

*iDSD* **Diablo 2**  
Can you handle the beast?

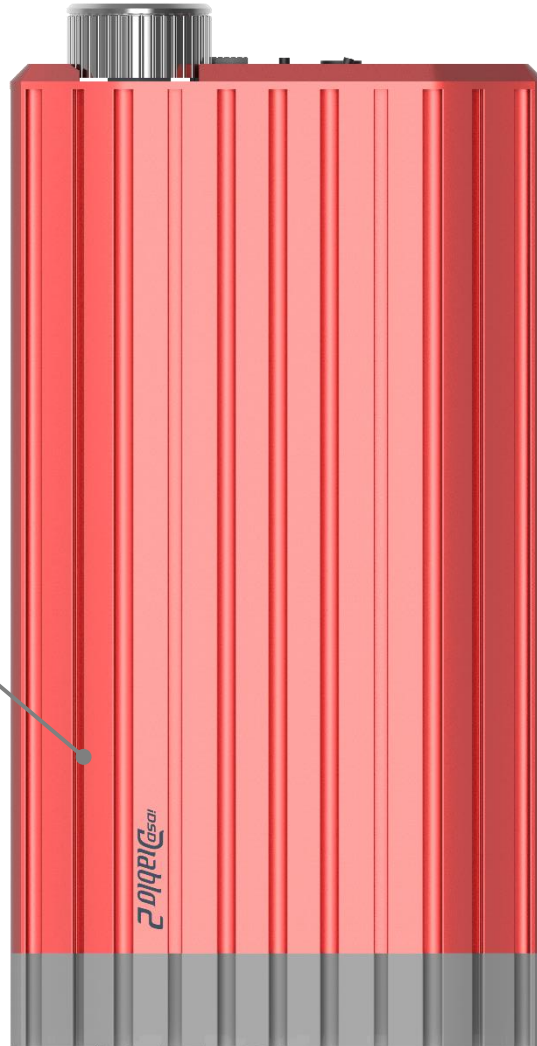


# Heavenly Sound. Devilish Power.

**5,180** mW

Prodigious power

Dressed in devilish red



Predecessor

*IDSD DIABLO-X*



*IDSD DIABLO*



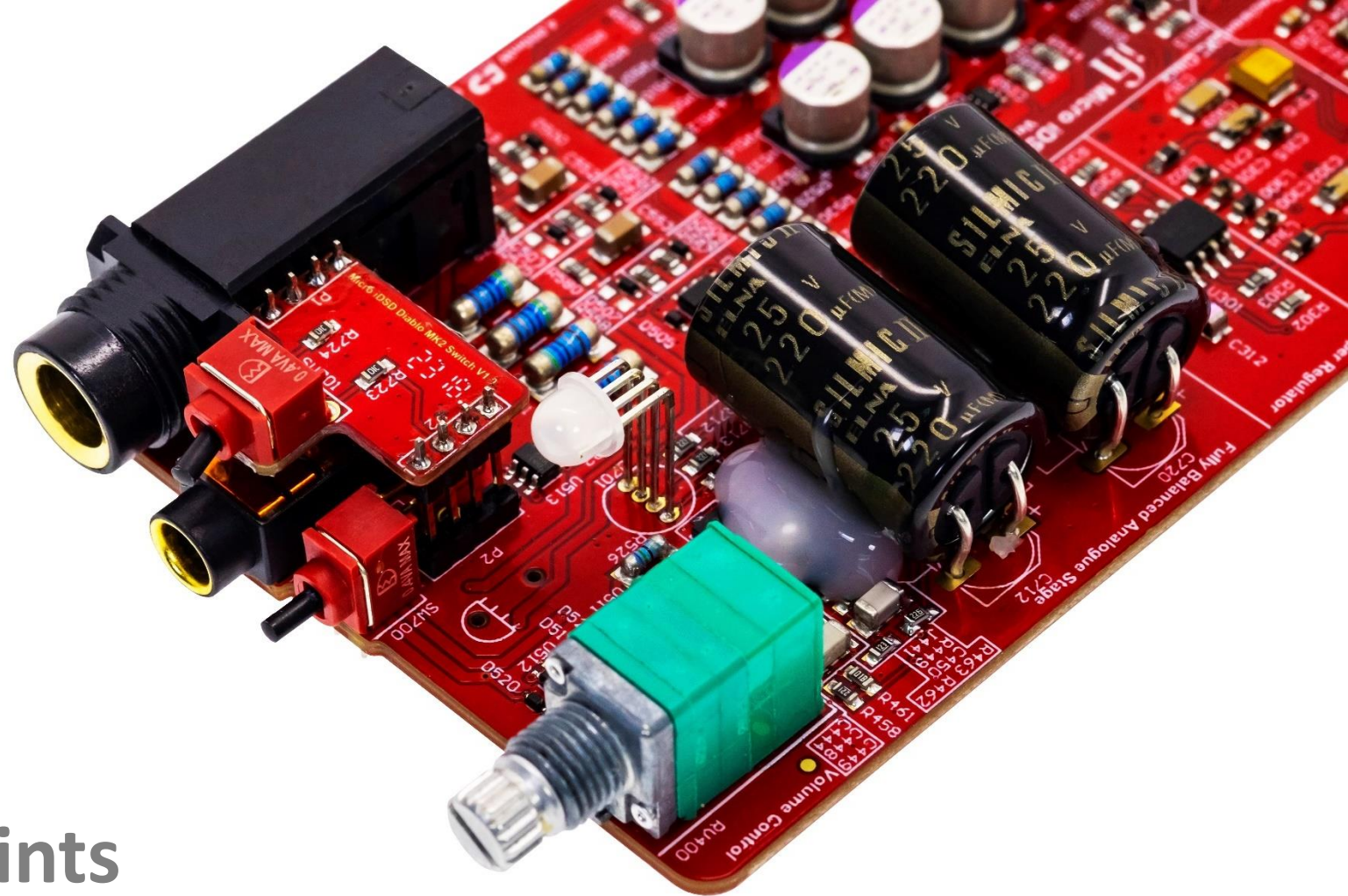
# Transportable or Desktop. It delivers.

Meet the ultimate solution for audiophiles needing separate systems for **home** and **mobile** use: the **iDSD Diablo 2**.

With a powerful **5,180mW** headphone output, it has **more power** than many desktop DAC/AMP setups.



# Unique Selling Points



# Key Features

Delivers up to **5,180mW** of prodigious power

**5,180** mW

World's first **Lossless Bluetooth** portable DAC/AMP

Qualcomm® aptX<sup>™</sup> Lossless



Compatible with **xMEMS** microspeaker technology

**xMEMS**



headamp  
**NITRO**

**Normal, Turbo and Nitro:**  
3 gain modes

**iEMatch**

Optimising output for high-sensitivity headphones/IEMs

**Balanced  
Performance**

Balanced, symmetrical dual-mono topologies

# Support Every Bluetooth Codec\* and Music Format

Qualcomm® aptX™  
Lossless



**Bluetooth 5.4™** - Supports new **aptX Lossless**.

The only Bluetooth codec capable of streaming lossless CD-quality audio.



Hi-res support:

**PCM 768kHz; DSD512 (22.6MHz); Full MQA decoding.**

Burr-Brown MultiBit



Dual-core DAC design enables true-native DSD and PCM.

# Got power-hungry headphones? Hit Nitro.

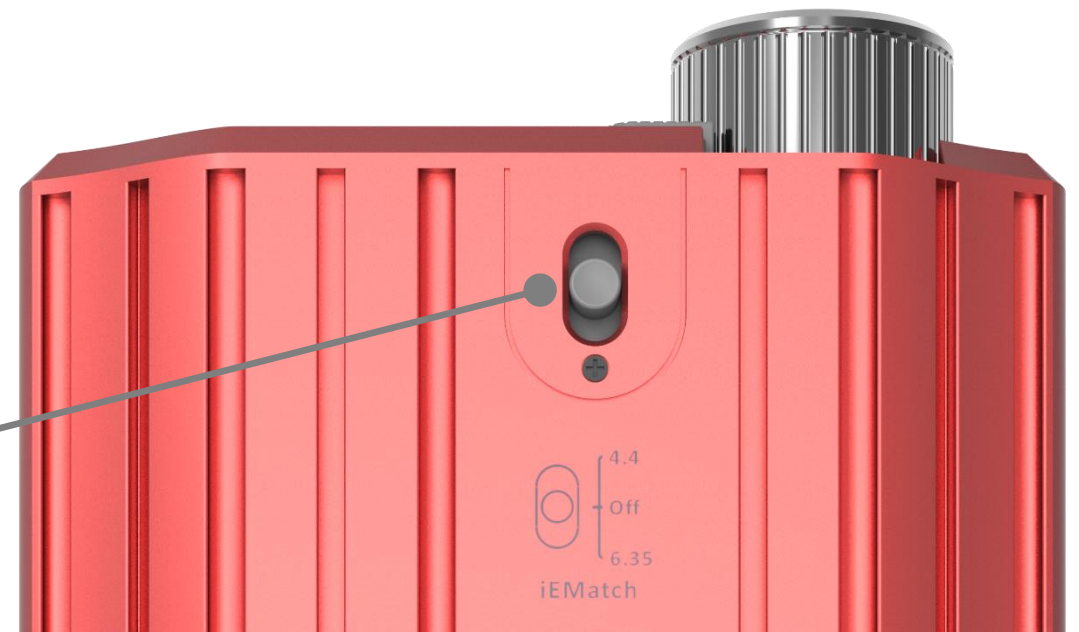


headamp  
**NITRO**

Three power modes:

**Nitro** for demanding headphones with a 19.2V max output  
**Turbo** for mid-sensitivity headphones,  
**Normal** for IEMs

**iEMatch** optimises output to suit high-sensitivity in-ear monitors.



# Next-gen **xMEMS** headphone driver technology compatible.

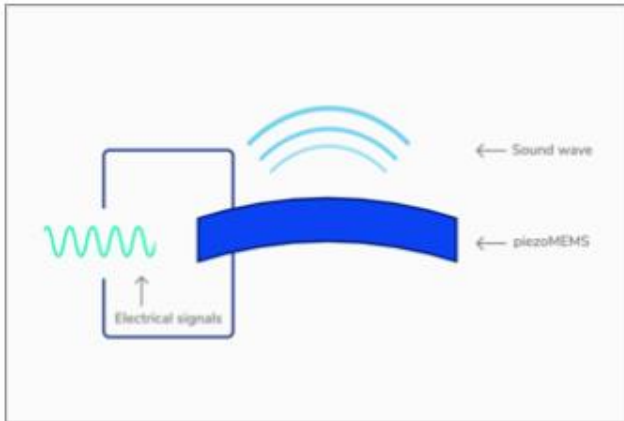


Image sourced from xmems.com

Custom bias, EQ and amp circuits for xMEMS

Piezoelectric effect for paper-thin **solid-state speakers**

**Enhances** IEM and headphone **performance**

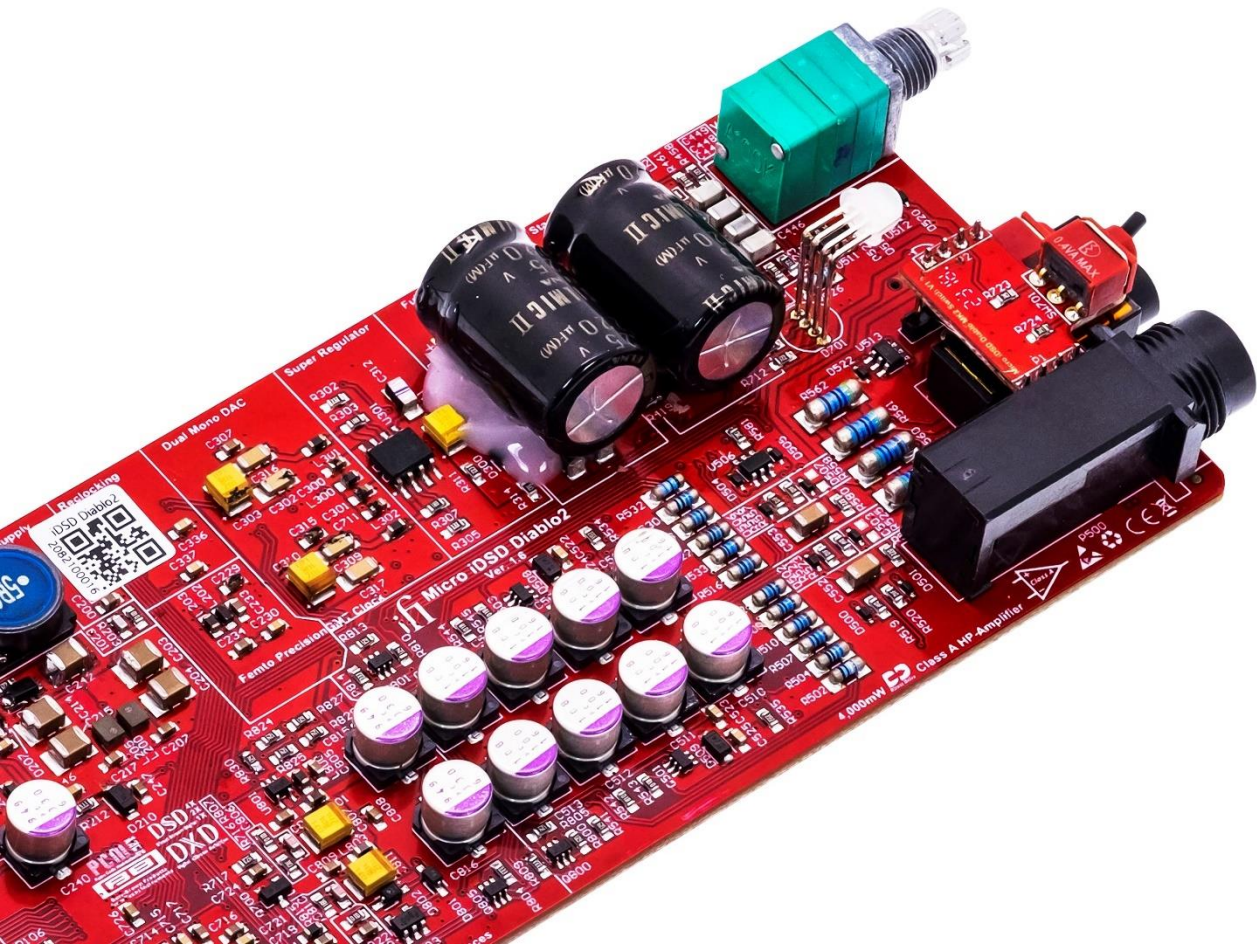
**150x faster** than a typical dynamic driver

Engage **xMEMS**



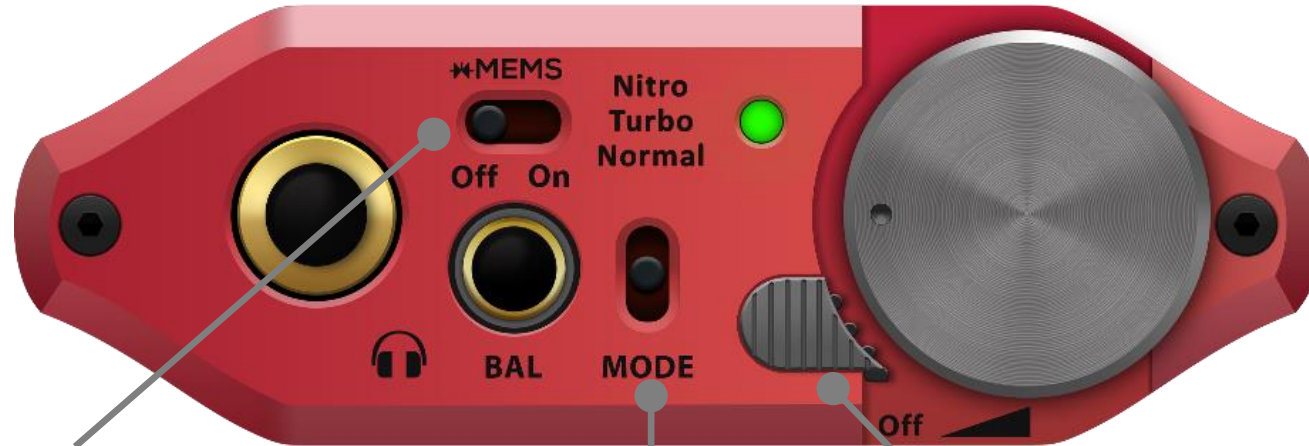


# Upgraded Features and Functionality



# iDSD Diablo 2 vs. Diablo Looks

*iDSD Diablo 2*



xMEMS ON/OFF

Nitro mode for most demanding headphones

Volume Lock prevents unexpected adjustments

*IDSD DIABLO*



# iDSD Diablo 2 vs. Diablo Looks

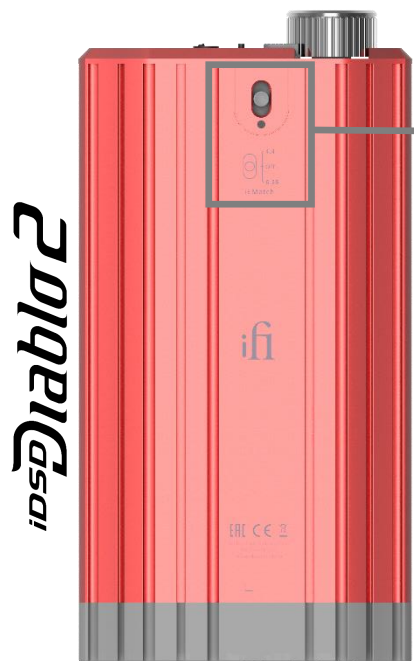


Input mode selector &  
**Bluetooth pairing**

New **USB-C** input



# iDSD Diablo 2 vs. Diablo Looks



New **iEMatch** optimises output to suit high-sensitivity in-ear monitors.



# Spec comparison



	iDSD Diablo 2	iDSD Diablo-X	iDSD Diablo
Digital Input	USB-C 3.0; S-PDIF (3.5mm coaxial/optical)	USB 3.0 type 'A' (USB2.0 compatible); S-PDIF (3.5mm coaxial/optical)	USB 3.0 type 'A' (USB2.0 compatible) S-PDIF (3.5mm coaxial/optical)
Bluetooth formats	aptX Lossless, aptX Adaptive, aptX, LDAC, LHDC/HWA, AAC, SBC	N/A	N/A
Output power - 4.4mm	>19.2V/611mW (@600Ω); >12.87V/5180mW (@32Ω)	>19.2V/611 mW (@ 600 Ω) >12.6V/4,980 mW (@ 32 Ω)	>19.2V/611 mW (@ 600 Ohm) >12.6V/4,980 mW (@ 32 Ohm)
Output power - 6.3mm	>9.6V/153mW (@600Ω); >8.85V/2450mW (@32Ω)	>9.6V/153 mW (@ 600 Ω) >8.8V/2,417 mW (@ 32 Ω)	>9.6V/153 mW (@ 600 Ohm) >8.8V/2,417 mW (@ 32 Ohm)
Power consumption	Nitro 12W; Turbo 5W; Normal 2W; xMEMS 8W	Turbo 12W; Normal 5W; xMEMS 8W	Turbo 12W; Normal 5W; ECO 2W

## Other Features



## Diablo 2. It has wings.



Features 22 rails for improved **cooling** performance.  
8 of these rails are compatible with the Diablo wings, allowing for **desktop stand** use.

# Horizontal or Vertical.

Customise the wings on the iDSD Diablo 2 to position it horizontally, like a **desktop DAC/amp**, or vertically to **save space**.

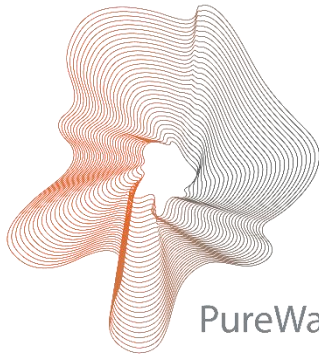




# Your wings. Your way.



# Wing-to-wing with Desktop DAC/Amps.



PureWave

**PureWave**, a **full balanced dual-mono** analogue circuitry, enhances audio clarity by separating channels, reducing noise, and ensuring unmatched purity with minimal distortion.



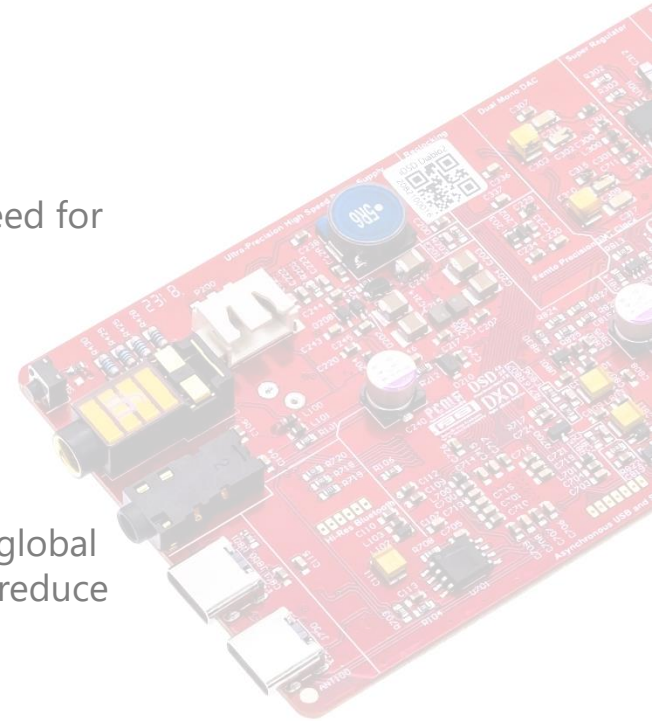
®

**DirectDrive** offers a **unique direct signal path**, eliminating the need for coupling capacitors, resulting in purer, 'truer' audio quality.



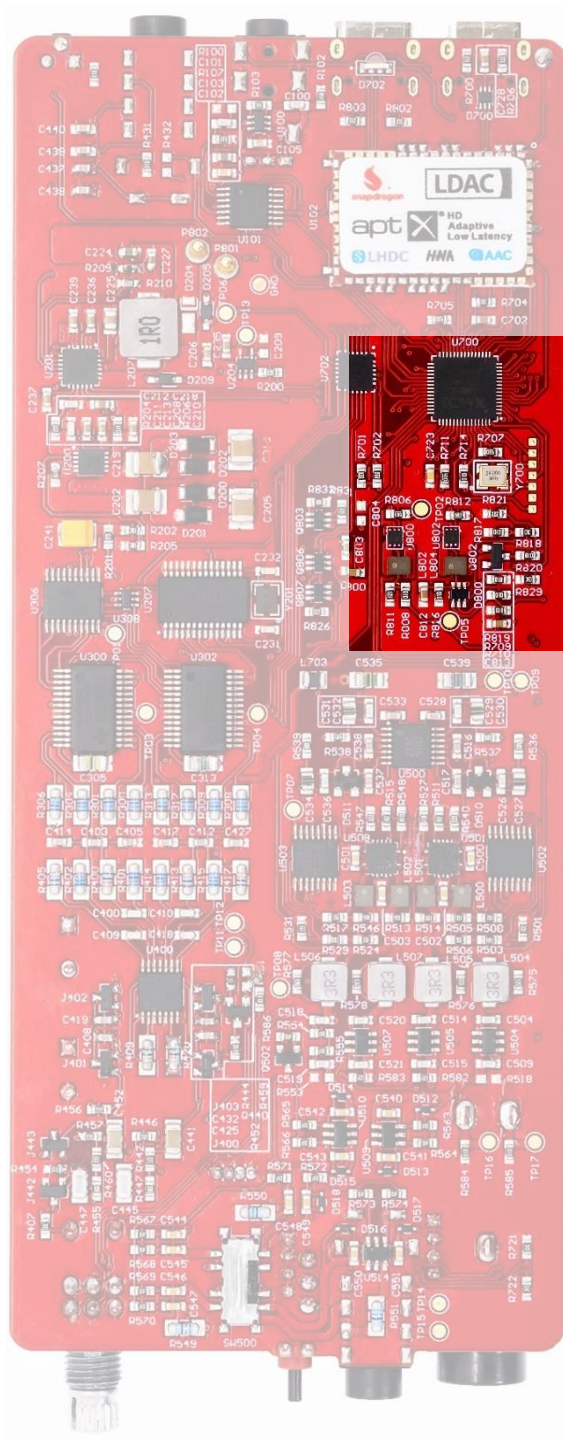
OptimaLoop

**OptimaLoop** uses **tailored multiple feedback** paths instead of a global loop in amplifiers, bypassing traditional issues to control gain and reduce distortion. Ensuring precise audio performance.





# Advanced jitter reduction



Enhanced **GMT femto-precision clock** and **Smart storage cache** reduces phase noise for purer sound.

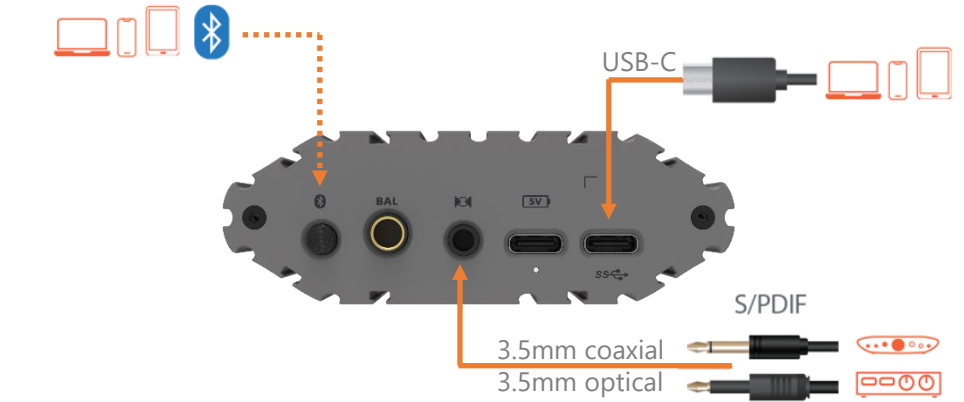


# Multiple operational modes

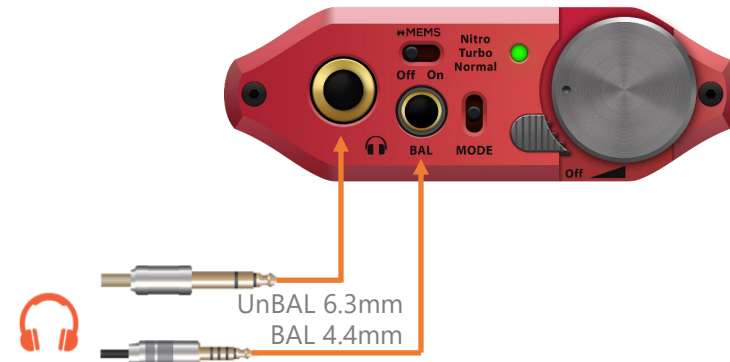
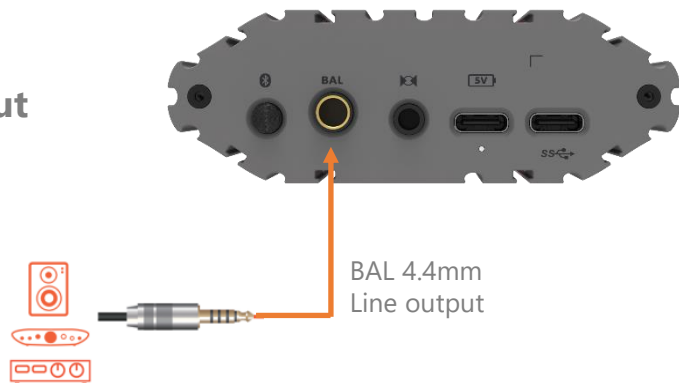
Pure DAC



DAC/headphone amp

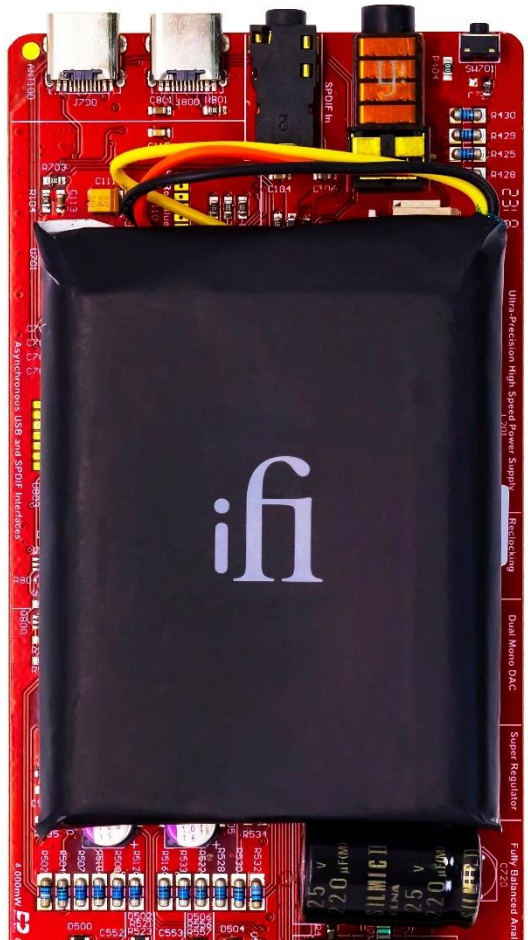


**Output**



# Powered by battery or mains

High-capacity **4,800mAh** lithium-ion battery provides long runtime despite extreme amp power.



**iPower 2 power supply** with Active Noise Cancellation.



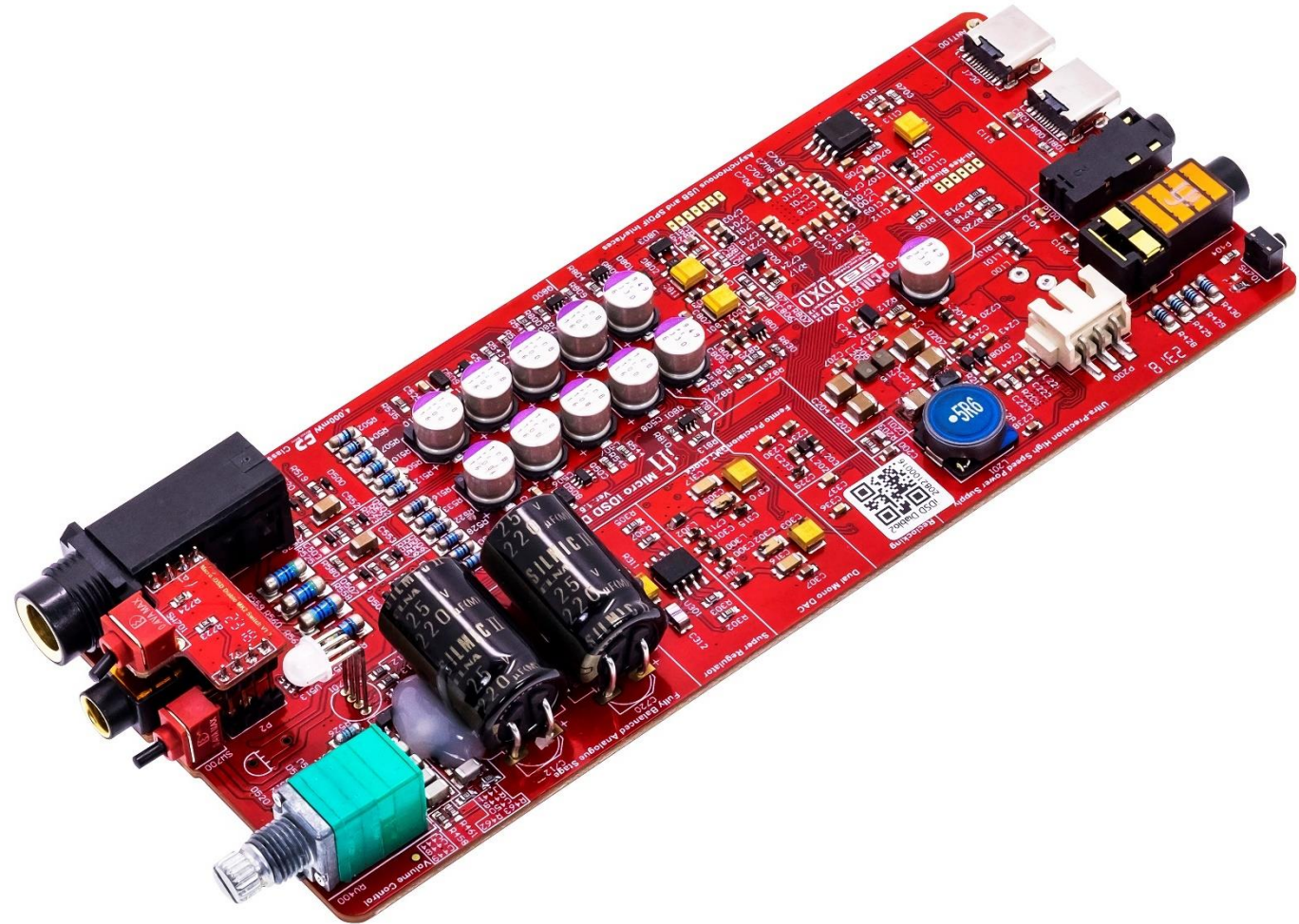
SilentPower®



**10X**

10x quieter than most audiophile power supplies

# Appendix



# Specifications

## iDSD Diablo 2

### Digital

Hi-res support	768kHz; DSD512; full MQA
Bluetooth formats	aptX Lossless, aptX Adaptive, aptX, LDAC, LHDC/HWA, AAC, SBC

### Output power

Output	4.4mm, 6.3mm
4.4mm	>19.2V/611mW (@600Ω); >12.87V/5180mW (@32Ω)
6.3mm	>9.6V/153mW (@600Ω); >8.85V/2450mW (@32Ω)
xMEMS	>28Vpp (4.4mm output)

### Line output

Output impedance	≤200Ω
SNR	≥114dB(A)
DNR	≥114dB(A)
THD+N	0.002% @ 0dBFS 200kΩ

### General

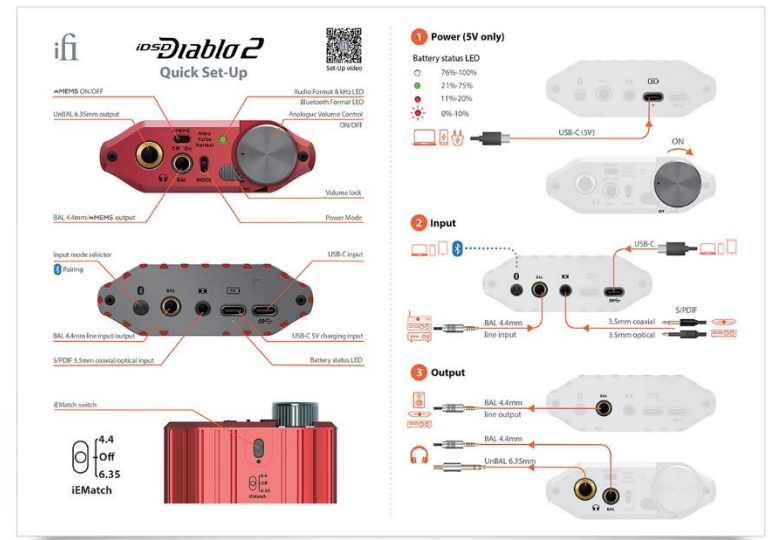
Power consumption	Nitro 12W; Turbo 5W; Normal 2W; xMEMS 8W
Battery	Lithium-polymer 4800mAh
Charging	Via USB-C – BC v1.2 compliant up to 1900mA
Dimensions	166x85x28.5mm
Net weight	455g (1.0lbs)

## Connectivity

Digital inputs	1x USB-C; 1x S/PDIF (optical/coaxial); Bluetooth 5.4™
Headphone outputs	1x balanced 4.4mm; 1x 6.3mm
Line output	1x balanced 4.4mm
Power/charging	1x USB-C



# Contents



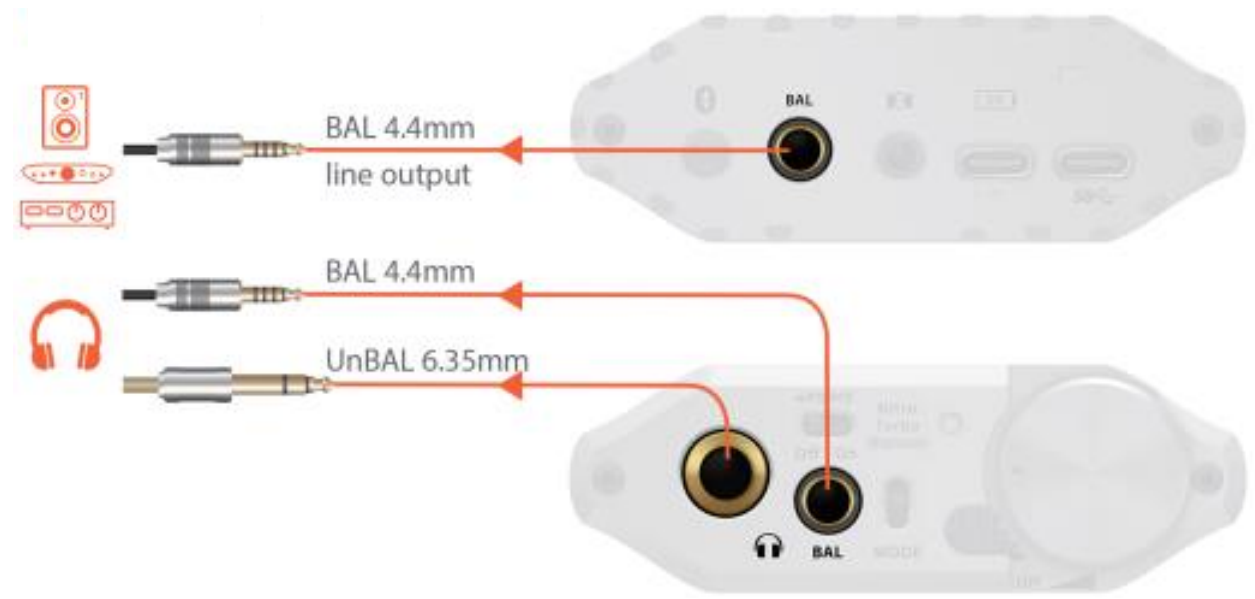


# Connections

## Input



## Output



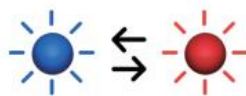
# Bluetooth Pairing and Audio Format LED

## Input mode selector

Short press to cycle through wired or Bluetooth input modes



Long press  $\geq 3$  seconds to enter pairing mode



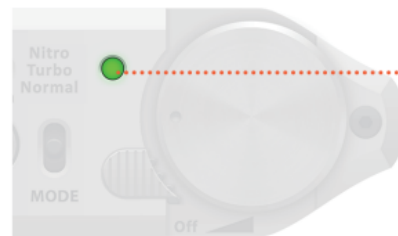
Pair your music source



Once connected



## Audio Format LED (kHz)/Bluetooth Format LED



Bluetooth	Wired
SBC	OFF
AAC	PCM 44.1/48kHz
aptX Lossless	PCM 88.2~768kHz
LDAC	DSD 64/128
HWA/LHDC	DSD 256/512
aptX Adaptive	MQA
aptX	MQA Studio
aptX HD	Original Sample Rate/MQB

