ComX Computers
Product Specification Sheet

AA-AXESTU

Asus Xonar Essence STU USB DAC (Digital-to-Analog Converter) + Headphone amplifier

Product Overview

Asus Xonar Essence STU - USB DAC (Digital-to-Analog Converter) + headphone amplifier; 120dB SNR, asynchronous USB audio, built-in 600ohms headphone amp, outputs: 6.3mm headphone out + RCA; inputs: AUX + SPDiF (coaxial + optical) + USB, 2x dedicated volume control knobs for speaker + headphone, with vertical stand











Specifications

Features:

The Essence of Sound
Following considerable positive feedback from customers on the excellent sound quality of Xonar Essence ST/STX sound cards, we developed the Xonar Essence STU USB external digital-to-analog converter and headphone amplifier. Based on the acclaimed design of Xonar Essence ST/STX and going beyond their already high standards, it offers even more premium audio quality plus easy controls and connectivity for discerning music lovers who needs a good DAC and headphone amplifier to drive the full capabilities of their high-end headphones.

High quality precision audio
Xonar Essence STU delivers clean, clear, and low distortion sound with 120dB signal-to-noise ratio (SNR) thanks to exacting hardware design and top-notch component selection.

Precision clock tuning technology
Xonar Essence STU embeds a precise clock tuning IC that kills jitter prior to signal processing, ensuring the highest fidelity with extensive detail and lively sound imaging.

Digital-to-analog converter (DAC)
High fidelity Texas Instruments PCM1792A DAC delivers accurate digital-to-analog conversion, sensational audio clarity, and low distortion.

Audiophile-approved capacitors
WIMA FKP2 and Nichicon Finegold capacitors deliver balanced and rich sound.

Asynchronous audio transfer
Asynchronous USB transfer mode separates unstable and noisy clocks generated by the computer or its USB interface logic, maintaining sync with master clock circuitry on Xonar Essence STU.

Balanced (or mirrored) PCB layout
Symmetrical analog output path ensures balanced and truthful representation of all sound sources and minimal crosstalk.

Headphone amplifier
Renowned TPA6120A2 headphone amplifier supports up to 600ohm impedance, driving all headphones available in the market. It empowers your favorite set with dynamic and detailed sound.

Headphone gain switch
Xonar Essence STU offers readily accessible switching between low and high gain settings, accommodating better listening experiences across a wide range of headphones, from in-ear headsets (typically 16ohm-32ohm) to premium full-size headphones (up to 600ohm). This is especially useful with the increasing popularity of mobile devices, which normally ship with low impedance/high sensitivity headsets.

Convenient tonal tuning
Xonar Essence STU has room for three swappable Op-Amps (operational amplifiers), which you can replace to adjust tonal performance based on personal taste. This open-ended and customizable design is inherited from previous Xonar Essence audio products, and remains true to the series' commitment to accommodating as many audiophile preferences as possible. Texas Instruments NS-LME49720 and NS-LM4562NA Op-Amps deliver acoustics fine-tuned by audio engineers to support livelier, more detailed, and more spacious sound.

By-passing volume jumper switch
The included jumper switch re-routes sound and allows Xonar Essence STU to be used as a pre-amplifier in conjunction with a

dedicated power amplifier. You can opt to adjust master volume directly on the power amplifier without having to reach Xonar Essence STU controls.

Selectable DC servo headphone output
Many music enthusiasts choose to solder a DC servo on their DAC to minimize power-up pop noise on the renowned TPA6120A2 headphone amplifier. The dedicated DC servo on Xonar Essence STU offers a convenient and solder-free alternative.

Specifications:

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Specifications	
Product Code	AA-AXESTU
Audio Performance	Output Signal-to-Noise Ratio (A-Weighted) (Front-out) :
	120 dB
	Output THD+N at 1kHz (Front-out) :
	>0.00036 %(-108 dB)
	Frequency Response (-3dB, 24bit/192KHz input) :
	10 Hz to 48 KHz
	Output/Input Full-Scale Voltage :
	Unbalanced Output : 2 Vrms (Vp-p)
	Headphone : 7 Vrms (Vp-p)
Bus Compatibility	USB 2.0 high-speed
Chipset	Audio Processor :C-Media CM6631A High-Definition Sound Processor
Sample Rate and Resolution	Analog Playback Sample Rate and Resolution :
	44.1K/48K/88.2K/96K/176.4K/192KHz @ 16bit/24bit
	ASIO Driver Support :
	44.1K/48K/88.2K/96K/176.4K/192KHz @ 16bit/24bit
Connectivity	Analog Output
	1 x 6.3 mm jack (1/4") Headphone out
	2 x RCA (Un-Balanced)
	Digital
	2 x S/PDIF in (1 x Optical (Toslink)/1 x Coaxial)
	1 x Aux in 3.5mm jack (1/8")
Operating System	Windows 8, 32bit/64bit
	Windows 7, 32bit/64bit
	Windows XP, 32bit/64bit
	Mac OS X *

Accessories	6.3mm to 3.5mm stereo adapter x 1
	Driver CD x 1
	Quick Start Guide x 1
	USB cable x 1
	Power cord x 1
	Power adapter x 1

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:
https://www.comx-computers.co.za/AA-AXESTU-Asus-Xonar-Essence-STU-USB-DAC-Digital-to-Analog-Converter-Headphone-amplifier-p-79901.php

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