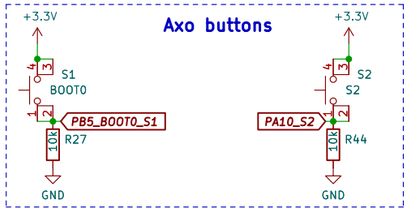
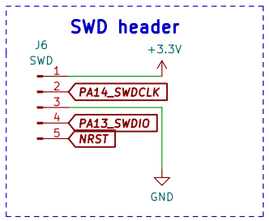
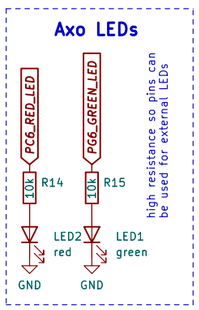
Axo buttons



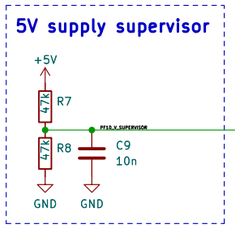
SWD header

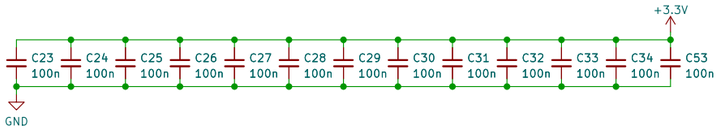


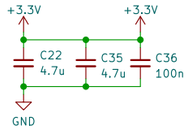
Axo LEDs



5V supply supervisor







MCU – STM32F42x

codec_adau1961

File: codec_adau1961.kicad_sch

headers

File: headers.kicad_sch

sdram

File: sdram.kicad_sch

power_midi

File: power.kicad_sch

usb

File: usb.kicad_sch

sdio

File: sdio.kicad_sch

CHANGELOG

changelog

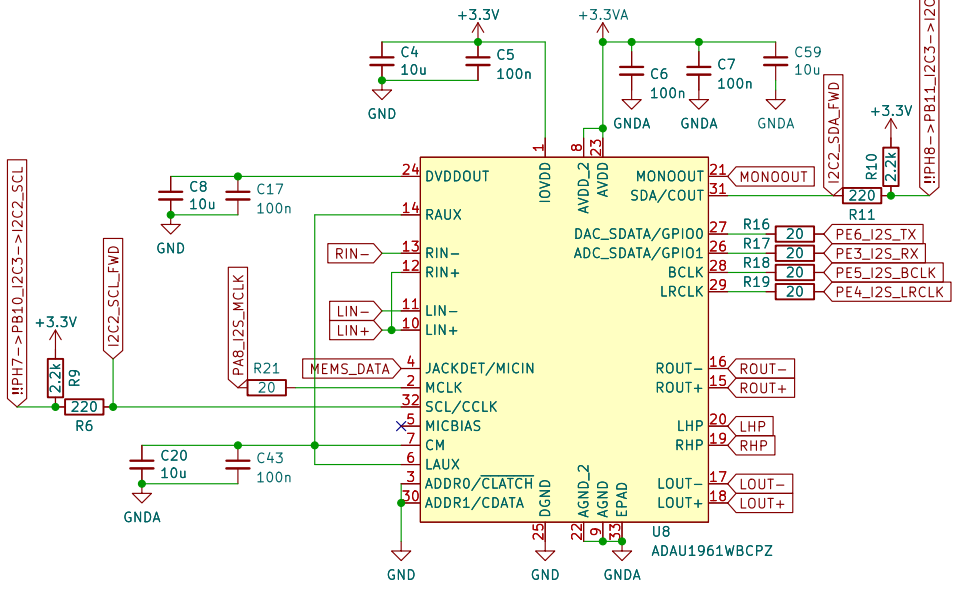
File: ~~changelog.kicad_sch~~

Sheet: /
File: ksoloti_core_v06.kicad_sch

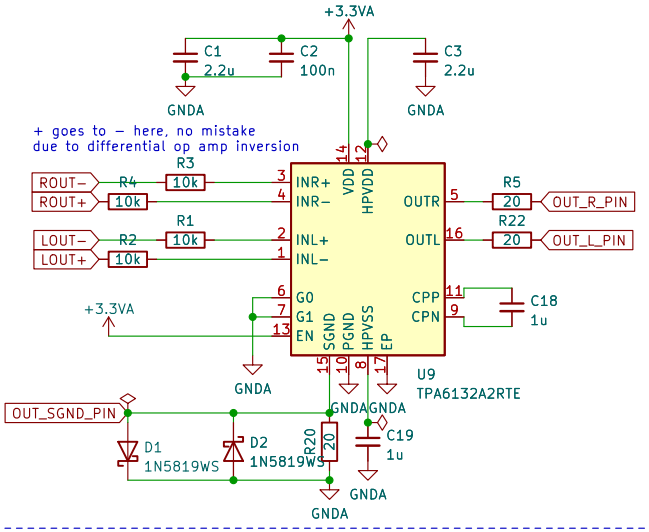
Title: Ksoloti Core

Size: A3	Date: 2024-10-07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 1/8

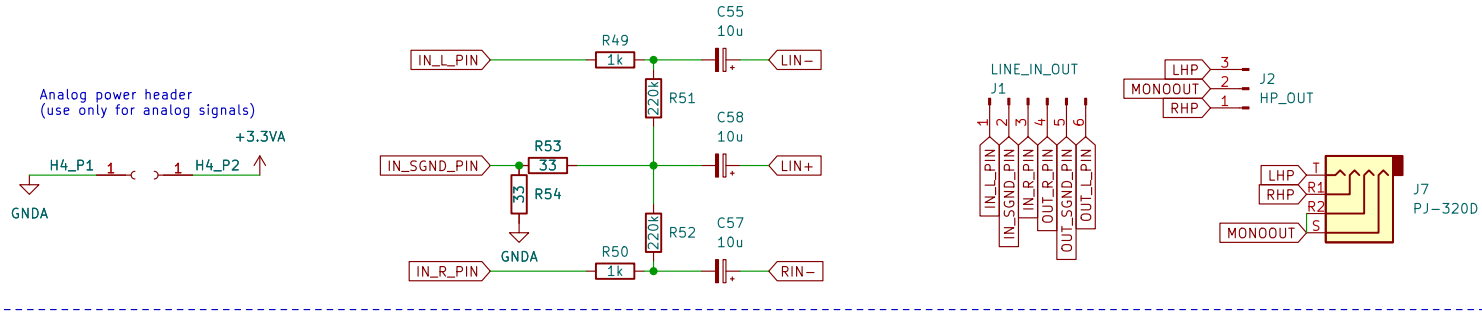
Codec



Output Opamp

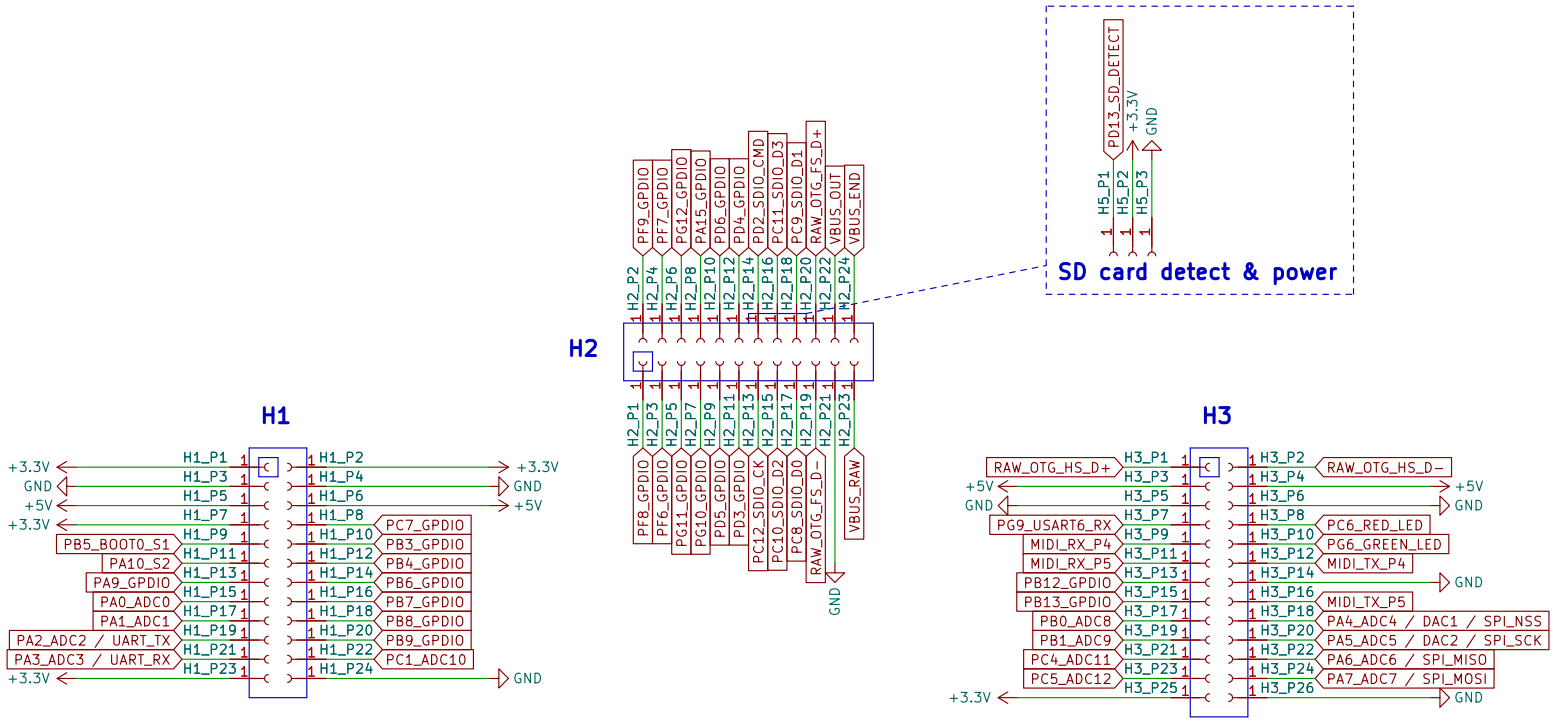


Jacks and headers



Sheet: /codec_adau1961/		
File: codec_adau1961.kicad_sch		
Title: Ksoloti Core		
Size: A4	Date: 2024−10−07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 2/8

GPIO and function headers (PCB component side view)



RESERVED for SPILINK implementation
Leave as is for regular use.

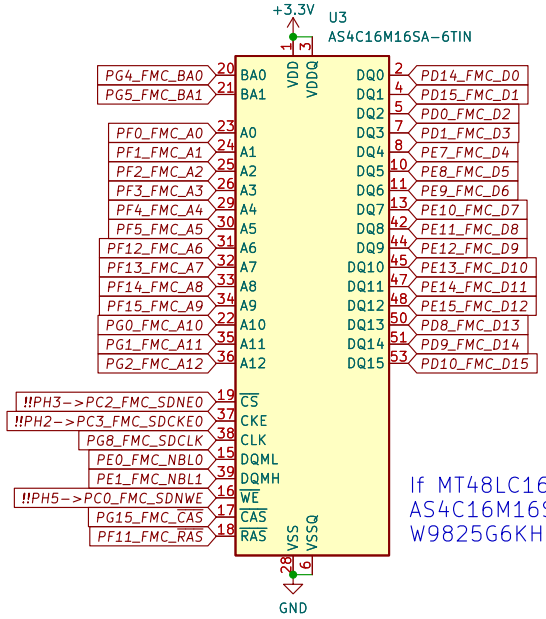
Digital microphone header

Sheet: /headers/
File: headers.kicad_sch

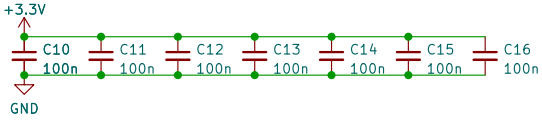
Title: Ksoloti Core

Size: A4	Date: 2024-10-07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 3/8

SDRAM



If MT48LC16M16A2P unavailable:
AS4C16M16SA-6TIN,
W9825G6KH-6I as replacement

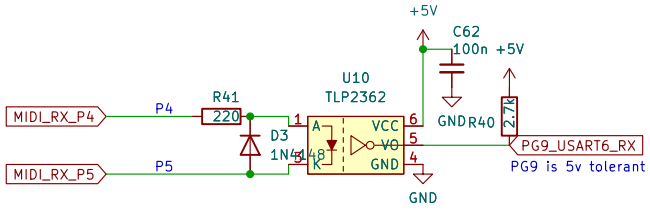


Sheet: /sdram/
File: sdram.kicad_sch

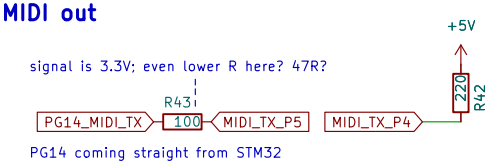
Title: Ksoloti Core

Size: A4	Date: 2024-10-07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 4/8

MIDI in (OPTIONAL footprints on the bottom side of the PCB — not placed by default)



MIDI out



GND = Shield
MO4 = Source
MO5 = Sink

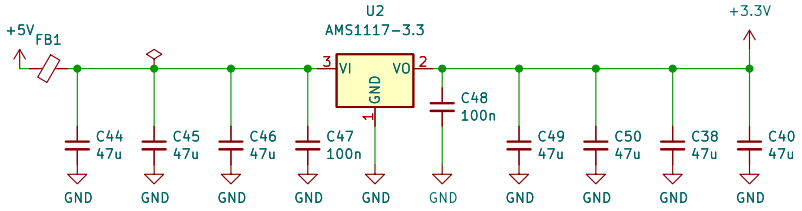
You can connect a DIN MIDI jack directly:

GND -> DIN pin 2
MO4 -> DIN pin 4
MO5 -> DIN pin 5

Or for TRS MIDI jacks:

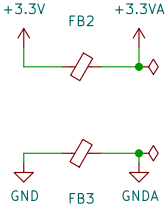
GND -> TRS sleeve
MO4 -> TRS ring
MO5 -> TRS tip

3.3V digital power supply



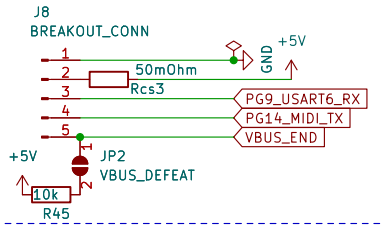
Analog power

(audio path only)



To optional power/MIDI board

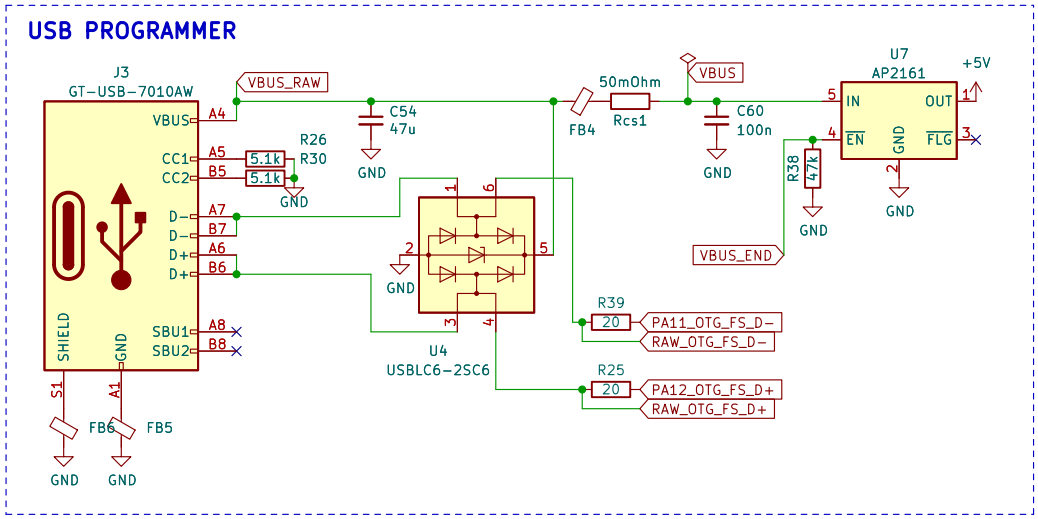
WARNING: J8 pinout inconsistent with Axoloti Core

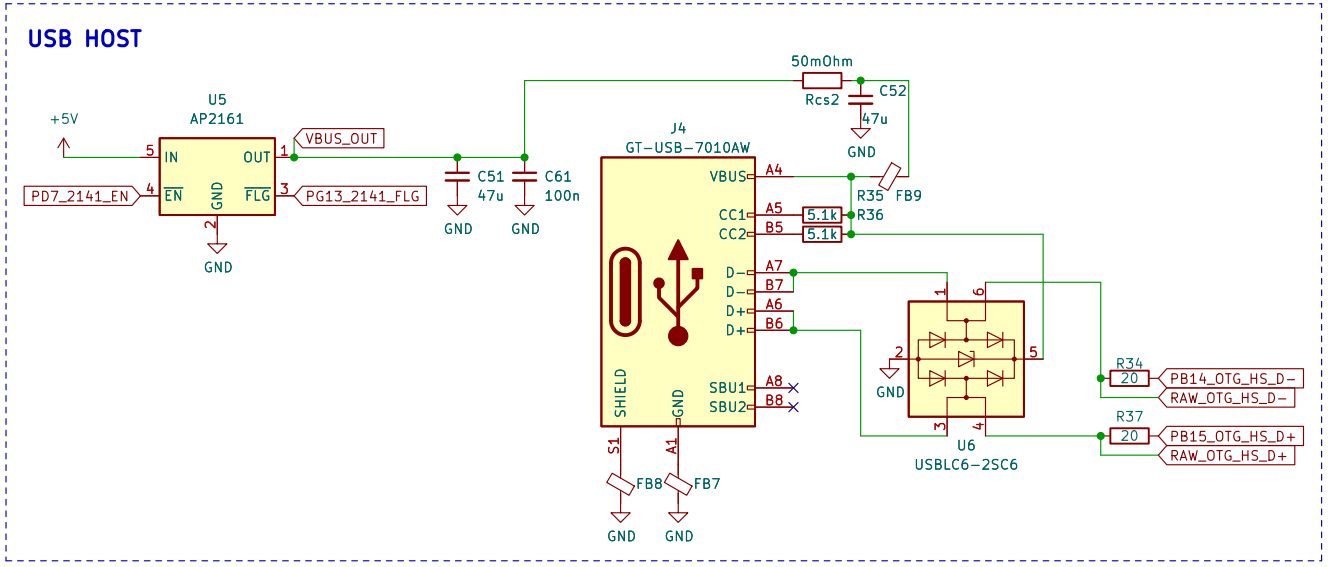


Sheet: /power_midi/
File: power.kicad_sch

Title: Ksoloti Core

Size: A4	Date: 2024-10-07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 5/8



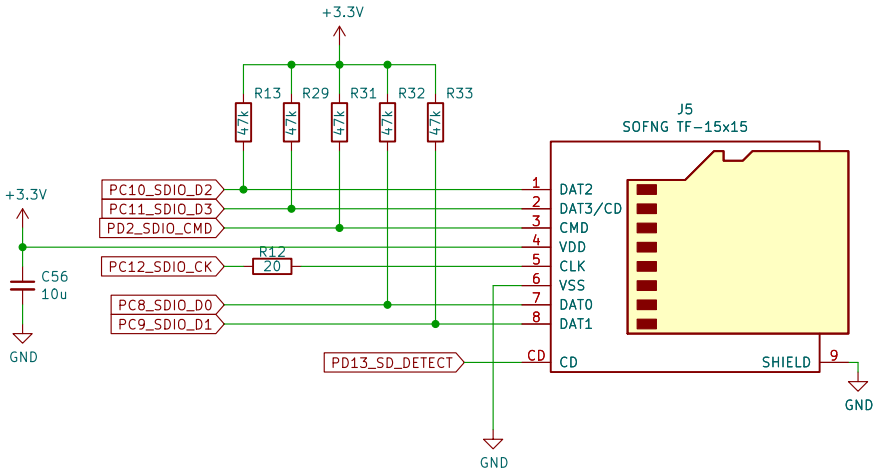


Sheet: /usb/
File: usb.kicad_sch

Title: Ksoloti Core

Size: A4	Date: 2024-10-07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 6/8

Micro SD card



Sheet: /sdio/		
File: sdio.kicad_sch		
Title: Ksoloti Core		
Size: A4	Date: 2024-10-07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 7/8

v0.5 done – production – 2023/09/22

Changes in v0.5:

- Remove PDM mic, add optional gyroscope/acceleroscope via I2C2.
- Rename MIDI pins to MIx, MOx.
- Fix swapped labeling of LED1 and LED2 to conform with Axo tradition. Rename LED pins to L1G and L2R to indicate color.
- Add 47uF caps C38, C40 to 3.3V rail for more stability when USB or external power is (accidentally) unplugged

v0.6 done – production – 2024/03/06

Changes in v0.6:

- In USB host port, use AP2161 instead of AP2141 to allow for up to 1A of current.
- MT48LC16M16A2P (SDRAM) part shortage. Use AS4C16M16SA-6TIN (W9825G6KH-6I; IS42S16160J-6TLI?)
- SRV05-4 price fluctuation. Use USBLC6-2SC6.
- Add jumper to disable VBUS power (useful if synced via spilink)
- Remove gyroscope (feature creep)
- Change layer sequence – SDRAM lines now run on inner layer.
- Realign R42, R43 (MIDI out circuit)
- Improve MI4, MI5, optional MIDI in circuit labeling
- Adjust USB Type-C connector footprint
- Use TLP2362 as optional optocoupler (smaller footprint)
- Adjust termination resistors from 33 to 20 ohm
- Add ferrites to USB GND

Sheet: /changelog/		
File: changelog.kicad_sch		
Title: Ksoloti Core		
Size: A4	Date: 2024-10-07	**Rev: v0.6**
KiCad E.D.A. kicad (6.0.11)		Id: 8/8