# Starting Eunhasu

## Eunhasu

Eunhasu is a web-based GUI to control network music players which was made on Linux OS. It has an easy and simple to use functions via a web GUI. Eunhasu can be used with PCs or various apps in smart devices.

## Eunhasu features

- Web GUI
  - Easy system configuration
  - Selectable music player applications
  - Selectable and configurable USB audio devices
  - Network share folder and USB storage device setting
- Roon Ready
- Roon Server sMS-1000SQ feature
- MinimServer sMS-1000SQ feature
- DLNA audio renderer, OpenHome support
- MPD (Music Player Daemon)
- LMS (Logitech Media Server)
- Squeezelite
- HQPlayer Network Audio Adapter
- Shairport
- LibreSpot
- Multi-zone network playback

## Models available with Eunhasu

- sMS-200
- sMS-200ultra
- sMS-1000SQ

## Services

Please click a link to show a description of each service.

### sMS-200 and sMS-200ultra services

- Roon Ready
- Squeezelite / Logitech Media Server
- MPD / DLNA renderer

- HQPlayer NAA
- Shairport
- LibreSpot

### sMS-1000SQ services

- Roon Server
- Squeezelite / Logitech Media Server
- MPD / DLNA renderer
- HQPlayer NAA
- Shairport
- MinimServer
- LibreSpot
- CD Ripping

## Eunhasu usage

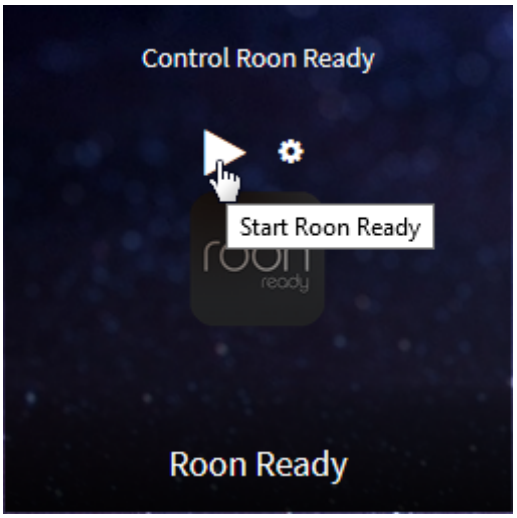
### Connection

Open the web browser on a PC or smart device and connect to http://eunhasu. On Apple® devices, connect to http://eunhasu.local. You can get the Eunhasu device’s IP address or link from http://sotm-audio.com/my if you’re using Android device. It works based on an IPv4 network. If either of the above paths do not make the connection to Eunhasu Web GUI, check the router setup to find out the IP address of your device(e.g. sMS-200 or sMS-1000SQ). And then enter your device's IP address like http://xxx.xxx.xxx.xxx directly into the browser to connect to the Eunhasu Web GUI. If you still can’t access the Eunhasu Web GUI, you will need to check that your network status or power connection is okay. If you connect to Eunhasu Web GUI successfully, you will see the home screen as like the image below.

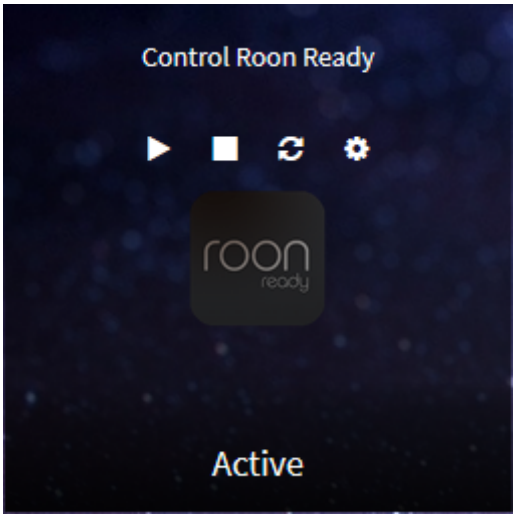
## Select functions

To select a function on the Web GUI, mouse over the desired icon and action buttons( ) will appear. On smart devices, touch the desired player icon and then the action buttons will appear like when using a mouse.

For example, in the case of the Roon Ready service, you can change states to 'Active' by icon click.




'Active' states. Not only Roon Ready service but other services have a similar screen.



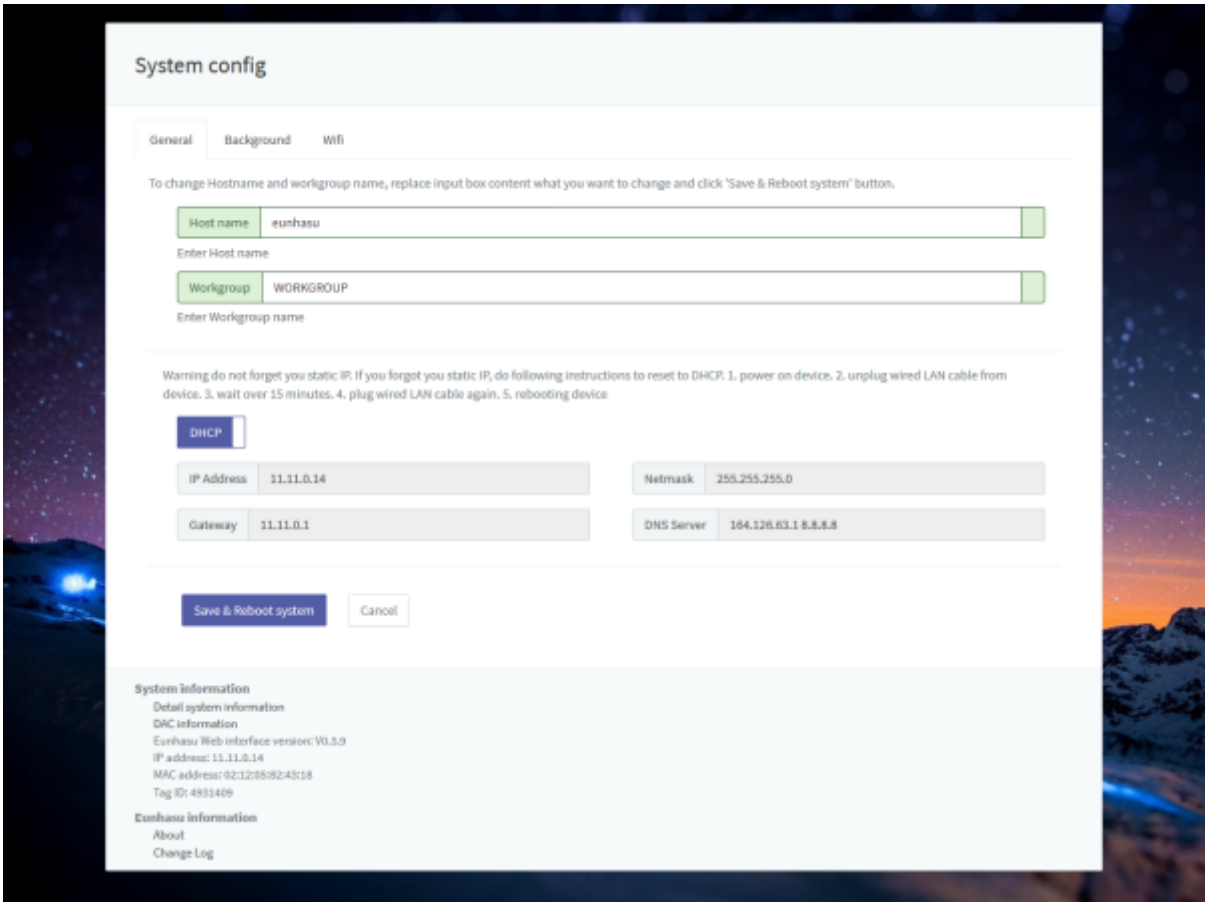

If you're facing an abnormal states screen or a continuous loading animation, please reload the page.

Screenshots may be different because new services and features are occasionally added.

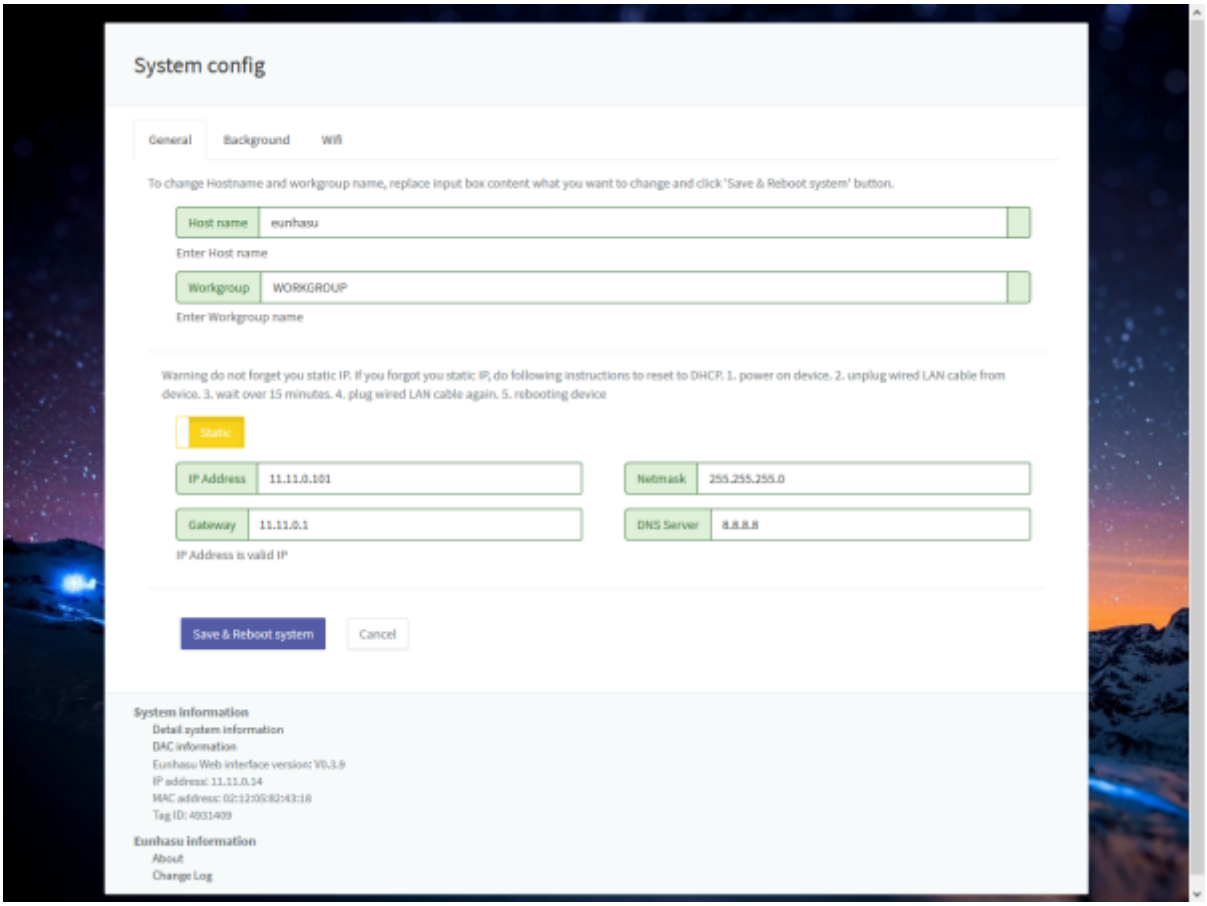
## System setup

Here you can change the system name and background image, setup wifi, adjust library settings, perform a system upgrade, reboot or power off.

### Change general config




- **Host name**: The name of the sMS-200 which appears on the network. If you use multiple Eunhasu-enabled device on the network, you will need to use a different host name for each device. English only and no spaces are allowed for the name.
- **Workgroup**: A workgroup name for shared folders on the network, normally “WORKGOUP” is used, but can change if required. English only and no spaces are allowed for the name.
- **IP**: Dynamic and static IP settings.



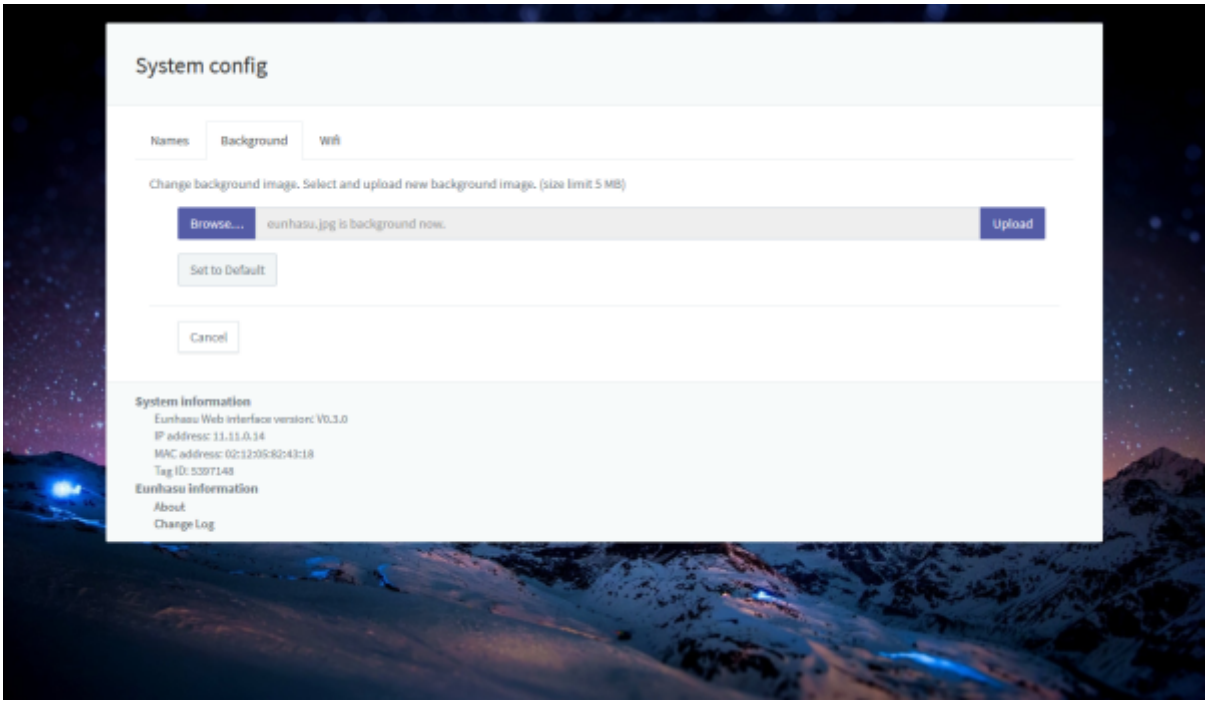

Do not forget your static IP address. If you forgot the address, please use the following instructions or reburn micro SD card to reset.

1. power on device.
2. unplug wired LAN cable from device.
3. wait over 15 minutes.
4. plug wired LAN cable again.
5. reboot the device

- **Save & Reboot system**: Save the information and reboot the product.
- **Cancel**: Go back to the home screen.

### Change background

To change background, only jpeg and png formats are allowed. If it's not applied after uploading a file, that could be caused by web browser cache feature. Plase reload the page.

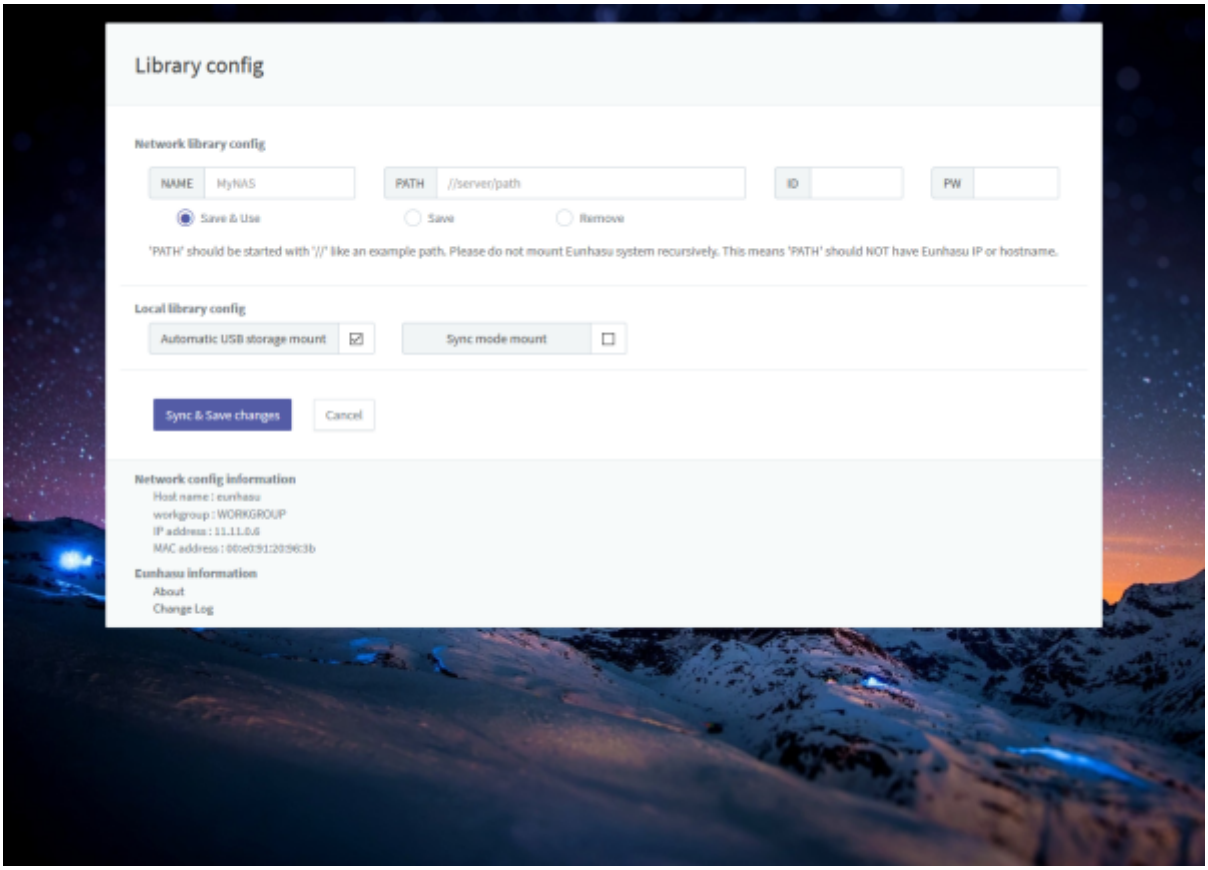



### Wifi setup

Please refer to how_to_use_wifi_in_eunhasu page.

## Library setup

Set up the path for the network library and enable the USB storage device to use.




- **NAME**: A library folder name appearing on Logitech Media Server or MPD. Only English, no spaces or numbers.
- **PATH**: A network sharing folder path. The path should be formatted like the screen shot.
- **ID**: Enter an ID if it is required to access the network sharing folder.
- **PW**: Enter a password if it is required to access the network sharing folder.
- **Save & Use**: Save the information you entered and use it.
- **Save**: Save the information you entered but not use it.
- **Remove**: Remove the information you entered.
- **Automatic USB storage mount**: Enable or disable the USB storage device, up to 2 USB storage devices can be used.
    - Check 'Automatic USB storage mount' to be enabled. The USB storage device will be auto-recognized and assign as the music folder on Logitech Media Server or MPD as the USB1 or USB2 folder.
- **Sync mode mount**: Enable or disable sync mode when storage is mounted.
    - Check 'Sync mode mount' to be enabled, the USB storage device will be mounted as sync mode. It is synchronous attachment which makes files in the storage more safety but might be slow system.
- **Save changes**: Save the new or modified information you entered.
- **Cancel**: Go back to the home screen.

The new network share folder information can be added after saving the current entered information. Eunhasu only supports SMB protocol with no-spaced-path name

1. Do not mount Eunhasu itself recursively. It makes system operation slow because music files would be duplicated during the making of the library. e.g.) /eunhasu/music/USB1 ✘

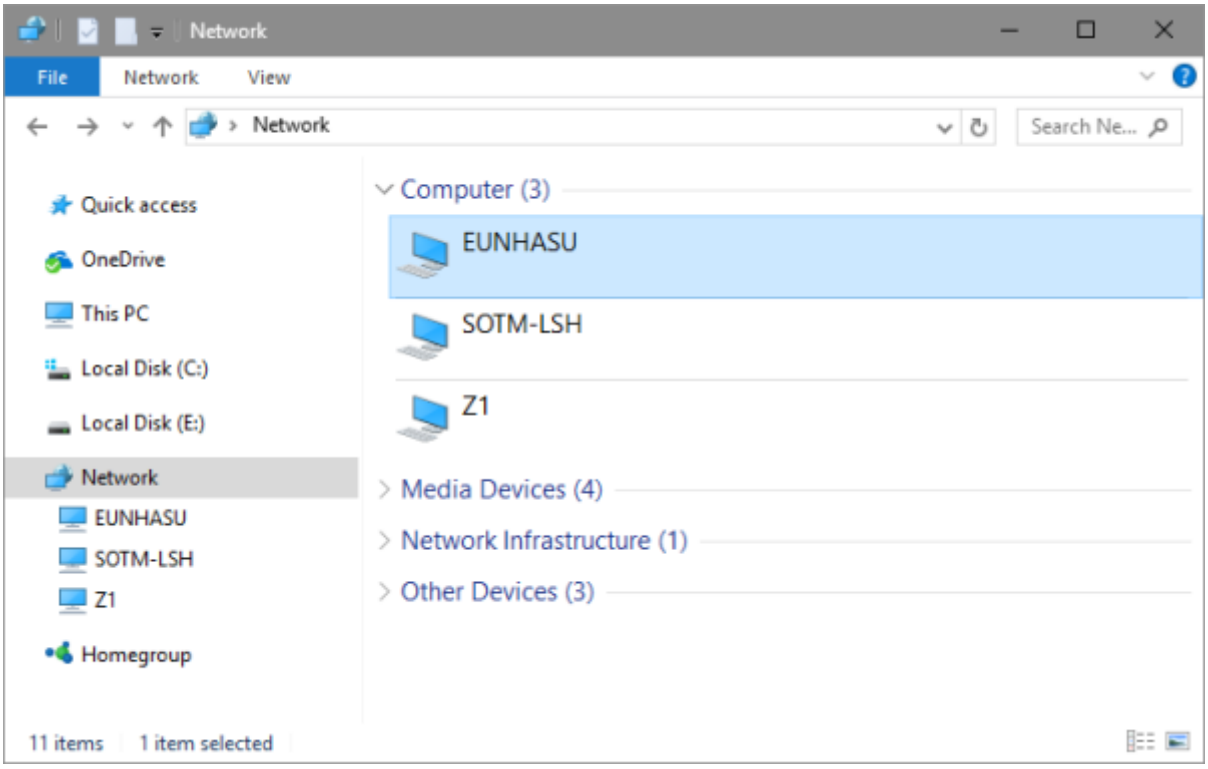
2. In case of sMS-1000SQ, do not mount the same point with RoonServer. That makes the Roon library unavailable.

- An external USB storage device in exFAT format is supportive from Eunhasu V0.2.7. And multi partitions cannot be mounted normally, we recommend connecting a 1 partition USB storage device.

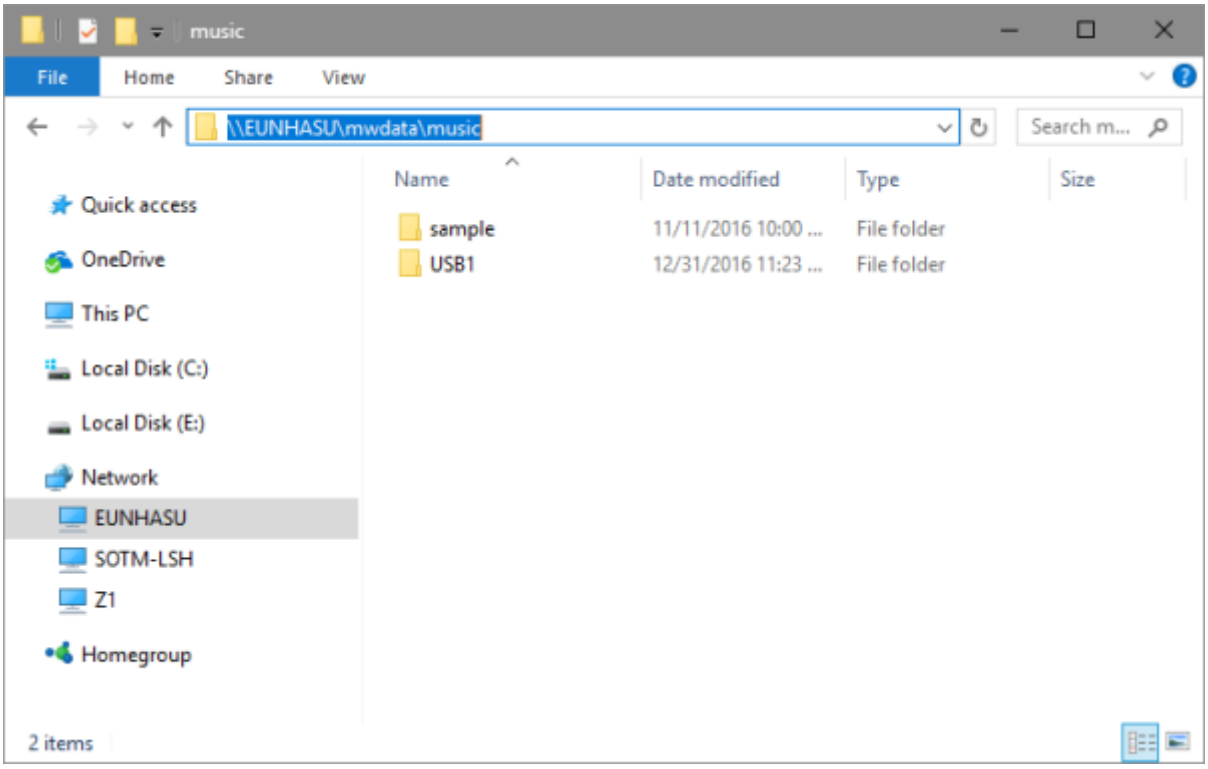
## Access Eunhasu folder

### Windows

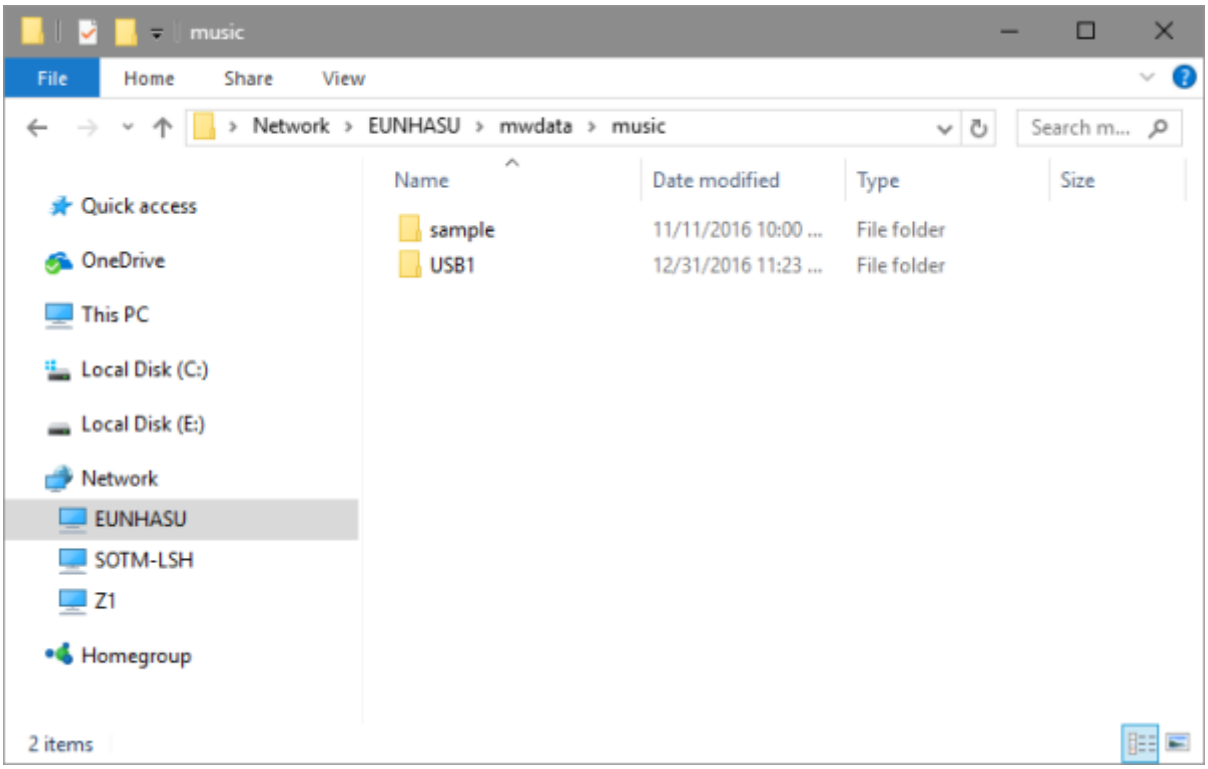
You can access the Eunhasu share folder to manage music files. Select 'EUNHASU' in the 'Network' part of Explorer. If you have serveral Eunhasu-enabled devices, please change system name because it could cause conflict in the network.



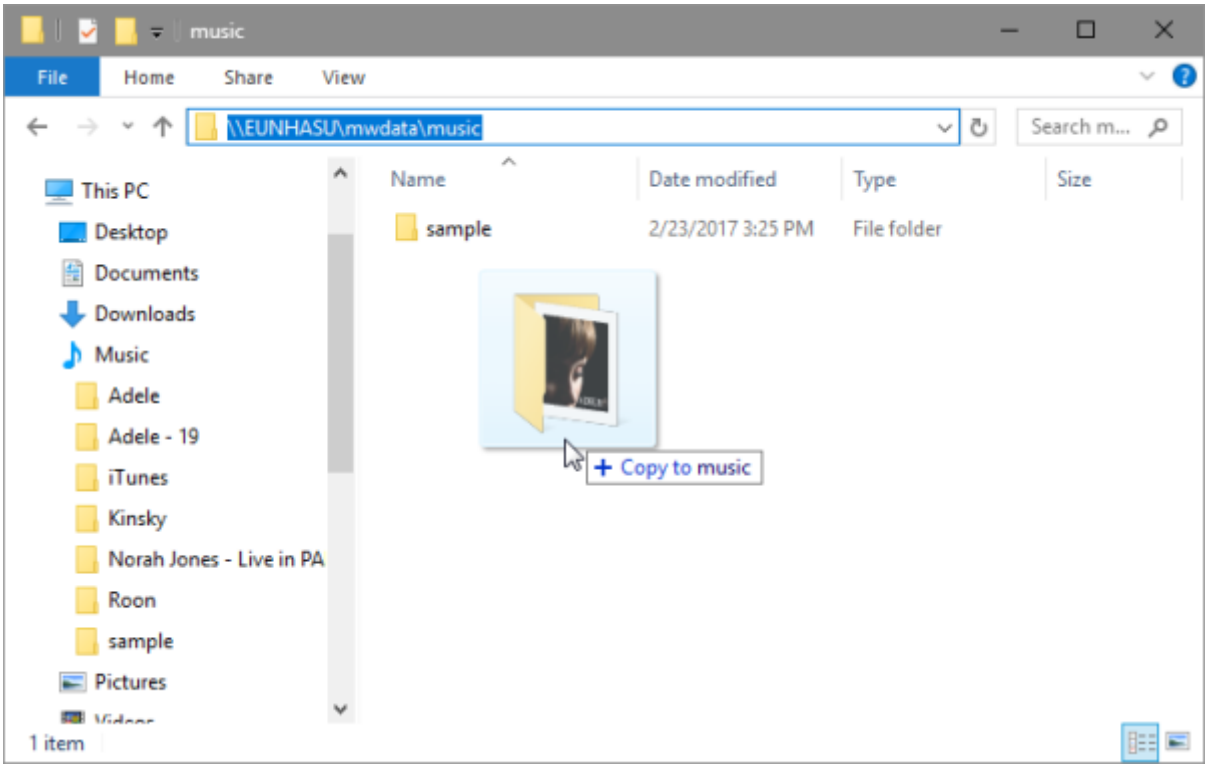

You can access by the direct path, \\EUNHASU\mwdata\music




The image below shows the screen after you enter 'mwdata'. ;mwdata' is a name of share folder in Eunhasu.




If you want to copy files into the sMS-1000SQ music directory, drag and drop files to the path, \\EUNHASU\mwdata\music, like the screen shot below:

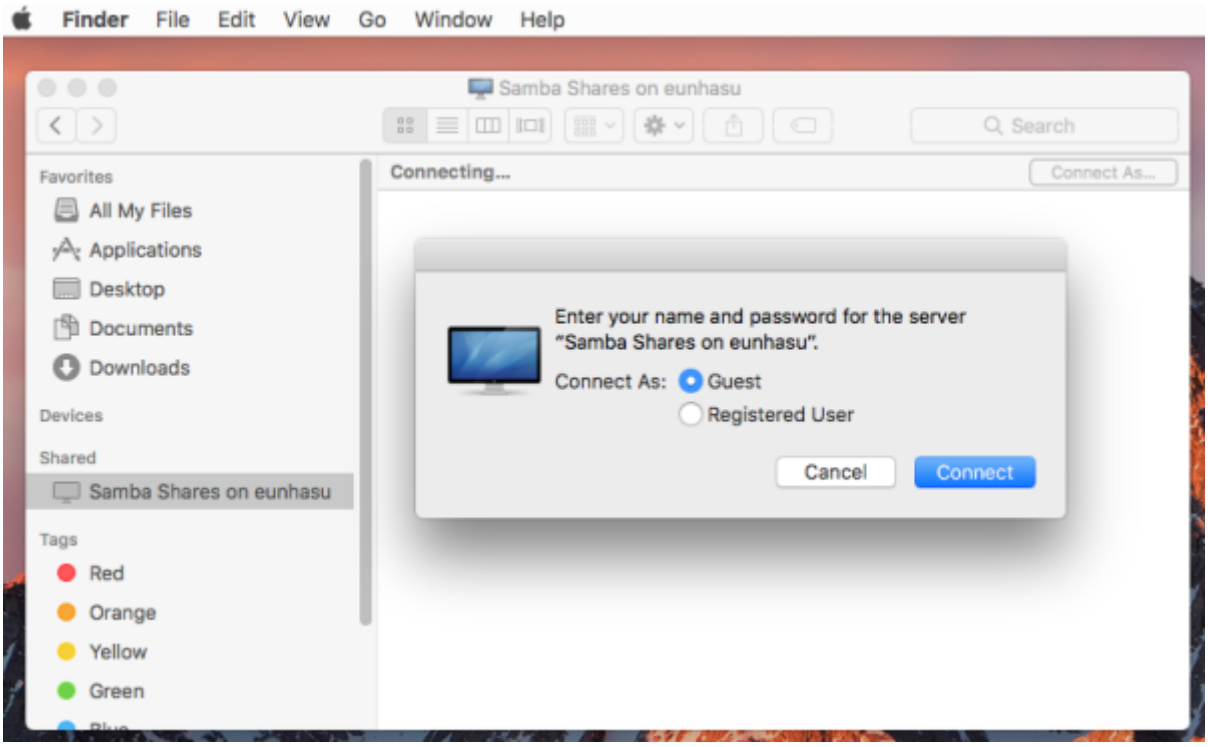


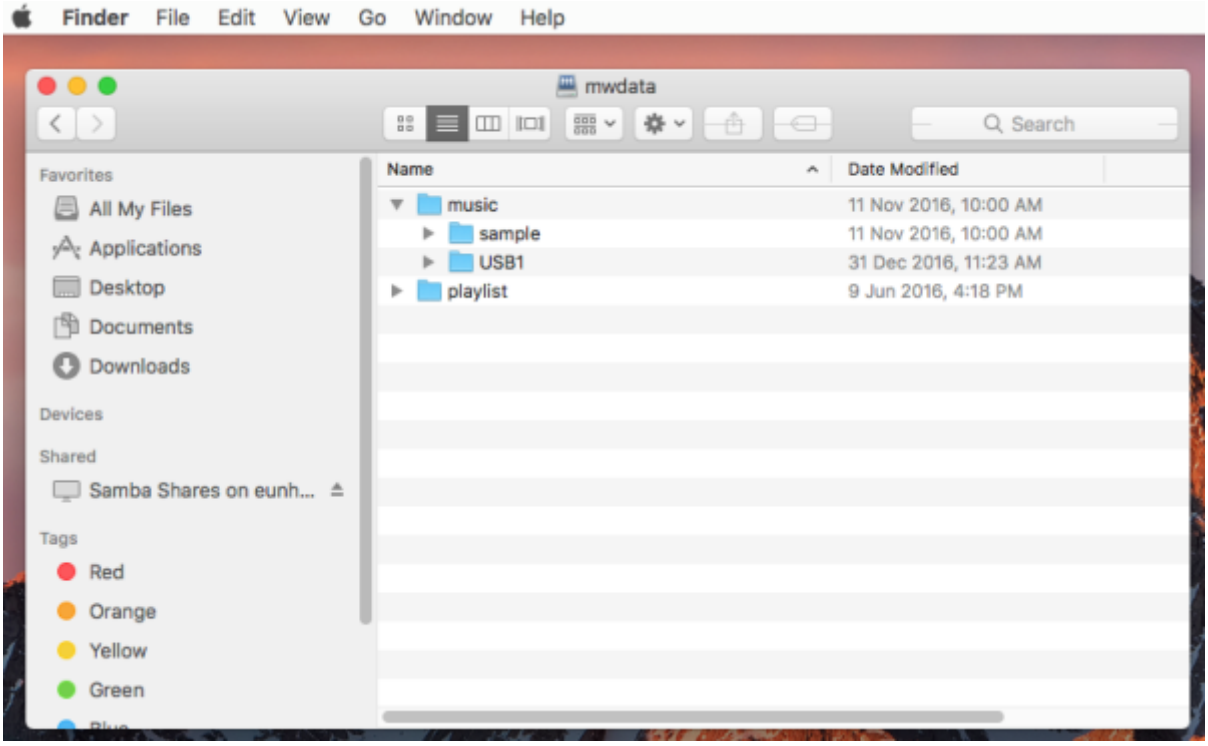

If you want to copy files into the sMS-1000SQ music directory which has the additional internal storage drive installed, drag and drop files to the path, \\EUNHASU\mwdata\music\HDD1

If you want to check the music files in the external USB storage drive connected into sMS-1000SQ, please check the path, \\EUNHASU\mwdata\music\USB1

### Mac OS

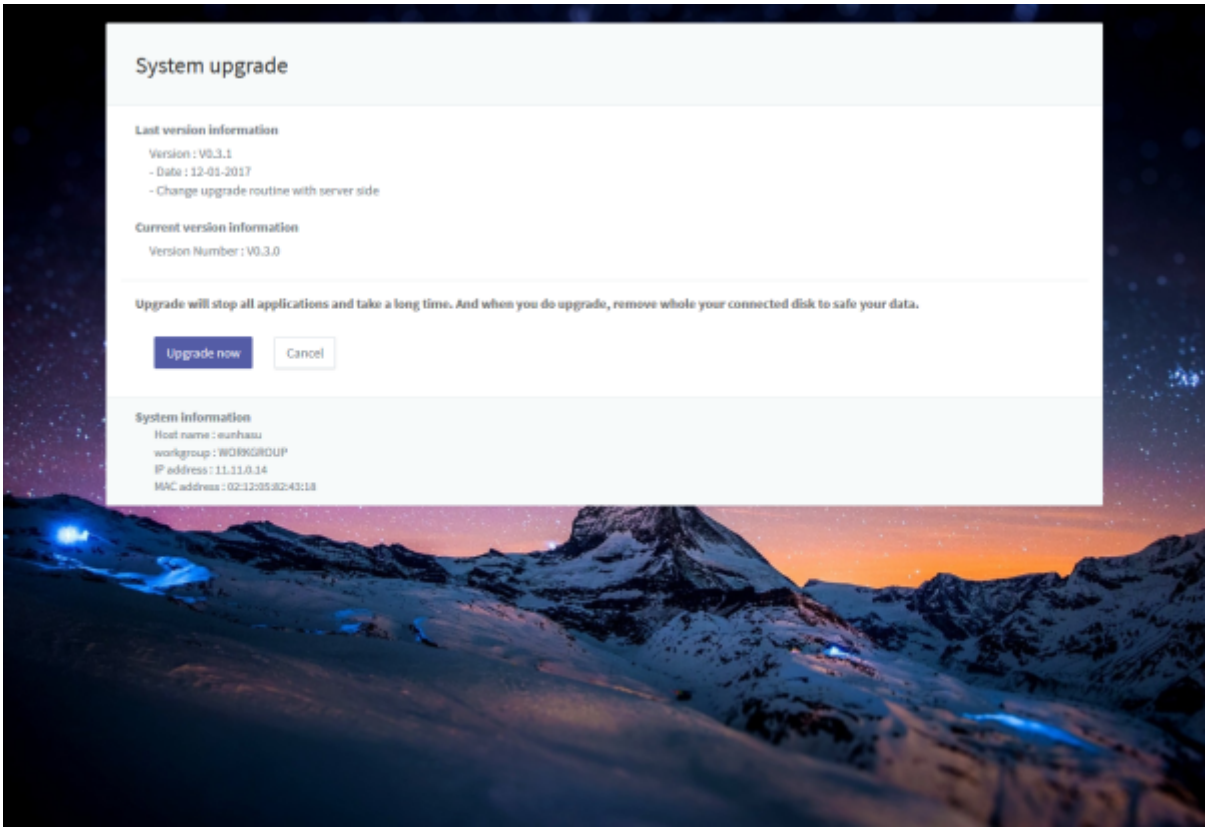
You can access Eunhasu share folder by Finder. Please connect as 'Guest' id to access.






## System upgrade

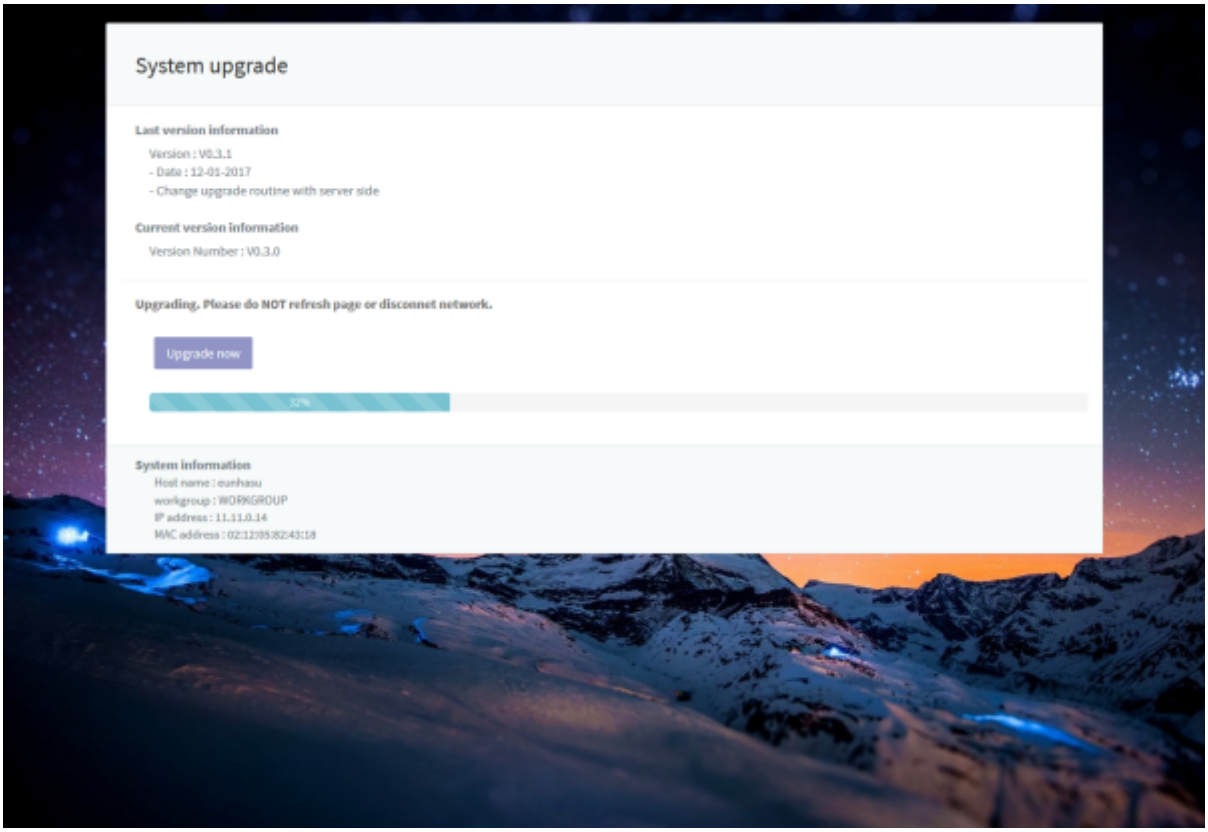
Upgrade your system.



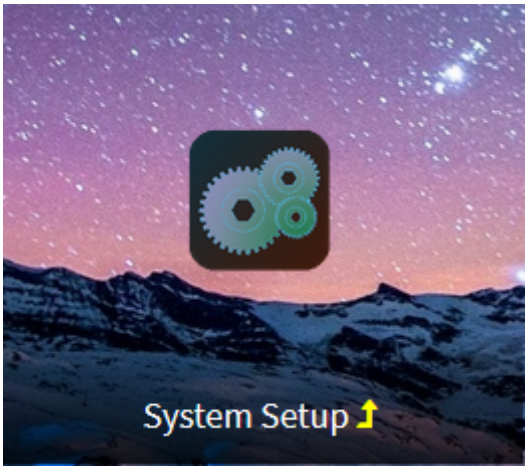

- Upgrade now: It stops all services and upgrade the software.
- Cancel: Go back to the home screen.

- The upgrade may require a long time, the power should be on while upgrading. You have to follow **recovery instruction**if the upgrade failed by forced power off or non-system environment.
- To safe your data, please remove your attached storage before starting the upgrade .

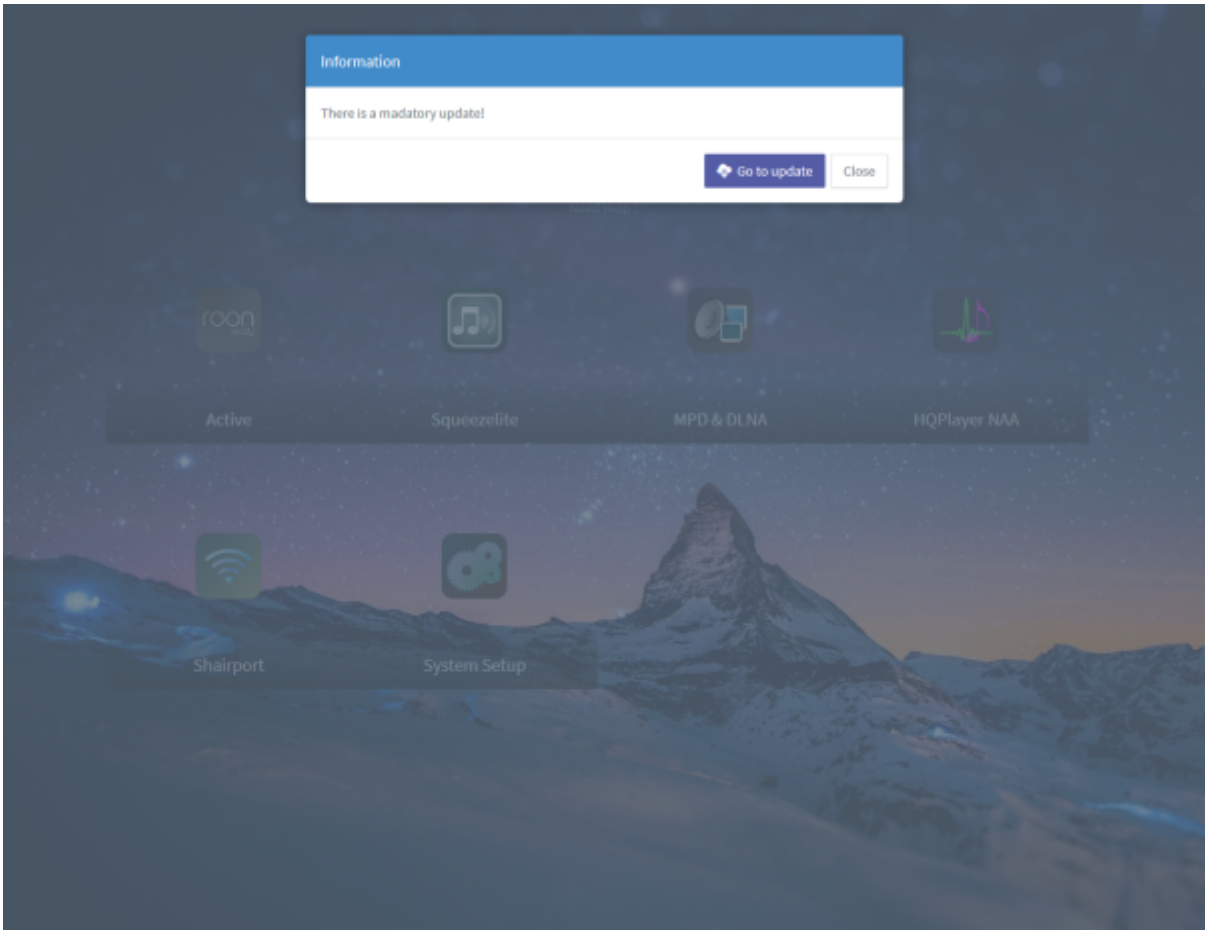
The progress bar of the upgrading would be shown when the upgrade starts.




If an upgrade is available, the yellow icon shows up at right of “System Setup”.



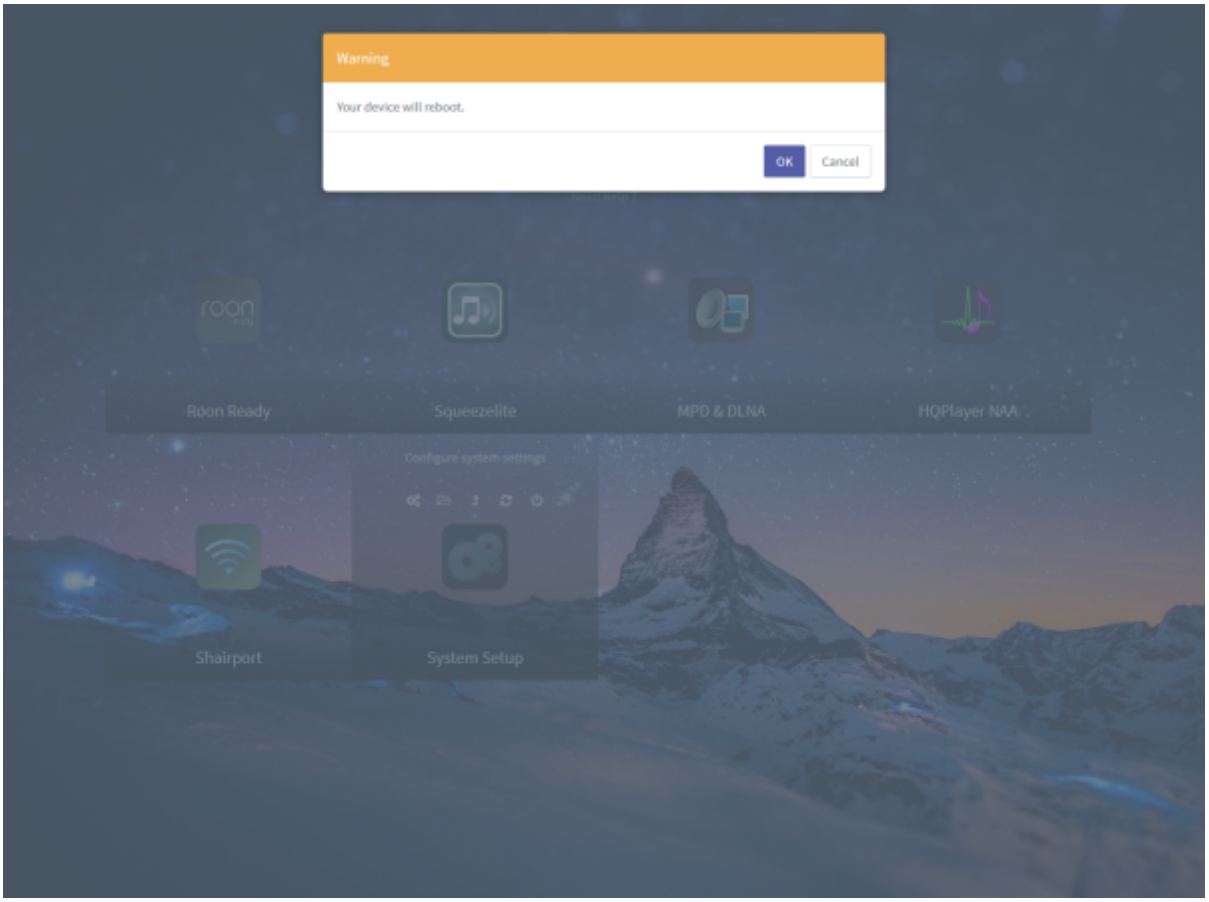

If there is a mandatory upgrade, Eunhasu shows a pop-up window to notify.



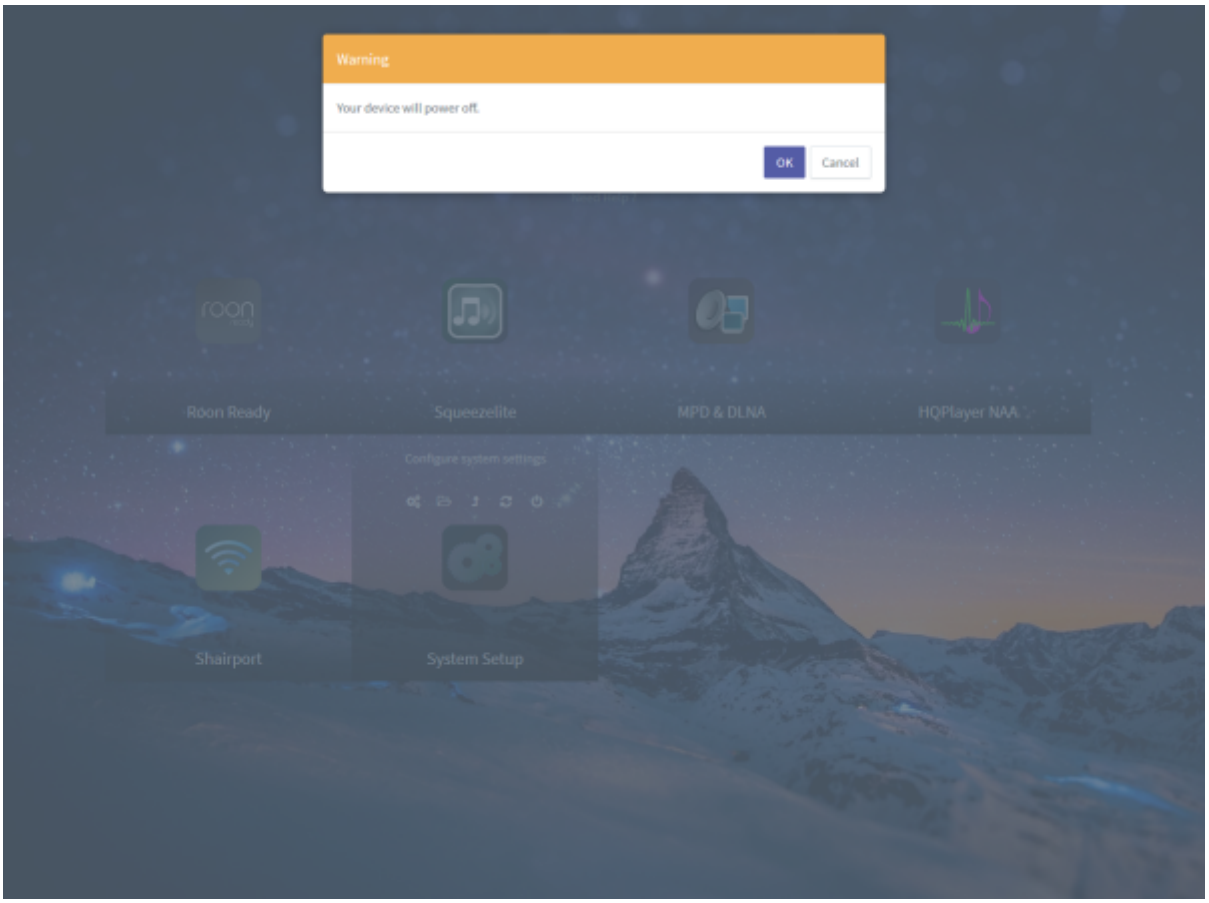

## Reboot and power off

Reboot and power off system.

Reboot will take 2~3 mins. It depends on device settings like connection storage or other accessories.




'power off' will not work immediately. It takes a few seconds. If you unplug the power cord, your storage device might be damaged. Please use the 'power off' function when you need to power off the device.



# Precautionary statement

- Eunhasu-enabled devices (e.g. sMS-200 or sMS-1000SQ) and control devices such as PC or smart device must be connected to the same local network.
- Check the USB connection before using the unit.
- When using an external storage device, we recommend using an external hard drive which is powered separately and up to 4TB capacity. (For stability, we recommend using an externally powered USB storage device.)
- An external HDD should be one partition and NTFS or FAT filesystems are recommended.
- We recommend using only one of the USB ports. If you use several USB ports at the same time, sound quality may be degraded.
- Eunhasu may not work on an IPv6 network. It was developed and tested in an IPv4 network environment.
- If the mwdata folder space is 100% full, the main system will be in an abnormal state and will not operate normally. External USB storage devices are not applicable.
- An external USB storage device can be used in the Squeezelite or MPD/DLNA feature.

# Additional tips

## Direct connection for Windows

- dhcp_server_for_windows
- direct_connection

## File Tag Encoding and Display Issues

https://kb.roonlabs.com/FAQ:Some_characters_are_not_displaying_properly

## Re-burning SD Card

Only for sMS-200(or sMS-200ultra), to initialize whole system.

- Burning mSD card image

## Installing Eunhasu_x86 for sMS-1000SQ

Only for sMS-1000SQ, to initialize whole system.

- Installing Eunhasu x86

### IckStream in LMS (not supported since May 2019)

- how_to_install_ickstream_app_in_lms

LMS should be restarted when you reboot Eunhasu because IckStream plugin could not get the login information just after the reboot.

## Additional information

### Supported Native DSD DAC list

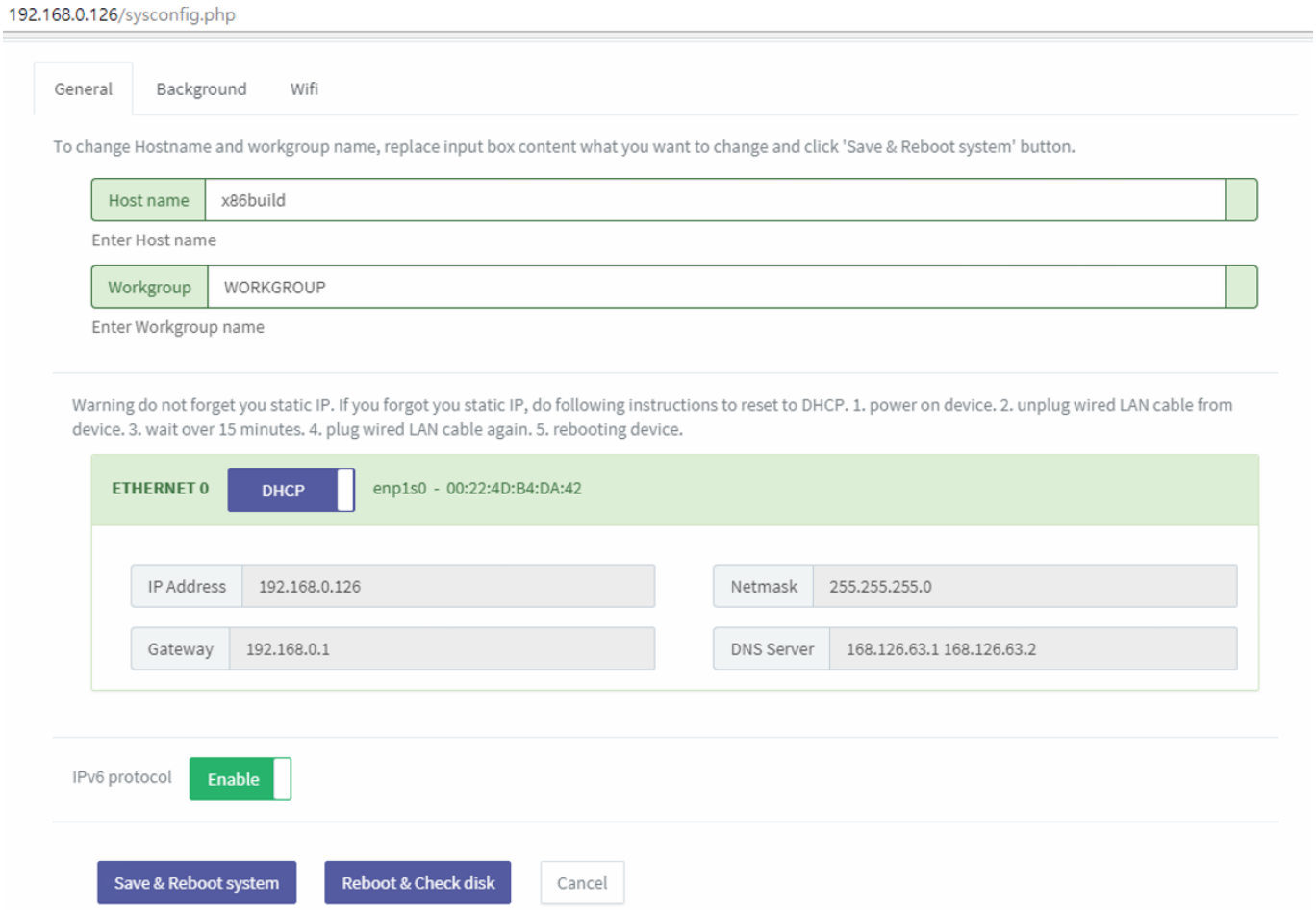
Below chart is the Native DSD DAC list supported in Eunhasu.

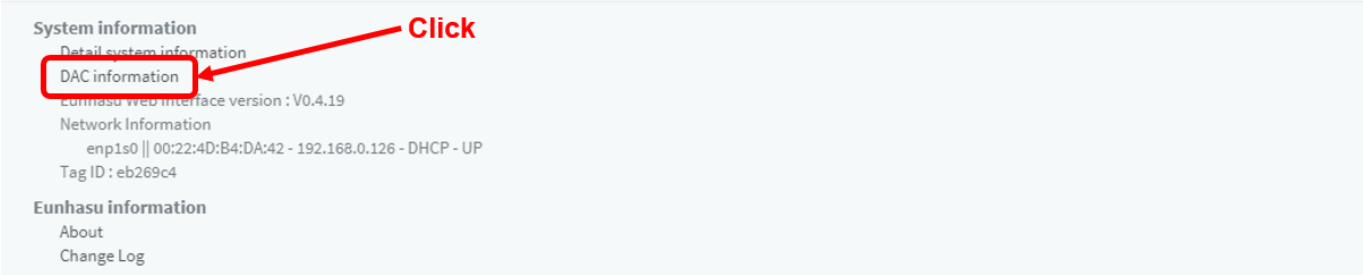
| Model | USB ID |
|---|---|
| Playback Designs | 0x23ba |
| AURALiC VEGA | 0x1511, 0x0037 |
| Wyred 4 Sound DAC-2 DSD | 0x20b1, 0x0002 |
| iFi Audio micro/nano iDSD | 0x20b1, 0x3008 |
| Matrix Audio X-Sabre | 0x20b1, 0x2008 |
| Matrix Audio Quattro II | 0x20b1, 0x302a |
| Matrix Audio Mini-i Pro | 0x20b1, 0x300a |
| Matrix Audio X-SPDIF 2 | 0x20b1, 0x2004 |
| Pro-Ject Pre Box S2 Digital | 0x2772, 0x0230 |
| OPPO HA-1 | 0x22d9, 0x0416 |
| LH Labs Geek Out 1V5 | 0x2522, 0x0007 |
| OPPO Sonica | 0x22d9, 0x0436 |
| LH Labs VI DAC Infinity | 0x2522, 0x0012 |
| LH Labs Geek Pulse X Inifinity 2V0 | 0x2522, 0x0009 |
| Mytek Brooklyn DAC | 0x25ce, 0x001f |
| Mytek Brooklyn DAC+ | 0x27f7, 0x1301 |
| Mytek Manhattan DAC | 0x25ce, 0x0021 |
| Mytek Liberty DAC | 0x25ce, 0x801e/0x001e |
| NuPrime DAC-10 | 0x16b0, 0x06b2 |
| NuPrime Audio HD-AVP/AVA | 0x16d0, 0x06b4 |
| NuPrime IDA-8 | 0x16d0, 0x09d8 |
| NuPrime Audio DAC-9 | 0x16d0, 0x09db |
| ENCORE mDSD | 0x16d0, 0x09dd |
| Bryston BDA3 | 0x1db5, 0x0003 |
| WaveIO USB Audio 2.0 | 0x20a0, 0x4143 |
| Gustard DAC-X20U | 0x20b1, 0x000a |
| Denafrips DAC | 0x20b1, 0x2005 |

| Model | USB ID |
|---|---|
| DIYINHK DSD DXD 384kHz USB to I2S/DSD | 0x20b1, 0x2009 |
| OKTO RESEARCH DAC8PRO | 0x20b1, 0x2009 |
| JLsounds I2SoverUSB | 0x20b1, 0x2023 |
| Engineered Electronics Stereo Playback Interface | 0x20b1, 0x300f |
| Eastern El. MiniMax Tube DAC Supreme | 0x20b1, 0x3021 |
| Aune X1S 32BIT/384 DSD DAC | 0x20b1, 0x3023 |
| Unison Research Unico CD Due | 0x20b1, 0x302d |
| Holo Springs Level 3 R2R DAC | 0x20b1, 0x3036 |
| Soekris dac1101 | 0x20b1, 0x3073 |
| Singxer F-1 converter board | 0x20b1, 0x3086 |
| CH Precision C1 DAC | 0x20b1, 0x307b |
| OPPO HA-2 | 0x22d9, 0x0426 |
| HDTA Serenade DSD | 0x22e1, 0xca01 |
| PS Audio NuWave DAC | 0x2616, 0x0106 |
| Audiolab 8300 CDQ | 0x2622, 0x0041 |
| Audiolab M-DAC+ | 0x2622, 0x0041 |
| Mutec MC3+ USB | 0x29a2, 0x0086 |
| Cayin iDAC-6 | 0x2d87, 0x000a |
| MSB Technology | 0x6b42, 0x0042 |
| W4S DAC-2v2SE | 0x27f7, 0x3002 |
| Amanero Combo384 | 0x16d0, 0x071a |
| JAVS X6-DAC | 0x2573, 0x8201 |
| iFi Neo iDSD | 0x20b1, 0x3009 |
| iFi Pro iDSD | 0x20bi, 0x3008 |
| OPPO UDP-205 | 0x22d9, 0x0461 |
| Topping D50, D70, D30 Pro | 0x152a, 0x8750 |
| Hegel HD12 DSD | 0x0d8c, 0x0316 |
| Furutech ADL Stratos | 0x16d0, 0x0733 |
| M2Tech Young MkIII | 0x249c, 0x9326 |
| M2Tech hiFaceTWO | 0x249c, 0x930b |
| W4S DAC-2v2SE | 0x27f7, 0x3002 |
| Rotel 1592 | 0x278b, 0x5100 |
| sDP-1000EX | 0x30b1, 0x2102 |
| T+A USB HD Audio 1 | 0x2ab6, Any |
| T+A USB HD Audio 2 | |
| T+A SD 3100 HV | |
| Denon DA-300USB | 0x154e, 0x1003 |
| Denon DCD-1500RE | 0x154e, 0x1002 |
| Denon XMOS USB Audio Device | 0x154e |
| Marantz HD-DAC1, Marantz NA11-S | 0x154e, 0x3005 |
| Marantz SA-14S1 | 0x154e, 0x3006 |
| Luxman DA-06 | 0x1852, 0x5065 |
| TEAC UD-501/UD-501V2/UD-503/NT-503 | 0x0644, 0x8043 |
| Esoteric D-05X | 0x0644, 0x8044 |
| TEAC UD-301 | 0x0644, 0x804a |

| **Model** | **USB ID** |
|---|---|
| Mola Mola Makua | 0x20b1, 0x3089 |
| Peachtree nova500 | 0x29c5, 0x0022 |
| Gustard USB audio GSD audio | 0x292b, 0xc4b3 |
| Lindemann USB Audio 2.0 | 0x2305, 0x0010 |
| D&M holdings Inc. PMA-2500NE | 0x154e, 0x1007 |
| Quad Artera DAC | 0x2622, 0x0002 |
| Quad XU1 Audio | 0x2622, 0x0001 |
| Mission XU1 Audio | 0x2622, 0x0010 |
| Luxman XU1 Audio | 0x2622, 0x0020 |
| Wharfedale XU1 Audio | 0x2622, 0x0030 |
| Audiolab XU1 Audio | 0x2622, 0x0040 |
| Ekco XU1 Audio | 0x2622, 0x0050 |
| IAG XU1 Audio | 0x2622, 0x0060 |
| Mission Audio | 0x2622, 0x0011 |
| Luxman Audio | 0x2622, 0x0021 |
| Wharfedale Audio | 0x2622, 0x0031 |
| Ekco Audio | 0x2622, 0x0051 |
| IAG Audio | 0x2622, 0x0061 |
| Accuphase DC-950 / DP-560 / DC-37 / DP-430 / DAC-50 | 0x21ed, 0xd37a |
| Auralic Vega G2.1 | 0x1511, 0x0052 |
| Marantz SA10S1 | 0x154e, 0x3008 |
| ARCAM irDAC II | 0x25c4 |
| DA2 McIntosh | 0x2afd, 0x000b |
| Aqua USB Audio 384 | 0x31c1 |
| Using XMOS XU208 chipset | 0x25d0, 0x0002 |

To check whether your DAC natively supports DSD playback in Eunhasu, please follow the steps below. Click the DAC information link at the bottom side of System config page.




Check the USB ID of the DAC that is connected to the Eunhasu device at DAC Information page.

```
**** List of PLAYBACK Hardware Devices ****
card 0: Audio [iFi (by AMR) HD USB Audio], device 0: USB Audio [USB Audio]
  Subdevices: 1/1
  Subdevice #0: subdevice #0
```

---

```
Bus 004 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 002 Device 003: ID 20b1:3008 XMOS Ltd
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 003 Device 004: ID 0781:5583 SanDisk Corp.
Bus 003 Device 002: ID 05e3:0610 Genesys Logic, Inc. 4-port hub
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
```

---

```
 0 [Audio          ]: USB-Audio - iFi (by AMR) HD USB Audio
                      iFi (by AMR) iFi (by AMR) HD USB Audio at usb-1c1c000.usb-1, high speed
```

---

```
iFi (by AMR) iFi (by AMR) HD USB Audio at usb-1c1c000.usb-1, high speed : USB Audio
```

If there is a matching USB ID in Supported Native DSD DAC list, it means it supports Native DSD playback.

If there is no matching USB ID in Supported Native DSD DAC list, please email us the request with the DAC information page. After checking the DAC information, we will make the Native DSD playback available on Eunhasu.

From:
https://www.wiki.sotm-audio.com/ - **SOtM docs**

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Last update: **2022/11/17 23:19**