



S2 Chrome Set Stream Box S2 Ultra & Pre Box S2 Digital

Digital micro preamplifier & Audio optimized network bridge

MSRP 1499 € (incl. VAT)

- Selected components
- Chrome surface on aluminium body
- Comes in high quality wooden box
- Dual mono construction
- MQA hardware decoding
- DSD64, DSD128, DSD256 & DSD512 (DSD over PCM)
- Up to 24bit/192kHz for optical & coax inputs
- 7 selectable digital filter characteristics
- 1 proprietary optimum transient digital filter
- Synchronization of all internal oscillators
- Jitter as low as 100 Femtoseconds!
- Audio optimized USB A output
- TIDAL, Spotify, Quobuz, Roon, Internet Radio (TuneIn)
- Controllable via App and PC/Laptop
- Multi-room enabled
- Bluetooth + Sharepoint
- Cleans up the audio signal from a PC
- HDMI video output
- Ethernet and WiFi connectivity

Pre Box S2 Digital:

3 digital inputs: 1x coax (S/PDIF), 1x optical (TOSlink®), USB B
D/A-converter: 2x ESS9038Q2M 32-bit PCM 768kHz / DSD512
Headphone amplifier chip: ESS9602
Sampling rates: 32/44,1/48/88,2/96/176,2/192/352,8/384/768 kHz
DSD support: DSD64, DSD128, DSD256 and DSD512
MQA support: full MQA unfolding by hardware
Frequency response: 20Hz - 20kHz, 0,0003% THD
Analogue out: 6.3mm Headphone Out (front), 1x Variable Out (RCA)
Output voltage: 2,05 Veff
Headphone output power: 68mW (32Ohms)
Power consumption: 5V, micro USB
Dimensions: 103 x 37 x 122 mm, 366g without power supply

Stream Box S2 Ultra:

Audio Formats: PCM 32bit/352.8kHz, DSD256
Supported data protocols: Roon Ready, Shairport, DLNA
Inputs: 2 x USB A, Micro USB B, Network (Ethernet, WiFi)
Outputs: Audio optimized USB A, HDMI (video)
Dimensions WxHxD: 105 x 37 x 105 mm, 375 g without power supply

The S2 Set in chrome finish!

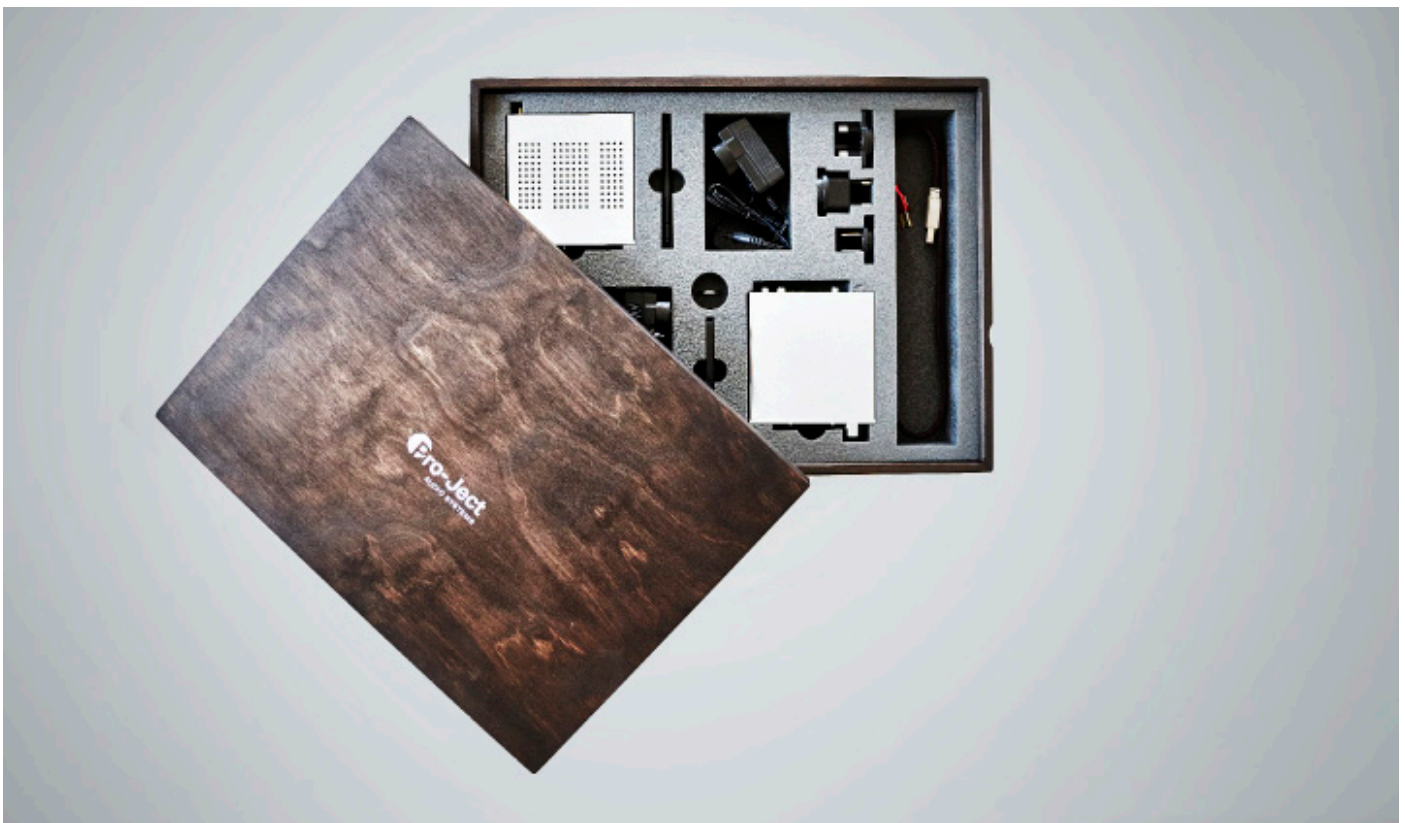
Pre Box S2 Digital and Stream Box S2 Ultra mark a new era for our S-series components.

For the very first time we are using a dual mono configuration with the highest class D/A converters of ESS Sabre, their flagship DAC chip ensures highest class audio in a small and affordable package. This DAC is capable of high resolution audio up to 32bit 768kHz PCM and DSD512!

Pre Box S2 Digital is also the very first of our devices to support hardware MQA unfolding. It's also the premiere of our proprietary Optimum transient digital filter and our proprietary clock circuitry design. Digital audio is the art of time, with our new proprietary clock design we have managed jitter rates of unrivalled 100 Femtoseconds, this easily outperforms many renowned and respected audiophile clock generators! With organic polymer capacitors and thin film miniMELF resistors we were able to create a tiny device that will blow away even much bigger components for a much higher price.

With a total of seven digital filters the sound can be shaped precisely to the listeners liking. Pre Box S2 Digital is fully remoteable, it can also control the playback software of a computer. You can use Play, Pause, Forward and Rewind straight with your Pre Box S2 Digital! The set comes in a high quality wooden box.

Stream Box S2 Ultra Chrome closes the gap, it offers modern connectivity with its network inputs and USB A output. This USB output is perfectionized for audio signals, it uses a dedicated internal power supply and only top audiophile grade components. You won't run into file-support issues, as Stream Box S2 Ultra Chrome acts as a network bridge, bypassing the files directly to your digital to analogue converter. Since most DACs only have one USB input, we have designed Stream Box S2 Ultra also to be a USB detox device. Simply connect your PC to the micro USB input of the unit and connect our DAC to the audio output. This way you can clean the noisy signal of your PC, while enjoying your music with it. Our new remote control iOS and Android App is based on an open-source project and has a large community behind it. This guarantees full support and future improvements.



First class components from first class manufacturers!

We are using dual DAC 2 x ESS9038Q2M - the newest generation of SABRE Digital to Analog Converter. The new benchmark in audio excellence. The ES9038 SABRE DAC is a high-performance 32-bit digital to analog converter and uses ESS's patented 32-bit Hyperstream II modulator architecture and Time Domain Jitter Eliminator. It is the first SABRE DAC to use new Dual-DAC architecture to further enhance performance. It also delivers an unprecedented dynamic range of up to 129dB and total harmonic distortion plus noise of -120dB (THD+N) – a performance level that will satisfy the most demanding audio enthusiasts.

ESS9602 - headphone amplifier and output buffer. Supports a dynamic range of up to 122dB and THD+N of -117dB with 600ohm loads. Additionally, we implemented a unique feature that improves THD+N with 32ohm loads to -112dB in Best Performance mode.

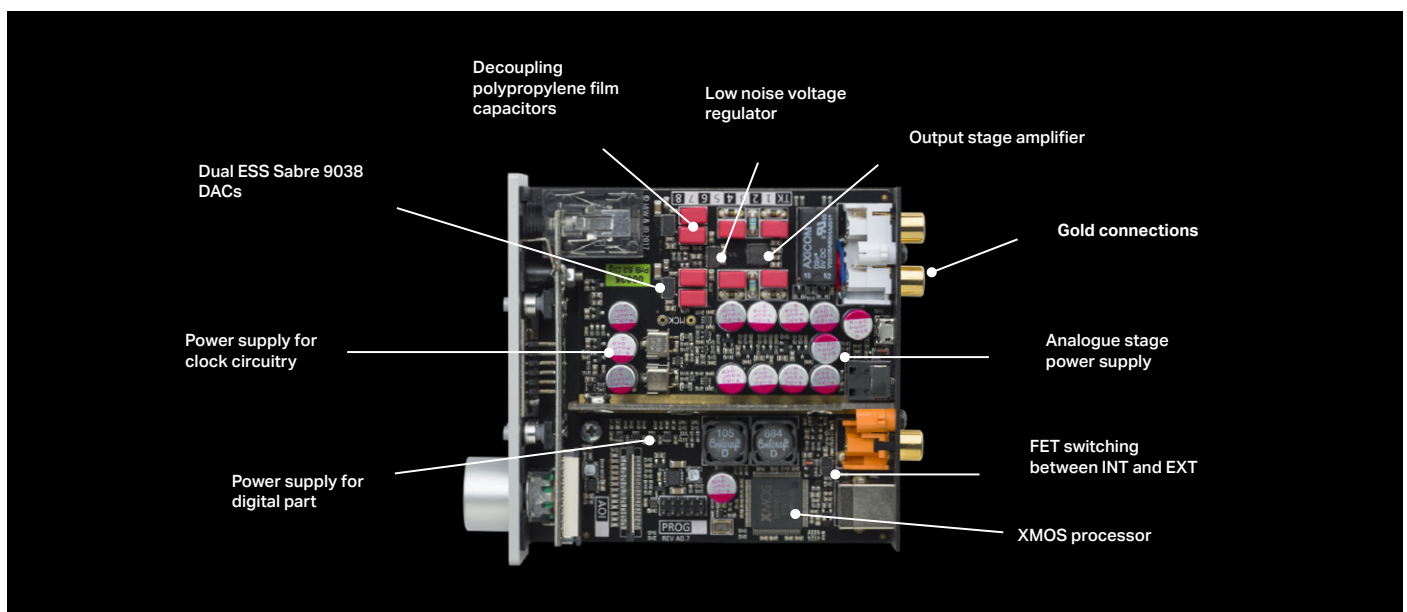
ESS9311 - is the industry's first low-noise, low-dropout regulator designed specifically for high-performance audio systems. It is optimized for high resolution audio thanks to its revolutionary dual regulator architecture. This innovative architecture contains series-voltage and shunt-voltage elements, eliminating the need for output decoupling capacitors – an industry first in audio system design. The ESS9311 provides the extreme-

ly low-noise outputs that are necessary for driving the reference inputs of audio converters and offers significant value-add for audio system designers.

Organic polymer capacitors are used in critical positions like the analogue power supply. These capacitors are very low thermal drift which result in consistent playback performance. Precision Thin Film MELF resistors - such resistors has very low voltage coefficient. It results in perfect sounds without impurities. 16-core XMOS USB chip for asynchronous USB data transfer and MQA unfolding. Gold plated four layer PCB with extra shielding for achieving optimal audio performance. Full colour OLED display for indication of volume level, selected input, sample rate and type of input digital signal.

Synchronization of all oscillators

This extremely important feature is almost always overseen. Imagine an orchestra without a drummer or a conductor. Every musician plays in his own rhythm and tempo. The result is chaos which nobody can listen to. The same applies to oscillators in a DAC. There are a lot of oscillators with different frequencies and they start to talk chaotically - what could the result be? The complete opposite happens when all the oscillators are perfectly synchronized and work like an orchestra with the perfect conductor. This results in low jitter, minimizing of interference and it is very important for good sound.



Feature galore!

Stream Box S2 Ultra Chrome is fully remoteable via smart devices and a regular web-browser. It offers support for the most popular streaming services: Spotify and TIDAL. Both services offer you a sheer endless amount of music, guaranteeing you, that you never run out of music to listen to.

By implementing Shoutcast, we also give you the option to listen to various internet radio stations. You can listen to your favourite radio shows, the news and discover new channels from all around the world - with just a few clicks. The back-sided HDMI video output lets you connect your monitor to the Stream Box S2 Ultra. It will then show you the graphic user interface, ready to act on your commands.

With the implementation of Shairport we were even able to give the iDevice users out there another possibility to send data to our Stream Box S2 Ultra Chrome. There are two USB inputs on Stream Box S2 Ultra Chrome, one front sided and one back sided. Both give you the pos-

sibility to connect an external harddrive to the unit. Via one of the various control scenarios (App, Webbrowser, external monitor) you can pick from your own selection of audio. The file system support goes up to PCM 32bit / 352.8 kHz and DSD256.

Here at Pro-Ject, we are big supporters of the Roon software, that is why we wanted the Stream Box S2 Ultra Chrome to be Roon Ready. This way you can simply pick your Stream Box S2 Ultra Chrome in the Roon interface and send bit-perfect audio streams to it over your network.

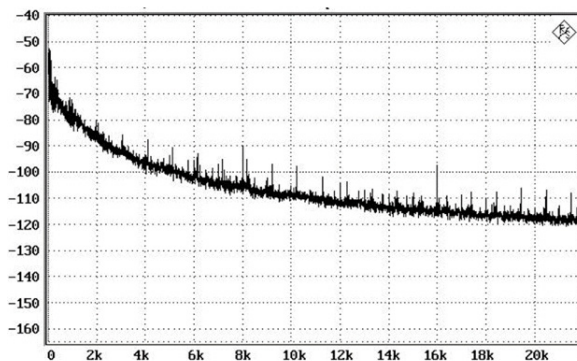
This incredible feature set makes Stream Box S2 Ultra Chrome bullet-proof for all future events. Together with Pre Box S2 Digital Chrome they become the most versatile and audiophile set in its price class.



Double filtering for a noise free USB input

One of the major problems for USB DACs is the transmission of unwanted noise coming through the USB output. A lot of research of Pre Box S2 Digital went into how to make this noisy connection more quiet. After a lot of headscratching trial and error we found the solution to lie in active and passive filtering of the output.

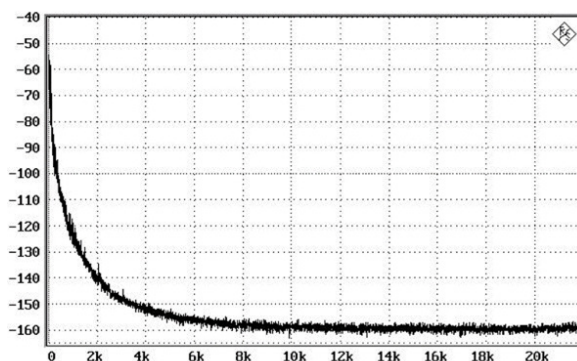
Typical USB output from personal computers:



We can see that the noise floor at 1kHz is about -75dB and at 10kHz it is about -110dB.

The result can be seen here:

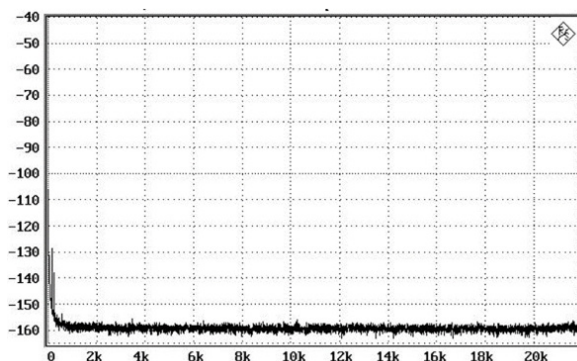
USB output after passive filtering



After applying passive RF interference filtering the results are already remarkable. Noise on 1kHz drops to -125dB, at 10kHz Noise comes even close to -160dB. But they improve even further when applying an active filter after the passive filtering.

This is the USB output noise after double filtering:

USB output after active filtering



The results are limited by the capabilities of the measuring equipment and noise floor lays at -160dB or even lower. There are visible peaks at 50Hz and 100Hz which are caused by limits of the measuring instruments. However, they are at a level of -130dB and -140dB.