



# **Motorized Paperless Dual-screen Interactive Monitor Lift with Microphone**



**TS-FE215MT3**

Before using the system, please read the user manual

## **Document description**

Before using this product, please read this manual carefully and keep it for future reference. Read the safety operation guide carefully. Note: Danger! Pay attention to reminder symbol.

This manual is only for user operation instructions, not for maintenance service purposes. The deadline for the described functions is December 30, 2021. If the functions or related parameters change after this date, supplementary explanations will be made without notice. For details, please contact the dealers.

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The product pictures in this manual are for reference only, please refer to the actual product.

## **Motorized Paperless Interactive Monitor Flipper**

### **Operation Guide**

In order to ensure the reliable use of the equipment and the safety of personnel, please observe the following items during installation, use and maintenance:

- There are live parts in the equipment. Non-professionals should not disassemble the equipment without permission to avoid the risk of electric shock.
- Do not disassemble the device when it is powered on or running to avoid the risk of electric shock.
- Do not operate with wet hands to prevent electric shock.
- It is strictly forbidden to use the product in an environment with flammable materials, explosive gases or heat sources.
- It is strictly prohibited to spill any corrosive chemicals or liquids on or near the equipment.

- Do not block the heat dissipation holes, and keep the working environment well ventilated, so that the heat generated by the device during work can be discharged in time, so as to avoid excessive temperature and damage to the device.
- Do not place the device on an unstable surface to avoid damage caused by the device falling.
- In order to avoid the equipment from being damaged by strong vibration during transportation, it is recommended to use proper packaging or use the original packaging during transportation.
- Do not squeeze the power cord and device with heavy objects.
- The equipment must use a grounded power supply.
- Do not repair it privately, so as not to aggravate the damage to the equipment.
- When moving the device, be careful not to drop the device to avoid personal injury or equipment damage.
- Turn off the main power supply of the equipment when it is in a humid environment or not in use for a long time.
- The equipment shall be used after being stored for a long time and must be inspected and trial run before use.
- Before cleaning the equipment, the equipment must be powered off and clean the equipment with a dry cloth.
- Discarded equipment should be treated as industrial waste, and incineration is strictly prohibited.

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## 1. Description

A lift that combines the computer monitor on the conference table with the conference microphone. This new product is more practical for paperless conference equipment. With rear 11.6-inch IPS full-view screen, seamless and no backplane connection highlighting the high-end and elegant appearance of the product. With paperless conference terminal, it can display the meeting pattern needed, meeting guest name. It can perfectly realize the powerful conference functions of interactive paperless system, the integration of high-definition video and unified communication functions, intelligent multi-screen interactive sharing function, intelligent conference control, audio and video collection and sound amplification system, etc., forming a "people-oriented" intelligent meeting experience. It can be controlled by panel button, RS232 command control and RS485 command.

When you need to use it, just press the up button on the panel. The screen and the microphone have a separate control system, which can be selected according to the needs. The lift is hidden in the conference table. Press the button, the lift and microphone will automatically raise from the cabinet to the desktop and tilt to a certain angle (if the angle is not suitable, you can adjust the appropriate angle by manual button). When they are not in use, you can press the down button to automatically descend to hide them, automatically close the valve and keep the desktop flat, and the LCD screen will automatically disconnect the power supply for efficient meeting, beautiful desktop, elegant appearance and space saving. It is very convenient to use. With anti-theft, dustproof, desktop beautifying and other functions.

## 2. Feature

1. It adopts dual-screen paperless intelligent desktop design. The back is equipped with 11.6-inch IPS full-view screen. It uses seamless and no backplane connection, which highlights the high-end and elegant appearance of the product.. It can display the meeting patterns needed and meeting guest names, perfectly realizing the powerful conference functions of interactive paperless system.
2. The microphone lift has an automatic straightening function. When the straw is bent, the machine can automatically straighten the straw without damaging the straw.
3. The screen and the microphone have a separate lift system, and both can be lifted according to demand.
4. The equipment adopts all-aluminum structure, high-quality aluminum material plus CNC precision processing, the display frame is a whole aluminum alloy, and the whole CNC is formed at one time, and the thinness is not more than 4 mm. The cabinet is made of aluminum alloy, which makes the whole equipment delicate, light, beautiful and elegant.

5. The surface treatment is anodized. The color is bright. Sandblasting, drawing and other processes can be used. And it can also be customized in various colors.
6. With the panel thickness of only 3mm, width of only 70mm, small footprint, it is light compared with traditional lifters. The weight is only one-third of the conventional lifter, which reduces transportation cost and the table pressure.
7. The transmission structure is specially treated to reduce noise.
8. High-definition screen is a well-known brand in China. It adopts Standard-A display screen with high resolution, bright and transparent color. Resolution is 1920\*1080P. Aspect ratio is 16:9.
9. It is matched with high-precision guide rail and linear bearing, and the AC reducer motor is used as the driving power;
10. After rising, the screen automatically powers up, after falling, the screen automatically cuts off power for environmental protection.
11. The main screen and the secondary screen support both HDMI and VGA signal input. When there is only one signal input, the screen will automatically recognize the signal. When two signals are input at the same time, it can be manually switched through the panel buttons. When there is no signal input, the screen will automatically enter power saving mode.
12. Through central control software and host, all monitors in a meeting room can be centrally controlled to lift with one button.
13. With USB port on the desktop panel, the user can read or upload files by U disk.

### 3. Specification

Model	TS-FE215MT3
Touch screen	Support touch
Lift time	36S
Elevation angle	0-30°, fully in line with ergonomic principles, without blocking the sight and face
Product Size	700X77X720mm
Panel size	700X77X3mm
Cabinet size	685X66X717mm
Desktop opening size	687X68mm(recommended to open hole according to the actual product)
Panel sink size	701X78X3mm(longXwidthXThick) (recommended to open hole according to the actual product)
Environmental conditions	-20℃ ~ 50℃, relative humidity≤70%
Screen size	21.5"
Screen ratio	16:9
Screen Resolution	1920*1080
Video interface	VGA, HDMI
Backlight type	WLED, 15K hours, with LED driver
Contrast	1000:1(Typ.) (transmission)
Brightness	250(Min.)
Viewing angle	85/85/80/80 (Typ.)(CR≥10)
Power supply	AC 220-240V 50-60Hz
<b>Microphone specification</b>	
Microphone type	Cardioid directional electret
Frequency response	80Hz-16KHz
Microphone input impedance	1KΩ
Sensitivity	-46dBV/Pa
Maximum SPL	125dB (A)
SNR	>80dB
THD	<0.1%
Power consumption	3W

<b>Secondary specification</b>	
Secondary screen size	11.6 inches
Secondary screen touch	Not support
Secondary screen resolution	1366(RGB)×768 [WXGA]
Contrast of secondary screen	800:1
Secondary screen brightness	250 (Typ.)
Secondary working environment	Working temperature: 0~50℃; Storage temperature: -20~60℃
Working frequency of secondary screen	60Hz

Viewing angle of secondary screen	89/89/89/89 (Typ.)(CR≥10)
Secondary screen type	IPS
Secondary screen voltage	3.3V
Display size	256.125×144 mm (H×V)
Signal system	eDP (1 Lane), connector, 30 pins

#### 4. Packing list

Serial number	Accessory name	User manual
1	Lifting machine	1
2	Power cable	1
3	Touch data line	1
4	User manual	1
5	Data USB cable	1
6	Serial line	1

**This machine is strictly packaged before leaving the factory. Please confirm whether the ordered products and accessories are damaged, deformed or missing. If it is damaged, inconsistent or missing, please contact us.**

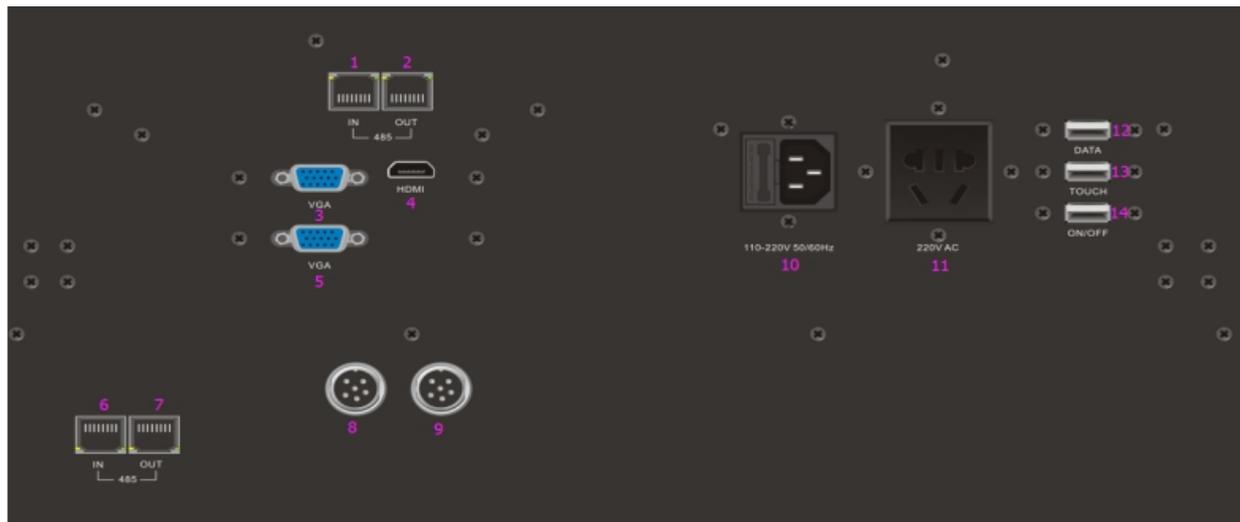
## 5. Appearance structure description

### 5.1 Front panel function



Serial NO.	Name	Description
1	USB interface	Read data
2	Lift up key	Control screen rising function (adjustable tilt angle 0-30°)
3	Lift pause button	Can pause the screen up or down function at any time
4	Lift down button	Control screen descending function (adjustable tilt angle 30-0°)
5	Signal switch button	If access to VGA and HDMI signals at the same time, the VGA signal and HDMI signal can be switched
6	Computer host switch button	Control the switch function of the host computer
7	Microphone lift hole	When the microphone rises, the dome cover will open, and the dome cover will close when the microphone is lowered.
8	Microphone up key	Press the microphone up button, the microphone rod will rise from the inside of the cabinet to a suitable position
9	Microphone rod pause button	Press the microphone pause button to pause the up or down of the rod
10	Microphone down button	Press the microphone up button, the microphone rod will drop from the panel to the inside of the case
11	Microphone enable button	When you need to speak, press the enable button to realize the speech function, and then press to turn off the microphone after speaking

## 5.2 Rear panel function

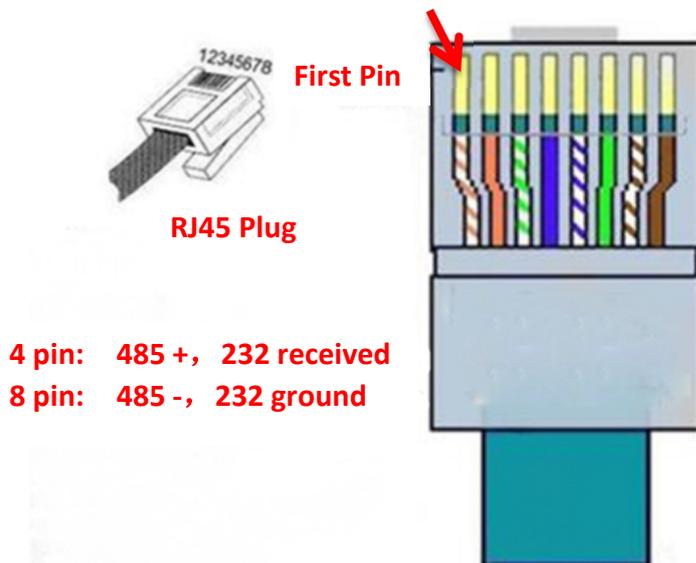


Serial NO.	Name	Description
1	Screen central control 485 input port	485 network input interface for screen lifting central control
2	Screen central control 485 output port	485 network output interface for screen lifting central control
3	Main screen VGA signal interface	VGA video signal input interface for main screen
4	Main screen HDMI signal interface	HDMI video signal input interface for main screen
5	Secondary screen VGA signal interface	VGA video signal input interface for secondary screen
6	Microphone lift central control 485 input port	485 network input interface for microphone lifting central control
7	Microphone lift central control 485 output port	485 network output interface for microphone lifting central control
8	Microphone signal input interface	For microphone signal input interface
9	Microphone signal output interface	For microphone signal output interface
10	Power input interface	For power input interface
11	Power output interface	For power output interface
12	Data transmission USB interface	Used to connect the USB data transmission interface
13	Touch line USB interface	For touch function interface
14	Switch machine USB control interface	Used to control the host switch machine interface

1. The board inserted on the rear panel is for reference only;
2. Product pictures are for reference only, please refer to the actual product.

## 6. Central Control Protocol Control Code

(1) It adopts 232 and 485 protocol control. There are two RJ45 network jacks at the bottom of the device, and multiple sets of common network cables adopts hand-in-hand serial connection. network cable and device protocol connection as shown below:



Baud rate: 2400

Parity check: N

Data bits: 8

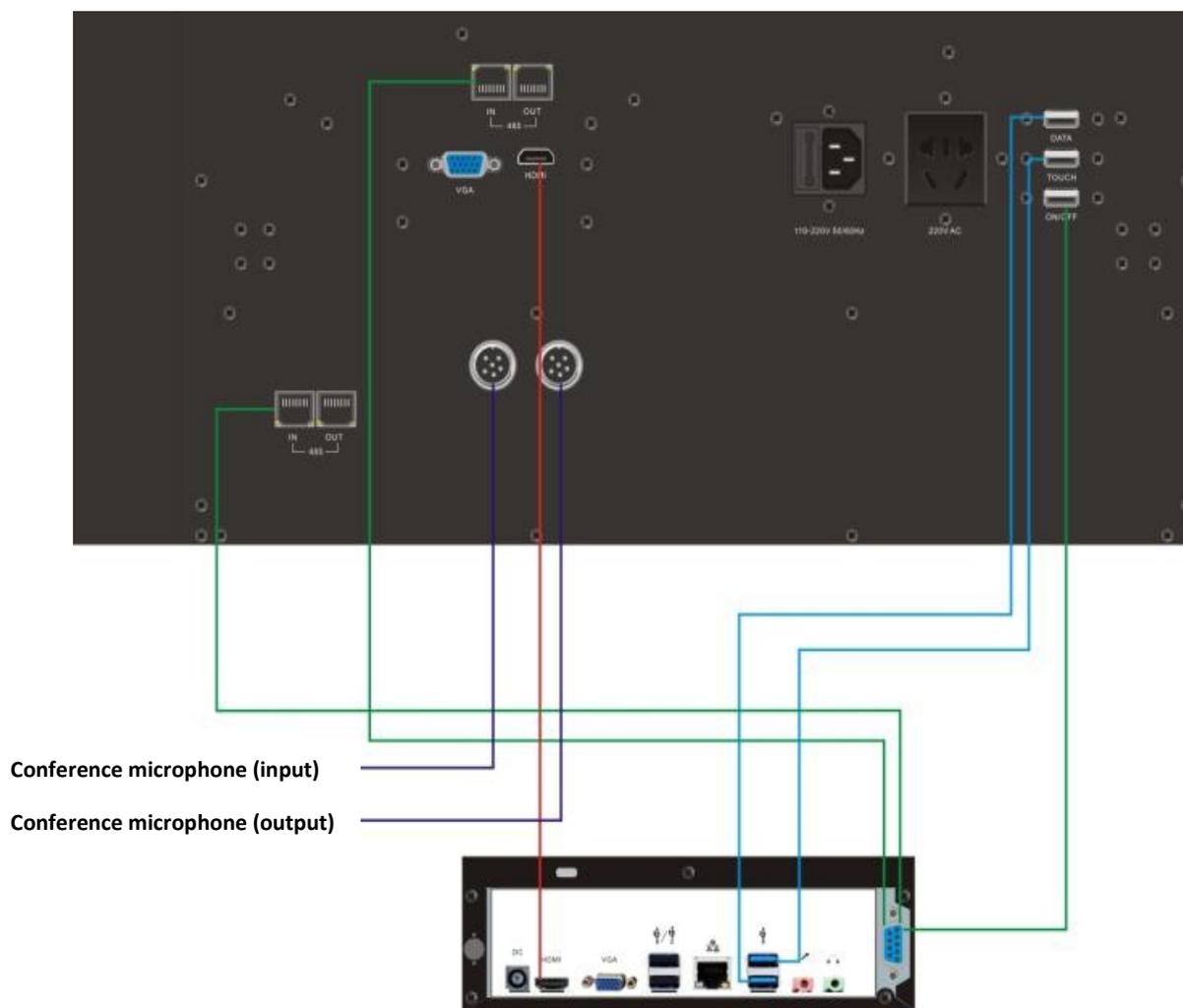
Stop bit: 1

Up code: FF EE EE EE DD

Down code: FF EE EE EE EE

Stop code: FF EE EE EE CC

## 7. Machine connection diagram

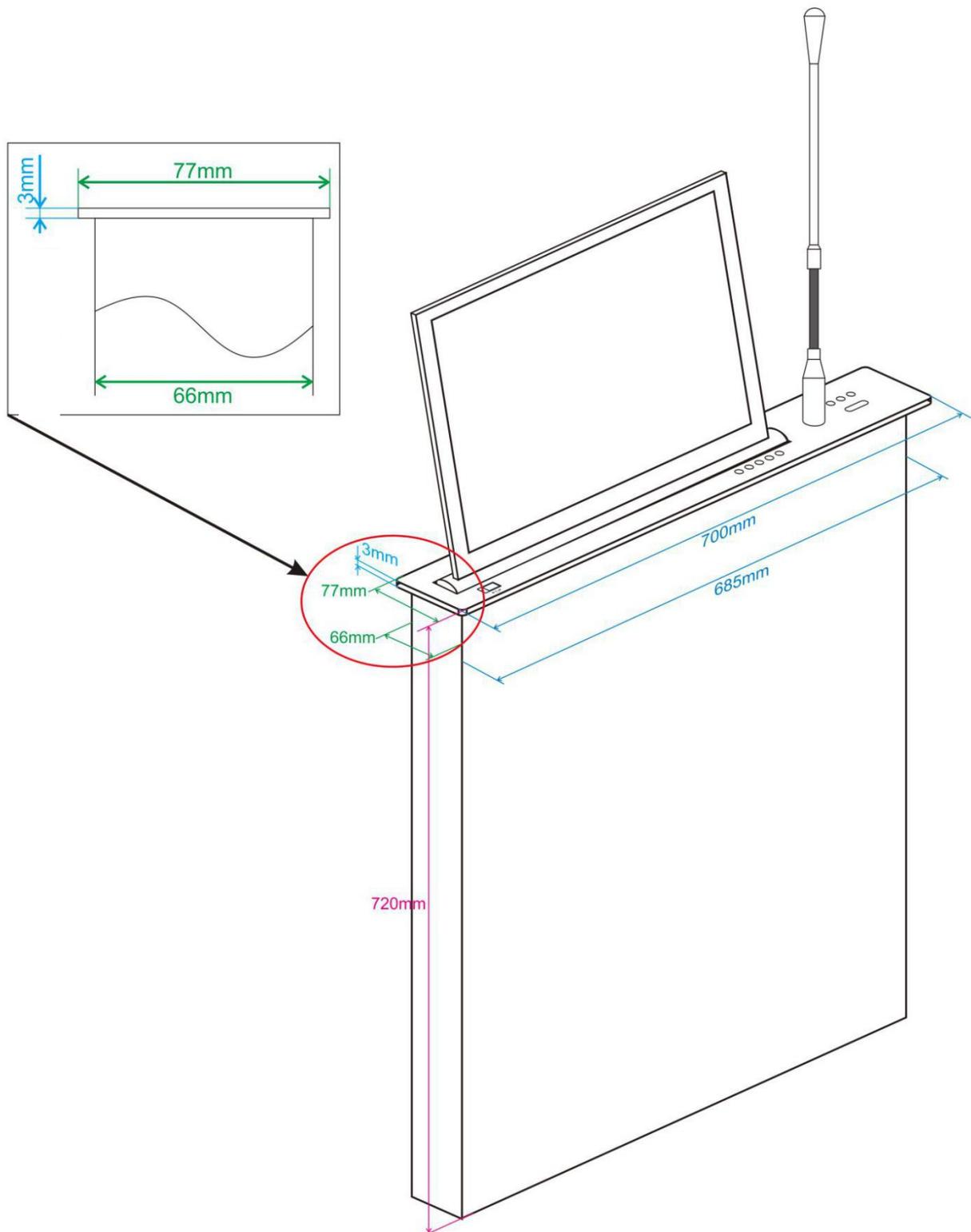


Conference microphone (input)

Conference microphone (output)

## 8. Installation size (product size drawing)

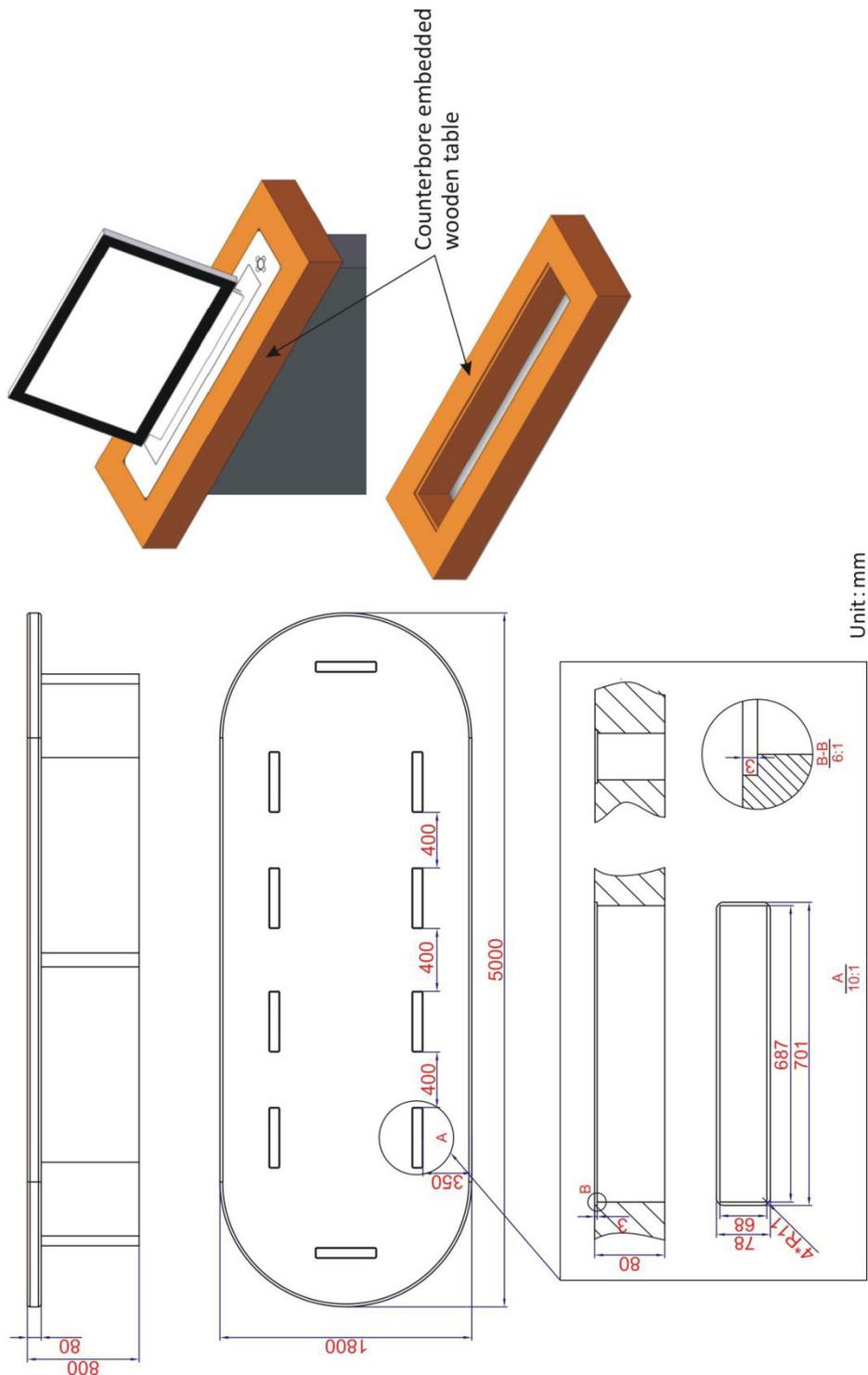
TS-FE215MT ultra thin 21.5Inch lift



Note: Before installation, please remove the two 'transport fixing screws' on the cover, and the side display fixing clips and clean the foam filling inside the flip door.

## 9. Installation size (meeting table opening size diagram)

TS-FE215MT ultra-thin 21.5 inch lift



Taking a 5m×1.8m×0.8m conference table as an example, the distance between the elevators is 0.4m, and it is appropriate to have a distance of 0.35m from the edge of the conference table. The user can adjust the size according to the actual needs. For the installation hole of the elevator, please mark the opening according to the drawing.

## 10. Common faults and maintenance

Fault phenomenon	Cause Analysis	Elimination method
The operation button does not respond and the screen does not rise.	Disconnected to the power supply	Check the power and make sure it is on
	Poor power input	Check the power interface and make sure it is in good contact. Switch to another power input.
No corresponding image outputs when the signal is switched	Signal source or terminal display is not turned on	Check and make sure the source and terminal display are on
	Loose contact of video signal port	Check and make sure the corresponding video signal port is connected properly
After the signal is switched, the display shows a black screen	Display does not support source resolution	Switch to a new source or set to automatically adapt to display resolution
Output image is disturbed	Loose contact between input and output devices	Connect the device properly and make it in good contact
	Input and output connection wire quality is not up to standard or damaged	Replace regular standard wire
	The wire is too long	Replace high-quality wire that supports the transmission range of the system
Panel touch has obvious static electricity	The device is not well grounded	Ground the grounding terminal of the machine well
Unable to control the unit or remote by serial command	Loose contact of the control port	Check the communication serial port to make sure it is in good contact
	The communication protocol is not set	Set the local or remote communication protocol as needed
The network port cannot control the machine	The control device network segment is inconsistent with the local matrix controller network segment.	Change the control device network segment to be consistent with the matrix controller
	The matrix controller network segment is inconsistent with the connected LAN segment.	Change the matrix controller network segment to be consistent with the LAN segment.
Not available	Internal damage to the controller	Send it to professional maintenance point

## 11. After-sales service

(1) During the warranty period of the product, if there are abnormal conditions under normal use, our company will repair without pay due to the failure caused by the quality of the product itself.

(2) Our company provides three-year warranty service for this product, the warranty period start date:

- ✓ Manufacture date;
- ✓ The above date cannot be obtained, and the manufacture date in the company's SN code shall prevail.

(3) In any following conditions, no warranty service is provided and the cost of repair parts is reasonably charged:

- ✓ Damage caused by improper use, storage and maintenance by consumers;
- ✓ Man-made damage to appearance and components;
- ✓ Damage caused by changes to the configuration or the product without the authorization of the company;
- ✓ Damage caused by force majeure.

(4) In any following circumstances, our company has the right to refuse to provide repair services. Or The company provide fee-based repair services ;

- ✓ Damage to the fragile label (except for our company's authorization): the product label content is altered or obscured, and cannot be identified;
- ✓ Damage caused by unauthorized installation and disassembly of our company;
- ✓ No sales voucher. Or sales voucher does not match the repair product model;
- ✓ Not products that our company produces and sells .

(5) You can contact us directly by the company's after-sales service department by letter or telephone, please inform us of the following:

- ✓ The model and name of the product;
- ✓ Failure phenomenon (as detailed as possible);
- ✓ The process before and after the fault.



## Warning



1. Do not block the vent.
2. If the power cord is damaged, stop using it immediately.
3. It should not be placed in the following places: poor ventilation; dusty; direct sunlight; high ambient temperature or close to heat sources; subject to vibration.
4. It is required to be protected from rain and moisture.
5. It cannot be placed in a container that can be filled with liquid.
6. The housing is required to be safely grounded.
7. The power plug and socket are required to be compatible.
8. Please do not open the housing cover by yourself to avoid electric shock. When it fails, please contact the supplier or the manufacturer for maintenance services, or you can entrust professionals in professional departments with professional certificates. Non-professionals are forbidden to disassemble the machine by themselves, otherwise electric shock may endanger the their life.

Specifications and parameters are subject to change without notice