ED-CLAWBOX

User Manual

by EDA Technology Co., Ltd

built: 2026-05-09

1 Hardware Manual

This chapter introduces the product overview, package contents, appearance, buttons, indicators, and interfaces.

1.1 Overview

ED-CLAWBOX is a compact OpenClaw mini unit based on the Raspberry Pi CM5, featuring 4GB of RAM and 64GB of storage, and comes pre-installed with the JishuShell operating system. Designed for AI enthusiasts who value efficiency, security, and elegance, it eliminates complex deployment procedures—allowing you to step into a powerful AI experience right out of the box. By fully leveraging the hardware's potential, it effortlessly handles a variety of local AI inference and computing tasks.

1.2 Packing List

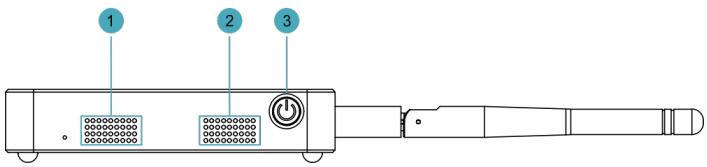
- 1 x ED-CLAWBOX Unit
- 1 x 2.4GHz/5GHz Wi-Fi/BT Antenna

1.3 Appearance

This section describes the function and definition of the interfaces on each panel.

1.3.1 Front Panel

Describes the interface types and definitions on the front panel.

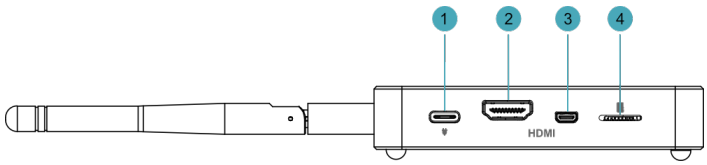


NO.	Function Definition
1	1 x Speaker, 8Ω 0.8W, for external audio playback.
2	1 x Speaker, 8Ω 0.8W, for external audio playback.

NO.	Function Definition
3	1 x ON/OFF Button, with a blue indicator, for powering the device ON and OFF.

1.3.2 Rear Panel

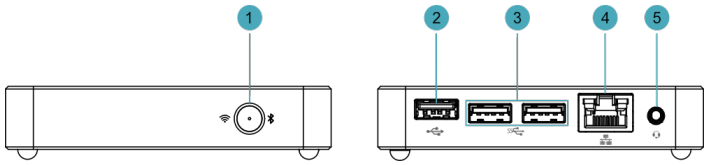
Describes the interface types and definitions on the rear panel.



No.	Function Definition
1	1 x DC Input, USB Type-C Connector, supports 5V 5A power input.
2	1 x HDMI, Type-A HDMI Connector, compliant with HDMI 2.0, supports 4K 60Hz resolution, for connecting a display.
3	1 x HDMI, Micro HDMI Connector, compliant with HDMI 2.0, supports 4K 60Hz resolution, for connecting a display.
4	1 x Micro SD Card Slot, for installing an SD card to boot the system.

1.3.3 Side Panel

Describes the interface types and definitions on the side panel.



No.	Function Definition
1	1 x Wi-Fi/BT Antenna Port, SMA connector, for connecting the Wi-Fi/BT antenna.
2	1 x USB 2.0, Type-A Connector, supports up to 480Mbps data transfer rate.
3	2 x USB 3.0, Type-A Connector, each supports up to 5Gbps data transfer rate.
4	1 x 1000M Ethernet, RJ45 connector, with LED indicators, 10/100/1000M auto-negotiation, for Ethernet connection.
5	1 x Audio Input/Stereo Output, 3.5mm Audio Jack, can be used for microphone input and stereo output. • When headphone is connected, audio output switches to the headphone. • When no headphone is connected, audio output switches to the Speaker.

1.4 Button

The ED-CLAWBOX includes one ON/OFF button with a blue indicator. The silkscreen on the case is "  ".

- Short Press: When the device is powered, press the button to power on the device. The indicator lights up blue and remains steady.
- Long Press (3s): When the device is normally powered on, long-press the button for 3 seconds to power off the device. The indicator will blink 5 times and then turn off.

1.5 Indicator

Describes the status and meaning of the indicators on the ED-CLAWBOX device.

Indicator	Status	Description
Green indicator of Ethernet port	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	On	The Ethernet connection is in the normal state.
	Blink	The Ethernet connection is abnormal.
	Off	The Ethernet connection is not set up.

1.6 Interface

Describes the definition and function of each interface on the product.

1.6.1 Micro SD Card Slot

The ED-CLAWBOX includes one Micro SD card slot. The silkscreen for the slot is "  ". It supports installing a Micro SD card for booting the system.

> TIP
>
> - The device comes with an SD card pre-installed with the operating system by default.
> - Do not remove or insert the SD card unless you need to reinstall the operating system.

1.6.2 Power Supply Interface

The ED-CLAWBOX includes one power input using a USB Type-C connector. The silkscreen for the interface is "  ", supporting 5V 5A power input.

> TIP
>
> The Raspberry Pi 27W USB-C Power Supply is recommended.

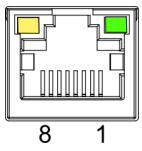
1.6.3 Audio Interface

The ED-CLAWBOX includes one audio input, a 3.5mm 4-pole headphone jack. The silkscreen for the interface is "". It supports OMTP standard stereo headphone output and single-channel microphone recording.

- When headphone is connected, the audio output switches to the headphone.
- When no headphone is connected, the audio output switche to the Speaker.

1.6.4 1000M Ethernet Interface

The ED-CLAWBOX includes one auto-negotiating 10/100/1000M Ethernet interface. The silkscreen for the interface is "". It uses an RJ45 connector. It is recommended to use Cat6 or higher specification network cables when connecting to Ethernet. The pin definitions for the connector are as follows:



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

1.6.5 HDMI Interface

The ED-CLAWBOX includes 1 standard HDMI port and 1 Micro HDMI port. The silkscreen is " HDMI". They support connecting to an HDMI display, with a maximum video output of 4Kp60.

1.6.6 USB 2.0 Interface

The ED-CLAWBOX includes one USB 2.0 interface. The silkscreen is "", a standard Type-A port. It supports connecting standard USB 2.0 peripherals, with a maximum transfer rate of 480Mbps.

1.6.7 USB 3.0 Interface

The ED-CLAWBOX includes 2 USB 3.0 interfaces. The silkscreen is "  ", standard Type-A ports. They support connecting standard USB 3.0 peripherals, with each supporting a maximum transfer rate of 5Gbps.

1.6.8 Antenna Interface

The ED-CLAWBOX includes one SMA antenna connector. The silkscreen is "  " and "  ", for connecting the Wi-Fi/BT antenna.

1.6.9 Speaker

The ED-CLAWBOX includes 2 speakers, 8Ω 0.8W each, supporting external audio playback.

> TIP
>
> When headphone is connected to the audio port, the speaker has no audio output.

2 Installing/Removing Components

This chapter describes the specific steps for installing/removing components.

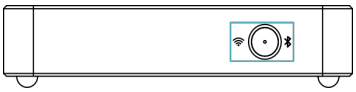
2.1 Installing the Antenna

Preparation:

The antenna has been taken out of the packaging box.

Steps:

1. Locate the antenna connector on the side of the device, as indicated in the following figure.



2. Align the connectors on the device and the antenna, and turn it clockwise to tighten. Ensure it is secure and will not come loose.

2.2 Installing a Micro SD Card (Optional)

If you need to install a Micro SD card during product use, refer to the following instructions.

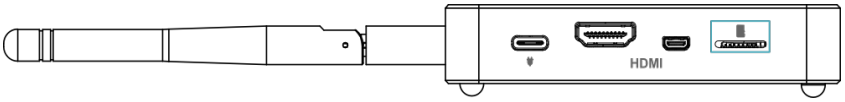
> Note
>
> Please turn off the power before inserting or removing the SD card.

Preparation:

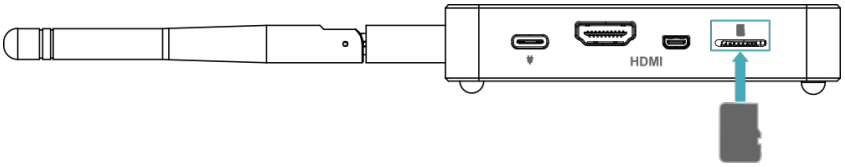
- The Micro SD card to be used is ready.
- The device is powered off.

Steps:

1. Locate the Micro SD card slot on the side of the device, as indicated in the following figure.



2. Insert the Micro SD card into the corresponding slot with the contact pins facing down. A click sound indicates successful installation.



2.3 Removing the Micro SD Card (Optional)

If you need to remove the SD card during product use, refer to the following instructions.

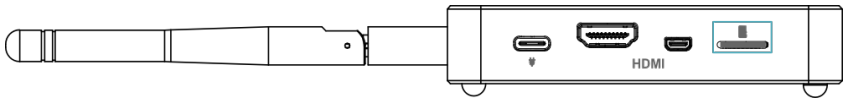
> Note
>
> Please turn off the power before inserting or removing the SD card.

Preparation:

The device is powered off.

Steps:

1. Locate the Micro SD card, as indicated in the following figure.



2. Press the Micro SD card into the slot to release it, and then pull it out.

3 Booting The Device

This chapter describes the specific steps for connecting cables and starting the device.

3.1 Connecting Cables

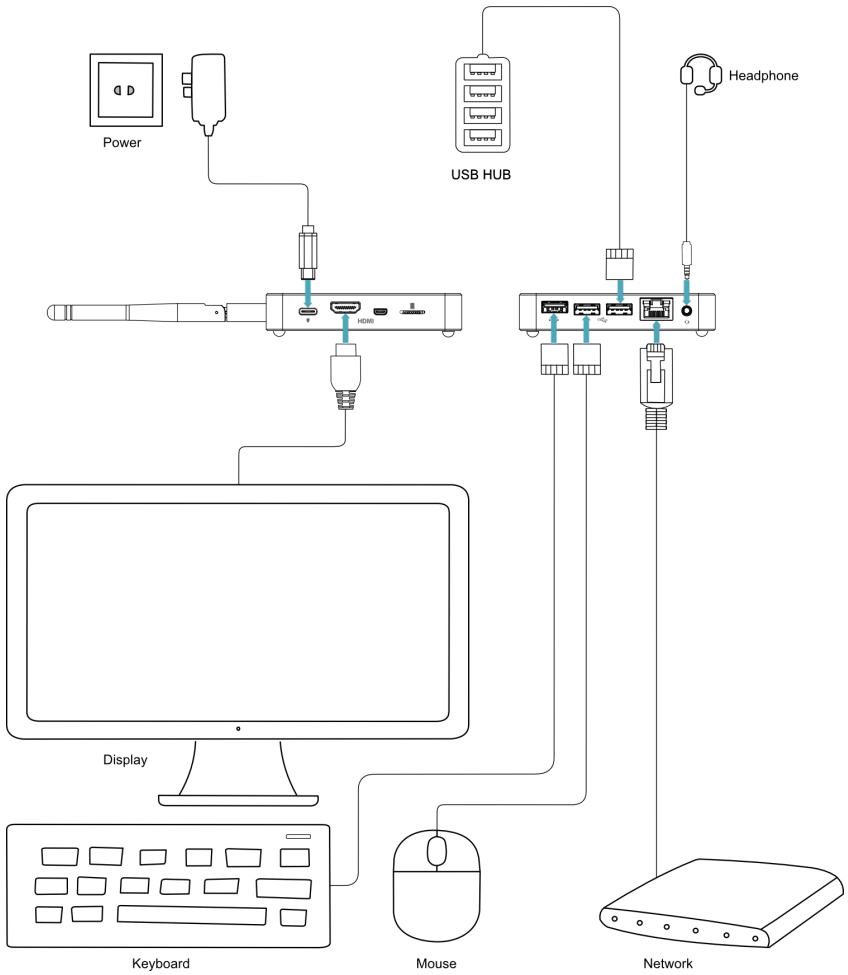
Describes the methods for connecting cables.

Preparation:

- Accessories such as a functional display, mouse, keyboard, and power supply adapter are ready.
- A functional network is available.
- Functional HDMI and Ethernet cables are ready.

Schematic diagram of connecting cables:

For pin definitions of each interface and specific connection methods, please refer to 1.6 Interface.



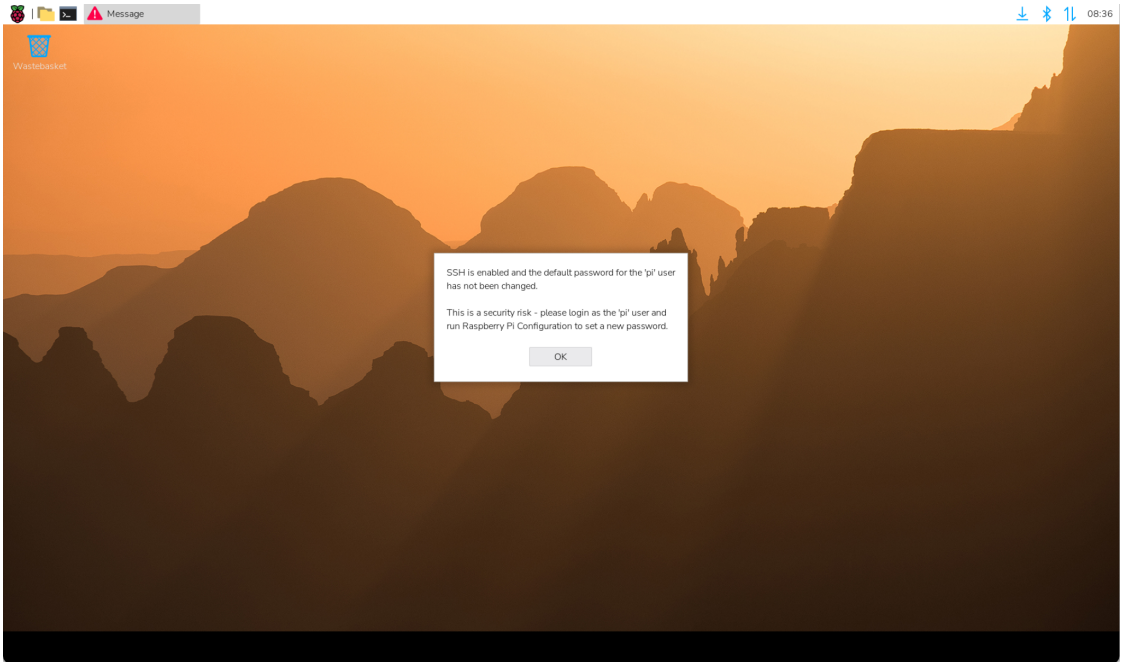
3.2 Booting The System For The First Time

After the ED-CLAWBOX device is connected to the power supply, press the ON/OFF button, and the system will begin to start.

- The indicator on the ON/OFF button lights up and remains steadily lit in blue.
- After the system starts normally, the Raspberry Pi logo will appear in the top-left corner of the screen.

> TIP
>
> Default Username: `pi` ; Default Password: `raspberry` .

The ED-CLAWBOX device comes with the Desktop edition of the system pre-installed. After startup, it directly boots into the desktop, as shown in the figure below.



4 Configuring System

This chapter describes the specific operations for system configuration.

4.1 Finding Device IP

Finding Device IP

4.2 Remote Login

Remote Login

4.3 Configuring Storage Devices

Configuring Storage Devices

4.4 Configuring Ethernet IP

Configuring Ethernet IP

4.5 Configuring Wi-Fi

Configuring Wi-Fi

4.6 Configuring Bluetooth

Configuring Bluetooth

4.7 Configuring Audio

The ED-CLAWBOX includes one audio port (supporting headphone connection) and one external Speaker output. Both headphone and Speaker volumes are adjustable, and it supports recording input audio.

4.7.1 Adjusting Volume

The headphone and Speaker volumes can be adjusted manually.

4.7.1.1 Adjusting Volume via Desktop Icon

If you are using the Desktop version of the OS, you can directly adjust the headphone and Speaker volume via the desktop icon.

Steps:

1. Click the or icon in the top-right corner of the desktop to open the volume control bar.

2. Drag the slider of the volume control bar up or down to adjust the volume. Check or uncheck the Mute checkbox to mute or unmute the audio.

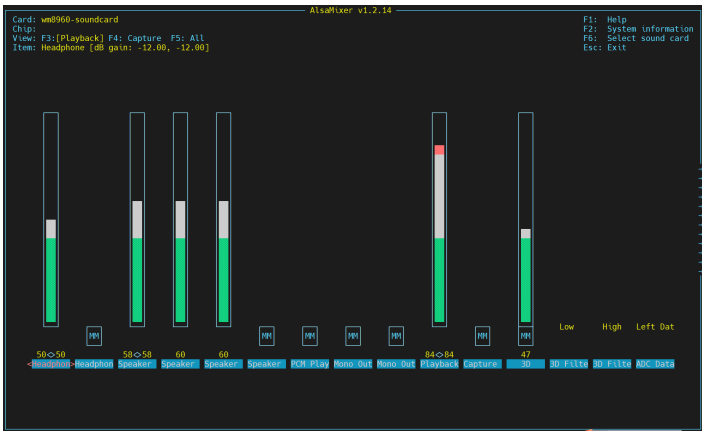
4.7.1.2 Adjusting Volume via Command Line

Supports adjusting the volume by opening the volume control interface via the command line.

Steps:

1. Execute the following command in the command window to open the volume control interface.

```sh
alsamixer
```



2. In the opened interface, view the current volume levels for the headphone and Speaker. Use the Left (←) and Right (→) arrow keys on the keyboard to select the option to adjust, and then use the Up (↑) and Down (↓) arrow keys to adjust the volume level. Press the M key to mute or unmute the audio.

Key	Function
↑	Volume Up
↓	Volume Down
M	Mute or Unmute

4.7.2 Configuring Recording

Supports recording input audio.

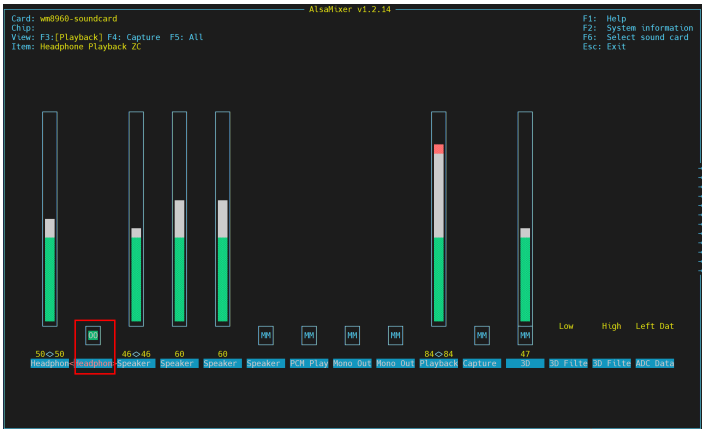
Preparation:

- Headphone (with MIC input capability) is connected to the audio port.
- Ensure the headphone volume is not muted.

Steps:

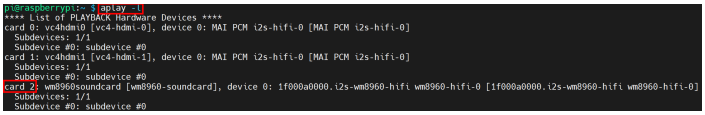
1. In the command window, execute the following command to open the volume control interface, and ensure the headphone volume is not muted.

```sh
alsamixer
```



2. Press `ESC` to return to the command window. Execute the following command to query the device's sound card number.

```sh
aplay -l
```



3. After obtaining the sound card number, execute the following command to start recording an audio file named "test" in MP3 format with a duration of 10 seconds.

```sh
arecord -f S16_LE -d 10 -D plughw:2 -q test.mp3
```

- `10` represents the recording duration, in seconds (s), customizable.
- `2` represents the sound card number, obtained from the query.
- `test` represents the recorded audio file name, customizable.
- `mp3` represents the audio format. WAV format is also supported, customizable.

4. Press `Ctrl+C` to stop recording.

> TIP

> The recorded audio file is saved in the `/home/pi/` directory by default.

5. Execute the following command to play the recorded audio.

```sh
aplay test.mp3
```

4.8 Connecting to the MiniMax Model Based on OpenClaw

The ED-CLAWBOX has OpenClaw deployed by default. Users can connect to various large language models (LLMs) as needed. The following is a step-by-step guide using the MiniMax model as an example.

> TIP
>
> OpenClaw supports connecting to various LLMs. Only the MiniMax model is introduced here as an example.

Preparation:

- The ED-CLAWBOX has started normally.
- A Windows PC is available. Both the Windows PC and the ED-CLAWBOX are connected to the same router, placing their IP addresses on the same subnet.
- The API Key for the MiniMax model is obtained.
  1. On the Windows PC's browser, enter the URL: https://platform.minimax.io (https://platform.minimax.io) to access the MiniMax official website.
  2. Apply for an API key as needed.

Steps:

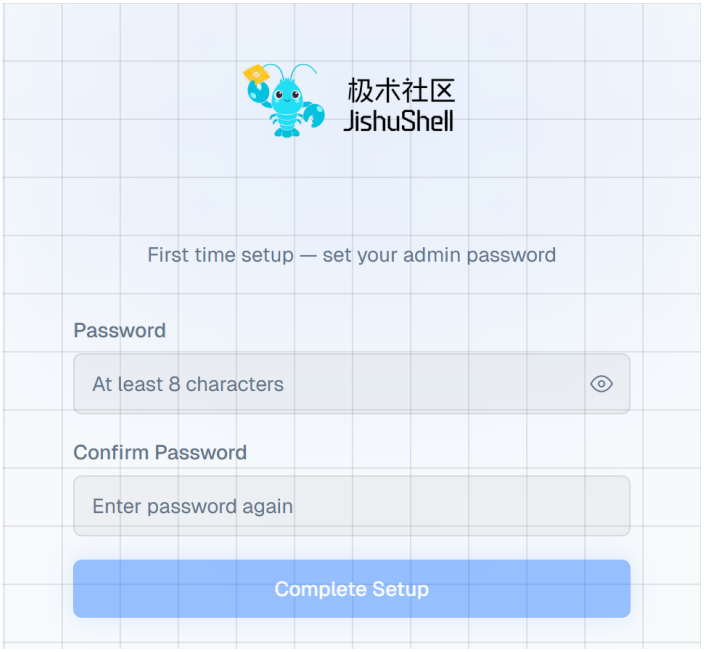
1. Open the command terminal on the ED-CLAWBOX device and execute the following command to query the device's IP address (e.g., 192.168.X.X).

```sh
ifconfig
```

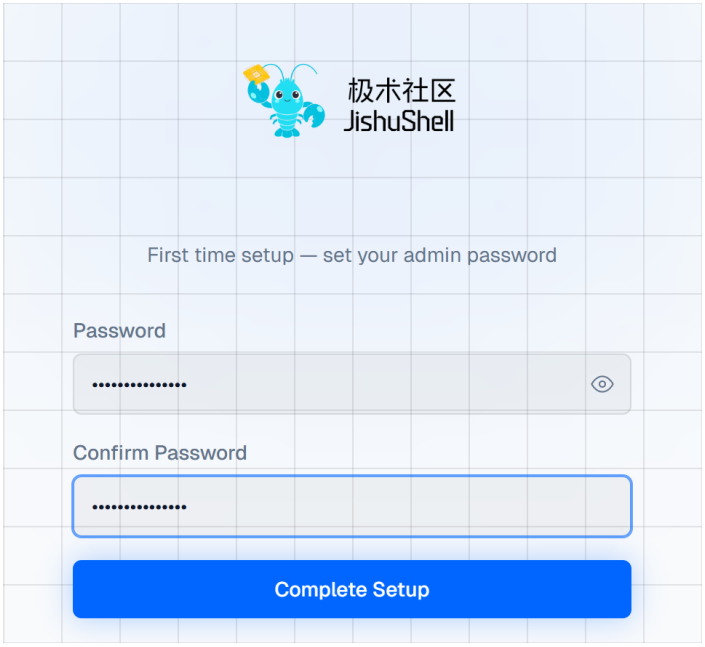
```
pi@raspberrypi:~ $ ifconfig
docker0: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        inet 172.17.0.1  netmask 255.255.0.0  broadcast 172.17.255.255
        ether 12:e1:27:b5:d1:ae  txqueuelen 0  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 17 overruns 0  carrier 0  collisions 0

eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.[redacted]  netmask 255.255.255.0  broadcast 192.168.8.255
        inet6 fe80::becb:1c7:e9d3:276a  prefixlen 64  scopeid 0x20<link>
        ether 88:a2:9e:42:49:c2  txqueuelen 1000  (Ethernet)
        RX packets 369  bytes 126728 (123.7 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 319  bytes 69519 (67.8 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
        device interrupt 112

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 490  bytes 84063 (82.0 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 490  bytes 84063 (82.0 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

wlan0: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        ether 88:a2:9e:42:49:c4  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

2. In the Windows PC's browser, enter the URL: http://192.168.X.X:8090, then press `Enter` to access the JishuShell login interface.

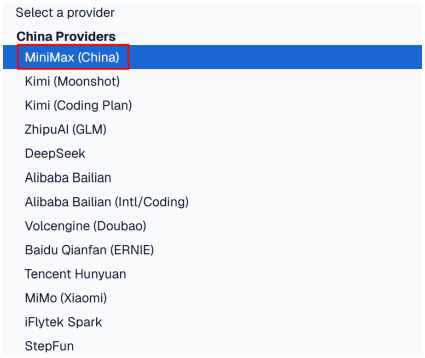
> TIP
>
> `http://192.168.X.X` is the ED-CLAWBOX device IP address obtained in Step 1.



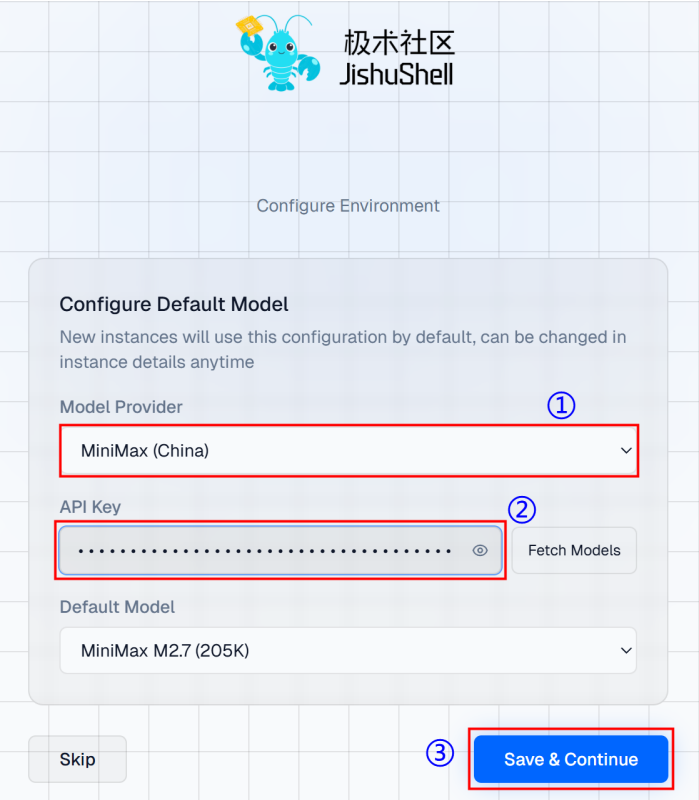
3. Set a password as prompted, then click "Complete Setup".



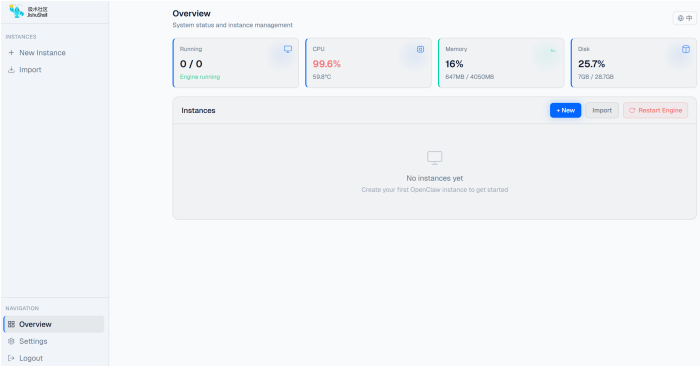
4. In the "Select a provider" field, select "MiniMax(China)".



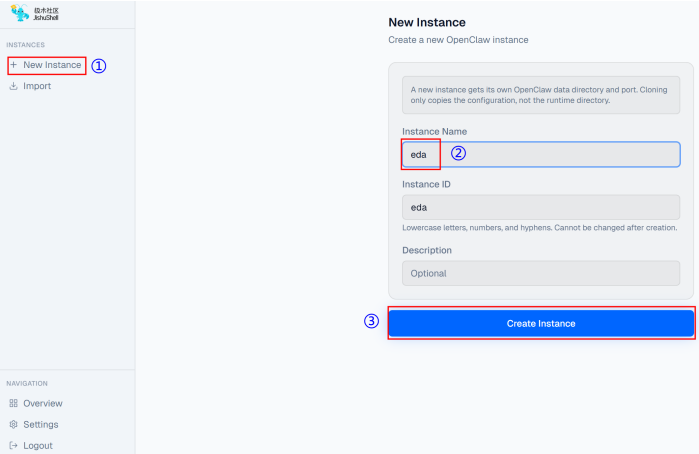
5. In the "API Key" field, enter the obtained MiniMax model API Key, then click "Save & Continue".



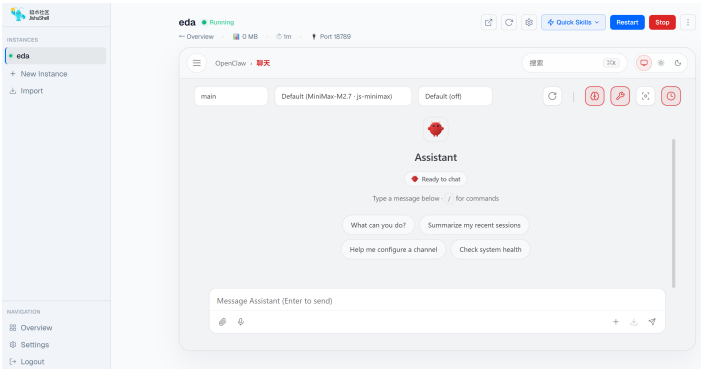
6. After configuration is complete, click "Enter Panel" to access the JishuShell configuration interface.



7. Click "New Instance", enter an Instance Name, and finally click "Create Instance".

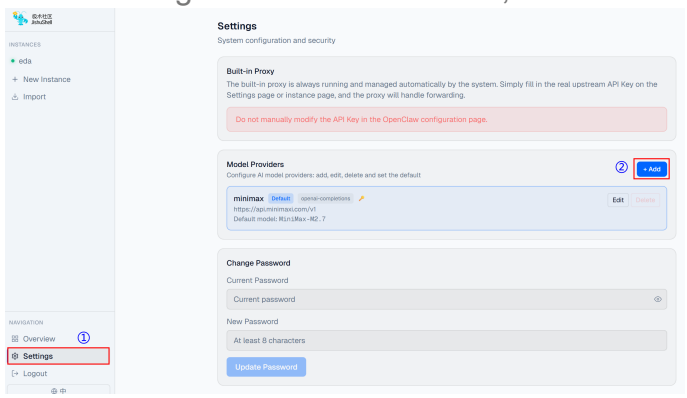


8. After the instance is successfully created, it will start automatically. The following figure shows the chat interface after the instance starts.

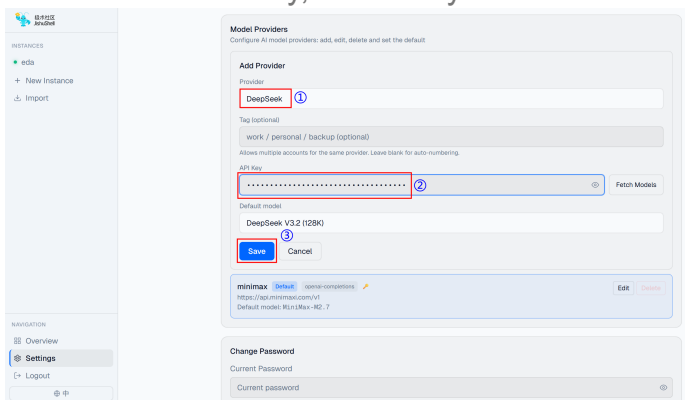


9. Chat in the dialog box as needed.
10. If you need to add a new model, switch models, or connect to other chat software during use, refer to the following instructions.

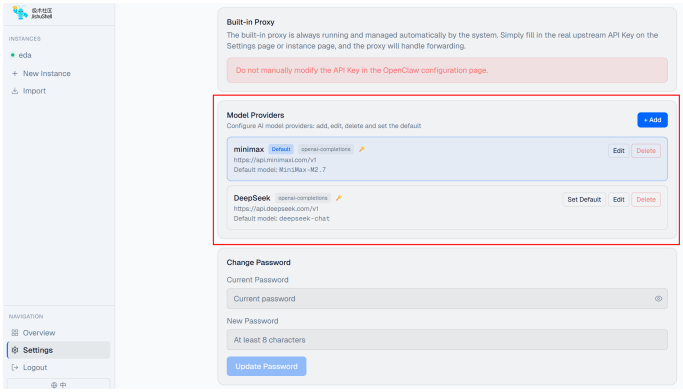
- Adding a Model and Switching Models (using the DeepSeek model as an example).
  1. Log in to the DeepSeek official website (https://platform.deepseek.com/usage (https://platform.deepseek.com/usage)) and obtain an API key.
  2. Click "Settings" in the left menu bar, then click "Add" in the "Model Providers" section.



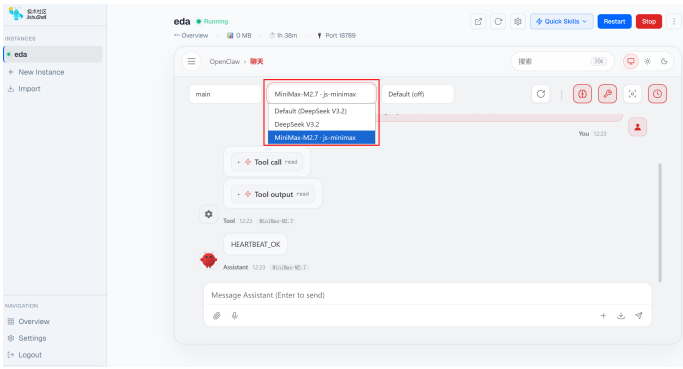
  3. In the expanded "Add Provider" section, first set the Model Provider to DeepSeek, then enter the obtained API Key, and finally click "Save".



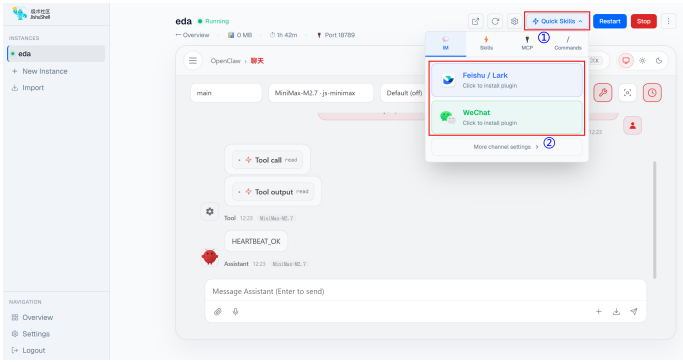
  4. After successful addition, the interface will display as shown below.



5. Return to the instance chat window. Switch the model in the model selection menu at the top.



- Connecting to Other Chat Software.
  1. In the upper right menu bar of the instance chat window, click "Quick Skills", then select "Feishu/Lark" or "WeChat".



  2. Follow the prompts to install the corresponding plugin, log in, and configure permissions as needed.

5 Installing OS (Optional)

The device comes with the operating system pre-installed at the factory. If the operating system becomes corrupted during use, or if the user needs to replace it, the system image must be downloaded again and flashed. The following section describes the specific steps to download the image and flash the SD card.

5.1 Downloading OS File

Our company provides a pre-installed OpenClaw system image. The download link is provided in the table below.

Product Model	Download Link
ED-CLAWBOX-504S ED-CLAWBOX-504P	raspios-trixie-arm64-ed-cm5clawbox-DEV-v20260424.01.img (https://1826505135.v.123pan.cn/1826505135/35922709)

5.2 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/)

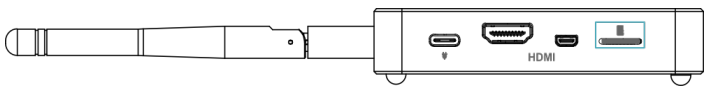
Preparation:

- The flashing tools have been downloaded and installed on a Windows PC.
- The image file to be written is ready.
- An SD card reader is prepared.
- The device is powered off.

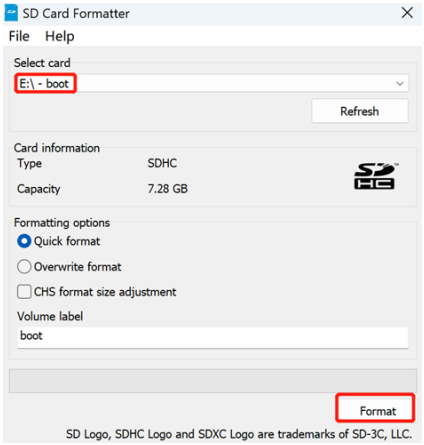
Steps:

The procedure is described using a Windows system as an example.

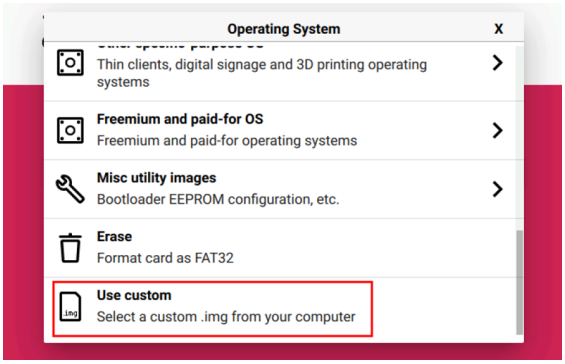
1. Locate the Micro SD card, as indicated in the following figure.



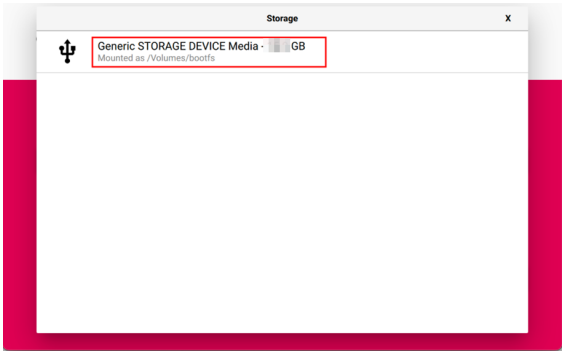
2. Press the Micro SD card into the slot to release it, and then pull it out.
3. Insert the removed SD card into the card reader, and then plug the card reader into a USB port on the Windows PC.
4. Open `SD Card Formatter`, select the drive letter to be formatted, and click "Format" at the bottom right to begin formatting.



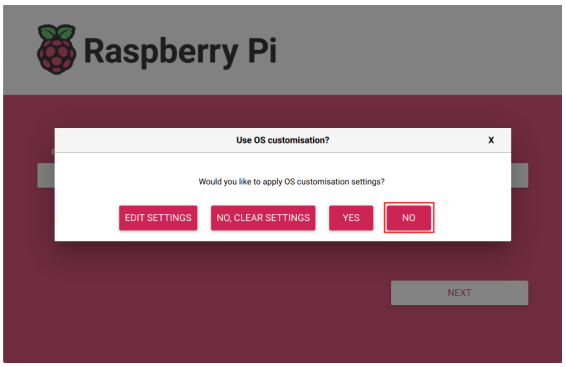
5. In the pop-up dialog box, click "Yes".
6. When the formatting is completed, click "OK" in the prompt box.
7. Close `SD Card Formatter` .
8. Open `Raspberry Pi Imager` , select "CHOOSE OS" and select "Use Custom" in the pop-up pane.



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

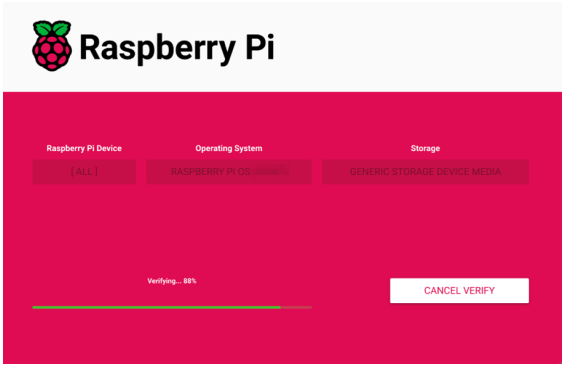


11. Click “NEXT”, select "NO " in the pop-up “Use OS customization?” pane.



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

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



14. After the verification is completed, click “CONTINUE” in the pop-up “Write Successful” box.
15. Close `Raspberry Pi Imager`, remove the card reader and SD card, and reinsert the SD card into the device.