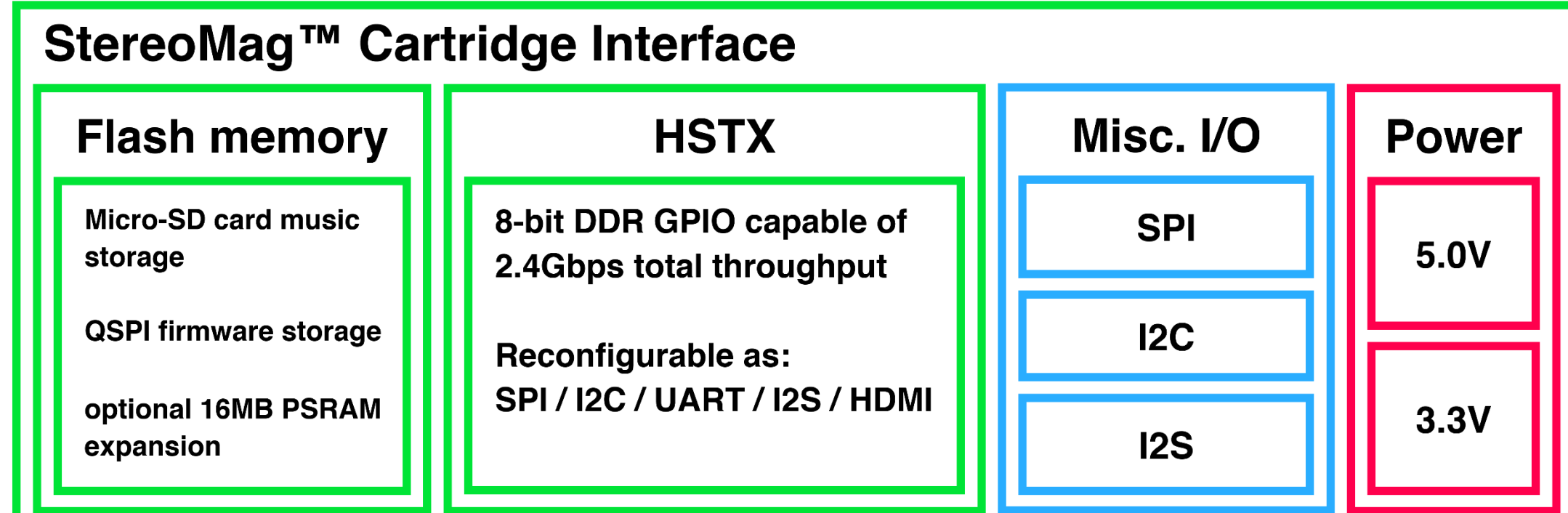


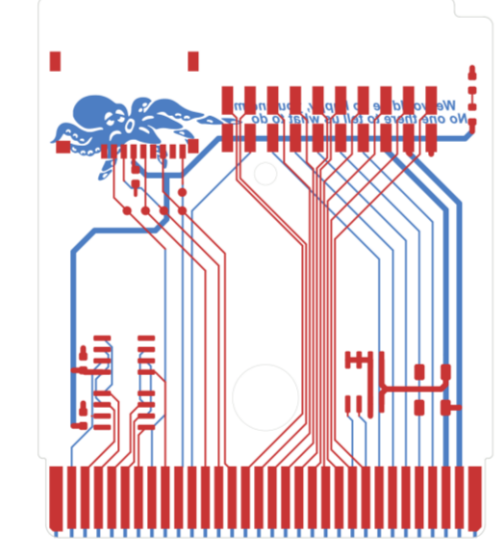
# STEREOMAG



StereoMag™ is designed to encourage users to share great music and custom software with others, and allows power users to augment the device to fit their needs.

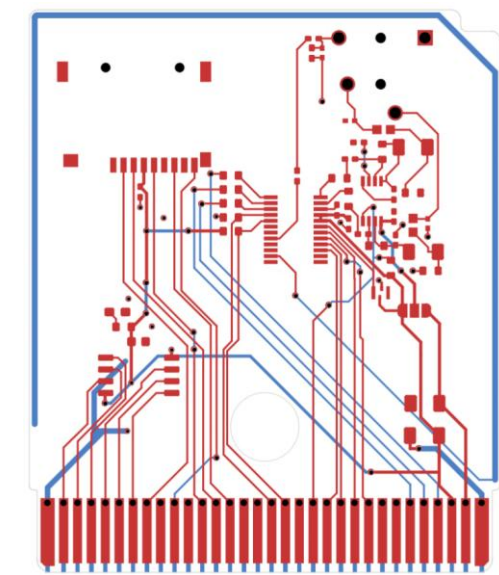
## StereoMag

Developer Kit



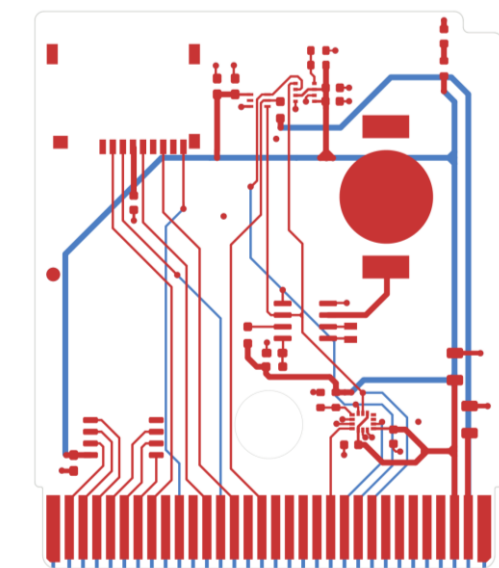
- ▶ Exposed pin header for easy prototyping
- ▶ 16MB PSRAM expansion
- ▶ 8KB FRAM nonvolatile storage

## RadioMag



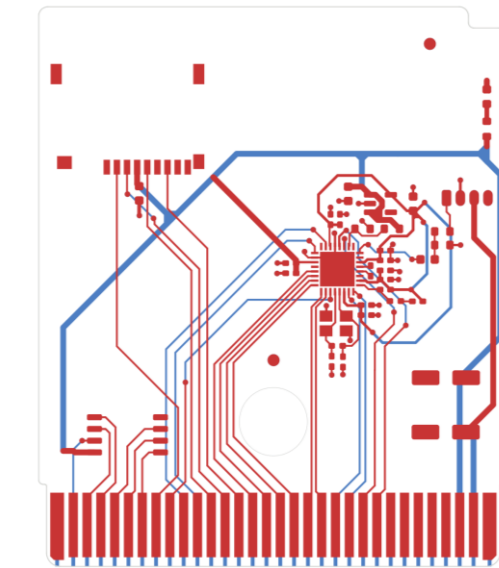
- ▶ FM radio receiver
- ▶ Integrated PCB antenna
- ▶ Headset antenna
- ▶ Frequency seeking + presets
- ▶ Retains StereoBoy firmware

## SensorMag



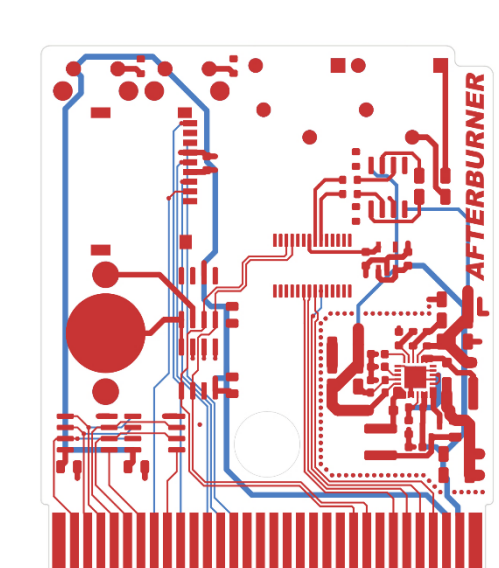
- ▶ Integrated temperature, humidity, pressure sensor
- ▶ Real time clock
- ▶ 6-DoF IMU
- ▶ Visible light color sensor
- ▶ Sensor-based playlist generation
- ▶ Shake-to-shuffle

## PhotoMag



- ▶ CVBS video camera
- ▶ ADV7180 video decoder ASIC
- ▶ Camera interfaced over GPIO
- ▶ Image capture to micro-SD card

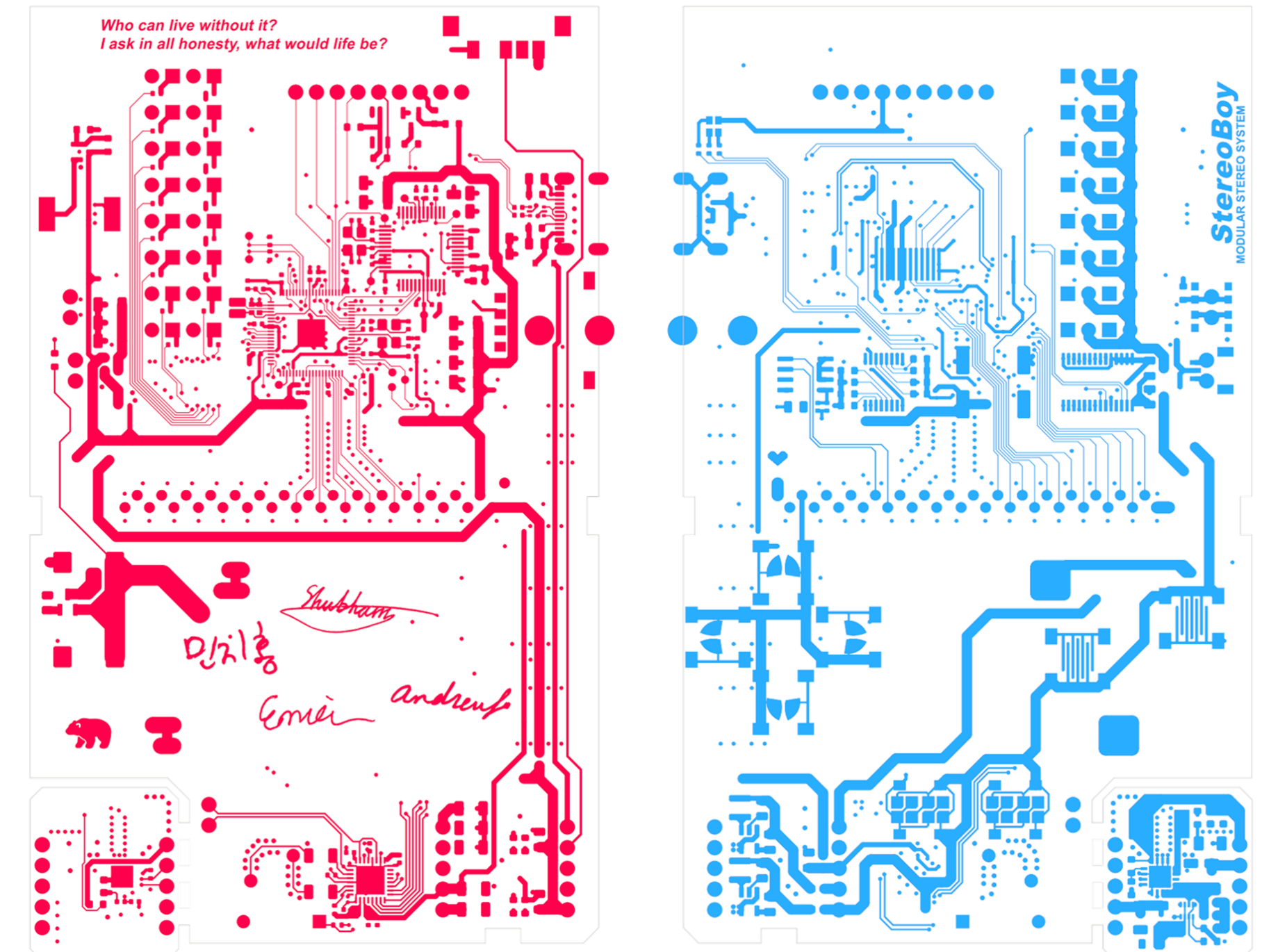
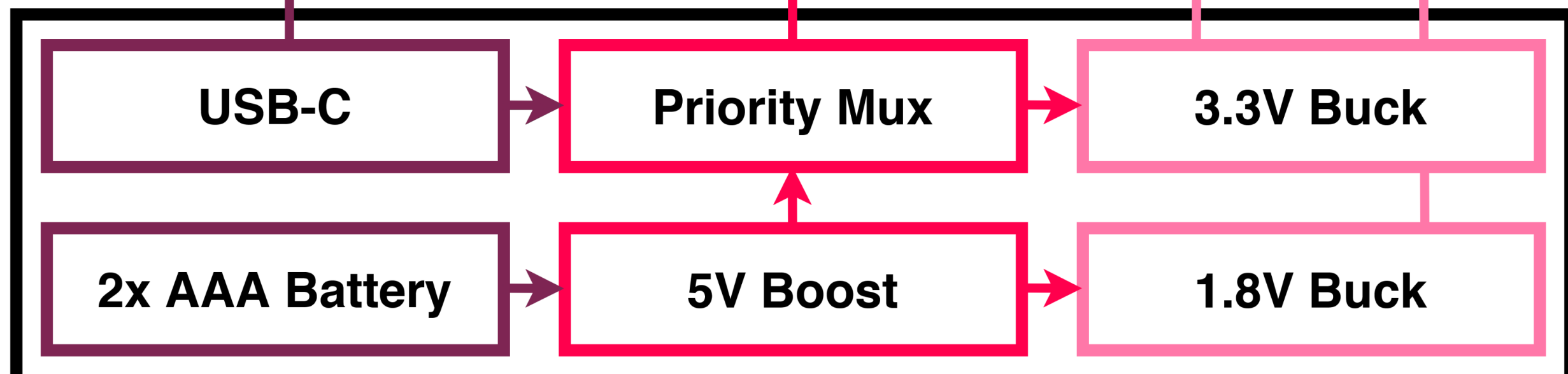
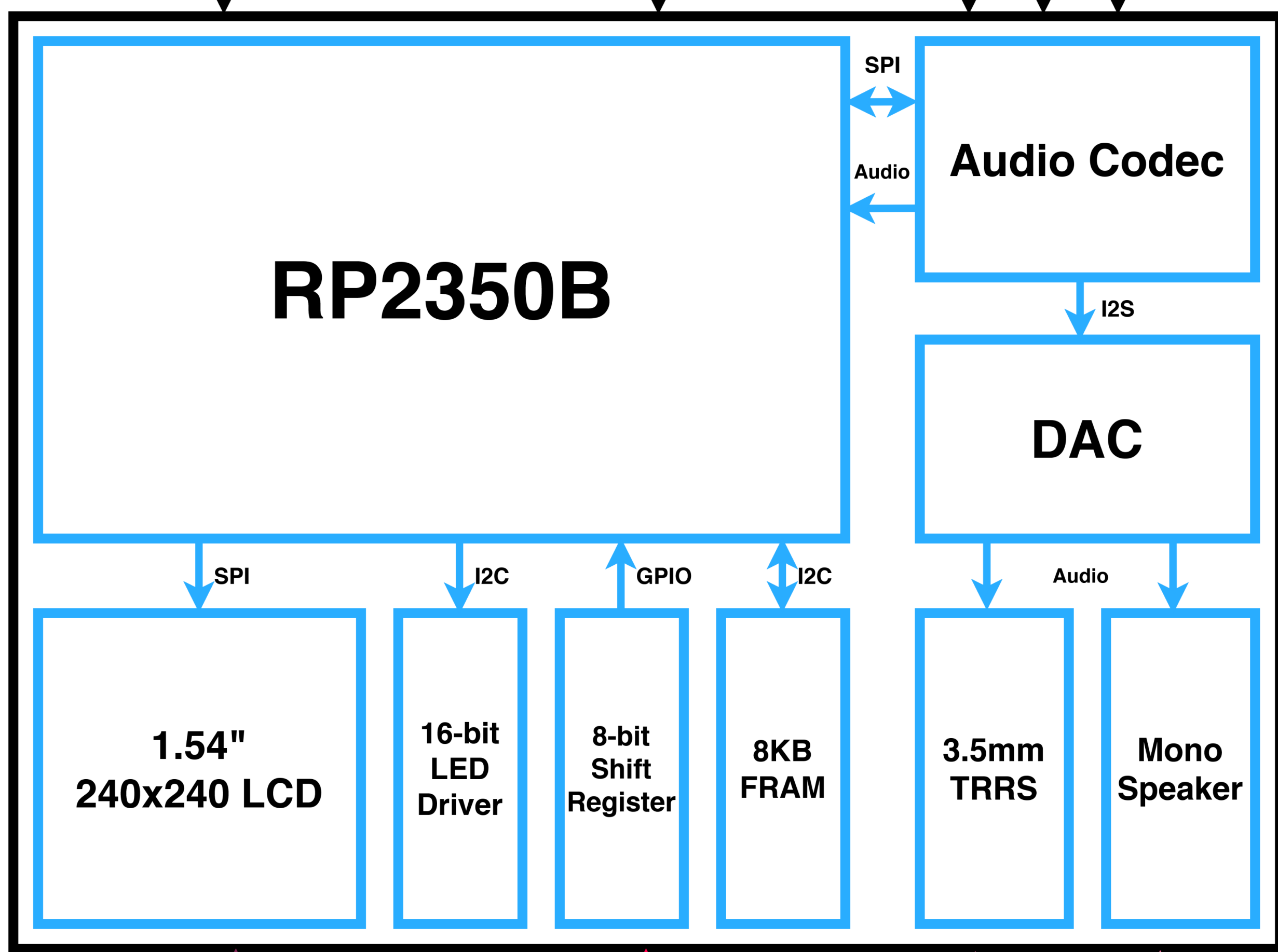
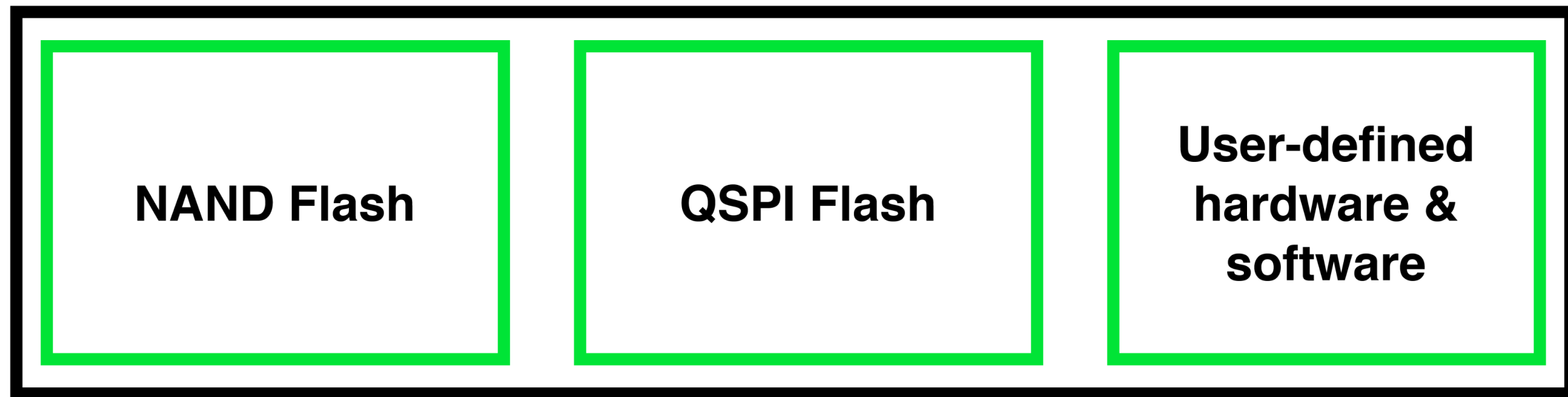
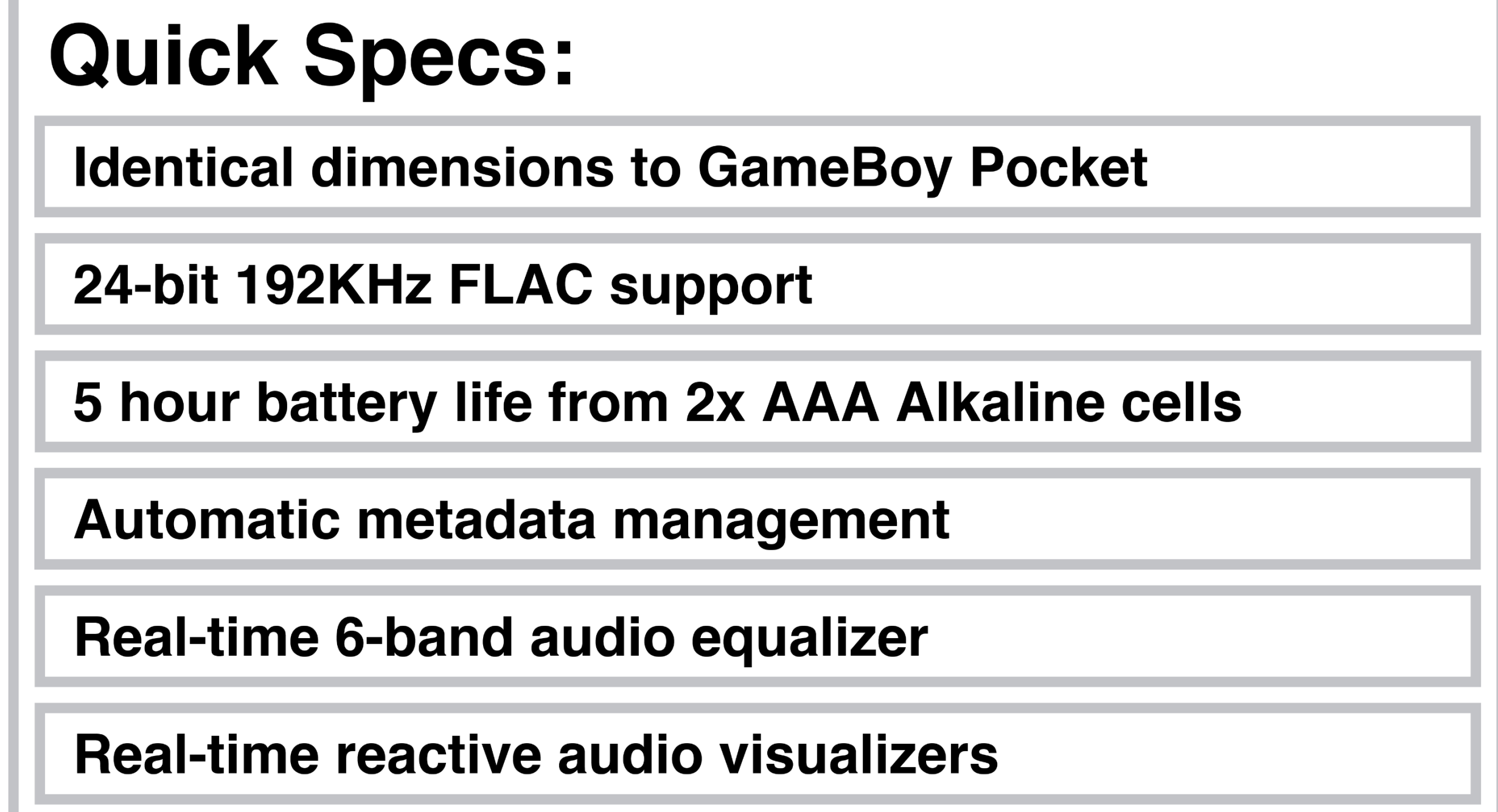
## AFTERBURNER



- ▶ ±10V split rail PSU
- ▶ 32-bit 384KHz lossless DAC + Amp
- ▶ Line-level stereo out
- ▶ Precision RTC
- ▶ 8KB FRAM nonvolatile storage
- ▶ 16MB PSRAM expansion

# Hear. There. Everywhere.

- ▶ **Portable:** Pocket-sized & battery powered.
- ▶ **Modular:** Uses StereoMag™ expansion cartridges.
- ▶ **Hackable:** Easily customizable to fit the user's needs.



## StereoMag™:

Physical storage medium for music, software, and additional hardware

## Logic Board:

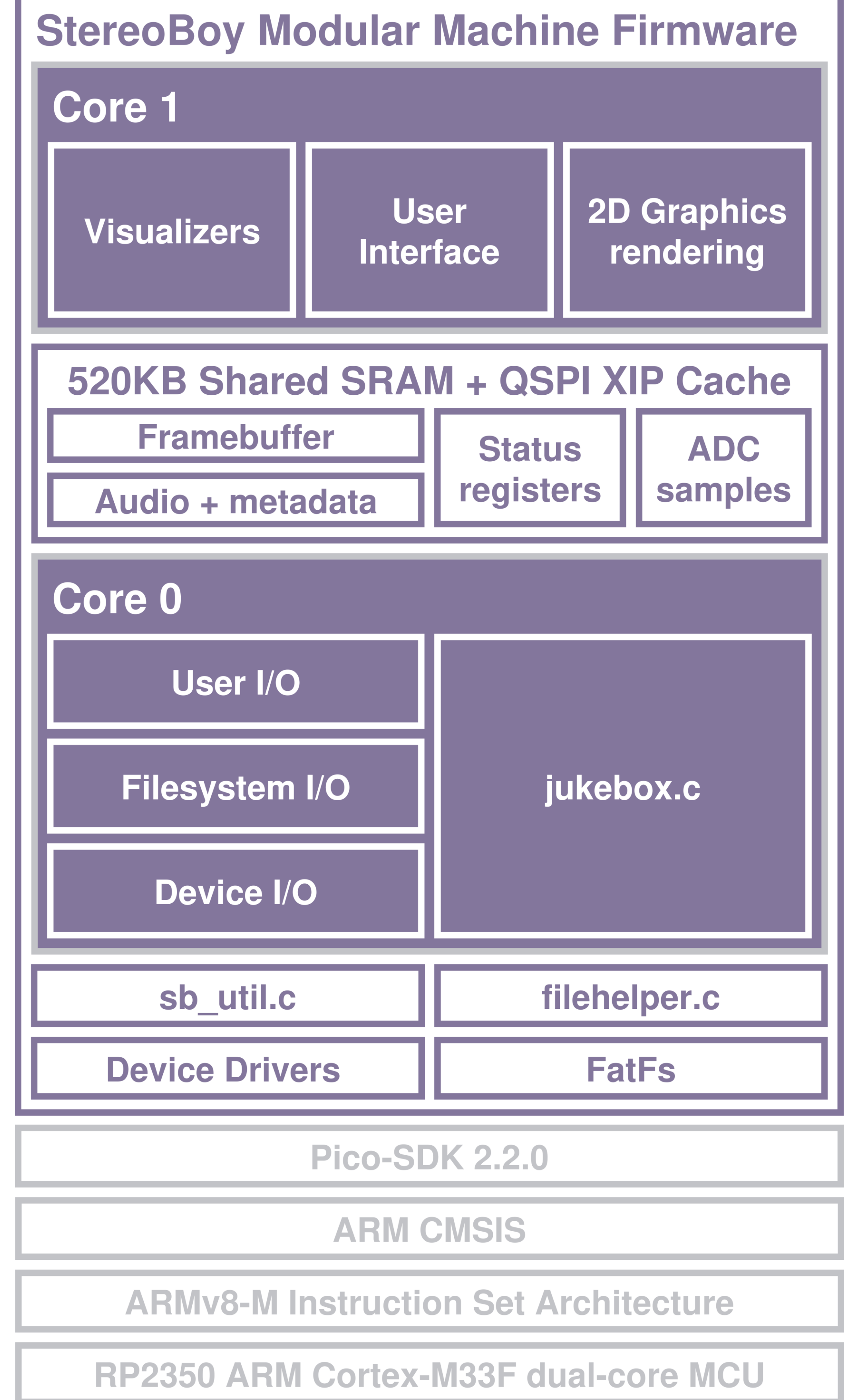
Tactile interface between user and StereoMag

- ▶ RP2350B dual-core ARM Cortex-M33F CPU @ 150MHz
- ▶ 24-bit 192KHz lossless stereo codec + DAC & headphone amp
- ▶ 240x240 TFT LCD with 16-bit color
- ▶ High-brightness twin LED VU meters
- ▶ 8KB FRAM ultra-fast nonvolatile storage

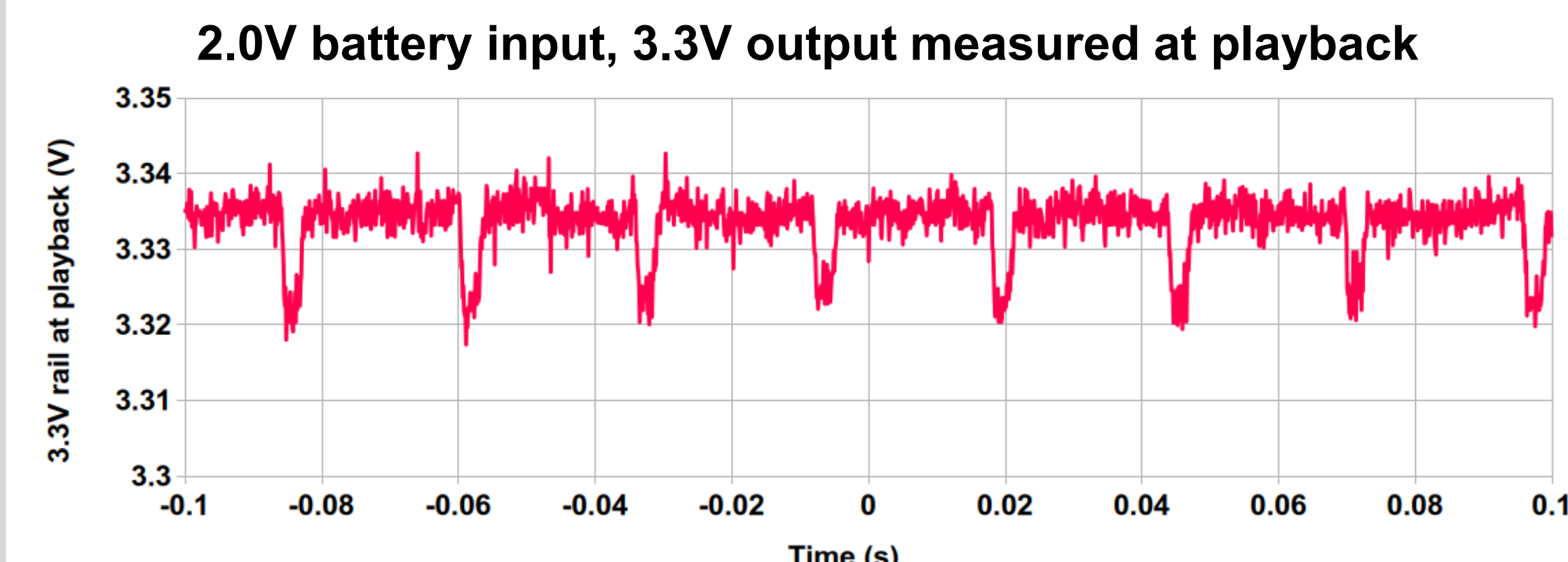
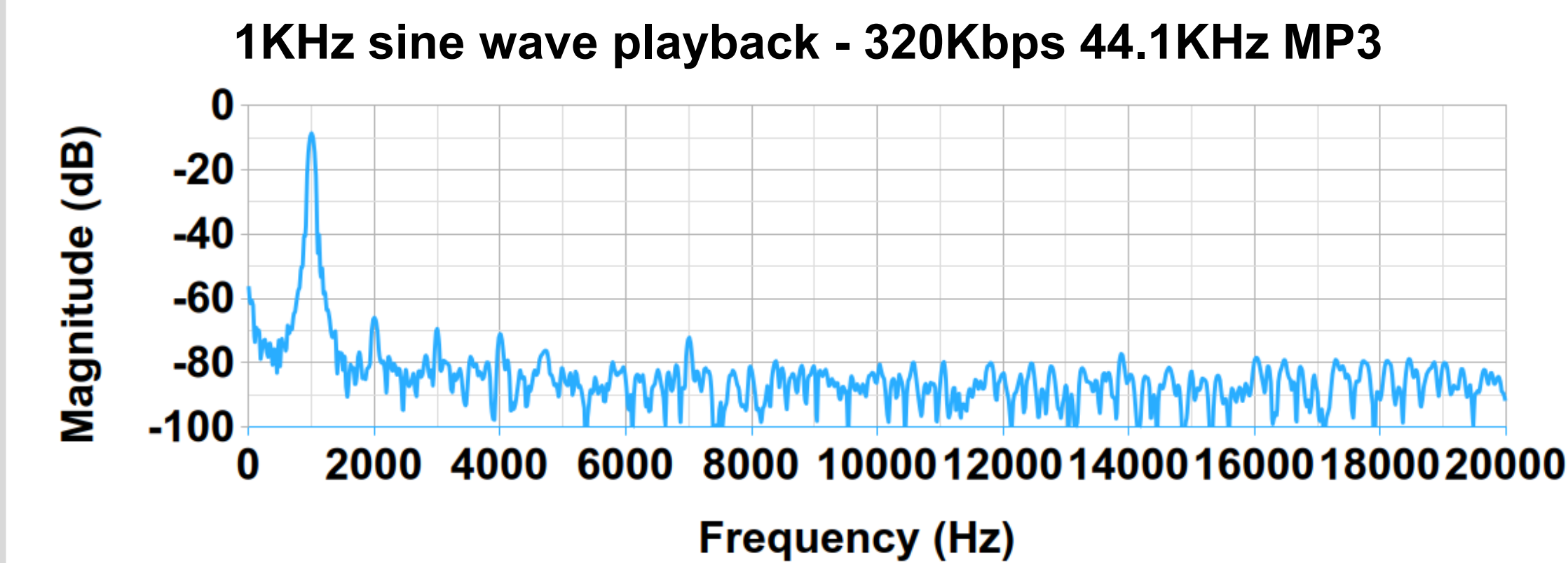
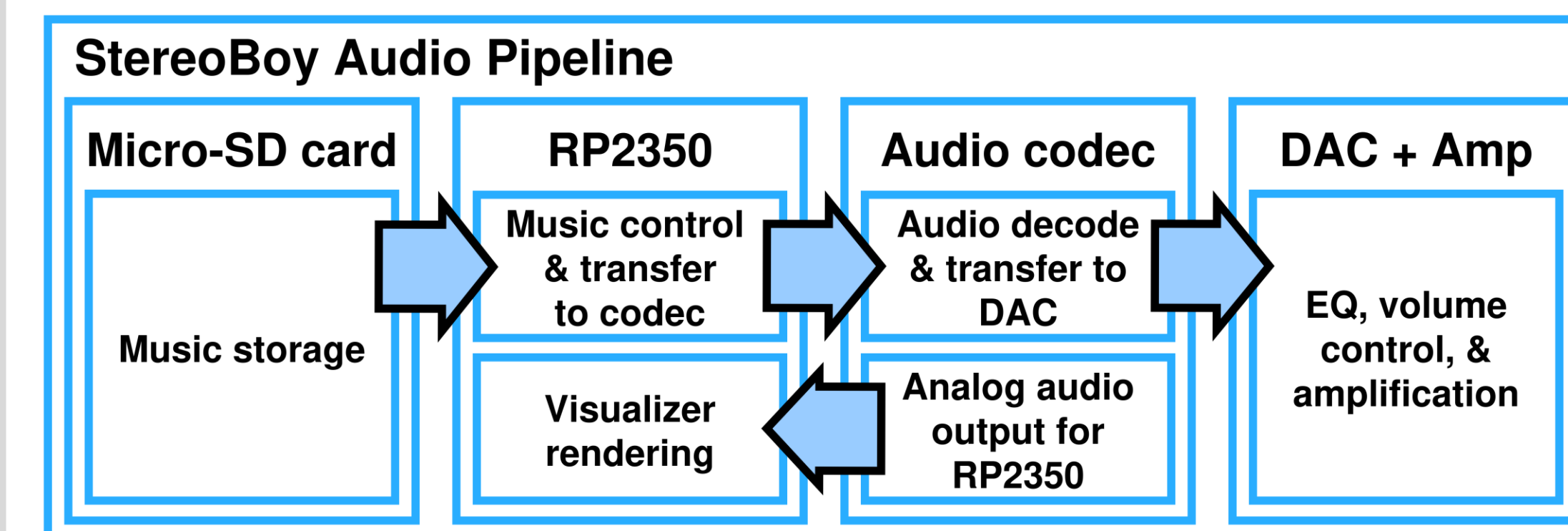
## Power Supply:

"Double-decker" PSU powers entire system from two AAA cells with no compromise to noise & efficiency

# SOFTWARE



## AUDIO / POWER



3.3347V average	42mV Pk-Pk	0.91% accuracy	±0.38% precision
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