ED-HMI3630-156C

User Manual

by EDA Technology Co., Ltd

built: 2026-05-29

1 Hardware Manual

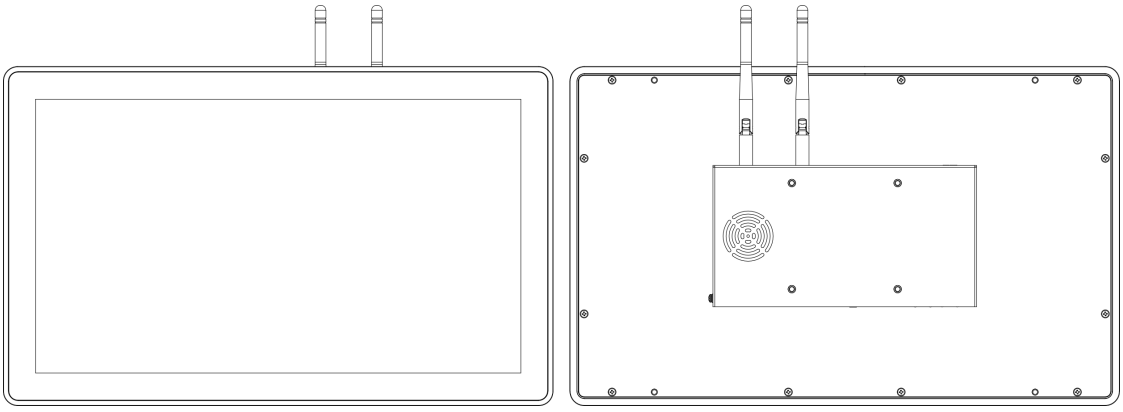
This chapter introduces the product overview, packing list, appearance, button, indicator and interface.

1.1 Overview

ED-HMI3630-156C is a 15.6-inch industrial HMI 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

ED-HMI3630-156C provides common interfaces such as HDMI, USB, Ethernet, RS232, RS485, DI, DO and CAN, and supports network access through Wi-Fi, Ethernet and 4G; integrated supercapacitor backup power supply (optional), RTC, EEPROM, and encryption chip, which enhances the ease of use and reliability of the product, which is mainly used in the field of industrial control and IOT.



1.2 Packing List

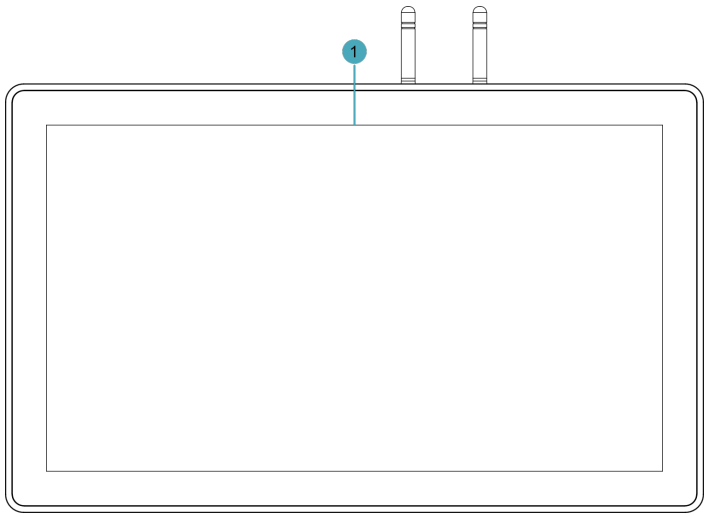
- 1 x ED-HMI3630-156C Unit
- 1 x Mounting Kit (including 4 x buckles, 4 x M4*10 screws and 4 x M4*16 screws)
- [Optional Wi-Fi/BT version] 1 x 2.4GHz/5GHz Wi-Fi/BT Antenna
- [Optional 4G version] 1 x 4G/LTE Antenna
- 1 x 2-Pin Phoenix Terminal with lock
- 3 x 6-Pin Phoenix Terminals
- 2 x 10-Pin Phoenix Terminals

1.3 Appearance

Introducing the functions and definitions of interfaces on each panel.

1.3.1 Front Panel

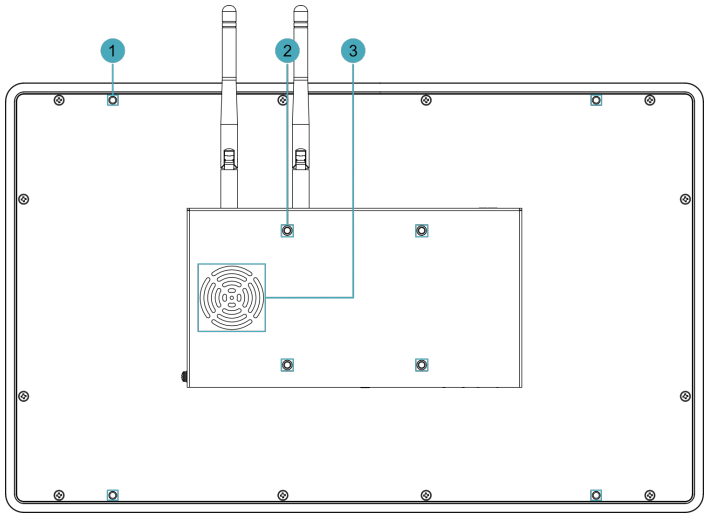
This section introduces functions and definitions of front panel.



NO.	Function Definition
1	1 x LCD display, 15.6-inch LCD touch screen, which supports up to 1920x1080 and multi-point capacitive touchscreen.

1.3.2 Rear Panel

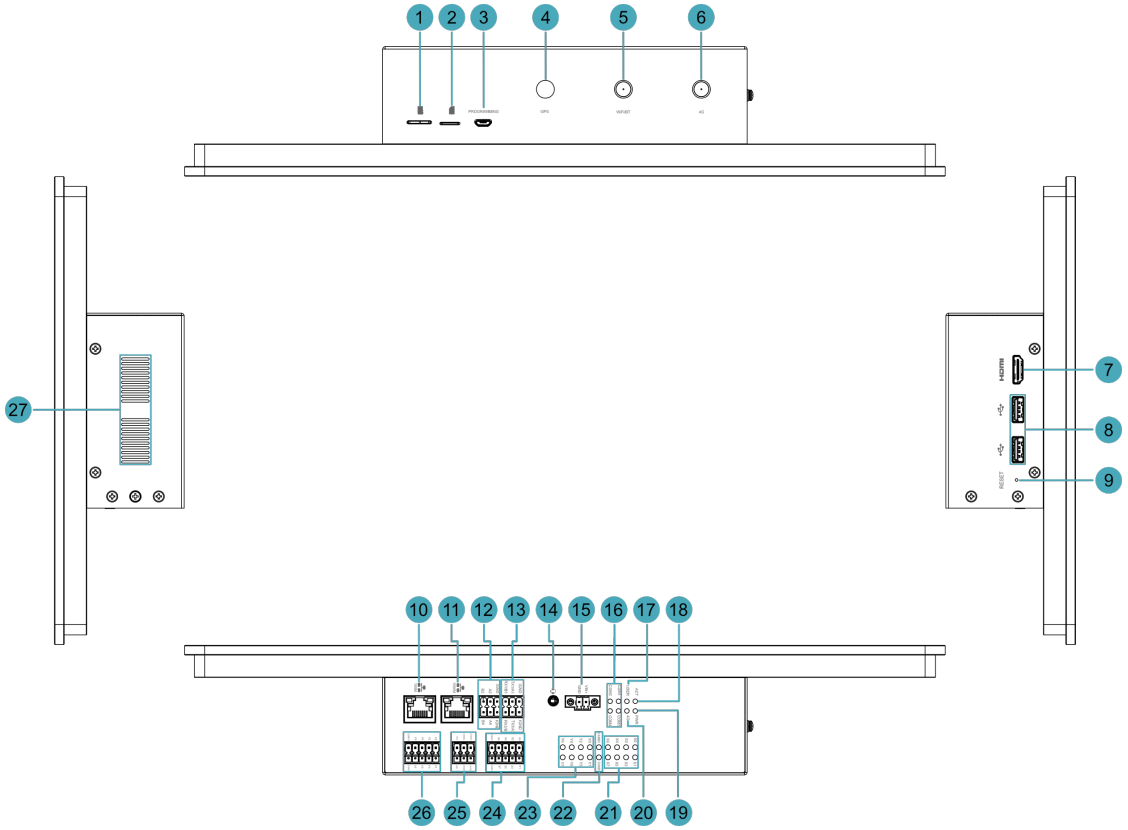
This section introduces interfaces and definitions of rear panel.



NO.	Function Definition
1	4 x installation holes of buckle, which are used to fix the buckles to the device for Embedded installation.
2	4 x VESA mounting holes, reserved for VESA bracket installation.
3	1 x Speaker, built-in one 4Ω 5W speaker, single-channel stereo audio output.

1.3.3 Side Panel

This section introduces interfaces and definitions of side panel.



NO.	Function Definition
1	1 x Micro SD card slot, which is used to install Micro SD card for storing user data.
2	1 x Nano SIM slot, which is used to install a Nano SIM card for getting 4G signal.
3	1 x Micro USB port, which supports to flash to eMMC for the system.
4	1 x rubber plug, here solely as a reserve hole.
5	1 x Wi-Fi/BT antenna port (optional), SMA connector, which can connect to Wi-Fi/BT antenna.
6	1 x 4G antenna port (optional), SMA connector, which can connect to 4G antenna.
7	1 x HDMI port, Type-A connector, which is compatible with HDMI 2.0 standard and supports 4K 60Hz. It supports to connect a displayer.
8	2 x USB 2.0 ports, Type-A connector, each channel supports up to 480Mbps transmission rate.
9	1 x Reset button, pressing the button will reset the device.
10	1 x 10/100M adaptive Ethernet port, RJ45 connector, with LED indicators. It can be used to access the network.
11	1 x 10/100/1000M adaptive Ethernet port, RJ45 connector, with LED indicators. It can be used to access the network.
12	

NO.	Function Definition
	2 x RS485 ports, 6-Pin 3.5mm pitch phoenix terminal, which is used to connect the third-party control equipment.
13	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-HMI3632-156C: configured for 2 x RS232 • ED-HMI3633-156C: configured for 1 x RS232 and 1 × RS485 • ED-HMI3634-156C: configured for 2 x RS485
14	1 x Audio In/Stereo Out, 3.5mm audio jack connector. It can be used as MIC IN and LINE OUT.
15	1 x DC input, 2-Pin 3.5mm pitch phoenix terminals with screw holes. It supports 12V~24V input, the signal is defined as VIN+/GND.
16	4 x green UART indicators, which is used to check the communication status of UART port.
17	1 x green user indicator, user can customize a status according to actual application.
18	1 x green system status indicator, which is used to check the working status of device.
19	1 x red power indicator, which is used to check the status of device power-on and power-off.
20	1 x green 4G indicator, which is used to check the status of 4G signal.
21	8 x green DI indicators, which is used to check the communication status of DI signal.
22	2 x green CAN indicators, which is used to check the communication status of CAN signal.
23	8 x green DO indicators, which is used to check the communication status of DO signal.
24	8 x DI ports, 10-Pin 3.5mm pitch phoenix terminals, which is used to connect third-party sensors.
25	2 x CAN ports, 6-Pin 3.5mm pitch phoenix terminals, which is used to connect third-party control device.
26	8 x DO ports, 10-Pin 3.5mm pitch phoenix terminals, which is used to connect third-party load.
27	Heat dissipation holes, which help improve cooling performance.

1.4 Button

The ED-HMI3630-156C 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-HMI3630-156C series 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	Input signal is 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	Output signal is detected.

Indicator	Status	Description
	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-HMI3630-156C includes a Micro SD card slot and a Nano SIM card slot.

1.6.1.1 Micro SD Card Slot

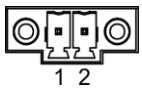
The silkscreen on the case of Micro SD card slot is " ", which is used to install Micro SD card for storing user data.

1.6.1.2 Nano 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-HMI3630-156C device includes one power input, 2-Pin 3.5mm pitch phoenix terminals. The silkscreen of port is "VIN+/GND", and the pins are defined as follows.



Pin ID	Pin Name
1	GND
2	12V~24V

1.6.3 Audio Interface

ED-HMI3630-156C Includes one audio connector, 3.5mm four-stage headphone jack. The silkscreen of port is " ", supports OMTP specification stereo headphone output and single channel microphone recording.

- When the headphone is connected, the audio output is switched to the headphone.
- When the headphone is not connected, the audio output is switched to the speaker.

1.6.4 Speaker

The ED-HMI3630-156C includes one amplifier output, a built-in 4Ω 5W speaker, and a single-channel stereo output. When playing audio, speaker has no audio output if headphones are accessed to the audio interface.

1.6.5 RS485/RS232 Interface

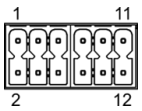
ED-HMI3630-156C includes 2~4 RS485 ports and 0~2 RS232 ports, Different product models correspond to different numbers of RS485 and RS232 ports:

- ED-HMI3632-156C：2 x RS485 and 2 x RS232
- ED-HMI3633-156C：3 x RS485 and 1 x RS232
- ED-HMI3634-156C：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

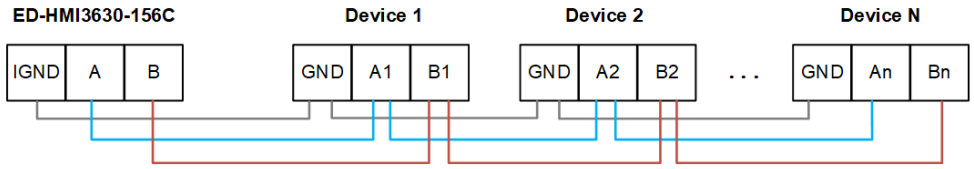
The pin names of the RS485 port corresponding to CM5 are as follows:

Signal	CM5 GPIO Name	CM5 Pin Out
RS485-2_B	GPIO13	UART5_RXD
RS485-4_B	GPIO9	UART4_RXD

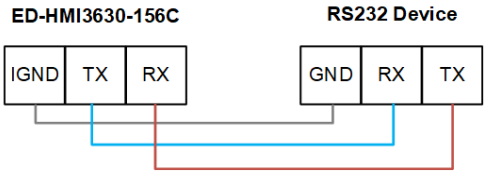
Signal	CM5 GPIO Name	CM5 Pin Out
RS485-2_A	GPIO12	UART5_TXD
RS485-4_A	GPIO8	UART4_TXD
RS232-1_RX or RS485-1_B	GPIO5	UART3_RXD
RS232-3_RX or RS485-3_B	GPIO1	UART2_RXD
RS232-1_TX or RS485-1_A	GPIO4	UART3_TXD
RS232-3_TX or RS485-3_A	GPIO0	UART2_TXD

Connecting Cables

The RS485 wiring schematic is as follows:



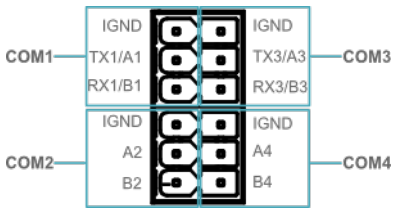
The RS232 wiring schematic is as follows:



RS485 Terminal Resistance Configuration

ED-HMI3630-156C includes 2~4 RS485 ports, 120R termination 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	

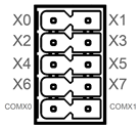
> **TIP**
>
> You need to open the device case to view the position of 120R termination resistor.

1.6.6 DI Interface

ED-HMI3630-156C includes 8 DI ports, every 4 DI ports share one common terminal (called COM): X0, X2, X4 and X6 share COMX0; X1, X3, X5 and X7 share COMX1.

Pin Definition

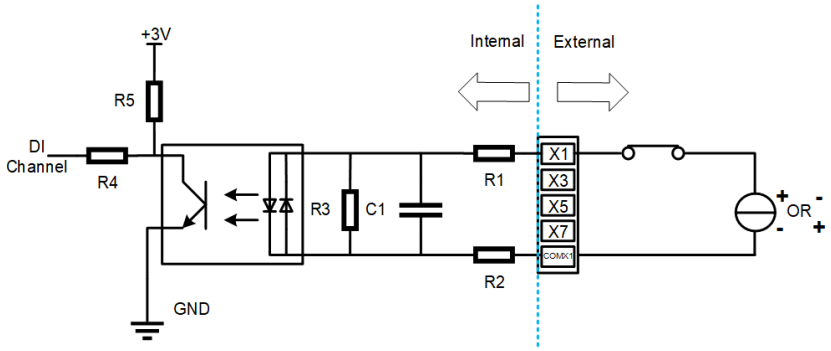
Terminal pins are defined as follows:



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

The wiring schematic for the single DI port is shown as follows:



Parameters	Description
Input Type	NPN and PNP
Isolation Protection	5 kV
COM	Every 4 DI ports share one common pin (called COM): X0, X2, X4 and X6 share COMX0 X1, X3, X5 and X7 share COMX1

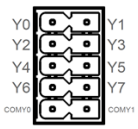
Parameters	Description
DI to COM	ON state: 5~30 VDC OFF state: 0~2 VDC

1.6.7 DO Interface

The ED-HMI3630-156C device includes 8 DO ports, every 4 DO ports share one common terminal (called COM): Y0, Y2, Y4 and Y6 share COMY0; Y1, Y3, Y5 and Y7 share COMY1.

Pin Definition

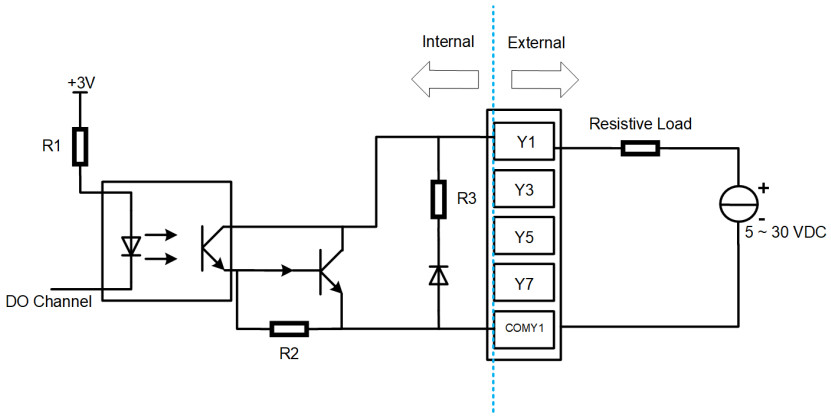
Terminal pins are defined as follows:



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

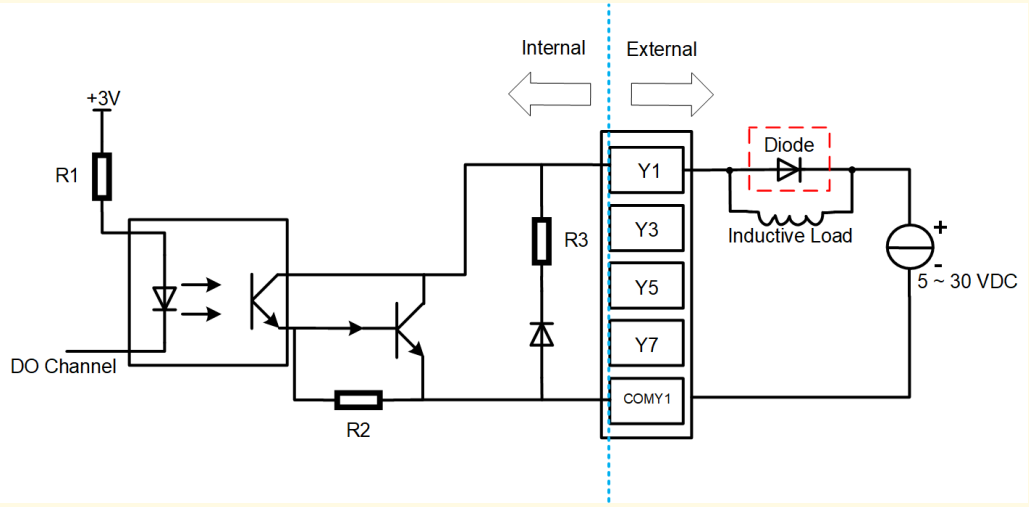
The wiring schematic for the single DO port is shown as follows:



Parameters	Description
Output Type	NPN
Isolation Protection	5 kV
COM	Every 4 DI ports share one common terminal (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.

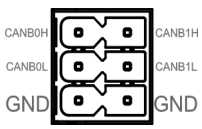


1.6.8 CAN Interface

The ED-HMI3630-156C includes 2 CAN ports.

Pin Definition

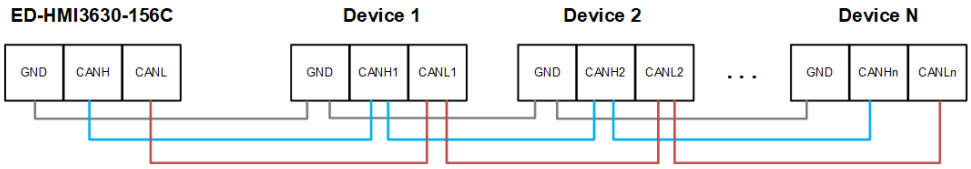
Terminal pins are defined as follows:



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

Connecting Cables

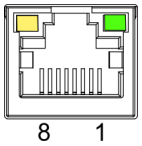
The wiring schematic for the CAN ports is shown as follows:



1.6.9 1000M Ethernet Interface

ED-HMI3630-156C includes an adaptive 10/100/1000M Ethernet port, and the silkscreen is "

". 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:

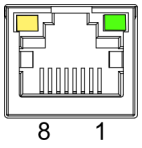


Pin ID	Pin Name
1	TX1+
2	TX1-
3	TX2+
4	TX2-
5	TX3+
6	TX3-
7	TX4+
8	TX4-

1.6.10 100M Ethernet Interface

ED-HMI3630-156C includes an adaptive 10/100M Ethernet port, and the silkscreen is "

". 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	-

1.6.11 HDMI Interface

ED-HMI3630-156C 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.

1.6.12 USB 2.0 Interface

ED-HMI3630-156C includes 2 USB 2.0 ports, the silkscreen is " ". The connector is Type-A USB, which can connect to standard USB 2.0 peripheral and supports up to 480Mbps.

1.6.13 Micro USB Interface

ED-HMI3630-156C includes one Micro USB port, the silkscreen is "PROGRAMMING", and it can be connected to a PC to flash to eMMC of the device.

1.6.14 Antenna Interface (Optional)

ED-HMI3630-156C includes 2 SMA antenna connectors, the silkscreens are "4G" and "Wi-Fi/BT" and they can be connected to the 4G antenna and Wi-Fi/BT antenna.

> TIP
>
> The number of antenna port is related to the actual model selected by the user, and only 2 antenna ports are included here as an example.

1.7 Supercapacitor (Optional)

The ED-HMI3630-156C 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 will automatically turn off the screen backlight and reduce the CPU frequency to save power. The device continues to operate in a low-power state until the capacitor's charge is depleted, after which it automatically shuts down safely. This effectively prevents operational interruptions and data loss.
- The device provides user-customizable emergency scripts, allowing for the 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, enabling 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 (Optional)

This chapter describes how to install optional components.

2.1 Install Antenna

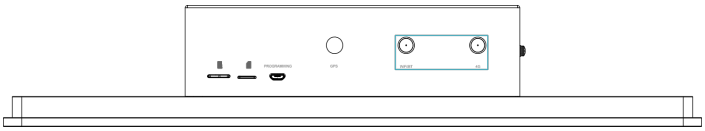
If the purchasing ED-HMI3630-156C includes 4G and Wi-Fi functions, you will need to install the antenna before using the device.

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. Find the location of the antenna connector, as indicated in the figure below.



2. Align the connectors on both sides of the device and the antenna, and turn the antenna clockwise to secure it.

2.2 Install Micro SD Card

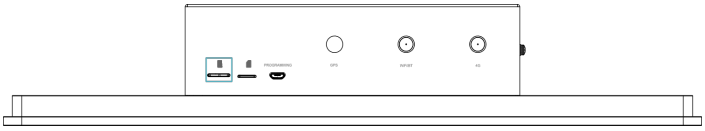
If you need to install the Micro SD card while using the product, you can refer to the following instructions.

Preparation:

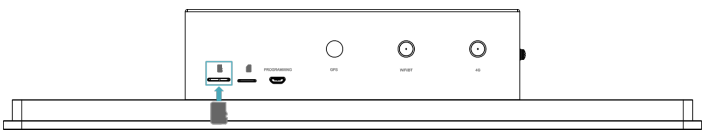
- Micro SD card is ready.

Steps:

1. Find the location of the Micro SD card slot, as indicated in the figure below.



2. Insert the Micro SD card into the corresponding card slot with the contact side facing down , and hear a sound to indicate that the installation is completed.



2.3 Install Nano SIM Card

If the purchasing ED-HMI3630-156C includes 4G function, you will need to install a Nano SIM card before using 4G.

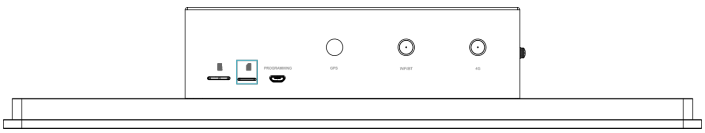
> WARNING
>
> Please turn off the power before inserting or removing the Nano SIM card.

Preparation:

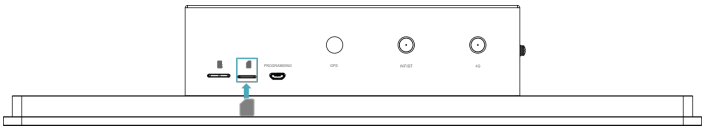
- The 4G Nano SIM card is ready.
- The device has been disconnected from power.

Steps:

1. Find the location of the Nano SIM card slot, as indicated in the figure below.



2. Insert the Nano SIM card into the corresponding card slot with the contact side facing down, and hear a sound to indicate that the installation is completed.



3 Installing Device

ED-HMI3630-156C device supports front embedded installation. The standard packaging includes the embedded installation Mounting kit (ED-ACCHMI-Front).

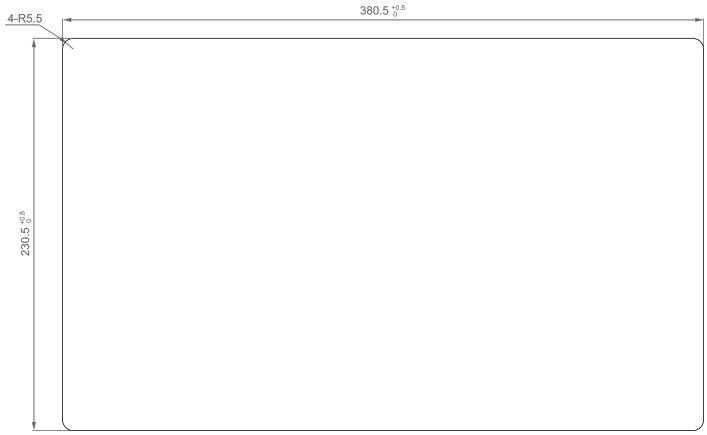
Preparation：

- The ED-ACCHMI-Front Mounting kit has been acquired (includes 4 × M4*10 screws, 4 × M4*16 screws, and 4 buckles).
- A cross screwdriver has been prepared.

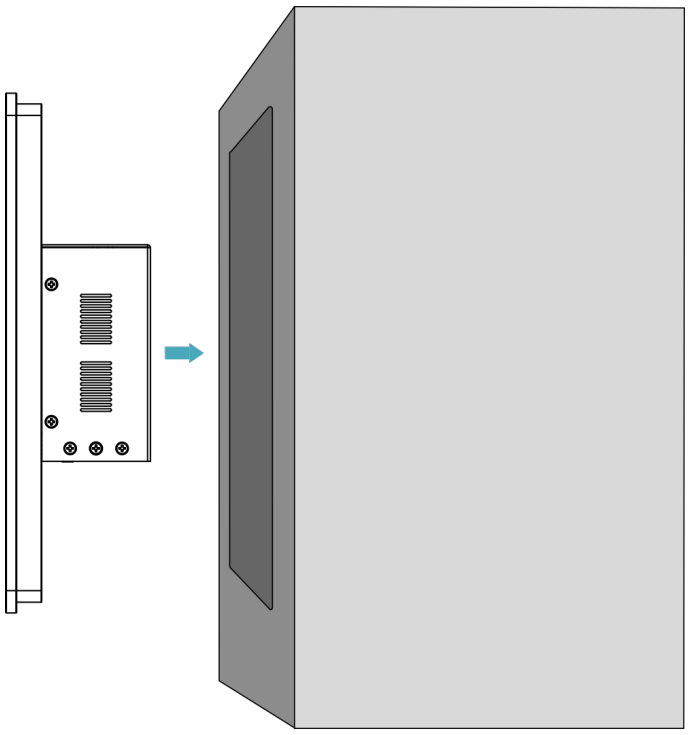
Steps：

1. Determine the cutout dimensions on the cabinet based on the ED-HMI3630-156C's size, as shown in the figure below.

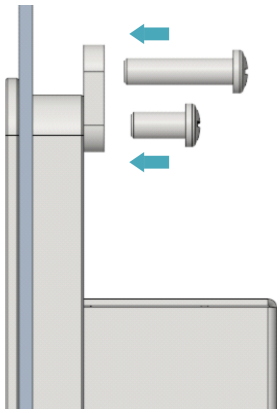
Unit: mm



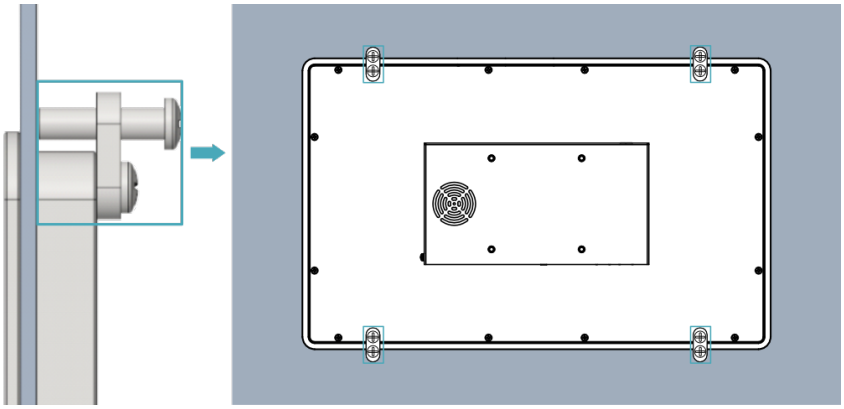
2. Drill a hole on the cabinet according to the aperture size defined in Step 1.
3. Embed the ED-HMI3630-156C into the cabinet from the exterior side.



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



5. Insert four M4*10 screws through the unthreaded holes of the buckle. Tighten clockwise with a screwdriver to secure the buckle to the device. Then, insert four M4*16 screws through the threaded holes of the buckle. Press them against the inner surface of the cabinet chassis and drive clockwise with a screwdriver until full thread engagement is achieved.



4 Booting the Device

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

4.1 Connecting Cables

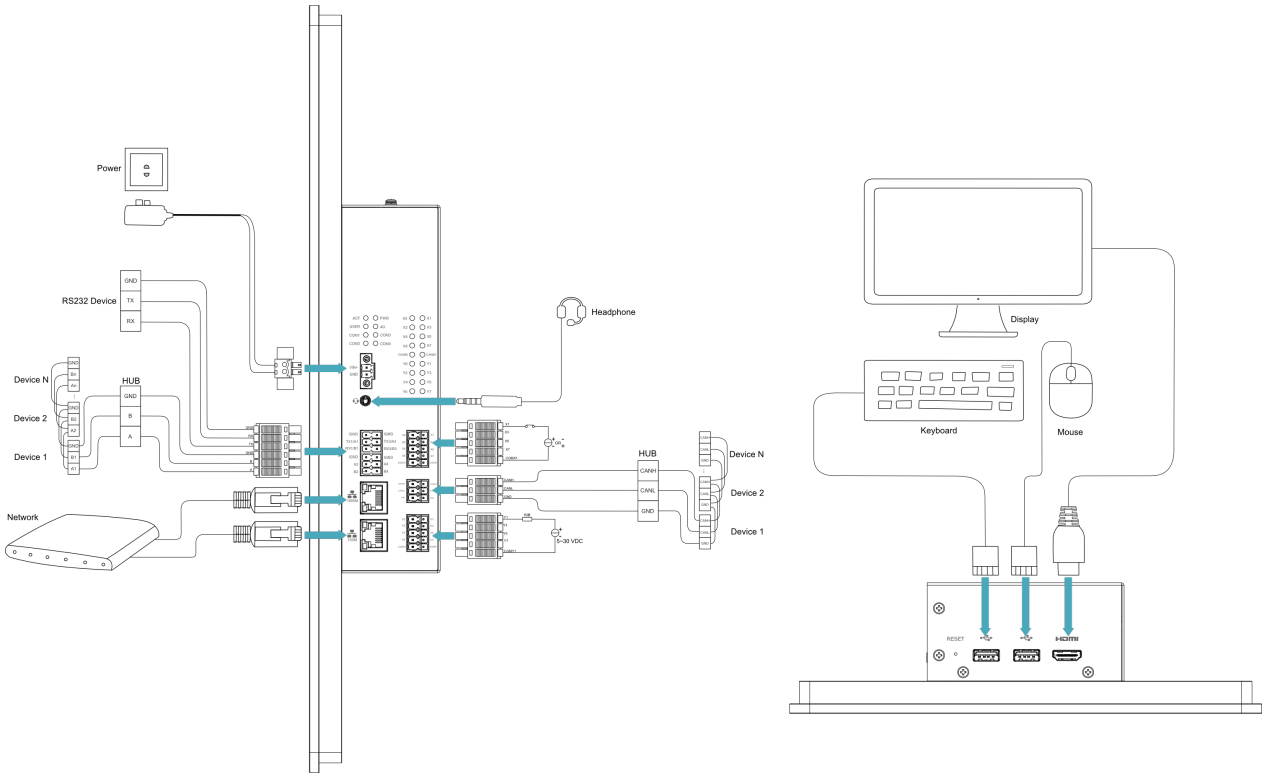
This section describes how to connect cables.

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

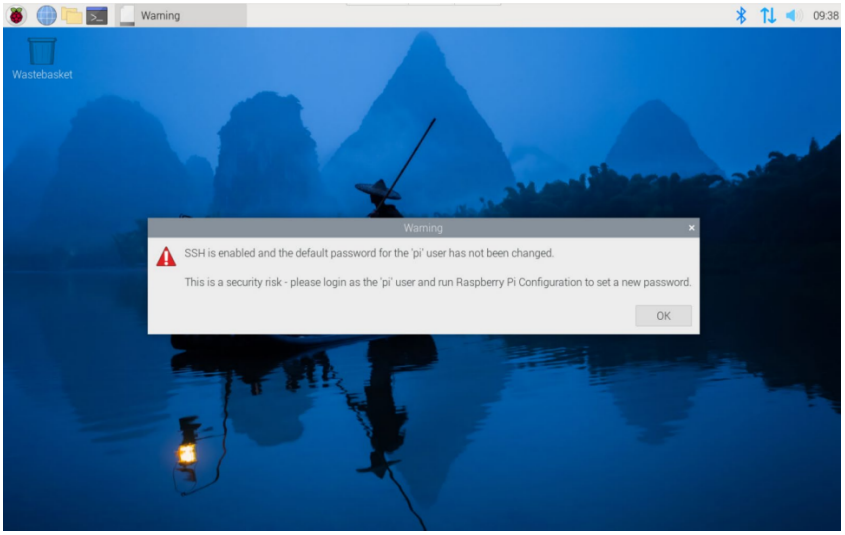
ED-HMI3630-156C device has no switching power supply. After the power supply is connected, the system will start.

- 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` .

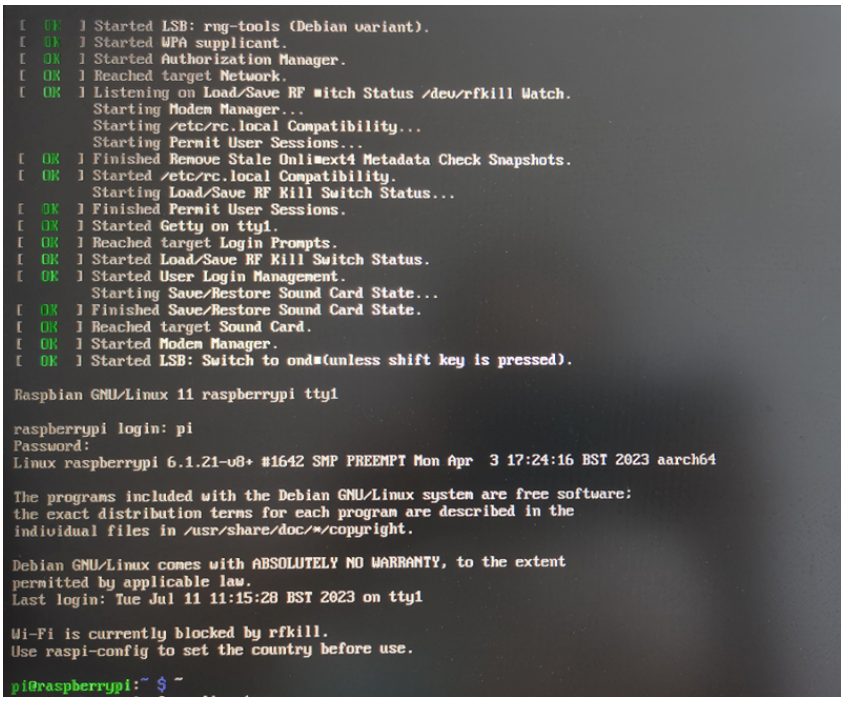
4.2.1 Raspberry Pi OS(Desktop)

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-HMI3630-156C includes 0~2 RS232 ports with corresponding COM ports and device files, as shown in the table below:

ED-HMI3632-156C

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

ED-HMI3633-156C

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

Preparation:

The RS232 ports of ED-HMI3630-156C 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-HMI3630-156C includes 2~4 RS485 ports with their corresponding COM ports and device files, as shown in the table below:

ED-HMI3632-156C

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

ED-HMI3633-156C

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

ED-HMI3634-156C

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-HMI3630-156C 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-HMI3630-156C includes 8 DI ports, which can be configured according to the actual requirement.

Preparation:

The connection of the DI port of the ED-HMI3630-156C 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 interface index, with a valid range of `DI0` to `DI7`.

5.12 Configuring DO

The ED-HMI3630-156C includes 8 DO ports, which can be configured according to the actual requirement.

Preparation:

The connection of the DO port of the ED-HMI3630-156C 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 interface index, with a valid range of `DO0` to `DO7`; a logic `1` represents a high level on the pin.

- 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 interface index, with a valid range of `DO0` to `DO7`; a logic `0` represents a low level on the pin.

5.13 Configuring 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-HMI3630-156C 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 Audio

Configuring Audio

5.15 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:

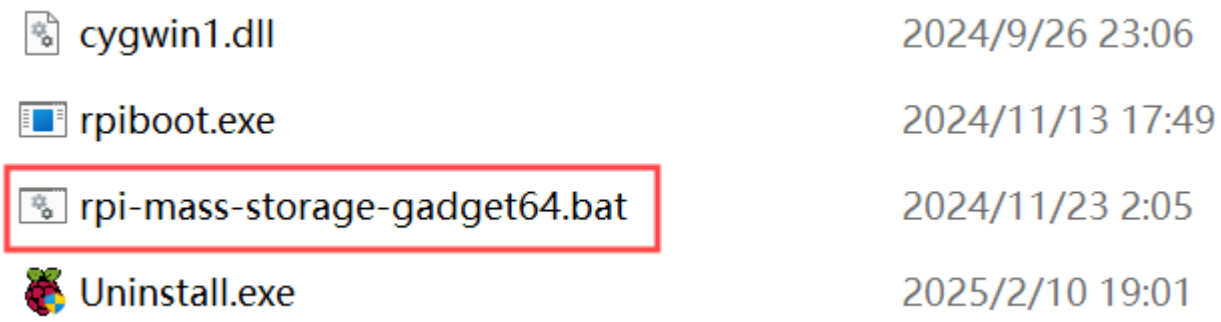
The steps are described using Windows system as an example.

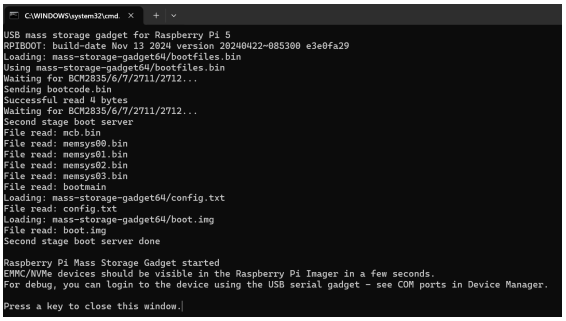
1. Connect the power cord and USB flashing cable (Micro-USB to USB-A).

   - Connecting to USB cable: One end is connected to the Micro USB port on the device side, and the other end is connected to the USB port on the PC.
   - Connecting to power cord: One end is connected to the DC 2-Pin Phoenix terminal on the device side, and the other end is connected to the external power supply.

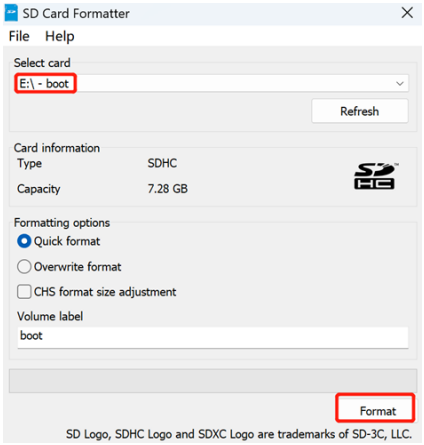
2. Disconnect the power supply of ED-HMI3630-156C and then power it on again.
3. Open the installed `rpi-mass-storage-gadget64.bat` tool (as shown in the red box in the picture below) to automate the disk tokenization.

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

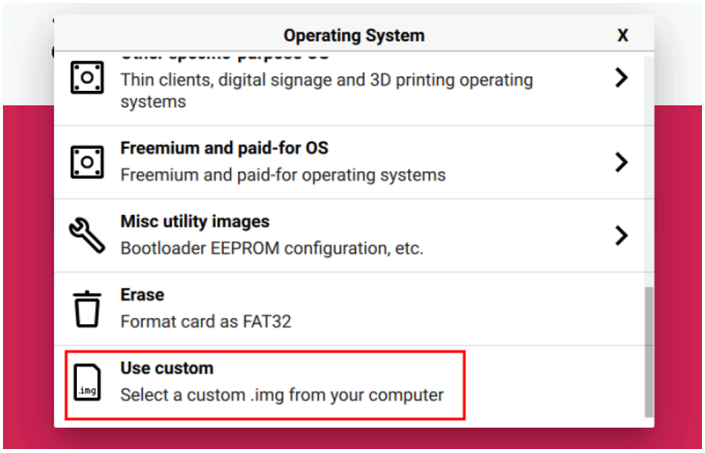




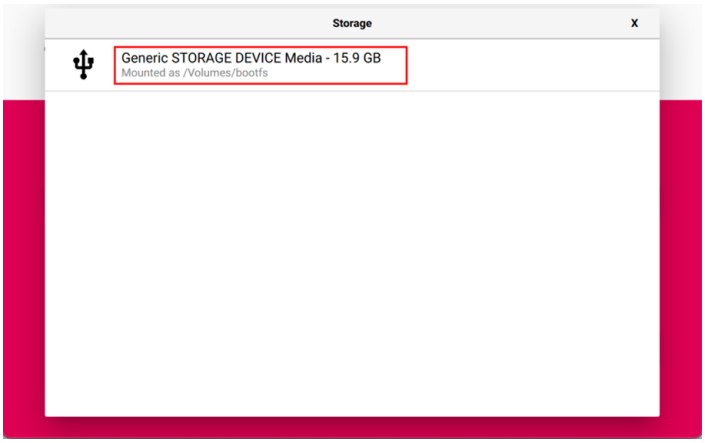
4. After the disk symbolization is complete, close the `rpi-mass-storage-gadget64.bat tool` and the disk symbol will pop up in the lower right corner of the computer.
5. Open `SD Card Formatter`, select the formatted drive letter, and click "Format" at the lower right to format.



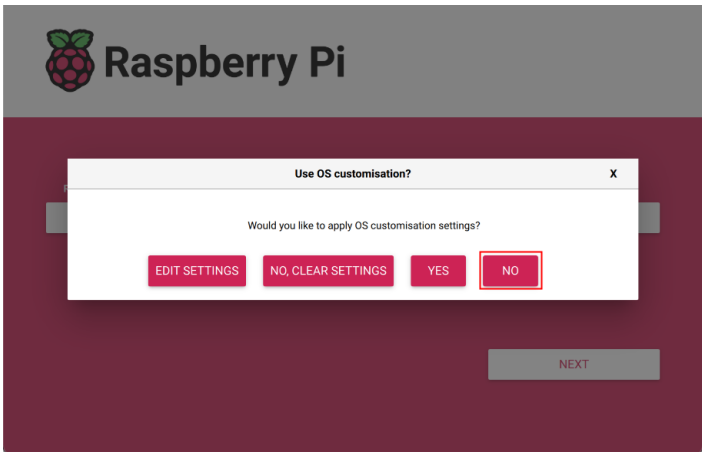
6. In the pop-up prompt box, select "Yes".
7. When the formatting is completed, click "OK" in the prompt box.
8. Close `SD Card Formatter` .
9. Open `Raspberry Pi Imager` , select "CHOOSE OS" and select "Use Custom " in the pop-up pane.



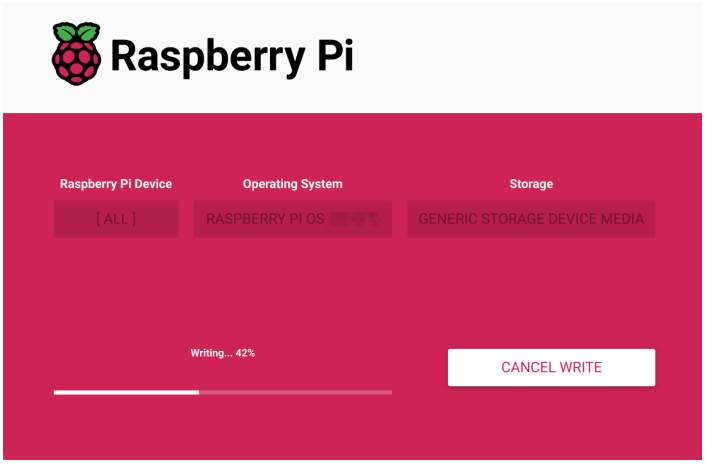
10. According to the prompt, select the OS file under the user-defined path and return to the main page.
11. Click "CHOOSE STORAGE", select the default device in the "Storage" interface, and return to the main page.



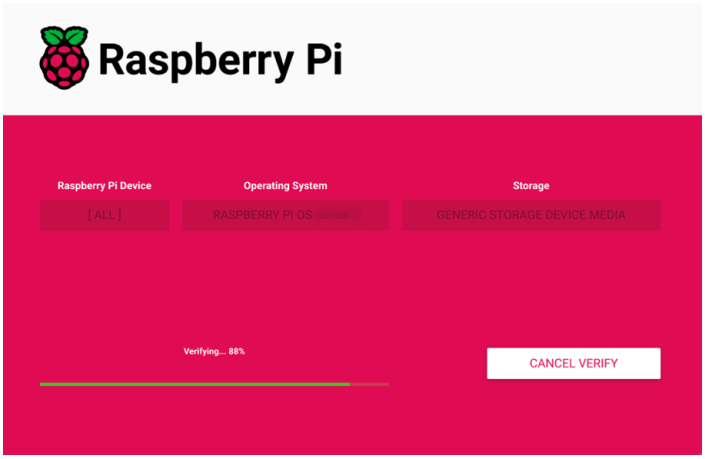
12. Click “NEXT”, select "NO " in the pop-up “Use OS customization?” pane.



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



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



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

6.3 Installing Firmware Package

After you have finished flashing to eMMC on ED-HMI3630-156C, 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.

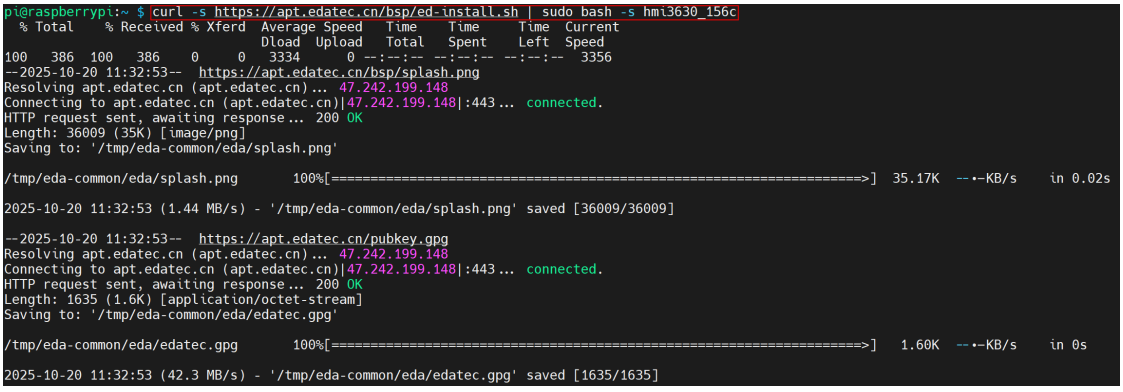
Preparation:

- The flashing to 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.

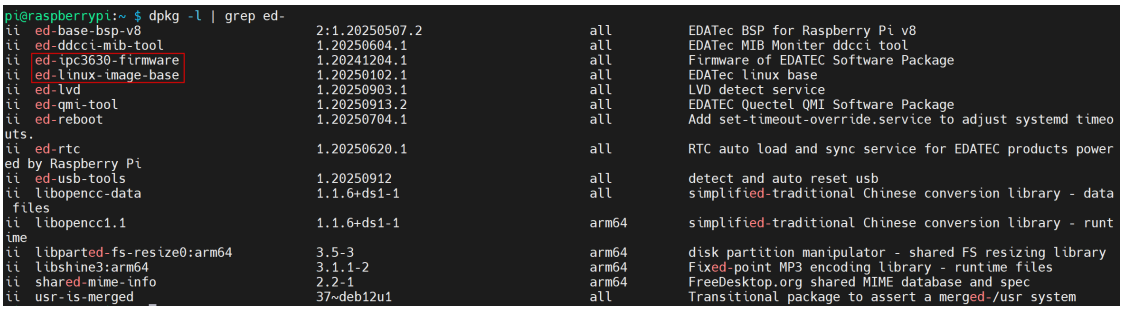
```sh
curl -s https://apt.edatec.cn/bsp/ed-install.sh | sudo bash -s hmi3630_156c
```



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.