

PecanPi®+ Specifications

XLR Output (including headphone driver):

Signal-to-Noise Ratio (SNR): 133dB (A-weighted)

Residual Noise: 1.174uV (A-weighted)

Dynamic Range (DNR): 129dB

Total Harmonic Distortion + Noise (THD+N) @ 0dBFS: -116dB or 0.00016%

Total Harmonic Distortion + Noise (THD+N) @ -6dBFS: -119dB or 0.00011%

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: 5.22Vrms (+16.6dBu)

RCA Output (including headphone driver):

Signal-to-Noise Ratio (SNR): 128dB (A-weighted)

Residual Noise: 1.308uV (A-weighted)

Dynamic Range (DNR): 124dB

Total Harmonic Distortion + Noise (THD+N) @ 0dBFS: -112dB or 0.00025%

Total Harmonic Distortion + Noise (THD+N) @ -6dBFS: -116dB or 0.00016%

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: 2.61Vrms (+10.6dBu)

Balanced Headphone Output:

Power into 32Ω: 1.7W peak

Power into 150Ω: 363mW peak

Power into 600Ω: 90mW peak

Output Impedance: < 60mΩ

Regular Headphone Output:

Power into 16Ω: 851mW peak

Power into 32Ω: 425mW peak

Power into 150Ω: 91mW peak

Power into 300Ω: 45.5mW peak

Output Impedance: < 550mΩ

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

See General section below.

General:

Sampling Rates: 44.1, 48, 88.2, 96, 176.4, 192, 352.8, and 384kHz (S/PDIF limited to 192k)

Bit Rates: 16, 24 and 32-bits (S/PDIF limited to 24-bits)

Formats: Supports all formats. DSD is converted to PCM before playback.

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 chip:

— Asahi Kasei Microdevices (AKM) flagship [AK4499EXEQ](#) combined with [AK4191EQ](#)

Clocking:

— Crystek [CCHD-575](#) oscillator — ultra-low clock jitter of 82fSec

S/PDIF Receiver

— Cirrus Logic [CS8416](#)

Output stage: True balanced, fully 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 (regular headphones)

— Quad parallel OPA1622s (balanced headphones)