Smart Blackboard User Manual

MAXHUB

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1. Safety Warning

Before operating, please read this manual thoroughly, and keep it for future reference. Image shown in this manual is indicative only. There may be differences between the pictures and the actual product, please prevail in kind.

Placement

• DO NOT put heavy objects on top of the unit.
• DO NOT put the unit near appliances that generate magnetic fields.
• DO NOT expose the unit to direct sunlight and other sources of heat.
• DO NOT place the unit on an unstable cart, stand, tripod, bracket, table, or shelf.
• DO NOT put any liquid near or on the unit, make sure do not spill any liquid inside the unit.

Power Supply

• Please keep power cable from physical or mechanical damage.
• Please check and ensure AC source is connected with the ground.
• This power cable comes with the device exclusively for this device only.
• Please unplug power supply when the weather is thunder-storm or lightning.
• Check that the unit's operating voltage is identical with your local power supply.
• Please use the original power cable from the accessory bag, don't modify or lengthen it.
• Please unplug power supply, when there is nobody home or the unit will be in idle for a long time.

LED Screen

• Unplug the power cable before cleaning.
• Clean the screen with a soft, dustless and dry cloth.
• For deep clean, please contact an authorized service center.
• Never use water or the spray type detergent to clean the unit.
• Never use any other hard or sharp object to replace the touch pen.
• Better for the panel lifetime and the display performance, do not display high brightness image for long time.

Temperature

• Normal operating temperature is 0 ~ 40℃.
• Do not place the unit near or over a radiator or a heater.
• If your unit is suddenly moved from a cold to a warm place, please unplug the power cable and do not turn it on at least 2 hours, making sure the moisture inside the unit is all evaporated.

Humidity

Do not expose the unit in rain, or place in high humidity area.

Please make sure indoor environment is dry and cool. Normal operating humidity is 10%~90%RH.

Ventilation

Please put the unit in a well-ventilated place, so the heating can be released easily.

Ensure that the unit has enough space for ventilation. Space requirement: left, right and back >10cm, top> 20cm.

Earphone

Before using earphone, please turn down the volume in advance.

Using the earphone to listen loud sound for a long time might affect the hearing.

Standby

It will enter standby mode but not turn off the unit after press the standby key.

Battery

Please make sure the battery gets proper disposal or recycle after using.

Please keep the battery away from kids and don't throw the battery into fire.

Caution risk of fire or explosion if the battery is replaced by an incorrect type.

Notes for Cleaning

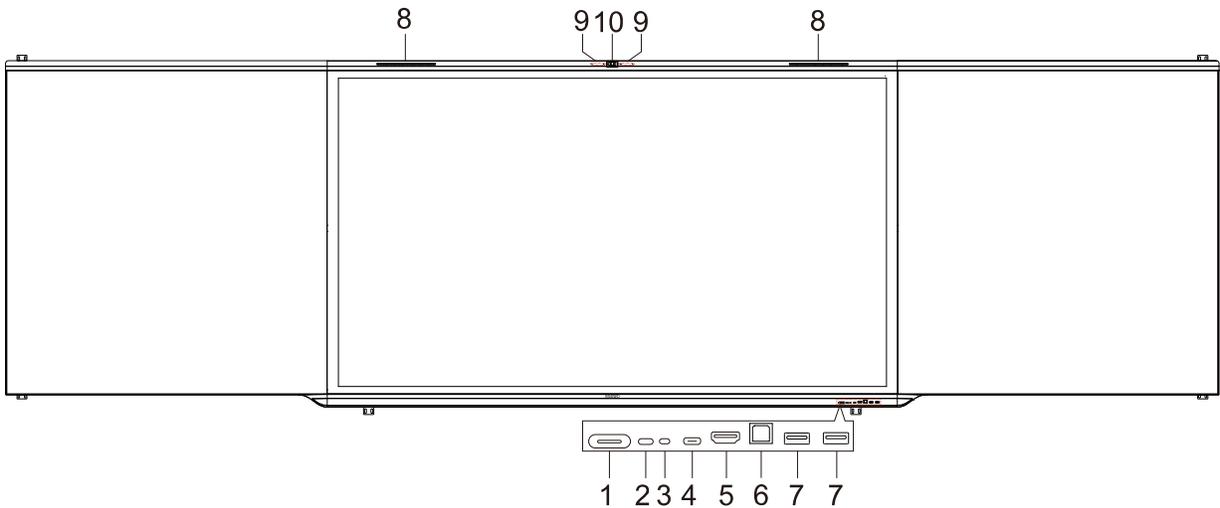There are vents on back cover, please do not use any liquid or spray directly during cleaning.

Power Switch Status Signs

"I" means power on, "O" means power off.
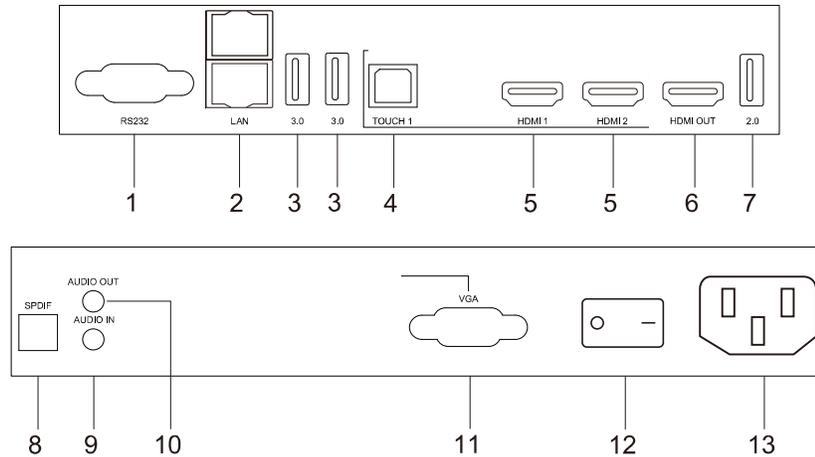
Notes for Maintenance

This machine can only be maintained by certified engineer.

2. Prepare to Install

NO.	Items
1	⏻ ： Tap to enter energy-saving,press at least 2 seconds to enter standby mode
2	Remote control signal receiver
3	Light sensor
4	USB Type-C: Note: The maximum rated power of the USB Type-C port of this product is 65W. When using this port to charge electronic devices, the charging power of the electronic device cannot exceed the rated power of this port. If the charging power of the electronic device exceeds the rated charging power of this port, please Do not directly use this port for charging.
5	HDMI IN
6	TOUCH
7	USB 3.0
8	Loudspeaker
9	Microphone
10	Camera

3. Terminal Interface

Number	Items	Function description
1	RS232	Serial interface, used for mutual transfer of data between devices.
2	LAN	Connect RJ45 terminals.
3	3.0	Connect USB devices such as mobile hard disk, U disk, USB keyboard and mouse, USB drives, etc.
4	TOUCH 1	Touch signal output to the external computer.
5	HDMI	High-definition multimedia interface signal input, connect to devices with HDMI output interface (personal computer with HDMI output, set-top box, or another video device).
6	HDMI OUT	Connect to the devices with HDMI input function.
7	2.0	Connect USB devices such as mobile hard disk, U disk, USB keyboard and mouse, USB drives, etc.
8	SPDIF	Carry multichannel sound via optical signals.
9	AUDIO IN	External computer audio input.
10	AUDIO OUT	Audio output to the external speaker.
11	VGA	External computer image input.
12	AC SWITCH	To open or shut down AC power supply. "I" means power on, "O" means power off.
13	AC IN	External computer image input.

4. Remote Control

(1) Remote Control Button Instruction
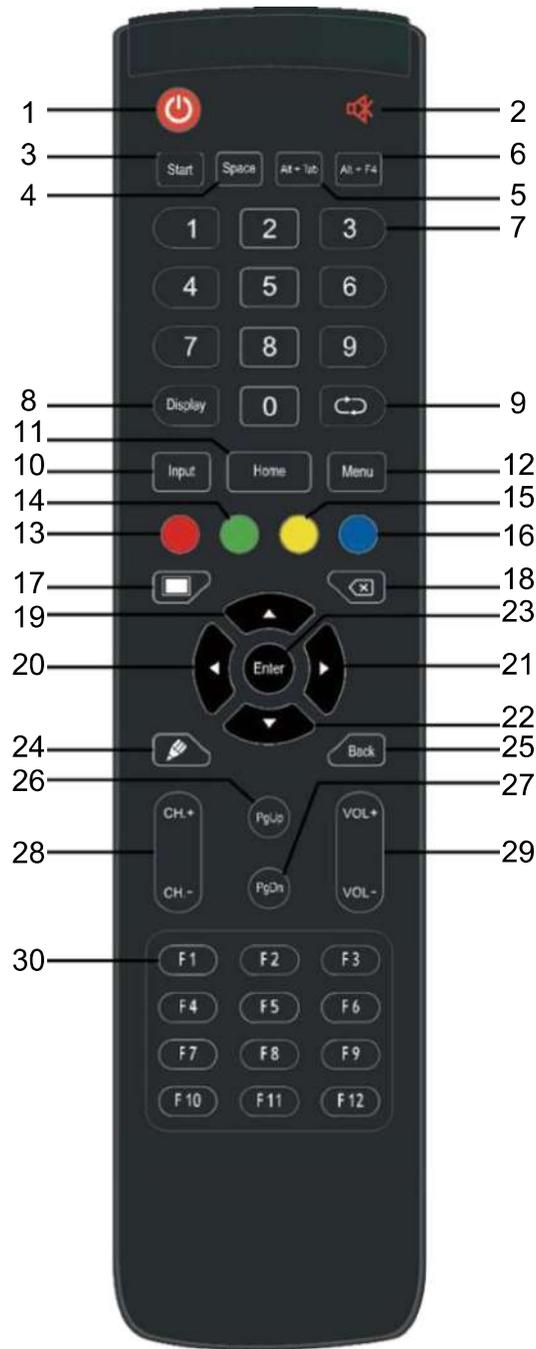
(2) Detailed Function Description

Number	Items	Function description
1	⏻	Power on/off
2	🔇	Enter or exit mute mode
3	Start	PC's Windows key
4	Space	PC's Space key
5	Alt+Tab	PC's Alt+Tab key
6	Alt+F4	PC's Alt+Tab key
7	Numeric keys	Numeric input
8	Display	Display channel information
9	⟳	/
10	Input	Pop up settings menu
11	Home	Return to Android system main screen
12	Menu	Pop up menu
13	Red	Enable or disable keys and Touch
14	Green	Enable or disable keys
15	Yellow	Enable or disable Touch
16	Blue	Pop out or close the screen freezing tools
17	▬	Turn off or turn on the screen backlight
18	⌫	PC's Backspace
19	▲	Scroll Up
20	◀	Scroll Left
21	▶	Scroll Right
22	▼	Scroll Down
23	Enter	Confirm selection state
24	✎	Quickly start writing software
25	Back	Return to the last operating interface
26	PgUp	Page Up
27	PgDn	Page Down

28	CH.+/CH.-	/
29	VOL+/VOL-	Increase/reduce the volume
30	F1-F12	PC's F1 - F12 function keys

NOTE: All computer - related function keys are not available without a built-in computer.

(3) Remote Control Instruction

Install Batteries
① Open back cover of battery component on the back of remote control.
② Install AAA type battery according to the corresponding electrode, make sure battery positive and negative pole are correct ("+"to"+", "-" to "-"), please do not mix using old and new batteries.
③ After battery is installed, close the back cover of battery components, and make the following clip buckled to the bottom.

Range of remote control
Remote control can work normally within the range of 3meters distance, 10 degrees left and right from the remote-control receiver; in order to protect environment, please dispose waste battery into recycling box.

⚠ If the battery is replaced by an incorrect type, it may lead to explosion.

5. Connection and Setting

⚠ For the safety of you and the machine, please do not connect any power plug before connection.

(1) External Computer and Touch Connection
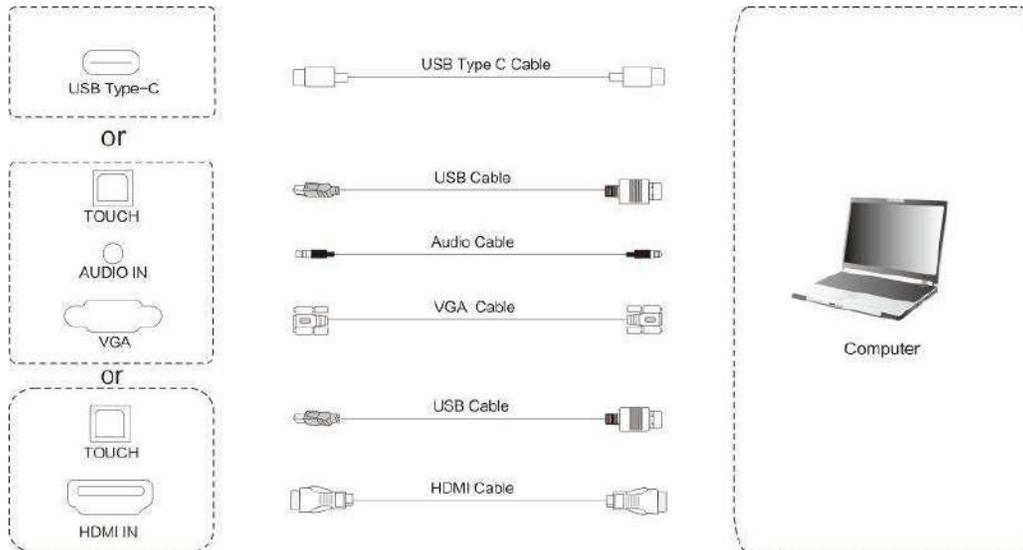
① Use USB Type-C cable to connect the computer (Or use VGA cable to connect to VGA output port of external computer, and meanwhile use headphone audio cable to connect to external computer audio output interface and use USB cable to connect to external computer USB port. Or use HDMI cable to connect to HDMI output port of external computer and use USB cable to connect to external computer USB port).

② After cable connection, plug in power cord, and switch power on.

③ Start external computer.

④ Press ⏻ key, and the equipment is power on.

⑤ Switch the input source to the USB Type-C/VGA/HDMI channel in the main menu.

⚠ NOTE: External computer input, equipment's best resolution is 3840*2160.

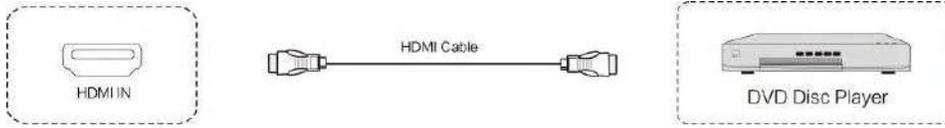Recommended computer configuration:

1GB Available Hard Drive

2.0GHz Processor, 1GB Memory

More than 256 color display cards

USB Type-C/VGA OUT / HDMI OUT, Audio-OUT, USB Interface

Support Resolution: 800×600, 1024×768, 1920×1080, 3840×2160

(2) Audio and Video Equipment

① Use HDMI cable to connect audio and video equipment with HDMI input.

② After cable connection, plug in power cord, and switch power on

③ Press ⏻ to turn equipment on

④ Switch the input source to the HDMI channel in the main menu.

(3) Audio and Video Equipment
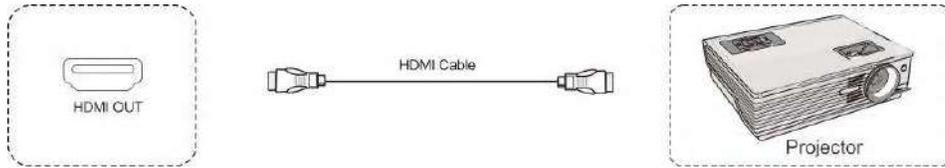
① Use HDMI cable to connect audio and video equipment with HDMI input.

② After cable connection, plug in power cord, and switch power on

③ Press ⏻ to turn equipment on

(4) RS232 Connection
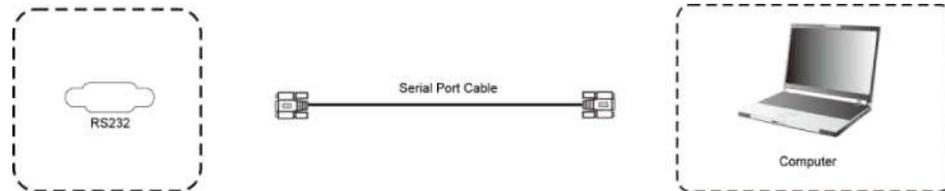
After using serial port cable to connect central control equipment and machine, certain function of the machine can be controlled via central control equipment, such as: machine ON/OFF, and adjustment of sound volume, etc.
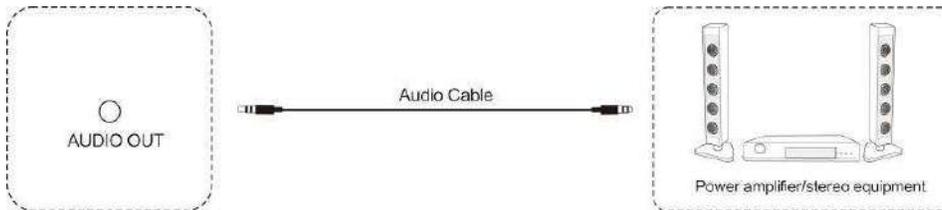
(5) LAN Connection
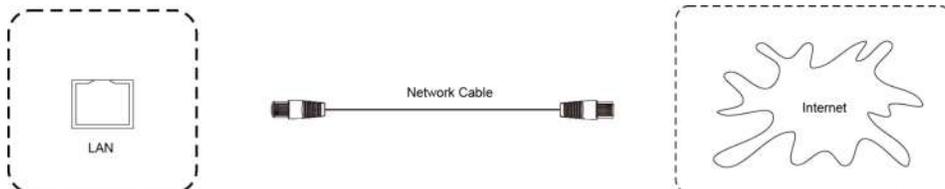
(6) USB Connection

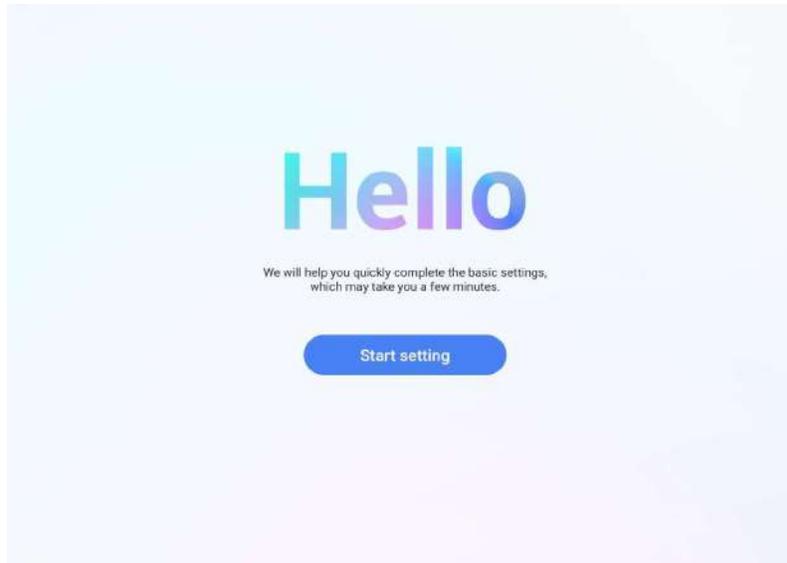

(7) AUDIO OUT Connection

6. MAXHUB EDU OS

6.1 Initial setup

After the IFP is installed, user can press the front power button to power up the device and enter out-of-box setup. Click "Start setting" to start setup wizard.

After previous settings, the critical parts of system settings are finished. Click "Explore now" to finish setup wizard and user can see the launcher homepage
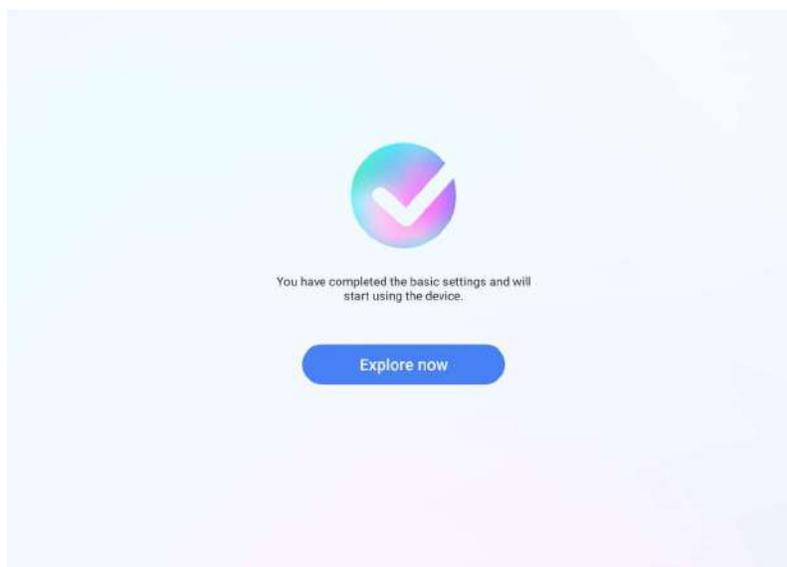
6.2 System setting

Click ![icon] in all apps folder to access system Settings:
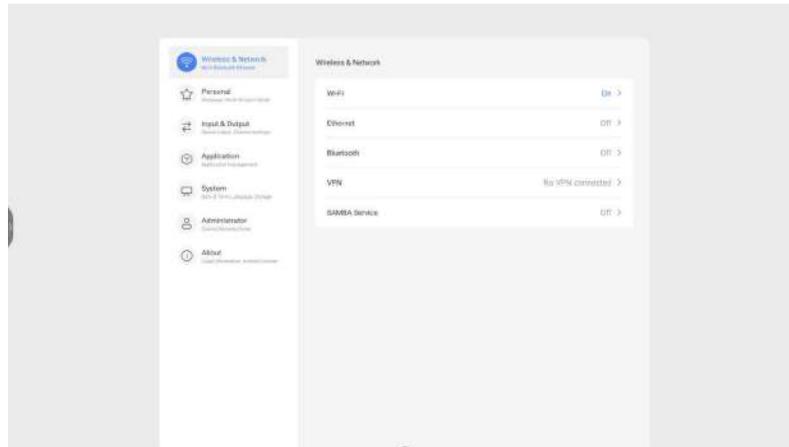
There are 7 Categories included in system settings:

• Wireless & Network

• Personal

• Input & Output

• Application

• System

• Administrator

• About

Click ![icon] in system bar to access OSD Settings:

General Settings:

Display Settings:

Audio Settings:

6.3 MAXHUB Account

Uses always have to focus on various preparations, find their files in public space, check to store or clean the data before leaving.It is inefficient and difficult.
MAXHUB Account is a cloud-based solution for users to customize their work space. Users can login on any device to have a safer, more efficient, personalized experience.
Public device status：

Personal status：
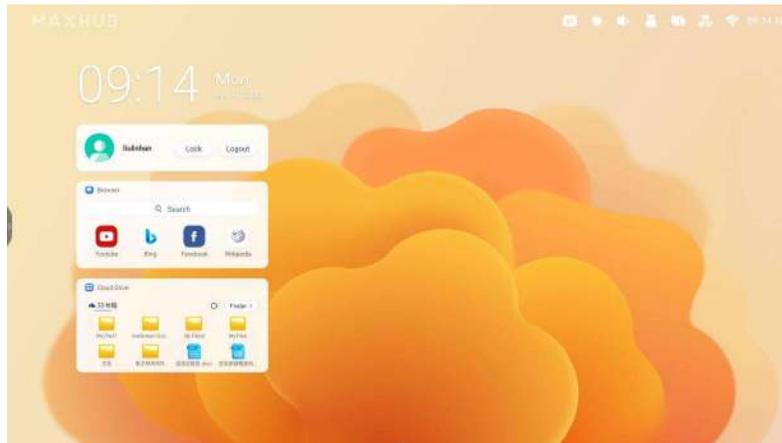
Users can conveniently log in or register for a MAXHUB Account by scanning the QR code.
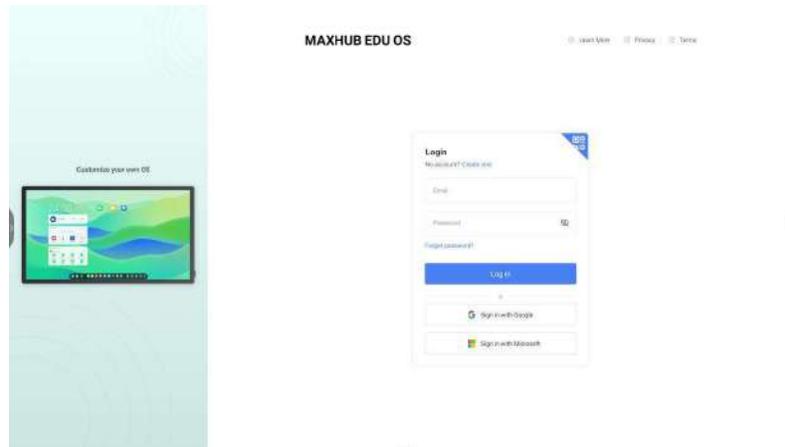
6.4 System Features

● **Launcher**

To enhance the classroom experience, MAXHUB EDU OS provides an integrated Launcher for teachers to easily and efficiently start class. With a simplified and organized interface, the Launcher includes various widgets to meet different teaching needs and a personalized touch.

● **Widgets**

In public mode, there are 6 widgets: MAXHUB account / Quick apps / Browser / Cloud Drive / MAXHUB class / One key operation. In personal mode, there are 5 widgets: MAXHUB account / Browser/Cloud Drive / MAXHUB class / One key operation. The Quick apps widget is changed into homepage shortcuts, and the orders of widgets and homepage shortcuts will be synchronized with MAXHUB account. Types of homepage shortcuts: Apps / Files / Websites / USB / The date & time widget will be always presented in homepage, user can access date and time settings by tapping on the date and time widget.
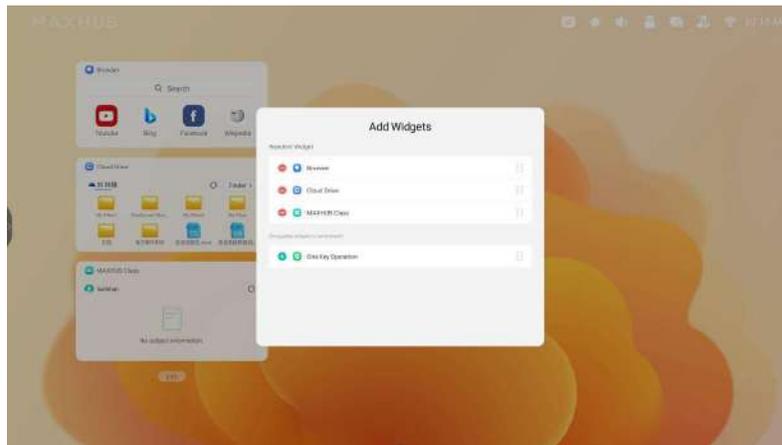
● **Status bar**

On the top right corner are the status bar icons, user can interact with the status icons to change the status or access quick settings.

● **System Bar**

The system bar provides teachers with a solution for centralized and efficient managing and switching tasks, and using tools in multiple scenarios. It mainly integrates three parts of the content: task manager, application manager, and tool manager, so that teachers can uniformly enable items in this integrator. In the same time, it also supports teachers to customize configuration and management according to lesson delivering habits. By default, we provide entrances at the bottom and both sides for the teacher, and the teacher can also configure the hide/show in Settings according to using habits.

Navigation bar: Task manager in System bar, control the progress of the tasks here.

Content	Description
Back	Click ◁ to return to the last operating interface.
Home	Click ⌂ to return to the desktop.
Backstage	Click ▢ to pop out the window and display the recent apps and input sources.

Application Center: Apps start and manager in System bar, you can find all apps here

Content	Description
Default shortcut	The default apps displayed in System bar: Note, Finder, Browser. Click on them to start the process.
All apps	Click to view all apps. The apps installed by default include: Browser, MAXHUB Account, MAXHUB Class, MAXHUB Pivot, Cloud Drive, Finder, Keeper, Note, Palette, PIP, Settings, Store (Only in 982 System custom), Visualizer, WPS Office
Running apps	 1.Click on the running app to continue its process. 2.Display the status of running applications in all applications
Replace shortcut	When there are 5 shortcut, the user can drag other app icon to replace the original shortcuts

Small Tools: With the tools, teacher can enhanced interactive learning with students for a fun experience.

Icon	Function	Description
	Menu	 ① Show all input sources, include PC, Android, HDMI, VGA. ② Show more advanced settings, including Display and Audio.
	Mark	 ① Empowers teachers to write on top of any app, video, website, document, or image. ② Whether using other input sources, or Android, teacher can take notes on top of any onscreen content. ③ Support sharing via QR code and saving to cloud disk.
	Cast	 The tool designed for seamless wireless presentation and collaboration during lectures.
	Crop	 ① Teachers can capture screen shots of anything on the screen, including content from apps, websites, and videos. ② Teacher can select Freedom, Full and window mode. ③ Support to insert whiteboard for editing.

	Time	 ① Show all input sources, include PC, Android, HDMI, VGA. ② Show more advanced settings, including Display and Audio.
	Stopwatch	 A tool which counts upwards from zero for measuring elapsed time.
	Airclass	 ① Teachers can invite students to join the interactive activities through QR code or IP address. ② It include voter, responder, selector, message and other rich activities.
	Spotlight	 Teachers can use this function to focus on specific areas of the screen.
	Record	 Teachers can record what's on the screen.
	Freeze	 Teacher can freeze and zoom the current content on the screen.
	PC	Teachers can quickly switch to PC source with one key.
	ScreenLock	Teacher can lock the screen with the ScreenLock, and unlock it by entering the password, which is set in Settings.
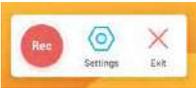
	Guide (Only in 982 System)	 Teachers can disable screen touch and Prohibit quitting the app after lock.
	Calculator (Only in 982 System)	 Teachers can quickly demon the use of the calculator.
	PIP (Only in Full-Screen Mode)	 Use PC software and Android app at the same time.
	Split screen (Only in Full-Screen Mode)	 One window with the Finder, one window with Browser.

7. Specifications

Display

Model	B8610
Diagonal Size (inch)	86
Display Area	1895.04(H) x 1065.96(V)mm
Aspect Ratio	16:9
Resolution	3840 x 2160
Viewing Angle	178° (H/V)
Brightness (typ.)	400cd/m²
Contrast Ratio	4000:1 (Typ.) 8000:1 (Dynamic.)
Color Depth	1.07B (10bit)
Color Gamut (typ.)	72% NTSC
Color Accuracy	Delta E ≤ 1.5
Glass	Zero parallax, 3.2mm thickness, 9H Tempered
Surface Technology	Anti-glare, Etched AG Technology Support writing with ordinary chalk, dustless chalk and liquid pens
Eyes Care	TÜV Eye Comfort TÜV Flicker Free TÜV Low Blue Light
Refresh Rate	60Hz
Response Time	8ms
Backlight Unit	DLED
Backlight Life (typ.)	≥ 50,000 Hours

Touch System

Touch Technology	Infrared recognition
Touch Point	20 Points touch
Object Recognition Range	3mm
Accuracy	± 2mm
Response Time	≤ 9ms
Supported Operating System (Touch Return)	Windows 10 / Windows 8 / Windows 7 / Windows XP / Android / Linux / Mac OS X / Chrome

Built-in System

Operating System	Android 11.0
RAM	8GB
ROM	64GB
CPU	2.0GHz quad core ARM A55
GPU	Mali-G52 MP2

Connectivity

Input	HDMI IN x 3
	USB 2.0 x 1
	USB 3.0 x 4
	USB Type-C x 1
	VGA IN x 1
	AUDIO IN x 1
	RS232 x 1
	RJ45 IN x 1
Output	HDMI OUT x 1
	TOUCH OUT x 2
	AUDIO OUT x 1
	SPDIF x 1
	RJ45 OUT x 1
OPS Slot	Module Slot x 1
Wifi Slot	Module Slot x 1

Camera/Audio/Microphone

Built-in Camera	16M 135°FOV
Video Recording	4K, 1080P, 720P
Built-in Microphone	4-Array Microphone
Microphone Pick Up Range	0-8m
Speaker Output Power	2 x 25W (Max.) Upper front speaker

Power

Power Supply	AC 100~240V 50/60Hz
Power Consumption (standby)	≤ 0.5W
Power Consumption (maximum)	440W

Environment

Operating Temperature	0˚C~40˚C
Storage Temperature	-20˚C~60˚C
Operating Humidity	10%~90%RH
Storage Humidity	10%~90%RH
Altitude	Below 5000 meters

Software

System OS	MAXHUB EDU OS V3.0
Account Management	MAXHUB Account
Whiteboard Tool	MAXHUB Class
Screen Sharing	MAXHUB Connect
Device Management	MAXHUB Pivot
Other Apps	Browser, Cloud Drive, Note, Palette, WPS Office, etc.

Physical Specification

Dimension (W x H x D)	Main screen: 1994 x 1200 x 109mm
	Blackboard: 1114 x 1200 x 112mm
	After assembling: 4200 x 1219 x 98mm
Shipping Dimension (W x H x D)	Main screen: 2156 x 255 x 1335mm
	Blackboard: 1240 x 280 x 1257mm
Thickness of machine and wall mount	98mm
Net Weight	Main screen: 61.45kg
	Total Blackboard: 18.10kg
Gross Weight	Main screen: 80.20kg
	Total Blackboard: 25.12kg

Accessories

Power Cord	3m x 1
Remote Control	x 1
Stylus	x 2
HDMI Cable	3m x 1
USB Type-C Cable	1.8m x 1
USB Touch Cable (Type A-B)	5m x 1
Wall Mount	x 1
Wireless Adapter	x 1

Optional Module

OPS	OPS62A
Mobile Stand	ST31
Borad	Blackboard & Whiteboard

8. Dimensions
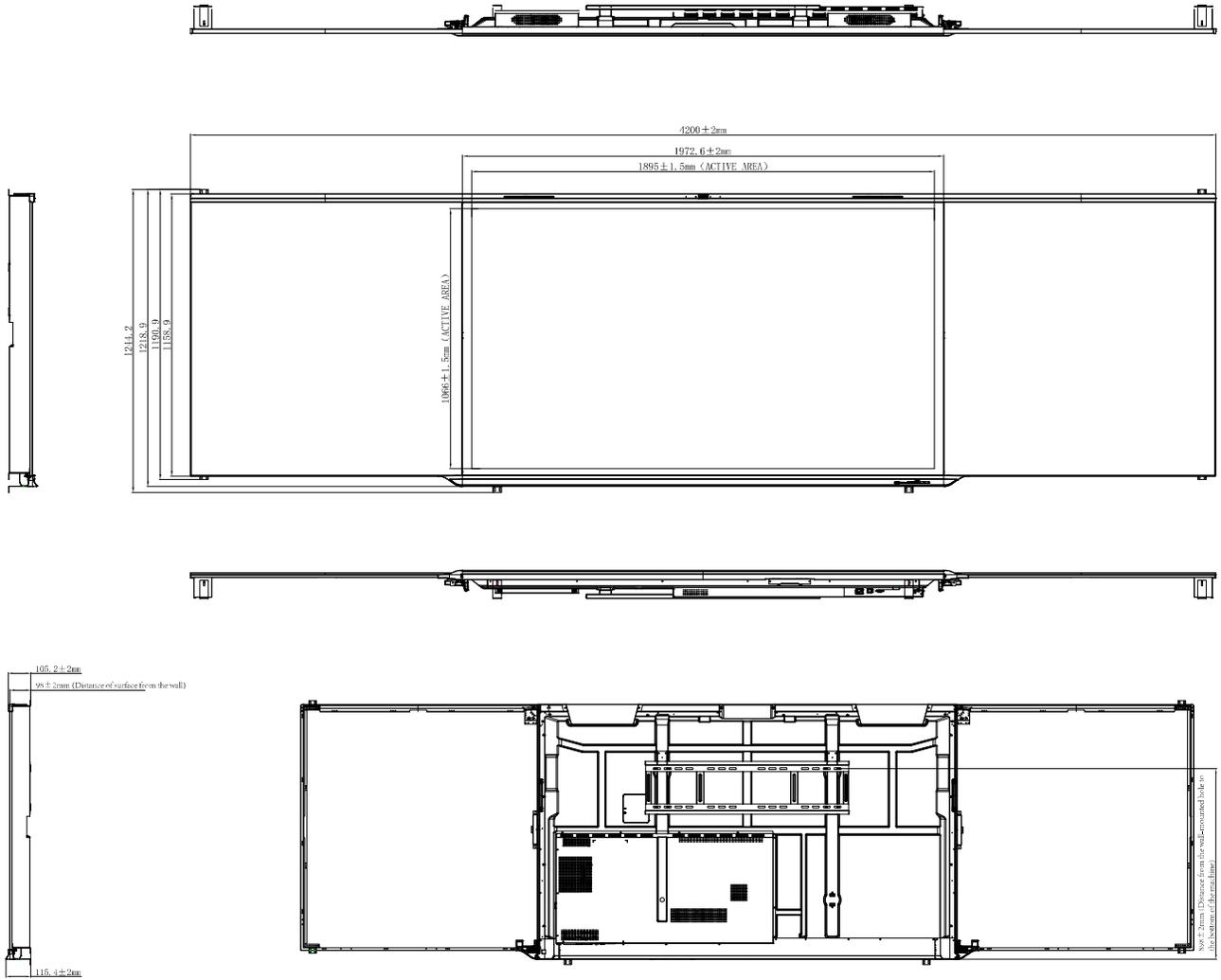
9. FAQ

1. Why does fog often appear on the screen?
To ensure the safety of the screen, a layer of tempered glass is added to the external of the screen. Moreover, to ensure heat radiation, there needs to be some gap between the two to reserve an air passage for ease of the convection of the air. The reason why fog appears is that there is a temperature difference between the screen temperature and the external temperature, and the hot air condenses and generates fog due to the glass surface with lower temperature. The fog does not affect the normal use, and it will evaporate and disappear after the machine is used for several hours.

2. Why are the boot times of the devices in different meetingrooms are different?
Generally, the external U disk or surfing online will let the device get virus. As a result, the disk space is fully occupied, or the system disk is damaged. Therefore, the boot of the device will get slower.

3. Why there is no sound for the external notebook computer?
In case of the VGA wire connection where only pictures are transmitted, you need to further connect the audio wire. Likewise, if only the audio wire is connected, the sound cannot be produced, and you need to connect the VGA wire to identify the VGA channel, or you can select the HDMI wire connection.

4. The attached touch pens are limited. Is there any object that can replace the touch pen for flexible writing and at the same time does not damage the screen?
Fingers can be temporarily used for writing. In addition, if
necessary, you can buy more writing pens.

5. After used for some time, the screen is overheated. Is it normal? Will it bring any bad influence?
It is normal that the screen is overheated, which will not bring any bad influence. Currently, the heat radiation design of our machine is advantageous in the industry. We are the maker of the industry standard, which complies with the international health standard.

6. Will it be harmful for eyes in case of use for a long time?
The identification of human eyes to the twinkling is 50 Hz, and the human eyes can feel the twinkling if the frequency is below 50 Hz. The eye muscles need to continuously adjust to adapt to the twinkling, which results in the fatigue of eyes. The frequency of the LCD we use is 60 Hz and 120 Hz. Therefore, human eyes cannot feel the twinkling of our screen, which can reduce the fatigue of eyes to a large extent compared with other similar products.

10. Simple Troubleshooting

(1) Automatic power off
① Is the sleep function enabled? Troubleshoot according to the general checking items of the computer.
② Check whether there is a signal on the channel where the input source is in. If there is no signal, the meeting machine will automatically enable the energy saving mode to power off.
③ Check the stability of the power supply.

(2) The indicator is off
① Check whether the power supply is normal.
② Check whether the rocker switch of the tablet computeris turned on.

(3) The indicator turns red, and booting is unavailable
① If pressing the button cannot turn on the IFP, unplug all the external wires, and turn on the IFP again after cutting off the power for 15 minutes.

(4) The pictures lack colors, or the color is abnormal.
① Check whether the VGA/HDMI cable is well connected or whether it is the quality problem.

(5) There are pictures but no sounds for the device.
① Try adjusting the volume by using VOL +/-.
② If the tablet computer is connected to the external computer, check whether the audio cable is correctly connected.
③ If the problem still persists, please contact professional after-sale maintenance personnel for your service.

(6) Inaccurate touch positioning.
① Check whether the touch pen or the finger is 90 degrees vertical to the screen.
② Check whether there are other objects touching the screen, for example, little tape or sleeve.

(7) Invalid Touch function.
① If the tablet computer is connected to the external computer, check whether the touch cable is correctly connected.

Maintenance

① Proper maintenance can avoid many early faults and regular careful cleaning can make machine brand new.

② Please unplug power plug before cleaning and maintenance, to prevent electric shock.

Clean Screen

① Please mix and stir even a little fabric softener or tableware detergent with alcohol.

② Please use a soft cloth to be completely soaked in the mixture.

③ Please take out cloth and twist to half dry state to wipe machine screen.

④ Repeat for several times, pay attention not to squeeze water flow into machine when wiping machine.

Clean Face Frame

① Please use dry, soft, lint-free cloth to wipe front frame.

No Use of Machine for A Long Time

① In case of no use of machine for a long time, such as holiday, please make sure to unplug the plug to prevent any possible dangers caused by power supply ripple from lightning.

HIGH-DEFINITION MULTIMEDIA INTERFACE

NOTICE: The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

MAXHUB