



## Tone2 Pro Specifications

<b>Model</b>	Tone2 Pro
<b>Overview</b>	Professional Hi-Fi DAC + HPA for Audiophiles
<b>Highlights</b>	Mini desktop DAC with built-in headphone amplifier World's first balanced RCA line-out MQA & DSD playback, bit-perfect audio transmission
<b>Finish</b>	Black, Red, Blue
<b>Materials</b>	Enclosure/Volume Knob: Aircraft-Grade Aluminum Bottom Cover: ABS, Polycarbonate Foot Pad: Silicone
<b>DAC Performance</b>	<b>Balanced RCA:</b> THD+N: -118dB / -119dB (A-weight) SINAD: 118dB / 119dB (A-weight) Noise: 3.5uVRMS / 2.75uVRMS (A-weight) SNR: 121dB DNR: 121dB/123.5dB(A-weight) Output Impedance: 200Ω Crosstalk: >120dB@200KΩ Maximum DAC Line-Output, 200KΩ: 4Vrms Frequency Range: ±0.15dB(20Hz ~ 20KHz) <b>Standard RCA (Single End):</b> THD+N: -116dB / -117dB (A-weight) SINAD: 116dB / 117dB (A-weight) Noise: 2.0uVRMS / 1.6uVRMS (A-weight) SNR: 119dB DNR: 119dB/122dB(A-weight) Output Impedance: 100Ω Crosstalk: >118dB@200KΩ Maximum DAC Line-Output, 100KΩ: 2Vrms Frequency Range: ±0.15dB(20Hz ~ 20KHz)
<b>Headphone Amplifier Performance</b>	<b>4.4 Headphone:</b> THD+N: -116dB@200kΩ/-117dB@200kΩ(A-weight), -116dB@600Ω, -116dB@300Ω, -116dB@150Ω, -110dB@32Ω, -110dB@16Ω SINAD: 116dB@200kΩ/117dB@200kΩ(A-weight), 116dB@600Ω, 116dB@300Ω, 116dB@150Ω, 110dB@32Ω, 110dB@16Ω Noise: <4.2uVRMS / <3.4uVRMS (A-weight) SNR: 121dB DNR: 121dB/123.5dB(A-weight) Output Impedance: <0.6Ω Crosstalk: >117dB@32Ω Frequency Range: ±0.2dB(20Hz ~ 20KHz) Max Output @ 600Ω: 42mW (5.0VRMS) Max Output @ 300Ω: 83mW (5.0VRMS) Max Output @ 150Ω: 167mW (5.0VRMS) Max Output @ 32Ω: 211mW (2.6VRMS) Max Output @ 16Ω: 154mW (1.57VRMS) <b>3.5 Headphone:</b> Depop chipset THD+N: -114dB@200kΩ/-114dB@200kΩ(A-weight), -114dB@600Ω, -114dB@300Ω, -114dB@150Ω, -109dB@32Ω, -101dB@16Ω SINAD: 114dB@200kΩ/114dB@200kΩ(A-weight), 114dB@600Ω, 114dB@300Ω, 114dB@150Ω, 109dB@32Ω, 101dB@16Ω Noise: <2.4uVRMS / <1.9uVRMS (A-weight) SNR: 119dB DNR: 119dB/122dB(A-weight) Output Impedance: <0.6Ω Crosstalk: >69dB@32Ω Frequency Range: ±0.2dB(20Hz ~ 20KHz) Max Output @ 600Ω: 8.8mW (2.3VRMS) Max Output @ 300Ω: 17.6mW (2.3VRMS) Max Output @ 150Ω: 35.3mW (2.3VRMS) Max Output @ 32Ω: 125mW (2.0VRMS) Max Output @ 16Ω: 114mW (1.35VRMS)
<b>Sampling Rate</b>	PCM 768KHz 32bit DSD 512 (Native)
<b>Audio Formats</b>	MQA, AAC, FLAC, APE, WMA, WAV, OGG, MP3
<b>Processor</b>	XMOS XU216, 16 Real-time Logical Cores

<b>Coprocessor</b>	STM8S003, Programmable
<b>DAC Chipset</b>	ESS ES9038Q2M 32-Bit Stereo Mobile Audio DAC
<b>Amplifier Chipsets</b>	I/V Stage: TI OPA1612 x2 LPF Stage: TI OPA1612 x2 Buffer Stage: RT6863D x2
<b>Ultralow Noise LDOs</b>	1x ESS ES9311Q, 1.3uVRMS (10Hz-100KHz) 5x ADI ADP151, 9uVrms (10Hz-100KHz) 1x ADI ADP7118, 11uVrms (10Hz-100KHz) 1x ADI ADP7182, 18uVrms (10Hz-100KHz)
<b>Jitter Filter Technology</b>	Built-in Intel MAX V CPLD, Pre-shaping Technology Accusilicon AS318-B Series Professional Audiophile Crystal Oscillator
<b>High Precision</b>	0.1% Film Resistors 5% Film Capacitors
<b>PCB Board</b>	Stackup: 6 Layers Glass Transition Temperature (Tg Rating): 170 °C
<b>Knob</b>	Hybrid Digital Volume Control Rotate/Push Operation
<b>LEDs</b>	Side: White, Pink Knob: RGB Light Ring
<b>Connectivity</b>	USB Port: USB-C 2.0 I2S Port: USB-C with I2S Pinout, Linear Power Supply Balanced RCA (Orange): Coaxial INPUT Balanced RCA (White): Left Channel Line OUT Balanced RCA (Red): Right Channel Line OUT 4.4 mm Headphone Jack (Balanced) 3.5 mm Headphone Jack (Single End)
<b>O/S Compatibility</b>	Windows 7, 8, 10 (Khadax USB ASIO driver required) MacOS Linux (with UAC2 compliant kernel) Android (supports OTG function) iPadOS iOS
<b>Apple MFi</b>	MFi 3.0
<b>Compliances</b>	CE, FCC, RoHS
<b>Size</b>	17.0mm(h) x 88.0mm(w) x 61.5mm(l) / 68.0mm(with RCA)
<b>Weight</b>	100 grams
<b>Power</b>	DC 5V, 8mA(Power Off)/380mA(Stand By)/450mA(Play)/510mA(DSD512)/620mA(PCM768)
<b>Warranty</b>	1 Year Limited Hardware Warranty
<b>In the Box</b>	Tone2 Pro USB-C Cable (C to C, 1 meter) Quickstart Guide and Warranty Card