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MCTC-HCB-T647/S Multimedia Display (Parallel Port)

User Guide

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

Data code PS00022004A00

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	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 Fundamental Safety Instructions

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



- 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.



- 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



- 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



- 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.



- 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
 • 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 interfaces for network connection and data transmission. To protect factories, systems, machines, and networks from cyberattacks, it is essential to implement proper protection mechanism for industrial security.

Customers are responsible for providing and maintaining a secure connection between the product and their network or any other network to protect their factories, systems, machines, and networks from unauthorized access. Such systems or machines can be connected to an enterprise network or the Internet only when a secure connection is established and appropriate security measures (such as using antivirus software or installing firewalls) are in place.

Inovance continuously develops and improves its products and solutions to enhance safety. It is strongly recommended that you update the product promptly and always use the latest version.



Tampering with software (such as viruses, Trojans, and Worms) can lead to unsafe drive state, 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 longer supported or the latest version of the program is not applied, customers are at increased risk of cyber-attacks.
- Take proper protection measures (including but not limited to deploying antivirus software, firewall, WAF, IPS/IDS, situational awareness system, ID verification, and data encryption) to prevent files in the mobile storage device from being damaged by malware and protect products, networks, systems, and interfaces from unauthorized access, disturbance, intrusion, data disclosure, or information theft.
- Check all safety-related interfaces and settings after commissioning.

2 Product Information

2.1 Technical Specifications

Param.	Description
Screen size	7 inches
Resolution	800 px x 480 px
Product view directions	θL-θR-θT-θB
	70-70-70-50
LCD brightness	320 cd/m^2
Display area	154.7 mm (W) x 86.5 mm (H)
LCD type	RGB
Power supply voltage	18 VDC to 36 VDC
Rated/Maximum power consumption	5 W/6 W
Rated/Maximum current (24 V)	200 mA/250 mA
Nominal capacity	• Drive 1: 10 MB • Drive 2: 128 MB
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

2.2 Product Dimensions

The devices come in surface mounting and embedded mounting types, with slightly different appearances (refer to the actual product), but have consistent dimensions. The following dimensions are for the embedded mounting type as an example.

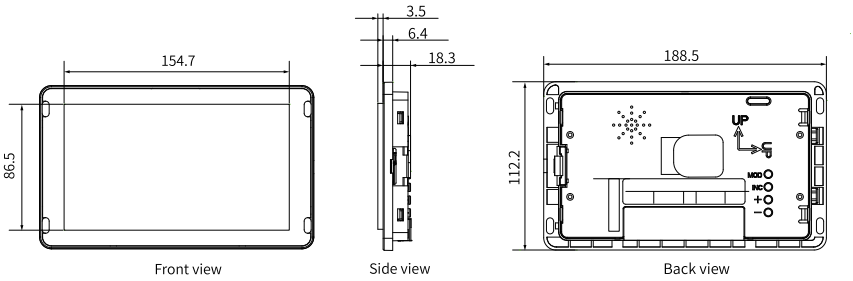


Figure 2-1 Product dimensions (unit: mm)

2.3 Appearance

The devices come in surface mounting and embedded mounting types, with slightly different appearances (refer to the actual product). The following part takes the embedded mounting type as an example.



Landscape Portrait

Figure 2-2 Product appearance

2.4 System Connection

Note

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

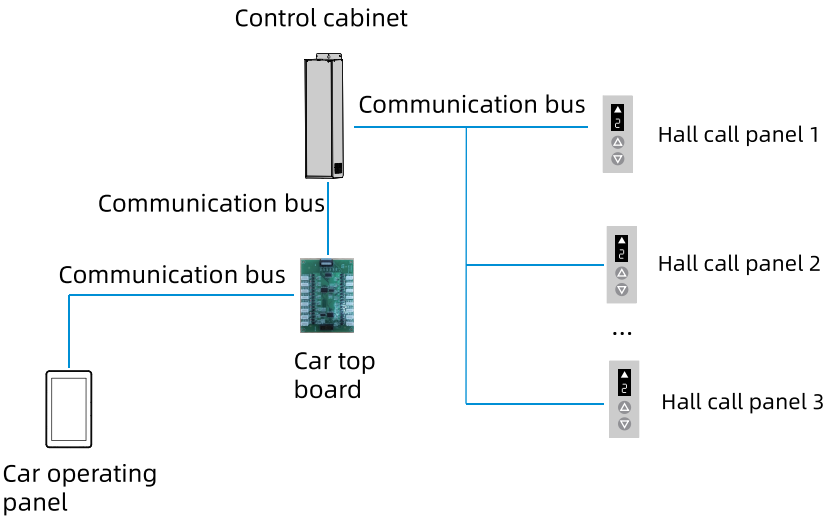


Figure 2-3 System Connection

3 Preparation Before Installation

3.1 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.

3.2 Installation Environment Requirements

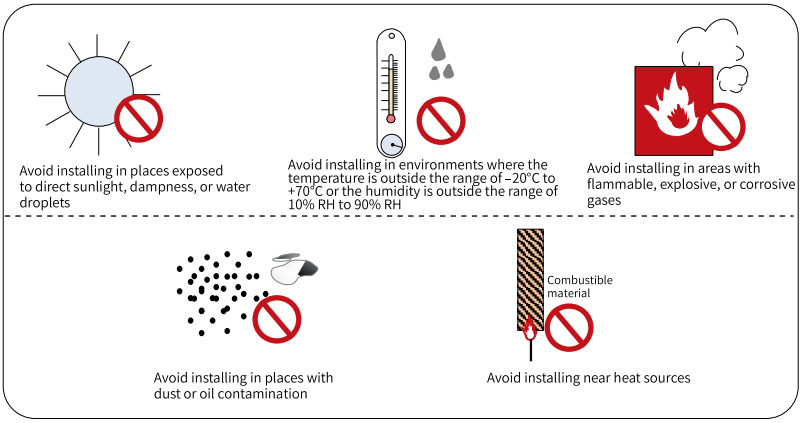


Figure 3-1 Installation Environment Requirements

3.3 Installation Tools

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 3–1 Installation tools

Tool	Description
Glove	Prevents static electricity during mechanical installation.
M3 x 15 weld screw (4 PCS)	Fix the product to the mounting surface.
Four M3 flange nuts	
M3 Phillips screwdriver	Tightens the screws.
5.5 mm open-end wrench or socket wrench	

4 Unpacking, Storage, 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.	□

5 Installation Guide

5.1 Port Layout and Description

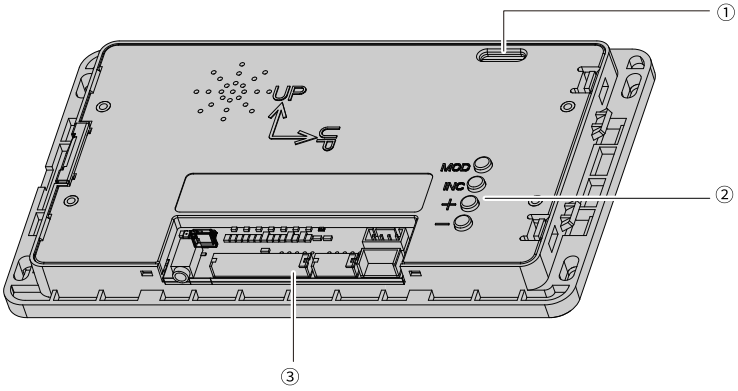


Figure 5-1 Port layout

Table 5–1 Port description

No.	Port	Description
①	Programming port	Performs programming or update on the deviceprograms.
②	Modbus	• Enters the setup menu interface • Enters the next-level menu • Enters the menu editing mode
	INC	• Exits the setup menu interface • Returns to the previous-level menu • Exits the menu editing mode
	+	• Moves up through menu items • Increases the value of a menu item (holding down increases speed)
	-	• Moves down through menu items • Decreases the value of a menu item (holding down increases speed)
③	Micro USB	Updates device resources.
	J1	Parallel port communication. A, b, c, d, E, F, G, H, 2A, 2B, 2C, 2D, 2E, 2F, 2G
	J3	Power supply connection. I, H, DN, UP, GND, 24V
	RS232	RS232 serial communication. 24V, TX, RX, GND

5.2 Installation Procedure

The devices come in surface mounting and embedded mounting types.

5.2.1 Embedded Mounting

1. Cut out a square area on the car wall panel and install weld screws according to the hole positions.

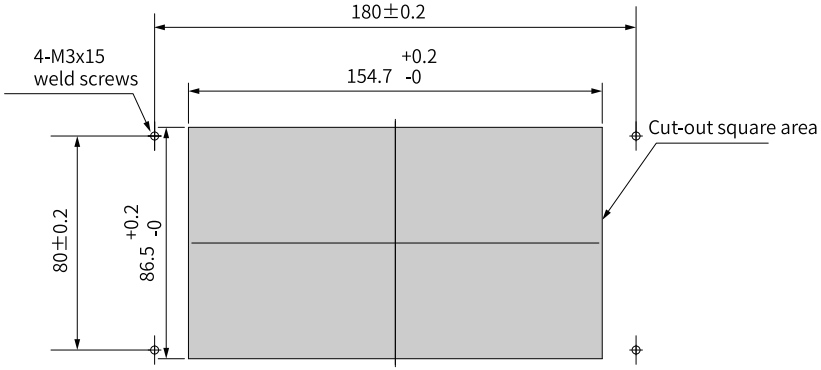


Figure 5-2 Hole dimensions (unit: mm)

2. Secure the device to the panel with four M3 flange nuts.

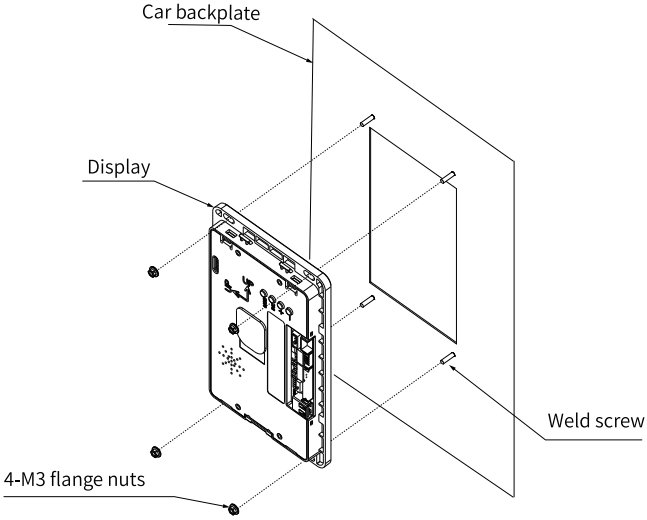


Figure 5-3 Securing the device to the car wall panel

3. Check the installation effect.

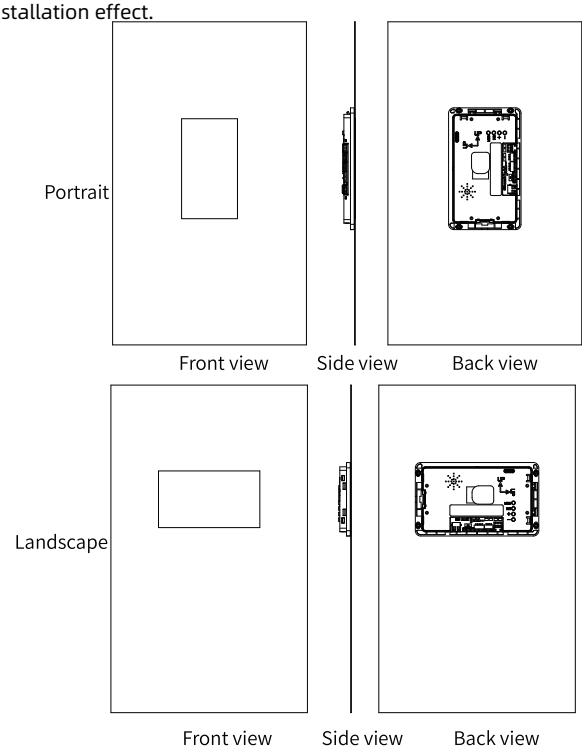
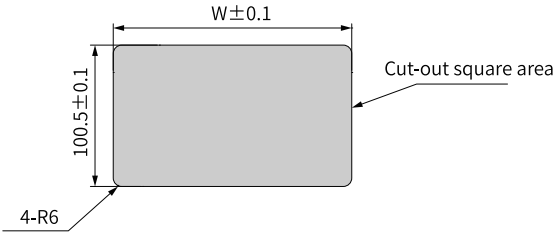


Figure 5-4 Checking the installation effect

5.2.2 Surface Mounting

1. Cut out an area on the car wall panel according to the product dimensions.



No.	Sheet metal thickness (mm)	W size (mm)
1	1.0	168.8
2	1.5	169.4
3	2.0	170

Figure 5-5 Hole dimensions

2. Mount the snap-fit joint first, then fix the bottom circlip to the car wall panel.

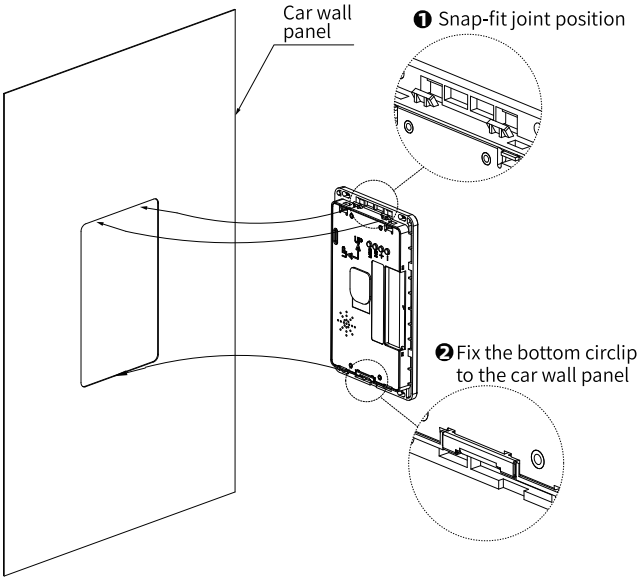


Figure 5-6 Securing the device to the car wall panel

3. Check the installation effect.

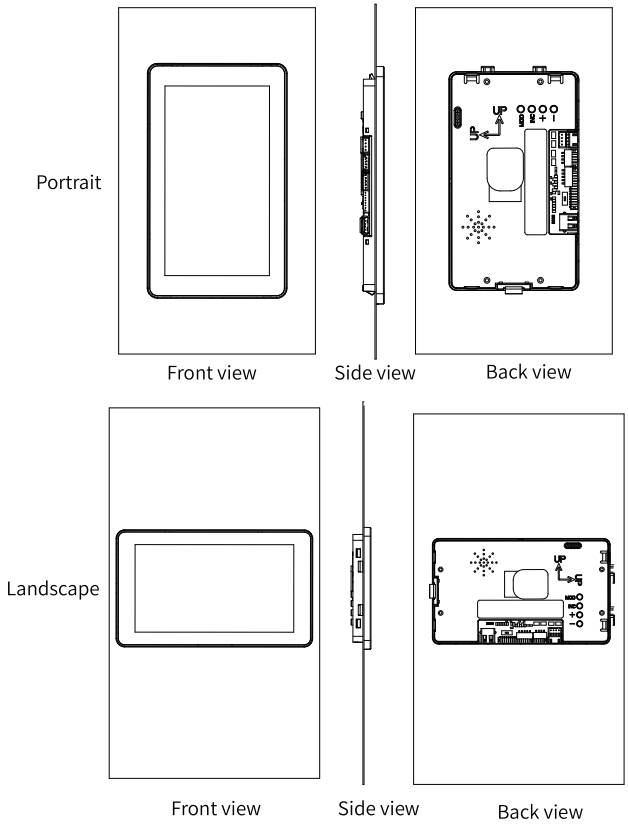


Figure 5-7 Checking the installation effect

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). If the measured value exceeds this range, disconnect the power supply immediately	□

6.2 Function Commissioning

The backplate has four physical keys, mainly used for menu selection and parameter setting.

Table 6–1 Keys description

Key	Function
Modbus	• Enters the setup menu interface • Enters the next-level menu • Enters the menu editing mode
INC	• Exits the setup menu interface • Returns to the previous-level menu • Exits the menu editing mode
+	• Moves up through menu items • Increases the value of a menu item (holding down increases speed)
-	• Moves down through menu items • Decreases the value of a menu item (holding down increases speed)

Table 6–2 Function Commissioning

<table>
<tr><th>Function</th><th>Description</th></tr>
<tr><td>Auto demo</td><td>• 0: Exits from auto demo mode and displays the current status of the elevator.
• 1: Enters the auto demo mode, with floors displayed cyclically without receiving elevator data.</td></tr>
<tr><td>Floor address setting</td><td>Reserved.</td></tr>
<tr><td>Floor minimum</td><td>The lowest floor in auto demo mode with a minimum value of 1.</td></tr>
<tr><td>Floor maximum</td><td>The highest floor in auto demo mode with a maximum value of 99.</td></tr>
<tr><td>Rotation</td><td>After rotation, the interface flips automatically, and the device does not need to be restarted.
• 0: Not rotating.
• 1: Rotating 90 degrees.</td></tr>
<tr><td>Theme</td><td>Two built-in themes are offered by default. If you need other themes, contact Inovance for customization.
• 0: Theme 1.
• 1: Theme 2.</td></tr>
<tr><td>Language</td><td>English and Chinese are offered by default. If you need other languages, contact Inovance for customization.
• 0: Chinese.
• 1: English.</td></tr>
<tr><td>Capacity</td><td>• 0: The number of persons is not displayed on the interface.
• Others: The load capacity and number of persons required by national standards are as follows:
Table 6–3 Load setting
<table>
<tr><th>Param.</th><th>Load</th><th>Person(s)</th><th>Param.</th><th>Load</th><th>Person(s)</th></tr>
<tr><td>1</td><td>100</td><td>1</td><td>15</td><td>900</td><td>12</td></tr>
<tr><td>2</td><td>180</td><td>2</td><td>16</td><td>975</td><td>13</td></tr>
<tr><td>3</td><td>225</td><td>3</td><td>17</td><td>1000</td><td>13</td></tr>
<tr><td>4</td><td>300</td><td>4</td><td>18</td><td>1050</td><td>14</td></tr>
<tr><td>5</td><td>375</td><td>5</td><td>19</td><td>1125</td><td>15</td></tr>
<tr><td>6</td><td>400</td><td>5</td><td>20</td><td>1200</td><td>16</td></tr>
<tr><td>7</td><td>450</td><td>6</td><td>21</td><td>1250</td><td>16</td></tr>
<tr><td>8</td><td>525</td><td>7</td><td>22</td><td>1275</td><td>17</td></tr>
<tr><td>9</td><td>600</td><td>8</td><td>23</td><td>1350</td><td>18</td></tr>
<tr><td>10</td><td>630</td><td>8</td><td>24</td><td>1425</td><td>19</td></tr>
<tr><td>11</td><td>675</td><td>9</td><td>25</td><td>1500</td><td>20</td></tr>
<tr><td>12</td><td>750</td><td>10</td><td>26</td><td>1600</td><td>21</td></tr>
<tr><td>13</td><td>800</td><td>10</td><td>27</td><td>2000</td><td>26</td></tr>
<tr><td>14</td><td>825</td><td>11</td><td>28</td><td>2500</td><td>33</td></tr>
</table></td></tr>
<tr><td>Media enable</td><td>• 0: Does not play background music.
• 1: Loops a single background music file.</td></tr>
</table>

Function	Description
Customer logo	• 0: Does not display the logo. • 1: Displays the logo. If you need to change the logo, contact Inovance for customization
Min media index	Sets the minimum image number for the multimedia area, with a minimum value of 1.
Max media index	Sets the maximum image number for the multimedia area, with a maximum value of 10.
Arrow scrolling speed	Reserved.
Text	• 0: Does not display text. • 1: Displays text and the language switches with the setting.
Volume setting	Sets the volume level, ranging from 0 to 100.
Brightness setting	Sets the normal operating brightness of the screen, ranging from 10 to 100.
Standby brightness	When the device does not receive the elevator operation signal within the standby time, it automatically enters the standby mode. The brightness will drop to this value, ranging from 10 to 100.
Standby entry time	Sets the time (in minutes) after which the device will automatically enter the standby mode, ranging from 0 to 120 minutes. If set to 0, it indicates that the sleep mode will never be applied.
Date (Year) setting	Sets the time and date.
Level mode	To set the level mode, open the back cover of the device and use the DIP switch. **FunSW: Floor and function signal.** • H: Active high. • L: Active low. **ICSSW: Up/Down arrow signal.** • H: Active high. • L: Active low.

6.3 Floor Mapping

1. Prepare a Micro USB cable and a computer.



Figure 6-1 Micro USB cable

2. With the device powered off, use the USB cable to connect the device to a USB port on your computer.
3. After connecting, power on the device. Once the device has started up, it will display **"usb device is connecting…"**.
4. The computer will recognize two drives. Open the drive with the larger memory capacity.
5. Open the **"bstupdate"→"MCU"** folder on the drive, locate the **"Setfile.txt"** mapping file, and modify the floor mapping rules as required.

Note

- The format of floor mapping entry is **"FLOORMAP: Physical floor": "Floor mapping name, voice announcement file number, 0",**. All characters must be in English. Note that there is an English comma **","** at the end.

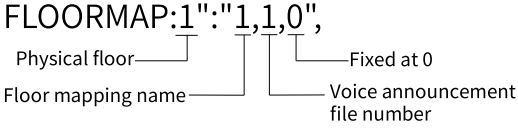


Figure 6-2 Floor mapping format (example)

- The range of physical floors is 1 to 56. The floor mapping name consists of numbers (0 to 9) or letters (A to Z), up to 3 characters long. The voice announcement file number ranges from 1 to 128.

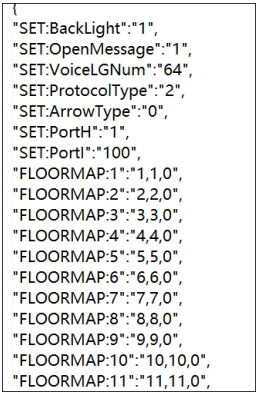


Figure 6-3 Floor mapping file

(Optional) Other configurable items in the mapping file:

- **"SET:ProtocolType": "Protocol type"**
  0 for binary; 1 for Gray code; 2 for seven-segment code.

- **"SET:ArrowType": "Arrow type"**
  0 for static; 1 for scrolling; 2 for Flashing.
- **"SET:PortH": "Pin H configuration"**
  100: Indicates this pin is used as the arrival signal input for voice announcements.
  Non-100: Indicates this pin triggers the display of the function status image corresponding to the ID number.
- **"SET:PortI": "Pin I configuration"**
  100: Indicates this pin is used as the arrival signal input for voice announcements.
  Non-100: Indicates this pin triggers the display of the function status image corresponding to the ID number.

6. When the device displays **"Update MCU successfully"**, the update is complete, and you may disconnect the USB cable.
7. Manually restart the device and check the floor mapping results.

7 Theme Replacement

Prepare a Micro USB cable and a computer.



Figure 7-1 Micro USB cable

1. Power off the device and connect it to the computer's USB port using the cable.
2. After connecting, power on the device. Once the device has started up, it will display **"usb device is connecting….."**
3. The computer will recognize two drives. Open the drive with the larger memory capacity.

7.1 Theme Background Image Change

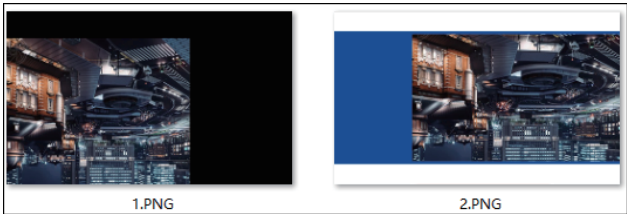
1. Create the new theme background image according to the requirements.

Note

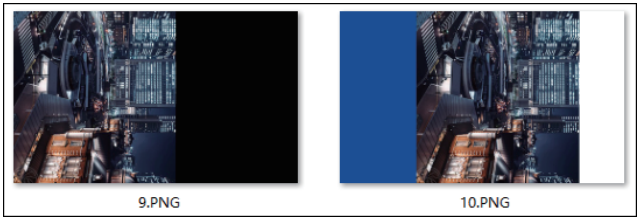
- The image must be in png format, with a resolution of 800 x 480 and 32-bit color depth.
- Ensure the new image matches the original one in **display orientation**, **name**, **and format**.
- You can check image information by right-clicking on the image file and selecting **"Properties>Details"**.

---

2. Open the **"TGUS_TF"** folder on the drive and replace the old image with the new one.



Landscape theme 1 background　　Landscape theme 2 background



Portrait theme 1 background　　Portrait theme 2 background

Figure 7-2 Theme background change

3. After the replacement is complete, eject the drive from the computer. When the device displays **"···finished···"**, the update is complete, and the USB cable can then be disconnected.
4. 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 and consistent with the image being replaced.

7.2 Ad Image, Logo or Welcome Message Change

1. Prepare new images according to the requirements.

Note

- Ensure you replace the images corresponding to landscape or portrait orientation as required. Make sure that the new images have the same naming, format, and resolution as the ones being replaced. See *" Appendix" on page 36* for the default images built into the device.
- Image format requirement: png format, 32-bit color depth. See the image name for resolution requirements. The image naming convention is "No. + Sequence + Height + Width +_ICO.png". You can view image information by right-clicking and selecting "Properties > Details".

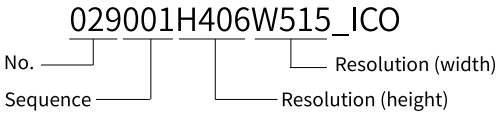


Figure 7-3 Image naming (example)

2. Open the **"TGUS_TF"** folder on the drive and replace the old image with the new one.
3. After the replacement is complete, eject the drive from the computer. When the device displays **"···finished···"**, the update is complete, and the USB cable can then be disconnected.
4. 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 and consistent with the image being replaced.

7.3 Background Music Change

1. Prepare the new background music according to the requirements.

Note

The file name and format must be 60.mp3.

2. Open the **"TGUS_TF"** folder on the drive and replace the background music with the new one.

3. After the replacement is complete, eject the drive from the computer. When the device displays **"···finished···"**, the update is complete, and the USB cable can then be disconnected.
4. Manually restart the device and check the play effect.

Note

If the music cannot be played, check for correct file name and format.

7.4 Voice Announcement File Change

1. Prepare new voice announcement file according to the requirements.

Note

- File duration: Keep within 5s.
- File format: WAV **format** with a **bit rate** of 705 kbps; otherwise, the voice announcement will not play.
- File naming:
  - **Floors 1 to 50 (In Chinese)**: **1.wav** to **50.wav**;
  - **Floor 3A (In Chinese)**: **57.wav**;
  - **Floor 13A (In Chinese)**: **58.wav**;
  - **Floor 17A (In Chinese)**: **59.wav**;
  - **Floor 1 (In Chinese)**: **61.wav**;
  - **Floor 2 (In Chinese)**: **62.wav**;
  - **Floor 3 (In Chinese)**: **63.wav**;
  - **Floor 4 (In Chinese)**: **64.wav**;
  - **Floors 1 to 50 (In English)**: **65.wav** to **114.wav**;
  - **Floor 3A (In English)**: **121.wav**;
  - **Floor 13A (In English)**: **122.wav**;
  - **Floor 17A (In English)**: **123.wav**;
  - **Floor 1 (In English)**: **125.wav**;
  - **Floor 2 (In English)**: **126.wav**;
  - **Floor 3 (In English)**: **127.wav**;
  - **Floor 4 (In English)**: **128.wav**;

---

2. (Optional) If the file format does not meet the requirements, use the software Format Factory to convert and set the sampling rate to 22050 Hz.
3. Open the **"TGUS_TF"** folder on the drive and replace the audio file with the new one.

4. After the replacement is complete, eject the drive from the computer. When the device displays **"···finished···"**, the update is complete, and the USB cable can then be disconnected.
5. Manually restart the device and check whether the voice announcements are working properly.

Note

If a broadcast error occurs, check the audio file duration, format, and filename. Ensure they are consistent with the old file being replaced.

---

8 Interface Upgrade

Prepare a Micro USB cable and a computer.



Figure 8-1 Micro USB cable

1. Power off the device and connect it to the computer's USB port using the cable.
2. Restart the device. Once it has started up, it will display **"usb device is connecting…."**
3. The computer will recognize two drives. Open the drive with the larger memory capacity.
4. Place the new **"TGUS_TF"** interface resource file into this drive, replacing the old one.

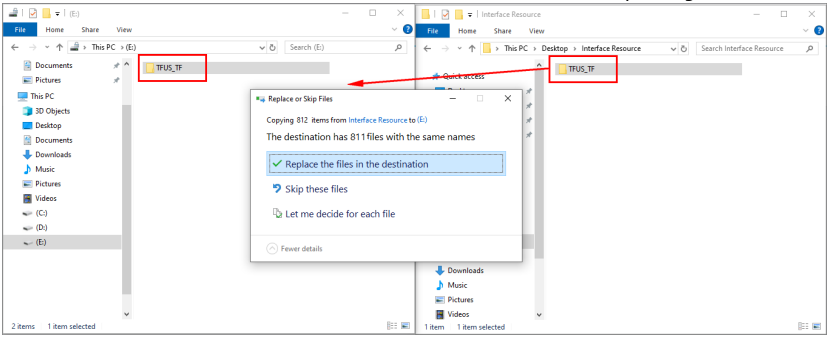


Figure 8-2 Replacing the old interface file

5. After the replacement is complete, eject the drive from the computer. When the device displays **"******finished"**, the update is complete, and the USB cable can then be disconnected.
6. Manually restart the device and check the display effect.

Note

If a display error occurs, check whether the name and path of the new interface file is correct, and ensure it is consistent with the old interface file being replaced.

---

9 Maintenance

9.1 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.

9.2 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 9–1 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 9–2 Daily Cleaning Items

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

9.3 Battery Replacement

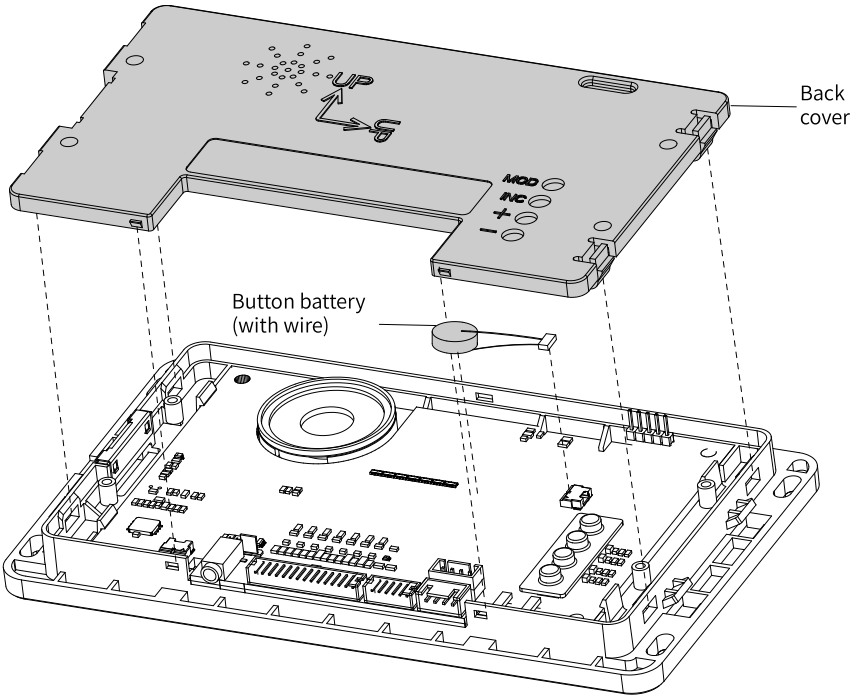


Figure 9-1 Battery replacement

10 Common Fault Troubleshooting

Table 10–1 Common fault troubleshooting

Name	Cause	Diagnosis	Troubleshooting
During installation and commissioning, floors and arrows are not displayed.	The wiring is incorrect or the cable is connected improperly.	Check whether all connection lines match the defined pinout of the device; inspect COB board and CTB wiring for any abnormalities.	Check whether the communication lines are incorrectly wired (reversed or incorrect sequence). • If so, reconnect the lines correctly. • If problems persist, connect the device to another normally operating elevator control cabinet and check whether the fault is displayed. If the display is normal, check the original control cabinet to ensure that it can operate properly.
	The device and control cabinet customer protocol codes do not match.	Go to the settings menu and check the **"Customer number"** in the menu.	Perform on-site modification using the Monarch App or provide the work orders on the back of the product to the device supplier. Scan and download the Monarch App.
	The on-site control cabinet is an encrypted system, but the device encryption authentication is disabled.	Go to the display settings menu and check whether the **"Security protocol"** is enabled.	Modify the parameters in the settings menu to enable the **"Security protocol"**.
	The on-site control cabinet is an encrypted system, but the device encryption self-authentication fails.	Go to the display settings menu and check whether the **"Security protocol"** is disabled in the menu and cannot be manually enabled.	Provide the work orders on the back of the product to the device supplier.
	Address settings conflict for multiple devices installed within the elevator car.	When there is only one device inside the car, it should be set to 0; when there are multiple devices, only one can be set to 0, and the others should be set to any address of D2, D3, or D4.	Go to the display settings menu and check the parameters in **"Floor setting>Floor address"** in the menu. If the parameters are incorrect, set them again.

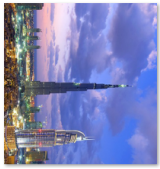
Name	Cause	Diagnosis	Troubleshooting
When the control cabinet is encrypted during running, the floor arrow area displays the up arrow and "000", "-" or "==". It can be temporarily fixed through restarting the system but reoccurs after 7 days.	The floor address setting is incorrect.	Go to the display settings menu and check whether the **"Security protocol"** is enabled. Check whether the device address setting is correct. When there is only one device inside the car, it should be set to 0; when there are multiple devices, only one can be set to 0, and the others should be set to any address of D2, D3, or D4.	Go to the display settings menu and check the parameters in **"Floor setting>Floor address"** in the menu. If the parameters are incorrect, set them again. Modify the parameters in the settings menu to enable the **"Security protocol"**.
	Device encryption authentication is not enabled.	Go to the display settings menu and check whether the **"Security protocol"** is enabled.	Go to the display settings menu and enable **"Security protocol"**.
	The on-site control cabinet is an encrypted system, but the device encryption self-authentication fails.	Go to the display settings menu and check whether the **"Security protocol"** is disabled in the menu and cannot be manually enabled.	Provide the work orders on the back of the product to the device supplier.
	The on-site control cabinet is an encrypted system, with more than two peripheral devices that require encryption authentication mounted or connected on the car COP bus, such as display, and A0S board.	For the Monarch encryption system, it must be ensured that only one peripheral device gets involved in the encryption authentication on the car COP bus.	Provide the work orders on the back of the product to the device supplier.
	The device and control cabinet customer protocol codes do not match.	Go to the settings menu and check the **"Customer number"** in the menu.	Perform on-site modification using the Monarch App or provide the work orders on the back of the product to the device supplier.
Time display is inaccurate.	Time has not been calibrated.	Go to the display setting menu and check the **"Time setting"** in the menu, where you can set the year, month, day, hour, minute, and display mode separately.	
	The battery level is low.	Check whether the time differs greatly from the previous setting. If yes, recalibrate the time. If the issue persists after three power cycles, it indicates that the battery level is low and replacement is required.	Contact the device supplier to purchase the CR1220 button battery for replacement.

Name	Cause	Diagnosis	Troubleshooting
The display freezes or there is no display after the multimedia image is updated.	The newly imported multimedia image format or specification do not meet the requirements.	Check the image against the specified requirements.	Modify the image format or specification, delete incorrect image, and re-import.
	The newly imported multimedia image name does not meet the requirements.	Check whether the name of the newly imported image matches the name of the replaced image.	Ensure that the names of the new and replaced images match.

11 Appendix

Ensure that when replacing advertisements, logos, or welcome messages, the naming, format, and resolution of the new images match those of the original images.

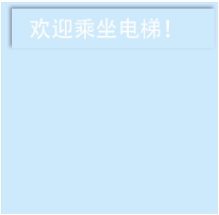
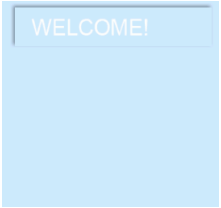
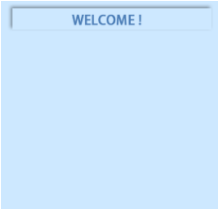
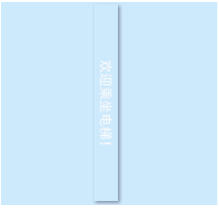
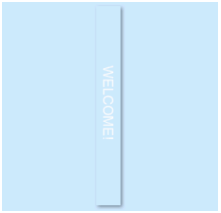
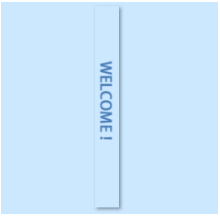
Ad image

Landscape theme 1	 029001H406W515_ICO.png	 029002H406W515_ICO.png	 029003H406W515_ICO.png	 029004H406W515_ICO.png	 029005H406W515ICO.png
Landscape theme 2	 039001H352W581_ICO.png	 039002H352W581_ICO.png	 039003H352W581_ICO.png	 039004H352W581_ICO.png	 039005H352W581_ICO.png
Portrait theme 1	 049001H480W458_ICO.png	 049002H480W458_ICO.png	 049003H480W458_ICO.png	 049004H480W458_ICO.png	 049005H480W458_ICO.png
Portrait theme 2	 059001H480W458_ICO.png	 059002H480W458_ICO.png	 059003H480W458_ICO.png	 059004H480W458_ICO.png	 059005H480W458_ICO.png

Logo

Landscape theme 1	Landscape theme 2	Portrait theme 1	Portrait theme 2
			
024001H067W284_ICO.png	034001H056W158_ICO.png	044001H287W069_ICO.png	054001H158W056_ICO.png

Welcome message

Landscape theme 1		Landscape theme 2	
			
028001H059W300_ICO.png	028002H059W300_ICO.png	038001H056W536_ICO.png	038002H056W536_ICO.png
Portrait theme 1		Portrait theme 2	
			
048001H480W059_ICO.png	048002H480W059_ICO.png	058001H480W056_ICO.png	058002H480W056_ICO.png

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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