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## **Ultra-thin HD Dual-screen LCD Lifter**



**TS-8202A/TS-FE173T**

**Before using this system, please read this manual carefully**

## Notification



### WARNING

To ensure the reliability of the equipment and the safety of personnel, please observe the following when installing, using and maintaining:

- If any of the following conditions are found, please immediately turn off the power, plug out and quickly contact your nearest dealer. Do not continue using this unit, which may cause a fire or electric shock.
  - If you find smoke or have a strange taste from the machine.
  - If water or metal falls into the machine.
  - If the unit is dropped or the case is damaged.
  - If the wire is damaged (wire core exposure, broken wire, etc.).
- If the machine contains high-pressure parts, in order to avoid the fire or electric shock, absolutely don't open the case, if any questions please inform your nearest dealer.
- Do not place cups, bowls, vases or metal and other water-filled substances on the unit. Serious spilled liquid may cause a fire or electric shock.
- Never expose the unit to rain and any moisture or water, which may cause electric shock or fire.
- Do not place metal objects or flammable materials from the vents on the machine cover, nor place coins, which may cause fire or electric shock.
- Do not place heavy objects on the unit to avoid personal injury or property damage when the unit is slipping.
- Make sure that the volume is turned on at the beginning of the boot, and the high volume of the boot may cause hearing problems.
- Make sure that the volume is turned on at the beginning of the boot, and the high volume of the boot may cause hearing problems.
- For long-term accumulation of dust to be cleaned, please inform your dealer to regularly clean the machine, so as to avoid damage to the machine or cause a fire.
- The battery must be replaced with the same type of product and the correct installation should be made in order to avoid electrical damage and explosion hazard.
- The product is a Class I device. The device must be well connected to ground. The power plug must be connected to a power outlet with a grounding device to ensure that the equipment is fully grounded.

- This product uses a power plug or appliance input socket as a disconnecting device with the power supply, and must be disconnected if necessary for safety reasons.



- This equipment is only suitable for safe use at altitudes above 2000 meters.

## Precautions

### 1. The installation environment

When installing the unit, in order to ensure the normal cooling of the host, should avoid the poor ventilation of the place or high temperature environment, to avoid direct sunlight.

Recommend to install cabinet or other well-ventilated place indoor. If you use the machine in the outdoors, please pay attention to waterproof, moisture, lightning protection measures.

Avoid installing in a violent place of vibration; do not place other equipment on the machine.

Working temperature :  $-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ .

Humidity is limited to 5% to 90% (non-condensing).

### 2. To avoid electric shock and fire

Do not touch the hands and the source with wet hands

Do not spill liquid on the machine, so as to avoid short-circuit or fire inside the machine.

Do not place other equipment directly on the top of the unit.

Non-professional service personnel Do not disassemble the unit yourself to avoid damage and electric shock.

### 3. Transport and handling

The packaging of the machine is designed and tested to ensure that the host will not be accidentally damaged during transport. It is best to use the original packaging when handling the unit.

Do not move the host device between the place or cold or over hot to avoid condensation inside the machine, affecting equipment life.

### 4. Please follow the warning instructions on this product, the warning signs on behalf of:

	Applicable to 2000 meters above sea level and below safe use
	Safe use only in non-tropical climates

## 5. Agreement

Please strictly follow the instructions in this manual. The software, hardware and appearance of this product will be upgraded and updated continually. The above changes will be made without notice.

Non-professional maintenance personnel, do not remove the product, to avoid damage and electric shock.

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## **1 Introduction**

A computer monitor integrated lifter for conference table is more suitable for paperless conference equipment. With rear 11.6-inch TN screen, seamless and no backplane connection highlighting the high-end and elegant appearance of the product. With paperless conference terminal, it can display the required meeting pattern, 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 and RS485 command.

When you need to use it, just press the UP button on the panel. And the elevator hidden in the conference table will automatically raise the display from the inside of the cabinet to the desktop, and tilt it at an angle (if the angle is not suitable, you can adjust to the appropriate angle by button manually). When the display is not in use, you can press the DOWN button to automatically drop it inside the conference table, and automatically close the valve to keep it level with the desktop. It is very convenient to use. With anti-theft, dust-proof, beautifying the desktop and other functions.

## 2 Function & Features

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 required meeting patterns and meeting guest names, perfectly realizing the powerful conference functions of interactive paperless system.
2. The whole device is made of high-quality aluminum with CNC carved processing. The display frame is made of integral aluminum alloy, and CNC is molded once as a whole. The thin part is not more than 4 mm. Cabinet is made of aluminum alloy, enabling the whole equipment refined, lightweight, beautiful and elegant.
3. The surface treatment is anodized. The color is bright. Sandblasting, wiredrawing and other processes can be done. And it can also be customized in various colors.
4. With the panel thickness of only 3mm, width of only 70mm, it is light compared with traditional lifters and small space usage. The weight is only one-third of the conventional lifter, which reduces transportation cost and the table pressure.
5. The transmission structure is specially treated to reduce noise.
6. High-definition screen is a well-known brand in China. It adopts Standard-A display screen with high resolution, bright color. Resolution is 1920\*1080P. Aspect ratio is 16:9.
7. It is matched with high-precision guide rail and linear bearing, and the AC reducer motor is used as the driving power; With strong compatibility, the central control protocol is compatible with all controllers and control devices.
8. After lifting, the screen will automatically supply power. After the drop, the screen will be powered off automatically, which is energy-saving and environmental protection.
9. Support HDMI and VGA two-channel signal inputs. 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 button. When there is no signal input, the screen automatically enters the power saving mode.
10. It can be centrally controlled through the central control software and the host. You can make all devices in the room up or down through one button at the same time.

### 3 Product Model & Specification

Model	TS-8202A	TS-FE173T
Product Dimensions (MM)	430*70*565	476*70*565
Cabinet Dimensions (MM)	415*60*562	461*60*562
Desktop Hole (MM)	417*62	463*62
Panel Sinking (MM)	431*71*3	477*71*3
Lifting Time	28S	30S
Elevation Angle	0-30°	0-30°
Video Interface	HDMI/VGA	HDMI/VGA
Screen Resolution	1920*1080	1920*1080
Operating Voltage	220V 50/60HZ	220V 50/60HZ
Contrast	600: 1	600: 1
Aspect Ratio	16: 9	16: 9
Brightness	300cd/m <sup>2</sup>	300cd/m <sup>2</sup>
Power Consumption	18W	20W

#### Vice Screen Specifications

Vice screen size	11.6 inches
Vice screen	Not support touch
Vice screen resolution	1366*768P
Vice screen contrast	500:1
Vice screen brightness	200 cd/m <sup>2</sup> (Typ.)
Vice screen working environment	Operating temperature: 0 ~ 50 °C; Storage temperature: -20 ~ 60 °C
Vice screen operating frequency	60Hz
Vice screen viewing angle	45/45/20/40 (Typ.) (CR ≥ 10)
Vice screen type	TN
Vice screen voltage	3.3V
Display dimensions	256.125*144mm

#### 4 Packing List

<b>NO.</b>	<b>Appendix</b>	<b>Notes</b>
1	Lifter	1
2	Power cable	1
3	Touch data line	1
4	User's manual	1
5	Data USB cable	1
6	Serial cable	1

It must be strictly packed before leaving the factory. Before use, please confirm whether the products and appendix are damaged, deformed or missing. If it is damaged, inconsistent or missing, please contact the product supplier.

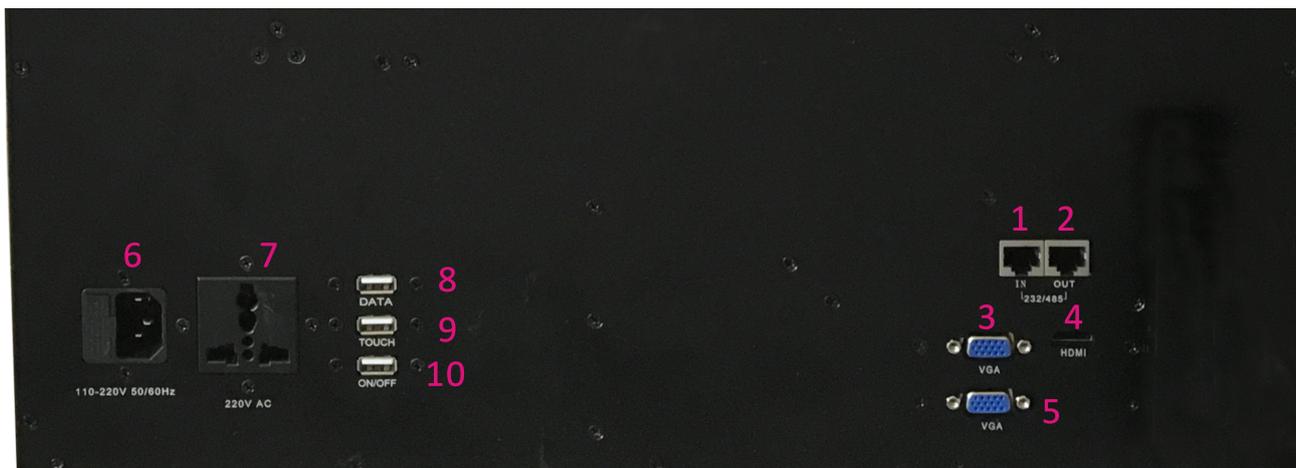
## 5 Product Appearance & Structure Instruction

### 5.1 Front Panel' Function & Introduction



NO.	Name	Description
1	USB Interface	For data transmission
2	Up Button	To control the rise of the screen
3	Pause Button	To control screen to pause
4	Down Button	To control the screen to drop
5	Switch Button	To switch screen video signal
6	On/Off Button	To boot/shutdown the controller

### 5.2 Rear Panel's Function Introduction (from left to right)



NO.	Name	Description
1	Central control 485 network port input	For the network input interface of the central control 485 control system
2	Central control 485 network output	For the network output interface of the central control 485 control system
3	VGA interface	VGA video signal input interface
4	HDMI interface	HDMI HD video signal input interface
5	Vice screen signal interface	For video signal input interface
6	Power interface	Power input interface
7	Power interface	Power output interface

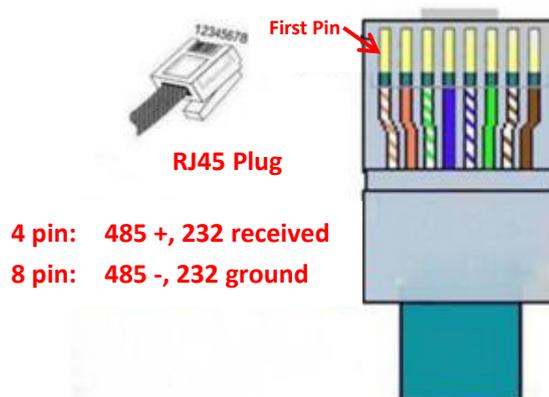
8	USB interface 1	For touch line signal interface
9	USB interface 2	For data transmission interface
10	USB interface 3	Boot/Shutdown the controller

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

## 6 Central Control Protocol Code learning

1. With 232 and 485 protocol control, the bottom of the device is configured with two RJ45 network sockets, which can allow multiple devices to use ordinary cable connecting hand in hand;

The cable and the equipment protocol are connected as follows:



Baud Rate 2400

Parity N

Stop bit 1

Rising Code: FF EE EE EE DD

Decline Code: FF EE EE EE EE

Stop Code: FF EE EE EE CC

2. The above default code is the original factory code. You can control all the equipment. If need for group control, you have to set the code for the group settings. The steps are as follows:
  - ① Firstly connect the computer and machine through the serial device, open the serial debugging software, and confirm the computer serial port transmitter and receiver connected with the device. You can control the equipment through the default code to ensure that all connections are with no problem.
  - ② In the serial debugging software code input field to write the learning code, to learn the

first group, write code: FF 10 11 01 AA; To learn the second group, write code: FF 10 11 02 AA; To learn the third group, write code: FF 10 11 03 AA ••••• and so on.

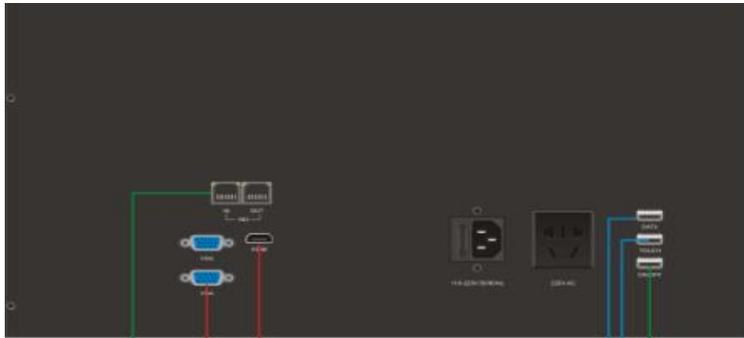
③ After writing the code, do not operate. Go back to the device which needs learning and press the "pause" key on the device panel without moving. Keep pressing it for 3-5 seconds, then the machine has a slight change.

④ Release the "pause" button, click on the serial port debugging software code to send the button, send step written in the learning code which can be continuous for 2-3 times.

⑤ After completion, the first set of control codes becomes: FF 10 11 01 DD(rise), FF 10 11 01 EE (drop), FF 10 11 01 CC (pause), the second set of control codes becomes: FF 10 11 02 DD (rise), FF 10 11 02 EE (drop), FF 10 11 02 CC (pause), ••••• and so on.

## 7 Machine wiring diagram

Paperless lifter



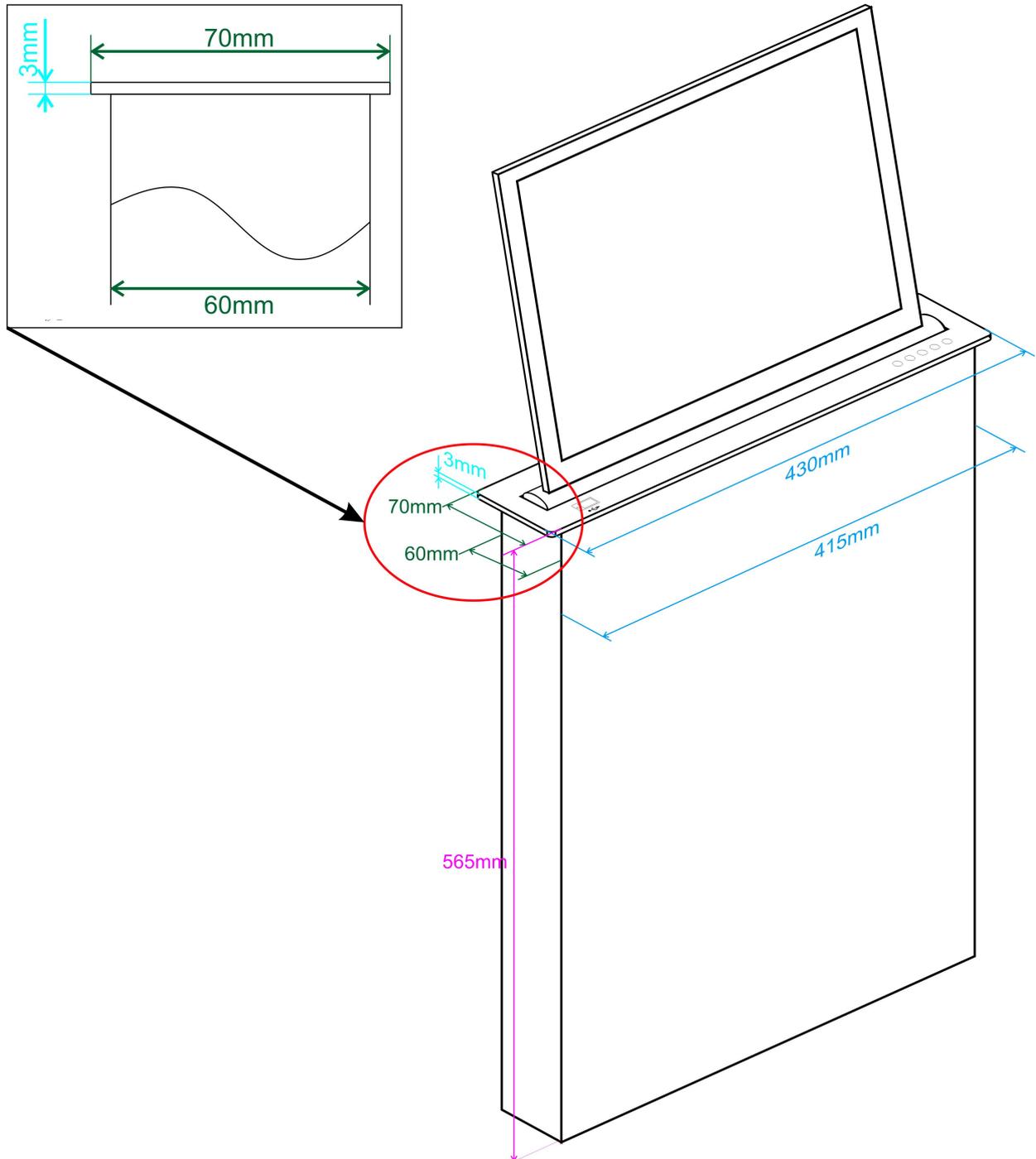
Multimedia conference  
terminal controller



Embedded lifting pure  
speech unit

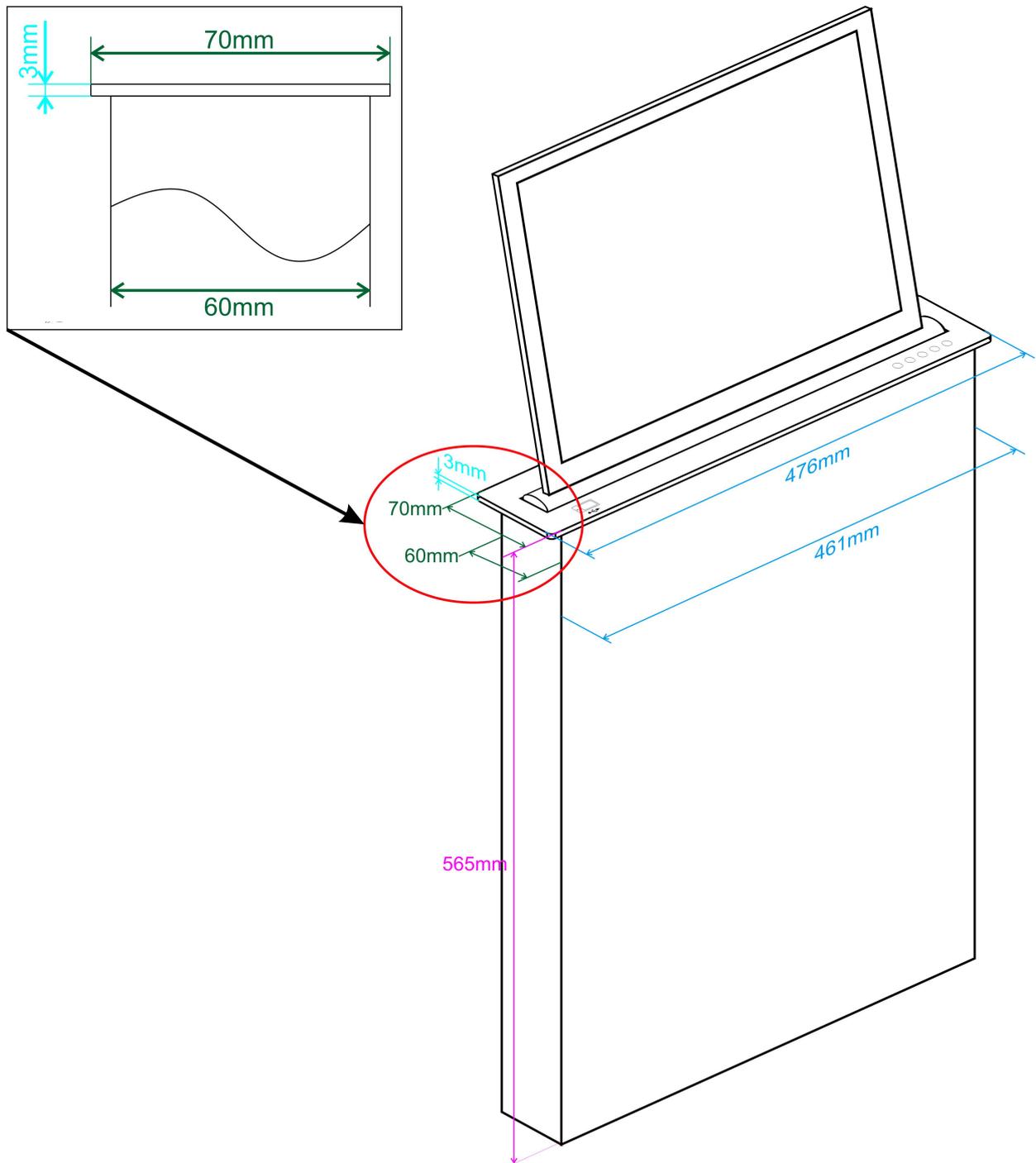
## 8 Installation size (product size chart)

TS-8202A Ultra-thin dual-screen 15.6-inch lifter:



**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.

**TS-FE173T ultra-thin dual-screen 17.3-inch lifter:**



**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 Common faults and maintenance

Troubleshooting situation	Cause Analysis	Solution
The operation button does not respond, the screen and the microphone does not rise.	Not connected to the power supply.	Check the power and make sure it is on.
	Poor power input.	Check the power connector and make sure it is in good contact. Switch to another power input.
No corresponding image output 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.
	Poor 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	Poor contact between input and output devices.	Connect the device properly and make it in good contact.
	Input and output connection wires are not qualified or damaged.	Replace regular standard wire.
	The wires are too long.	Replace high-quality wire with a length 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 unit well.
Unable to control the unit or remote terminal by serial command	Poor contact of the control port.	Check the communication serial port to make sure it is in good contact.
	The communication protocol is not well-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 host network segment.	Change the control device network segment to be consistent with the matrix host
	The matrix host network segment is inconsistent with the connected LAN segment.	Change the matrix host network segment to be consistent with the LAN segment.
Not working	Internal damage to the main unit.	Send professional repair center for maintenance.

# Ultra-thin HD Dual-screen LCD Lifter



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