

PA-LED

User Manual

Android LED Panels



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1 Introduction

The PA-LED family are LCD room panels with LED bars, designed for commercial applications. Powered by the Android operating system and equipped with the dedicated iC SmartView application, these panels offer excellent operation in a variety of environments

Available in a variety of size options, these LCD room panels with LED bars are versatile and customizable solutions for a wide range of settings in residential and commercial buildings. Their sleek and modern design, complemented with a metal wire slot for a clean and organized installation, ensures they seamlessly blend into any environment.

These panels come with a built-in multicolor LED bar that can be customized to suit specific needs and integrated into applications for enhanced functionality. With a 10-point capacitive touchscreen, they provide an exceptional viewing experience. Whether there is a need for a room management device for hotels, conference rooms, or a dynamic display in lobbies, these panels are up to the task.

In addition to their stunning design and capabilities, the panels offer advanced features, including Power over Ethernet (POE) for convenient power supply, and the iC SmartView app for kiosk mode and remote control. The multitude of interfaces and built-in features make these panels a versatile solution for a wide range of applications.



Figure 1. PA-LED panels

1.1 Revision History

Rev.	Date	Description
1.1	8 Mar 2024	<ul style="list-style-type: none"> Updated installation steps Updated safety rules
1.0	10 Nov 2023	First edition

Table 1. Revision history

2 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.
- 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.
- 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.

3 Technical Specification

3.1 PA-LED10

Power supply	Power input	12 V DC / 1.5 A
	PoE+	IEEE802.3at, class 4, 25.5 W
	Power adapter for EU, US, and UK	UL listed
		100-240 V AC
Platform	Operating system	Android 11
	CPU	CPU Quad-core Cortex A17, RK3288
	RAM	2 GB
	Internal memory	16 GB
Display	Screen type	LCD
	Touch type	10-point capacitive touch screen
	Size	10.1 in
	Aspect ratio	16:10
	Resolution	1280:800
	Contrast	800:1
	Luminance	250 cd/m ²
	Active area	217.40 x 136.40 mm / 8.56 x 5.37 in
	View angle	85/85/85/85(L/R/U/D)
	LED light bar	LED light bar with RGB and mixed colors
	Media	Audio
Video		MPEG-1, MPEG-2, MPEG-4, H.265, H.264, VC-1,VP8, etc., support up to 4K
Photo		JPEG
Interfaces	Card slot	SD card
	USB	USB 3.0 host
		USB for serial (RS232)
		micro USB OTG

	RJ45	RJ45 with PoE+ (IEEE802.3at), class 4, 25.5W
	WiFi	802.11 b/g/n
	Bluetooth	Bluetooth 4.2
	Audio	3.5 mm earphone
		2 speakers, 1.5 W
Temperature	Operating	0°C to 40°C/32°F to 104°F
	Storage	-20°C to 60°C/-4°F to 140°F
Humidity	Relative humidity	20% to 80% RH
Housing	Mounting	VESA 75*75 mm compatibility
Dimensions	Width	259.36 mm/10.21 in
	Length	178.36 mm/7.02 in
	Height	28.00 mm/1.10 in

Table 2. Technical specification of the PA-LED10 panel

3.2 PA-LED13

Power supply	Power input	12 V DC / 2 A
	PoE+	IEEE802.3at, class 4, 25.5 W
	Power adapter for EU, US, and UK	UL listed
100-240 V AC		
Platform	Operating system	Android 11
	CPU	RK3399 dual-core A72+quad-core A53
	RAM	2 GB
	Internal memory	16 GB
Display	Screen type	LCD
	Touch type	10-point capacitive touch screen
	Size	13.3 in
	Aspect ratio	16:9
	Resolution	1920:1080

	Contrast	800:1
	Luminance	250 cd/m ²
	Active area	293.76 x 165.24 mm / 11.57 x 6.51 in
	View angle	85/85/85/85
	LED light bar	LED light bar with RGB and mixed colors
Media	Audio	MP3/WMA/AAC, etc.
	Video	MPEG-1, MPEG-2, MPEG-4, H.265, H.264, VC-1,VP8, etc., support up to 4K
	Photo	JPEG
Interfaces	Card slot	SD card, max. support up to 64 GB
	USB	USB 3.0 host
		USB for serial (RS232)
		micro USB OTG
	RJ45	RJ45 with PoE+ (IEEE802.3at), class 4, 25.5W
	WiFi	802.11 a/b/g/n/ac
	Bluetooth	Bluetooth 4.2
	Audio	3.5 mm earphone
		Microphone
		2 speakers, 3 W
Temperature	Operating	0°C to 40°C/32°F to 104°F
	Storage	-20°C to 60°C/-4°F to 140°F
Humidity	Relative humidity	20% to 80% RH
Housing	Mounting	VESA 75*75 mm compatibility
Dimensions	Width	333.00 mm/13.11 in
	Length	225.00 mm/8.86 in
	Height	28.50 mm/1.12 in

Table 3. Technical specification of the PA-LED13 panel

4 Dimensions

4.1 PA-LED10

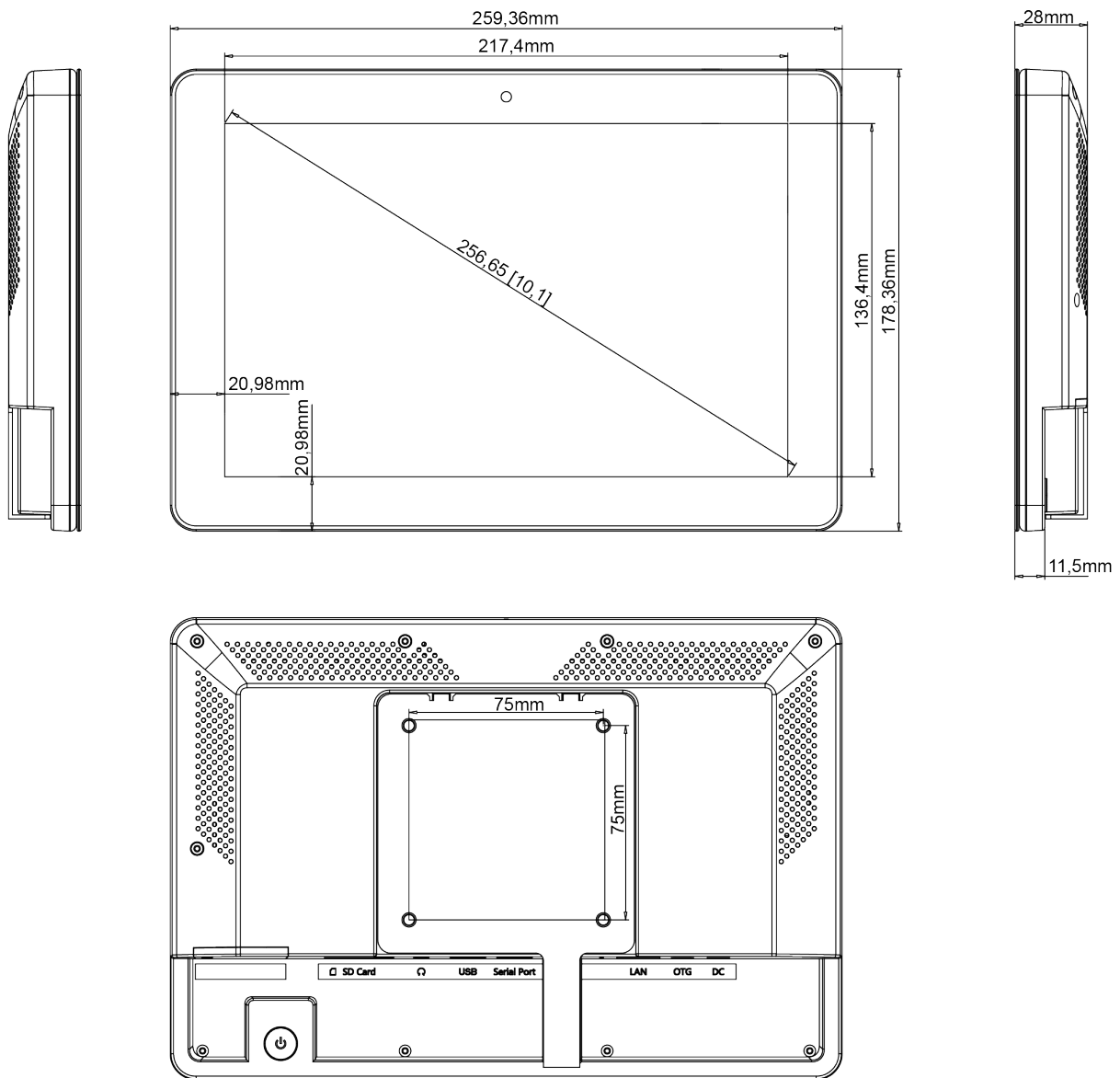


Figure 2. PA-LED10 dimensions

4.2 PA-LED13

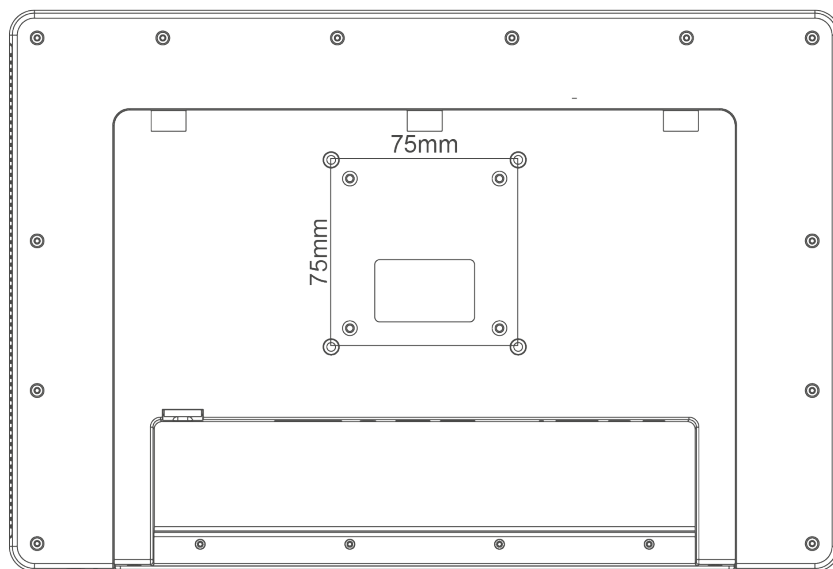
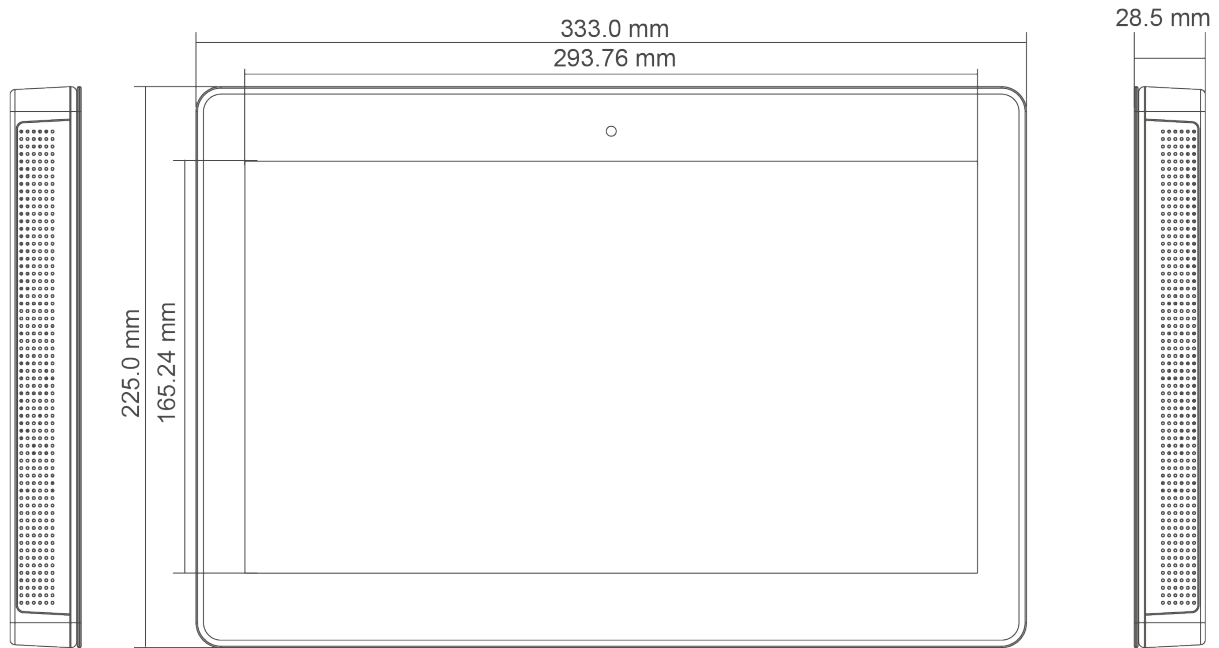


Figure 3. PA-LED13 dimensions

5 Interfaces

5.1 PA-LED10

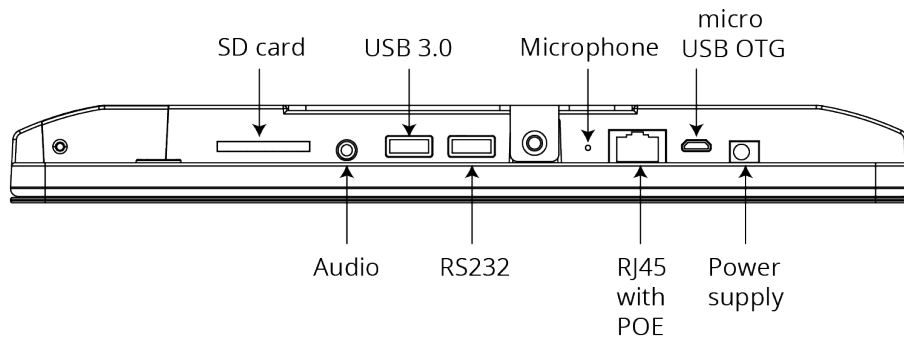


Figure 4. PA-LED10 interfaces

5.2 PA-LED13

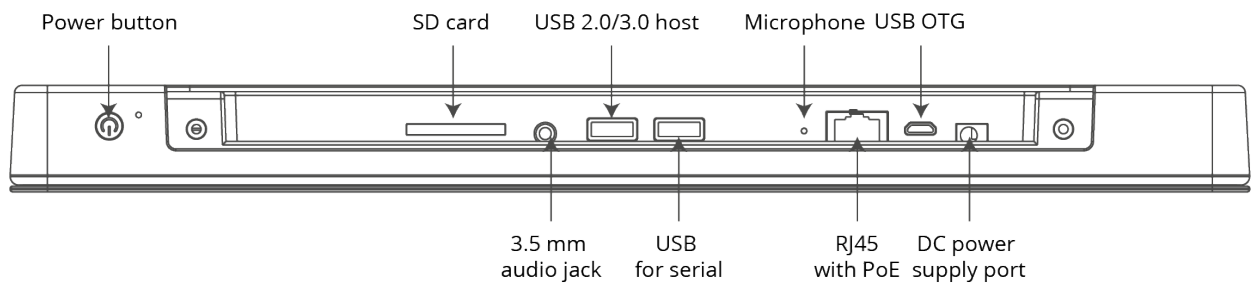
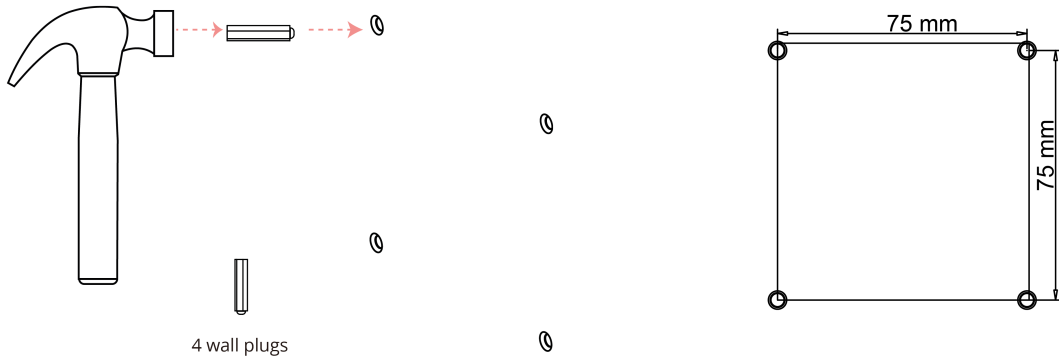


Figure 5. PA-LED13 interfaces

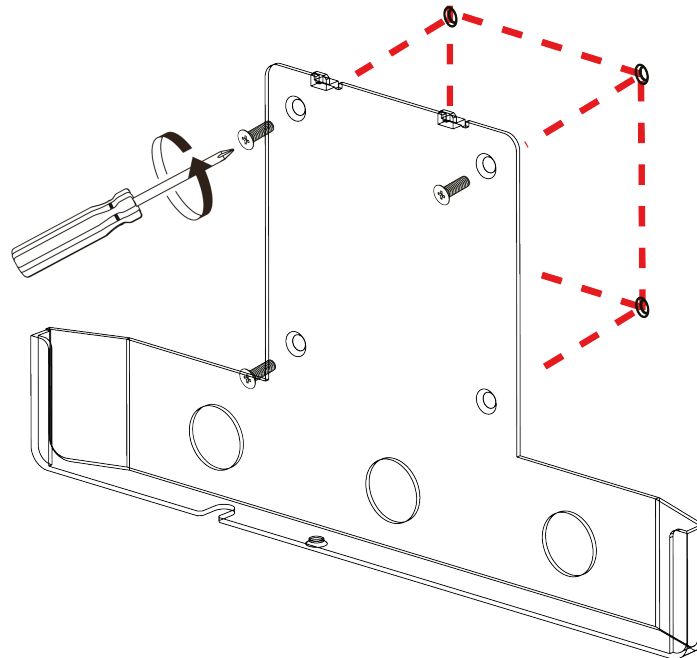
6 Installation

6.1 PA-LED10

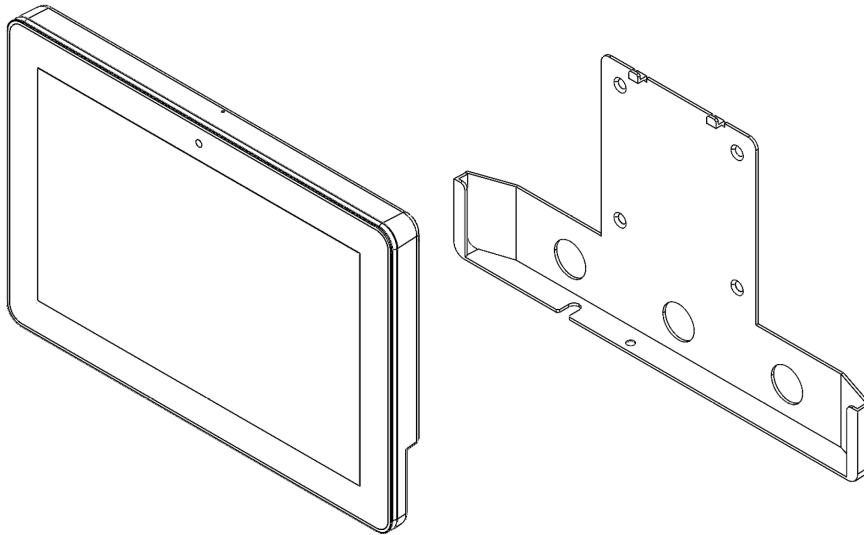
- Insert 4 expansion plugs in the wall, 75 mm separate from each other:



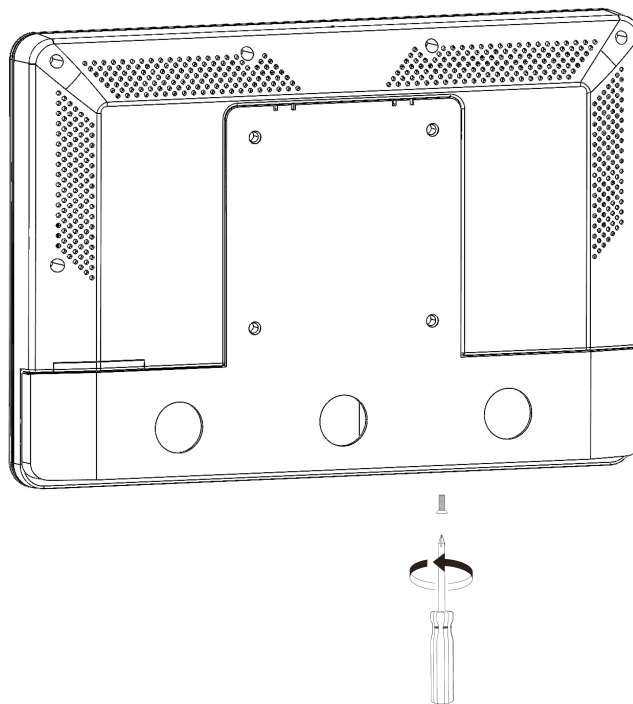
- Screw the metal mounting plate to the expansion plugs:



- Connect the power/communication cables and mount the panel on the mounting plate:

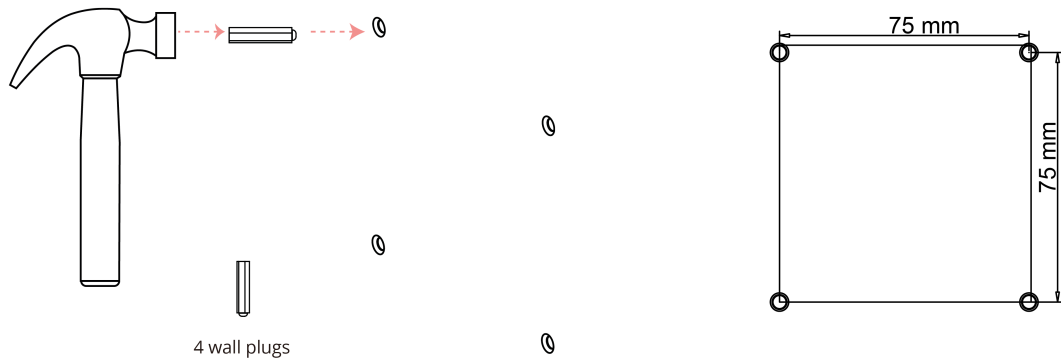


- Screw in the retaining screw to secure the panel:

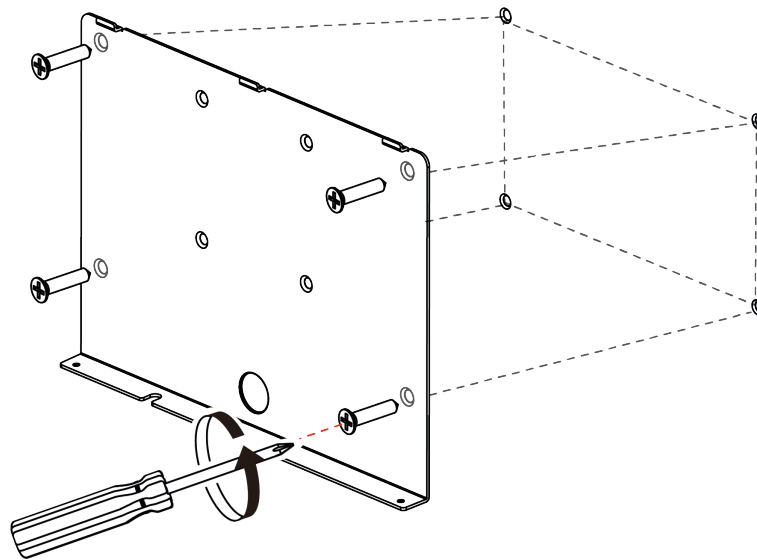


6.2 PA-LED13

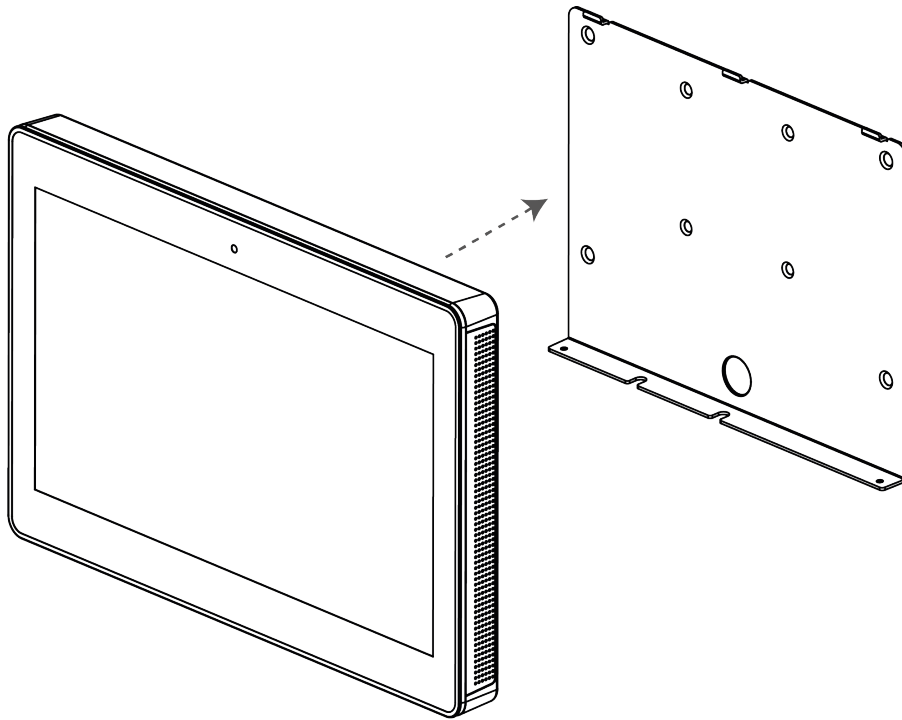
- Insert 4 expansion plugs in the wall, 75 mm separate from each other:



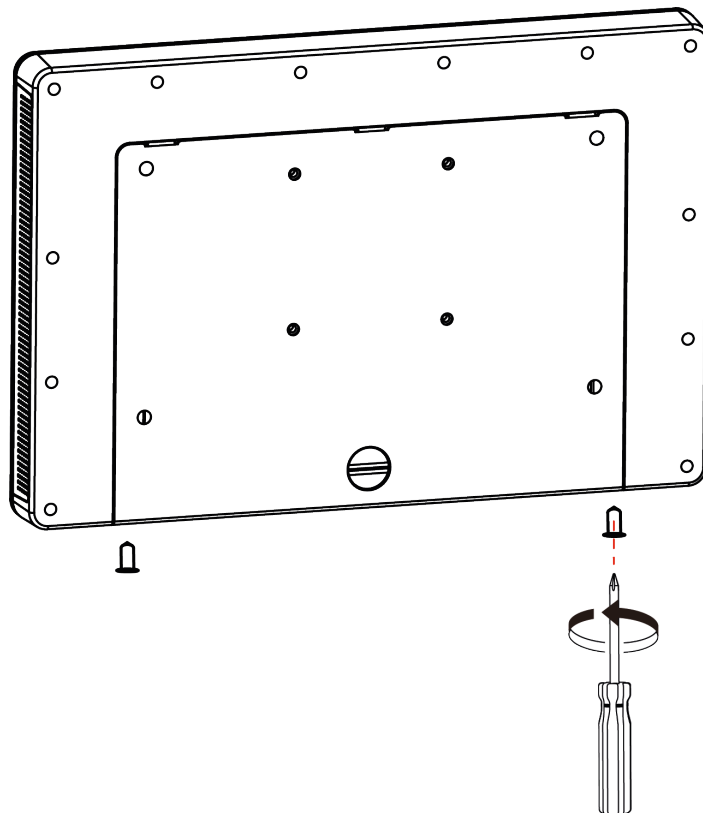
- Screw in the retaining screw to secure the panel:



- Connect the power/communication cables and mount the panel on the mounting plate:



- Screw in the retaining screw to secure the panel:



7 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**.

For a better user experience, during a long-term operation of the device, make sure that the auto-update function in the Play store is turned off:

- Open the Google Play Store app;
- In the top right corner, tap the profile icon;
- Tap **Settings > Network Preferences > Auto-update apps**;
- Select the Do not auto update apps option.

Note: Enabling automatic updates of any applications, self-initiated updating of the system, or installing other applications on the panel may cause uncontrolled loss of stability of operation of the Android system and other applications installed on it.

8 Quick Start-up

8.1 Powering up the Device

PA-LED panels are equipped with a multi-plug power adapter suitable for EU, US, and UK countries. Make sure to use the proper adapter for the electric plug. If using a PoE switch, ensure it is compliant with IEEE802.3at, class 4, 25.5 W.

12 V DC adapter:

- Plug the 12 V DC adapter into a power outlet.
- Connect the adapter to the power input port on the PA-LED Android panel.

The device will boot up automatically.

PoE switch:

- Connect one end of an Ethernet cable to the PoE switch.
- Connect the other end of the Ethernet cable to the Ethernet port on the PA-LED panel.

Ensure the PoE switch is compliant with IEEE802.3at, class 4, 25.5 W.

The Android panel should receive power via the Ethernet connection and begin booting up.

8.2 Mounting the Device

For mounting instruction please refer to the [Installation](#) section of this manual.

8.3 Setting up Network Configuration

After the first startup of the device, make sure that the network configuration of the device is correct. To do this, follow the below instructions.

- **Access to settings:** Open the Settings app on the Android panel. It can be found by swiping down from the top of the screen and tapping the gear icon, or by searching for "Settings" in the list of apps.

Note: Make sure that the kiosk mode is turned off in the iC SmartView to access the settings menu.

- **Network & Internet settings:** In the Settings menu, scroll down and select "Network and Internet." This option includes configuration of WiFi and Ethernet connections.

WiFi configuration:

- Tap on "WiFi" to access WiFi settings.
- Toggle the switch at the top to turn on WiFi if it is not already on.

The device will start scanning for available WiFi networks. When the scan is complete, tap the network to connect to.

If the network is secured, a password prompt will appear. Enter the password and tap "Connect."

Ethernet network setup:

If a wired Ethernet connection is used, the device must be connected to the Ethernet port using an Ethernet cable.

Once connected, return to the Network and Internet settings.

- Tap on "Ethernet" to access the Ethernet settings.
- Toggle the switch at the top to enable Ethernet if it is not already on.

The device should automatically detect the Ethernet connection and establish it in the DHCP mode. If a static IP address is used make sure to configure it and change the Ethernet IP mode from DHCP to static.

Note: Only one active connection, WiFi or Ethernet, is possible at a time. Make sure to disable WiFi if the Ethernet connection is required.

8.4 Device Admin Apps

In order to provide enhanced control, security, and management over the PA-LED panels using the iC SmartView, especially in the kiosk mode, it is necessary to enable the "Device admin apps" setting. This setting allows the application to prevent an unauthorized access to Android settings and other important features of the application. Please ensure that the iC SmartView is enabled in Settings > Security and privacy > Device admin apps.

8.5 iC SmartView as a Home App

To ensure the proper operation of the PA-LED panels, make sure that iC SmartView is set as a home screen launcher in the Android menu.

- Open Settings → Apps & notifications → Advanced → Default apps → **Home app** and make sure that iC SmartView is toggled as the default application.

8.6 LED Bar

The LED bar on the PA-LED panels allows user interaction with variable colors. The bar can be configured using the iC SmartView app. The application allows to enable/disable and test different colors. The LED bar can be customized using the REST API. See the API section in the [iC SmartView](#) manual for more details.