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BVT13301 13.3-inch Picture Display

User Guide

Industrial Automation | New Energy Vehicle | Intelligent Elevator | Intelligent Robot | Digital Energy | Rail Transit

Data code PS00020594A01

Legal Information

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Due to continuous updates and improvements of products and technologies, the content of this documentation may not fully match the actual products. In the event of any discrepancies, the actual products shall prevail.

The contents are subject to change without notice due to product upgrade.

Waste Disposal

The storage, use, and disposal of this product (including optional accessories) must comply with local laws and regulations.

Qualified Personnel

The product/system described in this documentation may be operated only by personnel qualified for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel can identify the risks of the product/system and prevent possible dangers.

Proper Use of the Product

Proper transportation, storage, assembly, installation, commissioning, operation, and maintenance are required to ensure the safe operation of the product without any problems. The required ambient conditions must be met. All operations must follow the guidelines provided in this documentation.

Preface

Introduction

The product is a multimedia display (hereinafter referred to as “device”) used inside the elevator car, with primary functions designed for passenger convenience. Passengers can operate the elevator through this interface, such as selecting their destination floor, and can also control the door open/close. Additionally, it displays information related to the elevator operation status, including but not limited to the current floor number and the direction of travel. This guide describes the basic information, installation, commissioning, and troubleshooting of the product.

Revision History

Date of revision	Version	Description
March 2026	A01	• Added *"2.1 Notes for Use" on page 8*. • Updated *" Updating Device Multimedia Content" on page 20*.
October 2025	A00	First issue.

Access to the Guide

This guide is not in the scope of delivery. If necessary, you can obtain the PDF file in the following ways:

- Visit *https://www.inovance.com/global*, choose Service&Support > Support > Documentation Download.
- Scan the **QR code** on the product with your smartphone.
- Scan the QR code below to install the application **My Inovance**, where you can search for and download the guide.

Warranty Instructions

If your product becomes defective under normal use conditions, we will offer guaranteed repair services within the warranty period. Charges will be paid beyond the warranty listed in the purchase order.

The warranty does not cover any defect caused by:

- failure to operate the product in accordance with the user guide
- events beyond control, such as fire, flood and abnormal voltage

- function misuse
- out-of-range application
- other events of force majeure, including but not limited to lightning, earthquake and other extreme weather events

The maintenance fee is charged according to the latest Price List of Inovance. If otherwise agreed upon, the agreed terms and conditions shall prevail.

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1 General Safety Rules

1.1 Safety Instructions

Safety Disclaimer

- To ensure the safety of humans and equipment, follow the signs on the product and all the safety instructions in this guide.
- To ensure the safety of humans and equipment, follow the signs on the product and all the safety instructions in this guide.
- The "CAUTION", "WARNING", and "DANGER" are only supplements to the safety instructions.
- Use this product according to the designated environmental requirements. Functional abnormalities or component damages caused by improper usage are not covered by warranty.
- Inovance shall take no responsibility for any personal injuries or property damage caused by improper usage.

Safety Levels and Definitions



Indicates that failure to comply with the notice will result in severe personal injuries or even death.



Indicates that failure to comply with the notice may result in severe personal injuries or even death.



Indicates that failure to comply with the notice may result in minor or moderate personal injuries or damage. Keep the guide properly for future reference and deliver it to the end user.

Wiring

DANGER

- Ensure that all power sources are disconnected before performing installation and wiring operations; avoid working on live circuits or plugging/unplugging cables to prevent electric shock or circuit damage.
- Connect the wiring for the DC power supply to the dedicated terminals as described in the guide.
- When drilling screw holes and wiring, ensure no metal shavings or wire clippings fall into the product to avoid malfunction, electronic component damage, or fire.
- After completing the wiring, carefully check to ensure the operating voltage and terminal positions are correct to avoid fire or accidents.

CAUTION

- To avoid electric shock, disconnect the power source before connecting the power to this product.
- The rated input power supply for this product is 24 VDC (allowable fluctuation range: 18 VDC to 36 VDC). If the input voltage is outside this range, severe damage to this product may occur. Therefore, please regularly check whether the DC power provided by the switched-mode power supply is stable.

Operation and Maintenance

CAUTION

- During use, take care to protect the panel; perform touch operations with your hand instead of tools to avoid damage. Users are responsible for any damage caused by excessive force exerted.
- Lithium batteries, device screens, capacitors, and other components may contain substances harmful to health and the environment. Treat the product as industrial waste.

Battery Use

WARNING

- Avoid replacing the battery with an incorrect type.
- Do not dispose of the battery in fire or heat sources, do not mechanically crush or cut batteries.
- Do not expose the battery to extreme temperatures.
- Do not swallow the battery as it poses a chemical burn hazard.
- This product contains a button battery. If swallowed accidentally, it can cause severe internal burns within 2 hours and may lead to death.

CAUTION

- Keep new and used batteries away from children.
- If the battery compartment is not securely closed, stop using the product and keep it away from children.
- Seek immediate medical attention if you suspect battery ingestion occurs.

Disposal
CAUTION • Dispose of the product according to industrial waste regulations; when disposing of batteries, follow local ordinances separately.

1.2 Industrial Information Security

The product provides an interface to connect to the network and transmit data through the network interface. To protect factories, systems, machines, and networks from cyber attacks, a proper industrial information security protection mechanism must be implemented to ensure safe operation of factories, systems, machines, and networks.

The customer is responsible for providing and continuously ensuring a secure connection between the product and the customer network or any other network to prevent unauthorized access to its factories, systems, machines, and networks. The system and device can be connected to the corporate network or Internet only when they are connected securely with appropriate security measures taken (for example, anti-virus software and firewall installation).

Inovance is committed to continuous development and improvement of the products and solutions to improve the level of safety. It is strongly recommended to update the product promptly and always use the latest version.

CAUTION

Tampering with software (such as viruses, Trojans, and Worms) can lead to unsafe drivestate, which can put the device in an unsafe operation state. This may result in death,serious injury, and property damage. Observe the following strictly.

- Always use the latest software version. If the product version is no longersupported or the latest version of the program is not applied, customers are atincreased risk of cyber-attacks.
- Take proper protection measures (including but not limited to deploying antivirussoftware, firewall, WAF, IPS/IDS, situational awareness system, IDverification, and data encryption) to prevent files in the mobile storage devicefrom being damaged by malware and protect products, networks, systems, andinterfaces from unauthorized access, disturbance, intrusion, data disclosure, orinformation theft.
- Check all safety-related interfaces and settings after commissioning.

2 Product Information

2.1 Notes for Use

- Compatible with Inovance elevator control system
- Compatible with CTB version: V0300 or later
- Controller parameter settings required: F8-15 bit 4 = 1
- The matching cable from the car top box MCTC-CTW-A3 to the operating panel needs to be purchased. One end of the cable connects to the car top box, and the other end connects to this device. The cable length specification is determined according to actual project requirements:

Code	Model	Note	Illustration
15041941	MCTC-CTW-A3 - Car top box to operating panel matching cable - 3 m	Length: 3 m	
15041942	MCTC-CTW-A3 - Car top box to operating panel matching cable - 7 m	Length: 7 m	

2.2 Technical Specifications

Param.	Description
Screen size	13.3-inch
Resolution	1920 px x 1080 px
Product view directions	θL-θR-θT-θB
	89-89-89-89
LCD brightness	400 cd/m^2
Display area	165.2 mm (W) x 293.8 mm (H)
LCD type	EDP
Power supply voltage	18 VDC to 36 VDC
Rated/Maximum power consumption	11 W/13 W
Rated/Maximum current (24 V)	450 mA/540 mA
Operating environment	• Temperature: -20°C to +70°C • Humidity: 10% RH to 90% RH
Storage environment	• Temperature: -30°C to +80°C • Humidity: 10% RH to 90% RH

2.3 Product Dimensions

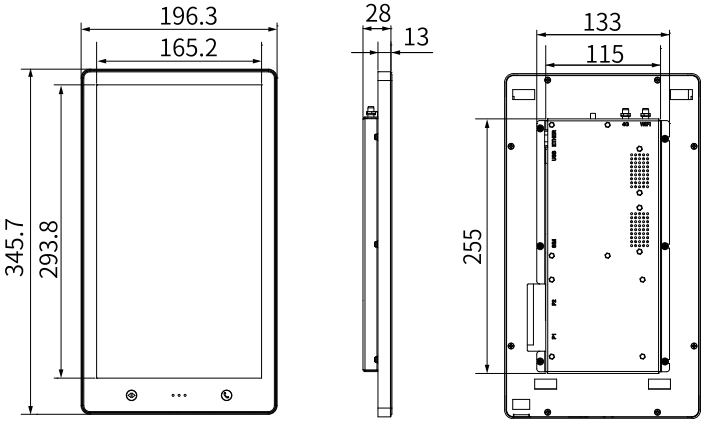


Figure 2-1 Product dimensions (unit: mm)

2.4 System Connection

Note

The figure is only for illustration. See the actual product for specifics.

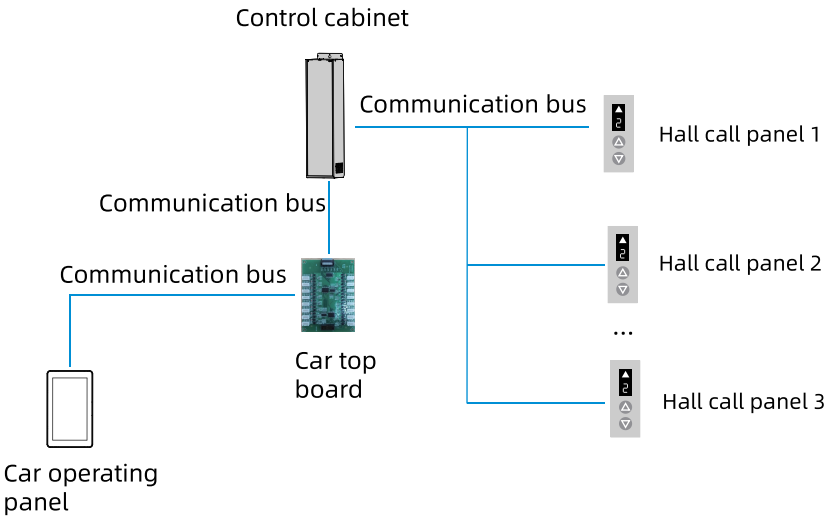


Figure 2-2 System Connection

3 Unpacking and Handling

Upon unpacking, check:

No.	Item	Description	Tick
1	Whether the product model is consistent with your order.	Check the model and specifications of the device for consistency with the order.	□
2	Whether the product is damaged.	Check whether the product enclosure is damaged during transportation. If there is any part missing or damaged, contact Inovance or your supplier immediately.	□

4 Preparations Before Installation

4.1 Installation Personnel Requirements

- Installation must be performed by only experienced personnel who have been trained with necessary electrical information.
- Read and comply with the safety information provided this manual.

CAUTION

Inovance is not responsible for equipment damage and casualties due to failure to comply with the safety instructions or operation by unqualified personnel.

4.2 Installation Environment Requirements

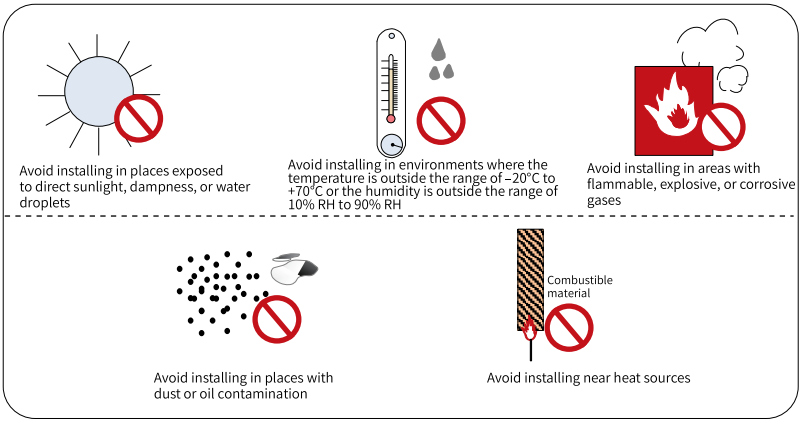


Figure 4-1 Installation environment requirements

4.3 Installation Tools Requirements

Please check the installation tools listed in the following table before installation. Tools not included with the scope of delivery must be provided by the customer.

Table 4–1 Installation tools

Tool	Description
Glove	Prevents static electricity during mechanical installation.
M3 x 10 countersunk screws (6 PCS)	Fix the product to the mounting surface.
M3 flange nuts (6 PCS)	
M3 Phillips screwdriver	Tightens the screws.
5.5 mm open-end wrench or socket wrench	

5 Installation Guidelines

5.1 Port Layout and Description

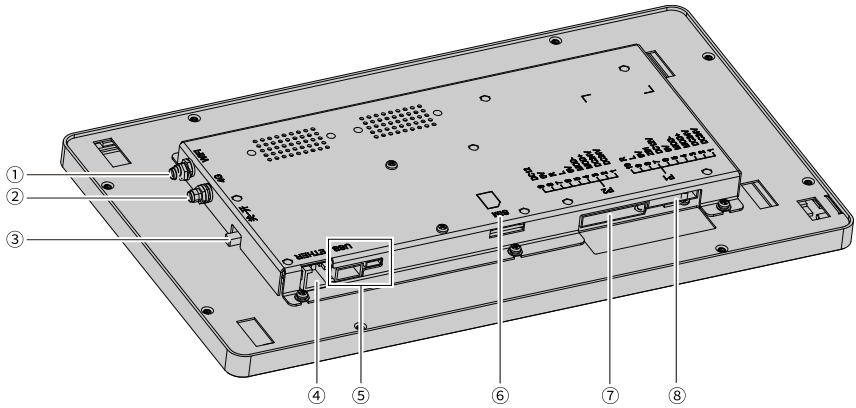


Figure 5-1 Port layout

Table 5–1 Port description

No.	Port and pin (from left to right)			Description
①	Wi-Fi			Connects to the external Wi-Fi antenna to ensure Wi-Fi signal strength
②	4G			Connects to the external 4G antenna to ensure signal strength for 4G calls
③	Switch			MCB power switch
④	ETHER			Network port, supporting 10 Mbps or 100 Mbps Ethernet connection
⑤	USB			Type A port: used for updating device resources
				Micro USB port: used for device commissioning
⑥	SIM			SIM card slot. Supports 4G mini SIM cards from China Mobile, China Unicom, or China Telecom, and ensure that VoLTE (HD voice calling) service is activated
⑦	P2	1	DC24V	Positive power pole, used only for powering the device
		2	DC24V	
		3	MOD+	RS485 A signal
		4	MOD-	RS485 B signal
		5	0V	Negative power pole, must be connected when powering the device
		6	L	Intercom signal adapter (Note: This product does not support analog intercom function.)
		7	R	
		8	0V	Negative power pole, must be connected when powering the device
		9	DC12V	Intercom power output

No.	Port and pin (from left to right)			Description
⑧	P1	1	DC24V	Positive power pole, used only for powering the device
		2	DC24V	
		3	MOD+	RS485 A signal
		4	MOD-	RS485 B signal
		5	0V	Negative power pole, must be connected when powering the device
		6	DC12V	Intercom power input. The negative power pole can be connected to the port 5 or port 8.
		7	Z01	Emergency power (12 V) input. The negative power pole can be connected to the port 5 or port 8.
		8	0V	Negative power pole, must be connected when powering the device
		9	L	Intercom signal adapter (Note: This product does not support analog intercom function.)
		10	R	

5.2 Installation Procedure

1. Cut out a square area on the car wall panel, then make holes.

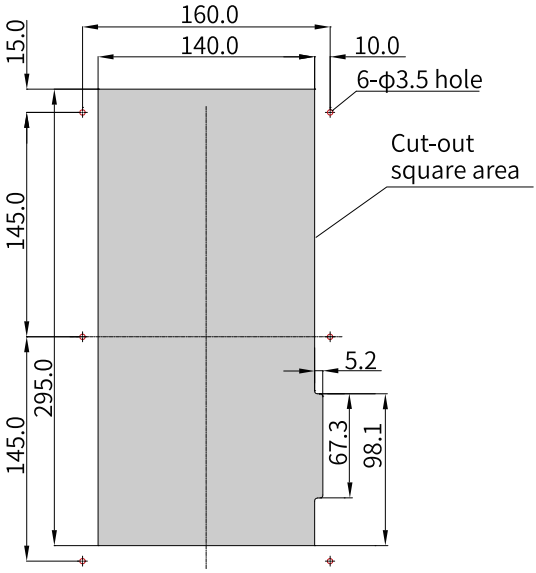


Figure 5-2 Hole dimensions (unit: mm)

2. Secure the mounting bracket to the car wall panel.

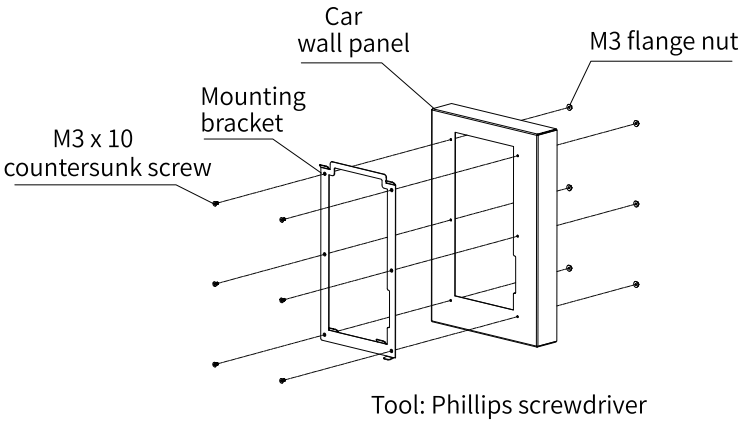


Figure 5-3 Securing the bracket

3. Connect the cables.

- Antenna: Secure the 4G antenna and Wi-Fi antenna separately to the device's 4G and Wi-Fi antenna ports.
- Other cables: Connect communication cables, power cables, and other required cables. For details, see *"5.1 Port Layout and Description" on page 13*.

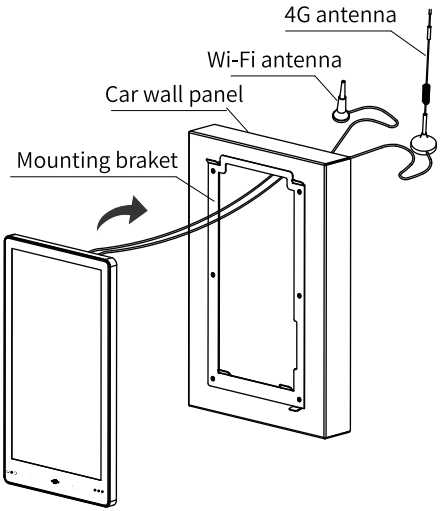


Figure 5-4 Connecting the cables

4. Secure the device.

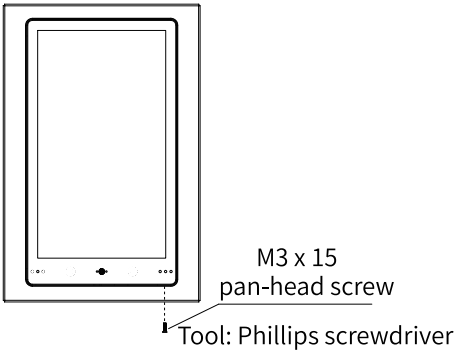


Figure 5-5 Securing the device.

6 Commissioning and Operation

This chapter introduces basic commissioning procedure for the device. By following the instructions, you can perform basic commissioning to ensure that its basic functions can be used normally.

6.1 Inspection Before Commissioning

The operator is responsible for performing checks including but not limited to those listed in the following table in accordance with the recognized technical rules in the country of installation and with applicable regional guidelines. Tick after each check of the item.

No.	Item	Tick
1	Ensure that the power input terminals are securely connected with no loose or poor connections.	□
2	Before powering on the device, ensure that the power port wiring sequence is correct and that the voltage meets the standard 24 VDC (allowable range: 18 VDC to 36 VDC).	□

6.2 Function Commissioning

Swipe left on the main interface to enter the menu settings.

Table 6–1 Function Commissioning

Function		Description
Level I menu	Level II menu	
Fan	-	Controls the cooling fan on/off in the car.
Lighting	-	Control the car lighting on/off in the car.

<table>
<tr><th colspan="2">Function</th><th rowspan="2">Description</th></tr>
<tr><th>Level I menu</th><th>Level II menu</th></tr>
<tr><td rowspan="9">Elevator management
Note: For maintenance personnel only. The default password is "10101".</td><td>Passenger capacity</td><td>The maximum number of passengers allowed in the elevator. Click the value to modify it.</td></tr>
<tr><td>Load</td><td>The maximum allowable load capacity of the elevator. Click the value to modify it.</td></tr>
<tr><td>Open/close button display</td><td>Sets whether the door open/close buttons are displayed on the main interface.</td></tr>
<tr><td>Door open holding</td><td>Elevator delayed door close.
Sets whether the door open holding button is displayed on the main interface.</td></tr>
<tr><td>Auto demonstration</td><td>Simulates elevator operation (animations, floor displays, and so on) in non-actual running state, often used for equipment demonstration and functional tests.</td></tr>
<tr><td>Weather display</td><td>Sets whether weather conditions are displayed on the main interface.</td></tr>
<tr><td>Installation position</td><td>Select the "Front door" or "Rear door" based on the device installation position.</td></tr>
<tr><td>Announcement selection</td><td>• Mute: No sound prompt when the elevator arrives at a floor.
• Chime: "Ding-dong" prompt when the elevator arrives at a floor.
• Voice: Plays "Floor X arrived" and elevator status (such as overload and fault.) within the set announcement time. Supports Chinese female voice or English female voice announcement.</td></tr>
<tr><td>Floor settings</td><td>Number of Floors: Input the current number of floors supported by the elevator, ranging from 2 to 6.
Mapped floors: Sets floor mapping names. Names consist of digits (0 to 9) or letters (A to Z), with a maximum of 2 characters.

Note
The number of floors must be consistent with F6-01 and F6-00 of the control cabinet; mapped floors must be consistent with the group FE. Otherwise, display errors will occur. For detailed information, see the related elevator control cabinet user guide.</td></tr>
</table>

Function		Description
Level I menu	Level II menu	
Device management	Media volume	Video playback volume.
	Screen brightness	Brightness when the screen is operating normally.
	Contact	Used to call for emergency rescue. Up to 4 emergency contact numbers can be set After pressing the emergency call button, you can select an emergency contact to call. If no one answers, the contact list will be automatically cycled through until the call is connected.
	Device status	Displays device information and network status.
	App permissions	Displays the QR code of the device ID, mainly used for logging into the elevator IoT platform by scanning the code.
	System properties	Sets time and location. When **"Network Time"** is enabled, the device will automatically synchronize and calibrate the time when the network is connected. Date and time can also be set manually.
	Restart	Restarts the device.

7 Updating Device Multimedia Content

Use a USB drive to replace the videos or images in the multimedia area of the device, or the logo in the upper left corner of the interface. The recommended size of the USB drive is smaller than 32 GB and the format is FAT32.

Note

Some low-cost USB drives use processing chips of unknown brands, which may lead to upgrade failures. It is recommended to use USB drives from well-known brands, such as Kingstone and SanDisk.

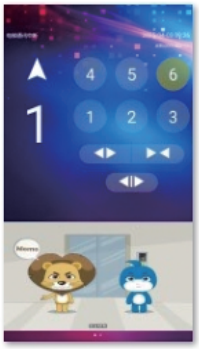
Updating Image or Video

1. Prepare the USB drive in advance and insert the USB drive into the computer.
2. Create the file path **"InoUpdate>udiskUpdate"** in the root directory of the USB drive.
3. Prepare new image or video according to the requirements.

Note

- The video format is mp4 or avi. Video resolution should be 1280 x 720 or lower, frame rate should be under 30 fps, video encoding format should be MPEG-4 or h.264, and video file size is recommended to be no more than 300 MB.
- The image format is jpg or png, with a resolution of lower than 1280 x 720.
- The video or image file names must consist of English characters or Arabic numerals, with the name length of less than 16 characters.

4. Open the **"udiskUpdate"** folder and place the new image or video inside the folder.
5. **(Optional) Switch to without-video interface:**
   If the **"udiskUpdate"** folder is empty (the video files in the device are deleted), the device will switch to the without-video interface.
6. Eject the USB drive from the computer and insert it into the device's USB port. Wait for the update process to complete, then remove the USB drive
7. Manually restart the device and check the display effect.



With-video interface



Without-video interface

Figure 7-1 Checking the display effect

Note

- If the image is displayed in the wrong orientation, check whether the image needs to be rotated.
- If the image fails to be displayed, check whether the image filename and format are correct.
- If the video cannot be played, check for correct file name and format.

Updating Logo

1. Prepare the USB drive in advance and insert the USB drive into the computer.
2. Create the file path **"InoUpdate>logo"** in the root directory of the USB drive.
3. Prepare new image according to the requirements.

Note

- The logo format jpg or png, with a resolution of 300 x 140.
- The logo file name must consist of English characters or Arabic numerals, with the name length of less than 16 characters.

4. Open the **"logo"** folder and place the new image inside the folder.
5. Eject the USB drive from the computer and insert it into the device's USB port. Wait for the update process to complete, then remove the USB drive
6. Manually restart the device and check the display effect.

Note

- If the image is displayed in the wrong orientation, check whether the image needs to be rotated.
- If the image fails to be displayed, check whether the image filename and format are correct.

8 Software Upgrade

The recommended size of the USB drive is smaller than 32 GB and the format is FAT32.

Note

Some low-cost USB drives use processing chips of unknown brands, which may lead to upgrade failures. It is recommended to use USB drives from well-known brands, such as Kingstone and SanDisk.

1. Prepare the USB drive in advance and insert the USB drive into the computer.
2. Create the **"InoApkUpdate"** folder on the USB drive, and place the new **"apk"** inside this folder.

Note

The following figure is for reference only. Please see the actual product.

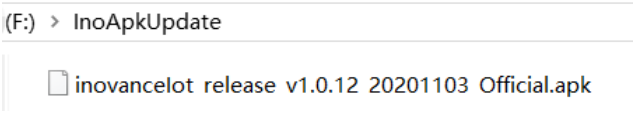


Figure 8-1 Software Update

3. Remove the USB drive from the computer, then insert it into the device's USB port. The upgrade process will automatically start.

9 Log Export

Export logs during troubleshooting to facilitate fault analysis. The recommended size of the USB drive is smaller than 32 GB and the format is FAT32.

Note

Some low-cost USB drives use processing chips of unknown brands, which may lead to upgrade failures. It is recommended to use USB drives from well-known brands, such as Kingstone and SanDisk.

1. Insert the USB drive into a computer and manually create the **"InoCopyLog"** folder in the root directory of the USB drive.
2. Remove the USB drive from the computer, then insert the USB drive into the USB port of the device. The device will automatically export logs to the USB drive after recognizing the USB drive.
   After the export is complete, the device will display the message **"Log copy completed"**.

10 Maintenance

10.1 Daily Maintenance Items

- Do not expose this product to rain or place it near water. If water stains appear on the surface, which can cause touch distortion, wipe it dry with a dry cloth or paper towel before resuming normal use.
- Do not install the product in unstable positions, such as on wobbling mounting brackets or on inclined surfaces.
- Do not drop the product or subject it to shocks.
- The touch surface of this product requires regular cleaning to ensure it remains clean and tidy.
- Do not hit the surface with force.
- Do not pry or force the edges of the frame open.

10.2 Daily Inspection and Cleaning Items

The operator is responsible for performing checks including but not limited to those listed in the following table in accordance with the recognized technical rules in the country of installation and with applicable regional guidelines. Tick after each check of the item.

Table 10–1 Daily inspection items

No.	Item	Tick
1	Ensure that the installation environment does not change.	☐
2	The device has normal operation and display.	☐
3	The wiring does not come loose.	☐
4	The screws on the external frame are secure.	☐

Table 10–2 Daily Cleaning Items

No.	Item	Tick
1	Clean dust and moist off the device surface periodically.	☐

11 Common Fault Troubleshooting

Table 11–1 Common fault troubleshooting

Name	Cause	Diagnosis	Troubleshooting
Unable to make phone calls	SIM card inserted incorrectly	Swipe left to enter the menu page, tap "Device Status" to check the network type and network status. If "No Network" and "No Signal" are displayed respectively, check whether the SIM card is installed correctly.	Ensure the smart screen is powered off before insertion. Insert the SIM card with the notched end facing outward and the chip side facing down, and push it firmly into place.
	4G module fault	1. Remove the back panel of the smart screen and check whether the 4G module has become detached. 2. Remove the back panel of the smart screen and confirm that no 4G module is present.	1. If the 4G module becomes loose or detached, reinstall and secure it. 2. This smart screen is a version without a 4G module.
	4G antenna loose or detached	Check the installation of the antenna at the top of the smart screen.	If the 4G module becomes loose or detached, reinstall and secure it.
Logo cannot be updated	A logo exceeding the specified size cannot be updated.	Check whether the logo resolution exceeds 300 x 140.	Change the logo resolution to be within specifications, then update the logo again.
Device enters system page instead of elevator call page after startup	Background image resolution exceeds specifications.	Check whether the logo resolution exceeds 1920 x 1080.	Follow the image update steps to create a new directory on the USB drive, do not place any image files in the directory, then update again.
Wi-Fi connection failure	Wi-Fi has two frequency bands: 2.4 GHz and 5 GHz. This device only supports 2.4 GHz and does not support dual-band integration.	Check the router frequency band settings.	Disable dual-band integration on the router and set a separate name for the router 2.4 GHz band.

12 Service and Support

Should you encounter a safety accident during the use or operation of the product, or face challenges in operating and maintaining the equipment, which remain unresolved after the relevant documentation is consulted, we provide multiple channels to ensure prompt resolution:

- Channel #1: Contact service@inovance.com.
- Channel #2: Visit https://www.inovance.com/global to access document downloads, after-sales support, spare parts ordering, repair applications, and authenticity verification services.
- Channel #3: Download My Inovance app (https://zshc-eu.inovance.com/download-pc/) where you can access products info and documentation, and query product parameters.

We are committed to providing you with quick and professional technical support, and we look forward to your satisfaction and trust.

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