ED-IPC3630

User Manual

by EDA Technology Co., Ltd

built: 2026-05-28

1 Hardware Manual

This chapter introduces the product overview, packing list, appearance, button, indicator and interface.

1.1 Overview

ED-IPC3630 is a highly reliable industrial computer based on Raspberry Pi CM5. According to different application scenarios and user needs, different specifications of RAM and eMMC computer systems can be selected.

- Options for 2GB, 4GB, 8GB and 16GB RAM
- Options for 16GB, 32GB and 64GB eMMC storage

The ED-IPC3630 provides a comprehensive suite of industrial interfaces, including HDMI, USB, Ethernet, RS232, RS485, DI, DO, and CAN. Complementing these hardware capabilities, the ED-IPC3630 ensures versatile network connectivity via Wi-Fi, Ethernet, and 4G. Furthermore, the integration of a supercapacitor (optional backup power), RTC, EEPROM, and an encryption chip significantly enhances the system's usability and reliability, making it an ideal solution for demanding Industrial Control and IoT applications.

1.2 Packing List

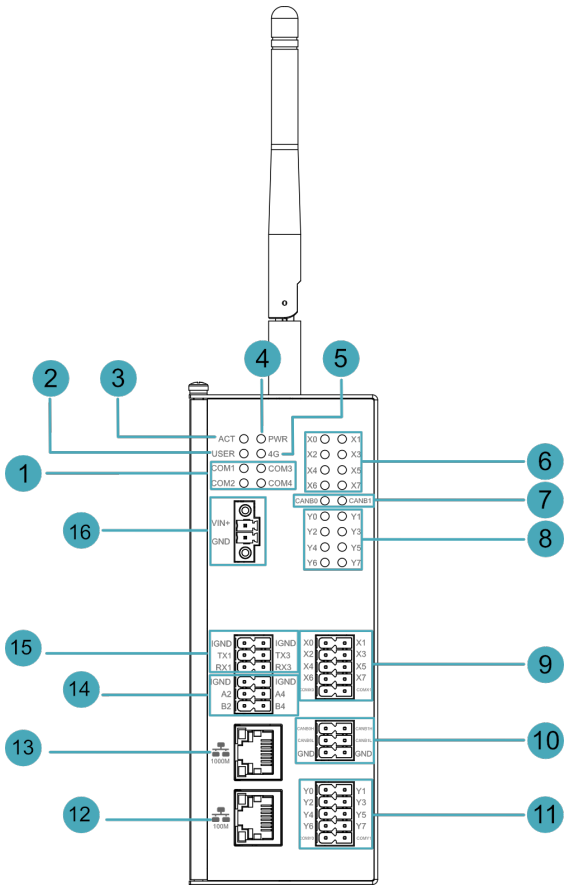
- 1 x ED-IPC3630 Unit
- [option Wi-Fi/BT version] 1x 2.4GHz/5GHz Wi-Fi/BT Antenna
- [option 4G version] 1x 4G/LTE Antenna
- 1 x 2-Pin Phoenix Terminal with lock
- 3 x 6-Pin Phoenix Terminals
- 2 x 10-Pin Phoenix Terminals

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.

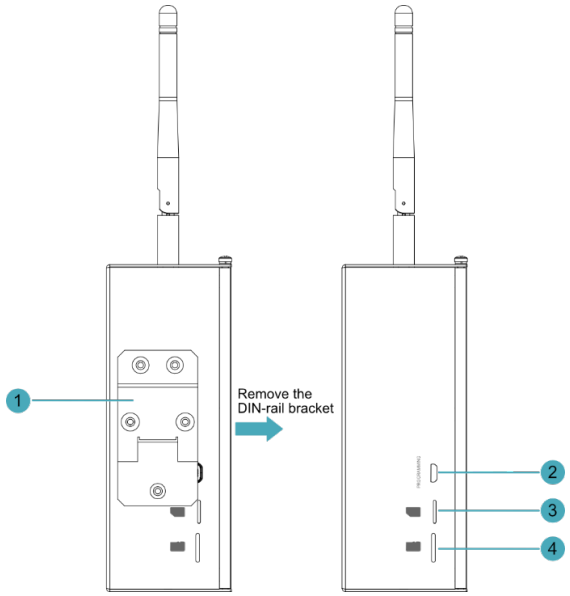


NO.	Function Definition
1	4 x green UART indicators, which is used to check the communication status of UART port.
2	1 x green user indicator, user can customize a status according to actual application.
3	1 x green system status indicator, which is used to check the working status of device.
4	1 x red power indicator, which is used to check the status of device power-on and power-off.
5	1 x green 4G indicator, which is used to check the status of 4G signal.
6	8 x green DI indicators, which is used to check the communication status of DI signal.
7	2 x green CAN indicators, which is used to check the communication status of CAN signal.
8	8 x green DO indicators, which is used to check the communication status of DO signal.
9	8 x DI ports, 10-Pin 3.5mm pitch phoenix terminals, which is used to connect third-party sensors.
10	

	2 x CAN ports, 6-Pin 3.5mm pitch phoenix terminals, which is used to connect third-party control equipment.
11	8 x DO ports, 10-Pin 3.5mm pitch phoenix terminals, which is used to connect third-party load.
12	1 x 10/100M adaptive ethernet port, RJ45 connector, with LED indicator. It can be used to access the network.
13	1 x 10/100/1000M adaptive ethernet port, RJ45 connector, with LED indicator. It can be used to access the network.
14	2 x RS485 ports, 6-Pin 3.5mm pitch phoenix terminal, which is used to connect the third-party control equipment.
15	2 x RS232/RS485 ports, 6-Pin 3.5mm pitch phoenix terminal, which is used to connect the third-party control equipment. Different number of RS232 and RS485 combinations can be choose according to the actual need, with three combinations: • ED-IPC3632: configured for 2 x RS232 • ED-IPC3633: configured for 1 x RS232 and 1 × RS485 • ED-IPC3634: configured for 2 x RS485
16	1 x DC input, 2-Pin 3.5mm pitch phoenix terminals with screw holes. It supports 9V~36V input, the signal is defined as VIN+/GND.

1.3.2 Rear Panel

This section introduces interfaces and definitions of rear panel.

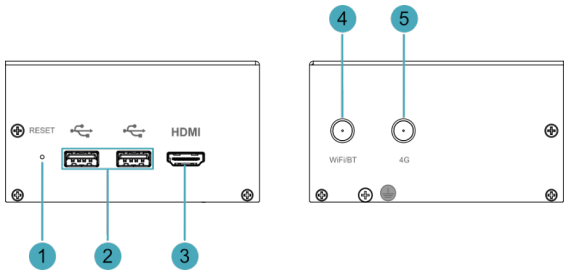


NO.	Function Definition
1	1 x DIN-rail bracket, install ED-IPC3630 Unit on the DIN-rail through the bracket.
2	1 x Micro-SD card slot, it supports the installation of Micro-SD card for storing user data.
3	1 x Nano SIM slot, using to install a Nano SIM card for acquiring 4G signals.

4	1 x Micro USB port, it supports to flash to eMMC for the system.

1.3.3 Side Panel

This section introduces interfaces and definitions of side panel.



NO.	Function Definition
1	1 x RESET button, hidden button, press the button to restart the device.
2	2 x USB 2.0 ports, Type-A connector, each channel supports up to 480Mbps.
3	1 x HDMI port, Type-A connector, which is compatibles with HDMI 2.0 standard and supports 4K 60Hz. It supports to connect a displayer.
4	1 x Wi-Fi/BT antenna port (optional), SMA connector, which can connect to Wi-Fi/BT antenna.
5	1 x 4G antenna port (optional), SMA connector, which can connect to 4G antenna.

1.4 Button

ED-IPC3630 device includes a RESET button, which is a hidden button, and the silkscreen on the case is "RESET". Pressing the RESET button will reset the device.

1.5 Indicator

Introducing the various statuses and meanings of indicators contained in ED-IPC3630 device.

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.
USER	On	User can customize a status according to actual application.

	Off	The device is not powered on or not defined by the user, and the default status is off.
4G	On	The dial-up is successful and the connection is normal.
	Off	4G signal is not connected or the device is not powered on.
Yellow indicator of Ethernet port (100M)	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 (100M)	On	The data transmission is abnormal.
	Blink	Data is being transmitted over the Ethernet port.
	Off	The Ethernet connection is not set up.
Yellow indicator of Ethernet port (1000M)	On	The data transmission is abnormal.
	Blink	Data is being transmitted over the Ethernet port.
	Off	The Ethernet connection is not set up.
Green indicator of Ethernet port (1000M)	On	The Ethernet connection is in the normal state.
	Blink	The Ethernet connection is abnormal.
	Off	The Ethernet connection is not set up.
COM1~COM4	On/Blink	Data is being transmitted.
	Off	The device is not powered on or there is no data transmission.
X0 ~ X7	On/Blink	The input signal has been detected.
	Off	The device is not powered on or there is no data transmission.
CANB0 ~ CANB1	On/Blink	Data is being transmitted.
	Off	The device is not powered on or there is no data transmission.
Y0 ~ Y7	On/Blink	The output signal has been detected.
	Off	The device is not powered on or there is no data transmission.

1.6 Interface

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

1.6.1 Card Slot

ED-IPC3630 device includes a Micro SD card slot and a Nano SIM card slot.

1.6.1.1 SD Card Slot

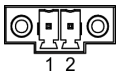
The silkscreen on the case of Micro SD card slot is "", which is used to install Micro SD card for storing user data.

1.6.1.2 SIM Card Slot (optional)

The silkscreen on the case of Nano SIM card slot is "", which is used to install Nano SIM card for obtaining 4G signals.

1.6.2 Power Supply Interface

The ED-IPC3630 device includes one power input, 2-Pin 3.5mm pitch phoenix terminals with screw holes. The silkscreen of port is "VIN+/GND", and the pins are defined as follows.



Pin ID	Pin Name
1	GND
2	9V~36V

1.6.3 RS485/RS232 Interface

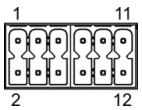
ED-IPC3630 includes 2~4 RS485 ports and 0~2 RS232 ports, Different product models correspond to different numbers of RS485 and RS232 ports:

- ED-IPC3632：2 x RS485, 2 x RS232
- ED-IPC3633：3 x RS485, 1 x RS232
- ED-IPC3634：4 x RS485（without RS232）

The silkscreen of RS485 single port is "IGND/A/B", the silkscreen of RS232 single port is "IGND/TX/RX", and 3.5mm pitch phoenix terminals .

Pin Definition

Terminal pins are defined as follows:



Pin ID	Pin Name
1	RS485-2_B
2	RS485-4_B
3	RS485-2_A
4	RS485-4_A
5	GND
6	GND

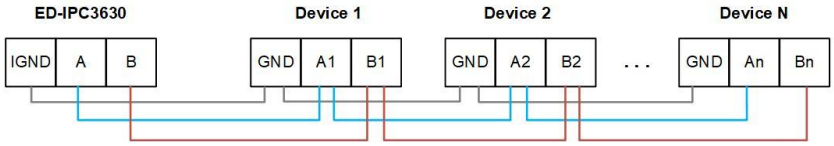
7	RS232-1_RX or RS485-1_B
8	RS232-3_RX or RS485-3_B
9	RS232-1_TX or RS485-1_A
10	RS232-3_TX or RS485-3_A
11	GND
12	GND

The pin names of the RS485 port corresponding to CM5 are as follows:

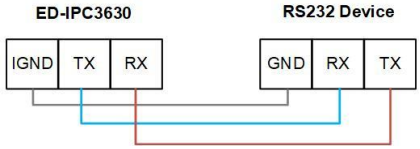
Signal	CM5 GPIO Name	CM5 Pin Out
RS485-2_B	GPIO13	UART5_RXD
RS485-4_B	GPIO9	UART4_RXD
RS485-2_A	GPIO12	UART5_TXD
RS485-4_A	GPIO8	UART4_TXD
RS232-1_RX or RS485-1_B	GPIO5	UART3_RXD
RS232-3_RX or RS485-3_B	GPIO1	UART2_RXD
RS232-1_TX or RS485-1_A	GPIO4	UART3_TXD
RS232-3_TX or RS485-3_A	GPIO0	UART2_TXD

Connecting Cables

The RS485 wiring schematic is as follows:



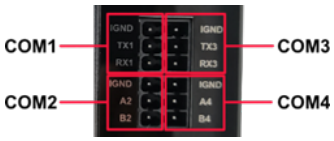
The RS232 wiring schematic is as follows:



RS485 terminal resistance configuration

ED-IPC3630 includes 2~4 RS485 ports, 120R jumper resistor is reserved between A and B of each RS485 line, plug in the jumper cap to enable the jumper resistor. The 120R termination resistor function is disabled when the jumper cap is not connected in the default state.

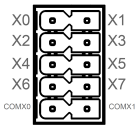
The locations of the 120R termination resistors for the 4 RS485 ports in the PCBA and the corresponding COM ports are shown in the table as follows.

Location in PCBA	Corresponding COM ports	The specific location of the corresponding COM
J19	COM3	
J21	COM1	
J24	COM4	
J22	COM2	

1.6.4 DI Interface

ED-IPC3630 contains 8 DI ports. Every 4 DI share one common pin (called COM): X0, X2, X4 and X6 share COMX0; X1, X3, X5 and X7 share COMX1.

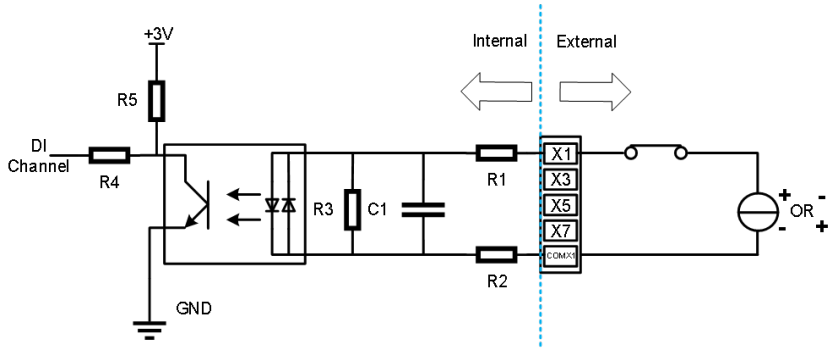
Terminal pins are defined as follows:



Pin ID	Pin Name
1	X0
2	X1
3	X2
4	X3
5	X4
6	X5
7	X6
8	X7
9	COMX0
10	COMX1

Connecting Cables

Schematic diagram of a single DI wire is as follows:



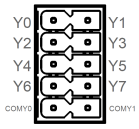
Parameter	Description

Input Type	NPN & PNP
Isolation Protection	5kV
COM	Every 4 DI share one common pin (called COM): • X0, X2, X4 and X6 share COMX0 • X1, X3, X5 and X7 share COMX1
DI to COM	• ON state: 5~30 VDC • OFF state: 0~2 VDC

1.6.5 DO Interface

ED-IPC3630 contains 8 DO ports. Every 4 DO share one common pin (called COM): Y0, Y2, Y4 and Y6 share COMY0; Y1, Y3, Y5 and Y7 share COMY1.

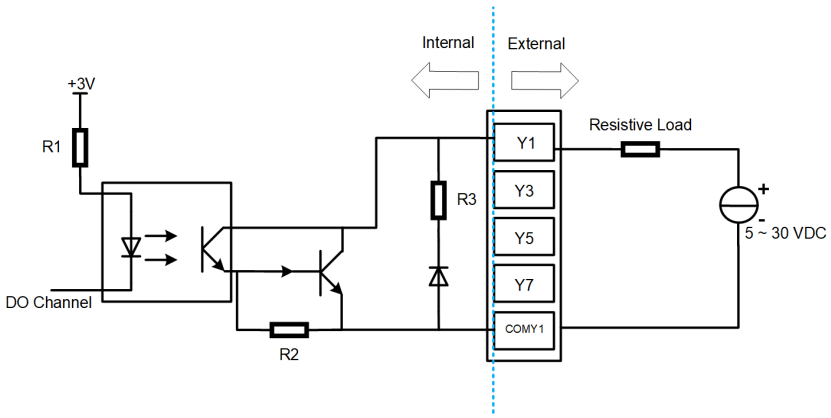
Terminal pins are defined as follows:



Pin ID	Pin Name
1	Y0
2	Y1
3	Y2
4	Y3
5	Y4
6	Y5
7	Y6
8	Y7
9	COMY0
10	COMY1

Connecting Cables

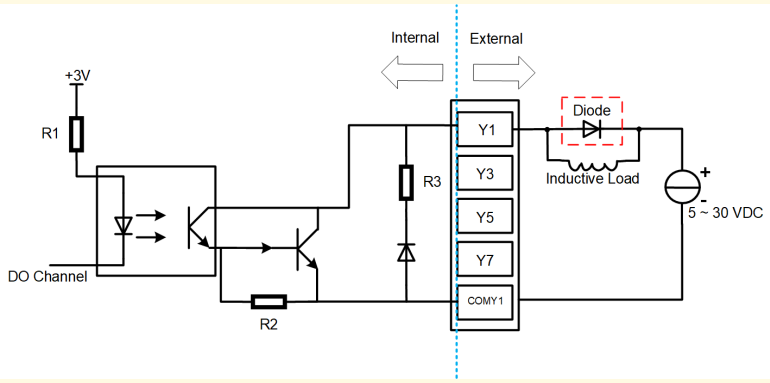
Schematic diagram of a single DO wire is as follows:



Parameter	Description
Output Type	Transistor
Isolation Protection	5kV
COM	Every 4 DI share one common pin (called COM): • Y0, Y2, Y4 and Y6 share COMY0 • Y1, Y3, Y5 and Y7 share COMY1
Output	5~30 VDC (24 VDC is recommended), maximum current is 1.5A (per channel)

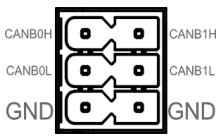
WARNING

If an inductive load is connected to the DO channel, it is recommended to add a Diode in the circuit (as shown in the figure below) for protection. Select an appropriate Diode based on the specifications of the inductive load.



1.6.6 CAN Interface

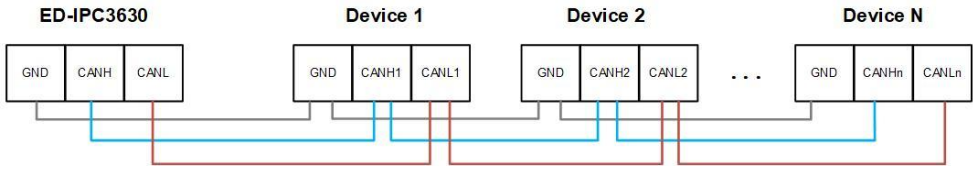
ED-IPC3630 contains 2 CAN ports. Terminal pins are defined as follows:



Pin ID	Pin Name
1	CANB0H
2	CANB1H
3	CANB0L
4	CANB1L
5	GND
6	GND

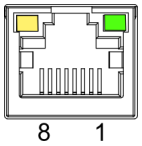
Connecting Cables

Schematic diagram of CAN wires is as follows:



1.6.7 1000M Ethernet Interface

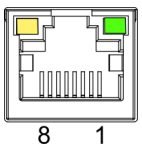
ED-IPC3630 device includes one adaptive 10/100/1000M Ethernet port, and the silkscreen is "1000M". The connector is RJ45, and it is recommended to use the network cable of Cat6 and above. The pins corresponding to the terminal are defined as follows:



Pin ID	Pin Name
1	TX1+
2	TX1-
3	TX2+
4	TX2-
5	TX3+
6	TX3-
7	TX4+
8	TX4-

1.6.8 100M Ethernet Interface

ED-IPC3630 device includes an adaptive 10/100M Ethernet port, and the silkscreen is "100M". The connector is RJ45, and it is recommended to use the network cable with Cat6 and above when accessing to network. The pins corresponding to the terminal are defined as follows:



Pin ID	Pin Name
1	TX+
2	TX-
3	Rx+
4	-
5	-
6	RX-
7	-
8	-

1.6.9 HDMI Interface

ED-IPC3630 device includes one HDMI port, the silkscreen is "HDMI". The connector is Type-A HDMI, which can connect to an HDMI display and supports up to 4Kp60.

1.6.10 USB 2.0 Interface

ED-IPC3630 device includes 2 USB 2.0 ports, the silkscreen is "". The connector is Type-A USB, which can connect to standard USB 2.0 peripherals and supports up to 480Mbps.

1.6.11 Micro USB Interface

ED-IPC3630 device includes one Micro USB interface, the silkscreen is "PROGRAMMING" and it can be connected to a PC to flash to eMMC of the device.

1.6.12 Antenna Interface (optional)

The ED-IPC3630 contains up to 2 SMA antenna ports, the silkscreens are "4G" and "WiFi/BT". They can be connected to the 4G antenna and Wi-Fi/BT antenna.

> TIP
>
> The number of antenna interfaces is related to the model actually selected by the user. Here we take only 2 antenna interfaces as an example for explanation.

1.7 Supercapacitor (Optional)

The ED-IPC3630 supports an optional supercapacitor backup power module, featuring a comprehensive safe shutdown protection mechanism.

- In the event of an unexpected power failure when the supercapacitor is fully charged, the system can automatically switch to supercapacitor power supply, allowing the device to continue normal operation until the capacitor's charge is depleted. It then automatically shuts down safely, effectively preventing operational interruptions and data loss.
- The device provides user-customizable emergency scripts, supporting pre-configuration of critical data saving, backup, or other emergency procedures. At the moment of power loss, the system will automatically execute the preset scripts to ensure critical operations are completed, allowing for a composed response to sudden power outages.

> TIP
>
> - For specific operations on customizing supercapacitor-related parameters, please refer to AN18 Supercapacitor Usage Guide.
> - The supercapacitor requires the device to be powered on for at least 5 minutes to fully charge, and normal functionality is only guaranteed when it is fully charged.

2 Installing Components

This chapter describes how to install components.

2.1 Install Antenna (optional)

If the selected ED-IPC3600 series device includes 4G and Wi-Fi functions, the antenna need to be installed before using the device.

Preparation:

The corresponding antennas have been obtained from the packaging box. If there are multiple antennas, they can be distinguished by the labels on the antennas.

Steps:

1. Locate the antenna port where the antenna is to be installed, as shown in the red mark in the figure below.

> TIP
>
> The number of antenna interfaces is related to the model actually selected by the user. Here we take only one antenna interfaces as an example for explanation.

2. Align the ports on both sides of the device and the antenna, then tighten them clockwise to ensure that they will not fall off.

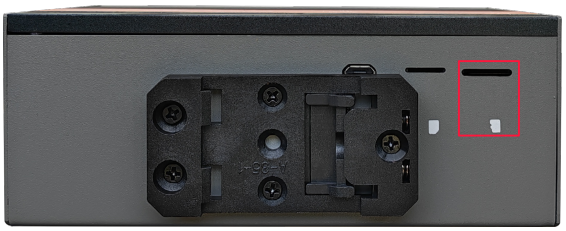
2.2 Install Micro SD Card

Preparation:

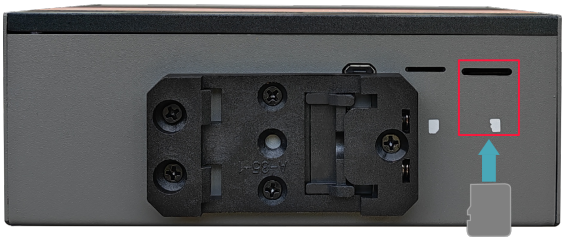
The Micro SD card has been obtained.

Steps:

1. Locate the Micro SD card slot where the Micro SD is to be installed, as shown in the red box below.



2. Insert the Micro SD card with the chip side up into the corresponding card slot, and hear a sound to indicate that the installation is complete.



2.3 Install Nano SIM Card (optional)

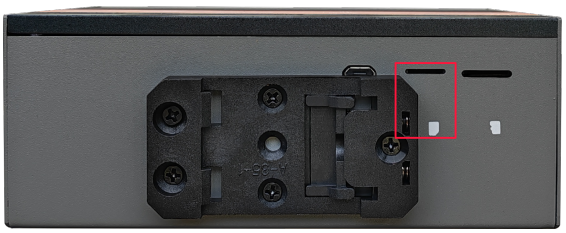
If the selected ED-IPC3600 series device includes 4G function, the SIM card need to be installed before using the device.

Preparation:

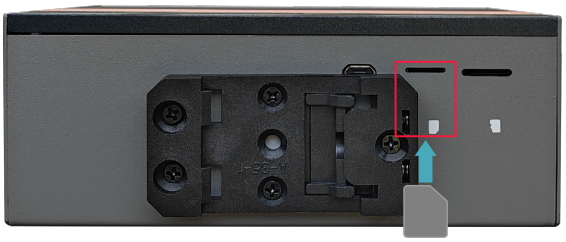
The 4G Nano SIM card has been obtained.

Steps:

1. Locate the Nano SIM card slot where the Nano SIM card is to be installed, as shown in the red box below.



2. Insert the Nano SIM card with the chip side up into the corresponding card slot, and hear a sound to indicate that the installation is complete.



3 Installing Device

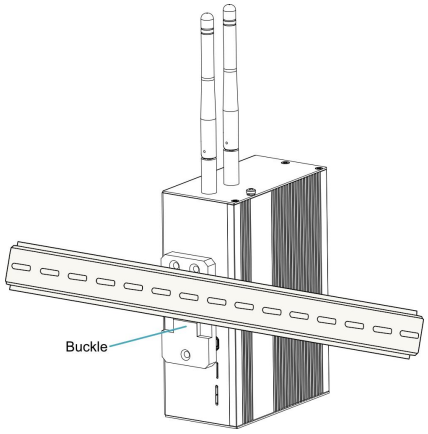
This chapter introduces how to install the device.

3.1 DIN-Rail Installation

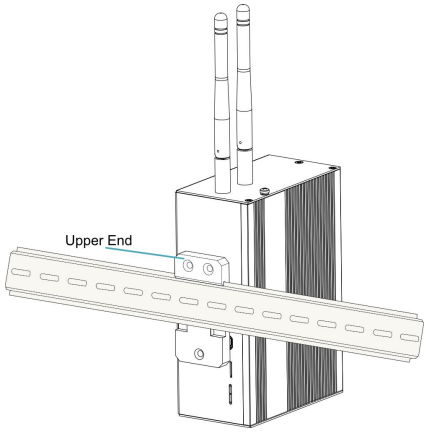
The ED-IPC3630 device supports DIN rail mounting. The DIN rail bracket is pre-installed and provided as standard. The following steps describe how to mount the device on a DIN rail.

Steps:

1. Face the side of the device with the rail bracket toward the DIN rail, and hook the retractable buckle of the bracket onto the lower edge of the DIN rail from bottom to top.



2. Hold the device with your hand, press the buckle firmly upward, and ensure the top of the bracket fully snaps onto the upper edge of the DIN rail.



3.2 Wall Mounting

The ED-IPC3630 device support wall-mount installation. A wall-mount bracket is not included as standard upon shipment. Users can purchase the bracket as needed and proceed with wall-mount installation. For details, please refer to ED-BKT-LB.

4 Booting The Device

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

4.1 Connecting Cables

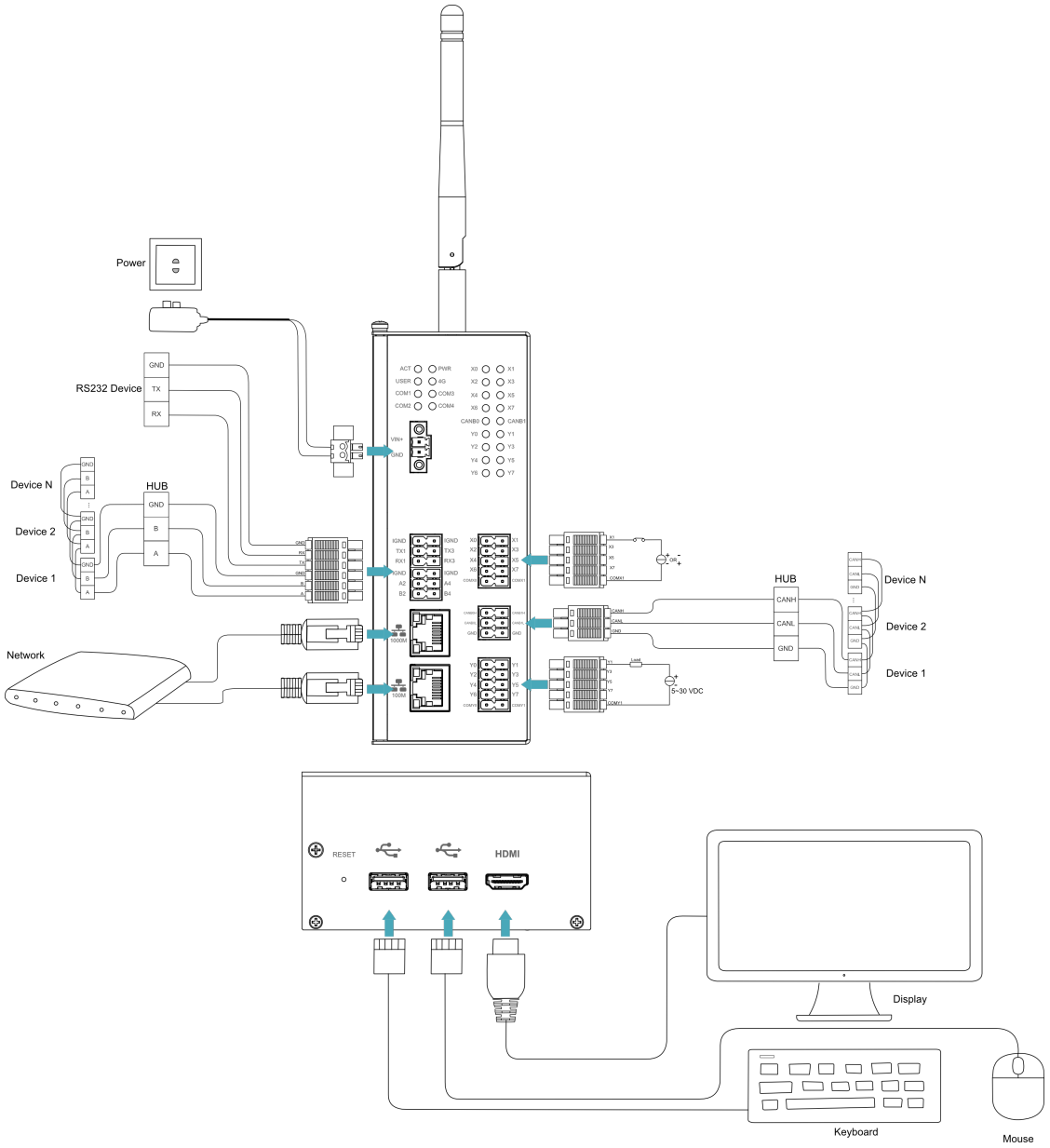
This section describes how to connect cables.

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

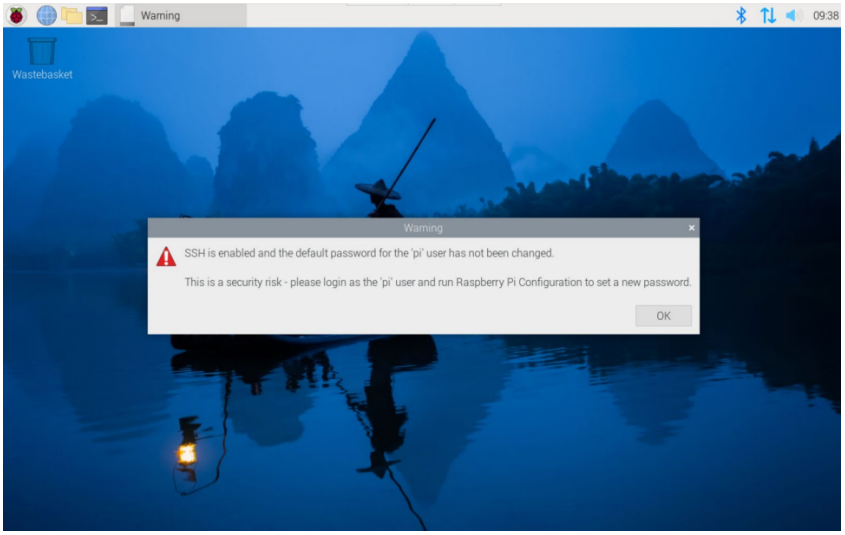
ED-IPC3630 device has no switching power supply. After the power supply is connected, the system will start.

- 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 of Raspberry Pi will appear in the upper left corner of the screen.

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

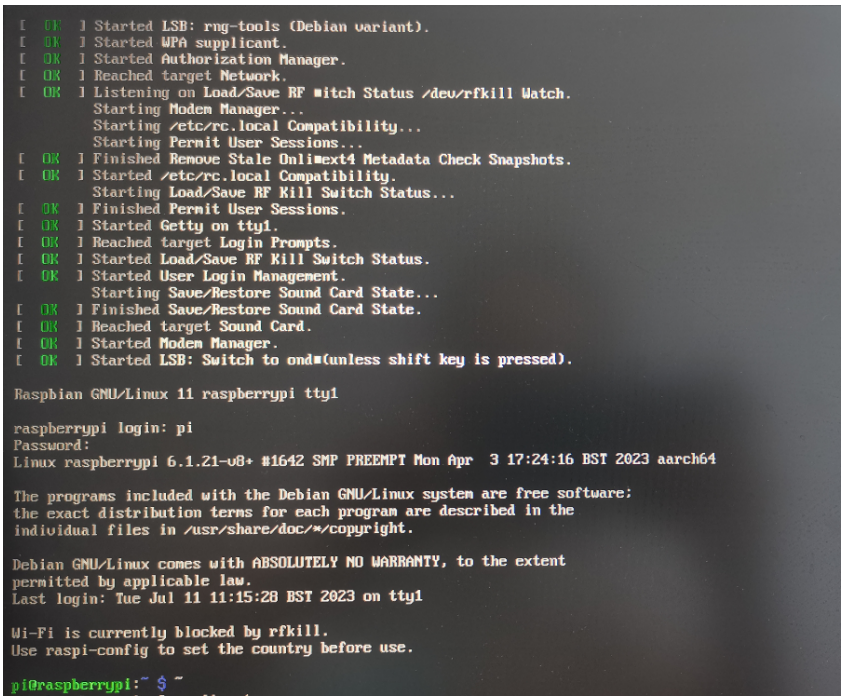
4.2.1 Raspberry Pi OS (Desktop)

If the Desktop version of the system is installed when the product leaves the factory, after the device is started, it will directly enter the desktop, as shown in the following figure.



4.2.2 Raspberry Pi OS (Lite)

If the Lite version of the system is installed at the factory, the default username `pi` will be used to automatically log in after the device is started, and the default password is `raspberry`. The following figure shows that the system has been 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 Storage Devices

Configuring Storage Devices

5.4 Configuring Ethernet IP

Configuring Ethernet IP

5.5 Configuring Wi-Fi (Optional)

Configuring Wi-Fi

5.6 Configuring Bluetooth (Optional)

Configuring Bluetooth

5.7 Configuring 4G (Optional)

Configuring 4G

5.8 Configuring Buzzer

Configuring Buzzer

5.9 Configuring RTC

Configuring RTC

5.10 Configuring Serial Port

This chapter introduces the configuration method of RS232 and RS485.

5.10.1 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
```

5.10.2 Configuring RS232

ED-IPC3630 includes 0~2 RS232 ports with corresponding COM ports and device files, as shown in the table below:

ED-IPC3632

Number of RS232 Ports	Corresponding COM Port	Corresponding Device File
2	COM1, COM3	/dev/com1, /dev/com3

ED-IPC3633

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

Preparation:

The RS232 ports of ED-IPC3630 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 115200 /dev/com1
```

2. Input commands as needed to control external device.

5.10.3 Configuring RS485

ED-IPC3630 includes 2~4 RS485 ports with their corresponding COM ports and device files, as shown in the table below:

ED-IPC3632

Number of RS485 Ports	Corresponding COM Port	Corresponding Device File
2	COM2, COM4	/dev/com2, /dev/com4

ED-IPC3633

Number of RS485 Ports	Corresponding COM Port	Corresponding Device File
3	COM2, COM3, COM4	/dev/com2, /dev/com3, /dev/com4

ED-IPC3634

Number of RS485 Ports	Corresponding COM Port	Corresponding Device File
4	COM1, COM2, COM3, COM4	/dev/com1, /dev/com2, /dev/com3, /dev/com4

Preparation:

The RS485 ports of ED-IPC3630 has been connected with external device.

Steps:

1. Execute the following command to open the serial port com4, and configure the serial port baud rate to 115200.

```sh
picocom -b 115200 /dev/com4
```

2. Input commands as needed to control external device.

5.11 Configuring DI

The ED-IPC3630 includes 8 DI ports, which can be configured according to the actual requirement.

Preparation:

The connection of the DI port of the ED-IPC3630 to the external sensor has been completed.

Steps:

1. Execute the following commands in sequence to detect and install the gpiod tool.

```sh
sudo apt update
sudo apt install gpiod
```

2. Execute the following command to read the data from the corresponding DI port.

```sh
gpiofind DI0 | awk '{print substr($0,9)}' | xargs -i bash -c "gpioget {}"
```

- DI0 indicates the corresponding port number.

5.12 Configuring DO

The ED-IPC3630 includes DO ports, which can be configured according to the actual requirement.

Preparation:

The connection of the DO port of the ED-IPC3630 to the external load has been completed.

Steps:

1. Execute the following commands in sequence to detect and install the gpiod tool.

```sh
sudo apt update
sudo apt install gpiod
```

2. Execute the following commands to set the output to high or low.

- Setting the output to a high level.

```sh
gpiofind DO0 | awk '{print substr($0,9)}' | xargs -i bash -c "gpioset {}=1"
```

`DO0` indicates the corresponding port number, `1` indicates that the pin is high level.

- Setting the output to a low level.

```sh
gpiofind DO0 | awk '{print substr($0,9)}' | xargs -i bash -c "gpioset {}=0"
```

`DO0` indicates the corresponding port number, `0` indicates that the pin is low level.

5.13 Configuring CAN

This chapter introduces the configuration method of CAN.

5.13.1 Installing can-utils tool

Execute the following commands in sequence to detect and install the can-utils tool.

```sh
sudo apt update
sudo apt install can-utils
```

5.13.2 Setting CAN state

Preparation:

The connection of the CAN port of the ED-IPC3630 to external devices has been completed.

Steps:

1. Execute the following command to set the baud rate of the CAN port to 1000000.

```sh
sudo ip link set canb0 type can bitrate 1000000
```

`canb0` is the port number and the values include `canb0` and `canb1`.

2. Execute the following command to open the CAN port.

```sh
sudo ip link set canb0 up
```

`canb0` is the port serial number and the values include `canb0` and `canb1`.

3. Execute the following command to set up the CAN port for communication.

- Receive data:

```sh
candump canb0
```

- Send data:

```sh
cansend canb0 123#1122334455667788
```

`canb0` is the port serial number and the values include `canb0` and `canb1`.

`123#1122334455667788` is the message to be sent, which can be customised by the user according to the format.

5.14 Configuring USER Indicator

Configuring USER Indicator

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, eMMC 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_arm64-2024-11-19/2024-11-19-raspios-bookworm-arm64.img.xz (https://downloads.raspberrypi.com/raspios_arm64/images/raspios_arm64-2024-11-19/2024-11-19-raspios-bookworm-arm64.img.xz)
Raspberry Pi OS(Lite) 64-bit-bookworm (Debian 12)	https://downloads.raspberrypi.com/raspios_lite_arm64/images/raspios_lite_arm64-2024-11-19/2024-11-19-raspios-bookworm-arm64-lite.img.xz (https://downloads.raspberrypi.com/raspios_lite_arm64/images/raspios_lite_arm64-2024-11-19/2024-11-19-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 eMMC

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/)
- Rpiboot: https://github.com/raspberrypi/usbboot/raw/master/win32/rpiboot_setup.exe (https://github.com/raspberrypi/usbboot/raw/master/win32/rpiboot_setup.exe)

Preparation:

- A Windows PC has been acquired and The downloading and installation of the official tools to the PC have been completed.
- A Micro USB to USB-A cable has been prepared.
- The OS file has been obtained.

Steps:

The steps are described using Windows system as an example.

1. Use a cross screwdriver to loosen five screws on the DIN-rail bracket counterclockwise and remove the default DIN-Rail bracket.

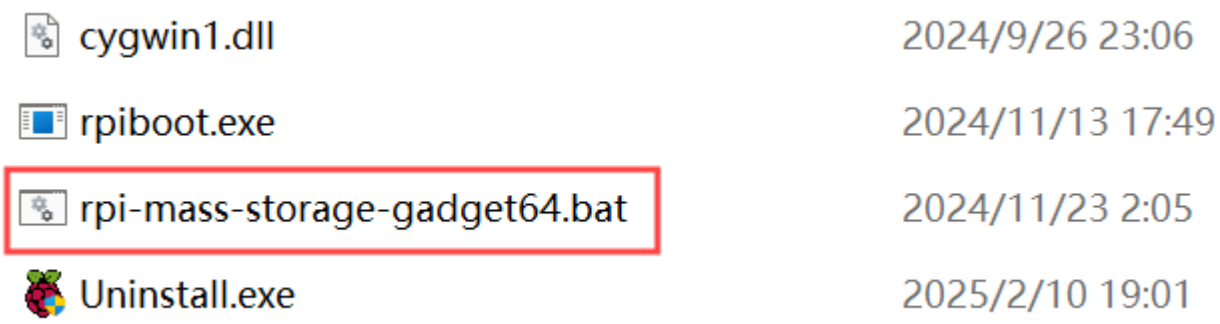
2. Determine the location of the Micro USB port on the side of the device, as shown in the red box below.

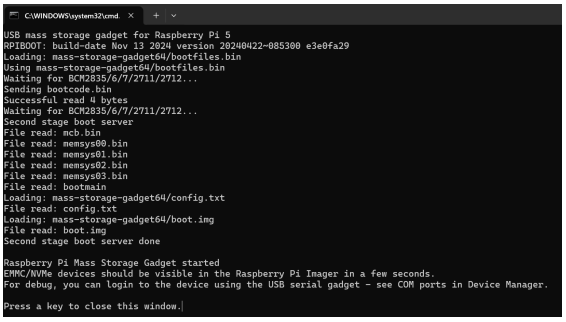
3. Connect the power cord and USB burner cable (Micro-USB to USB-A).

- Connect the USB burner cable: one end connects to the Micro USB port on the side of the device, the other end connects to the USB port on the PC.
- Connect the power cable: one end connects to the DC 2Pin Phoenix terminal on the device side, the other end connects to an external power supply.

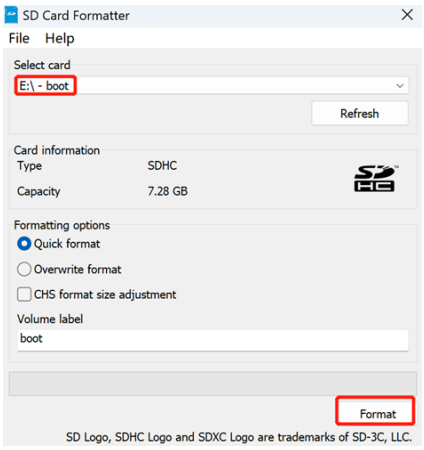
4. Disconnect the ED-IPC3630 from the power supply and power it back up.
5. Open the installed `rpi-mass-storage-gadget64.bat` tool as shown in the red box in the picture to automate the disk tokenization.

> TIP
>
> The `rpi-mass-storage-gadget64.bat` tool is located in the installation directory of Rpiboot.

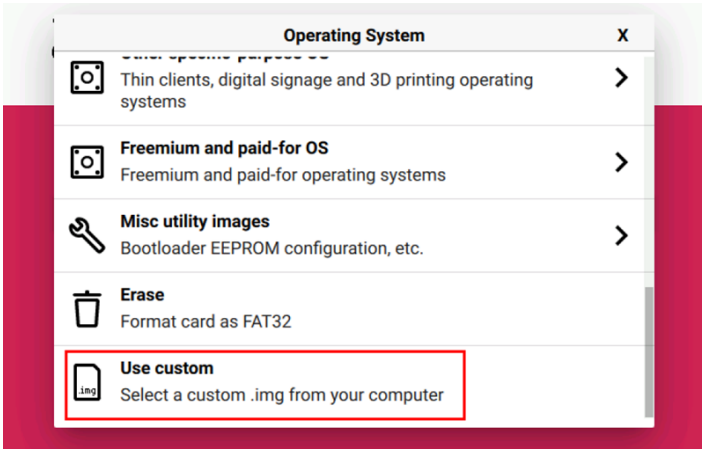




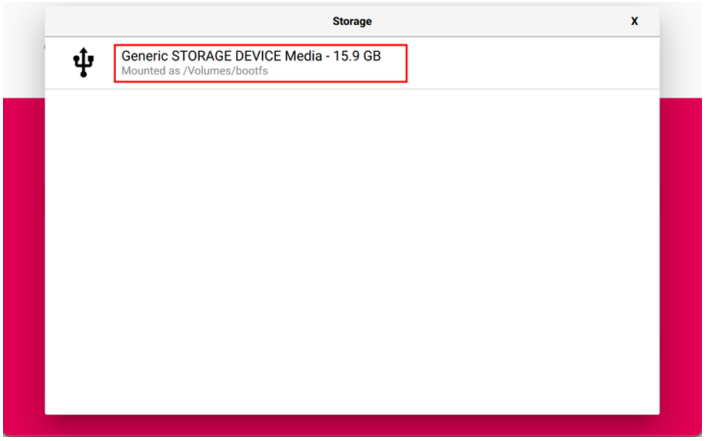
6. After the disk symbolization is complete, close the `rpi-mass-storage-gadget64.bat` tool and the disk symbol will pop up in the lower right corner of the computer.
7. Open `SD Card Formatter`, select the formatted drive letter, and click "Format" at the lower right to format.



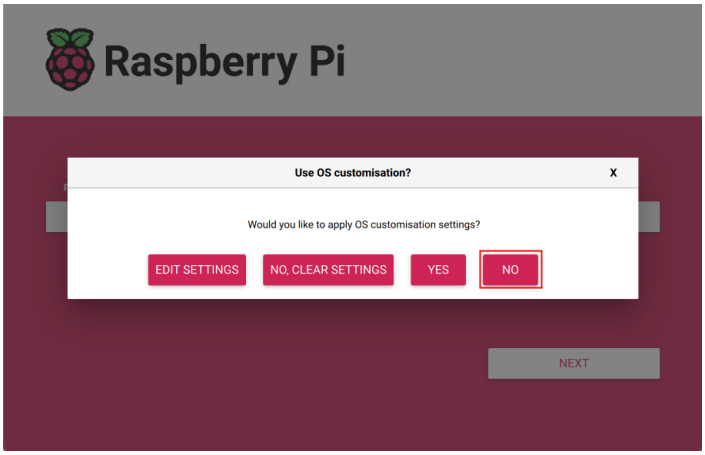
8. In the pop-up prompt box, select "Yes".
9. When the formatting is completed, click "OK" in the prompt box.
10. Close `SD Card Formatter`.
11. Open `Raspberry Pi Imager`, select "CHOOSE OS" and select "Use Custom " in the pop-up pane.



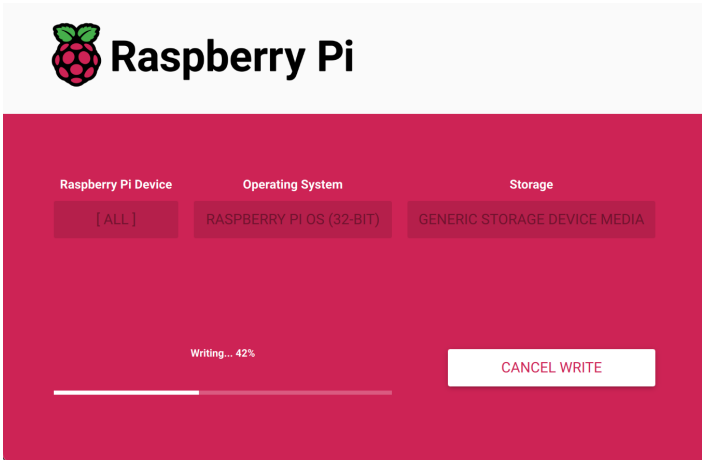
12. According to the prompt, select the OS file under the user-defined path and return to the main page.
13. Click "CHOOSE STORAGE", select the default device in the "Storage" interface, and return to the main page.



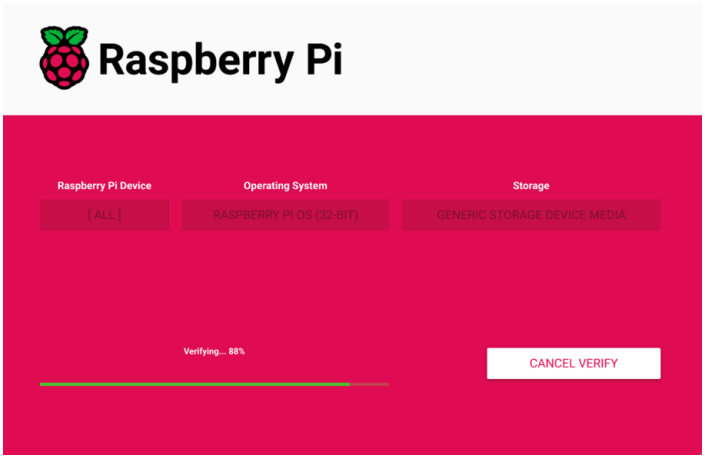
14. Click “NEXT”, select "NO " in the pop-up “Use OS customization?” pane.



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



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



17. After the verification is completed, click “CONTINUE” in the pop-up “Write Successful” box.
18. Close `Raspberry Pi Imager`, remove USB cable and power on the device again.

6.3 Installing Firmware Package

After installing the standard Raspberry Pi OS on ED-IPC3630, you need to add `edatec apt` source and install firmware package to configure the system. The following instructions use Debian 12 (Bookworm) Desktop edition as an example.

> 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.

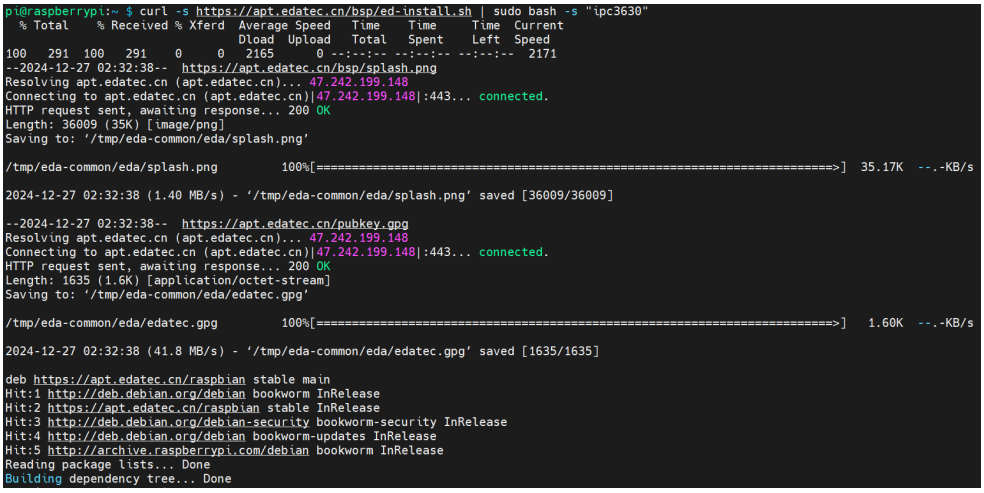
Preparation:

- The flashing to eMMC 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.

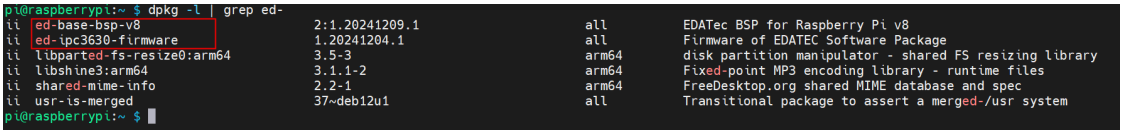
```sh
curl -s https://apt.edatec.cn/bsp/ed-install.sh | sudo bash -s ipc3630
```



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.



> 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.