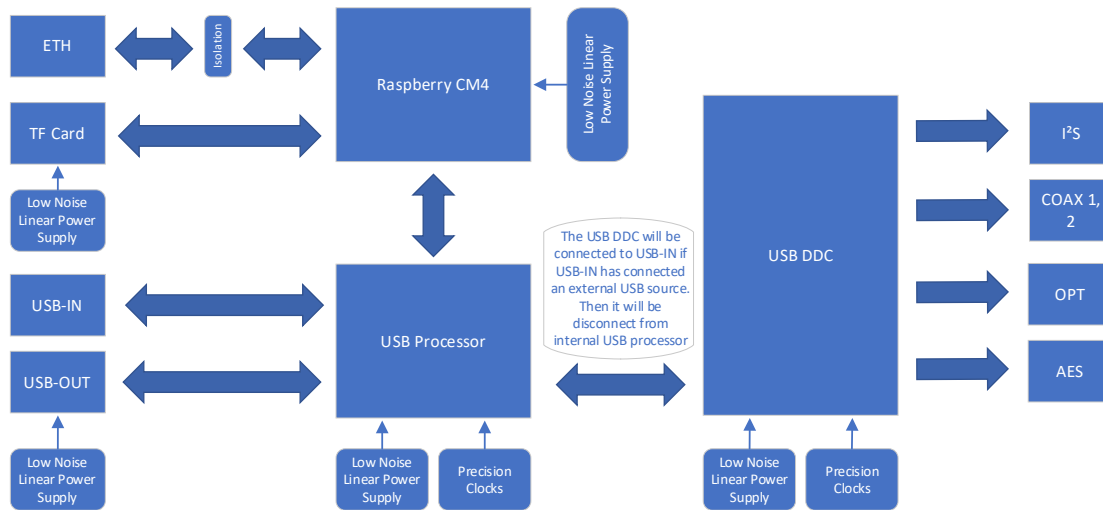


Precautions

Please turn off the power before plugging and unplugging the TF card. Hot swapping with power on may cause damage to the TF card!

Hardware Description

RED is composed of multiple sets of ultra-low noise linear regulated power supplies, high-quality clocks, USB signal processors, USB DDC, Raspberry Pi CM4, etc. The internal block diagram is shown below:



When the USB-IN is effectively connected, the USB DDC will be connected to the USB-IN and disconnected from the USB processor; I²S, COAX-1, COAX-2, OPT, AES will simultaneously output the audio signal from the USB-IN.

Digital Output

COAX-1, COAX-2, OPT, AES	PCM 44.1-192K 24bit
	DSD 64 DOP
USB	PCM 1.536Mhz / DSD1024
I²S	PCM 44.1K-768K
	DSD 64-512X Native / DSD64 -256X DOP

Chassis Specifications

Size	212x143x42mm - W x L x H (does not include overhangs)
Weight	2.4kg

Power Specifications

Power Input (Configurable, see the label on the bottom for more details)	220-230V 50/60Hz - Fuse Specifications 1A SB 5x20mm
	100-115V 50/60Hz - Fuse specifications 2A SB 5x20mm
Rated Power	15W (The actual power depends on the load)

Appendix

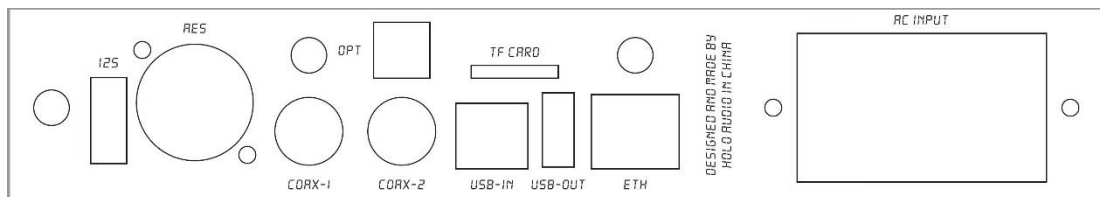
Accessories	AC Power Cable x1
	TF card (pre-installed custom bridge system) x1

Front Panel



LED status indicator: the power indicator is green and steady, and the load indicator is red and flashing (it is normal to flash or turn off according to the load used)

Rear Panel



From left to right (top to bottom) interfaces are: optical fiber, system TF card holder*, I²S*, AES, coaxial 1*, coaxial 2*, USB input, USB output, network port, AC power input

1. Do not hot swap the TF card while the power is on! Please turn off the power before inserting or removing the TF card.
2. I²S adopts LVDS differential transmission mode, and the pinout can be configured. Please refer to I²S output configuration for details. The physical interface form is the same as HDMI. An HDMI cable can be used but note that the electrical signal it transmits is I²S, not a conventional HDMI audio and video signal.
3. Coaxial 1 and coaxial 2 cannot be short-circuited.

RED OS

Find the IP address the corresponds to RED through your router's client list or use tools like an IP scanner to obtain the IP address.

The image shows a mobile device interface on the left and an Advanced IP Scanner window on the right. The mobile interface displays the IP address 192.168.0.117, MAC address E4, and connection status 有线连接. It also shows network speed (0.0 B/s) and settings for speed limit and internet time. The Advanced IP Scanner window shows a list of devices on the network, with the device named 'Red' highlighted in blue and its IP address 192.168.0.117 circled in red.

Status	Name	IP	Manufacturer	MAC address
	192.168.0.101	192.168.0.101		
	192.168.0.103	192.168.0.103		
	192.168.0.104	192.168.0.104		
	192.168.0.105	192.168.0.105		
	192.168.0.106	192.168.0.106		
	192.168.0.107	192.168.0.107		
	DESKTOP-KHKGQ2N	192.168.0.108		
	192.168.0.110	192.168.0.110		
	192.168.0.111	192.168.0.111		
	ADP006	192.168.0.112		
	Red	192.168.0.117		
	HTTP			

Using a device on the same network, open a browser and type in the corresponding IP address you just obtained for the RED.

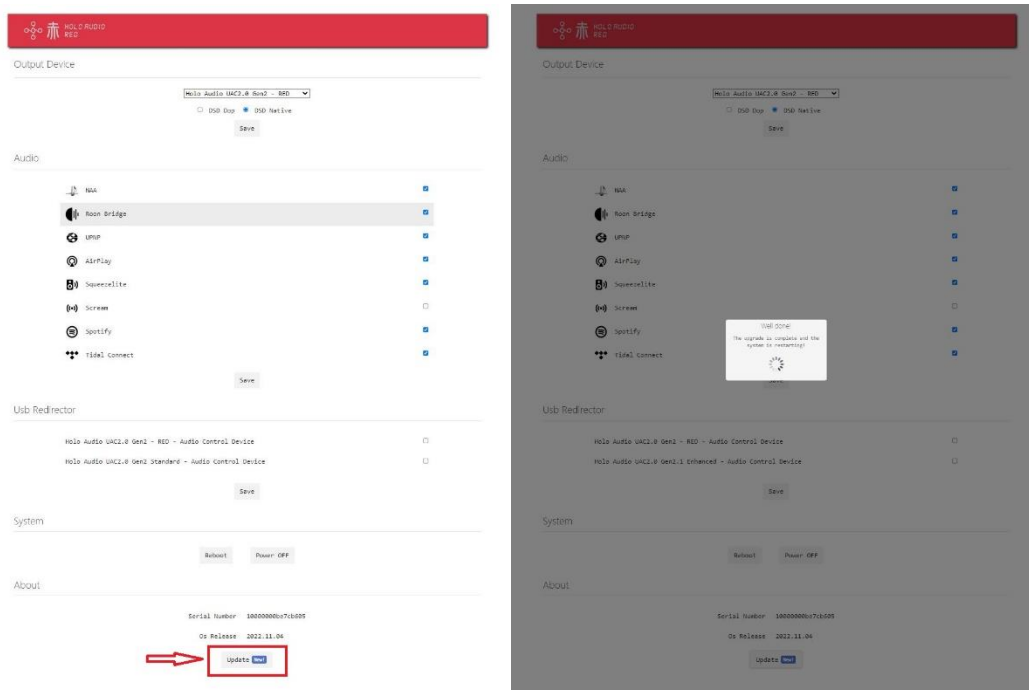
The image shows a web browser window displaying the configuration page for RED OS. The page title is 'Holo Audio RED'. The 'Output Device' section shows a dropdown menu with three options: 'Holo Audio UAC2.0 Gen2 - RED', 'Holo Audio UAC2.0 Gen2 - RED', and 'Holo Audio UAC2.0 Gen2.1 Enhanc'. The 'Audio' section has several options checked: NAA, Room Bridge, UPnP, AirPlay, SqueezeLite, Spotify, and Tidal Connect. The 'Scream' option is unchecked. The 'Usb Redirector' section has two options unchecked: 'Holo Audio UAC2.0 Gen2 - Audio Control De...' and 'Holo Audio UAC2.0 Gen2.1 Enhanced - Audio Cont...'. At the bottom, there are buttons for 'Save', 'Reboot', and 'Shutdown'. The 'About' section shows 'Serial Number 10 05' and 'Os Release 2022.11.18'.

Use RED's internal USB DDC output

When using RED's internal USB DDC output, please select "Holo Audio UAC2.0 Gen2-RED" in the Output Device section, and the audio will be output through RED's I²S, coaxial, AES, and optical fiber. ("-RED" is the internal USB DDC)

Use RED's USB-OUT connection

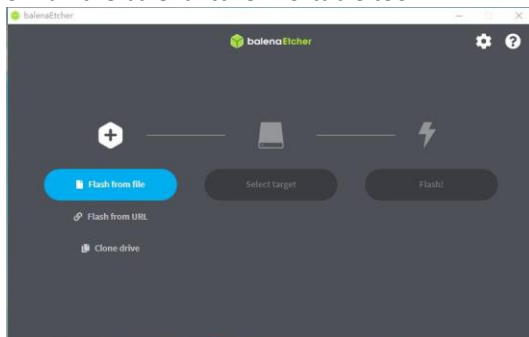
When using RED's USB-OUT to connect DAC or external USB DDC, please select the corresponding device in Output Device, such as "Holo Audio UAC2.0 Gen2.1 Enhanced" or "Holo Audio UAC2.0 Gen2 Standard."



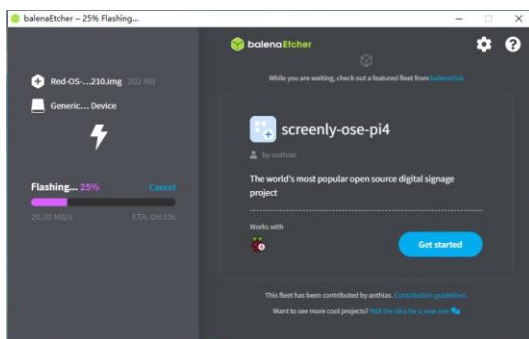
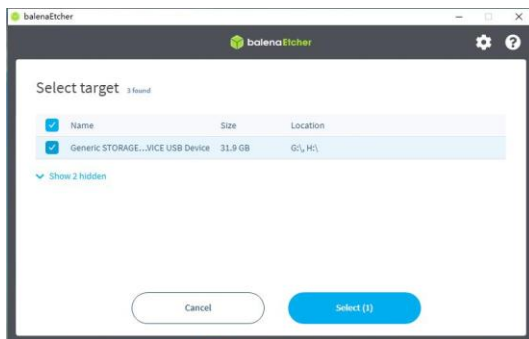
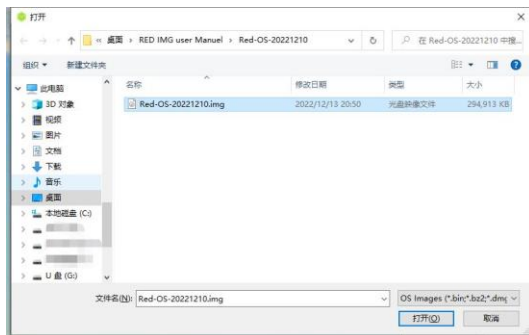
When there is an Update **【New!】** button means that there is updateable system content, click Update **【New!】** Update the system, wait for the system update to complete, and restart.

Write the operating system to the TF card

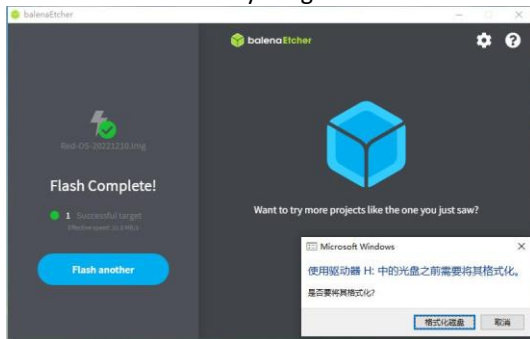
1. Unzip the downloaded chosen operating system image file to get the .img file.
2. Insert the TF card into the card reader and connect it to the computer.
3. Run the balenaEtcher-Portable tool.



4. Select the desired system image (.img file) in the BalenaEtcher-Portable software under "Flash from file", select the corresponding TF drive letter under " Select target ", and then select "Flash!" to start writing to the system. A dialog box will appear asking if you are sure, select "Yes".



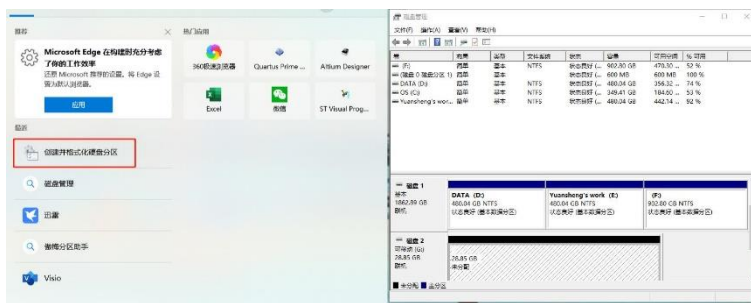
5. It takes a few minutes to finish (it depends on the file size). When the "Flash Complete!" dialog box appears, it means that the everything was successful.



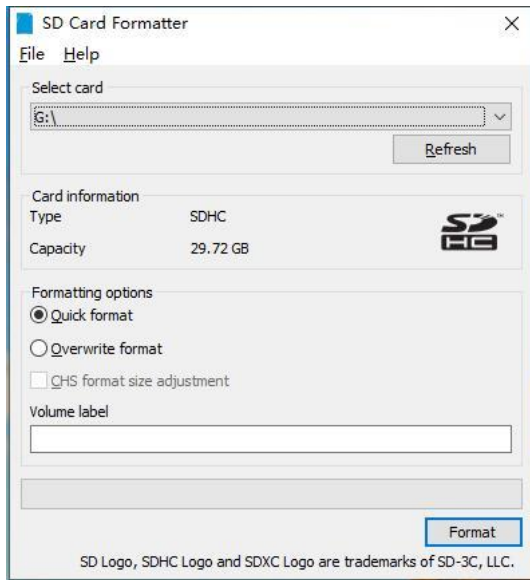
If the system prompts you to format, please remember not to format, click "Cancel" or "X", otherwise the system installed in the hidden partition may be erased and unable to enter the system.

Common Issue

1. After the installation is complete, you will find that the displayed capacity of the TF card is lower than the original capacity. This is because only the boot partition in FAT format is displayed in the Windows system, only tens or hundreds of MB (according to the system written in the TF card), and the larger partition is the Linux partition, which is not displayed in the Windows system. It does not affect the work of the Raspberry Pi Linux (moodeaudio, volumio, etc...) system.
2. If you want to use the drive for something else or want to install a new system, it will need to be formatted according to the instructions below. After the TF card is formatted using the Windows system "My Computer", the TF card will still be partitioned according to the Linux system and will not merge the TF partitions. You can use the Windows disk management tool for partition management to do this.



In addition, you can use the SD Card Formatter tool to format the TF card. Proceed as follows:
 Run SD Card Formatter and select the TF card to be formatted. !!! Carefully check the drive letter that needs to be formatted to avoid the tragedy of formatting other disks!!!

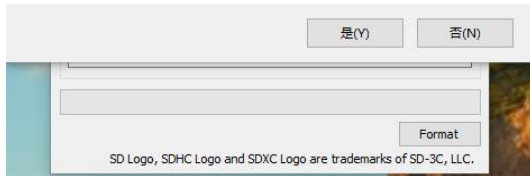


After checking the letter of the drive that needs to be formatted, click "Format", and click "Yes (Y)" after a warning box pops up.

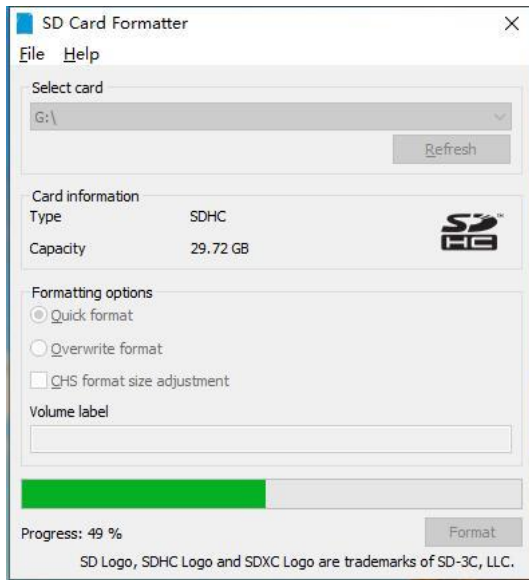


Formatting will erase all data on this card.
Do you want to continue?

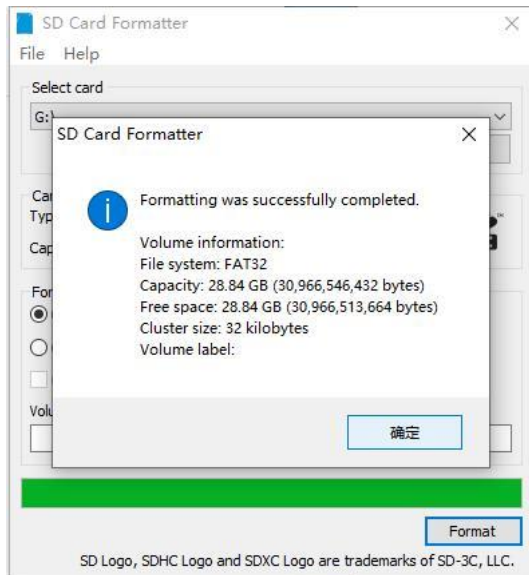
Note: As formatting can take some time (especially when overwrite option is selected), please make sure that your computer is connected to a power supply and that sleep mode is disabled.



Formatting...



After the formatting is completed, drive capacity and storage space can be seen; click "OK" to close the software.




Turn On USB

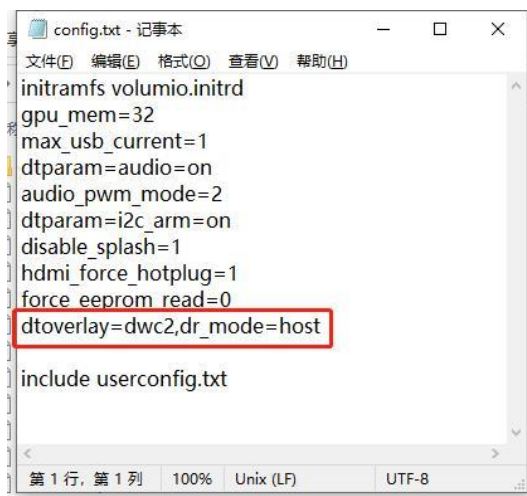
Because CM4 turns off USB by default to reduce power consumption, some systems need to configure it after writing to the TF card.

Moode audio and RoPieeeXL systems are USB enabled and require no user configuration.

After the Volumio system is written using balenaEtcher, it is necessary to add the USB enable configuration statement "dtoverlay=dwc2,dr_mode=host" to the config.txt file in the system TF card and save the txt file (shortcut key Ctrl+S)



名称	修改日期	类型	大小
overlays	2022/2/7 17:48	文件夹	
.firmware_revision	2022/3/31 12:56	FIRMWARE_REVISI...	1 KB
bcm2708-rpi-b.dtb	2022/3/31 12:56	DTB 文件	28 KB
cmdline.txt	2022/3/31 12:57	文本文档	1 KB
config.txt	2022/10/9 11:17	文本文档	1 KB
fixup.dat	2022/3/31 12:56	DAT	8 KB



```
config.txt - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)
initramfs volumio.initrd
gpu_mem=32
max_usb_current=1
dtparam=audio=on
audio_pwm_mode=2
dtparam=i2c_arm=on
disable_splash=1
hdmi_force_hotplug=1
force_eeprom_read=0
dtoverlay=dwc2,dr_mode=host
include userconfig.txt

第 1 行, 第 1 列 100% Unix (LF) UTF-8
```