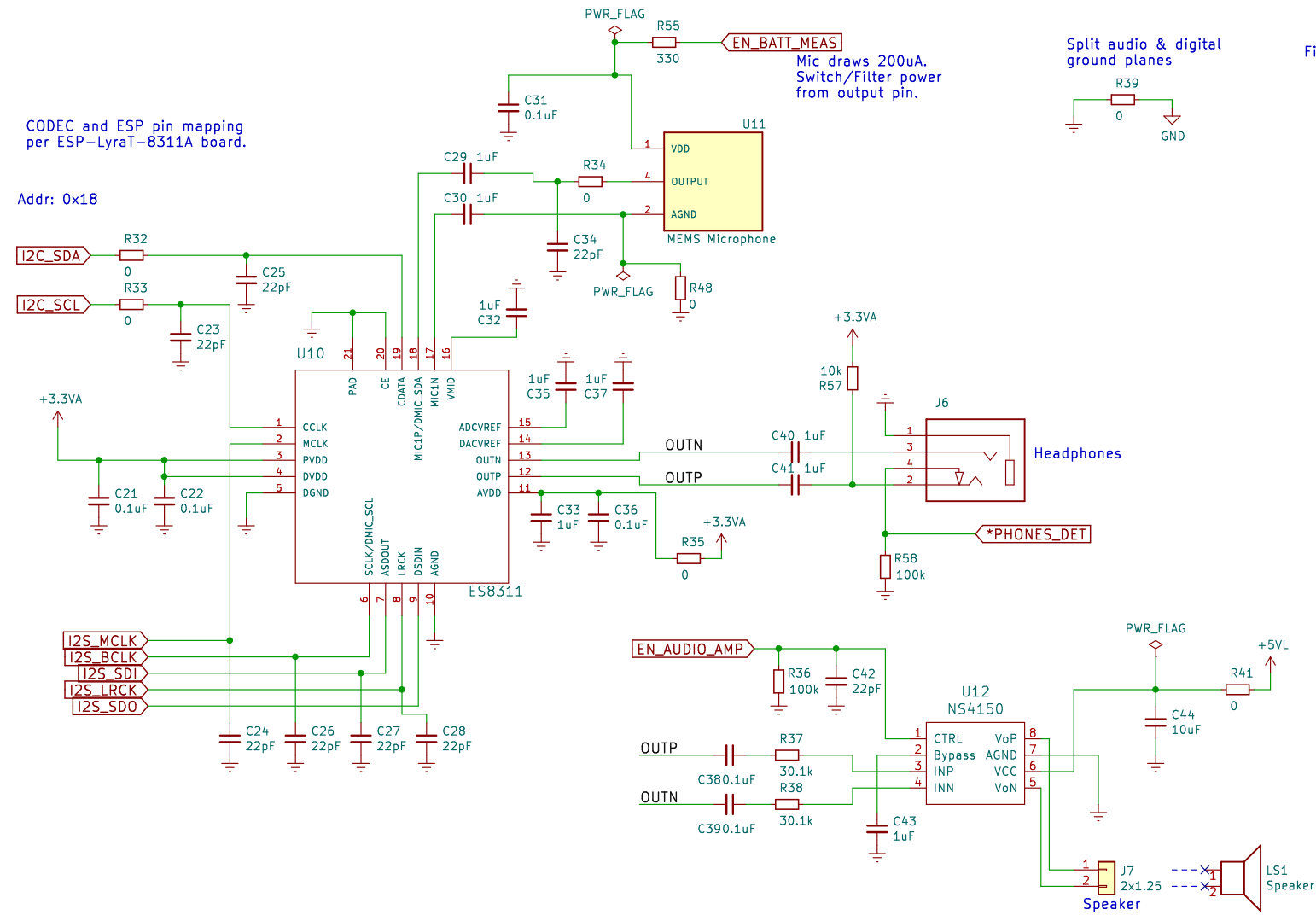
C24 22pF
C26 22pF
C27 22pF
C28 22pF

PWR_FLAG
R55 330
EN_BATT_MEAS

Mic draws 200uA.
Switch/Filter power
from output pin.

Split audio & digital
ground planes
R39 0
GND

Filter audio power domain
VCC
+3.3VA
R40 0
C45 10uF



Audio Subsystem

Firia, Inc.

Sheet: /Audio/
File: codex-mk1-3.kicad_sch

Title: CodeX Mk1

Size: USLedger | Date: 2022-05-14
KiCad E.D.A. kicad (6.0.6)

Rev: C
Id: 3/4

