

ifi



ZEN One
Signature

Tech Lowdown

All-purpose Digital Audio Hub

The **ZEN One Signature** delivers exceptional sound from every digital device in a home audio environment.

One DAC for universal connectivity

- Bluetooth
- USB
- S/PDIF



Purist Engineering and Signature-grade Circuitry

The **ZEN One Signature** is performance-tuned to deliver captivating sound with all forms of media, from hi-res music to movie and video game soundtracks.

- Next gen Bluetooth – best sound from every source
- True Native hi-res DAC with powerful 16-core XMOS processor
- Balanced circuit design with Signature-grade circuit components



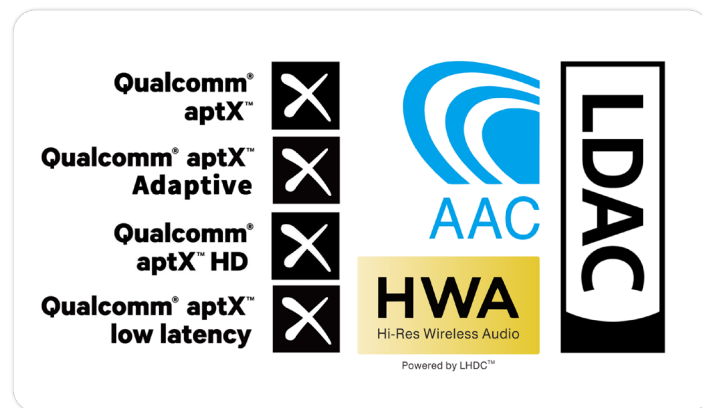
Hi-Res DAC

- Hi-res PCM up to 32-bit/384kHz
- Full native DSD playback
- Full MQA decoding
- Optical & coaxial S/PDIF supports 32-bit/192kHz PCM and MQA



Hi-Res Bluetooth

- Advanced 96kHz Bluetooth 5.1 module with QCC5100 chipset
- Supports HD Bluetooth formats including aptX, aptX HD, aptX Adaptive, aptXLL, LDAC and LHDC/HWA, AAC and SBC codec
- Bluetooth at 96kHz



Display Audio Format LEDs



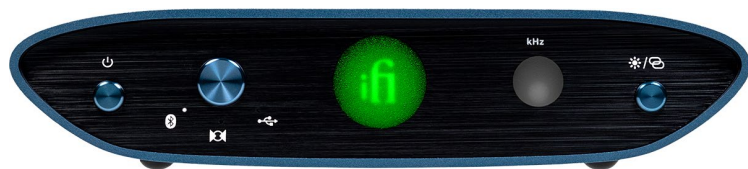
PCM/HWA(LHDC)



MQA Studio/aptX



AAC



MQA/aptX Adaptive



DSD/LDAC



Original Sample Rate*/aptX HD



SBC

Input Audio Format LEDs



DSD 256



PCM 44.1/48kHz



DSD 64/128



Bluetooth pairing and display ON/OFF



PCM 88.2/96/176/192/352/384kHz

Upgraded GMT circuitry

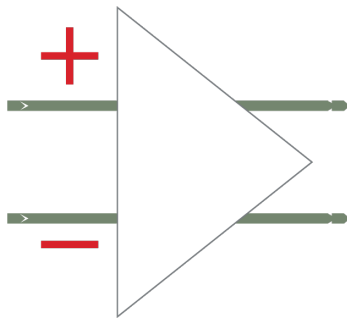
- Improved Global Master Timing (GMT) clock circuitry
- Customised digital filter
- Eradicates jitter and other forms of digital distortion
- >20dB better performance



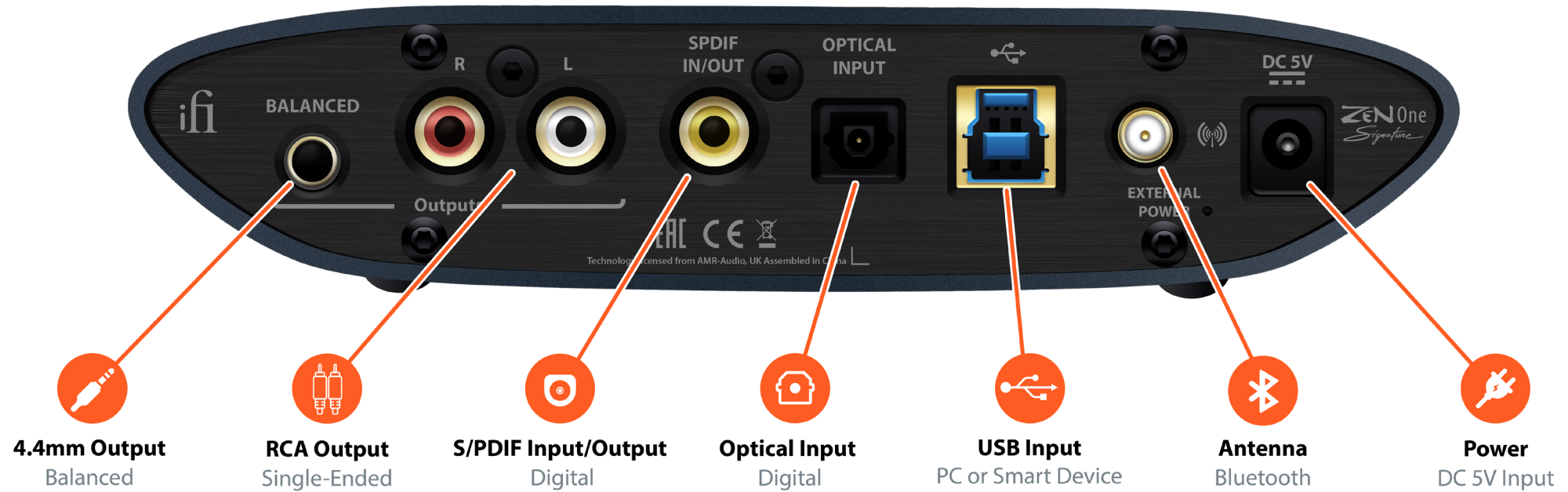
Balanced Signature-grade Circuit Design

- Balanced analogue circuitry design
- Outstanding components – including C0G capacitors from TDL
- Ultra-low distortion and exceptional sonic purity
- SNR: -105dB(A) @ 0dBFS (BAL/UnBAL)
- THD + N: <0.002% @ 0dBFS (BAL/UnBAL)

Balanced



Connections



Superior Design and Components



Fully MQA Decoding
Xmos 16-Core controller with iFi optimised firmware



Qualcomm 5100 series Bluetooth chip
Bluetooth 5.0* (aptX, aptX HD, aptX Adaptive, aptX LL, LDAC, HWA/LHDC, AAC and SBC)



Time Domain Jitter Reduction



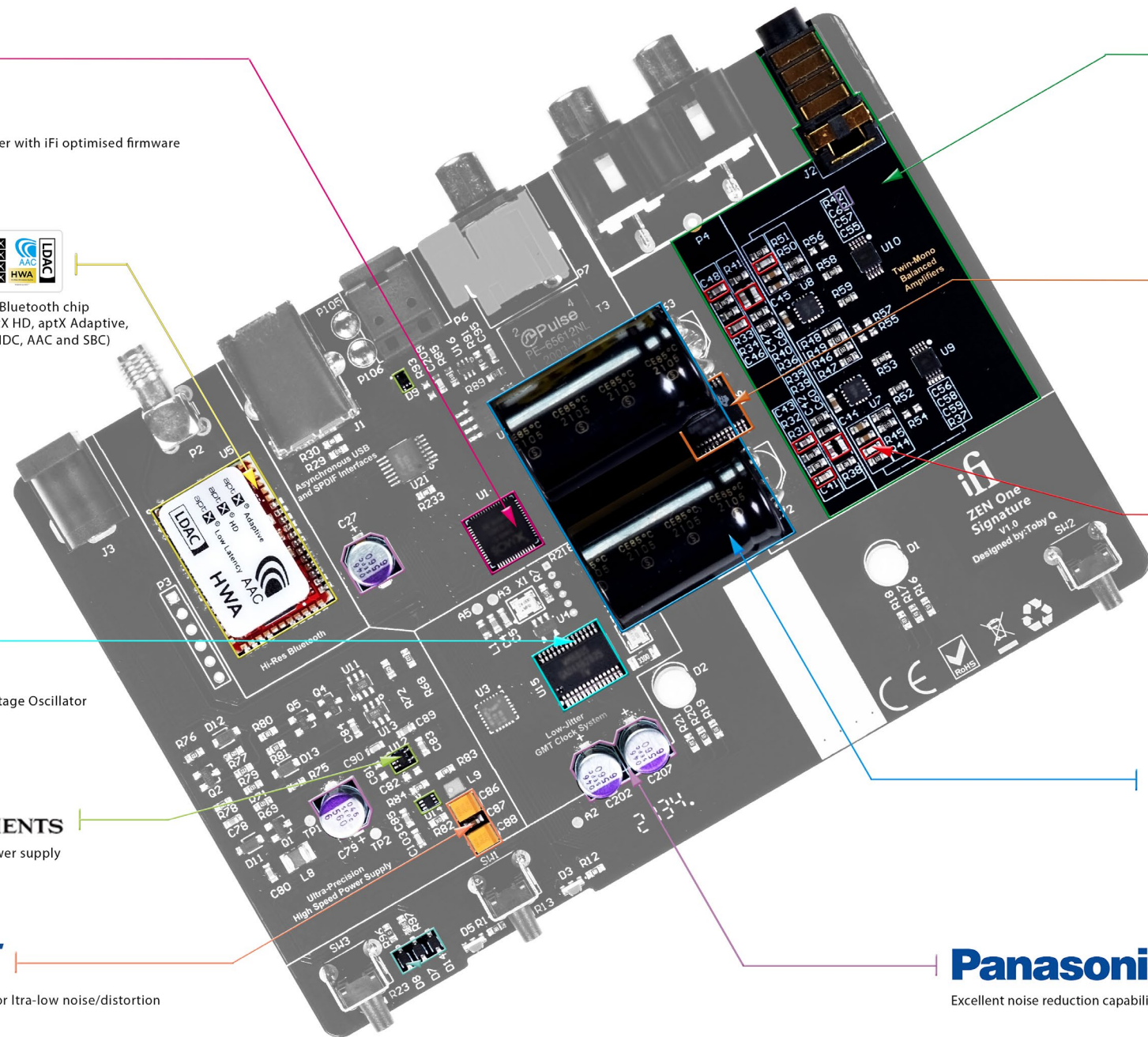
Ultra-low Jitter Audio Stage Oscillator



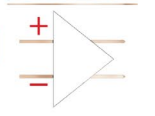
Precision low-noise power supply



Tantalum Polymer Capor Itra-low noise/distortion



Balanced



Balanced output stage



Burr-Brown Products from Texas Instruments
Burr-Brown Native DSD DAC



TDK
COG capacitors



Elna Silmic II capacitors



Excellent noise reduction capability and frequency characteristics

Specifications

Power	DC 5V (centre pin +ve)	
Digital inputs	USB3.0 Type B (USB2.0 compatible)	
	S/PDIF (coaxial, TOSLINK optical)	
	Bluetooth 5.1 (aptX, aptX HD, aptX Adaptive, aptX LL, LDAC, LHDC/HWA, AAC and SBC codec)	
Formats	PCM	44.1/48/88.2/96/176.4/192kHz
	DSD	2.8/3.1/5.6/6.1/11.3/12.3MHz
	DXD	352.8/384kHz
	MQA	Decoder
	Bluetooth	96kHz
Chipset	Bit-Perfect DSD & DXD DAC by Burr Brown	
	Qualcomm QCC 5100 Series	

Analogue outputs	Coaxial, Audio RCA L/R
	4.4 Balanced Lineout
Frequency Response	5Hz - 80kHz \pm 3dB
Outputs	4V / 2V max. (BAL/UnBAL)
Output Impedance	\leq 72 Ω /36 Ω (BAL/UnBAL)
SNR	-105dB(A) @ 0dBFS (BAL/UnBAL)
THD + N	<0.002% @ 0dBFS (BAL/UnBAL)
Power consumption	No Signal \sim 0.7W/Max Signal \sim 1W
Dimensions	158 x 100 x 35 mm
	6.2" x 3.9" x 1.4"
Net weight	485g
	1.1 lbs

Specifications

Line Section		
Outputs	Balanced	6.7V max. (variable)
	UnBAL	3.5V max. (variable)
Output Impedance	Balanced	$\leq 200\Omega$
	UnBAL	$\leq 100\Omega$
SNR	Balanced	$< 110\text{dB(A)} @ 0\text{dBFS}$
	UnBAL	$< 110\text{dB(A)} @ 0\text{dBFS}$
THD+N	Balanced	$< 0.007\% @ 0\text{dBFS}$
	UnBAL	$< 0.015\% @ 0\text{dBFS}$

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