

MELCO

Melco N1 series introduces the world's first Consumer Hi-Fi RAVENNA Server in collaboration with Merging Technologies

Always at the cutting edge of Digital Audio, Melco now offers Ravenna as an optional network connectivity. Well established in the Studio and Pro Music field, Ravenna is now being offered to discerning audiophiles as high res digital music connectivity evolves.



Press contact details:

Andy Napthine
Napthine Porter Ltd.
andy@napthineporter.com
07920 425166

February 2017 – London – MELCO, the audiophile division of leading Japanese computer peripheral company Buffalo Technology, has announced that the Melco N1 series has become the first approved server for RAVENNA. This highly advanced professional audio distribution protocol from ALC NetworX offers a method of audio transmission and distribution that is almost unlimited in scale and bandwidth but that makes use of existing network hardware to do so. This development has been a joint engineering effort by MERGING TECHNOLOGIES and MELCO to develop a fully networked solution.

N1ZS20/2



Ravenna is a protocol used for the network connectivity from the dedicated PLAYER port of the Melco music library to a MERGING+NADAC DAC and Audio Preamplifier, bypassing the need for a static connection between a digital source and the decoding playback device. Historically, multiple device configurations either required the source to have multiple digital outputs or for there to be physical reconnection to switch from device to device. RAVENNA bypasses this by ensuring that a signal from a server can be made available via network switch to multiple devices. These devices can access multiple individual streams from the source or indeed access the same stream, even if it is already in use from another device.





MERGING NADAC

Melco has developed its line of Audiophile grade servers and storage devices with a view to offering exceptional performance with unparalleled stability and flexibility. Exacting attention to detail in all aspects of the design, especially in relation to signal and data processing on the Ethernet connections along with extreme low jitter and low-noise engineering, ensure that Melco servers are an incredibly capable delivery system for your digital content.

The partnership with Merging Technologies means that the exceptional quality of digital audio from a Melco device can be made available to multiple RAVENNA-compatible players. The high bandwidth ensures that formats up to DSD256 can be handled with extremely accurate clocking, high resistance to packet loss and very low latency. RAVENNA already meets the demanding requirements of the broadcast and professional audio sectors and ensures that audiophiles have access to a system able to handle any requirement they are likely to have in the foreseeable future. The system is an emphatic demonstration that the audio industry is not content to sit and 'make do' with legacy systems but has the resolve and engineering prowess to push on and develop solutions that combine higher performance with further improvements to the user experience.



RAVENNA

Alan Ainslie, General Manager of Melco, added...

"The partnership with Merging and the incorporation of the RAVENNA server into the Melco digital music libraries, represents a joint will to achieve the finest digital audio platform available. Now audiophiles can experience the same class-leading distribution and performance of high resolution digital music files as the professional recording industry, without the need for any third-party IT equipment. Once again, Melco's dedication to technology through real research is leading the industry in the direction of the finest audio performance."

While MERGING+NADAC released with RAVENNA support for Windows and MacOS computers a year ago, the connection through RAVENNA with Melco state of the art range of music servers not only finally removes the need of a computer but provides a very elegant solution comprised of only a Server and a DAC, for an extraordinary musical and ergonomic experience. The MERGING+NADAC has been winning critical acclaim across the globe and combines the experience gained in professional and broadcast audio with the ability to deliver a performance capable of meeting the demands of the most stringent audiophile. Dominique Brulhart, Merging's Head of Software Development and NADAC Product Manager, has been demonstrating the MERGING+NADAC at shows globally and notes; "Most people who purchased, tested or reviewed our DAC during the past year not only were amazed by its superior sound quality but definitely appreciated the advantages that RAVENNA offers. We are then delighted that RAVENNA now finds a new major adopter with Melco. As RAVENNA is an open and non-proprietary protocol, we have no doubt that this technology will be largely deployed in a near future in other audiophile products as the perfect solution for carrying safely and elegantly high resolution music between high-end equipment, the base for a new clock accurate, precise, robust, flexible and ergonomic ecosystem."

The upgrades to ensure RAVENNA compatibility take the form of a firmware update that Melco will be making available free of charge to all customers shortly. This is compatible both with the recently announced trio of new models and the existing product line that introduced Melco to the public and that has been a considerable success both in the UK and abroad.

STOP PRESS. Melco and Merging have announced that a system featuring a Melco N1 running Ravenna, and MERGING+NADAC will be on demonstration at the upcoming Bristol Sound & Vision Show - a world first. We invite both press and public to come and experience the absolute cutting edge in high performance audio reproduction on the Melco booth.

About MELCO - www.melco-audio.com

MELCO, which stands for Maki Engineering Laboratory Company, was established by Makoto Maki in 1975 in Japan. Maki, an enthusiastic audiophile, established the company to design and manufacture the finest audio components of the time - the undoubted masterpiece of the MELCO line being the turntable, introduced into the UK in 1980, which set new standards in music reproduction.

From those early beginnings MELCO developed into the largest computer peripherals manufacturer in Japan (Buffalo Inc.), offering advanced products based on rigorous R&D, including Wireless routers, Ethernet Data Switches and storage devices such as NAS drives.

Now the Company is proud to revive the highly-respected MELCO brand, offering discerning audiophiles high technology networked audio components in the spirit of those much revered early MELCO products, while incorporating the very latest research into reliable high performance networked devices and storage.

For further information, images, interview requests and press samples, please contact:

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MELCO Digital Music Libraries - Explained

MELCO Direct Streaming Music (DSM)

Regardless of the precautions and optimisations within a digital music source/network player, it all comes to nothing when sensitive music data is put onto a LAN network. Compromises such as commodity grade data cables and data switches designed purely for rapid data transfer all have a detrimental effect on music files. To combat this, MELCO Music Libraries (MML) have a dedicated Ethernet port for direct link to the network player. By removing the necessity for external network switches, this architecture not only ensures the best possible data delivery from the Melco N1 to the player, but also exposes the benefits of carefully engineered precision Ethernet cables.

The dedicated Player port establishes the relationship between the MML and the player, including management of the player IP address.

A separate Ethernet port provides a high-quality connection to the LAN, so that the network player will still be connected via the MML and, therefore, can be controlled by iOS or Android devices, whilst also connect to music streaming sites or Internet radio. But for the simplest purest playback of High Resolution music on a network player that has its own control, all that is required is the Melco N1 and a precision Ethernet cable. Setting the MELCO N1 into Direct Mode activates an internal DHCP server removing the need for any IT devices in the audio system.

Local USB-DAC Player

The Local USB-DAC player can be used in the same manner as the Network Player, connected via the dedicated USB 2.0 socket on the rear each model. The Local USB-DAC player is simply controlled from a UPnP Control App on a Smartphone or Tablet on the network. The App discovers the N1 & DAC combo as a Digital Media Renderer or Player on the Network as soon as a DAC is connected using a standard USB cable to the N1.

The N1 Local USB-DAC Player supports PCM up to 384 kHz / 32 bit, and DSD up to 11.3MHz quad DSD. Automatic sample rate adjustment is offered to match the capabilities of the connected DAC - e.g. 192 kHz is automatically downsampled to play on a 96 kHz capable DAC. DSD to PCM conversion is also supported, with the conversion of DSD to 24 bit PCM for USB DACs that do not support DSD via a manual setting in the Menu.

The Playlist can be stored either on the N1 (Mode 1) to allow the playlist to be maintained even if the App is out of contact, or on the App itself (Mode 0) for when the App requires it. New firmware allows the N1 to operate in Hybrid Mode whereby the MELCO automatically works out the appropriate control mode.

The MELCO Local USB-DAC player can be easily controlled by any UPnP control Point (App) and will play music from other UPnP servers on the Network in addition to music stored on the MELCO.

True Audiophile performance

Audio performance is paramount as the industry moves beyond the legacy standards of the CD format. This makes such issues as data integrity and jitter even more critical. For this reason, the MML range uses none of the IT industry norms in creating this solution.

Internal and external data communications are differentiated with separate and isolated power supplies, whilst SSD data management is especially optimised as the requirements

for audio are quite different to PC requirements (music data is written infrequently and is rarely modified, rendering the usual SSD lifetime optimisation algorithms as inappropriate, especially as they also tend to impact on data integrity, as they operate in burst as required). The MML uses highly stable purpose-built Audio Grade SSDs designed especially for audio playback, as they have a low level and consistent management algorithm that has zero impact on data integrity. Audio Grade SSD also greatly reduces power supply spikes compared to fast IT SSDs.

All digital processes, including the external Ethernet communications, are derived from a precision ultra-low jitter data clock to ensure total freedom from jitter-induced artefacts on final D/A conversion. The low jitter Ethernet connectivity is provided by RJ45 ports isolated with high grade TDK magnetics. This ensures absolute freedom from interference and noise, which is otherwise fed into sensitive analogue electronics in the playback system. The Ethernet connectors have opto-coupled data transfer indicating LEDs, which can be extinguished to provide the purest connection environment.

Power supplies are critical in all high-end audio applications. Not only does the MML separate power supplied for internal and external data communications, but also specially designed components minimise common mode interference, protecting delicate analogue circuitry elsewhere in the playback system. N1Z chassis models benefit from twin medical grade supplies.

Simple setup - no computers

In the spirit of the MML being a true Audiophile source, the MML does not have a web server and does not require a computer to either configure it or to enable it to play. A versatile array of useful customisations is available from the informative OLED front panel display and navigation buttons. During playback, the display shows the selected track along with sample rate. For ultimate audio performance, the display can be switched off during playback.

Storing music files to the MML is simple via the USB 3.0 socket on the rear or over the LAN, whilst backup is easy thanks to the dedicated rear-mounted BACKUP USB 3.0 socket, which automatically offers to start to backup the music data onto any external drive with enough capacity upon connection.

Newly introduced is MELCO Direct CD-import allowing archival copies of the user's CD collection.

Expansion to over 12Tb is easily achieved by simply adding a USB drive to the dedicated rear-mounted EXPANSION port. No configuration is required - the additional capacity is simply available to store more music.

The simple Hi-Fi style front panel on/off switch means that the MML is up and running after only 15 seconds and can be shut down safely in under five seconds. Were there to be a power cut, all music files remain safe, thanks to the Melco N1 robust software.

High Resolution Music Download direct to the MELCO Music Library

Purchasing habits for music are changing dramatically and the MELCO Music Library offers users the ability to download HD music from several online stores directly into the MML without any requirement for external computers other than to confirm the initial purchase - the MML polls all user accounts seeking newly purchased music and will download directly and verify the music files ready for immediate playing.