

## USB Audio Interface Supports 22.5MHz DSD and Asynchronous Transmission

The N-01XD is further equipped with USB-B port for connecting to a computer. The driver and Esoteric HR Audio Player (music player application) can be downloaded for free from the Esoteric website. The audio interface supports high sampling playback at 22.5MHz DSD and asynchronous transmission for enabling high-fidelity playback from even studio master quality sources. In addition to its USB ports, three types of digital input ports (XLR × 1, coaxial × 2, optical × 1) have also been provided for connection to a wide range of digital devices.

## High-Rigidity Chassis Design

The N-01XD features a highly rigid chassis design incorporating thick, dual layer aluminum and steel panels and a double-deck interior structure that both suppresses interference between circuits and drastically shortens power supply wiring to achieve the ultimate in sound quality. Additionally, every slot and groove in the chassis has been precisely laser-machined to effectively reduce vibration. The chassis' entire 5mm-thick steel bottom panel is supported by our own Esoteric pinpoint feet (Patent No:JP4075477, JP3778108) to ensure complete mechanical grounding that further protects the unit against the effects of vibration.

## Semi Floating Top Panel

The enclosure's top panel utilizes a screwless semi-floating structure that further contributes to the N-01XD's open and expansive sound.

N-01XD Network DAC



## Specifications

<b>Digital audio inputs</b>	
ES-LINK	1 pair(L/R)
Input signal formats	Linear PCM (ES-LINK5) 44.1-768kHz, 48bit DSD (ES-LINK5) 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz
XLR	1
Input signal formats	Linear PCM (AES/EBU) 32-192 kHz, 16-bit, 24-bit DSD (ES-LINK1,ES-LINK2, DoP) 2.8 MHz
RCA	2
Input signal formats	Linear PCM (IEC 60958) 32-192 kHz, 16-bit, 24-bit DSD (DoP) 2.8MHz
Optical digital	1
Input signal formats	Linear PCM (IEC 60958) 32-192 kHz, 16-bit, 24-bit DSD (DoP) 2.8MHz
USB(USB 2.0 or higher recommended)	1 (Type B)
Input signal formats	Linear PCM 44.1-384 kHz / 16-bit, 24-bit, 32-bit DSD 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz
Ethernet(1000BASE-T)	1
Input signal formats	Linear PCM 44.1-384kHz(stereo) / 16-bit, 24-bit, 32-bit DSD 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz(stereo)
Supported file formats	PCM lossless ...FLAC, Apple Lossless (ALAC), WAV, AIFF, MQA DSD lossless ... DSF, DSDIFF (DFF), DoP Compressed audio ... MP3, AAC (m4a container)
USB DRIVE ports(USB 2.0 or higher recommended)	2 (Type A)
Supported file systems	FAT32, exFAT and NTFS Single partition, USB 2.0 or higher recommended
Maximum current supply	0.5A
Input signal formats	Linear PCM 44.1-384kHz(stereo) / 16-bit, 24-bit, 32-bit DSD 2.8MHz, 5.6MHz, 11.2MHz, 22.5MHz(stereo)
Supported file formats	PCM lossless ...FLAC, Apple Lossless (ALAC), WAV, AIFF, MQA DSD lossless ... DSF, DSDIFF (DFF), DoP Compressed audio ... MP3, AAC (m4a container)

## Clock input

BNC	1
Frequencies that can be input (±10 ppm)	10MHz
Input impedance	50Ω
Input level	Rectangle wave: TTL level equivalent Sine wave: 0.5 to 1.0 Vrms

## Clock output

BNC	1
Output level	TTL level equivalent (into 75 Ω)
Output frequencies	44.1 kHz, 48 kHz
Output frequency precision	±0.5 ppm (when shipped from the factory)

## Analog audio outputs

XLR/ESL-A	1 pair (L/R)
RCA	1 pair (L/R)
Output impedance	XLR: 40Ω, RCA: 15Ω
Maximum output level (at 1kHz, 10kΩ load)	XLR: 5.0Vrms, RCA: 2.5Vrms
Frequency response	5Hz to 75 kHz (-3 dB)
S/N ratio	113 dB
Distortion	0.0007% (1 kHz)

## General

Power supply	Model for Europe.....AC 220-240 V, 50/60 Hz Model for USA/Canada.....AC 120 V, 60 Hz Model for Korea.....AC 220 V, 60 Hz Model for Hong Kong..... AC 230 V, 50 Hz
Power consumption	33W
External dimensions (W x H x D, including protrusions)	445 x 162 x 438 mm (17 5/8" x 6 1/2" x 17 1/4")
Weight	26.3 kg (58 lb)

## Included accessories

HDMI cable × 1	Power cord × 1
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Only files with integer formats can be played.

- This product is available in three different power supply variations shown in the chart above.
- Make sure that the voltage shown on the rear panel matches the AC line voltage in your area.
- The shape of the AC inlet and plug of the supplied power cord depends on the voltage rating and destination country.

Please note that Esoteric products are only available from approved distributors in overseas territories.  
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# ESOTERIC

# Network DAC N-01XD



PROUDLY MADE IN TOKYO

# ESOTERIC

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*We begin with the New Master Sound Discrete DAC, a system designed completely in-house by Esoteric for lifelike reproduction of the original performance in an ultimate network DAC system that only Esoteric could provide.*

*Then introduce a Superior Sound Quality Network Module That's Even Further Evolved.*

*Combine the Ultimate Cutting-Edge Network Player and D/A Converter Based on These Two Technologies.*

*The N-01XD is born.*



## Story of Innovation

The N-01XD is another flagship Esoteric product that combines a network player with a stereo D/A converter to enable full enjoyment of the world of master sound playback from various media sources, ranging from network playback to disc playback using our Master Sound Discrete DAC.

In 2019, Esoteric launched the second-generation of its flagship Grandioso series (Grandioso P1X, D1X, and K1X). The two major innovations of its VRDS-ATLAS, an unrivaled high-accuracy SACD transport mechanism, and Master Sound Discrete DAC both introduced in the "X" edition, have firmly established Esoteric as an industry leader.

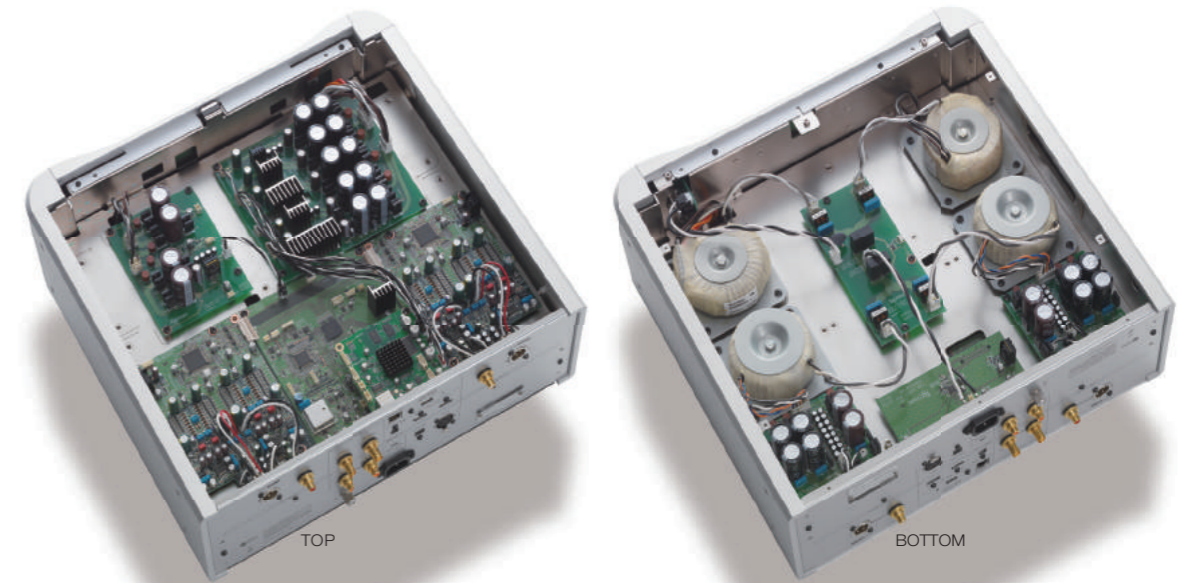
The Master Sound Discrete DAC features 64-bit resolution in the first discrete DAC module designed specifically for 22.5MHz DSD, and completely in-house by Esoteric. An original FPGA algorithm and large-scale discrete circuit design were also developed with the ultimate goal of delivering original master-quality sound.

The new N-01XD features Esoteric's latest network module, which supports native playback of 22.5MHz DSD and ES-LINK digital transmission for high-quality sound playback of SACDs when used as a DAC in combination with an SACD transport. This makes the N-01XD more than simply the latest model in the N series of network players, it also represents the latest in Esoteric's D series of highly acclaimed D/A converters.



# Master Sound Discrete DAC

Our goal was to assemble a careful selection of rigorously tested discrete components into a complete circuit that could perfectly reproduce all the dynamics and energy of music, which is simply unattainable using ordinary integrated chips. Our top engineering teams put their pride on the line to design and produce a quality of sound that can only be found in our Master Sound Discrete DAC discrete D/A converter.



## Luxurious Materials and Powerful Current Output

The N-01XD's Master Sound Discrete DAC is the most revolutionary two-channel stereo DAC circuit in Esoteric's history, and is based on the original circuit developed for the Grandioso D1X Monoblock D/A Converter. As an extension of the D1X's design philosophy, an abundance of luxurious materials have been invested in the construction of N-01XD's Master Sound Discrete DAC, including 32 separate elements for each channel. Each of these 32 elements, including such key components as a clock driver, logic circuitry, capacitors and resistors, are kept independent to ensure the purest output with virtually no loss of musical energy.

## Advanced Digital Processing Capability

The N-01XD includes Esoteric's exclusive  $\Delta\Sigma$  modulator supporting 64-bit/512Fs audio frequency sampling. To perform D/A conversion on par with its excellent DSD and PCM characteristics, separate FPGA\* digital processing algorithms were developed for each conversion process. This enables the N-01XD to extract the optimum sound quality from CDs, Super Audio CDs, and networks.

## Unique ESOTERIC-HCLD\* Output Buffer Circuit with Enhanced Current Transmission

The N-01XD's ESOTERIC-HCLD output buffer amplifier boasts an astonishing high-speed slew rate (response speed) of



2,000V/ $\mu$ s. Current transmission and speed—the most important factors in the design of any analog output circuit—have been pushed to the limits, while the array of EDLC\*\* super capacitors used in the buffer circuit's power supply provide a staggering capacitance of 250,000 $\mu$ F per channel for solid bass support and exceptional reproduction of all the dynamism of music coupled with a sense of realism that is truly breathtaking.

\*HCLD: High Current Line Driver  
\*\*EDLC: Electric Double-Layer Capacitor

## High-Quality ES-LINK Analog Current Transmission

In addition to its standard XLR and RCA line connections, the N-01XD is also equipped with Esoteric's own ES-LINK Analog current transmission system. Taking full advantage of the robust stream of current supplied by its HCLD buffer circuitry makes the N-01XD less susceptible to the detrimental effects of signal path impedance, ensuring more pure and powerful signal transmission that maximizes system potential to deliver outstanding analogue audio transmission when connected to comparable components.

## Transport Connections for Super Audio CD Playback

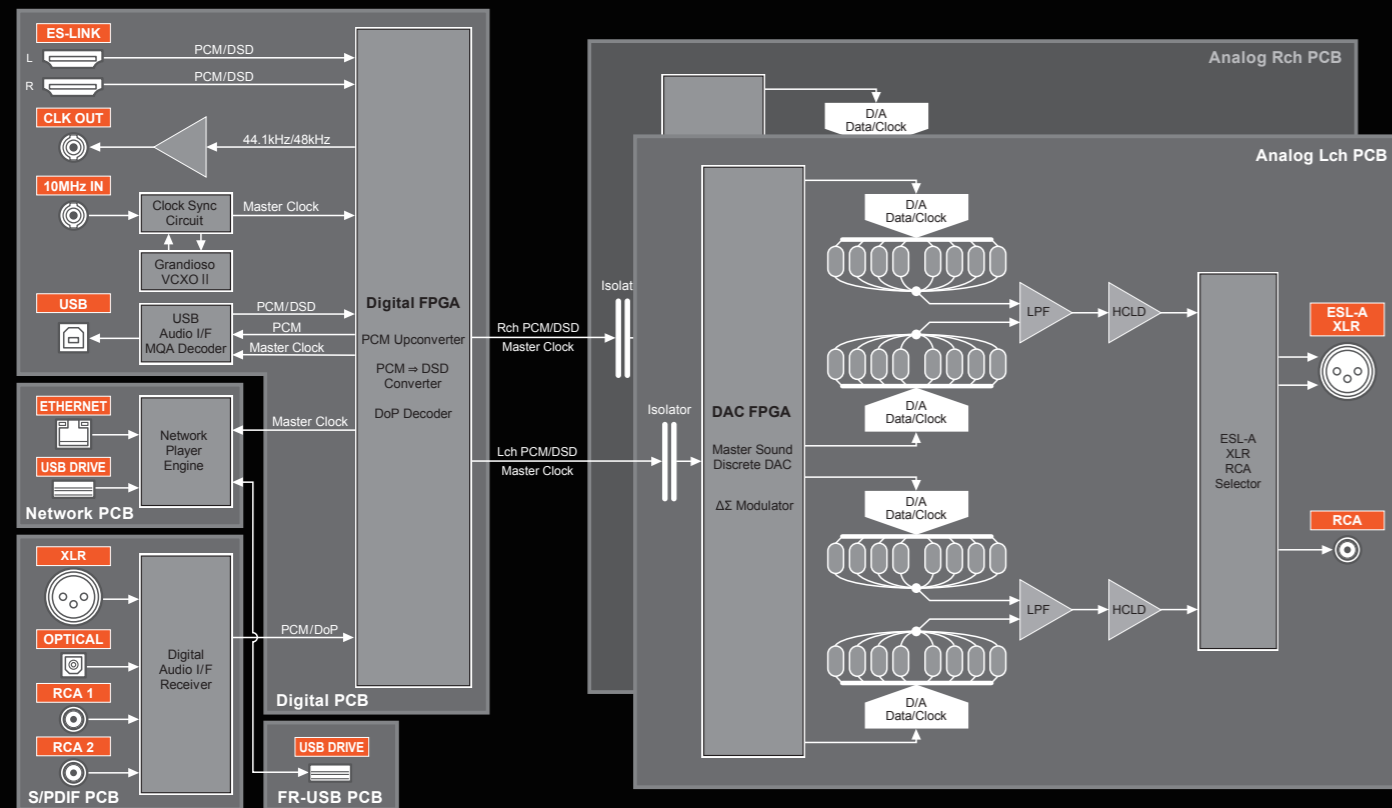
The N-01XD supports Esoteric's proprietary ES-LINK digital wideband transmission standard. An Esoteric transport can also be connected using either two HDMI cables or a single XLR cable to enable playback of Super Audio CDs.

\*ES-LINK is an ultra-wideband digital interface developed exclusively by Esoteric. Like our flagship Grandioso D1X Monoblock D/A Converter, the N-01XD's ES-LINK has also been upgraded to Version 5 to support wide-range transmission using two HDMI cables (Max: 22.5MHz DSD or 768kHz/48-bit PCM). The HDMI multi-cable configuration is used for fully balanced audio data, LR clock, and bit clock signal transmission. In contrast to regular digital transmission, no processing is required for signal modulation at the sending side or for demodulation at the receiving side, thus allowing a significant reduction in the DAC's digital processing load to help realize pure digital signal transmission with near perfect optimization.

## Full MQA Support

The N-01XD is also capable of MQA decoding for all digital input sources. In addition to conventional network input, MQA-CD playback is also possible when used in combination with a CD transport.

## N-01XD Signal Block Diagram



# Network Audio

With network audio, you can realize the opulent dream of full access to all your music with superior sound quality from the comfort of your listening position. All that is required besides the audio system is a regular home LAN (such as a Wi-Fi router), tablet or smartphone, and a NAS (Network Attached Storage) device for storing your music library. With these components, you can easily begin a life of relaxing music enjoyment with uncompromising quality.

The N-01XD features noticeable improvements in network playback quality, including the latest developments in network modules that supports 22.5MHz DSD and linear power supply technology without any switching elements.



## Compatible with a Wide Range of Audio Sources

The N-01XD is compatible with 22.5MHz DSD, 384kHz/32-bit PCM playback and a host of other formats (DSF, DSDIFF, FLAC, Apple Lossless, WAV, AIFF, MP3, AAC and MQA). Gapless playback capability is also offered in all lossless formats.

## Esoteric Sound Stream

Esoteric Sound Stream is an Apple iOS/Android network playback app for smartphones and tablets designed with an emphasis on both sound quality and intuitive operability. Musical tracks can be easily selected using the smartphone/ tablet to create a customized playlist for later playback. All screens have been intuitively designed for simple operation and access to playlists and libraries, making it easy for anyone to use. Yet it also offers an extensive range of refined features that meet the demands of even the most experienced users.

Key to this achievement is a superb search and retrieval function that fully utilizes tag information. Images can also be stored using the app, enabling the user to instantly scroll through album artwork and libraries according to artist, year of recording, composer or other categories. This use of tag information even allows tracks that have the same name but different formats to be easily identified onscreen.

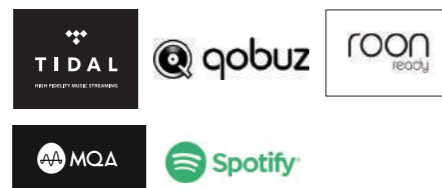


Album artwork courtesy of **e-onkyo music**  
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Japan's largest class hi-resolutions audio distribution site  
<http://www.e-onkyo.com/music/>

## Compatible with a Wide Selection of Audio Codecs and Streaming Services

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

\*Information on newly supported services will be released on the Esoteric website. Please note, however, that regional restrictions may be applied on some services.



## Music Server Function\*

The N-01XD has two USB-B Ports, one each on its front and rear panels, that enable connection of up to two large-capacity USB storage devices (USB flash drive, external USB HDD/SDD, etc.) for use as a music server. This allows easy music playback even without a separate NAS for people who find NAS configuration to be too complicated and troublesome.

\*HDD/SDD cannot be installed inside the N-01XD unit itself.



## Equipped with Four Powerful Independent Power Supplies

The key to the powerful and deep, rich sound provided by the N-01 and D-02X lies in their high-performance power supplies. The N-01XD features significant enhancements to its power supply to ensure it delivers even more robust, lifelike sound.

Its built-in D/A converter features a total of four independent toroidal power transformers, one each for the right and left channels, digital circuits, and network module.

The DAC's power regulator utilizes a low-feedback DC regulator for minimizing feedback in a discrete configuration that uses no integrated circuits, but instead adopts technology obtained in the development of the Grandioso P1X Super Audio CD Transport and D1X Monoblock D/A Converter. The result is a powerful, expansive sound.

## Network Module Features High-Sound-Quality Linear Power Supply

Thanks to recent breakthroughs in the development of our network transports, the network module uses a new power supply designed with linear elements customized for audio use instead of a regulated switching power supply. Combined with its high-capacitance filter capacitors, Schottky barrier diodes, EDLC (Electric Double-Layer Capacitor) super capacitors boasting a

capacitance of 2,333,333μF, and other high-end components, this enables the N-01XD to deliver dramatically improved sound quality.

## Grandioso Custom VCXO\* II

The N-01XD also includes the same Grandioso Custom VCXO II high-precision clock developed for the P1X and D1X, which features extremely low levels of phase noise and excellent centering accuracy (±0.5 ppm). The N-01XD's clock output enables

high-precision clock synchronization using the Grandioso Custom VCXO II as a master unit by simply connecting it to a transport with a clock input port. An external Grandioso G1 or G-01X Master Clock Generator can also be connected to synchronize internal circuits with a 10MHz clock that rivals atomic clocks in its precision, thus realizing even higher levels of sound quality. USB input and network playback can also be synchronized with the external clock.

\*VCXO: Voltage-controlled crystal oscillator.

