



ESOTERIC

N-01XE Network Dac

257493



Esoteric N-01XE Network/DAC pairs the Master Sound Discrete DAC G2 and Network Engine G4 from the flagship Grandioso N1 in the 01 Series. Five independent linear power supplies deliver a smooth, natural, analog-like sound.

Colour



PRODUCT DETAILS

Authentic. Emotional.

The Esoteric "01" Series

Exquisite mechanical construction.

A unique discrete circuit design that faithfully reproduces the texture of music.

A powerful power supply forms the foundation for three-dimensional sound.

The exceptionally substantial chassis built without regard for cost.

The elegant finish achieved through a combination of various machining techniques.

The Esoteric "01" Series is the premium line that embodies all these hallmarks of Esoteric.

Continuously advancing audio engineering while refining every technology to its purest expression, the "01" Series has become the iconic expression of Esoteric's heritage of innovation and tradition.

With its authentic, emotionally engaging sound and uncompromising musical performance, the "01" Series has consistently set new standards in premium audio reproduction.

Crafted with the pride of Japanese artisanship, Esoteric's commitment to quality and attention to detail demonstrates our deep respect for all music lovers.

Featuring a Next-Generation Discrete DAC and Network Engine

The N-01XE network/DAC is more than the successor to the acclaimed N-01XD SE. By incorporating the Master Sound Discrete DAC G2 and Esoteric Network Engine G4, both derived directly from the flagship Grandioso N1, it brings Esoteric's latest digital playback technologies to the prestigious 01 Series.

Esoteric's proprietary "Master Sound Discrete DAC" has evolved into its second-generation G2 architecture, achieving even higher performance while preserving its signature musicality. The next-generation "Esoteric Network Engine G4" enables even purer streaming via optical network connections.

Although the N-01XE is a stereo unit, its built-in DAC employs a fully dual-mono configuration with independent power transformers for the left and right channels. It features a large-scale design incorporating a total of five independent power transformers: one each for the left and right DACs, the network engine, digital circuits and the microcontroller. Supplying each circuit with its own robust linear power source contributes to a smooth, natural, and remarkably analog-like sound.

N-01XE – Key Features

- **Network/DAC:** Designed for premium digital music streaming and high-resolution file playback.
- **4th-Generation Esoteric Network Engine G4:** Supports native DSD 22.5 MHz playback and features an SFP optical network port.
- **Master Sound Discrete DAC G2:** New-generation FPGA based Multi-Level DAC, fully designed and manufactured in-house using precisely selected discrete components.
- **ES-Link Analog:** Esoteric's proprietary current-transmission link for compatible preamplifiers, delivering exceptionally natural sound.
- **Independent x5 Linear Power Supplies (Dual Mono DACs/Network/Digital Audio/Microcomputer):** Delivers powerful, exceptionally transparent sound.
- **Low-Feedback Discrete DC Power Regulator:** Contributes to a more open, dynamic, and lifelike sound.
- **ES-Link5:** Esoteric's proprietary ultra-wideband HDMI cable link with Esoteric SACD transport.
- **Wide Range of Digital Connectivity:** ES-Link5 x1 [L/R], USB x1, XLR x1, Coax x1, Opt x1.
- **Music Server Function:** Connect a USB storage device for convenient local music playback.
- **Master Sound Discrete Clock for Digital Player:** Ultra-high precision internal clock circuit.
- **10MHz Clock Sync Capability:** Compatible with Esoteric G-01XD and G-05 master clocks.
- **Wide Range of Supported File Formats:** DSF, DSDIFF, FLAC, ALAC, WAV, AIFF, MQA, MP3, AAC.
- **Esoteric Sound Stream App:** Provides extremely comfortable operation on smartphone/tablet.
- **Support for Multiple Streaming Services:** Tidal, Tidal Connect, Qobuz, Qobuz Connect, Roon*, Spotify, QQ Music.
- **Multi-Layer Chassis:** Prevents interference between circuit components.
- **Semi-Floating Top Panel:** Enhances sonic openness.
- **Advanced Isolation Feet:** Provides focused sound and an open soundstage.

*Regarding Roon Ready, we are currently undergoing certification testing. We will announce on the website when we have officially decided to support Roon Ready.

Master Sound Discrete DAC G2 – Key Features

- **FPGA-Based, Multi-Level D/A Converter:** Fully designed and manufactured in-house.
- **Proprietary 64-bit/512-Fs Modulator:** One of the most powerful processing architectures in the industry.
- **Unique Discrete Circuit:** Completed without using conventional DAC chipsets.
- **FPGA Digital Processing Algorithms:** Independently optimized for DSD and PCM, with dedicated algorithms developed separately for each format.
- **Industrial-Grade, Ultra-High-Precision MELF Resistor Elements**
- **Manufactured in the Esoteric Factory:** One of the world's premier PCB mounting facilities, equipped with oxygen-free reflow furnaces and hospital-grade clean rooms.
- **Extensive Use of Audio-Grade Components:** Including Esoteric's exclusive IDM-01 amplifier modules.
- **Low-Noise New Register Network:** Provides cleaner imaging and lower noise.
- **Redesigned Power Supply:** Extensively separated FPGA power lines, and hot/cold analog power lines, achieving ultimate supply purity.
- **"Esoteric-HCLD" High Current Line Driver:** Super high slew-rate design (2,000V/μs) bringing out all the dynamics and energy of music.

Bringing Out All the Dynamics and Energy of Music

Esoteric Master Sound Discrete DAC G2 is a fully in-house-designed, FPGA-based, multi-level (delta-sigma) D/A converter built with meticulously selected discrete components. The ultimate goal of this unique architecture is to effortlessly reproduce the true dynamics and power of music, far surpassing the limitations of conventional DAC IC chips. Its large-scale circuit design comprises 32 elements per channel and features completely independent key components, including clock drivers, logic circuits, capacitors, and resistors. Breathtakingly powerful, dynamic, and musical, this architecture delivers the ultimate pure listening experience, without compromise.

Advanced Digital Processing

Esoteric Master Sound Discrete DAC G2 supports the latest high-resolution digital formats, including 22.5 MHz DSD and 768 kHz PCM signals. To achieve D/A conversion that fully matches the unique characteristics of both DSD and PCM, dedicated FPGA* digital processing algorithms have been independently developed for each format. This ensures the finest sonic performance from any type of digital source.

*FPGA: Field-Programmable Gate Array

Evolution to G2 (Generation 2)

The second-generation Master Sound Discrete DAC G2 is the result of our commitment to achieving new heights in sound quality.

1 New Low-Noise Register Network

In a DAC, the resistor network is a critical circuit that converts the digital signal generated by the FPGA into an analog signal through precision resistor elements.

For the new G2 version of the DAC, Esoteric applied development achievements from our flagship network streamer, the Grandioso N1. This approach simplified and optimized the circuit responsible for switching the resistor elements on and off. In addition, capacitors placed in close proximity to the resistor network improve current supply stability, enabling the generation of purer analog signals with significantly reduced noise.

2 Even Purer Separate Power Supply Lines

A new approach was adopted that involved separating the power supply lines for the FPGA and the other digital domain circuits, as well as the hot and cold power supplies for the analog domains. Each section is powered by its own power regulator. Reconstructing the power lines further improved sound purity.

Extensive Use of Ultra-High-Quality Components

Ultra-High-Precision MELF Resistors / Proprietary IDM-01 Amplifier Modules

The DAC circuit's core resistor elements employ industrial-grade, ultra-high-precision MELF resistors to maximize processing accuracy. In addition, the analog filter section incorporates Esoteric's proprietary IDM-01 amplification module. Meticulously developed by Esoteric engineers, the IDM-01 was refined through rigorous evaluation of materials, circuit topology, and component layout, much like the development of a fully discrete amplifier. By integrating the IDM-01 with other carefully selected discrete components, the N-01XE achieves sound quality marked by vivid live presence, superb dynamics, and an organic, natural texture.

Advanced Quality Control

In a discrete DAC, where component tolerances are directly linked to processing precision, highly advanced quality control is essential in the manufacture of electronic circuit boards. Esoteric's in-house factory employs some of the world's most advanced board-mounting technologies, including soldering performed in an oxygen-free furnace located within a clean room maintained at hospital operating-room levels of cleanliness. The technologies cultivated through the production of circuit boards for the audio, medical, aerospace, and defense industries ensure the exceptional manufacturing quality of the Master Sound Discrete DAC G2.

Unique Esoteric-HCLD* Output Buffer Circuit with Enhanced Current Transmission

The Esoteric HCLD Output Buffer Amplifier features an astonishingly fast slew rate of 2,000V/μs. Current transfer and speed – the most important factors for an analog output circuit – have been pushed to the limit to reproduce the reality of music with a truly breathtaking dynamics.

*HCLD = High Current Line Driver

ES-Link Analog – Esoteric's Proprietary Current Transmission

In addition to conventional line-level connections (XLR and RCA), the amplifier can also be connected via ES-Link Analog, Esoteric's proprietary current-transmission system. ES-Link Analog is the ideal

method for high-end audio signal transmission. Compared with conventional voltage transmission, ES-Link Analog delivers approximately 100 times more current, allowing the full energy of the musical signal to reach the amplifier. Also, it is not affected by the impedance of the interconnects running between the source and amplifier, so it maintains a perfect integrity between the output signal of the source and the input signal to the amplifier.

Robust Power Supply Circuit

The N-01XE's robust power supply design is central to its powerful, three-dimensional, and lifelike sound. Following the design philosophy of the flagship Grandioso series, this stereo unit features a true dual-mono configuration with independent power transformers for the left and right DACs.

In total, the N-01XE employs five independent power transformers: one each for the left and right DACs, the network engine, the digital circuitry, and the microcontroller. Supplying each section with its own dedicated linear power supply contributes to a smooth, natural presentation with the musical ease often associated with analog playback. The key power supply section employs a fully discrete Low-Feedback DC Regulator, eliminating the use of integrated circuits. By minimizing feedback, the N-01XE achieves a powerful, open, and natural sound.

Master Sound Discrete Clock for Digital Player

It is no exaggeration to say that the clock circuitry is one of the most important elements to high sound quality in digital music reproduction. For the flagship Grandioso G1X Master Clock Generator, Esoteric developed its own in-house Master Sound Discrete Clock, an OCXO clock module engineered to the highest standards. The Master Sound Discrete Clock for Digital Player employed in the N-01XE inherits the core design philosophy of the Grandioso G1X's in-house-developed OCXO module and adapts it for the internal clock of Esoteric's digital players. Its unique circuit architecture, built around carefully selected discrete components including a large crystal oscillator, delivers exceptional sound quality that embodies Esoteric's engineering philosophy in every detail, surpassing what is possible with conventional off-the-shelf clock modules.

G-01XD: External Master Clock Generator Connectivity

The N-01XE can be connected to the G-01XD/G-05 external master clock generator, further enhancing sound quality by synchronizing its internal circuitry to an even more precise 10MHz reference clock.

Equipped with 4th Generation Esoteric Network Engine G4

The N-01XE is equipped with the 4th generation Esoteric Network Engine G4, a top-of-the-line engine with the processing power worthy of a premium grade network/DAC. The G4 engine features large-capacity RAM, a powerful CPU, and an SFP port for optical network connections.

The Esoteric Network Engine G4 is a concentrated embodiment of the design philosophy unique to high-end products. It boasts a dedicated linear power supply that is completely independent of the audio power supply, ensuring signal purity. Each component of the engine is independently powered through separate transformer windings. Moving beyond conventional switching power supplies, Esoteric incorporates premium components such as a large toroidal transformer, custom capacitors, Schottky barrier diodes, and other oversized parts. This meticulous engineering results in a sound that is smooth, vinyl-like, and richly detailed.

SFP Port

The Esoteric Network Engine G4 is equipped with a built-in network switch function and has two network interfaces: an Ethernet RJ45 connector and an SFP port.

By connecting the N-01XE to an external network switch using an SFP module and fiber optic cable, you can isolate the signal from network noise, achieving unparalleled purity in playback. Alternatively, a metal cable connection using a Direct Attach Cable (DAC) can simplify the network signal path by reducing the number of circuits involved. For maximum flexibility, both the RJ45 and SFP ports can be used simultaneously, tailoring the setup to your preferences and requirements.

Music Server Function

The N-01XE is equipped with a USB-A port and can function as a music server by connecting a USB storage device, such as a flash drive or HDD/SSD unit.

Extensive Noise Isolation

The connection between the network engine and the digital audio circuit is routed through isolator circuits that effectively eliminate potential network-generated noise. Thanks to this design, the N-01XE delivers clear, beautifully immersive sound, befitting its status as a premium Network/DAC.

Support for Various Network Sources

The N-01XE supports a wide range of formats for network playback, including DSF, DSDIFF, FLAC, ALAC, WAV, AIFF, MP3, AAC, and MQA. It handles playback up to DSD 22.5MHz and PCM 768kHz*/32-bit, and also supports the 32-bit float format commonly used in the professional audio industry. The N-01XE provides gapless playback for all lossless formats.

* Down-converted to 384kHz for playback.

ESOTERIC Sound Stream

The Esoteric Sound Stream app, available for both Apple iOS and Android devices, is designed to combine exceptional sound quality with effortless usability. Tailored for smartphones and tablets, this innovative app allows users to easily browse, manage, and customize their music playback experience with just a few taps.

With its intuitive interface, creating and managing playlists becomes seamless. All screens are thoughtfully designed for straightforward navigation, ensuring that music libraries and playlists are easily accessible to users of any experience level. At the same time, the app offers a suite of advanced features to satisfy even the most seasoned audiophiles.

Compatible with a Wide Selection of Audio Codecs and Streaming Services

Esoteric has partnered with a wide array of streaming service and audio codec providers, and preparations are currently underway to provide compatibility with newer services.

* Information on newly supported services will be released on Esoteric's website.

* Please note that regional restrictions may be applied on some services.

*Regarding Roon Ready, we are currently undergoing certification testing. We will announce on the website when we have officially decided to support Roon Ready.

Advanced Digital Connectivity

Flexible Connectivity for Digital Sources

In addition to AES/EBU (XLR), coaxial and optical inputs, the N-01XE features an asynchronous USB-B port supporting DSD 22.5MHz and PCM 384kHz/32-bit resolution. All digital inputs to the DACs are routed through isolator circuits to eliminate noise interference. The N-01XE also features selectable digital filters (ES-Link5 input: Rdot/Off; other inputs: FIR/Rdot/Off) together with PCM-to-DSD conversion. These functions allow users to customize the sonic character to their personal preferences.

Super Audio CD Transport Connectivity

The N-01XE supports Esoteric's proprietary ES-Link 5 ultra-wideband digital transmission standard and can connect to Esoteric's Super Audio CD transport models using either two HDMI cables or a single XLR cable.

ES-LINK 5

ES-Link 5 is an ultra-wideband digital interface developed exclusively by Esoteric. The ES-Link 5 supports up to 22.5MHz DSD or 768kHz/48-bit PCM using two HDMI cables. The HDMI multi-cable configuration is used for the transmission of fully balanced audio data, LR clock and bit clock signals. Unlike conventional digital transmission, no processing is required for signal modulation at the sending end or for demodulation at the receiving end, thus significantly reducing the digital processing load on the DAC to achieve pure digital transmission.

Architectural Sophistication

High-Rigidity Chassis Design

The N-01XE features a high-rigidity double-layer chassis constructed from thick aluminum and steel. The internal double-layer structure minimizes mutual interference between circuit sections while optimizing power supply routing. The entire unit is supported at three points by a 5 mm thick steel base chassis and patented Pinpoint feet, which integrate a spike and saucer to provide effective mechanical grounding of vibrations. Rather than being bolted to the base chassis, the feet are held in place solely by the weight of the chassis. By eliminating the stress concentration created when conventional feet are rigidly fastened to the chassis, this unique construction contributes to a more open and natural sound.

Semi Floating Top Panel

The top panel of the chassis uses a screwless semi-floating structure, which further contributes to an open and dynamic sound.

Specifications Network section

- Supported file formats — PCM Lossless: FLAC, ALAC, WAV, AIFF, MQA
- Supported file formats — DSD Lossless: DSF, DSDIFF (DFF), DoP
- Supported file formats — Compressed audio: MP3, AAC
- RJ45 port: 1 (1000BASE-T)
- SFP port: 1 (1000BASE-T-LX (single mode), 1000BASE-SX (multi mode))
- USB DRIVE port: 1 (TYPE-A) USB2.0 or higher recommended
- USB DRIVE port — Supported file systems: FAT32, exFAT, NTFS, Single partition
- USB DRIVE port — Maximum current supply: 0.5A
- Supported sampling frequencies — PCM: 44.1 to 768kHz, 16bit / 24bit / 32bit
- Supported sampling frequencies — DSD: 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz

Digital audio inputs

- **ES-LINK: 1 (L/R)**
- ES-LINK — Linear PCM: 44.1 to 768kHz, 48bit (ES-LINK5 format)
- ES-LINK — DSD: 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz (ES-LINK5 format)
- **XLR: 1**
- XLR — Input level: 5.0Vp-p
- XLR — Input impedance: 110
- XLR — Linear PCM: 32 to 192kHz, 16bit / 24bit (AES/EBU format)
- XLR — DSD: 2.8MHz (ES-LINK1, ES-LINK2, DoP format)
- **RCA: 1**
- RCA — Input level: 0.5Vp-p
- RCA — Input impedance: 75
- RCA — Linear PCM: 32 to 192kHz, 16bit / 24bit (IEC60958 format)
- RCA — DSD: 2.8MHz (DoP format)
- **OPTICAL: 1**
- OPTICAL — Input level: -24.0 to -14.5 dBm peak
- OPTICAL — Linear PCM: 32 to 192kHz, 16bit / 24bit (IEC60958 format)
- OPTICAL — DSD: 2.8MHz (DoP format)
- **USB: 1 (TYPE-B)**, USB2.0 or higher recommended
- USB — Linear PCM: 44.1 to 384kHz, 16bit / 24bit / 32bit
- USB — DSD: 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz

Clock input

- BNC: 1
- Supported input frequency: 10MHz (± 10 ppm)
- Input impedance: 50
- Input level — Rectangle wave: TTL level equivalent

- Input level — Sine wave: 0.5 to 1.0Vrms

External control input

- TRIGGER IN: 1 (3.5mm mono mini jack)
- Input level: 12V, 1mA

Analog audio outputs

- **XLR/ES-LINK Analog:** 1 pair (L/R)
- XLR — Output impedance: 60 (XLR)
- XLR — Maximum output level: 5.0Vrms (1kHz, 10k load)
- **RCA:** 1 pair (L/R)
- RCA — Output impedance: 20
- RCA — Maximum output level: 2.5Vrms (1kHz, 10k load)

Audio performance

- Measured at: DSD 2.8MHz 0dB, DSDF=F2, XLR output.
- Frequency response: 5Hz to 30kHz (−3dB)
- S/N ratio: 113dB (A-weight)
- Distortion: 0.001% (1kHz)

General

- Power supply — Model for Europe: AC220–230V, 50/60Hz
- Power supply — Model for USA/Canada: AC120V, 60Hz
- Power consumption: 26W (in standby: 0.3W)
- External dimensions (W×H×D): 445 × 161.5 × 437mm / 17-" × 6-" × 17-¼" (including protrusions)
- Weight: 25.7kg / 56¾ lb

Included accessories

- Power cord × 1
- Felt pads × 3
- Owner's manual × 1
- Warranty card × 1

Specs

Product Attributes

EAN:	4907034226290
Manufacturer number:	N-01XE
Product weight:	32.922 kilograms
Pieces per master carton:	4 Piece