

Instruction Manual

Please read this manual carefully prior to use of the product, and keep it properly.



21.5" Capacitive Touch Monitor with RFID

LKX21ECCRBD-IL2

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Foreword

Notes on documentation

This description is intended exclusively for trained specialists in controlling and automation technology who are familiar with the applicable national standards. For installation and commissioning of the components it is absolutely necessary to observe the following notes and explanations. The qualified personnel must ensure that the application or use of the described products meets all safety requirements, including all applicable laws, regulations, provisions and standards.

Disclaimer

This documentation has been carefully prepared. However, the products described are subject to continuous further development. Therefore, the documentation is not always completely checked for compliance with the described performance data, standards or other features. If it contains technical or editorial errors, we reserve the right to make changes at any time and without notice. The information, illustrations and descriptions in this documentation do not constitute grounds for claims for changes to products already supplied.

Copyright

Passing on and reproduction of this document, use and communication of its contents are prohibited unless expressly permitted. All rights reserved in case of patent, utility model or design patent registration.

State of delivery

All components are delivered in specific hardware and software configurations depending on the application requirements. Changes to the hardware or software configuration, which go beyond the documented possibilities are not permitted and result in the exclusion of liability.

Explanation of the safety symbols

The following safety symbols are used in these operating instructions. These symbols are primarily intended to draw the reader's attention to the text of the adjacent safety instructions.

 DANGER	Acute danger of injury! If the safety instruction next to this symbol is not observed, there is an immediate danger to life and health of persons.
 WARNING	Caution Risk of injury! If the safety instruction next to this symbol is not observed, there is a danger to life and health of persons.
 CAUTION	Injury to persons! If the safety instruction next to this symbol is not observed, persons may be injured.
 Attention	damage to the environment or equipment If the note next to this symbol is not observed, the environment or equipment may be damaged.
 Note	Tip or pointer This symbol indicates information that contributes to better understanding.

Basic security measures

Below are some basic security measures to ensure proper operation of the Touch Monitor.

 Attention	Switch off all system components, then disconnect the fieldbus Before opening the Touch Monitor housing and whenever the Touch Monitor is not used for control purposes, for example during the functional test after a repair, all system parts must first be switched off and then the Touch Monitor must be disconnected from the system. Switched off system parts must be secured against being switched on again.
 Attention	Do not replace any parts when under voltage When installing and removing components, the supply voltage must be switched off. Damage can occur during installation in the Touch Monitor: • If metal objects such as screws or tools are placed in the circuit boards. • If Monitor internal connection cables are pulled off or plugged in during operation.

Duty of care for the operator

The operator must ensure that:

- The Touch Monitor is only used for its intended purpose (see chapter Product Description).
- The Touch Monitor is only operated in a faultless, fully functional condition.
- The operating manual is always available in a legible condition and complete at the place of use of the Touch Monitor.
- Only sufficiently qualified and authorized personnel operate, maintain and repair the Touch Monitor.
- This personnel is regularly instructed in all applicable questions of occupational safety and environmental protection, and the operating manual and in particular the information contained therein contained in the safety instructions.
- All safety and warning notices attached to the Touch Monitor are not removed and stay legible.

Depending on the type of machine and system in which the Touch Monitor is used, there are national regulations for the control of such machines and systems which the operator must comply with. These regulations regulate, among other things, the intervals at which the controller must be checked.

The operator must arrange for this inspection within a certain period of time.

 Attention	Only qualified personnel may open the housing of the Touch Monitor The operator must ensure that only trained electrical specialists open the housing of the Monitor. In this case the warranty will become invalid.
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In the event of faults on the Touch Monitor, the list in the Troubleshooting section can be used to determine which measures should be taken.

Requirements for the operating personnel

Every user of the Touch Monitor must have read this operating manual.

General warning

If you notice a burning smell or the device is making noise, disconnect it from the power supply immediately.

 Note	Cleaning To clean the device, switch it off and use a dry, soft cloth with light pressure.
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Product description

Appropriate use

The Capacitive Touch Monitors are used in many different application areas (in industrial or retail applications).



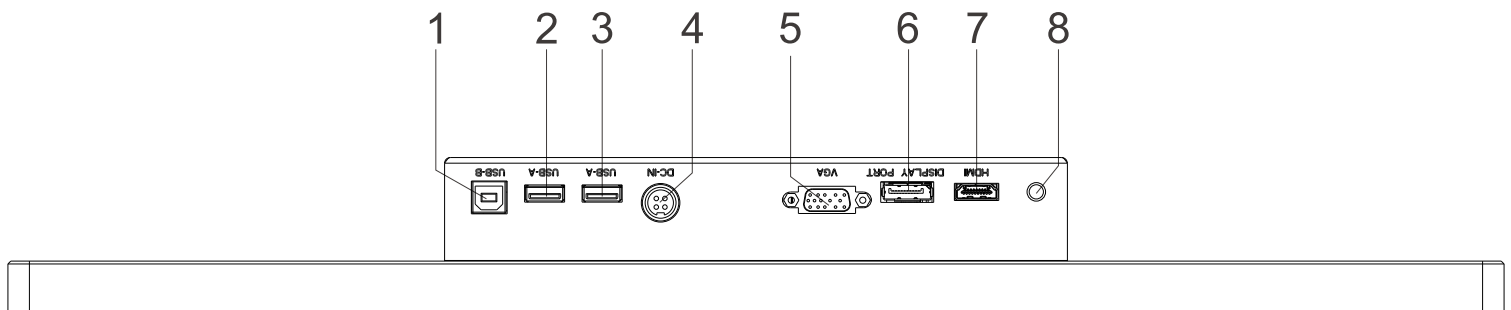
Front of the 21.5" Capacitive Touch Monitor with RFID reader



Connectors of the 21.5" Capacitive Touch Monitor with RFID reader

Interfaces

Interfaces of the Capacitive Touch Monitors



Bottom side of the 21.5" Capacitive Touch Monitor with RFID reader

USB Type-B (for touch)

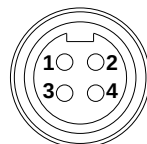
The USB Type-B socket (1) enables the Touch Monitor to connect the touch function directly to the PC it is connected to.

USB-A

The USB-A sockets (2, 3) enables various connections using USB connection.

Power Supply

The power supply of the monitor is established via the socket (4). The DC-In input is 9-36V and uses a 4-Pin connector.



Pin 1 = 9-36V	Pin 3 = GND
Pin 2 = 9-36V	Pin 4 = GND

VGA (Video Graphics Array)

The VGA connector (5) is for transmitting the video signal.

DP (Display Port)

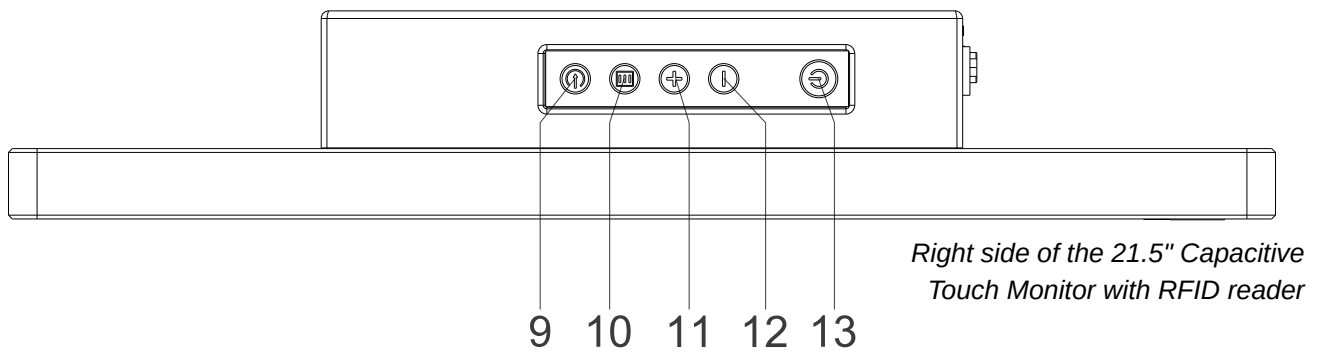
The DP connector (6) is for transmitting the video signal (default input).

HDMI (High-Definition Multimedia Interface)

The HDMI terminal (7) is for transmitting the video signal.

M5 PE-Bolt

This bolt (8) is a connection to the housing without grounding.

**Button 1: SOURCE**

With this button (9) the menu is opened to choose the right input source (HDMI, DP, VGA).

Button 2: MENU

With the button (10) you can open the OSD menu -or- confirm selection in the OSD menu.

Button 3: +

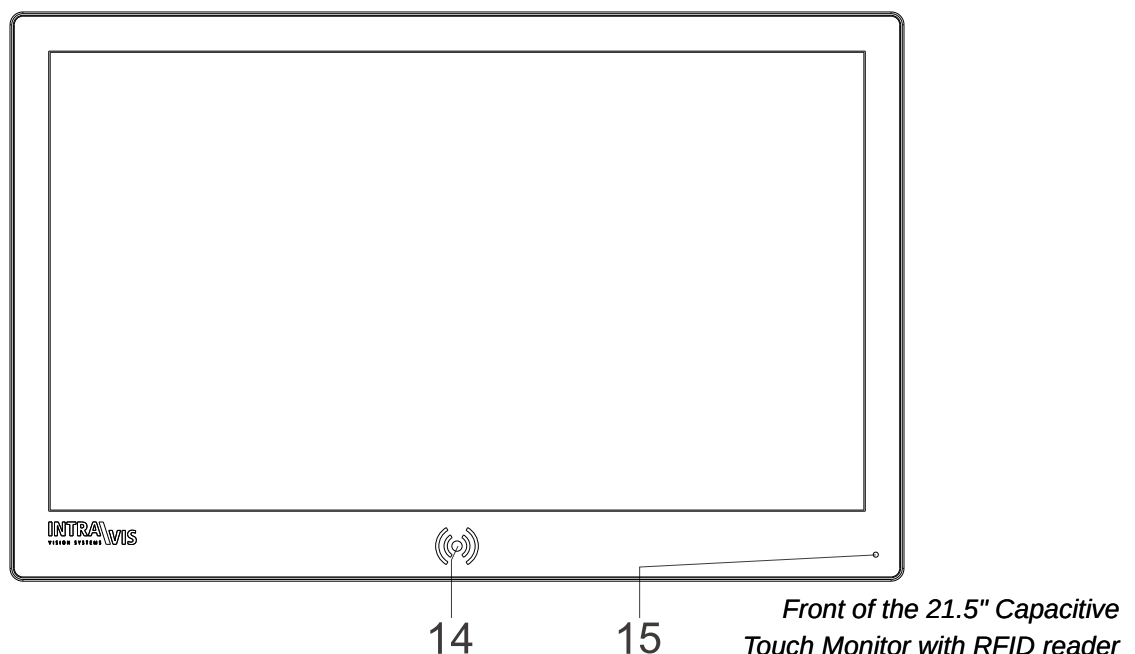
This button (11) is able to increase the volume -or- navigate in the OSD menu (right / up) -or- change the highlighted values in the menu.

Button 4: -

This button (12) is able to decrease the volume -or- navigate in the OSD menu (left / down) -or- change the highlighted values in the menu.

Button 5: On / Off switch

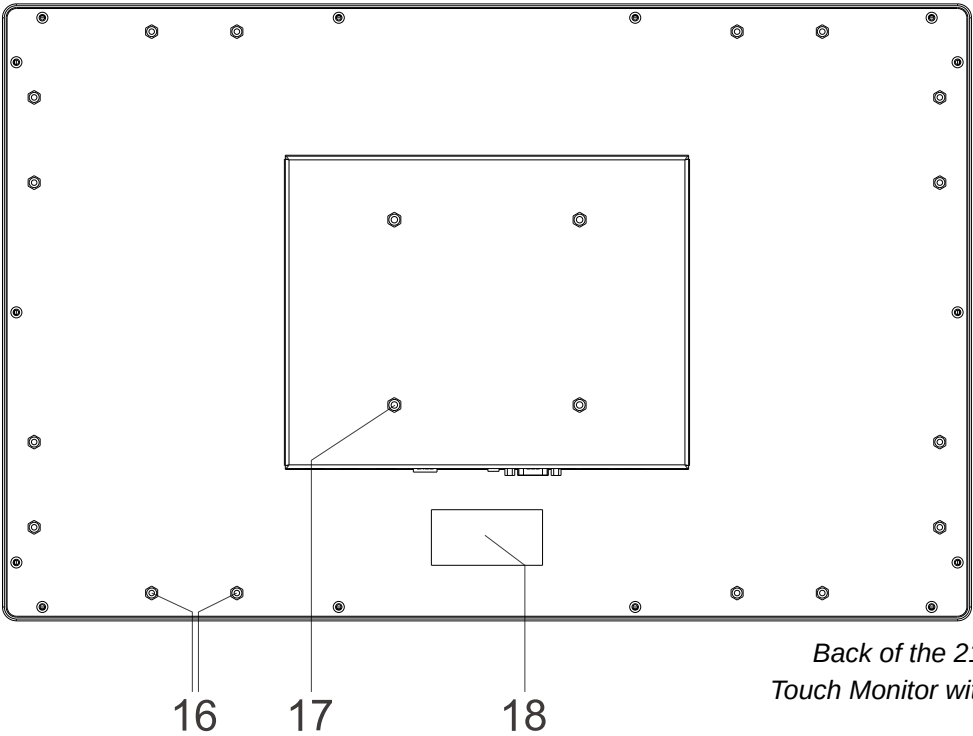
With the button (13) the Touch Monitor can be switched on and off.

**RFID reader**

The RFID reader (14) is integrated into the front of the device and can be used to scan RFID cards.

LED light

The LED light (15) is located on the front and shows the status of the monitor (more info on page 13).



Clamp support mounting holes

The small clamp support mounting holes (16) provides an easy and simple mounting solution for integration into a machine, server door or any cut-out. Also, additional peripherals, can be mounted using these holes.

VESA 100 mounting holes

The VESA 100 mounting holes (17) supports in easily integrating or mounting the unit on a wall or stand. The thickness of the holes are suitable for M4 screw threads.

Product label

The product label (18), with model, serial and additional information is located on the back of the device.

Status LEDs

-  **No LED**
There is no power supply.
-  **Green LED**
The touch monitor is switched on.
-  **Red LED**
The Touch monitor is connected to a power source, but it is currently switched off.

 Attention	Moving or cleaning the device Make sure that you only clean or move the device when the LED light is off.
--	---

Scope of delivery

This device has no included accessories.

Installation instructions

Transportation

Despite the robust design, the built-in components are sensitive to strong vibrations and shocks. Therefore, protect your touch monitor from high mechanical stress during transport. Use the original packaging for shipping.

 Attention	Risk of damage to the device When transporting the device in cold weather or if the device is exposed to extreme temperature fluctuations, make sure that no moisture (condensation) condenses on or in the device. Allow the device to slowly adjust to room temperature before putting it into operation. If there is condensation, the unit may only be switched on after a waiting period of about 12 hours.
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Unpacking

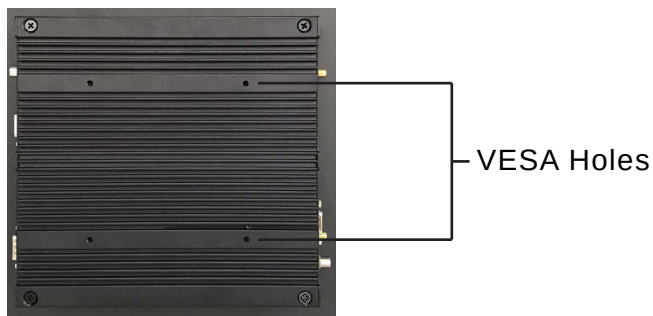
Proceed as follows when unpacking the device:

1. Remove the packaging.
2. Do not throw away the original packaging. Keep it for re-transport.
3. Check the delivery for completeness based on your order.
4. Please keep the documents supplied with the device; they contain important information about the device and on how to use it.
5. Check the package contents for visible transport damage.
6. If you notice transport damage or discrepancies between the contents of the package and your order, please inform the manufacturer.

Mounting options

There are several ways to mount the device:

1. use the VESA-75 or VESA-100 holes on the back to mount the unit on a wall or stand.



** Not the actual device*

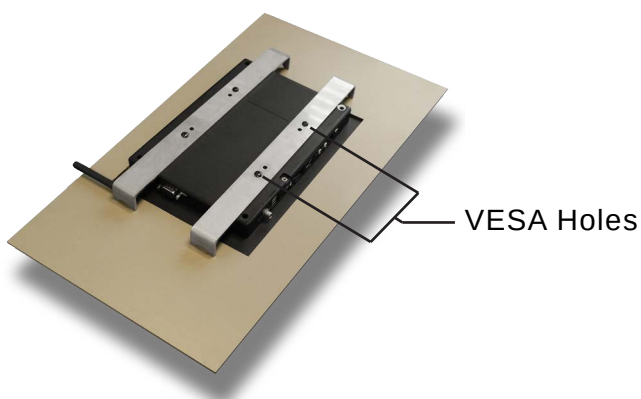


VESA 75/100
Wall Mount
(not included)



VESA 75/100
Metal Stand
(not included)

2. Use the U-profile brackets in combination with the VESA holes to integrate the unit into a cabinet.

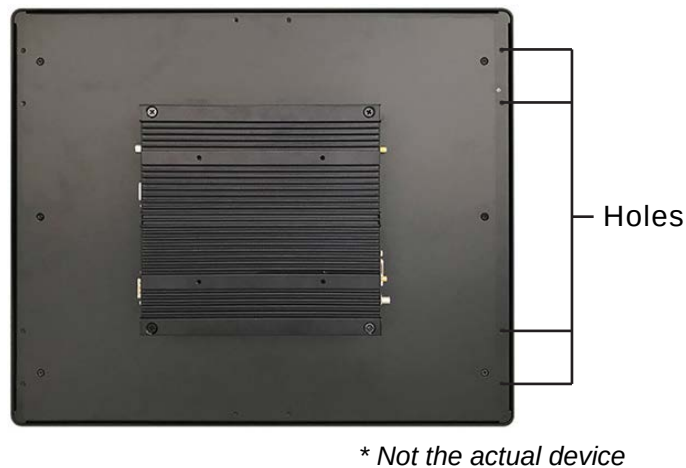


** Not the actual device*



U-Profile
Mounts
(not included)

3. Use the mounting brackets to integrate the device into a cabinet. This mounting solution uses the screw holes that can be used for all peripherals.



** Not the actual device*



*Clamp Supports
(not included)*



** Not the actual device*

Note	Own mounting solution Of course it is also possible to use your own mounting solutions. The supplier is not responsible for the proper use of the mountings.
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Connecting the device

The connectors are located at the rear of the Touch Monitor and are documented in the chapter Product Description. To start the device, connect it to a power source with 9-36V. For all power information see the respective product label.



Attention

Own power supply

Only use your own power supply unit if you are aware of the use of the power supply unit. If the wrong voltage is used, it may destroy the unit.



CAUTION

Fire or smoke

If the appliance catches fire or starts smoking, immediately unplug the appliance and then extinguish with powder or nitrogen.

OSD Menu operation

To fully operate the touch monitor, it is important to understand the options and customizations available in the OSD menu (on-screen display), which can be operated using the touchscreen function or buttons on the side.

First of all, press the Menu button (Ⓜ) located on the back of the monitor to open the OSD menu.

 Note	Buttons on the Device Make sure to understand the function of each button, as explained on page 12, in order to smoothly navigate the OSD menu
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Picture menu

After pressing the Menu button (Ⓜ) as indicated above, the OSD Menu opens up. In this menu, you can navigate right or left by using the (⊕) or (⊖) buttons on the back. Press the Menu button (Ⓜ) once more to select the highlighted menu item and proceed into its specific settings.

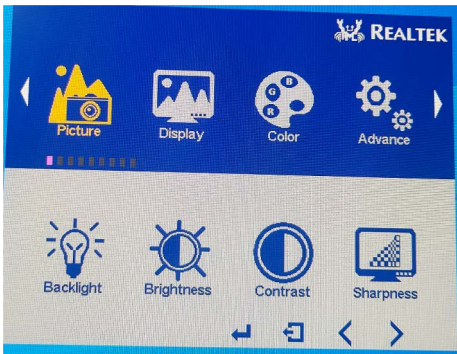
The following settings are available in the Picture menu:

Backlight:
Adjust the brightness of the backlight LEDs.
Range: (0 - 100)

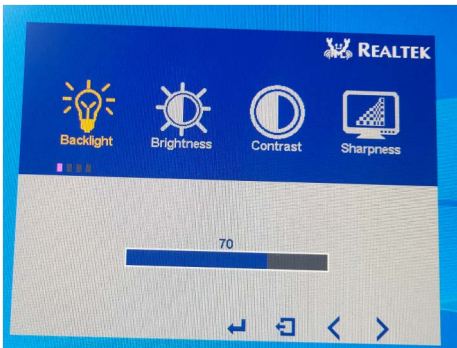
Brightness:
Adjust the brightness of the LCD Panel.
Range: (0 - 100)

Contrast:
Adjust the contrast of the display screen.
Range: (0 - 100)

Sharpness:
Adjust the sharpness of the display screen.
Options: (0, 1, 2, 3, 4, 5)



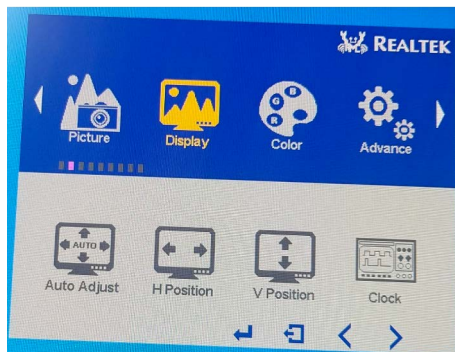
1: Picture menu



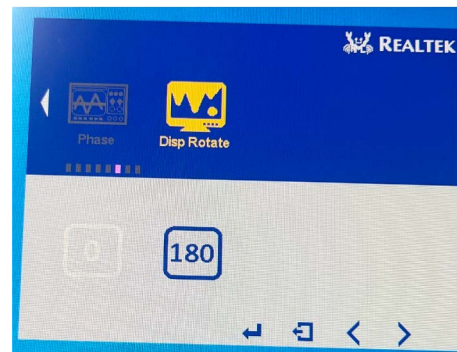
2: Picture menu
(backlight adjustment)

Display menu

The following settings are available in the Display menu:



3: Display menu



4: Display menu
(display rotation)

Auto adjust:

Auto adjust the display position to match the size and ratio of the screen (only available if connected using VGA).

H position:

Adjust the display position in the horizontal direction (only available if connected using VGA).

V position:

Adjust the display position in the vertical direction (only available if connected using VGA).

Clock rate:

Adjust the internal oscillation frequency of the display (only available if connected using VGA).

Display rotation:

Adjust the display direction, allowing the display to be flipped upside down.

Options: (0°-standard, 180°-upside down)

Color menu

The following settings are available in the Color menu:

Panel uniformity:

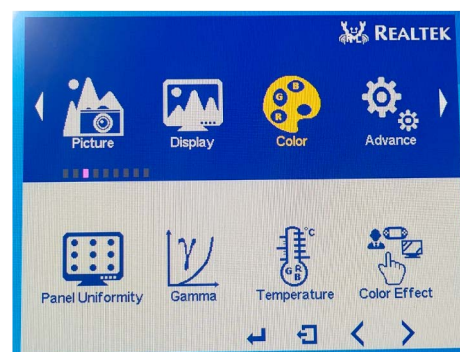
Adjust the panel uniformity, to ensure the brightness and color is consistent across the entire screen.

Options: (on, off)

Gamma:

Select the gamma type of the display.

Options: (off, 1.8, 2.0, 2.2, 2.4)



5: Color menu

OSD Menu operation

Temperature:

Adjust the color temperature of the display to be warmer or colder.

Options: (9300, 7500, 6500, 5800, sRGB, User)

Color effect:

Select the color effect of suitable for your application.

Options: (standard, game, movie, photo, vivid, user)

Demo type:

Select the demo type of the display.

Options: (off, type1, type2, type3, type4, type5)

Color format:

Adjust the color format of the display.

Options: (RGB, YUV)

PCM:

Select the pulse-code modulation type.

Options: (user, native)

Hue:

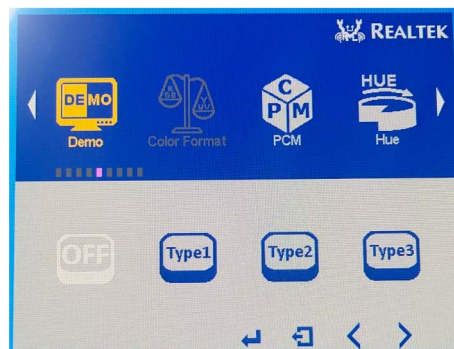
Adjust the hue of the display.

Range: (0 - 100)

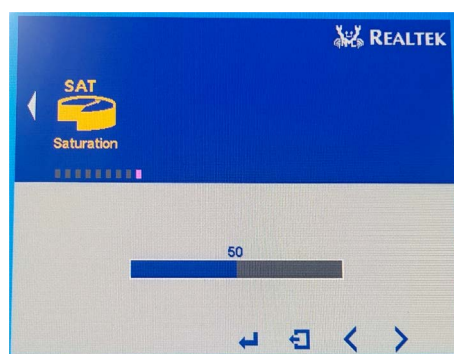
Saturation:

Adjust the saturation of the display.

Range: (0 - 100)



6: Color menu
(demo settings)



7: Color menu
(saturation settings)

Advance menu

The following settings are available in the Advance menu:

Aspect ratio:

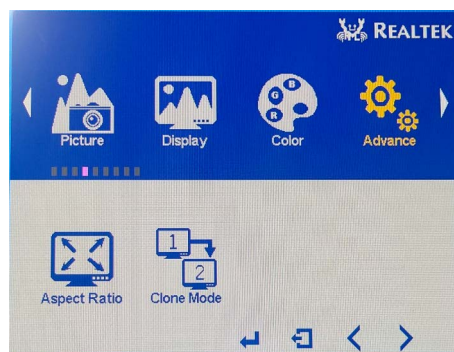
Adjust the aspect ratio of the display.

Options: (full, 16:9, 4:3, 5:4, 1:1, user)

Clone mode:

Select the gamma type of the display.

Options: (single, clone, extend)



8: Advance menu

Input menu

The following settings are available in the Input menu:

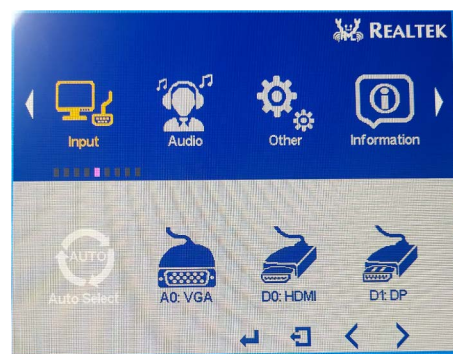
Options:

Auto select: set to auto detect input signal

A0-VGA: set to input VGA signal

D0-HDMI: set to input HDMI signal

D1-DP: set to input DP signal



9: Input menu

Audio menu

The following settings are available in the Audio menu:

Volume:

Adjust the volume.

Range: (0 - 100)

Mute:

Mute or unmute the sound.

Options: (on, off)

Stand along:

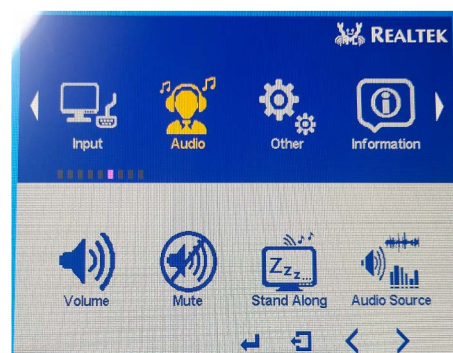
Turn the stand along settings on or off.

Options: (on, off)

Audio source:

Switch the audio source.

Options: (analog, digital)



10: Audio menu

Other menu

The following settings are available in the Other menu:

Reset:

Set all the settings back to their initial values.

Menu time:

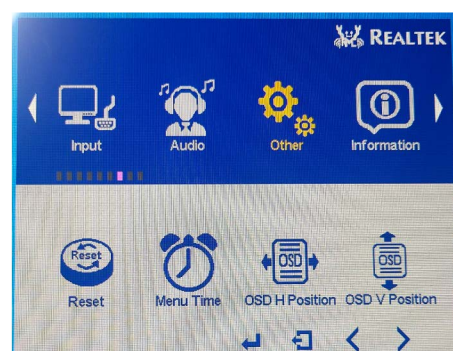
Adjust the menu display time settings.

Range: (0 - 60)

OSD H position:

Adjust OSD position in the horizontal direction.

Range: (0 - 100)



11: Other menu

OSD Menu operation

OSD V position:

Adjust OSD position in the vertical direction.
Range: (0 - 100)

Language:

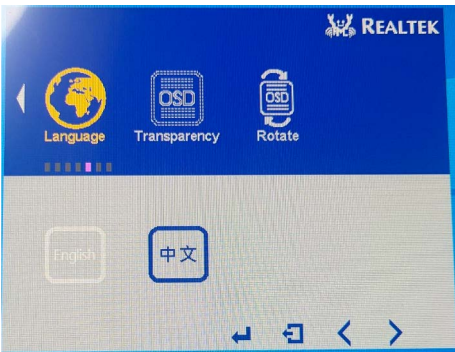
Change the language settings of the OSD menu.
Options: (English, 中文)

OSD transparency:

Adjust the OSD menu transparency.
Range: (0 - 255)

Rotate:

Rotate the OSD menu on the screen.
Options: (0°, 90°, 270°, 180°)

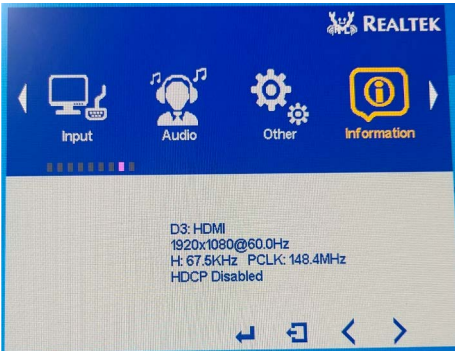


12: Other menu
(language settings)

Information menu

The Information menu shows the display information.

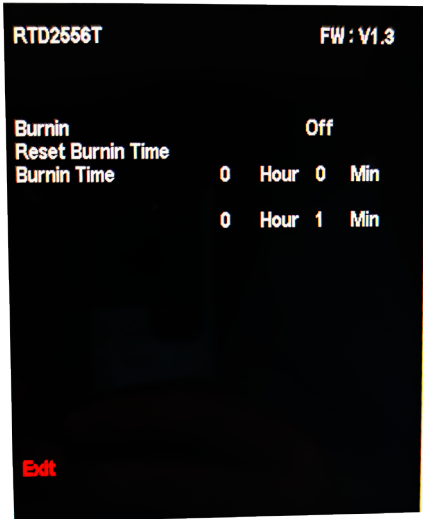
D3: [video connector]
[screen resolution] @ [frequency] Hz
H: [frequency] KHz PCLK: [frequency] Mhz
HDCP [enabled / disabled]



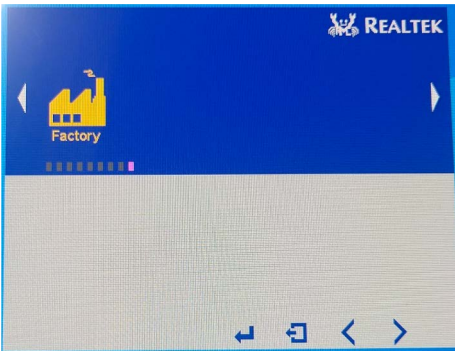
13: Information menu

Factory menu

By clicking on Factory in the OSD menu, a new menu will open which focuses on software information and burnin function.



14: Factory information
(separate menu)



13: Factory information

Troubleshooting & FAQs

Troubleshooting

No image

1. First check whether the power supply is correctly connected and working (green LED on power supply unit)
2. Ensure that the monitor is correctly connected to an external PC in order to receive the source. Also, double-check the cables whether they are fully plugged in.
3. If none of the above points leads to success, please contact us directly, under the contact details given on the next page.

Touch function is not accurate

1. Please download the latest touch drivers from our website and perform a recalibration to recalibrate the touch screen.

FAQs

Everything on my screen is mirrored or upside down, what should I do?

Within the OSD menu, you can adjust the image mirrored or upside down. This function is necessary if the monitor is mounted upside down or you are using a rear view camera. The settings can be made in the OSD menu if a video source is connected and you open the OSD menu.

The touch function does not work properly, what can I do?

If you have problems with the touch, please check if the driver and all cables are installed correctly. Otherwise the most common error is caused by the protective foil on the touch display. Please remove the protective foil to get the best possible use out of the display.

Can I calibrate the touch function accurately?

The touch panel is adjusted during the manufacturing process. However, you can always make a new calibration in the touch software under the calibration point.

Does the touch functionality affect the image quality?

No, the touch panel is transparent and non-reflective. So you will not notice the additional panel.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

Appendix

Declaration of Conformity

Hereby the supplier declares that the equipment is in compliance with the essential requirements and other relevant regulations of the directives 2014/53/EU, 2014/30/EU, 2014/35/EU, 2011/65/EU, SI 2016/1091, SI 2016/1101 and SI 2017/1206

Contact Information

Legal information and responsibility

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<https://www.canvys.de>

Please use the following link for the registration of service issues:
<https://www.canvys.de/support/teklink/>