ED-HMI3020-101C

User Manual

by EDA Technology Co., Ltd

built: 2025-11-26

1 Hardware Manual

This chapter introduces the product overview, packing list, appearance, button, indicators and interfaces.

1.1 Overview

ED-HMI3020-101C is a 10.1-inch industrial HMI based on Raspberry Pi 5. According to different application scenarios and user needs, different specifications of RAM, SD card and SSD can be selected.

- RAM can choose 2GB, 4GB, 8GB and 16GB
- SD card can choose 32GB and 64GB
- SSD can choose 128GB and 256GB

ED-HMI3020-101C provides HDMI, USB 2.0, USB 3.0, RS232, RS485, Audio and Ethernet interfaces, supporting access to the network through Wi-Fi and Ethernet. ED-HMI3020-101C integrates RTC and is mainly used in industrial control and IOT.

1.2 Packing List

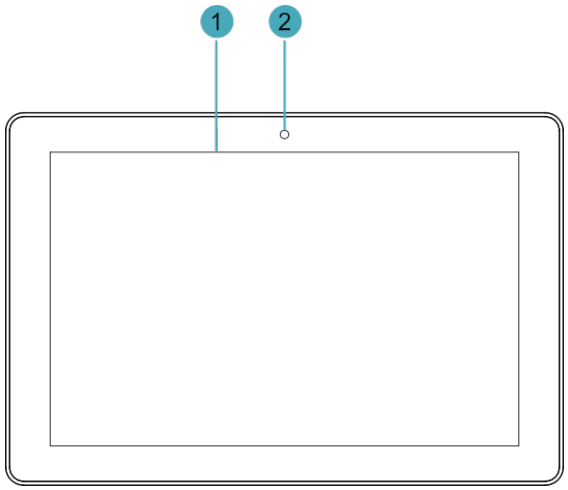
- 1x ED-HMI3020-101C Unit
- 1 x Mounting Kit (including 4 x buckles, 4 x M4*10 screws and 4 x M4*16 screws)

1.3 Appearance

Introducing the functions and definitions of interfaces on each panel.

1.3.1 Front Panel

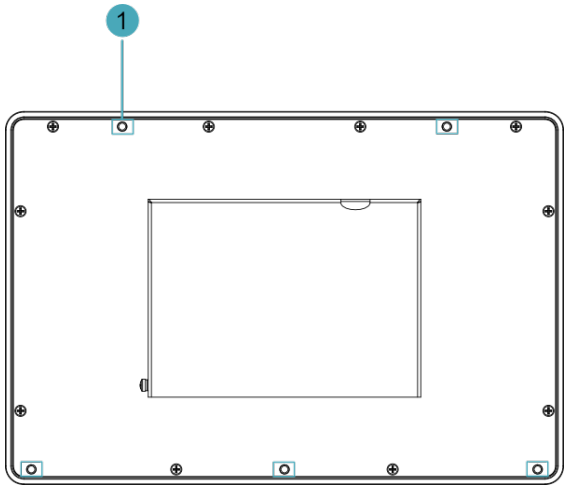
This section introduces functions and definitions of front panel.



NO.	Function Definition
1	1 x LCD display, 10.1-inch LCD touch screen, which supports up to 1028x800 resolution and multi-point capacitive touchscreen.
2	1 x camera (optional), 8 Megapixel front camera.

1.3.2 Rear Panel

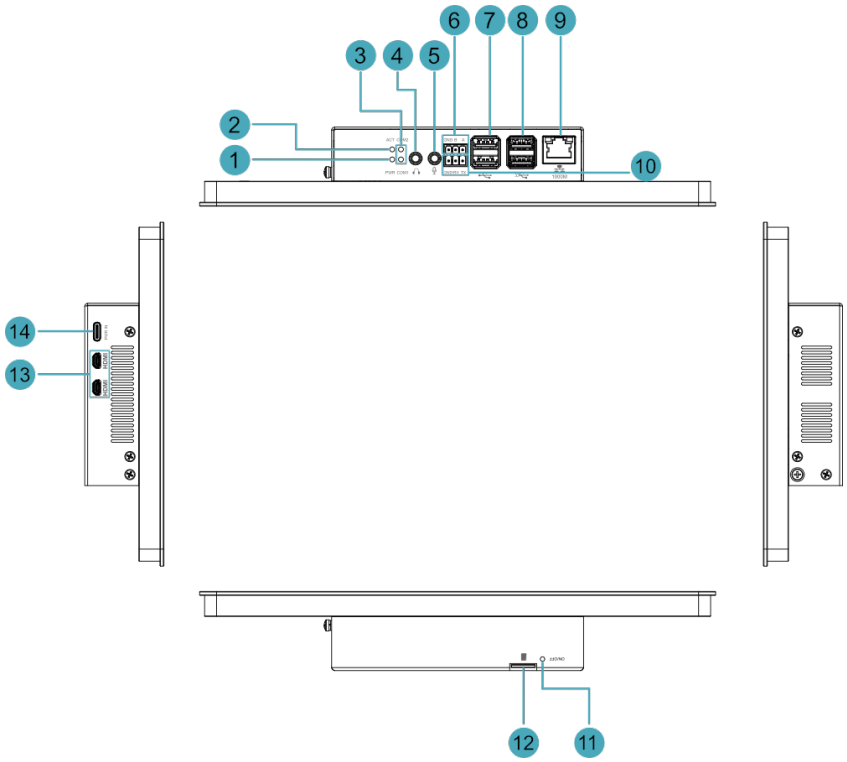
This section introduces interfaces and definitions of rear panel.



NO.	Function Definition
1	5 x installation holes of buckle, which are used to fix the buckles to the device for installation. You only need to use 4 installation holes during installation, and reserve one as a spare.

1.3.3 Side Panel

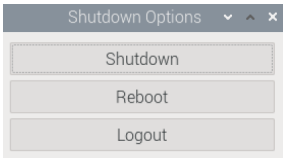
This section introduces interfaces and definitions of side panel.



NO.	Function Definition
1	1 x red power indicator, which is used to check the status of device power-on and power-off.
2	1 x green system status indicator, which is used to check the working status of device.
3	2 x green UART indicators, which is used to check the communication status of UART port.
4	1 x Audio Output (HPO), 3.5mm audio jack connector(green), stereo audio output.
5	1 x Audio Input (LINE IN), 3.5mm audio jack connector(red), supporting stereo audio input.
6	1 x RS485 port, 3-Pin 3.5mm pitch phoenix terminal, which is used to connect the third-party control equipment.
7	2 x USB 2.0 ports, Type-A connector, each channel supports up to 480Mbps.
8	2 x USB 3.0 ports, Type-A connector, each channel supports up to 5Gbps.
9	1 x 10/100/1000M adaptive ethernet port, RJ45 connector, with led indicator. It can be used to access the network.
10	1 x RS232 port, 3-Pin 3.5mm pitch phoenix terminal, which is used to connect the third-party control equipment.
11	1 x power button, which is used to turn on and turn off the device.
12	1 x Micro SD card slot, which is used to install Micro SD card. It supports booting the OS from SD card.
13	2 x HDMI ports, Micro HDMI connector, which can connect a display and supports 4K 60Hz.
14	1 x DC input, USB Type-C connector, which supports 5V 5A power input.

1.4 Button

The ED-HMI3020-101C includes a ON/OFF button, and the silkscreen is “ON/OFF”. If you run Raspberry Pi Desktop, you can initiate a clean shutdown by briefly pressing the power button. A menu will appear asking whether you want to shutdown, reboot, or logout:



> TIP：
>
> If you run Raspberry Pi Desktop, you can press the power button twice in quick succession to shut down.

1.5 Indicator

This section introduces various statuses and meanings of indicators contained in ED-HMI3020-101C.

Indicator	Status	Description
PWR	On	The device has been powered on.
	Blink	Power supply of the device is abnormal, please stop the power supply immediately.
	Off	The device is not powered on.
ACT	Blink	The system started successfully and is reading and writing data.
	Off	The device is not powered on or does not read and write data.
COM1~COM2	On/Blink	Data is being transmitted.
	Off	The device is not powered on or there is no data transmission.
Yellow indicator of Ethernet port	On	The Ethernet connection is in the normal state.
	Blink	The Ethernet connection is abnormal.
	Off	The Ethernet connection is not set up.
Green indicator of Ethernet port	On	The Ethernet connection is in the normal state.
	Blink	Data is being transmitted over the Ethernet port.

Indicator	Status	Description
	Off	The Ethernet connection is not set up.

> TIP:
>
> The function of the PWR/ACT indicator on the Raspberry Pi 5 has been transferred to the separate PWR and ACT indicators by default, so the PWR/ACT indicator remains on after the device is powered on.

1.6 Interface

Introducing the definition and function of each interface in the product.

1.6.1 Micro SD Card Slot

The ED-HMI3020-101C includes a Micro SD card slot, and the silkscreen is "" , which supports the installation of a Micro SD card for booting the system.

1.6.2 Power Supply

The ED-HMI3020-101C includes one power input, and the silkscreen is “PWR IN”. The connector is USB Type-C, which supports 5V 5A power input.

> TIP:
>
> In order for Raspberry Pi 5 to achieve better performance, it is recommended to use a 5V 5A power adapter.

1.6.3 1000M Ethernet

ED-HMI3020-101C includes one adaptive 10/100/1000M Ethernet port, and the silkscreen is "1000M". The connector is RJ45, which is used to access to network. It is recommended to use the network cable of Cat6 and above.

1.6.4 HDMI

ED-HMI3020-101C includes 2 HDMI ports, and the silkscreen is "HDMI". The connector is Micro HDMI, which can connect to HDMI displays and supports up to 4Kp60.

1.6.5 USB 2.0

ED-HMI3020-101C includes 2 USB 2.0 ports, and the silkscreen is "". The connector is USB Type-A, which can connect to standard USB 2.0 peripherals and supports up to 480Mbps.

1.6.6 USB 3.0

ED-HMI3020-101C includes 2 USB 3.0 ports, and the silkscreen is "SS". The connector is USB Type-A, which can connect to standard USB 3.0 peripherals and supports up to 5Gbps.

1.6.7 RS232

ED-HMI3020-101C contains 1 RS232 port, 3-Pin 3.5mm pitch phoenix terminals. The silkscreen is "GND/RX/TX".

Pin Definition

Terminal pins are defined as follows:

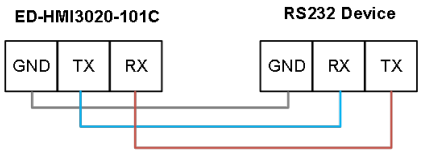
	Pin ID	Pin Name
	1	GND
	2	RX
	3	TX

The pin names of Pi5 corresponding to RS232 interface are as follows:

Signal	Pi5 GPIO Name	Pi5 Pin Out
TX	GPIO4	UART3_TXD
RX	GPIO5	UART3_RXD

Connecting Cables

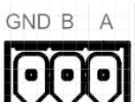
Schematic diagram of RS232 wires is as follows:



1.6.8 RS485

ED-HMI3020-101C contains 1 RS485 port, 3-Pin 3.5mm pitch phoenix terminals. The silkscreen is "A/B/GND".

Pin Definition Terminal pins are defined as follows:

	Pin ID	Pin Name
	1	GND
	2	B

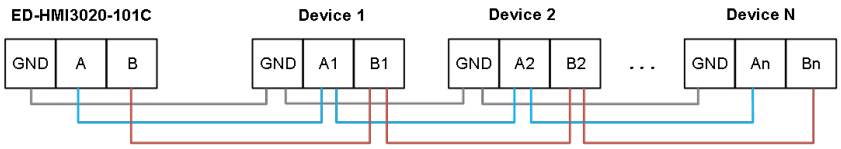
	3	A

The pin names of Pi5 corresponding to RS485 interface are as follows:

Signal	Pi5 GPIO Name	Pi5 Pin Out
A	GPIO12	UART5_TXD
B	GPIO13	UART5_RXD

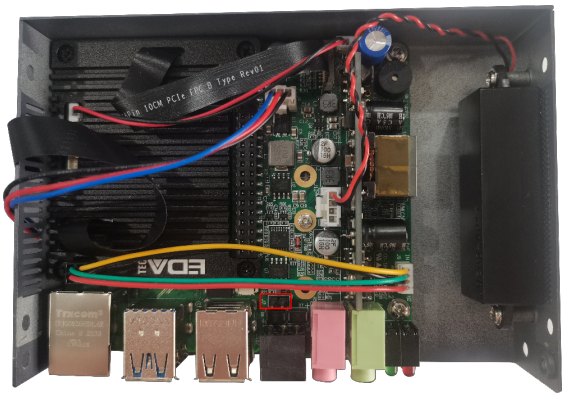
Connecting Cables

Schematic diagram of RS485 wires is as follows:



RS485 Terminal Resistor

ED-HMI3020-101C contains a RS485 port. A 120R jumper resistor is reserved between A and B of RS485 line. The jumper cap can be inserted to enable the jumper resistor. By default, the jumper cap is not connected, and the 120R jumper resistor function is disabled. The position of jumper resistor in the PCBA is J7 in the figure below (red box position).



> TIP:
>
> You need to open the device case to view the position of 120R jumper resistor. For detailed operations, please refer to 2.3 Open Device Case.

1.6.9 Audio In

ED-HMI3020-101C contains one audio input (LINE IN), 3.5mm audio jack connector (red). The silkscreen is "🎙", supporting stereo audio input.

1.6.10 Audio Out

ED-HMI3020-101C contains one audio output (HPO), 3.5mm audio jack connector (green). The silkscreen is "🎧", supporting stereo audio output.

1.6.11 Speaker

The ED-HMI3020-101C contains a power amplifier output, built-in a 4Ω 3W speaker, supporting single-channel stereo output. When playing audio, if the headphone is connected to the Audio Out interface (HPO), the speaker will have no audio output.

2 Installing/removing Components (optional)

This chapter introduces how to install/remove components.

2.1 Pull Out Micro SD Card

If you need to remove the Micro SD card while using the product, you can refer to the following instructions.

> NOTE:
>
> Please turn off the power before inserting or removing the Micro SD card.

Preparation:

The device has been disconnected from power.

Steps:

1. Find the location of the Micro SD card, as shown in red mark of figure below.

2. Hold the Micro SD card and pull it out.

2.2 Insert Micro SD Card

If the product model includes a Micro SD card, the Micro SD card will be installed by default. If the product model does not include a Micro SD card, you will need to use the Micro SD card later. Please refer to the following to install it.

> NOTE:
>
> Please turn off the power before inserting or removing the Micro SD card.

Preparation:

- Micro SD card is ready.
- The device has been disconnected from power.

Steps:

1. Find the location of the Micro SD card slot, as shown in red mark of figure below.

2. Insert the Micro SD card into the corresponding card slot with the contact side facing up, making sure it will not fall out.

2.3 Open Device Case

If you need to open the device case while using the product, please refer to the following instructions.

Preparation:

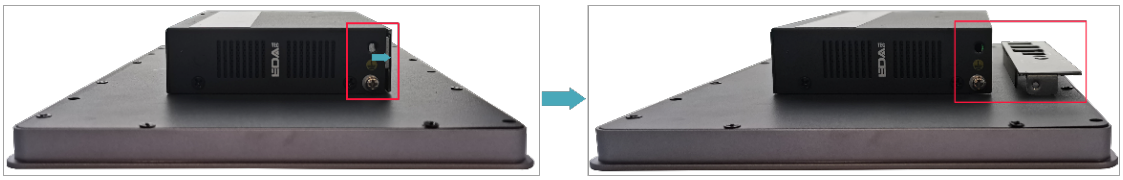
- A cross screwdriver has been prepared.
- The device has been disconnected from power.

Steps:

1. Pull out the default configuration of phoenix connector (male for wiring).

2. Use a screwdriver to loosen two M3 screws on two sides counterclockwise, as shown in the red mark of figure below.

3. Remove the front cover to the right, as shown in the figure below.



4. Use a screwdriver to loosen four M3 screws and one grounding screw on two sides counterclockwise, as shown in the red mark in the figure below.

5. Remove the metal case upward and flip it clockwise to the PCBA side.

6. Use a screwdriver to loosen 6 screws of PCBA mounting counterclockwise to separate the PCBA from the metal case, and flip it to the back of PCBA.

2.4 Remove SSD

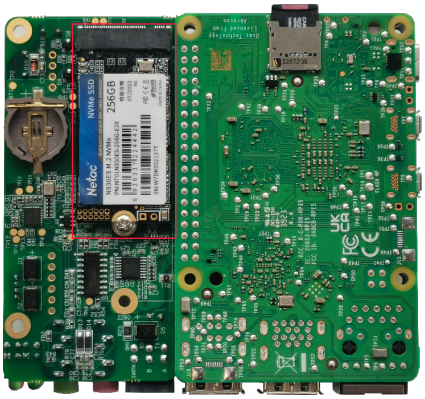
If the SSD is damaged during use and needs to be replaced, the damaged SSD needs to be removed first.

Preparation:

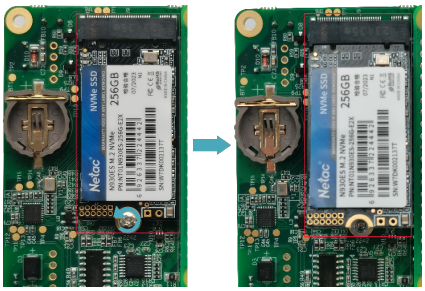
- The device case has been open.
- A cross screwdriver has been prepared.

Steps:

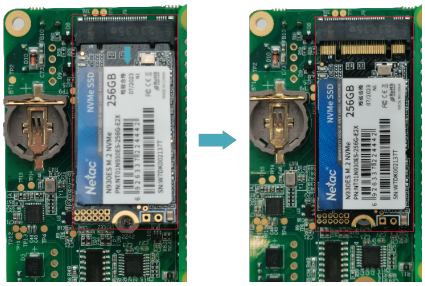
1. Find the location of SSD, as shown in the red mark of figure below.



2. Use a screwdriver to loosen the screws that secure the SSD counterclockwise.



3. Hold both sides of the SSD with your hands and pull it out in the direction of the arrow.



2.5 Install SSD

If you choose a model without SSD when purchasing the product, and you need to use an SSD later, please refer to the following to install the SSD.

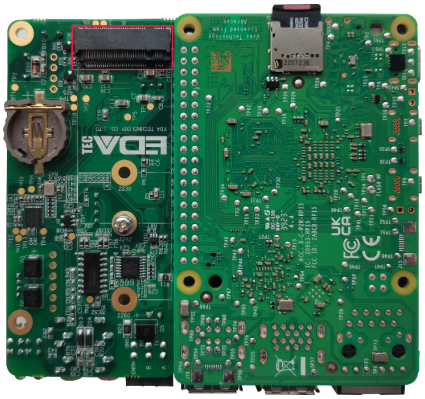
> TIP:
>
> Only compatible with M.2 2230, M.2 2242 and M.2 2260 SSD.

Preparation:

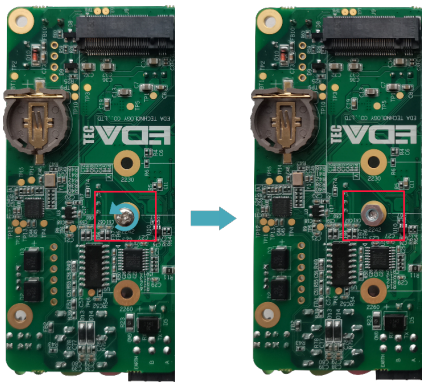
- The device case has been open.
- A cross screwdriver has been prepared.
- SSD is ready.

Steps:

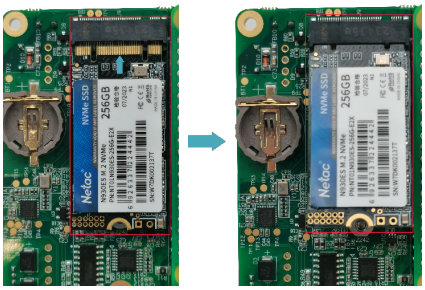
1. Find the location of SSD connector, as shown in the red mark of figure below.。



2. Use a screwdriver to loosen the screws that secure the SSD counterclockwise.



3. Insert the SSD into the connector with the contacts facing up.



4. Insert the screws that secure the SSD and tighten clockwise to secure the SSD to the PCBA.

2.6 Install RTC Battery

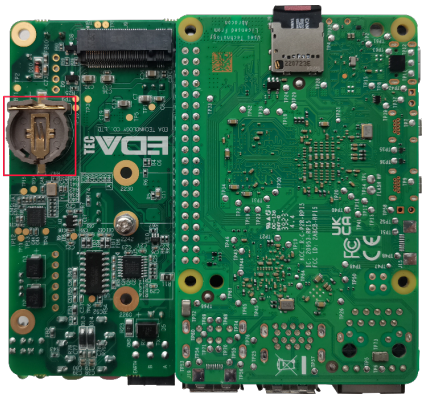
> TIP:
>
> Some international logistics do not support the transportation of batteries, and some ex-factory devices are not equipped with CR1220 batteries. Therefore, before using RTC, please prepare a CR1220 battery and install it on the motherboard.

Preparation:

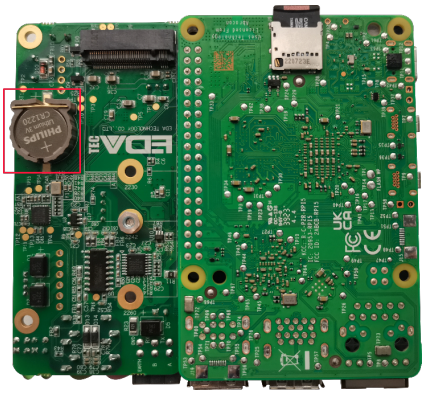
- The device case has been open.
- The battery CR1220 is ready.

Steps:

1. Find the location of RTC battery base, as shown in the red mark of figure below.



2. Place the positive terminal of the battery facing up, and press it into the RTC base. The completed installation is as shown below.



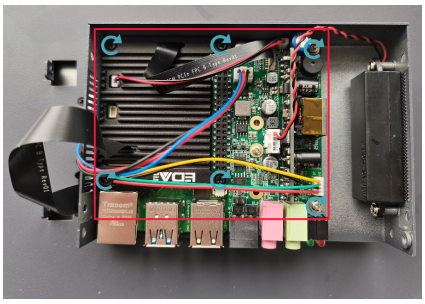
2.7 Close Device Case

Preparation:

A cross screwdriver has been prepared.

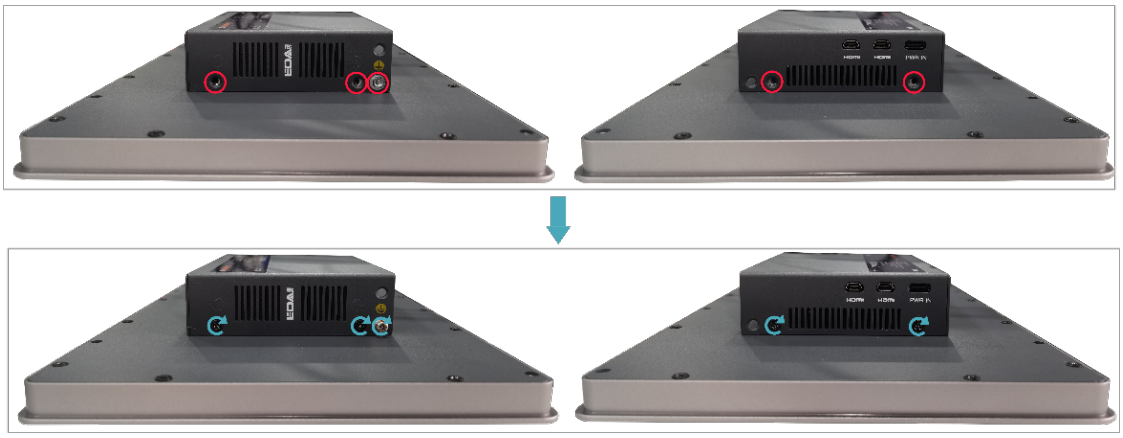
Steps:

1. Turn the PCBA over to port side, place the PCBA on the metal case to align the 6 mounting holes on the PCBA with the studs on the metal case. Then insert 6 mounting screws, and tighten clockwise to fix the PCBA to the metal case.



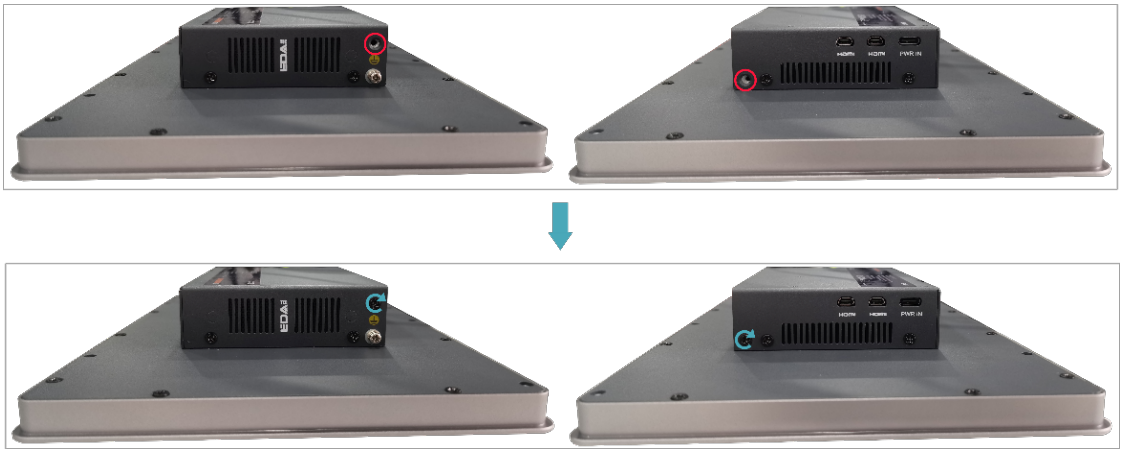
2. Flip the metal case downward, align the screw mounting holes on the metal case with the screw mounting holes on the back of the LCD screen, and cover it downward on the back of the LCD screen.

3. Use a screwdriver to tighten four M3 screws and one grounding screw on two sides clockwise.



4. Align the ports on the PCBA with the port's holes on the side panel, and insert the side cover.

5. Use a screwdriver to tighten 2 M3 screws clockwise to fix the side cover.



6. Plug in the default configuration of phoenix connector.

3 Installing Device

This chapter introduces how to install the device.

3.1 Embedded Installation

ED-HMI3020-101C supports embedded front installation, which is equipped with a Mounting Kit (including 4 x buckles, 4 x M4*10 screws and 4 x M4*16 screws).

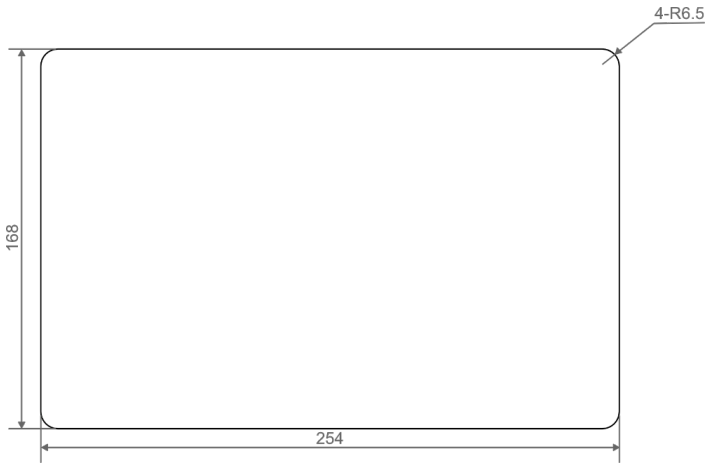
Preparation:

- A Mounting Kit (including 4 x buckles, 4 x M4*10 screws and 4 x M4*16 screws) have been obtained from the packaging box.
- A cross screwdriver has been prepared.

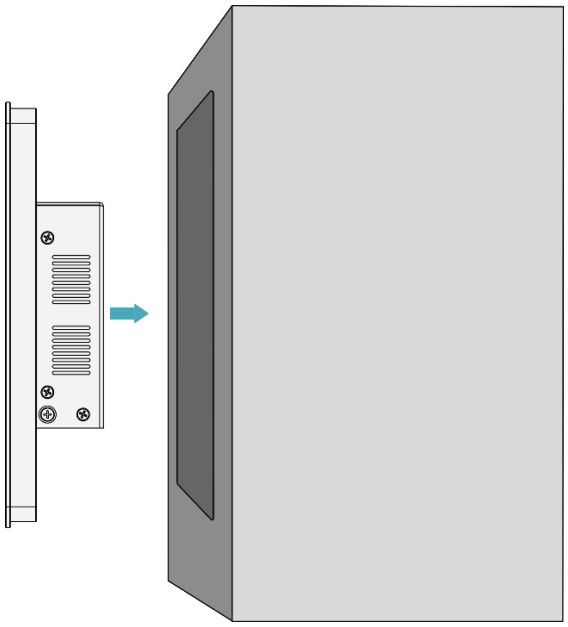
Steps:

1. You need ensure the opening size of the cabinet according to the size of ED-HMI3020-101C, as shown in the figure below.

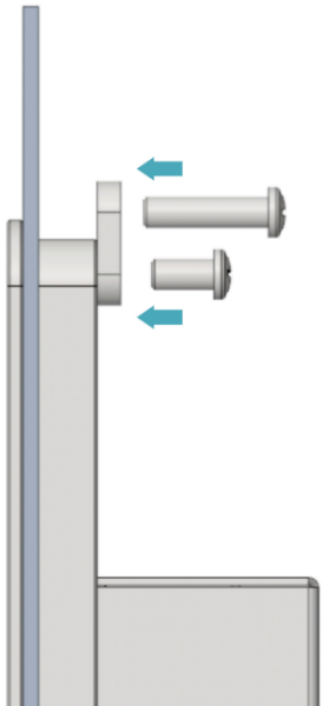
Unit: mm



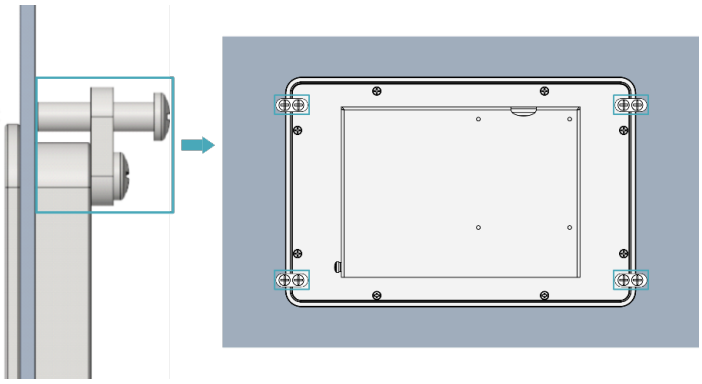
2. Drill a hole on the cabinet according to the hole size of step1.
3. Insert the ED-HMI3020-101C into the cabinet from the outside.



4. Align the screw hole (unthreaded hole) of the buckle with the buckle mounting hole on the side of the device.



5. Use 4 M4*10 screws to pass through the buckle and tighten it clockwise to fix the buckle to the device; then use 4 M4*16 screws to pass through the screw hole (threaded hole) of the buckle and tighten clockwise to the end through the buckles.



4 Booting The Device

This chapter introduces how to connect cables and boot the device.

4.1 Connecting Cables

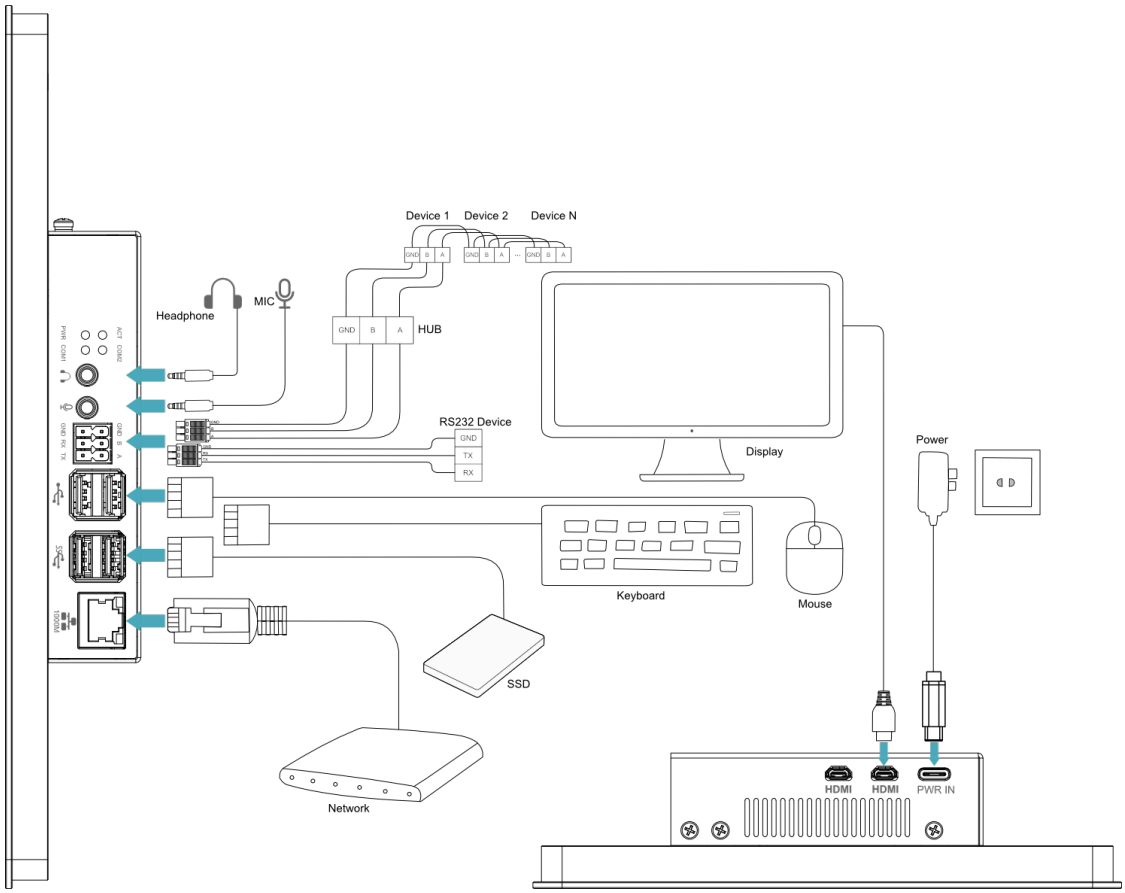
This section describes how to connect cables.

Preparation:

- Accessories such as display, mouse, keyboard and power adapter that can be used normally have been ready.
- A network that can be used normally.
- Get the HDMI cable and network cable that can be used normally.

Schematic diagram of connecting cables:

Please refer to 1.6 Interface for the pin definition of each interface and the specific method of wiring.



4.2 Booting The System For The First Time

After ED-HMI3020-101C is connected to the power supply, the system will start.

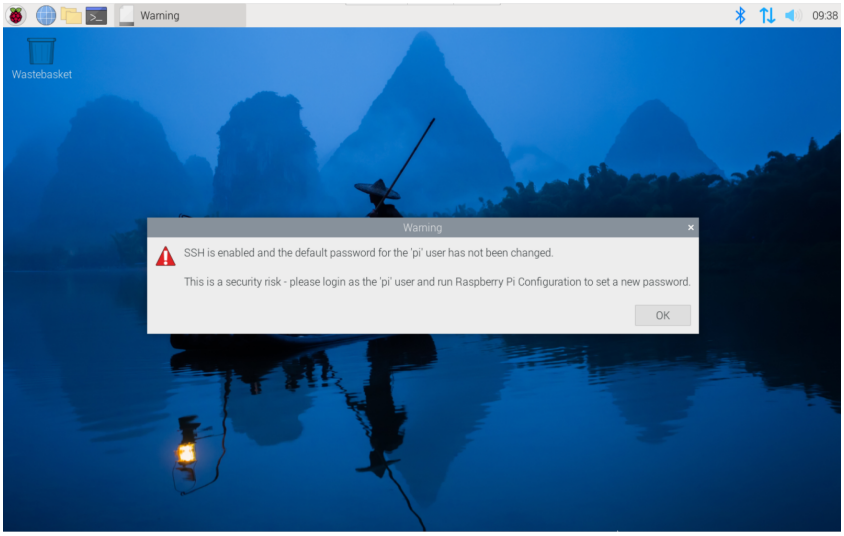
- The red PWR indicator is on, indicating that the device has been powered normally.

- The green ACT indicator is blinking, indicating that the system is started normally, and then the logo will appear in the screen.

> TIP:
>
> Default username is pi, Default password is raspberry.

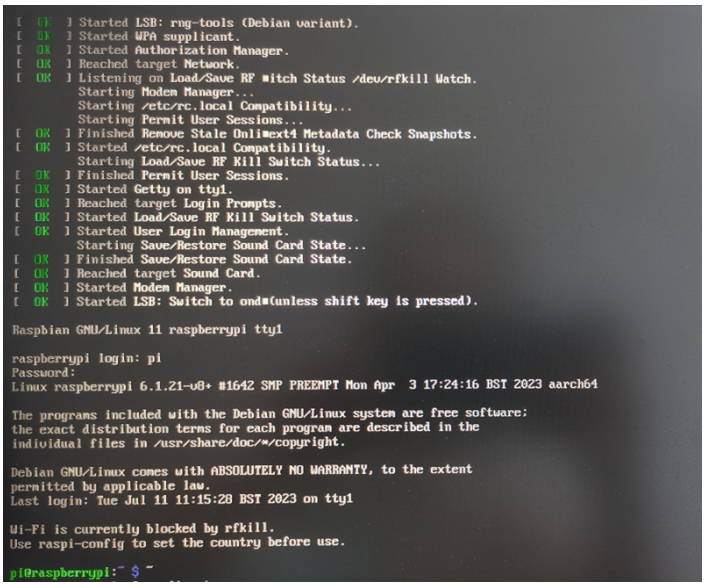
4.2.1 Raspberry Pi OS (Desktop)

The product is installed with the Desktop version system when it leaves the factory. After the device is started, it will directly enter the desktop.



4.2.2 Raspberry Pi OS (Lite)

If the product is installed with a Lite version of the system when it leaves the factory, the device will automatically log in using the default user name pi after startup, and the default password is raspberry. The following figure shows that the system has started normally.



5 Configuring System

This chapter introduces how to configure system.

5.1 Finding Device IP

Finding Device IP

5.2 Remote Login

Remote Login

5.3 Configuring Wi-Fi

Configuring Wi-Fi

5.4 Configuring Ethernet IP

Configuring Ethernet IP

5.5 Configuring Bluetooth

Configuring Bluetooth

5.6 Configuring Buzzer

The buzzer is controlled using GPIO6.

Execute the following command to turn on the buzzer:

```sh
pinctrl set 6 op dh
```

Execute the following command to turn off the buzzer:

```sh
pinctrl set 6 op dl
```

5.7 Configuring RTC

Configuring RTC

5.8 Configuring Serial Port

This chapter introduces the configuration method of RS232 and RS485.

5.8.1 Installing picocom tool

In the Linux environment, you can use the picocom tool to debug the serial ports RS232 and RS485.

Execute the following command to install the picocom tool.

```sh
sudo apt-get install picocom
```

5.8.2 Configuring RS232

ED-HMI3020-101C contains 1 RS232 port, and its corresponding COM port and device file are detailed in the following table.

Number of RS232 Ports	Corresponding COM Port	Corresponding Device File
1	COM1	/dev/com1

Preparation:

The RS232 port of ED-HMI3020-101C has been connected with external device.

Steps:

1. Execute the following command to open the serial port com1, and configure the serial port baud rate to 115200.

```sh
picocom -b 114200 /dev/com1
```

2. Input commands as needed to control external device.

5.8.3 Configuring RS485

ED-HMI3020-101C contains 1 RS485 port, and its corresponding COM port and device file are detailed in the following table.

Number of RS485 Ports	Corresponding COM Port	Corresponding Device File
1	COM2	/dev/com2

Preparation:

The RS485 port of ED-HMI3020-101C has been connected with external device.

Steps:

1. Execute the following command to open the serial port com2, and configure the serial port baud rate to 115200.

```sh
picocom -b 115200 /dev/com2
```

2. Input commands as needed to control external devices.

5.9 Configuring Audio

Configuring Audio

5.10 Configuring SSD (optional)

Configuring SSD

6 Installing OS (optional)

The device is shipped with an operating system by default. If the OS is corrupted during use or the user needs to replace the OS, it is necessary to re-download the appropriate system image and install it. Our company supports to install the OS by installing the standard Raspberry Pi OS first, and then install the Firmware package.

The following section describes the specific operations of image download, SD card/SSD flashing and installation of Firmware packages.

6.1 Downloading OS File

You can download the corresponding official Raspberry Pi OS file according to your actual needs, the download path is listed below:

OS	Download Path
Raspberry Pi OS(Desktop) 64-bit-bookworm (Debian 12)	https://downloads.raspberrypi.com/raspios_arm64/images/raspios_arm64-2024-07-04/2024-07-04-raspios-bookworm-arm64.img.xz (https://downloads.raspberrypi.com/raspios_arm64/images/raspios_arm64-2024-07-04/2024-07-04-raspios-bookworm-arm64.img.xz)
Raspberry Pi OS(Lite) 64-bit-bookworm (Debian 12)	https://downloads.raspberrypi.com/raspios_lite_arm64/images/raspios_lite_arm64-2024-07-04/2024-07-04-raspios-bookworm-arm64-lite.img.xz (https://downloads.raspberrypi.com/raspios_lite_arm64/images/raspios_lite_arm64-2024-07-04/2024-07-04-raspios-bookworm-arm64-lite.img.xz)

> TIP
>
> Our engineers are currently adapting and developing firmware packages for Raspberry Pi OS-trixie (Debian 13), so it is temporarily not supported. We recommend using the Raspberry Pi OS 64-bit-bookworm (Debian 12) version of the operating system.

6.2 Flashing to SD Card or Flashing to SSD

The ED-HMI3020-101C supports booting the system from an SD card or SSD. For practical applications, please refer to the following instructions for system flashing.

6.2.1 Flashing to SD Card

It is recommended to use the Raspberry Pi official tools. The download paths are as follows:

- Raspberry Pi Imager: https://downloads.raspberrypi.org/imager/imager_latest.exe (https://downloads.raspberrypi.org/imager/imager_latest.exe)

- SD Card Formatter: https://www.sdcardformatter.com/download/ (https://www.sdcardformatter.com/download/)

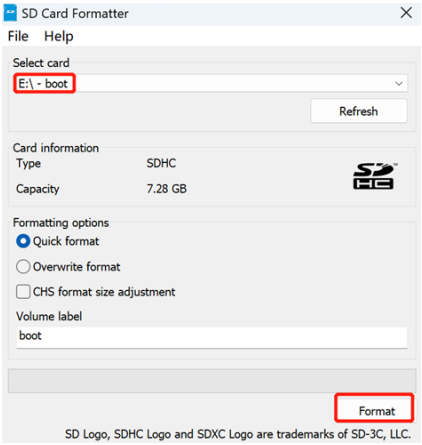
Preparation:

- The downloading and installation of the official tools to the computer have been completed.
- An SD card reader has been prepared.
- The OS file has been obtained.

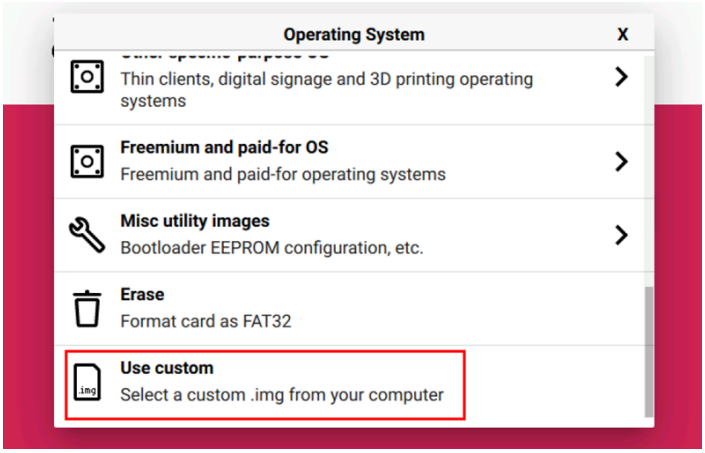
Steps:

The steps are described using Windows system as an example.

1. Before flashing to SD card, it is necessary to remove the SD card. Please refer to 2.1 Pull Out Micro SD Card.
2. Insert the Micro SD card into the card reader, and then insert the card reader into the USB port of your computer.
3. Open SD Card Formatter, select the formatted drive letter, and click "Format" at the lower right to format.

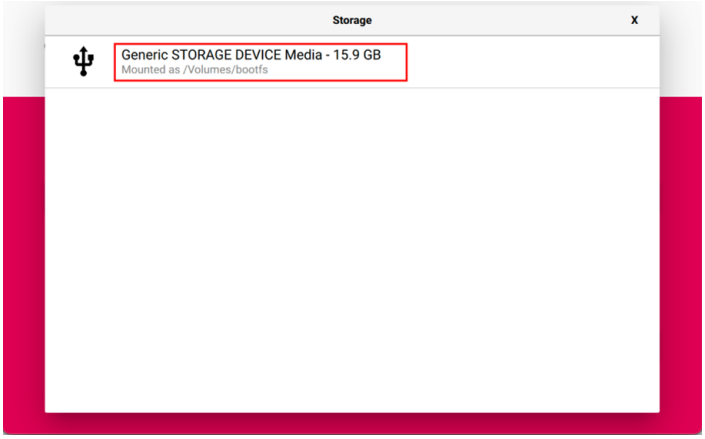


4. In the pop-up prompt box, select "Yes".
5. When the formatting is completed, click "OK" in the prompt box.
6. Close SD Card Formatter.
7. Open Raspberry Pi Imager, select "CHOOSE OS" and select "Use Custom " in the pop-up pane.

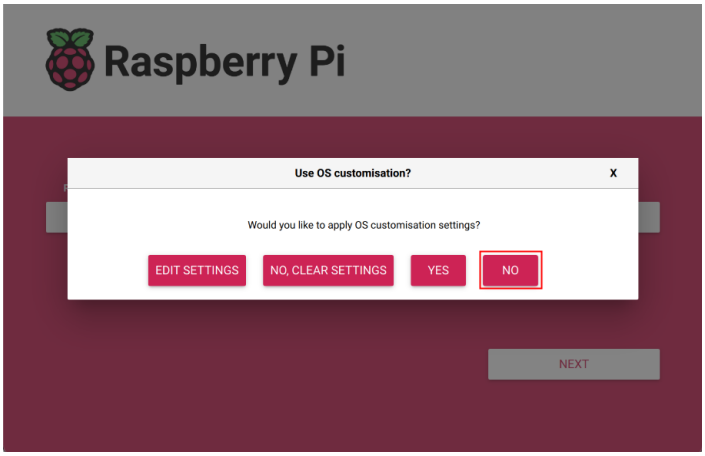


8. According to the prompt, select the OS file under the user-defined path and return to the main page.

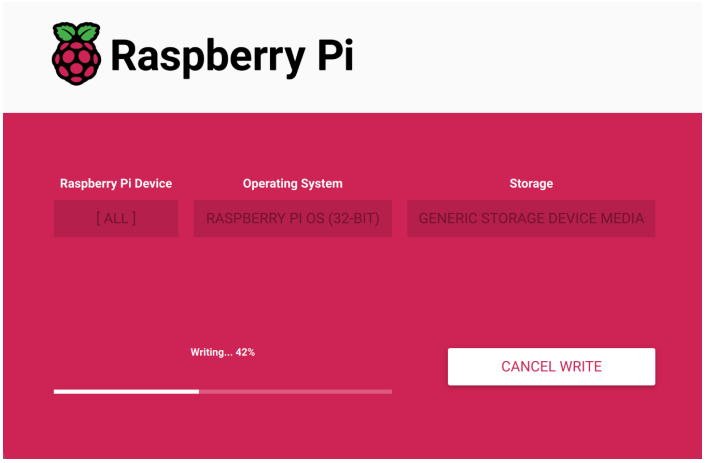
9. Click "CHOOSE STORAGE", select the default device in the "Storage" interface, and return to the main page.



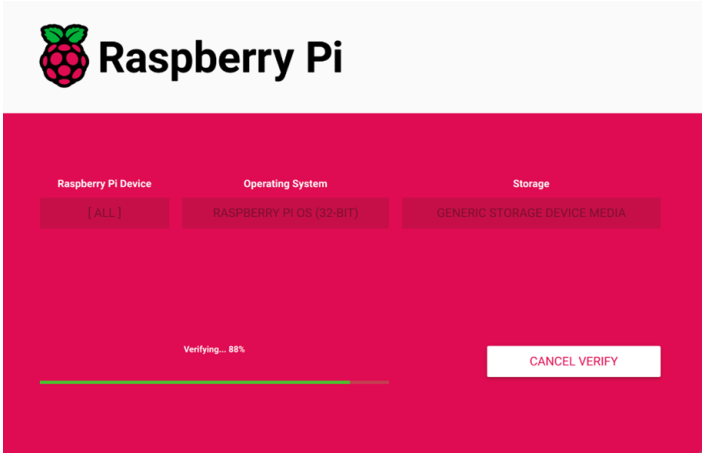
10. Click “NEXT”, select "NO " in the pop-up “Use OS customization?” pane.



11. Select “YES” in the pop-up “Warning” pane to start writing the image.



12. After the OS writing is completed, the file will be verified.



13. After the verification is completed, click “CONTINUE” in the pop-up “Write Successful” box.
14. Close Raspberry Pi Imager, Remove the card reader and SD card.
15. Insert the SD card into the device and then power it up.

6.2.2 Flashing to SSD

If the device is set to boot the system from the SSD by default, it comes pre-installed with an operating system when shipped from the factory. If the operating system becomes damaged during use or if the user needs to replace it, a suitable system image must be downloaded and flashed to the SSD.

> TIP
>
> If there is an SD card in ED-HMI3020-101C, the system will boot from the SD card by default.

6.2.2.1 Flashing through an SSD box

You can flash to SSD through an SSD box on a windows PC. It is recommended to use the Raspberry Pi tool and the download path is as follows:

- Raspberry Pi Imager : https://downloads.raspberrypi.org/imager/imager_latest.exe (https://downloads.raspberrypi.org/imager/imager_latest.exe)

Preparation:

- An SSD box has been prepared.

- The device case has been opened and the SSD has been removed. For detailed operations, please refer to 2.3 Open Device Case and 2.4 Remove SSD.
- The download and installation of Raspberry Pi Imager tool to the computer has been completed.
- The OS file has been obtained.

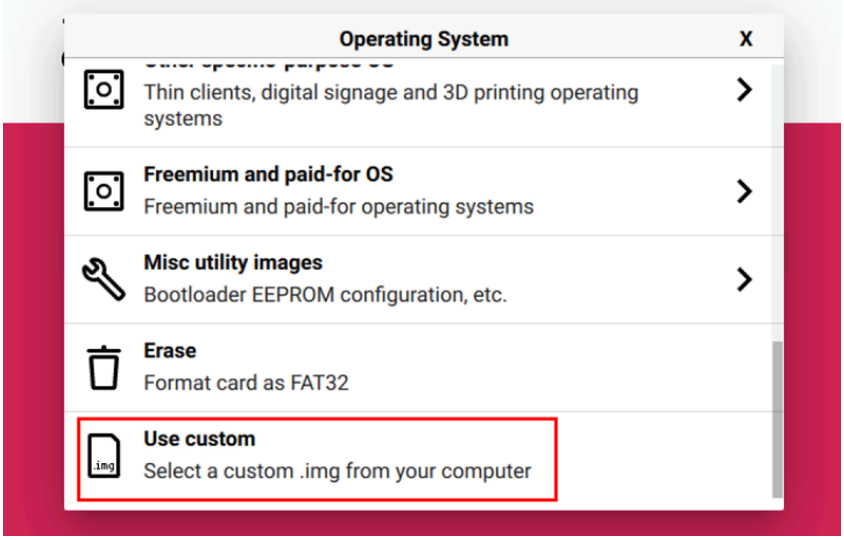
Steps:

The steps are described using Windows system as an example.

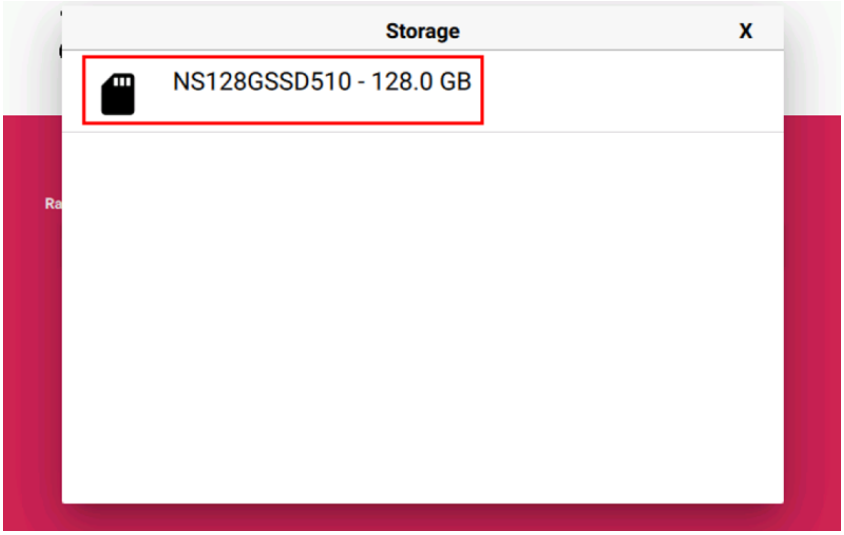
1. Install the SSD into the SSD box.
2. Connect the USB port of SSD box to PC, then make sure the SSD can be displayed on the PC.

> TIP
>
> If the SSD cannot be displayed on the PC, you can format the SSD first.

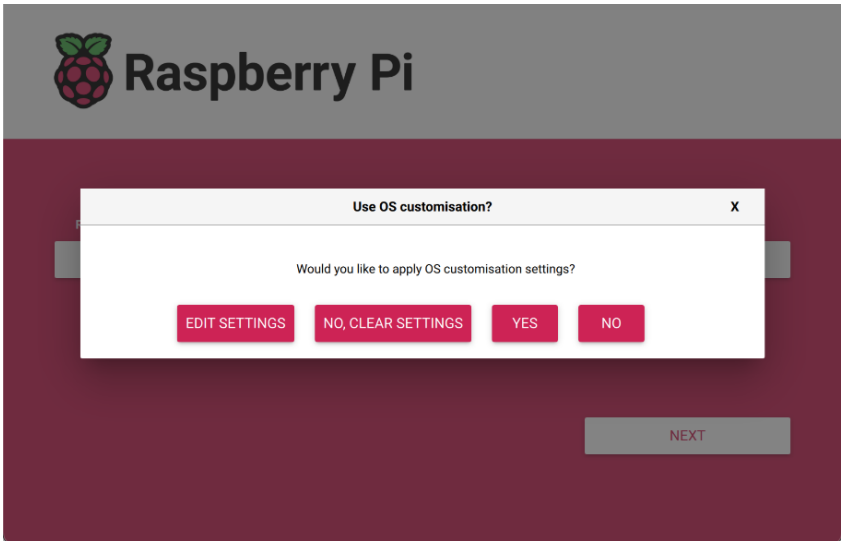
3. Open Raspberry Pi Imager, select "CHOOSE OS" and select "Use Custom " in the pop-up pane.



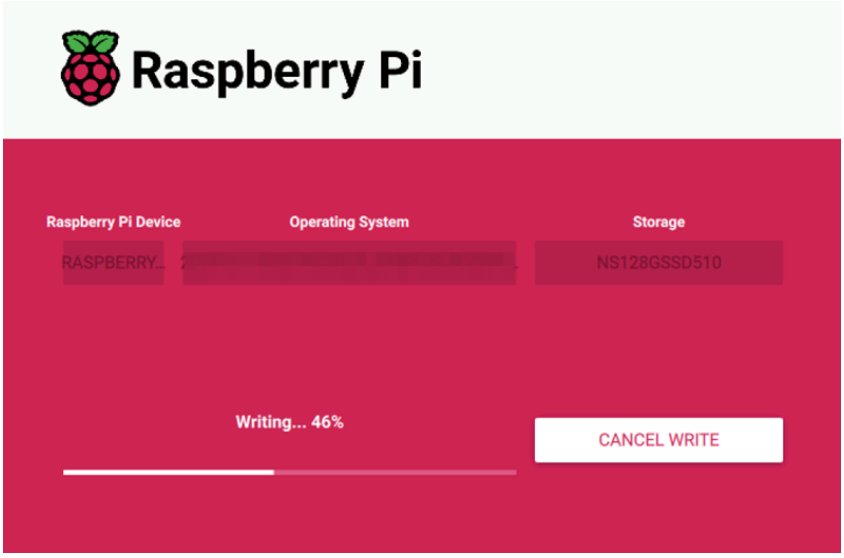
4. According to the prompt, select the downloaded OS file under the user-defined path and return to the main page.
5. Click "CHOOSE STORAGE", select the SSD of ED-HMI3020-101C in the "Storage" pane, and return to the main page.



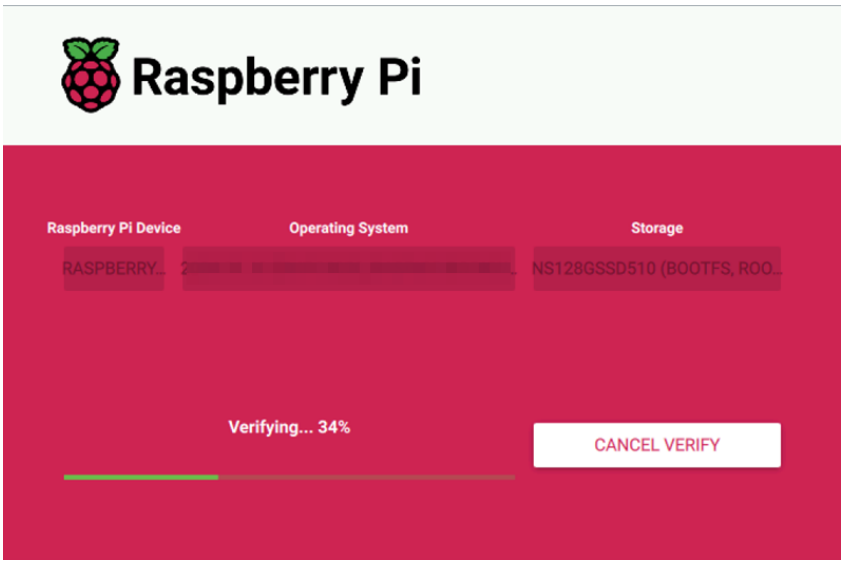
6. Click “NEXT”, select "NO " in the pop-up “Use OS customization?” pane.



7. Select “YES” in the pop-up “Warning” pane to start writing the image.



8. After the OS writing is completed, the file will be verified.



9. After the verification is completed, click “CONTINUE” in the pop-up “Write Successful” box.
10. Close the Raspberry Pi Imager and remove the SSD box.
11. Remove the SSD from the SSD box, install the SSD to PCBA and close the device case. For detailed operations, please refer to 2.5 Install SSD and 2.7 Close Device Case.

6.2.2.2 Flashing on ED-HMI3020-101C

Preparation:

- ED-HMI3020-101C has been booted from SD card, and ED-HMI3020-101C contains an SSD.
- The OS file has been obtained.

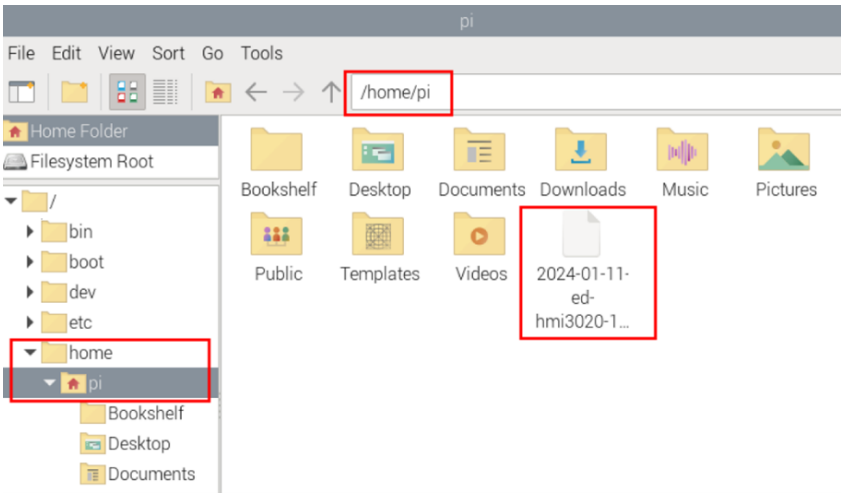
Steps:

The steps are described using Windows system as an example.

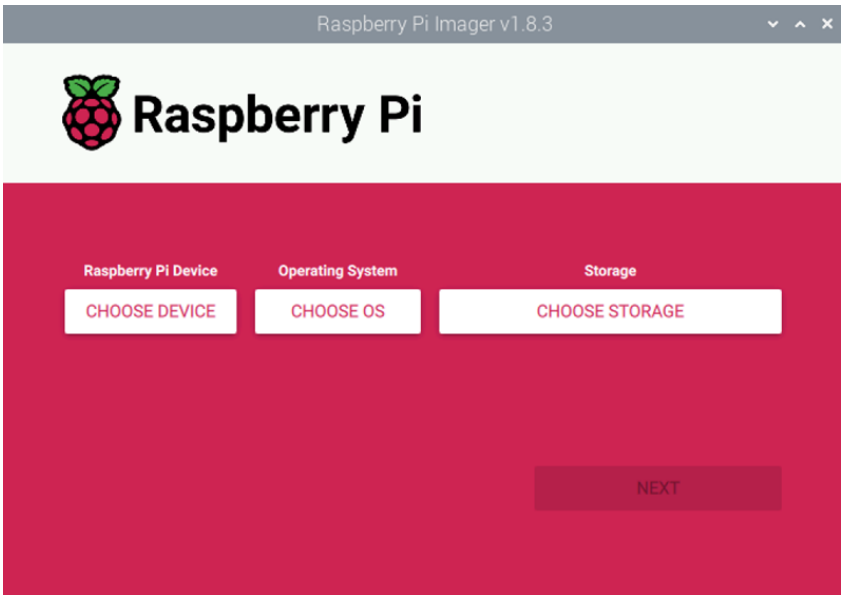
1. Unzip the downloaded OS file, obtain the `.img` file, and store it in an specified directory of local PC, such as Desktop.
2. Use the `SCP` command on Windows PC to copy the OS file (`.img`) to ED-HMI3020-101C.
   a. Enter `Windows+R` to open the run pane, enter `cmd` , and press Enter to open the command pane.
   b. Execute the following command to copy the OS file (`.img`) to the `pi` directory of ED-HMI3020-101C.

```sh
scp “Desktop\2024-01-10-ed-HMI3020-101C_raspios-bookworm-arm64_stable.img” pi@192.168.168.15
```

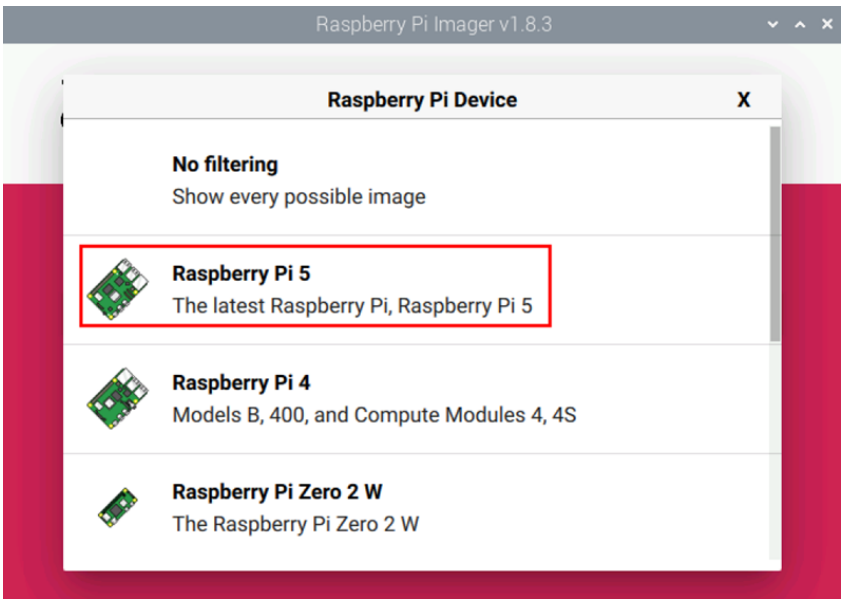
   - `Desktop\2024-01-10-ed-HMI3020-101C_raspios-bookworm-arm64_stable.img` : Indicating the storage path of `.img` file on windows PC.
   - `pi` : Indicating the storage path of `.img` file on ED-HMI3020-101C (the path where the `.img` file is stored after copying is completed).
   - 192.168.168.155: The IP address of ED-HMI3020-101C
3. After the copy is completed, view the `.img` file in the pi directory of ED-HMI3020-101C.



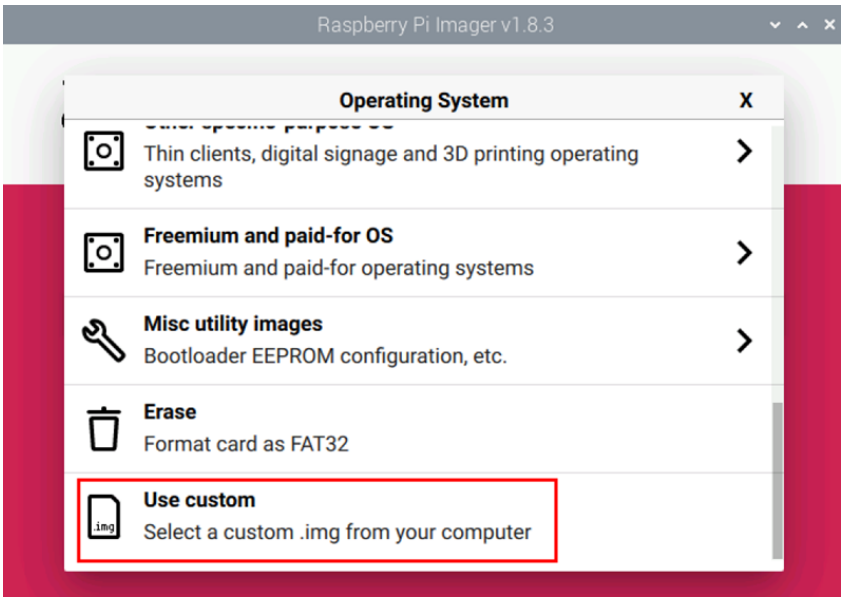
4. Click the icon "🍓"in the upper left corner of the desktop, select "Accessories→Imager" in the menu, and open the Raspberry Pi Imager tool.



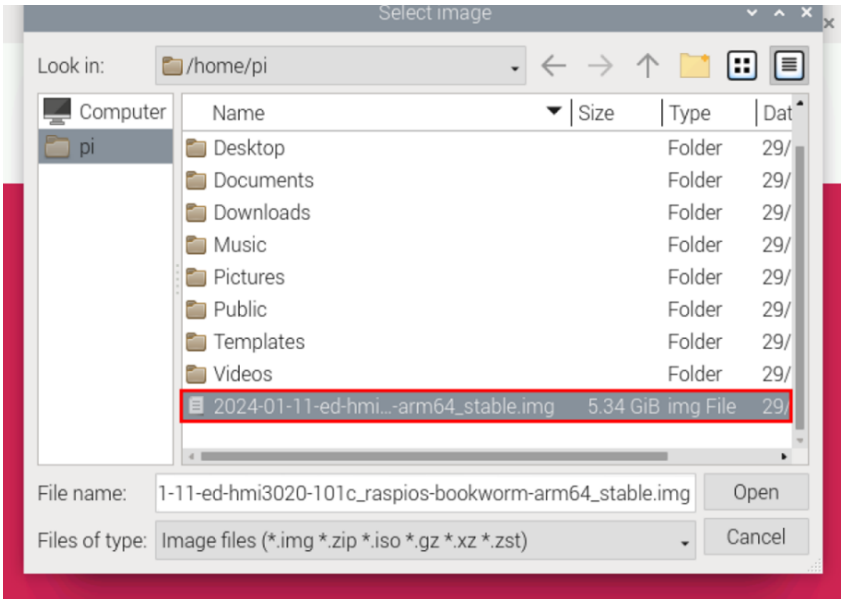
5. Click "CHOOSE DEVICE", select "Raspberry Pi 5" in the pop-up "Raspberry Pi Device" pane.



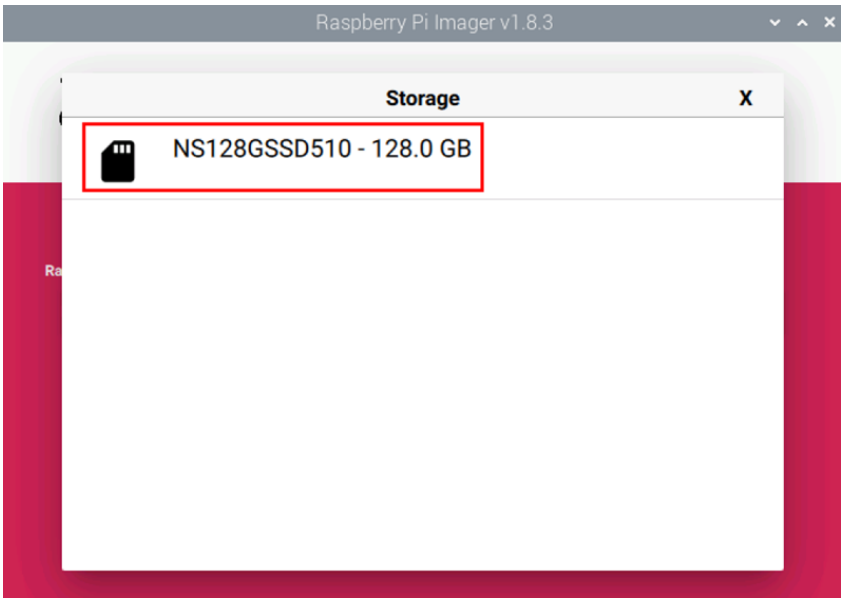
6. Click "CHOOSE OS", select "Use Custom " in the pop-up "Operating System" pane.



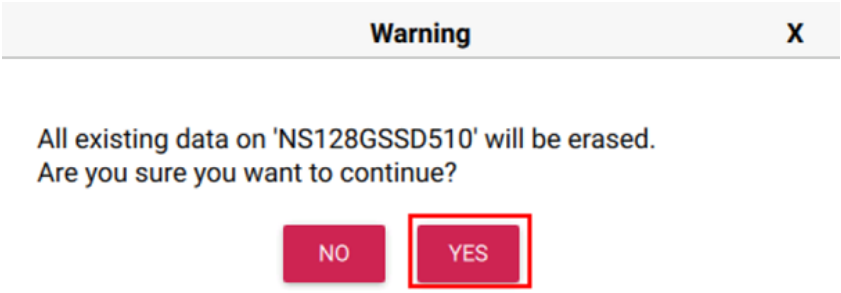
7. According to the prompt, select the downloaded OS file in “Select image” pane, and return to the main page.



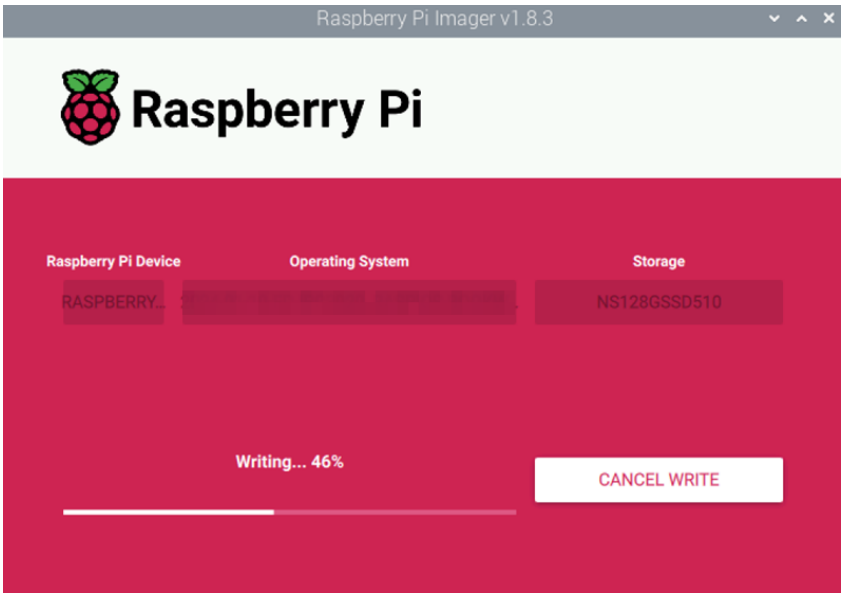
8. Click "Open" to return to the main page.
9. Click "CHOOSE STORAGE", select the SSD of ED-HMI3020-101C in the "Storage" pane, and return to the main page.



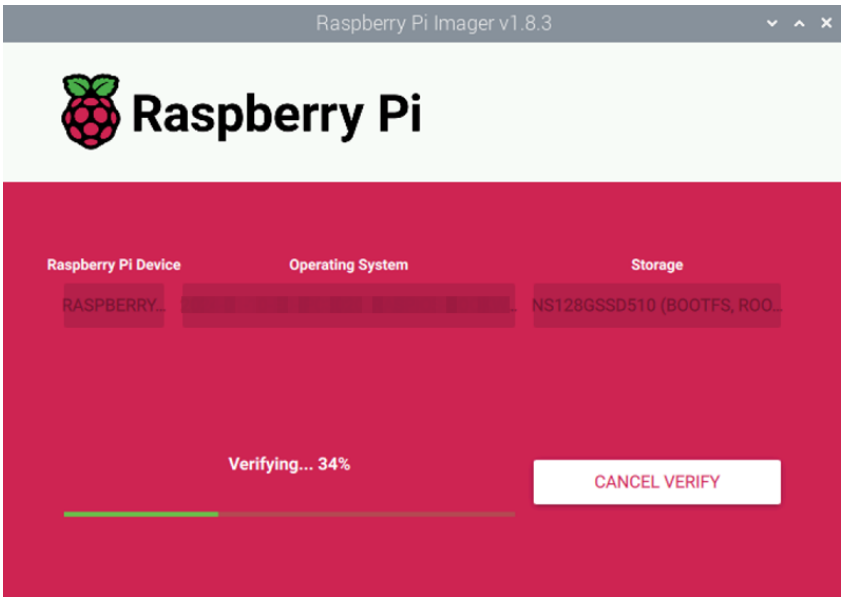
10. Click “NEXT” and select “NO” in the pop-up “Use OS customization?”.
11. Select “YES” in the pop-up “Warning”.



12. Enter password (raspberry) in the pop-up “Authenticate”, and then click “Authenticate” to start writing the OS.



13. After the OS writing is completed, the file will be verified.



14. After the verification is completed, input password (raspberry) in the pop-up “Authenticate”, and then click “Authenticate”.
15. In the pop-up “Write Successful” prompt box, click “CONTINUE”, then close Raspberry Pi Imager.
16. Power off ED-HMI3020-101C and pull out the SD card.
17. Power on ED-HMI3020-101C to restart the device.

6.3 Installing Firmware Package

After you have finished flashing to SD card or SSD on ED-HMI3020-101C, you need to configure the system by adding edatec apt source and installing firmware package to make the system work. The following is an example of Debian 12 (bookworm) desktop version.

> TIP
>
> Our engineers are currently adapting and developing firmware packages for Raspberry Pi OS-trixie (Debian 13), so it is temporarily not supported. We recommend using the Raspberry Pi OS 64-bit-bookworm (Debian 12) version of the operating system.

Preparation:

- The flashing to SD card or SSD of the Raspberry Pi standard OS (bookworm) has been completed.
- The device has booted normally and the relevant boot configuration has been completed.

Steps: :

1. After the device starts normally, execute the following commands in the command pane to add the edatec apt source and installing firmware package.

```sh
curl -s https://apt.edatec.cn/bsp/ed-install.sh | sudo bash -s hmi3020_101c
```

```
pi@raspberrypi:~ $ curl -s https://apt.edatec.cn/bsp/ed-install.sh | sudo bash -s hmi3020_101c
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   410  100   410    0     0    581      0 --:--:-- --:--:-- --:--:--   580
--2024-10-22 10:22:02--  https://apt.edatec.cn/bsp/splash.png
Connecting to 192.192.192.208:8118... connected.
Proxy request sent, awaiting response... 200 OK
Length: 36009 (35K) [image/png]
Saving to: '/tmp/eda-common/eda/splash.png'

/tmp/eda-common/eda/splash.png      100%[===================================================================>]  35.17K  --.-KB/s    in 0.002s

2024-10-22 10:22:04 (18.7 MB/s) - '/tmp/eda-common/eda/splash.png' saved [36009/36009]

--2024-10-22 10:22:04--  https://apt.edatec.cn/pubkey.gpg
Connecting to 192.192.192.208:8118... connected.
Proxy request sent, awaiting response... 200 OK
Length: 1635 (1.6K) [application/octet-stream]
Saving to: '/tmp/eda-common/eda/edatec.gpg'

/tmp/eda-common/eda/edatec.gpg      100%[===================================================================>]   1.60K  --.-KB/s    in 0s
```

2. After the installation is complete, the system automatically reboots.
3. Execute the following command to check whether the firmware package is installed successfully.

```sh
dpkg -l | grep ed-
```

The result in the picture below indicates that the firmware package has been installed successfully.

```
pi@raspberrypi:~ $ dpkg -l |grep ed-
ii  ed-hmi3020-101c-firmware        1.20240731.3                    arm64        Firmware of EDATEC Software Package
ii  ed-linux-image-6.6.31-2712      1:6.6.31                        arm64        Linux 6.6 for Raspberry Pi 2712, Raspberry Pi
ii  libparted-fs-resize0:arm64      3.5-3                           arm64        disk partition manipulator - shared FS resizing li
brary
ii  libshine3:arm64                  3.1.1-2                         arm64        Fixed-point MP3 encoding library - runtime files
ii  shared-mime-info                 2.2-1                           arm64        FreeDesktop.org shared MIME database and spec
ii  usr-is-merged                    37~deb12u1                      all          Transitional package to assert a merged-/usr syste
m
```

> TIP
>
> If you have installed the wrong firmware package, you can execute `sudo apt-get --purge remove package` to delete it, where “package” is the package name.