

## Gustard X30

# Gustard X30 Network Streaming DAC User Manual

Model: X30 | Brand: Gustard

## 1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your Gustard X30 Network Streaming DAC. Please read this manual thoroughly before using the device to ensure optimal performance and longevity.



Figure 1: Front view of the Gustard X30 Network Streaming DAC in silver finish.

## 2. KEY FEATURES

The Gustard X30 is a high-performance balanced DAC and preamplifier designed for audiophiles, featuring advanced digital and analog technologies.


- **Quad ES9039SPRO & ES9311Q Chipset:** Utilizes four ES9039SPRO DAC chips and ES9311Q for a fully balanced architecture with independent power supply and grounding for each channel.
- **High-Resolution Audio Support:** Supports PCM up to 32bit 768kHz, native DSD512, and MQA 384K decoding via XMOS XU216 USB interface.
- **Advanced DSP Digital Filter:** Incorporates ADI SHARC DSP platform with newly developed high-performance digital filters, supporting 3 types of PCM and 4 types of DSD, including NOS mode.
- **Passive Analog Preamplifier:** Features R2R relay volume adjustment for lossless signal control, allowing direct connection to active studio monitors or power amplifiers.
- **Network Streaming Capabilities:** Connects to networks and supports Roon, Airplay, DLNA, UPnP, and NAA

protocols with configurable settings and online upgrade functions.

- **High-End Components:** Includes K2 synthesizer synchronous clock implantation technology, local OCXO clock, external 10M clock input, and discrete Class A analog LPF circuits for optimized performance.

# X30 Network Streaming Decoder

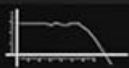
## ES9039SPRO X 4




USB DSD 22.4M      FIXED      - \* +

**ESS** ES9039SPRO Quad Core

**ESS** ES9311Q Multi-group energy-rich independent power supply

 DSP autonomous digital filtering reduce aliasing noise

Digital filtering :  
4 kinds of DSD filters  
3 kinds of PCM filters  
support NOS mode

 FPGA programmable logic chip,  
Self-constructed logic function,  
Clock management Digital Shaping

Synchronized clock implantation technology:  
reduce device audio clock requirements


**K2** Built-in OCXO constant temperature crystal oscillator  
supports 10M clock input, K2, ultra-low noise synthesizer

Bridge. Network Streaming ROON Bridge Airplay.UPnP.NAA

**DSD** DSD512

**PCM** PCM768K

**XMOS** DSD512  
PCM768K  
MQA384K

 Dual IIS-H Inputs, IIS Line Sequence Adjustable

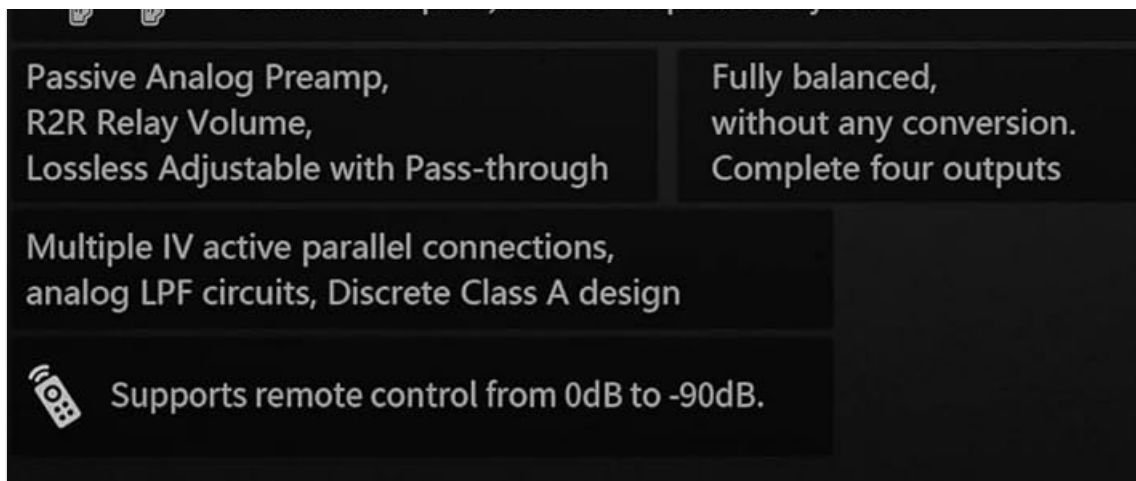


Figure 2: Overview of key features and supported audio formats, including ES9039SPRO Quad Core, DSP digital filtering, network streaming, and clock synchronization.

## 3. SETUP GUIDE

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### 3.1 Unpacking and Placement

Carefully remove the Gustard X30 from its packaging. Place the unit on a stable, level surface away from direct sunlight, heat sources, and excessive moisture. Ensure adequate ventilation around the unit.

### 3.2 Connecting Power

Connect the provided power cable to the AC input on the rear panel of the X30. Ensure the voltage switch (if present and accessible) is set to your local mains voltage (AC115V/230V). Plug the other end into a suitable wall outlet.

### 3.3 Input and Output Connections

The Gustard X30 offers a variety of digital inputs and analog outputs. Refer to the rear panel diagram for connection points.



Figure 3: Rear panel showing various input and output connections, including Clock, Coaxial, AES, USB, LAN, IIS, XLR, and RCA.

- **USB Input:** Connect your computer or digital audio source via a USB cable.
- **Optical/Coaxial/AES Inputs:** For connecting digital audio sources like CD players, media streamers, or TVs.
- **LAN Input:** For network streaming capabilities. Connect an Ethernet cable to your router or network switch.
- **IIS Inputs (x2):** For high-quality digital audio transmission from compatible sources.
- **Clock Input:** For connecting an external 10M clock for enhanced timing precision.
- **XLR Outputs (Balanced):** For connecting to balanced amplifiers or active speakers.
- **RCA Outputs (Unbalanced):** For connecting to unbalanced amplifiers or active speakers.

## 4. OPERATING INSTRUCTIONS

## 4.1 Front Panel Controls



- 1、Standby Switch
- 2、Display Area
- 3、Display Area
- 4、Remote control reception
- 5、Touch area

## ES9039SPRO X 4

Adopting 4 pieces of ESS flagship chip ES9039SPRO for decoding, two pieces per channel to form a fully balanced architecture, completely independent power supply, independent grounding, to obtain the best performance.

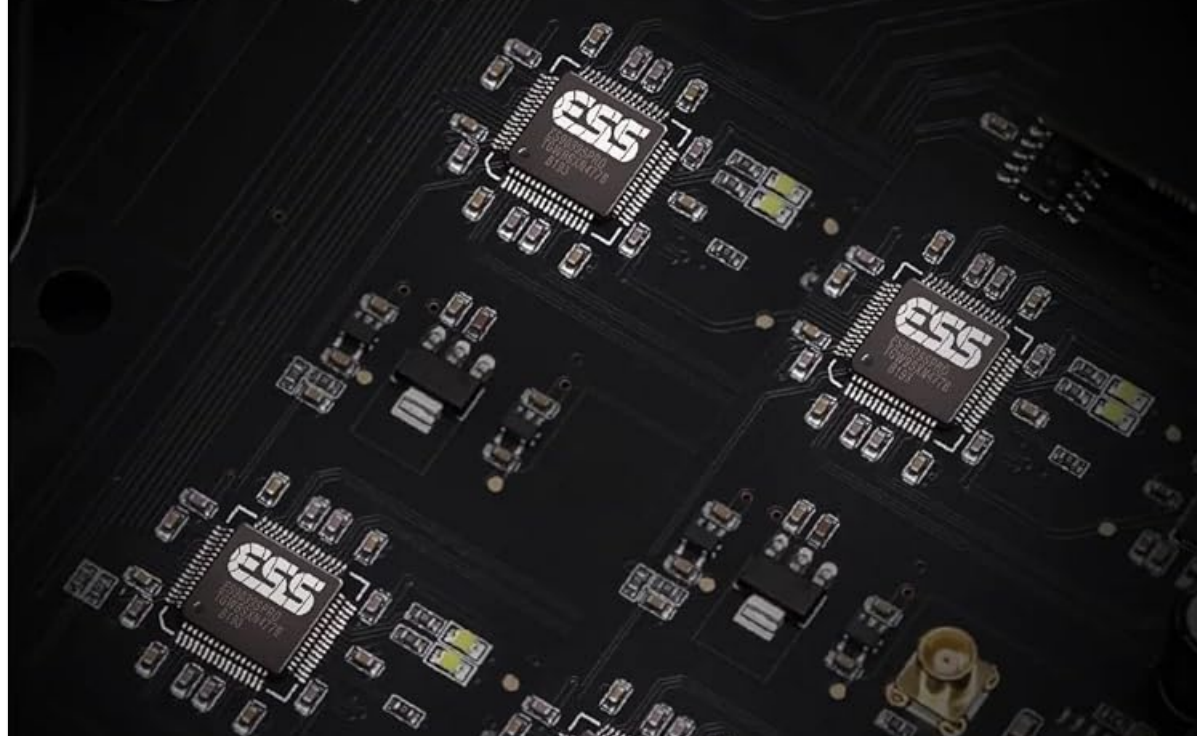




Figure 4: Front panel layout and control areas, indicating standby switch, display, remote reception, and touch area.

1. **Standby Switch:** Press to power on/off the unit or put it into standby mode.
2. **Display Area:** Shows current input, sample rate, and other operational information.
3. **Remote Control Reception:** Infrared receiver for the remote control.
4. **Touch Area:** Used for navigation and selection on the display.
5. **Volume/Menu Controls:** Adjusts volume or navigates menu options.

## 4.2 Basic Operation

- **Power On/Off:** Press the standby switch on the front panel or the power button on the remote control.
- **Input Selection:** Use the front panel controls or remote to cycle through available digital inputs (USB, Optical, Coaxial, AES, LAN, IIS, Clock).
- **Volume Adjustment:** Rotate the volume knob or use the +/- buttons on the remote. The X30 features a passive analog preamplifier with R2R relay volume adjustment for lossless control.
- **Menu Navigation:** Access settings and advanced options via the front panel touch area or remote control.

## 4.3 Network Streaming

The Gustard X30 supports various network streaming protocols. For initial setup and configuration, access the device's web configuration page. The Linux kernel is optimized for I/O to reduce audio data forwarding delay and jitter.

- **Roon Ready:** Integrate the X30 into your Roon ecosystem for seamless music management and playback.
- **Airplay 2:** Stream audio wirelessly from Apple devices.
- **DLNA/UPnP:** Connect to compatible media servers and control points.
- **NAA (Network Audio Adapter):** For advanced network audio setups.
- **Firmware Updates:** The device supports online firmware upgrades via the network connection.



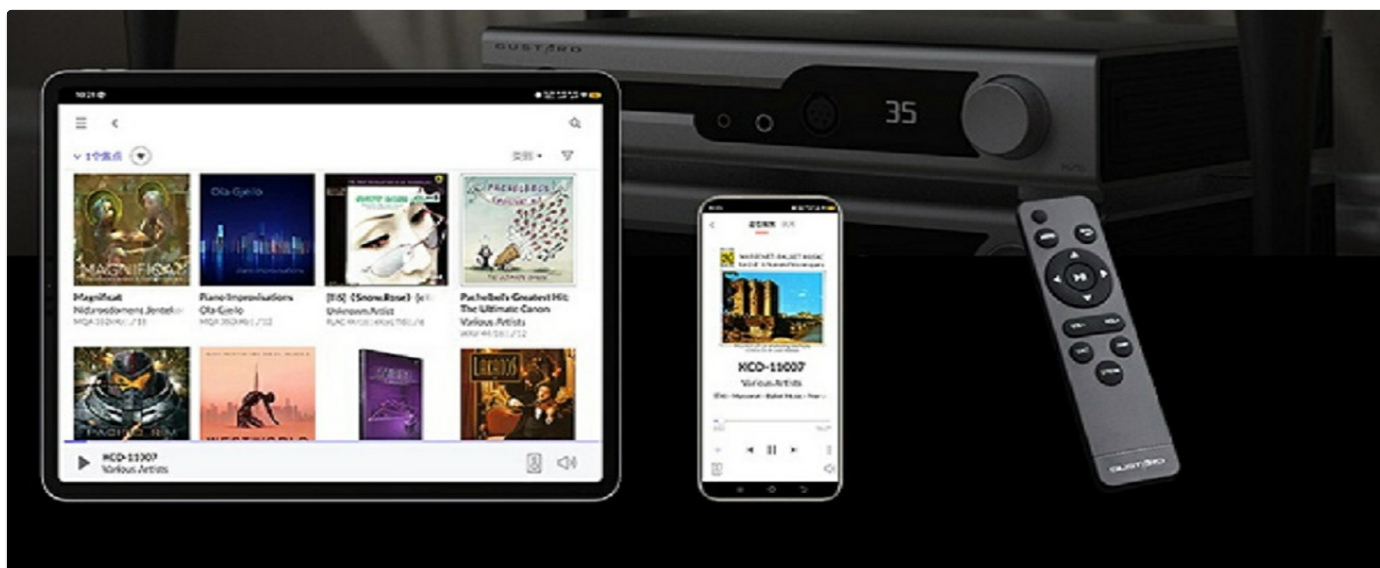


Figure 5: Example of network streaming interface on a tablet and smartphone, demonstrating connectivity and music playback.

## 5. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid using abrasive cleaners or solvents.
- **Ventilation:** Ensure that the ventilation openings are not blocked to prevent overheating.
- **Firmware Updates:** Regularly check for and install firmware updates to ensure optimal performance and access to new features. Instructions for online updates are available via the device's web interface.

## 6. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power	Power cable not connected; Power outlet faulty; Unit in standby.	Check power cable connection; Try a different outlet; Press standby switch to power on.
No sound output	Incorrect input selected; Volume too low; Cables not connected properly; Amplifier/speakers off or faulty.	Select correct input; Increase volume; Check all audio cable connections; Verify amplifier/speaker status.
Network streaming issues	Network cable disconnected; Router/network issue; Incorrect network settings.	Check LAN cable connection; Restart router; Verify network settings via web interface.
Distorted audio	Source audio quality; Incorrect sample rate setting; Faulty cables.	Ensure source audio is high quality; Check sample rate settings on source and DAC; Replace audio cables.

If the problem persists after attempting these solutions, please contact customer support.

## 7. TECHNICAL SPECIFICATIONS



Figure 6: Detailed specifications table outlining supported PCM, MQA, and DSD formats for USB/IIS streamer and AES/Coaxial/Optical inputs.

## Digital Input

- **LAN Support Protocols:** Roon, Airplay, UPnP, NAA, Spotify (configurable via web page, online upgradeable)
- **LAN Speed:** 100/1000Mbps
- **10M Clock (BNC):** Input impedance 50 Ohm, 0dBm-20dBm, CMOS square wave 0.2V-3.3V, Sine wave 0.5V-3.3V

## Analog Output

- **Frequency Response:** 20-20kHz /  $\pm 0.2$ dB
- **Dynamic Range:**  $>130$ dB
- **Signal to Noise Ratio:**  $>129$ dB
- **Channel Crosstalk:**  $-139$ dB @ 10kHz
- **THD+N:**  $\leq 0.0001\%$  @ 1kHz
- **IMD:**  $\sim 0.001\%$  @  $-1$ dbfs
- **RCA Output Level:** 2.5Vrms (VOLUME FIXED)
- **RCA Output Impedance:**  $100\Omega$
- **XLR Output Level:** 5.1Vrms (VOLUME FIXED)
- **XLR Output Impedance:**  $100\Omega$
- **XLR Interface Definition:** American standard (1 ground, 2 hot, 3 cold)

## Other Parameters

- **AC Power Supply:** AC115V/230V 50/60Hz
- **Power Consumption:**  $<30$ W
- **Size (W\*D\*H):** 430mm \* 300mm \* 80mm (including feet 92mm)
- **Package Size (L\*W\*H):** 530mm \* 400mm \* 180mm
- **Weight with Package:** 10KG







## 8. WARRANTY AND SUPPORT

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The Gustard X30 is covered by a manufacturer's warranty. Please refer to the warranty card included with your product for specific terms and conditions. For technical support, troubleshooting assistance beyond this manual, or warranty claims, please contact your retailer or the manufacturer, Gustard, directly. The seller, Auinshifiman, also provides 24-hour online service and a 1-year or more pledge from the date of purchase.

For further assistance, you may contact Auinshifiman through their Amazon seller page: [Auinshifiman Seller Page](#).

Related Documents - X30

	<p><a href="#">GUSTARD X30 High Performance Audio DAC User Manual</a></p> <p>Comprehensive user manual for the GUSTARD X30 High Performance Audio DAC, detailing its features, operation, settings, specifications, and warranty information.</p>
	<p><a href="#">Gustard R26 High-Performance Audio DAC User Manual</a></p> <p>User manual for the Gustard R26 High-performance Audio DAC, detailing its features, operation, specifications, and warranty information.</p>
	<p><a href="#">Gustard R26 High-Performance Audio DAC User Manual</a></p> <p>Detailed user manual for the Gustard R26 High-Performance Audio DAC. Covers MQA technology, front and back panel controls, screen and menu operations, remote control functions, comprehensive specifications, and product warranty information. Essential guide for audiophiles using the Gustard R26.</p>
	<p><a href="#">Gustard A26 High Performance Audio DAC User Manual</a></p> <p>Comprehensive user manual for the Gustard A26 High Performance Audio DAC, covering features, operation, specifications, and warranty information. Learn about MQA, input/output options, and menu settings.</p>
	<p><a href="#">Gustard A26 MQA DAC</a></p> <p>Gustard A26      DAC                      MQA</p>
	<p><a href="#">Gustard X30 High Performance Audio DAC User Manual</a></p> <p>User manual for the Gustard X30 High Performance Audio DAC, detailing front and rear panel operations, settings menu, remote control functions, streamer operation, product specifications, and after-sales service.</p>