PecanPi® Specifications

XLR Output (including headphone driver):
Signal-to-Noise Ratio (SNR): 130dB (A-weighted)
Residual Noise: 1.6uV (A-weighted)
Dynamic Range (DNR): 125dB
Total Harmonic Distortion + Noise (THD+N): -110dB or 0.0003%
Frequency Response: DC (0Hz) to 22kHz @ 48kHz sample rate
Frequency Response: DC (0Hz) to 44kHz @ 96kHz sample rate
Frequency Response: DC (0Hz) to 88kHz @ 192kHz sample rate
Output Voltage: 5Vrms (+16.2dBu)

RCA Output (including headphone driver):
Signal-to-Noise Ratio (SNR): 124dB (A-weighted)
Residual Noise: 1.6uV (A-weighted)
Dynamic Range (DNR): 122dB
Total Harmonic Distortion + Noise (THD+N): -110dB or 0.0003%
Frequency Response: DC (0Hz) to 22kHz @ 48kHz sample rate
Frequency Response: DC (0Hz) to 44kHz @ 96kHz sample rate
Frequency Response: DC (0Hz) to 88kHz @ 192kHz sample rate
Output Voltage: 2.5Vrms (+10.2dBu)

Balanced Headphone Output:
Power into 32Ω: 1.56W peak
Power into 150Ω: 333mW peak
Power into 600Ω: 83.5mW peak
Damping Factor: >210

Regular Headphone Output:
Power into 16Ω: 781mW peak
Power into 32Ω: 390mW peak
Power into 150Ω: 83.5mW peak
Power into 300Ω: 41.6mW peak
Damping Factor: >230

Input Power:
Input Connector: Barrel Plug, 2.1mm I.D. x 5.5mm O.D. x 9.5mm
Input Voltage: 9VDC
Input Power: 20W Max (w/ Raspberry Pi)

S/PDIF (coax) Input:
Supports all sample and bit rates listed in the general section below.

General:
Sampling Rates: 44.1, 48, 88.2, 96, 176.4 and 192kHz
Bit Rates: 16 and 24-bit
Formats: Supports all formats.
DAC Compatible Rpi Models: 1B+, 1A+, 2B, 3B, 3B+, 4B, Zero, & ZeroW
DAC Compatible Asus Models: Tinker Board & Tinker Board S

Size:
Streamer / Ultra: 195 x 120 x 100mm (7.7 x 4.75 x 4.25in)
DAC: 97mm (3.82") x 78.5mm (3.09") x 38.1 mm (1.5")

Implementation

DAC chips:
— Dual flagship Burr-Brown **PCM1794A**s in monaural mode
Digital HW Volume Control and Re-clocking:
— Crystek **CCHD-575** oscillator — ultra-low clock jitter of 82fSec
— **SRC4193** for volume control
S/PDIF Receiver
— Cirrus Logic **CS8416** (starting at DAC rev 3.0)
Output stage: True balanced dual differential output stages
— Uses **OPA1612**s
— Low Noise Panasonic Resistors
— Proprietary filtering topology
Ultra-low noise linear power supplies:
— **LT3045** (0.8uV noise) for positive op-amp power supply
— **LT3090** (18uV noise) for negative op-amp power supply
— **LT3042** (0.8uV noise) for DAC Chips
Headphone driver:
— Dual parallel **OPA1622**s for regular headphones
— Quad parallel OPA1622s for balanced headphones