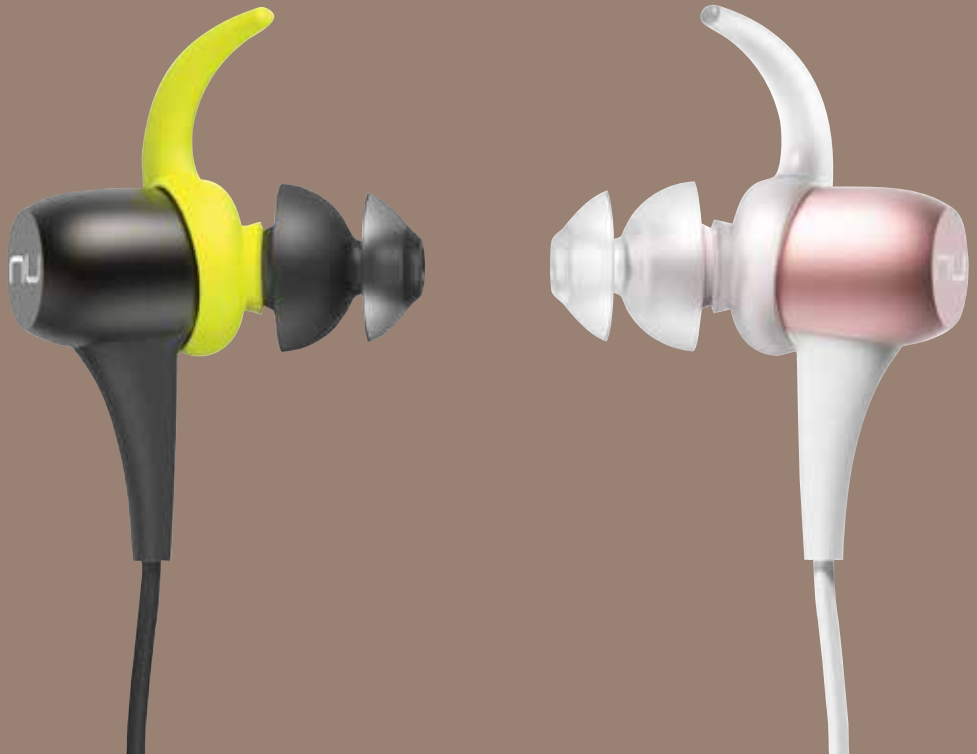
Optoma

Audio range

Spring 2017

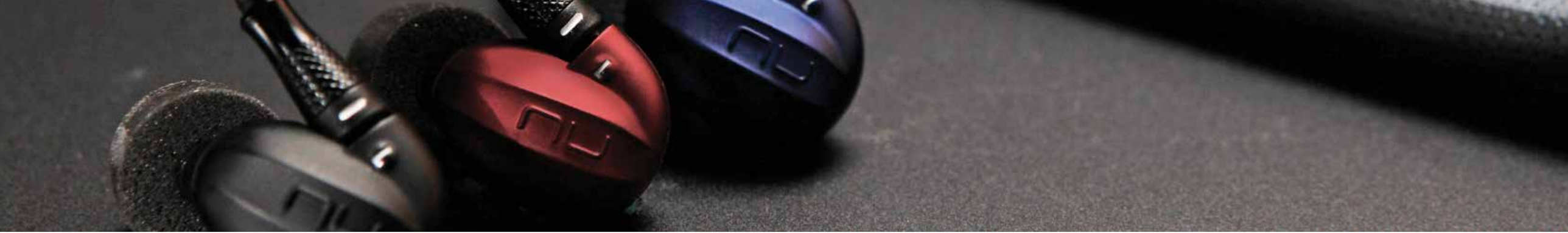


nu FORCE

See more. Hear more.

The Optoma NuForce audio range is designed for people that care about sound. They are built from premium quality components combining a sleek design with outstanding audio quality.

optoma.com



HEM8

High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. Designed for professionals, the HEM8 in-ear monitors deliver spectacular detail and a strong bass. Each earpiece has four individual drivers.

Number of driver(s)
8

Driver type
High resolution Knowels™ balanced armature

Frequency range
10 - 40,000Hz

HEM6

High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. The HEM6 are perfectly balanced for professional use on stage as well as music on the go. Each earpiece has three individual drivers.

Number of driver(s)
6

Driver type
High resolution Knowels™ balanced armature

Frequency range
18 - 40,000Hz

HEM4

High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. Designed for professionals and audio enthusiasts, the HEM4 reflects sound better than most in its class. Each earpiece has two individual drivers.

Number of driver(s)
4

Driver type
High resolution Knowels™ balanced armature

Frequency range
18 - 40,000Hz

HEM2

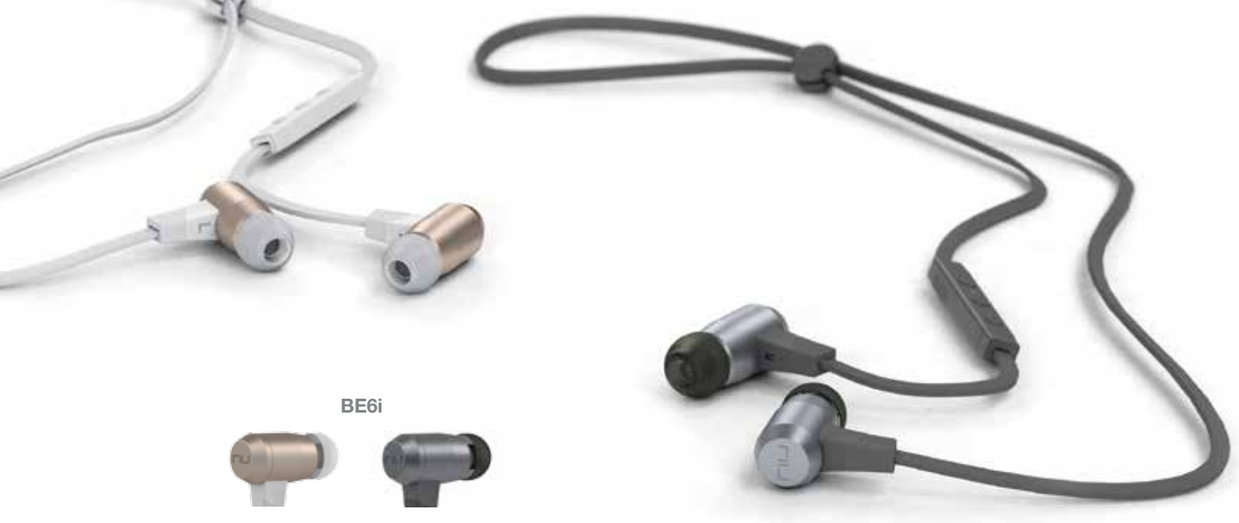
High resolution in-ear headphones

The High Resolution certified HEM series set a new standard for accuracy, speed and comfort. The HEM2 are ideal for home musicians and audio enthusiasts. Each earpiece contains a single full range driver.

Number of driver(s)
2

Driver type
High resolution Knowels™ balanced armature

Frequency range
20 - 40,000Hz



BE6i

Wireless Bluetooth® in-ear headphones

The BE6i takes the same stylish design as the BE6 but offers an incredible battery life of up to 8 hours. They are also IPX5 certified for greater protection from rain and sweat. The BE6i are the only Bluetooth® in-ear headphones to be fully crafted from aluminium, which provides crystal-clear sound and elegant design in a lightweight form-factor, making them durable and attractive for all lifestyles.

Bluetooth

Bluetooth 4.1, aptX™, supported AAC

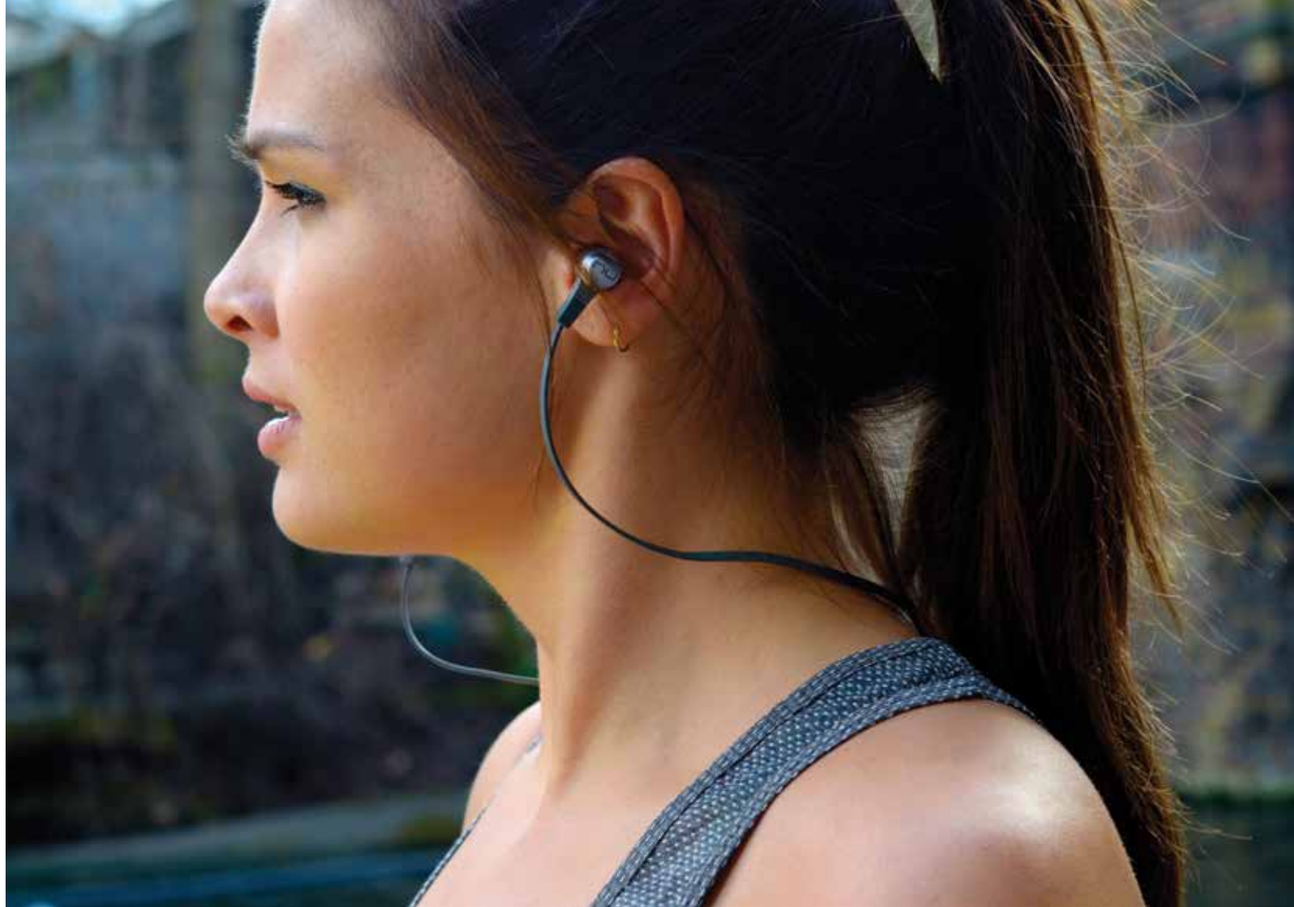
Impedance

20 Ohm

Battery life

up to 8 hours

Bluetooth® Qualcomm® aptX™ AAC



BE Sport3

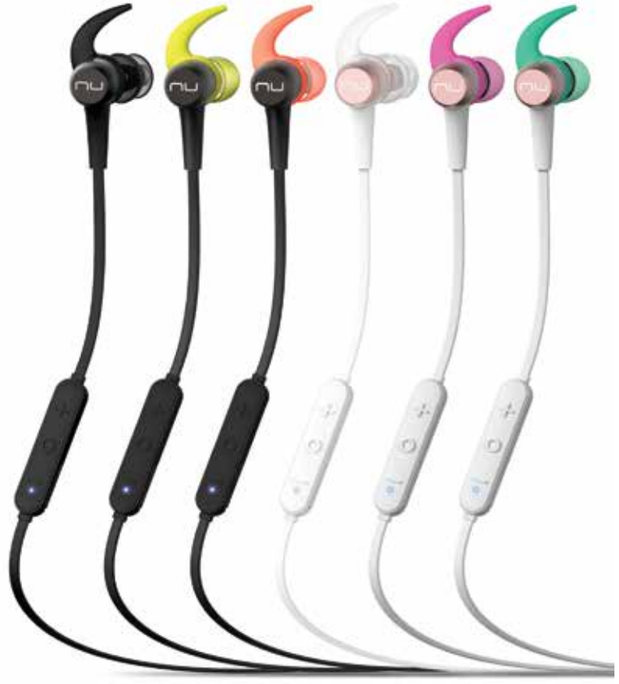
Your ultimate workout partner

Fitness-focused in-ears headphones Stay motivated when you're pushing yourself to the limits with the BE Sport3 in-ear Bluetooth headphones. The lightweight, durable design and custom ear tips keep them securely in place no matter how vigorous your workout – without the distraction of wires. In addition, wireless means a future fit to smartphones that don't include an audio jack.

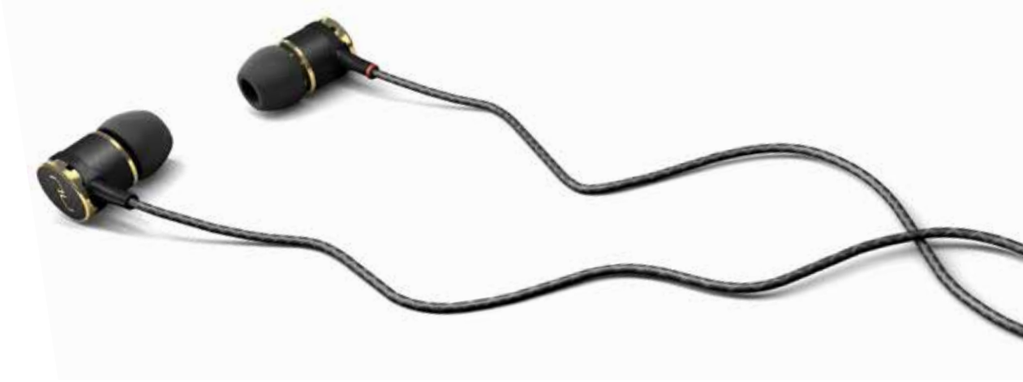
Bluetooth
Bluetooth 4.1, aptX™, supported AAC

Impedance
20 Ohm

Battery life
up to 10 hours



Bluetooth® Qualcomm® aptX™ AAC



NE800M

Superior performance in-ear headphones

The NE800M introduce music lovers and gamers to the next level of sound. These in-ear headphones include a sound nozzle machined from solid brass to minimise vibration and optimise the sound. Coupled with an ultra-lightweight and durable carbon fibre chassis, the NE800M's exceptional acoustic design brings out all of the detail in your music.

Impedance
16 Ohm

Maximum SPL
120dB

Sensitivity
118dB +/-3dB

NE750M

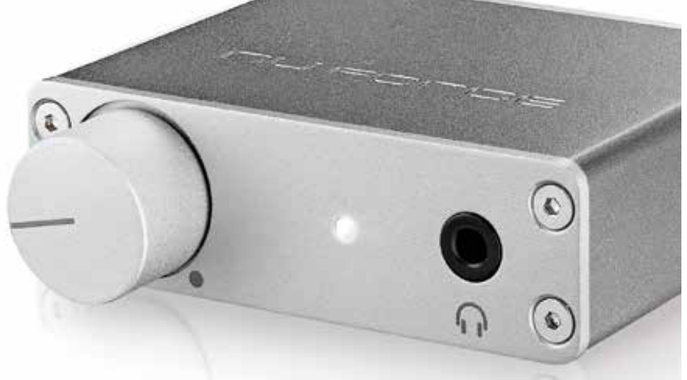
High performance in-ear headphones

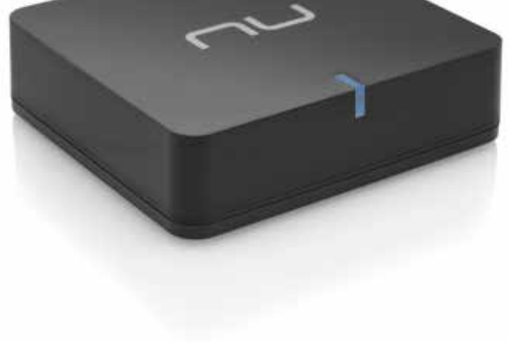
Designed for people that care about the sound; these in-ear headphones deliver exceptional acoustic design, superior quality components and an ultra-lightweight and durable chassis. They offer a substantial upgrade from those that come with your smartphone or music player and set the standard for premium portable sound.

Impedance
16 Ohm

Maximum SPL
120dB

Sensitivity
113dB +/-3dB





uDAC5

uDAC3

HA200

BTR100

Super small DSD DAC and headphone amp

The uDAC5 is Optoma's first DSD high resolution DAC. It will play any audio file at any resolution. It combines a robust headphone amplifier which significantly transforms any computer's sound output. Ideal for enthusiasts and music lovers who wish to listen to the highest quality audio content. Available with drivers for PC and MAC.

Connections
Input: USB. Output: RCA L+R/digital coax, 3.5mm with volume control

Maximum SPL
120dB

Resolution
Up to 384kHz PCM and DSD256

Super small mobile DAC and headphone amp

The uDAC3 digital to analogue converter (DAC) and combined headphone amplifier significantly upgrades any computer's sound output. Ideal for music lovers and gamers, this tiny device connects to the computer's USB port and improves, amplifies and converts digital audio files from a PC or Mac.

Connections
Input: USB. Output: RCA L+R/digital coax, 3.5mm with volume control

Power supply
Via USB connection

Resolution
96kHz / 24 bit

High performance headphone amp

The HA200 high performance headphone amp is capable of driving any set of headphones with more detail and greater scale. The HA200 uses a purist Class-A design in a constant current configuration and offers true single ended output performance. For even greater performance the HA200 provides balanced mode operation with increased accuracy.

Connections
Input: RCA L+R, XLR

Output and control
6.3mm, XLR

Power supply
IEC mains

Bluetooth receiver

Free the music from your smartphone, tablet or computer. Using the latest aptX and AAC technology, the BTR100 is an advanced Bluetooth hub for all mobile devices. Easy to synchronize and connect, you can wirelessly stream CD quality digital audio, via Bluetooth, directly to your home stereo system.

Bluetooth
aptX supported by AAC

Power supply
External

Output
3.5mm, optical

Specifications

In-ear headphones

Model name	HEM8	HEM6	HEM4
			
Product category	Mobile	Mobile	Mobile
Product type	High resolution in-ear headphones	High resolution in-ear headphones	High resolution in-ear headphones
Connector type	3.5mm	3.5mm	3.5mm
Cable length (m)	1.38 (OFC), 1.38 (Mic)	1.38 (OFC), 1.38 (Mic)	1.38 (OFC), 1.38 (Mic)
Driver	8 high-res balanced armature	6 high-res balanced armature	4 high-res balanced armature
Impedance (Ohm)	32	37	38
Frequency response	10Hz - 40kHz	18Hz - 40kHz	18Hz - 40kHz
Sensitivity (dB)	124dB +/-3dB	113dB +/-3dB	113dB +/-3dB
Weight (kg)	0.0058	0.0058	0.0052
Standard accessories	2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), brush / cleaning tool, lapel clip, waterproof display case, carrying case	2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), brush / cleaning tool, lapel clip, waterproof display case, carrying case	2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), brush / cleaning tool, lapel clip, waterproof display case, carrying case
Colour	Black	Black	Blue
Suggested products	uDAC5, HA200	uDAC5, HA200	uDAC5, HA200

In-ear headphones

Model name	HEM2	BE6i	BE Sport3	NE800M
				
Product category	Mobile	Mobile	Mobile	Mobile
Product type	High resolution in-ear headphones	Wireless in-ear headphones	Wireless in-ear headphones	In-ear headphones
Connector type	3.5mm	Bluetooth	Bluetooth	3.5mm (4-pole stereo)
Cable length (m)	1.38 (OFC), 1.38 (Mic)	0.561	1.37	1.37
Driver	2 high-res balanced armature	10mm (patented)	Dynamic / 6mm	Dynamic / 8.6mm
Impedance (Ohm)	26	20	16	16
Frequency response	20Hz - 40kHz	20Hz - 20kHz	20Hz - 20kHz	10Hz - 40kHz
Sensitivity (dB)	110dB +/-3dB	95 +/-3 at 1KHz	102 +/-3 at 1kHz	113 +/-3
Weight (kg)	0.0034	0.019	0.015	0.018
Standard accessories	2x 1.38m detachable cables, 3.5mm - 6.3mm gold-plated adapter, 5x pairs soft silicone ear tips (XS, S, M, L, XL), 2x pairs Comply™ memory foam ear tips (M, L), brush / cleaning tool, lapel clip, waterproof display case, carrying case	4 x pairs proprietary NuForce silicone ear tips (XS, S, M, L), 2 x pairs Comply foam ear tips (M, L), 1 x pair ear wings, 1 x USB charging cable (USB A-USB micro), 1 x carry case 1 x cable management clip, basic user's guide, safety booklet	3x pairs soft silicon ear tips (3x colours, S/M/L), 3x Ear Wings (3x colours, ,2x sizes M/L), 1x pair custom SpinFit dual ribbed ear tips, 1x cable tensioner, carrying pouch, 1x USB charging cable, basic user's manual, safety booklet	2 pairs Comply earbuds (M, L), 3 pairs silicone earbuds (S, M, L), carry case
Colour	Red	Gold or Grey	Gun metal grey / Rose gold	Black / Gold
Suggested products	uDAC5, HA200	-	-	uDAC5, uDAC3, HA200

Specifications

In-ear headphones

Model name	NE750M
	
Product category	Mobile
Product type	In-ear headphones
Connector type	3.5mm (4-pole stereo)
Cable length (m)	1.37
Driver	Dynamic / 8.6mm
Impedance (Ohm)	16
Frequency response	20Hz - 20kHz
Sensitivity (dB)	113 +/-3
Weight (kg)	0.014
Standard accessories	3 pairs silicone earbuds (S, M, L), carry case
Colour	Black / Red
Suggested products	uDAC5, uDAC3, HA200

Amplifiers

Model name	HA200
	
Product category	Home stereo
Product type	Headphone amplifier
Connections - input	RCA L+R, XLR
Connections - output	XLR, 6.3mm (stereo jack)
Connections - control	-
Power output	393mW at 16 Ohm, 747mW at 32 Ohm, 383mW at 100 Ohm, 129mW at 300 Ohm, 70mW at 600 Ohm
Peak output power	600mW at 16 Ohm, 937mW at 32 Ohm, 530mW at 100 Ohm, 180mW at 300 Ohm, 96.3mW at 600 Ohm
Recommended headphone impedance (Ohm)	32 to 600
Balanced mode	200 Ohm, 14.6Vrms
Frequency response	10Hz - 20KHz
Signal to noise ratio (SNR) (dB)	>106
Power supply	115V - 230V, 50 - 60Hz
Weight (kg)	2.2
Dimensions (W x D x H mm)	217 x 231 x 44
Standard accessories	Power cable
Colour	Black
Suggested products	HEM series

DACs

Model name	uDAC5	uDAC3
		
Product category	Mobile	Mobile
Product type	DSD portable DAC	Portable DAC
Connections - input	USB	USB
Connections - output	RCA L+R, digital coax, 3.5mm	RCA L+R, digital coax, 3.5mm
Headphone power output	140mW x 2 at 32 Ohm	80mW x 2 at 16 Ohm
Volume control	Rotory	Rotory
Maximum sampling rate (kHz)	384kHz/DSD256	96
Bit resolution (bit)	24	24
Native bit rate	16, 24	16, 24
Frequency response	20 - 25kHz	20 - 25kHz
Signal to noise ratio (SNR) (dB)	112	98
Power supply	USB bus powered, 1A/5V	USB powered, 80mA/5V
Wireless type	-	-
Weight (kg)	0.100	0.090
Dimensions (W x D x H mm)	68 x 45 x 21	68 x 38 x 21
Standard accessories	USB cable	USB cable
Colour	Silver	Black
Suggested products	HEM series	NE800M, NE750M

Specifications

Bluetooth

Model name	BTR100
	
Product category	Home stereo
Product type	Bluetooth receiver
Connections - output	Optical, 3.5mm stereo
Frequency response	20Hz-20kHz
Sensitivity (dB)	-84
Signal to noise ratio (SNR) (dB)	>90
Power supply	5V 1A
Operating range (m)	10
Supported CODECs	aptX®, SBC, AAC
Weight (kg)	0.103
Dimensions (W x D x H mm)	157 x 155 x 38
Standard accessories	Power supply, 3.5mm - 3.5mm cable, 3.5mm - RCA L+R
Colour	Black
Suggested products	-

Key definitions

96/24

Higher than CD resolution with greater amounts of detail and bandwidth, resulting in a greater level of the original recording with very substantial and positive effect on the quality of bass and clarity.

192/24

Very high resolution audio available in two major formats. This offers the purest form of the music as captured in the studio. It is in fact the standard used by professionals to record most music.

Balanced armature driver

A balanced armature driver is able to reach frequencies of up to 40,000Hz for rich bass and clear highs. It uses a magnet to move a small diaphragm, resulting in low distortion levels for spacious, detailed and fatigue-free sound at any volume level.

Bluetooth®

Bluetooth smart technology is a wireless communications system intended to replace the cables connecting many types of devices such as mobile phones and headphones.

DAC

Digital to analogue converter, designed to translate digital signal of various formats into the analogue sound that is heard from a speaker or headphones.

DSD

Direct Stream Digital (DSD) audio is able to capture the original sound created by musicians in a professional studio. It is offering a range of sound and frequencies far greater than that of a CD. DSD offers a staggeringly realistic recreation of the originally recorded notes.

Hi-Res Audio

High resolution audio stands for audio formats that contain larger quantity of data and greater range than that of CD quality audio. Music made of high resolution audio can be heard from discs and downloads.

Integrated amp

Combines the ability to connect and select a source, change volume levels and output the signal sent from source as sound via a connection to speakers.

LPCM

A form of PCM files typically used to code high resolution movie sound tracks that are greater than CD audio quality.

PCM

Method used to represent digitised analogue signals; the most common form of digital audio. Used for CD replay, movie sound track and audio download files of various types all the way from MP3 to 192/24 audio files.

Pulse Width Modulation

A modern circuit that allows very efficient electrical design, typically known as Class-D amp, resulting in small compact structures that are able to provide a great deal of power, whilst maintaining lower power consumption when compared to traditional amp design.

RCA

The most common analogue speciality audio connection which is also known as “Phono” and “Single-ended” connection.

S/PDIF

This connection is designed to offer easy digital connection between audio components. Able to send high definition audio and mainly used in professional and broadcasting industry with BNC termination.

Toslink

Optical fibre connection designed to transmit digital audio files. Commonly found on almost every home audio entertainment device. Able to transmit very high resolution signal as well as all Dolby and DTS HD format and many other PCM and LPCM audio formats.

Social

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V1 - 20/01/17

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