

WS Series HMI Installation Manual

Part 1 General note

- Please follow all warnings and instructions, install the device according to the manual, and do not install it improperly.
- Fully insert the power plug into the socket. Incomplete insertion may cause overheating and fire.
- The power plug must be fully inserted into the socket, if not fully inserted, it may cause overheating and lead to fire.
- Turn off the power before cleaning. Wipe the surface using alcohol or approved electronic cleaning agents only.
- Do not disassemble or repair the device yourself, to avoid high-voltage electric shock or other hazards.
- Do not install the device near radiators or other heat sources to avoid device damage.
- Disconnect the power plug and switch off the main power supply when the device will remain unused for an extended period.

Part 2 Safety precautions

During installation, wiring, operation, maintenance and inspection, always pay attention to the following safety precautions.

Installation requirements:

- Please install the HMI according to the requirements of this manual to avoid possible damage to the device.
- Do not use the product in environments with water vapor, corrosive gases, flammable gases or similar substances to avoid electric shock or fire hazards.

Wiring

- This series of HMIs operates on AC 220 V or DC 12 V power supplies only. Connection to power sources outside these specifications may result in unstable parameters or performance, and in severe cases, cause permanent equipment damage.
- Simultaneous connection of AC 220V and DC 12V power sources is strictly prohibited. Such operation may lead to burnout of the HMI, rendering the unit inoperable.

Operation

- HMIs of this series shall be used together with RH-series V-BOX host.
- Do not change the wiring when the power is on, otherwise it may cause electric shock or personal injury.
- Do not touch the panel with sharp objects, otherwise the panel may be dented and the display unit may not work properly.
- HMI is professional device and must be installed, used and maintained by trained and skilled technicians. Children are prohibited from operating it.

Maintenance

- Do not touch the inside of the HMI, otherwise it may cause device damage and electric shock.
- When the power is on, it is prohibited to remove the HMI panel, otherwise it may cause device damage and electric shock.

- Do not touch wiring terminals within 10 minutes after power off. Residual voltage may cause electric shock.
- Do not block the exhaust vents during operation, as this may cause malfunction.

Communication Wire Requirements

- Please use communication wiring cables according to standard specifications.
- The length of the communication cable must comply with the regulations.
- Use the correct grounding loop to avoid poor communication.

Part 3 Work environment

This product must be placed in its packaging before installation. If it is not in use temporarily, in order to ensure that the product complies with the company's warranty and future maintenance, please pay attention to the following matters during storage:

- It must be placed in a dust-free and dry place;
- The ambient temperature of the storage location must refer to the range of the "Product Specifications";
- The humidity of the storage location must refer to the range of the "Product Specifications";
- Avoid storage in an environment containing corrosive gases or liquids;
- Best suited for packaging and storage on a shelf or countertop.

Part 4 Basic inspection

Please perform the following basic tests before using this series of HMI:

General inspection

- Regularly check whether the data cables connecting the HMI ports and equipment are loose
- Vent holes shall be kept free from ingress of foreign substances including oil, water and metal powder. In addition, cutting dust from electric drills must be prevented from falling into the HMI.
- If the HMI is installed in locations with hazardous gas or heavy dust, prevent hazardous gas and dust from infiltrating the unit.

Pre-operation inspection (control power not supplied)

- Please insulate the wiring part of the wiring terminal.
- The communication wiring should be correct, otherwise abnormal operation may occur.
- Check whether there are any foreign objects entering the HMI, especially conductive objects such as screws or metal sheets, or flammable objects.
- When electronic instruments used near the HMI are subject to electromagnetic interference, please use instrument calibration to reduce electromagnetic interference.
- Please make sure that the power supply voltage of the HMI is correct.

Pre-operation inspection (control power supplied)

- Check whether the power indicator light is on.
- Check whether the communication between each device is normal.
- If there is any abnormality in the HMI, please contact the manufacturer.

Part 5 Packing list

Number	Object	Quantity
1	Device	1
2	Power cable	1
3	Warranty card	1
4	Certificate of conformity	1
5	Universal VESA mount bracket	1
6	USB touch extension cable	1
7	Matching fixing screws	4
8	HDMI data cable	1
9	Fixing bracket	1

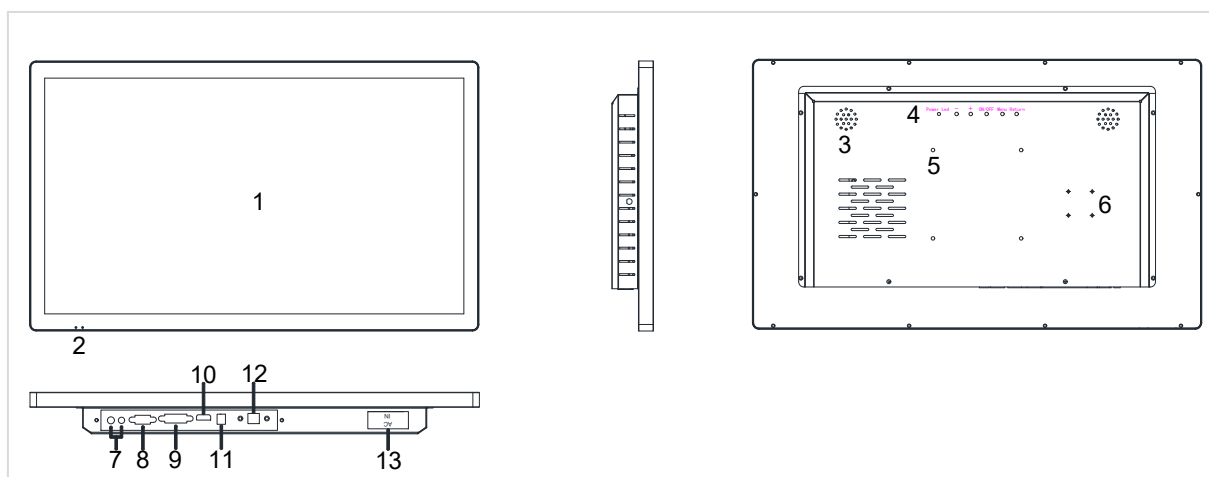
Part 6 Specifications

Model	WS2105
Content	
Application scenario	Indoor
Input voltage	AC 110 to 220 V / DC 12 V
Standby power	≤ 1 W
Rated power	≤ 35 W
Service life	> 50000 hours
Operating ambient temperature	0°C to 55°C
Storage temperature	-5°C to 60°C
Operating ambient humidity	10% RH to 80% RH
Storage humidity	10% RH to 80% RH
Installation	Supports wall mounting / ceiling mounting
Net weight	5.2 kg
Overall dimension	509.2*305.8*47mm
Mount hole spacing	100*100mm
Panel size	21.5 inches
Resolution	1920*1080
View angle	89/89/89/89
Display area	475 x 267 mm
Aspect scale	16:9
Screen brightness	≥ 250 cd/m ² (typical)
Backlight type	W-LED
Contrast	1000:1
Refresh rate	60 Hz
Pixel arrangement	Vertical RGB stripe
Response time	13/5 (Typ.) (Tr/Td)

Part 7 Basic functions

Function		Description
Video decoding		Supports decoding and playback of video and images up to 1080P
Power-on mode		Power-on auto start
Signal detection		Automatic detection of signal input source
Standby function		Auto enter standby mode when no signal input
Choose language		Supports multi-languages including Chinese, English, etc.
Audio function		Built-in 2 high-quality loudspeakers
Light color	Black	No power supply
	Red	Standby mode
	Blue	Working mode

Part 8 Parts and function



WS2105 appearance object description

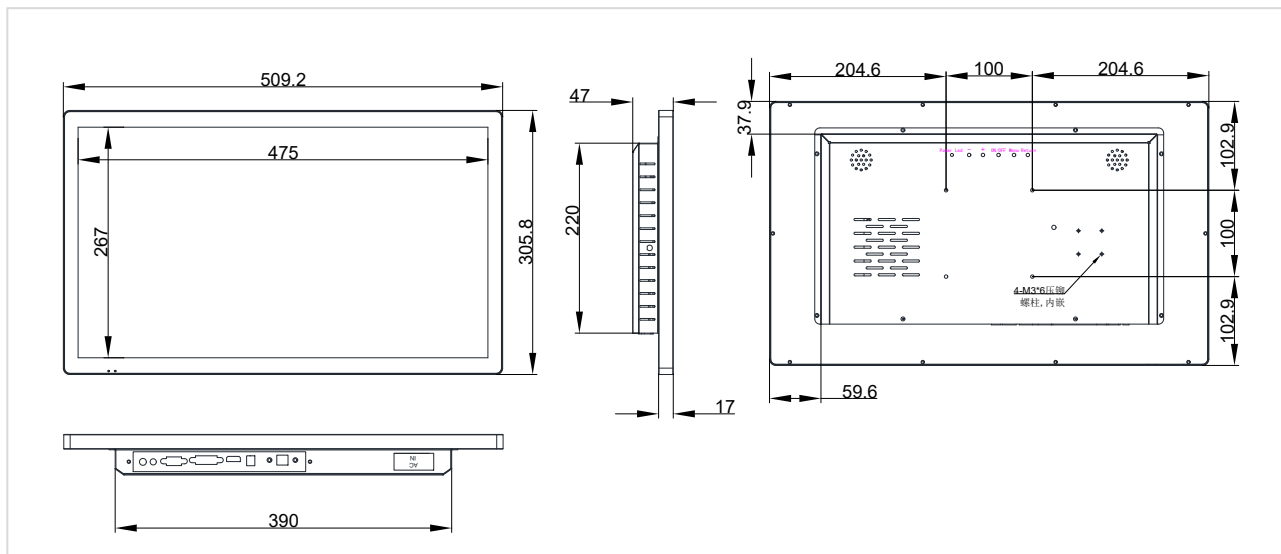
1	LCD and touch screen	2	IR remote indicator light	3	Loudspeaker	4	Indicator lights and function buttons
5	VESA mounting holes	6	Mounting bracket threaded holes	7	Audio port	8	VGA port
9	DVI port	10	HDMI port	11	DC power input	12	USB-B
13	Power switch and AC power port						

Note:

- (1) The VESA mounting holes are compatible with 100 x 100mm hanging brackets.
- (2) The AC power port and the DC power port cannot be connected at the same time.

Part 9 The size of product

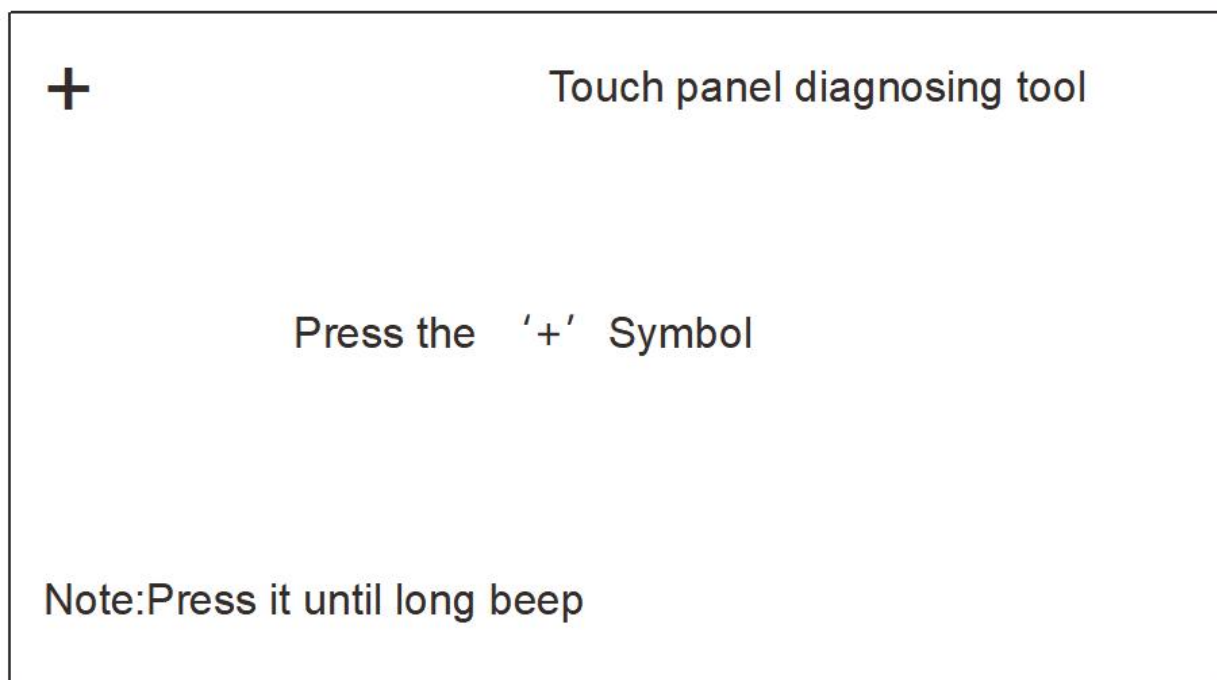
Unit: mm, error range ± 0.5 mm



WS2105 mounting dimension drawing

Part 10 Touch screen calibration

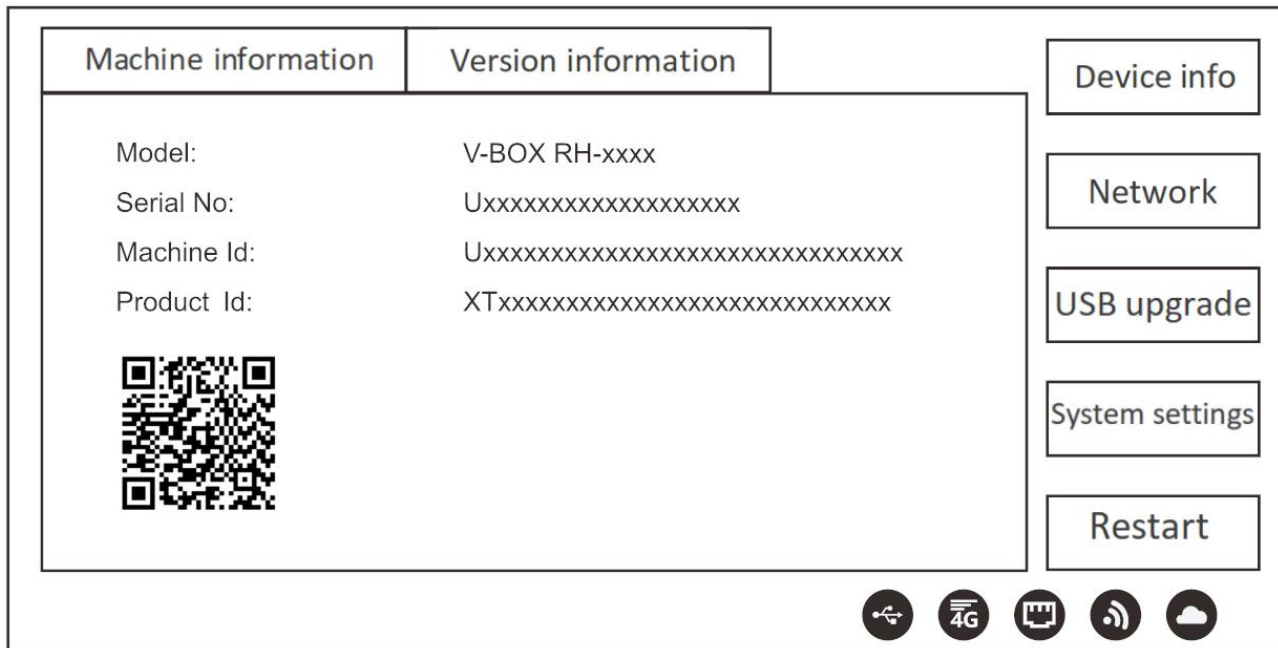
After the WS2105 is connected to the RH series V-BOX, press and hold the upper-left corner of the screen for approximately 3 to 5 second. The following screen will appear.



Tap the "+" marks at the upper-left corner, upper-right corner, lower-right corner, lower-left corner and center point in sequence, then restart the device.

Part 11 Parameters setting

When operating the WS2105 with the RH series V-BOX, a floating icon is available on the project screen. Click this icon to access the system background. Refer to the screen shown below.



Part 12 Interface installation

Note:

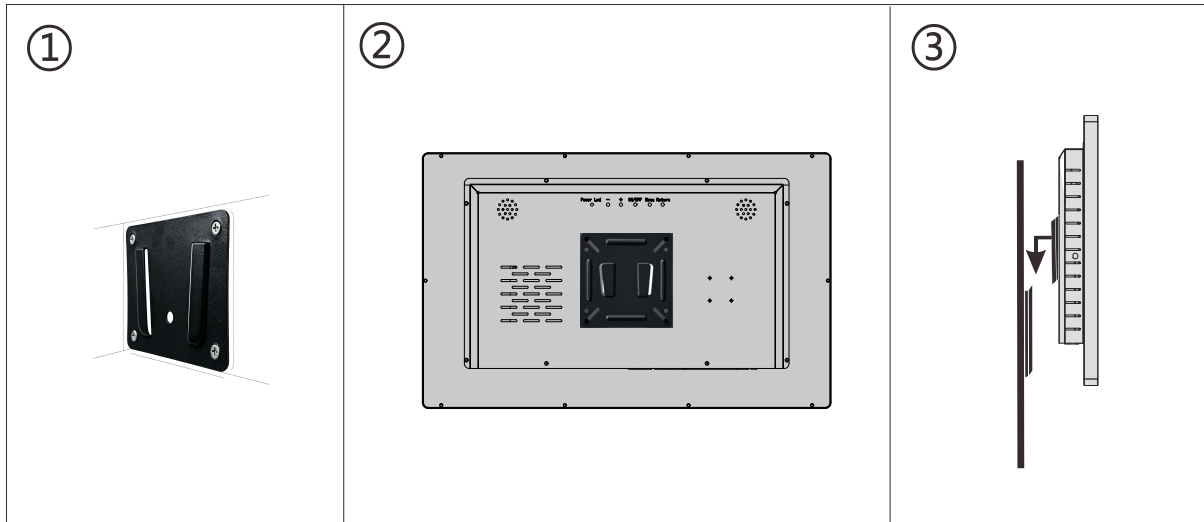
- The installation direction must be according to the requirements of this manual, otherwise it will cause malfunction.
- To ensure a good cooling cycle effect, when installing the HMI, there must be sufficient space between the adjacent objects and baffles (walls) above, below, left and right to avoid damage to the device due to poor heat dissipation.
- Use a type 4x enclosure.

Installation steps:

- (1) Remove the HMI from packaging and take out the universal VESA mount bracket included inside.
- (2) Ensure the wall or cabinet mounting surface is flat and can support at least twice the weight of the device. Mark the four pilot holes for the VESA bracket, drill, and secure the bracket in place.
- (3) Secure the wall-mounting bracket to the pre-set surface using expansion bolts, ensuring the bracket is level and not tilted.
- (4) Align the VESA plate (included with the bracket) with the four holes on the back of the device. Fasten it using the supplied screws, tightening them gradually in a diagonal sequence. Caution: Do not overtighten to avoid stripping threads or damaging the screen. Ensure the plate fits snugly without gaps.
- (5) With both hands, lift the device (now fitted with the plate) and align it with the slots on the bracket arms. Hook it in from top to bottom until you hear a "click" or manually verify it is

locked by giving it a slight shake.

- (6) Route power, USB touch and HDMI signal cables from the device side. Keep cables away from ventilation holes. Power on the device to calibrate the touch function and verify the display.



Installation diagram

Notice

**The contents of this manual are
subject to change without notice.**



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