NEO iDSD2

Wireless. Lossless.

Driving Innovation, Bringing Lossless Bluetooth to Life

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

Qualcomm® aptX™ Lossless

Unique Selling Points

World’s First Lossless Bluetooth DAC/Amp

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

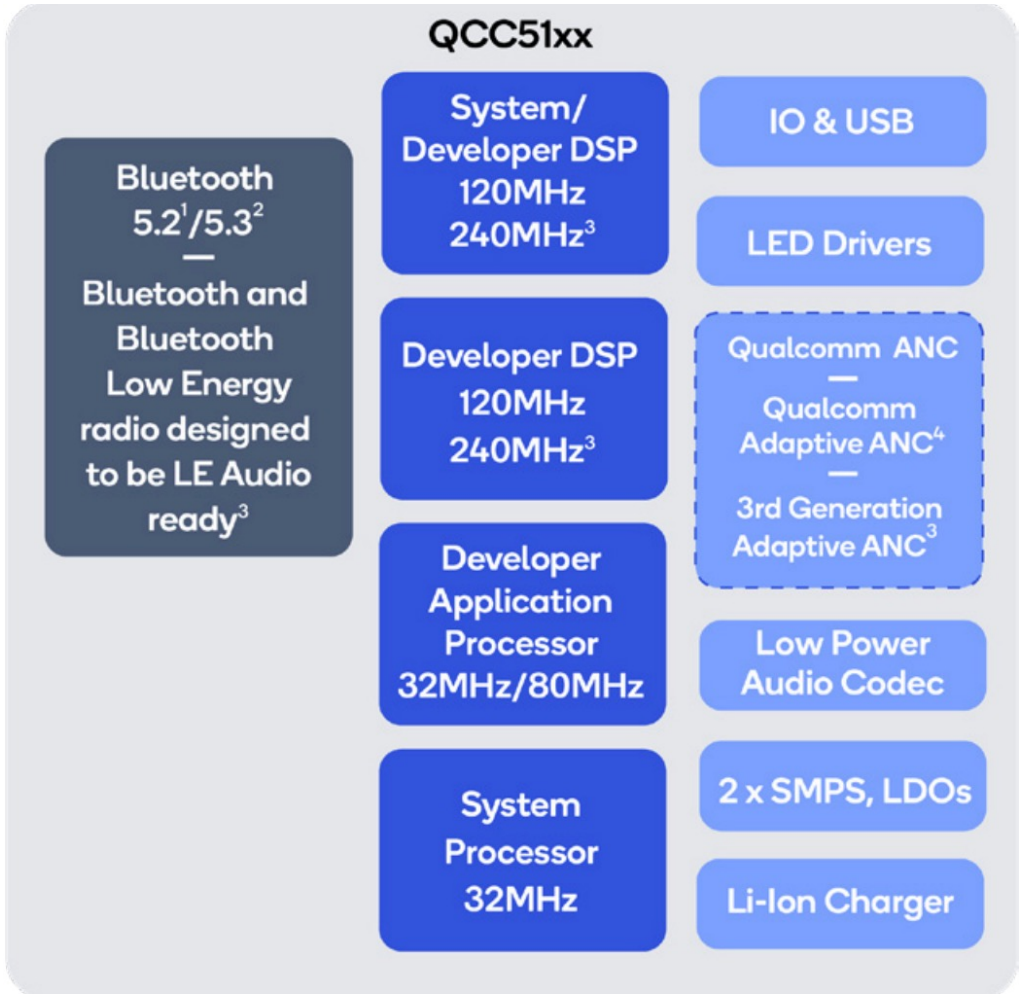
The only Bluetooth codec capable of streaming lossless CD-quality audio.

Plenty of power for headphones and power amplifiers

Headphone Balanced output: >13.3V (**19.5V Max**) / **5,551 mW** (@ 32Ω)

XLR Balanced output: **19.5V max**. (variable), 4.4V fixed

Qualcomm® aptX™ Lossless



+

iFi
Unique Modules

- LDAC
- LHDC
- Real-time receive & transmit switching
- Stereo (non TWS) receiver
- Custom XMOS interface
- Personalized Device Name
- SPDIF Input
- aptX Lossless indicator*
- I2S Input*

*In development

Exclusive Collaboration with **Qualcomm** Engineers to Develop Additional Modules and Functionalities.

Key Features

All-in-one DAC/amp that can be used as a pure DAC, DAC/preamp, and headphone DAC/amp.

Enhanced headphone output with gain selection

Added four digital filters

Added analogue processing modes: XSpace, XBass II

Tailored for CAS users

Pairs effortlessly with Computers, Headphones, Earphones, and Active speakers.

Upgraded Features and Functionality

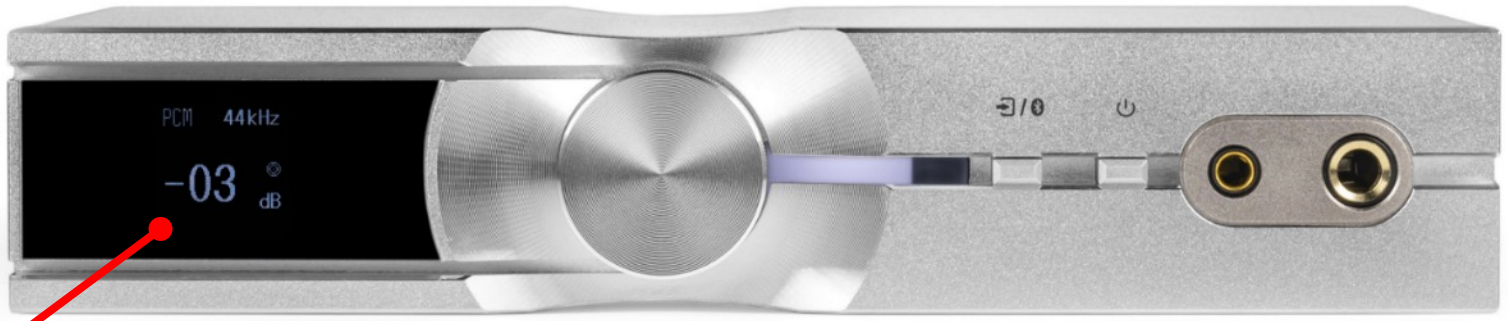
NEO iDSD 2 vs. iDSD Looks

NEO iDSD2

SilentLine retina-grade TFT **colour** display with noise-free design for pure audio signal.

Added analogue processing modes **XSpace** and **XBass II**, as well as a **headphone gain** selection.

NEO iDSD



Mono display.

NEO iDSD 2 vs. iDSD Looks

NEO iDSD2

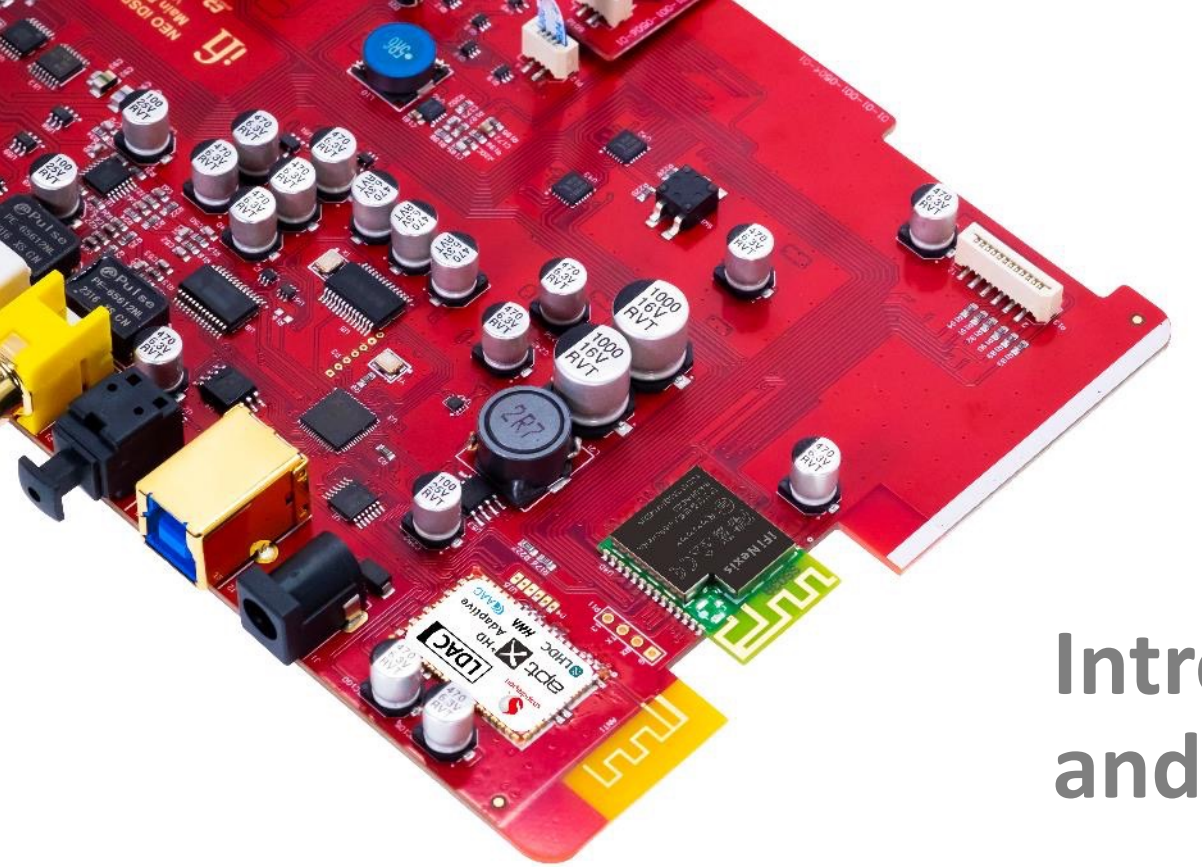
Added **external clock input** and **Analogue** 3.5mm input.

Improved **internal antenna** design.

NEO iDSD

NEO iDSD vs. iDSD 2

	NEO iDSD	NEO iDSD2
Lossless Bluetooth	-	aptX Lossless
Output power (up to 10x more)	Balanced: >6.4V/68.6 mW (@ 600Ω) >5.77V/1040 mW (@ 32Ω) UnBAL: >3.25V/17.6 mW (@ 600Ω) >3V/295 mW (@ 32Ω)	>19.5V/650 mW (@ 600Ω) >13.3V/5,551 mW (@ 32Ω) >10.5V/184 mW (@ 600Ω) >9.5V/2,832 mW (@ 32Ω)
Headphone gain selection (additional 3 levels)	-	Auto iEMatch (-12dB) 0dB > +8dB > +16dB > -12dB
XBassII	-	XBass + Presence
XSpace	-	Yes
Display	0.96‟ Mono	2.0” Retina-grade TFT color display
Analogue Input	-	3.5mm
New External Clock Input	-	External Sync Clock 10MHz
Antenna	External	Internal
Remote	Plastic 6 buttons	Alloy Metal 11 buttons
iFi Nexis App	-	Compatible



Introducing Our New App and Remote Control

iFi Nexis App. Enhancing User Experience.

OTA Upgrades: Automatic firmware updates over the network.

Modern Remote Control: User-friendly interface replaces traditional remotes.

Easy Adjustments: Manage and adjust NEO iDSD2 functions with convenience.

New Aluminum-Made Remote Control

Added play/pause button.

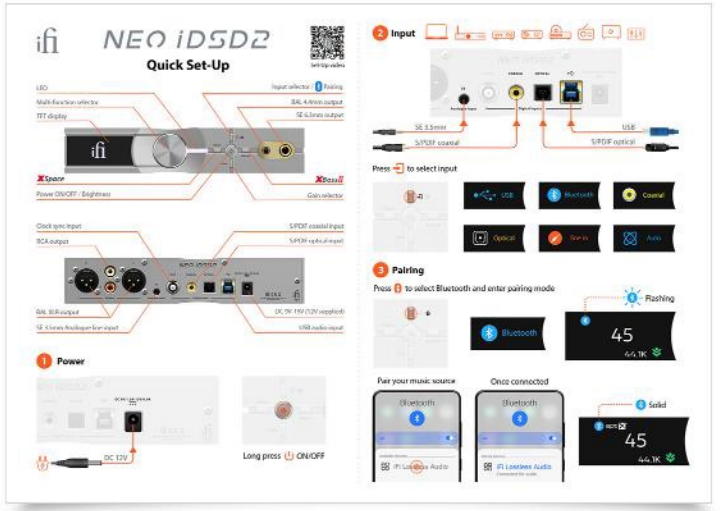
Added XBass II and XSpace analogue processing modes, enhancing bass and expanded sound stage.

Added menu settings for controlling digital filters, external sync clock, etc.

Previous NEO iDSD remote.

Appendix

Box contents



Specifications

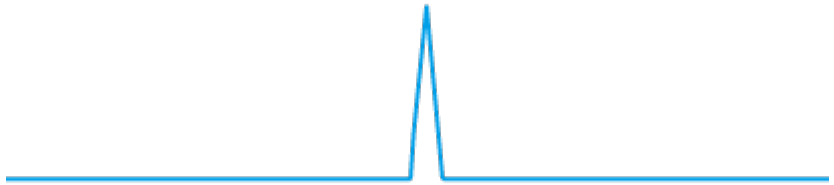
SPECIFICATIONS	
Inputs:	
Digital	USB3.0 B (USB2.0 compatible)
	S/PDIF (RCA Coaxial)
	S/PDIF (Optical)
	Bluetooth 5.4™ (aptx, aptX Lossless, aptX Adaptive, LDAC, HWA/LHDC, AAC and SBC)
Analogue	UnBAL 3.5mm
Clock:	External Sync Clock 10MHz, 1Vpp (min 600mV, 5V max.) Sinewave or Squarewave
Format:	DSD 512 / 22.6MHz
	PCM 768kHz
	MQA Full Decoder
	Bluetooth
DAC:	Bit-Perfect DSD & DXD DAC by Burr Brown
	Qualcomm QCC 5181 Series
Line Section	
Outputs:	
Balanced XLR	19.5V max. (variable) 4.4V fixed
UnBAL RCA	10.5V max. (variable) 2.2V fixed
Output Impedance:	
Balanced	≤100Ω
UnBAL	≤50Ω
SNR:	
Balanced	<-120dB(A) @ 0dBFS
UnBAL	<-120dB(A) @ 0dBFS
DNR:	
Balanced	>120dB(A) @ -60dBFS
UnBAL	>120dB(A) @ -60dBFS
THD+N:	
Balanced	<0.0015% @ 0dBFS
UnBAL	<0.0015% @ 0dBFS

Headphone Section	
Output:	
Balanced 4.4mm	3.5V / 19.5V max. 12Ω - 600Ω Headphone
UnBAL 6.3mm	4.5V / 9.50V max. 12Ω - 300Ω Headphone
Output Power:	
Balanced	>19.5V/650 mW (@ 600Ω)
	>13.3V/5,551 mW (@ 32Ω)
UnBAL	>10.5V/184 mW (@ 600Ω)
	>9.5V/2,832 mW (@ 32Ω)
Output Impedance:	
Balanced	<1Ω
UnBAL	<1Ω
SNR:	
Balanced	>120dBA @ (6.2V)
UnBAL	>120dBA @ (3.3V)
DNR:	
Balanced	-120dB(A)
UnBAL	120dB(A)
THD + N:	
Balanced	<0.0015% (125mW @ 32Ω)
UnBAL	<0.0015% (125mW @ 32Ω)
Frequency Response:	20Hz - 90kHz (-3dB)
Power supply requirement:	DC 9V/1.5A - 15V/0.9A (centre +ve)*
Power consumption:	No Signal ~5W
	Max Signal ~13.5W
Dimensions:	214 x 158 x 41 mm (8.4" x 6.2" x 1.6")
Net weight:	916g (2.0 lbs)
Limited Warranty:	12 months**
*A power supply unit must be able to deliver minimum rated repetitive current	
**12 months typical or as permitted/required by local reseller laws.	
***Specifications are subject to change without notice	

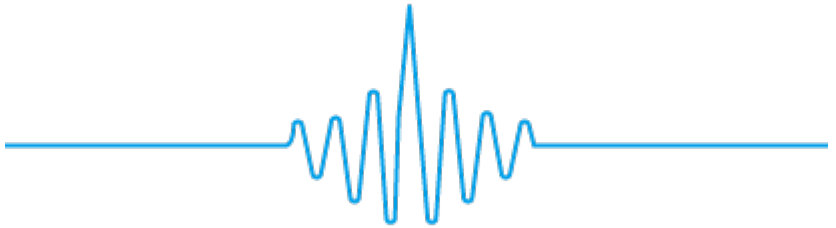
Explanation of Digital Filters

There's no one-size-fits-all solution; it's about finding what suits you best.
The following four digital filters are available:

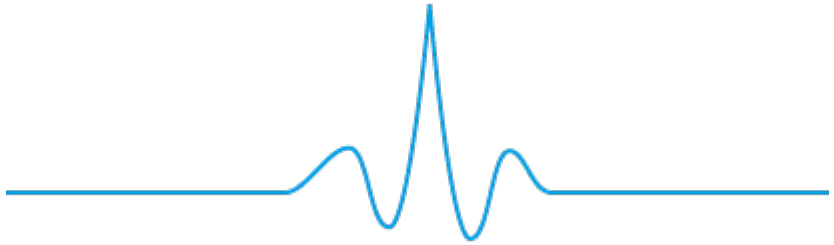
'BP' Bit-Perfect, with no digital filtering or pre/post ringing.
Delivers crisp, robust sound, sharp natural tones, and a fuller midrange.



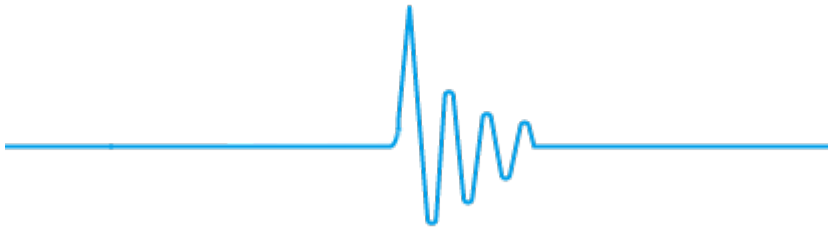
'STD' Standard provides balanced filtering with modest pre and post ringing.
With its fast roll-off and subtle post-reverb, delivering a powerful sound.
It reduces high-frequency noise, resulting in a tighter sound with controlled highs.



'MIN' Minimum Phase offers slow roll-off with minimal pre and post ringing, slight reverberation, and a warmer sound.
It balances data metrics and listening experience, between STD and BP.



'GTO' Gibbs Transient-Optimised, up-sampled to 352.8/384kHz, offers minimal filtering with no pre-ringing and minimal post-ringing.
With its precision characteristic, it enhances sound details and density.



Explanation of Analogue Processing Modes

XSpace

The XSpace Matrix on/off recreates a holographic sound field using purely analog signal processing, designed for headphone as if one was listening to speakers. It addresses the 'music inside the head' sensation that can be uncomfortable.

XBassII

“XBass” is an analogue circuit designed to 'add back' the lost bass response for more accurate reproduction of the original music. "Presence" refers to improving the upper midrange for a natural sound.

Cycle through the three bass modes to select:

Off > XBass > XBass > XBass

Off XBass Presence XBass + Presence

Note: Research into headphone frequency response showed that a purely at response may not be correct. Our long present XBass fits the profile of the low-frequency correction required. However, it was also shown that a certain amount of upper midrange boost is needed to give many headphones a more 'natural' sound. This upper midrange region is usually called the 'presence' region; we have used this term to indicate the upper midrange correction. In the NEO iDSD2, XBass II (or perhaps better HPEQ) can be selected to have either Bass + Presence correction, only Bass or only Presence correction.

Note: Sonically-hindering DSP is NOT used for XBass II nor XSpace matrix systems. They use the highest-quality discrete components and operate purely in the analogue domain. Hence all the clarity and resolution of the original music is retained.


audio