

# Touchboards

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*Optoma*

Sound range

Spring / Summer 2015



NU FORCE





## Hear more. Feel more.

NuForce is already known for its clean design and superior sound. The new streamlined Optoma NuForce audio range comprises three main categories:

Mobile - created for premium sound on the move.

Home stereo - advanced technology and design for the highest sound reproduction capability.

Home cinema - complements Optoma's award winning home cinema projectors.

[www.optoma.com](http://www.optoma.com)



## Mobile

Optoma's mobile products deliver crystal clear HiFi sound for life on the move. The range includes a choice of superior earphones and a super small mobile USB DAC.

Mobile



Primo8

### Reference-class earphones

Primo8 earphones offer music enthusiasts, gamers and professionals the sound quality of reference-class, multi-driver, high-end audiophile speakers.

Equipped with eight drivers, the earphones are built and created for life on the move. The durable design of the Primo8 contains patent-pending technology and materials that make these earphones stand well apart from the crowd.

### Impedance

38 Ohm

### Maximum SPL

121dB

### Sensitivity

118dB +/-3dB



Primo8's Comply™ soft silicon ear tips shape themselves to fit perfectly in the ear canal offering superior isolation from noise and creating incredible bass response.

Like professional large speakers, the advanced technology embedded in the Primo8 uses a set of high definition MicroDrivers that produce incredibly spacious sound and rich bass. The four balanced-armature drivers in each earphone deliver a smooth, fatigue-free sound regardless of the device to which they are connected.

Mobile



NE800M



### Superior performance earphones

The NE800M earphones introduce music lovers and gamers to the next level of sound. Equipped with a Brilliance™ Ultra Wide Band driver, the earphones deliver incredible clarity and rich bass. The NE800M utilises a carbon fibre shell to eliminate micro dynamic vibrations and a brass sound nozzle for enhanced sound quality.

#### Impedance

16 Ohm

#### Maximum SPL

120dB

#### Sensitivity

113dB +/-3dB



NE750M



### High performance earphones

The NE750M earphones introduce music lovers and gamers to a higher level of sound. Equipped with a Brilliance™ Ultra Wide Band driver, the earphones deliver incredible clarity and rich bass. Made from aircraft grade aluminium, the NE750M is lightweight and acoustically neutral providing the ideal mix of comfort and performance.

#### Impedance

16 Ohm

#### Maximum SPL

115dB

#### Sensitivity

105dB +/-3dB





uDAC3



### 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/digital coax, 3.5mm with volume control

#### Power supply

Via USB connection

#### Resolution

96kHz / 24 bit





## Home stereo

Optoma's home stereo products offer the highest sound reproduction capability for the most discerning listener. The range includes a digital to analogue converter (DAC), power amps, integrated amps, a headphone amp and a Bluetooth receiver.

## Home stereo



**DDA120 + BTR1**



### Powerful integrated digital amp with Bluetooth receiver

The DDA120 is a powerful yet compact integrated digital amp and is supplied with the Bluetooth receiver dongle. It is an ideal entertainment hub that can be connected to both digital and analogue sources from record players, digital satellite boxes, DVD players and gaming consoles to the most advanced digital devices.

#### Connections

Input: USB, RCA, 2x optical, Bluetooth, digital coax, 176.4kHz / 24 bit

#### Output and control

Optical, speakers, IR control

#### Power

2x 75W (4 Ohm) 50W (8 Ohm)

**DAC80**



### Digital to analogue converter and pre-amp

Designed to be the cornerstone of the audiophile's high-end audio system, the DAC80 offers a multitude of connections for the various sources used in a modern home. It has three digital connectivity options and the capability to connect four devices concurrently. It supports virtually all digital file formats including the very highest quality 192kHz/24-bit studio master.

#### Connections

Input: USB, Toslink, 2x digital coax. Output: RCA

#### Power supply

IEC mains

#### Resolution

192kHz / 24 bit



**STA120**



**HA200**



### High end stereo Class-D amp

The STA120 is a high end Class-D power amp housed in a stylish, compact enclosure. It renders all of your recordings with deep bass, crystal clear highs, and a warm, life-like midrange - all in perfect balance with high resolution and effortless, fatigue-free sound.

#### Connections

Input: RCA

#### Output and control

Speakers

#### Power

2x 140W (4 Ohm)

### 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, XLR

#### Output and control

6.5mm, XLR

#### Power supply

IEC mains

## Home stereo



**WDC200**



**STA200**



### High resolution wireless DAC

The WDC200 wireless DAC is designed for audio enthusiasts and boasts cutting-edge re-clocking and circuit design technologies for ultimate accuracy, clarity and resolution. Based on WiFi technology, in contrast to typical Bluetooth systems, the WDC200 delivers high resolution sound with harmonically accurate and jitter-free music. The WDC200 supports DLNA and is compatible with Airplay.

#### Connections

Input: wireless, optical. Output: RCA

#### Power supply

External

#### Resolution

96kHz / 24 bit wireless, 192kHz / 24 bit via optical

### High performance amp

The STA200 is a high performance amp for discerning music lovers. Born from collaboration between Optoma and the prestigious Swiss audio specialist, Goldmund, the STA200 is based on their revered Mega-Hertz Bandwidth amps and encased in a stylish aluminium case.

#### Connections

Input: RCA

#### Output and control

Speakers

#### Power

2x 80W (8 Ohm)



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**BTR100**



## Bluetooth receiver

Using the latest aptX and AAC technology, BTR100 is an advanced Bluetooth hub for all mobile devices. Easy to synchronize and connect, it can provide quick access to audio from mobile devices offering the ability to enjoy music and games through an audio system.

## Bluetooth

aptX

## Power supply

External

## Output

3.5mm, optical







## Home cinema

Optoma's home cinema products are engineered for audio purists with astounding accuracy for superior sound. The range includes a digital AV preamp and two high power multi-channel amps.

## Home cinema



**AVP18**



**MCA18**



### Digital AV preamp

The AVP18 is a digital AV preamp for audio enthusiasts with an optional Bluetooth receiver dongle, BTR1. This preamp focuses exclusively on sound quality rather than the latest gimmicky features. Accepting only digital inputs for the purest audio quality and utilising the same technology found in our high-end DAC, this AV processor was built from the ground up for superior surround sound and audio performance.

### Connections

Input: 4x HDMI 1.4, 2x optical, 2x digital coax, Bluetooth

### Surround

DD, DD EX, DD+, DD Tru HD, dts, dts ES, DTS HD\*

### Type

7.1

\*see website for full specifications

### High end multi-channel amp

The MCA18 multi-channel amp offers the audio enthusiast eight channels of superior sound. Developed as an audio enthusiasts alternative to consumer-grade amps, the MCA18 will render your movie soundtracks with astounding accuracy.

### Connections

Input: 8x RCA

### Output and control

8x speakers, trigger

### Power

8x 110W (4 Ohm)



**MCA20**



### **High power multi-channel amp**

The MCA20 multi-channel amp offers the audio enthusiast superb power along with eight channels of superior sound. Developed as an enthusiasts alternative to consumer-grade amps, the MCA20 will render your movie soundtracks with astounding accuracy.

#### **Connections**

Input: 8x RCA

#### **Output and control**

8x speakers, trigger

#### **Power**

8x 278W (4 Ohm)

# Specifications

## Earphones

Model name	Primo8	NE800M	NE750M
			
Product category	Mobile	Mobile	Mobile
Product type	Earphone	Earphone	Earphone
Connector type	3.5mm (4-pole stereo)	3.5mm (4-pole stereo)	3.5mm (4-pole stereo)
Cable length (m)	1.4	1.37	1.37
Driver	Balanced armature / 8 x 7 x 6mm	Dynamic / 8.6mm	Dynamic / 8.6mm
Impedance (Ohm)	38	16	16
Frequency response	18Hz-22kHz	10Hz-40kHz	20Hz-20kHz
Sensitivity (dB)	118 +/-3	113 +/-3	113 +/-3
Weight (kg)	0.193	0.018	0.014
Standard accessories	2 pairs of comply isolation foam ear tips (M, L), 8 pairs of silicone ear tips (S, M, L, XL), 51.2in(130cm) detachable cable with microphone (An optional non-mic cable accessory is available for purchase), 3.5mm to 6.5mm adapter and one airline adapter, Primo8 leather pouch, cleaning tool, microfiber cleaning cloth	Two pair comply ear tips, a leather soft box, aviation plug, 3 pairs of single flange ear tips	3 pairs of single flange ear tips, carrying pouch

## Bluetooth

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### Model name

**BTR100**



**BTR1**



Product category	Home stereo	Home stereo
Product type	Bluetooth receiver	Bluetooth receiver
Connections - output	Optical, 3.5mm stereo	Bluetooth
Frequency response	20Hz-20kHz	-
Sensitivity (dB)	-84	-
Signal to noise ratio (SNR) (dB)	>90	>92
Power supply	5V 1A	-
Operating range (m)	10	10
Supported CODECs	aptX®, SBC, AAC	aptX®, SBC, AAC
Weight (kg)	0.103	0.035
Dimensions (W x D x H mm)	157 x 155 x 38	65 x 26 x 8
Standard accessories	3.5mm to 3.5mm cable, RCA to 3.5mm adapter	-

# Specifications

## DACs

Model name	uDAC3	DAC80	WDC200
			
Product category	Mobile	Home stereo	Home stereo
Product type	Portable DAC	DAC	Wireless DAC
Connections - input	USB	USB-B, Toslink, 2x digital coax	Wireless, Toslink
Connections - output	RCA, digital coax	RCA	RCA
Headphone power output	80mW x 2 @ 16 Ohm	-	-
Volume control	Rotary	Rotary 32bit digital attenuator	Rotary
Maximum sampling rate (kHz)	96	192	192
Bit resolution (bit)	24	24	24
Native bit rate	32, 44.1, 48, 88.2, 96	32, 44.1, 48, 96, 192	192
Frequency response	20-25kHz +/- 0.25dB	20-25kHz +/- 0.25dB	20-20kHz
Signal to noise ratio (SNR) (dB)	98	96	100
Power supply	USB powered, 5V 80mA	115V-230V, 50-60Hz	5V 450mA
Wireless type	-	-	802.11b/g/n
Weight (kg)	0.25	1.2	1.5
Dimensions (W x D x H mm)	68 x 38 x 21	229 x 216 x 51	180 x 215 x 42
Standard accessories	USB cable	USB cable, power cable	Power adapter, antenna
Colour	Red / Black / Silver	Black / Silver	Silver

## AV processor

### Model name

**AVP18**



Product category	Home cinema
Product type	AV processor
Connections - input	4x HDMI, 2x digital coax, 2x Toslink optical, USB-B (service), USB-A Bluetooth
Connections - output	HDMI (ARC), 8x RCA, SPDIF
Connections - control	RS232, trigger
Maximum sampling rate	192kHz
Bit resolution (bit)	24
Frequency response	20Hz-20kHz
Signal to noise ratio (SNR) (dB)	100
Power supply	115V-230V, 50-60Hz
Supported HD Audio	Dolby Digital, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, Dolby Pro Logic IIx, Dolby Pro Logic IIz, DTS, DTS ES, DTS HD, DTS HD Master Audio, DTS Neo:6, SPDIF, PCM 8 channel
Video input	HDMI/DVI, 480P, 576P, 720P50, 720P60, 1080i 50, 1080i 60, 1080P 50, 1080P 60, 1080P 24
Weight (kg)	4.6
Dimensions (W x D x H mm)	430 x 314 x 81
Standard accessories	Power cable, IR remote control, setup mic for room equalization
Colour	Black

## Integrated amplifiers

**DDA120**



Product category	Home stereo
Product type	Integrated amplifier
Connections - input	USB-B, 2x Toslink, digital coax, USB-A Bluetooth, RCA
Connections - output	Four-way binding posts
Connections - control	IR remote
Power output	2x 75W @ 4 Ohm, 2x 50W @ 8 Ohm
Maximum sampling rate (kHz)	44.1, 48, 88.2, 96, 176.4
USB Sampling Rates (kHz)	44.1, 48, 96
S/PDIF Sampling Rates (kHz)	44.1, 48, 88.2, 96, 176.4
Bit resolution (bit)	16, 24
Gain (dB)	Digital: 11.625 Analog: 31
Frequency response	20Hz-20kHz +/- 0.1dB
Signal to noise ratio (SNR)	>95dB A-Weighted
Power supply	115V-230V, 50-60Hz
Weight (kg)	1.2
Dimensions (W x D x H mm)	241 x 216 x 51
Standard accessories	IR remote, power cable, manual
Colour	Black / Silver

# Specifications

## Amplifiers

Model name	HA200	STA120	STA200
			
Product category	Home stereo	Home stereo	Home stereo
Product type	Headphone amplifier	Stereo amplifier	Stereo amplifier
Connections - input	RCA, XLR	RCA	RCA
Connections - output	XLR, 6.3mm	Five-way binding posts	Five-way binding posts
Connections - control	-	-	-
Power output	393mW @ 16 Ohm, 747mW @ 32 Ohm, 383mW @ 100 Ohm, 129mW @ 300 Ohm, 70mW @ 600 Ohm	2x 140W @ 4 Ohm, 2x 100W @ 8 Ohm	2x 80W @ 8 Ohm
Peak output power	600mW @ 16 Ohm, 937mW @ 32 Ohm, 530mW @ 100 Ohm, 180mW @ 300 Ohm, 96.3mW @ 600 Ohm	300W	16 Ohm
Recommended headphone impedance (Ohm)	32 to 600	-	-
Balanced mode	200 Ohm, 14.6Vrms	-	-
Frequency response	10Hz-20KHz	10Hz-40KHz	20Hz-80kHz
Signal to noise ratio (SNR) (dB)	>106	115	100
Power supply	115V-230V, 50-60Hz	115V-230V, 50-60Hz	115V-230V, 50-60Hz
Weight (kg)	2.2	3.5	6
Dimensions (W x D x H mm)	217 x 231 x 44	215 x 230 x 50	355 x 224 x 87
Standard accessories	Power cable, manual	Power cable, manual	Power cable, umbilical cord (for WDC200)
Colour	Black	Black / Silver	Silver



## Amplifiers

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### MCA18



Home cinema

Multi channel amplifier

8x RCA

8x speakers

12V trigger

8x 110W @ 4 Ohm, 8x 55W @ 8 Ohm

-

-

10Hz-50kHz

>89

115V-230V, 50-60Hz

6.5

432 x 340 x 70

Power cable, manual, trigger cable

Black

### MCA20



Home cinema

Multi channel amplifier

8x RCA

8x speakers

-

8x 278W @ 4 Ohm, 8x 150W @ 8 Ohm

8x 352W @ 4 Ohm, 8x 187W @ 8 Ohm

-

-

10Hz-50kHz

>91

115V-230V, 50-60Hz

15

432 x 340 x 80

Power cable, manual, trigger cable

Black

# 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.

## 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.

## 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.

## Multi channel amplifier

Designed to connect to a surround sound speaker system and deliver the individual signal required to create the surround sound effect to each speaker.

## 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.

## Power amp

Offering the power and current required to transform the signal sent from source into sound via a connection to speakers.

## Pre amp

Improves separation of audio signal and provides the ability to change sources and volume levels. Requires a power amp in order to transform the signal from source into sound.

## 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.

## Surround sound processor

Detects and converts surround sound and other types of audio signal from digital and analogue sources and divides the signal between the individual speakers.

## 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.

**Optoma**

Optoma has a full range of business, education and home entertainment projectors.

To see the range please visit  
[www.optoma.com](http://www.optoma.com)



**PRO | SCENE**

Optoma has a full range of professional AV projectors.

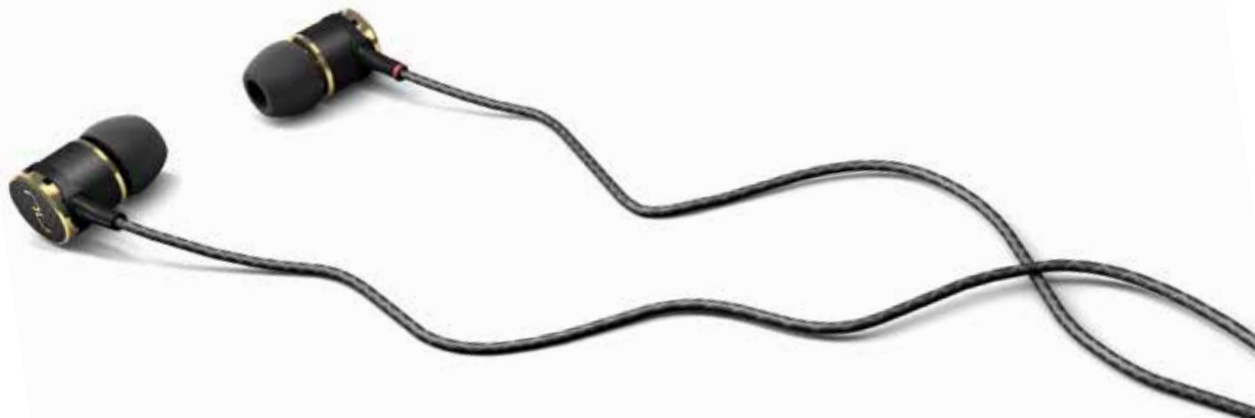
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**Optoma**  
LED Lighting

Optoma also has a full range of LED lighting.

To see the range please visit  
[www.optoma.com](http://www.optoma.com)



The logo for Touchboards features the word "Touchboards" in a bold, black, sans-serif font. The letters "T", "C", and "B" are each enclosed within a square frame. The "T" frame is yellow, the "C" frame is light blue, and the "B" frame is orange. The remaining letters "o", "u", "c", "h", "b", "o", "a", "r", "d", "s" are not enclosed in frames.

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The Optoma logo consists of a white, stylized, curved swoosh above the word "Optoma" in a white, italicized, sans-serif font.

*Optoma*

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