iSMA-D-PA

User Manual

Android PC Panel

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1 Introduction

The iSMA-D-PA series are industrial HMI panels based on Android OS and equipped with an exclusive iC SmartView platform, designed to provide an optimal performance for building automation and control applications requiring responsive, local visualization.

D-PA Panels are ideal for integration with controllers equipped with HTML5 web servers, providing a high-performance local HMI interface. Controllers such as MAC36PRO, JACE-9000, or others powered by Niagara and IP-enabled devices can be connected via Ethernet, enabling a smooth display of controller-stored graphics and dashboards.

Available in 7", 10", and 15" versions, the panels are designed for flush mounting in control cabinets or VESA mounting and feature a multilingual interface for easy customization.

Figure 1. iSMA-D-PA panels

1.1 Revision History

Rev.	Date	Description
1.3	2 Dec 2025	• iSMA-D-PA7-B Android panel added • Cybersecurity compliance note added
1.2	10 Dec 2024	Android 11 update for 10" and 15" panels
1.1	25 May 2022	• iSMA-D-PA7C-B1 Android panel added • Rebranded
1.0	18 Jul 2019	First edition

2 Cybersecurity Compliance Note for EN 18031-1 and EN 18031-2

The HMI Android Panels are designed and evaluated in accordance with the principles and protection objectives defined in EN 18031-1 and EN 18031-2, addressing cybersecurity, network security, and privacy protection for connected control equipment used in building management system (BMS) environments.

The BMS environment refers to a dedicated, isolated network intended for building automation and control equipment. It is separated from public or enterprise IT networks and accessible only to authorized personnel, such as system admins, network administrators, or BMS operators. This environment includes both physical and logical access controls (e.g., VLAN segmentation, user and role-based access control) to ensure that only qualified and authorized entities can interact with devices and data within the system.

When deployed within the assumed operational environment as defined in EN 18031-1, the device supports the secure management and protection of network, security, and privacy assets in accordance with the requirements of EN 18031-1 and EN 18031-2.

Specifically:

- Controlled Accessibility
  Access to security-, network-, and privacy-related assets is limited to authorized entities through physical and logical protections implemented in the BMS operational environment.
- Secure Storage and Handling
  Security, network, and privacy assets stored on the device are safeguarded to prevent unauthorized access or modification, ensuring integrity and confidentiality as required by EN 18031-1 and EN 18031-2.
- Protected Communication
  Any communication involving security, network, or privacy assets is protected by physical or logical measures within the target environment. These protections prevent exposure of sensitive assets to unauthorized entities during data transfer.

The device's public network accessibility, where applicable, is part of its intended functionality and does not compromise the protection requirements defined by EN 18031-1 and EN 18031-2 when deployed in a properly secured BMS infrastructure.

3 Safety Rules

- Improper wiring of the product can damage it and lead to other hazards. Make sure that the product has been correctly wired before turning the power on.
- Before wiring or removing/mounting the product, make sure to turn the power off. Failure to do so might cause an electric shock.
- Do not touch electrically charged parts such as power terminals. Doing so might cause an electric shock.
- Do not disassemble the product. Doing so might cause an electric shock or faulty operation.
- Use the product only within the operating ranges recommended in the specification (temperature, humidity, voltage, shock, mounting direction, atmosphere, etc.). Failure to do so might cause a fire or faulty operation.
- Firmly tighten the wires to the terminal. Failure to do so might cause a fire.
- Avoid installing the product in close proximity to high-power electrical devices and cables, inductive loads, and switching devices. Proximity of such objects may cause an uncontrolled interference, resulting in an instable operation of the product.
- Proper arrangement of the power and signal cabling affects the operation of the entire control system. Avoid laying the power and signal wiring in parallel cable trays. It can cause interferences in monitored and control signals.
- It is recommended to power controllers/modules with AC/DC power suppliers. They provide better and more stable insulation for devices compared to AC/AC transformer systems, which transmit disturbances and transient phenomena like surges and bursts to devices. They also isolate products from inductive phenomena from other transformers and loads.
- Power supply systems for the product should be protected by external devices limiting overvoltage and effects of lightning discharges.
- Avoid powering the product and its controlled/monitored devices, especially high power and inductive loads, from a single power source. Powering devices from a single power source causes a risk of introducing disturbances from the loads to the control devices.
- If an AC/AC transformer is used to supply control devices, it is strongly recommended to use a maximum 100 VA Class 2 transformer to avoid unwanted inductive effects, which are dangerous for devices.
- Long monitoring and control lines may cause loops in connection with the shared power supply, causing disturbances in the operation of devices, including external communication. It is recommended to use galvanic separators.
- To protect signal and communication lines against external electromagnetic interferences, use properly grounded shielded cables and ferrite beads.
- Switching the digital output relays of large (exceeding specification) inductive loads can cause interference pulses to the electronics installed inside the product. Therefore, it is recommended to use external relays/contactors, etc. to switch such loads. The use of controllers with triac outputs also limits similar overvoltage phenomena.
- Many cases of disturbances and overvoltage in control systems are generated by switched, inductive loads supplied by alternating mains voltage (AC 120/230 V). If they do not have appropriate built-in noise reduction circuits, it is recommended to use external circuits such as snubbers, varistors, or protection diodes to limit these effects.

4 Technical Specification

4.1 iSMA-D-PA7-B

Panel type	Industrial LCD panel TFT grade	
Operating system	Android 14	
Screen type	LED; backlight lifetime ≥50000 h	
Size	7″	
Aspect ratio	16:9	
Resolution	1024x600	
Luminance	300 nit	
Contrast	500:1	
Active area	154.81x86.52 mm	
Display color	16.7 M	
View angle	75/75/70/75	
Response time	6.5 ms	
Installation	Compatible with VESA, for embedding	
Menu languages	English, French, Spanish, Chinese, Russian, Portuguese, Arabic	
Touch type	10-point capacitive touch screen	
Material	Metal/aluminum alloy	
Interfaces	RJ45 (10M/100M/1000M adaptive Ethernet), TF/SD card, 2 USB 3.0 (1 USB OTG, 1 host), RJ45, audio output	
Power port	24 V DC +/-20%	
Temperature	Operating temperature: -10°C to 60°C (14°F to 140°F)	Storage temperature: -10°C to 60°C (14°F to 140°F)
Humidity	Operation humidity: 10% to 80% RH	Storage humidity: 10% to 90% RH
Anti-static	Contact 4 KV, air 8 KV	

Rated voltage	100 V〜240 V AC to 24 V DC	
Rated frequency	50 Hz/60 Hz	
Power supply	110-240 V AC, 50/60 Hz	
Power supply adapter	EU, UK, or US	
Power	Power consumption ≤30 W	Power standby ≤1.5 W
Dimensions	196.54x152.20x38.90 mm (7.73x5.99x1.53 in)	
IP	IP65 – for front panel	

Table 1. Technical specification of the iSMA-D-PA7-B panel

4.2 iSMA-D-PA7C-B1

Panel type	Industrial LCD panel A grade
Operating system	Android 6.0
Screen type	LED; backlight lifetime ≥50000 h,
Size	7″
Aspect ratio	16:9
Resolution	1024x600
Luminance	300 nit
Contrast	800:1
Active area	154.81x86.52 mm
Display color	16.7 M
View angle	75/75/70/75
Response time	6.5 ms
Installation	Compatible with VESA, for embedding
Menu languages	English, French, German, Spanish, Chinese, Italian, Russian, Portuguese, Arabic

Touch type	10-point capacitive touch screen	
Material	Metal/aluminum alloy	
Interfaces	IP, 2 RS232, TF/SD card, 2 USB 2.0, USB OTG (mini USB), RJ45, audio output	
Power port	12 V DC	
Anti-interference	Anti-interference electromagnetic compatibility; electromagnetic interference	
Anti-vibration	5-19 HZ/1.0 mm amplitude; 19-200 HZ/1.0 g accelerated speed	
Temperature	Operating temperature: 0°C to 50°C (32°F to 122°F)	Storage temperature: -20°C to 70°C (-4°F to 158°F)
Humidity	Operation humidity: 25% to 85% RH	Storage humidity: 10% to 90% RH
Anti-static	4 KV-8 KV; (customized max. 16 KV)	
Rated voltage	100 V~240 V AC to 12 V-24 V DC	
Rated frequency	50 Hz/60 Hz	
Power supply	110-240 V AC, 50/60 Hz	
Power supply adapter	EU, UK, or US	
Power	Power consumption ≤30 W	Power standby ≤1.5 W
Dimensions	196.54x152.20x38.90 mm (7.73x5.99x1.53 in)	
IP	IP65 – for front panel	

Table 2. Technical specification of the iSMA-D-PA7C-B1 panel

4.3 iSMA-D-PA10C-B1 and iSMA-D-PA15C-B1

Panel type	Industrial LCD panel A grade
Operating system	Android 11
Screen type	LED; backlight lifetime ≥50000 h,

Size	10.1”/15.6”	
Aspect ratio	16:9	
Resolution	1366x768/1920x1080	
Luminance	Standard 300 nit	
Contrast	800:1/1000:1	
Active area	222.7x125.2 mm/344.2x193.6 mm	
Display color	16.7 M	
View angle	80/80/80/80 / 89/89/89/89	
Response time	5 ms	
Installation	Compatible with VESA, for embedding, wall mount	
Menu languages	English, French, German, Spanish, Chinese, Italian, Russian, Portuguese, Arabic	
Touch type	10-point capacitive touch screen	
Material	Metal/aluminum alloy	
Interface	IP, RS232, TF/SD card, USB 2.0, USB 3.0, USB C (OTG USB)/ USB 3.0 (OTG USB), HDMI (10” panel), RJ45, audio output	
Power port	12 V DC	
Anti-interference	Anti-interference electromagnetic compatibility; electromagnetic interference	
Anti-vibration	5-19 HZ/1.0 mm amplitude; 19-200 HZ/1.0 g accelerated speed	
Temperature	Operating temperature: -10°C to 60°C (14°F to 140°F)	Storage temperature: -10°C to 60°C (14°F to 140°F)
Humidity	Operation humidity: 10% to 80% RH	Storage humidity: 10% to 90% RH
Anti-static	4 KV-8 KV; (customized max. 16 KV)	
Rated voltage	100 V~240 V AC to 12 V-24 V DC	

Rated frequency	50 Hz/60 Hz	
Power supply	110-240 V AC, 50/60 Hz	
Power supply adapter	EU, UK, or US	
Power	Power consumption ≤30 W	Power standby ≤1.5 W
Dimensions	293.6x193.6x48.5 mm (11.560x7.622x1.909 in)/ 420.0x269.0x70.0 mm (16.535x10.591x2.756 in)	
IP	IP65 – for front panel	

Table 3. Technical specification of the iSMA-D-PA10C-B1/ iSMA-D-PA15C-B1 panels

5 Dimensions

5.1 iSMA-D-PA7-B and iSMA-D-PA7C-B1

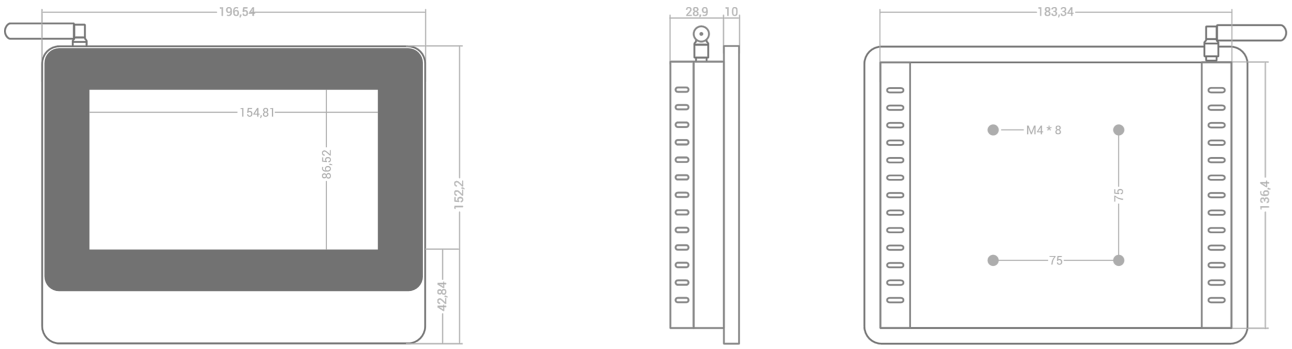

Figure 2. Dimesions of iSMA-D-PA7-B and iSMA-D-PA7C-B1

5.2 iSMA-D-PA10C-B1

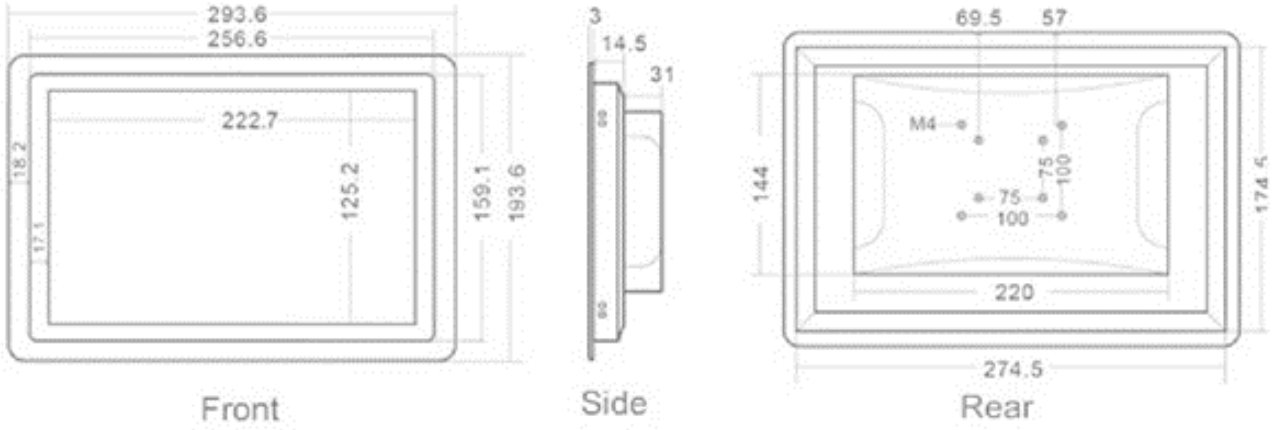

Figure 3. Dimensions of iSMA-D-PA10C-B1

5.3 iSMA-D-PA15C-B1

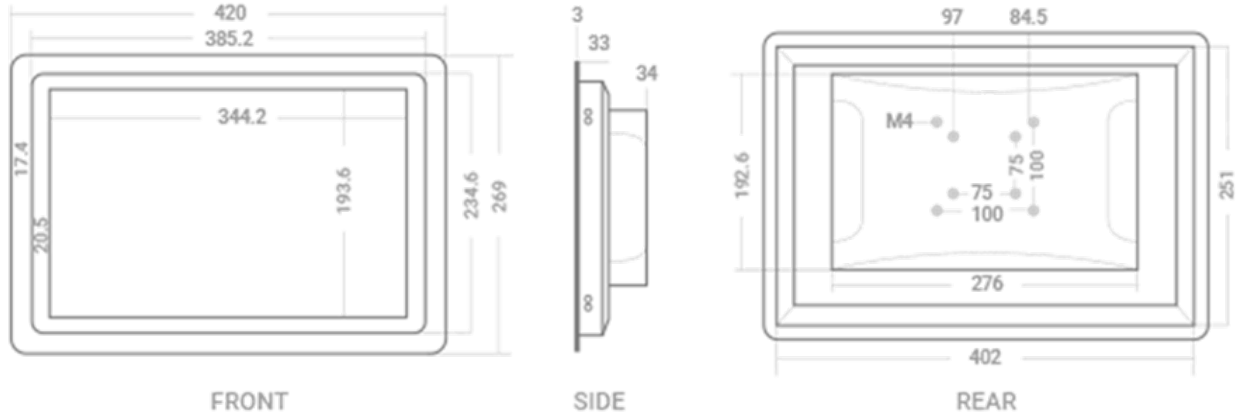

Figure 4. Dimensions of iSMA-D-PA15C-B1

6 Interfaces

The monitor recognizes and selects the signal automatically. The only exception is the USB in the OTG mode: the USB port needs to be manually set to the OTG mode. For full instruction see section Setting USB Port to OTG mode. In the 10" Android Panel USB C is automatically set to the OTG mode; there is no need to change the settings.

6.1 iSMA-D-PA7-B

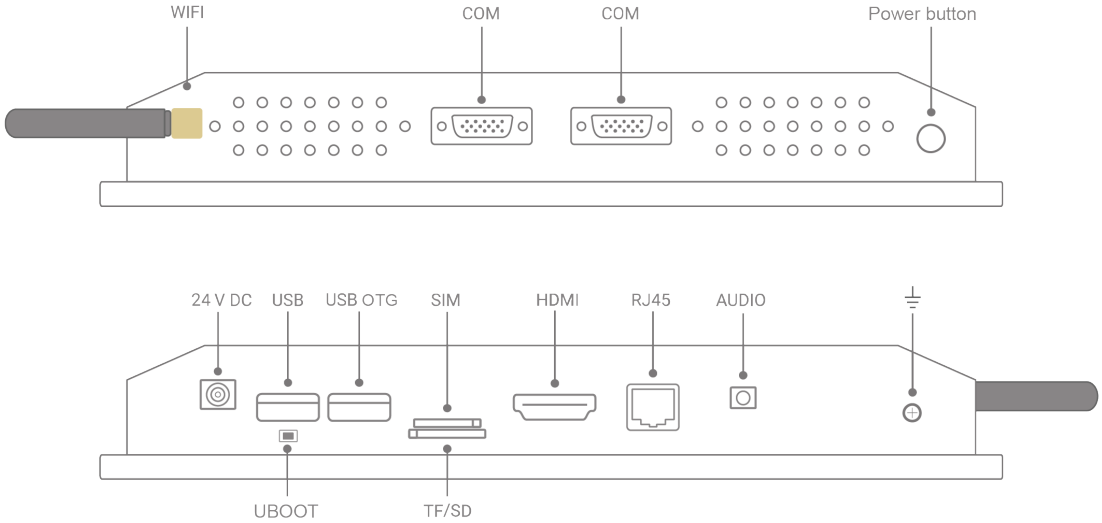

Figure 5. Interfaces of iSMA-D-PA7-B

6.2 iSMA-D-PA7C-B1

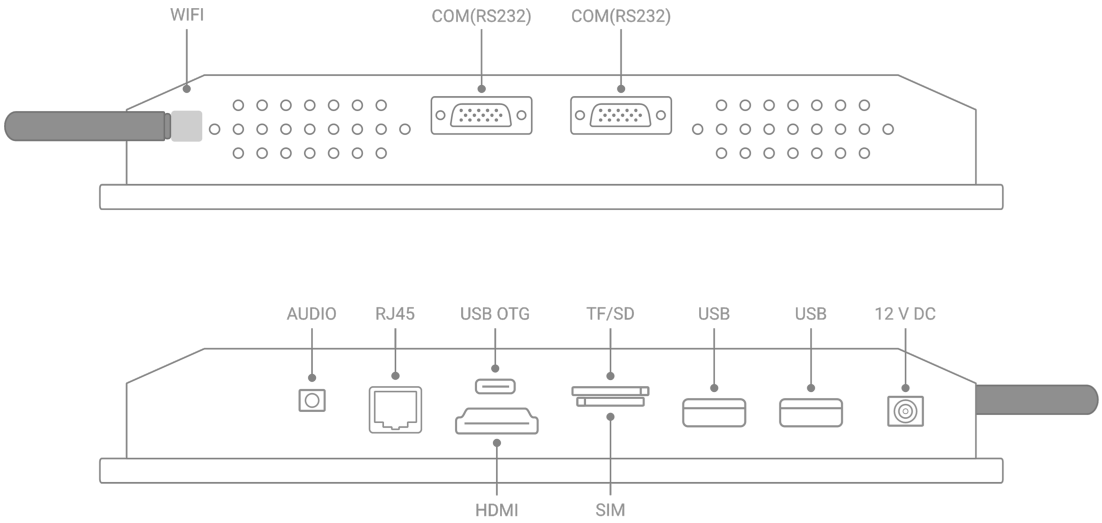

Figure 6. Interfaces of iSMA-D-PA7C-B1

6.3 iSMA-D-PA10C-B1

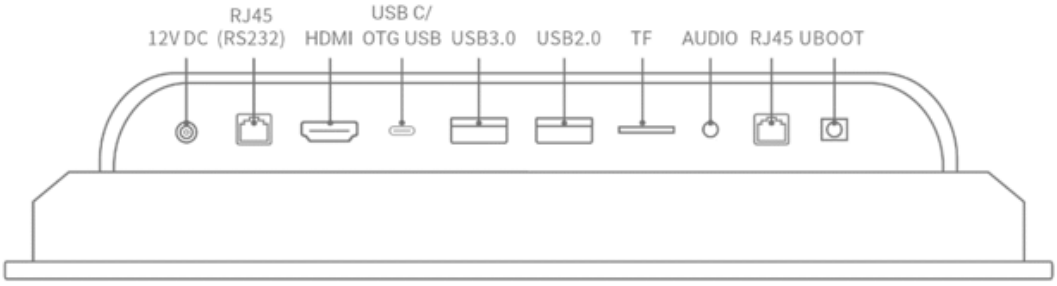

Figure 7. Interfaces of iSMA-D-PA10C-B1

6.4 iSMA-D-PA15C-B1

Figure 8. Interfaces of iSMA-D-PA15C-B1

6.5 Setting USB Mode to OTG

- Go to the main menu of the Android Panel PC – a round, white icon with dots at the bottom center of the screen:

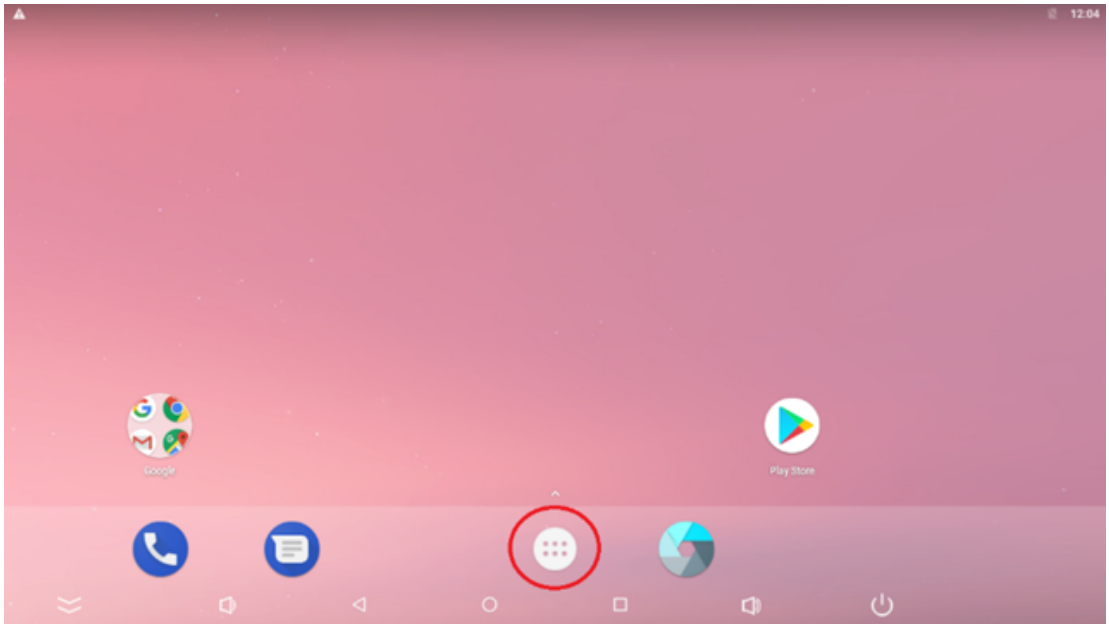

Figure 9. Main menu

- Go to the Settings:

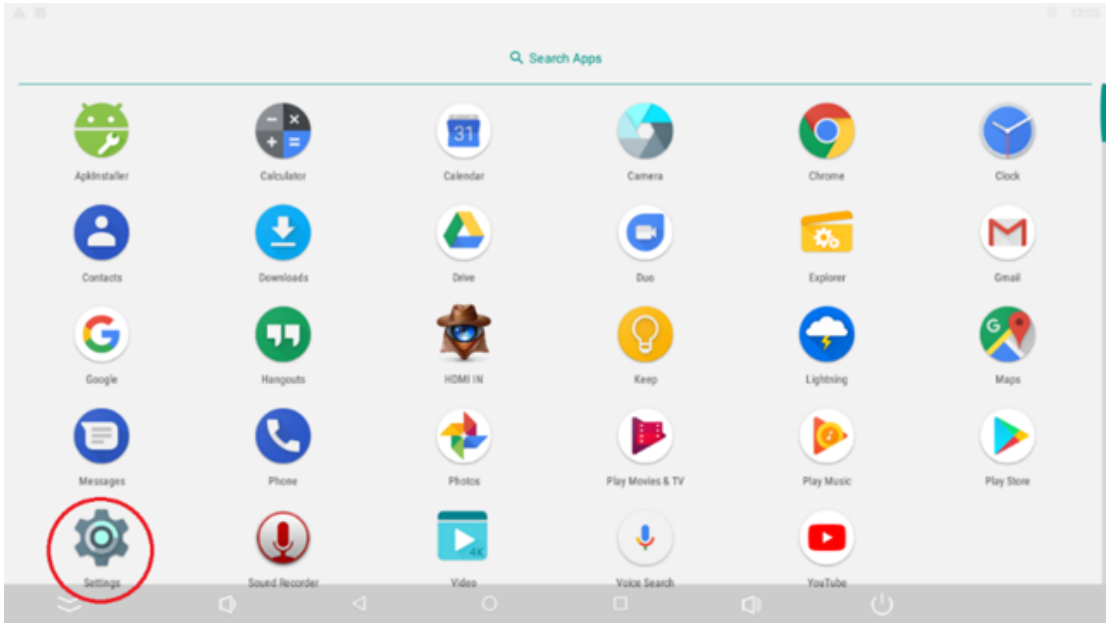

Figure 10. Settings

- Go to the Developer options:

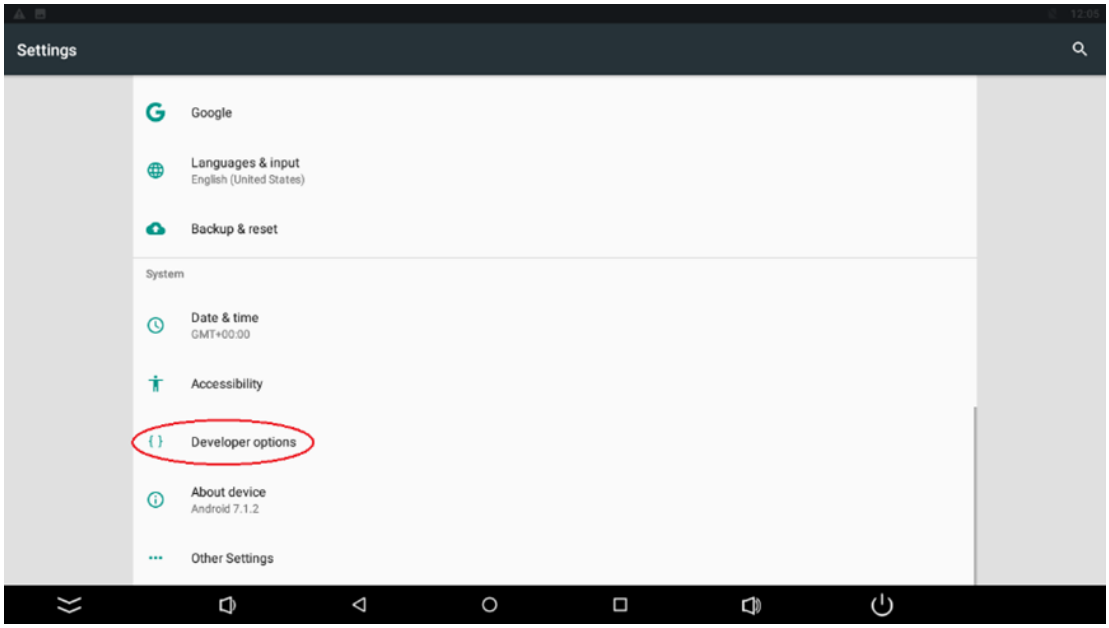

Figure 11. Developer options

- Set the USB Mode to the OTG Mode and turn on USB debugging:

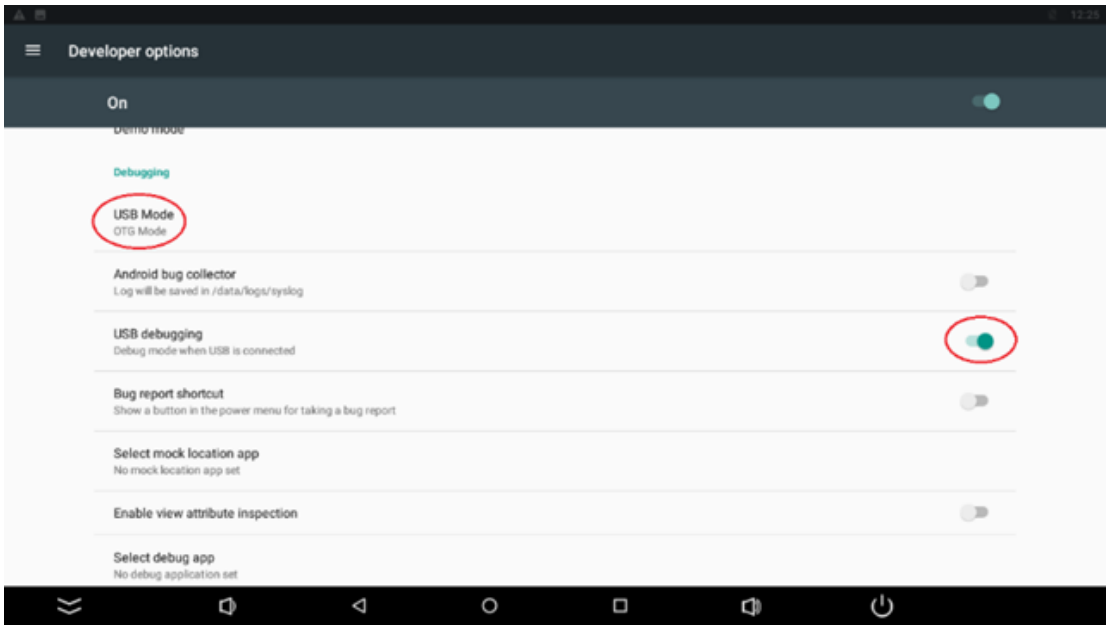

Figure 12. USB mode and USB debugging

- Set the USB Configuration to MTP:

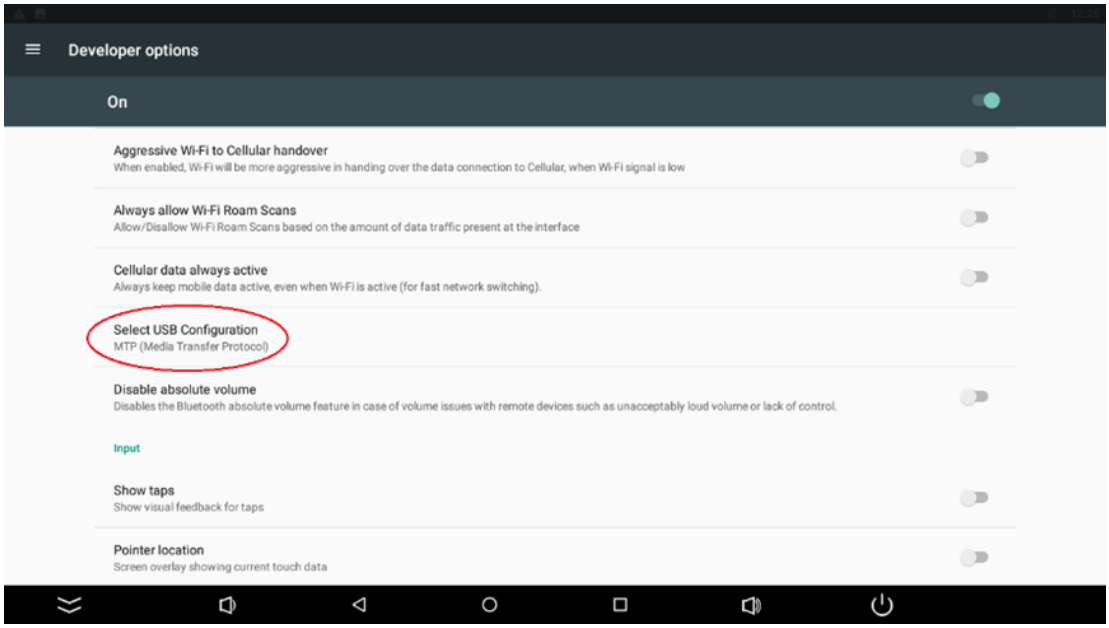

Figure 13. Select USB configuration

7 Operation Guide

7.1 Rear Navigation Buttons

The rear navigation buttons are used to turn the device on and off. Brightness +/- buttons are prepared for future development:

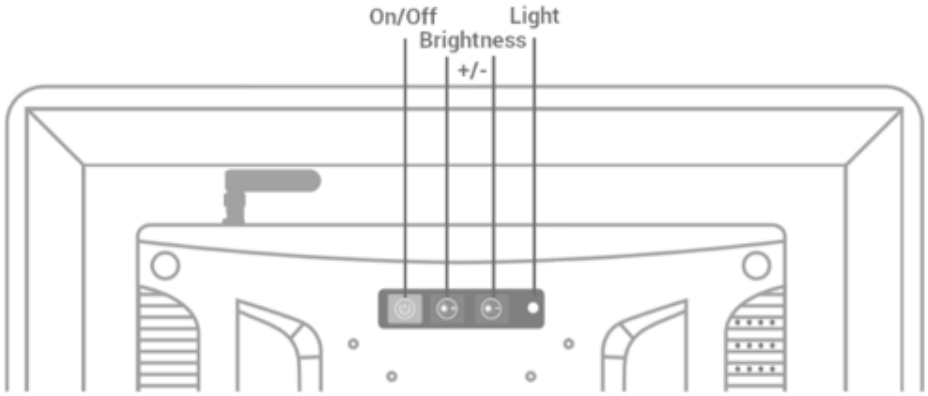

Figure 14. Rear navigation buttons

Symbol	Name	Instruction
Brightness +/-	Choose +	Buttons prepared for future development
Brightness +/-	Choose -	
On/Off	On/Off button	Start-up/Shut down the monitor. The button has to be pressed for a few seconds for both turning on and off. When turning on, wait a few seconds after pressing the button.

Table 4. Operating of rear navigation buttons

7.2 Setting Static IP Address

Follow the instruction steps to set a static IP address:

- Go to the Settings of the Android panel.
- Go to the More option:

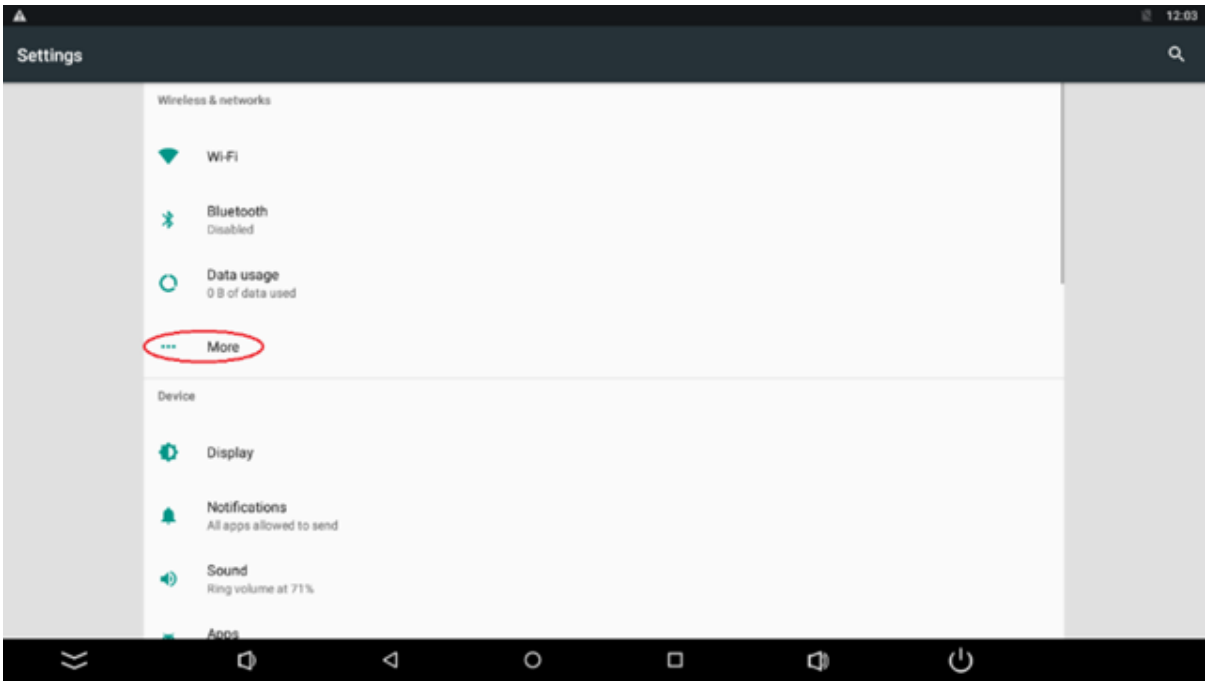

Figure 15. Settings - More

- Go to the Ethernet:

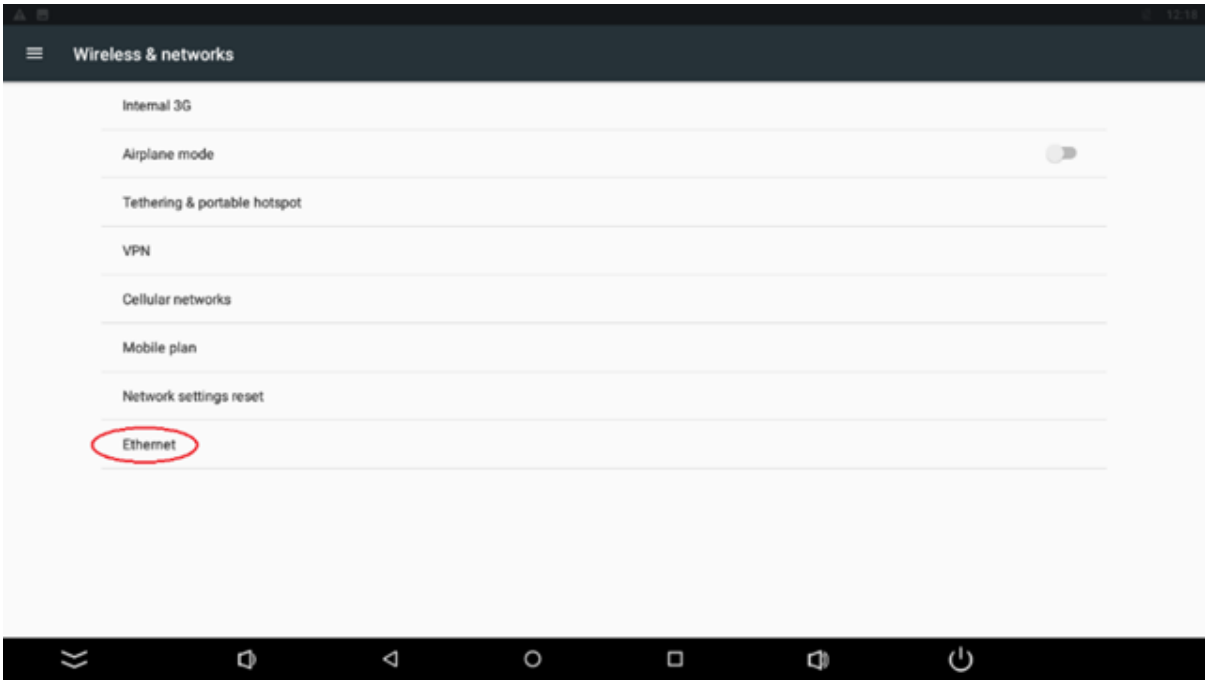

Figure 16. Ethernet

- Go to the Ethernet IP mode:

Figure 17. Ethernet

- Choose the “static” option:

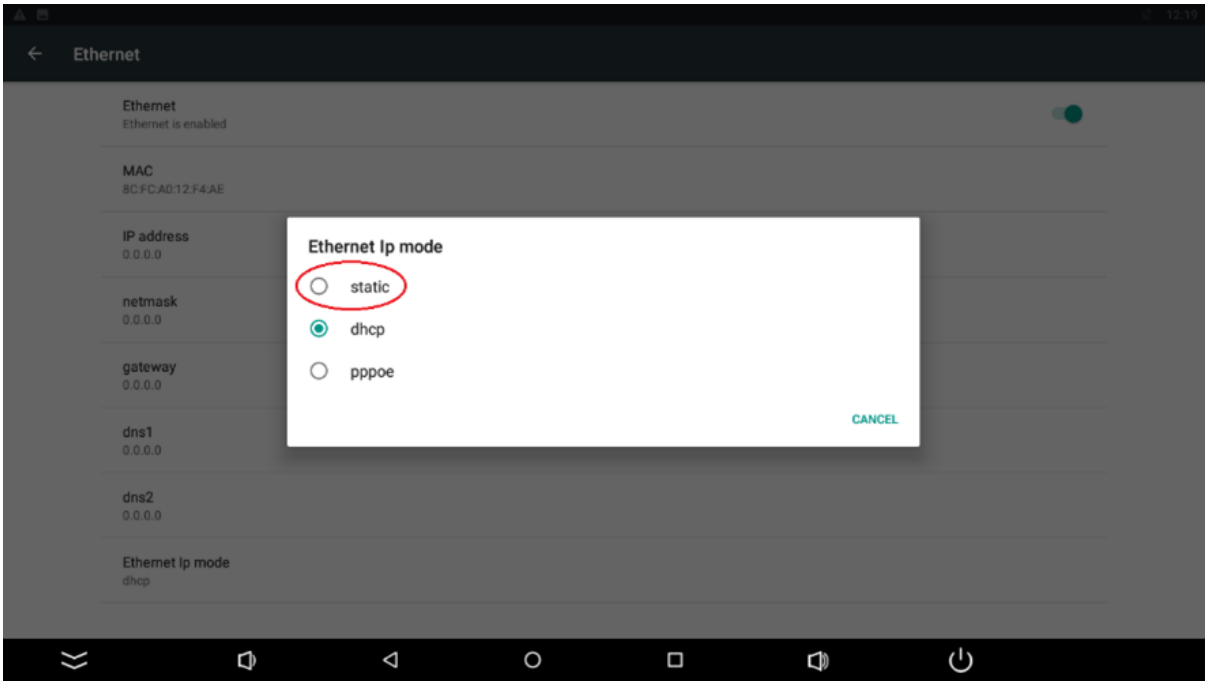

Figure 18. Setting Ethernet IP mode

- Insert the IP address and other information and click CONNECT:

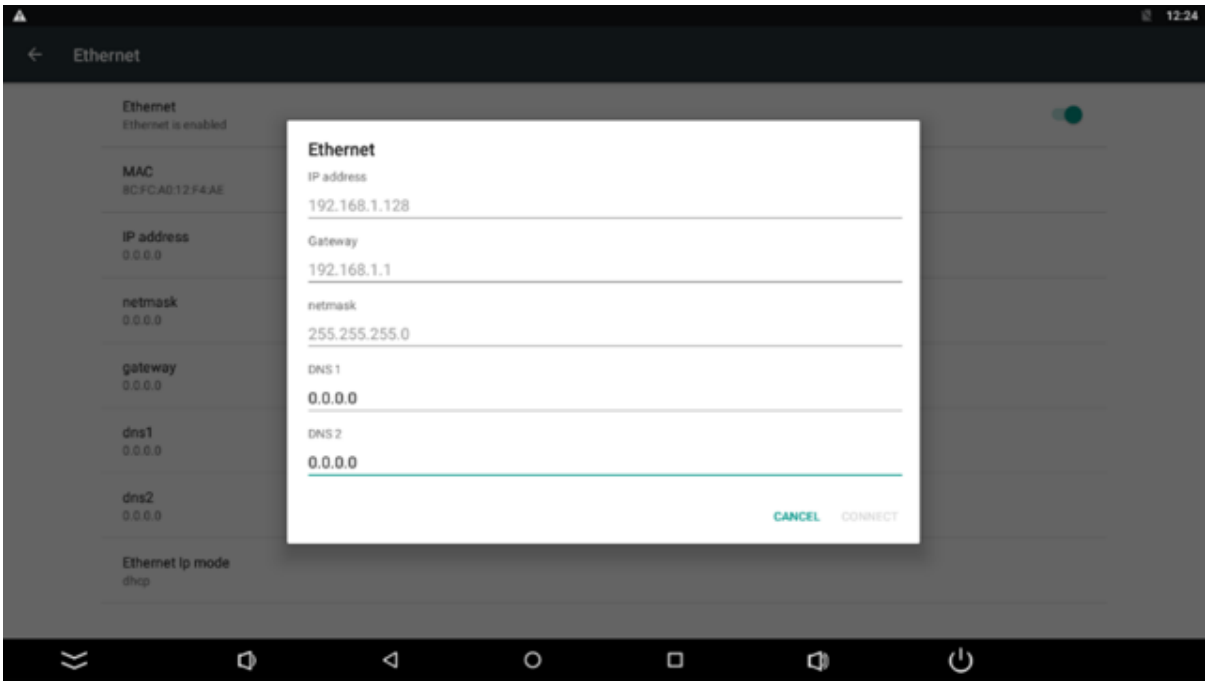

Figure 19. Inserting Ethernet information

8 Installation

- Do not place the panel next to the radiator or heat source.
- Do not let any objects press or twine around the power cable or VGA cable.
- Do not place the panel near a water source or humid places.
- Do not block off the back vents, which can dissipate heat generated inside it, to prevent damage of components.

8.1 Snap Joint Installation

Follow the below steps to install the panel with four snap joints buckle hole:

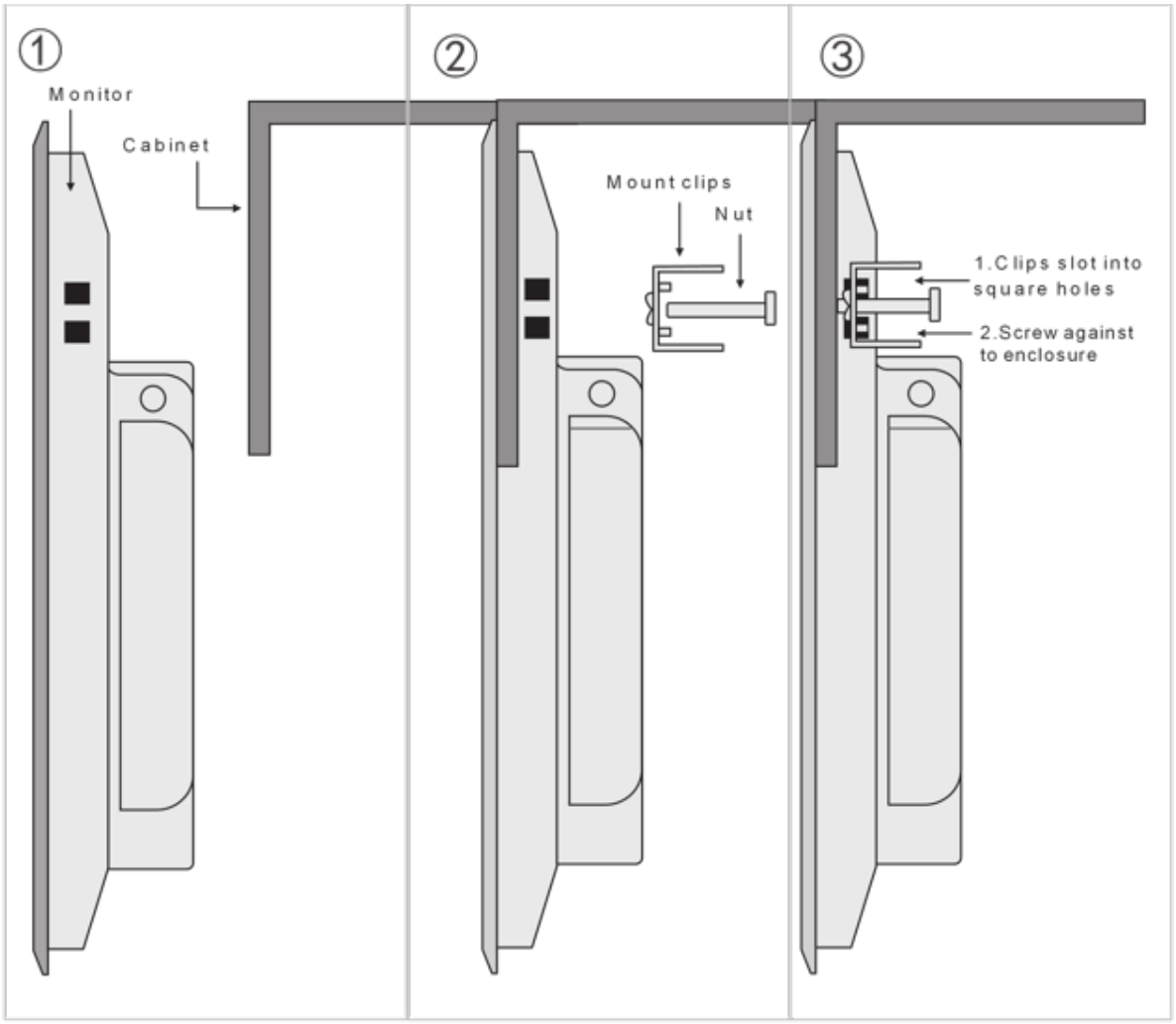

Figure 20. Embed with snap joint installation

8.2 Wall-mount Installation

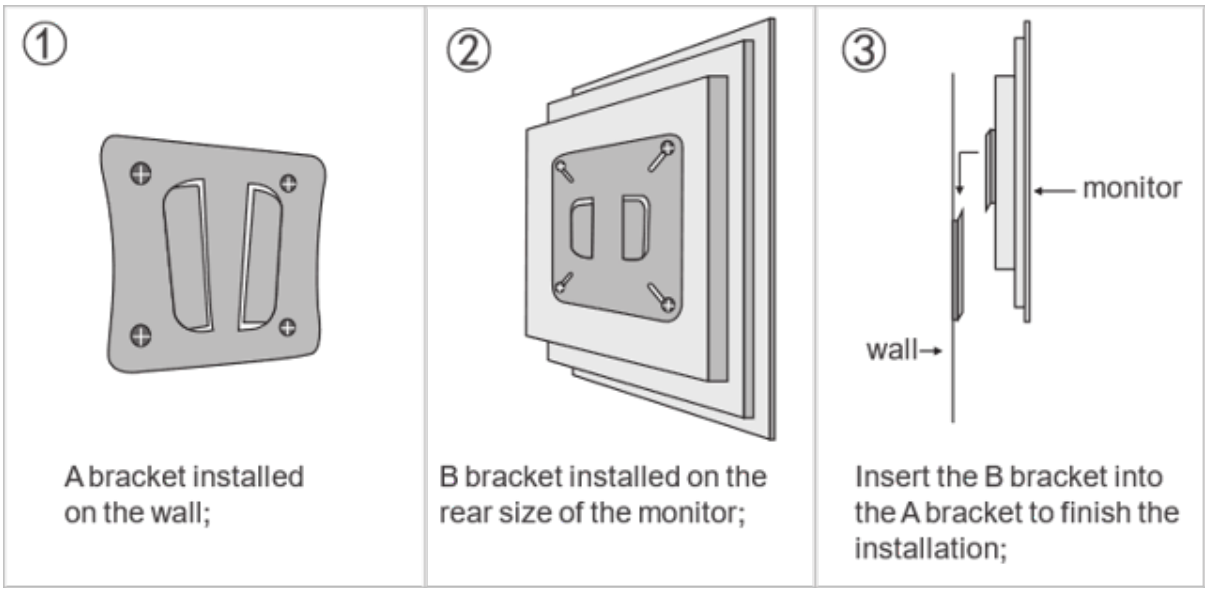

Figure 21. Wall mount installation

8.3 Cabinet-mount Installation

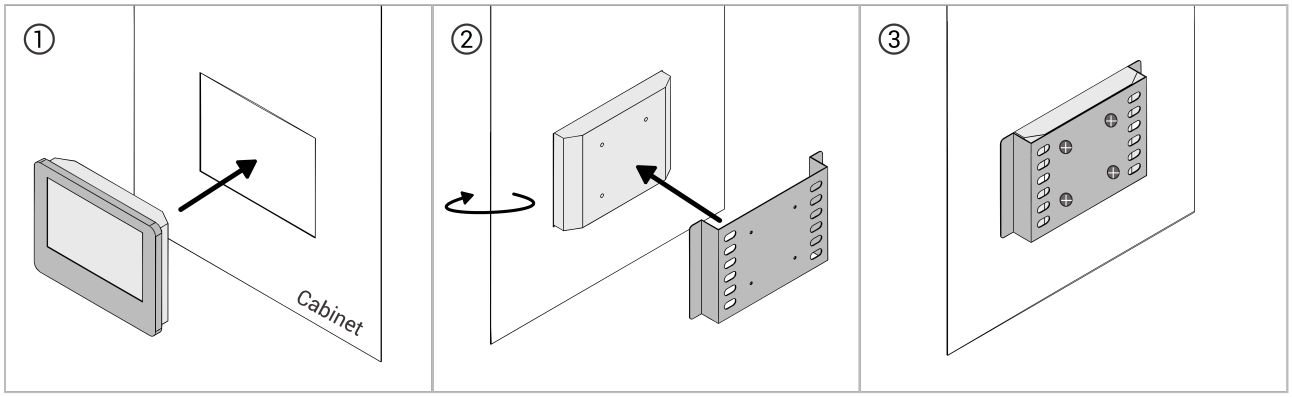

Figure 22. Cabinet-mount installation

9 Android System

Warning!

In case any custom modifications or any other changes are introduced to the Android system originally installed on the equipment, **the warranty automatically expires**. The only exception is when the iSMA CONTROLLI itself announces the possibility of introducing custom modifications to the Android system originally installed on the equipment **precisely specifying the range of such modifications**.