

HUAWEI IdeaHub B3 and Board 3 23.1 OPS Configuration

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Contents

Contents.....1

1 OPS Installation.....2

2 OPS Network Configuration.....2

3 Access to the Windows UI3

4 Basic Configuration5

5 Meeting Configuration.....6

6 External Devices8

7 Software Installation9

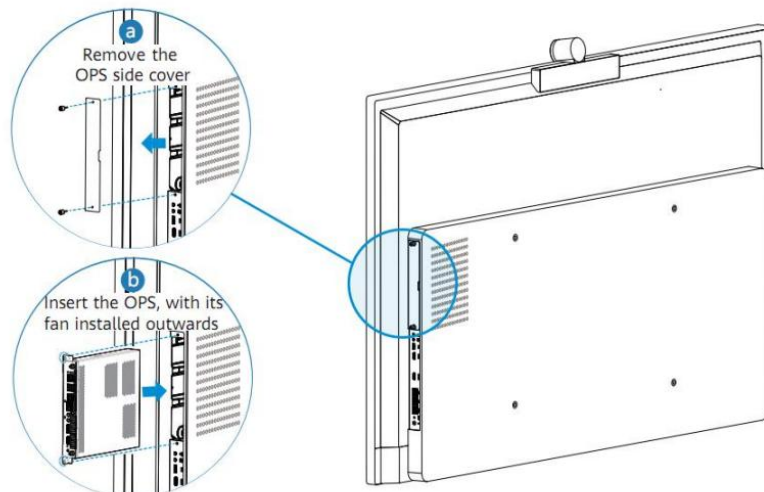
8 Content Sharing10

1 OPS Installation

Install the Open Pluggable Specification (OPS) on the back of the display. (Before installing or uninstalling the OPS, ensure that the display is powered off. Otherwise, the OPS may be abnormal.)

Different OPS models differ slightly in appearance and screw positions, but their installation methods are similar. [Figure 1](#) shows an example.

Figure 1 OPS Installation



NOTE

The OPS supports the Windows 10 IoT Enterprise operating system. After the OPS is installed, the Windows operating system is automatically activated after the device is powered on and connected to the network.

- If the OPS Windows operating system is not activated due to a network exception or network verification failure, tap  and choose **Settings > Update and security > Activate** when the network is connected.
- If a message such as "We can't activate Windows on this device..." is displayed during the activation of the OPS Windows operating system, click **Troubleshoot** to try again when the network is connected. The operating system will be automatically activated based on the default key.

2 OPS Network Configuration

The OPS supports wired and wireless network connection modes. For details about the configuration, see the *OPS User's Manual* delivered with the product.

Connection over a Cable

When the OPS and large screen share a wired network, the OPS, without connecting to a network cable, can directly use the wired network of the large screen. If the OPS and the large screen are on different networks, the OPS must be connected to a network cable.

OPS and Large Screen Share the Wired Network

You do not need to connect a network cable to the OPS. You only need to set network parameters to connect the OPS to the network of the large screen.

- If a DHCP server has been configured on the network, the OPS automatically obtains a dynamic IP address after being inserted into the large screen. No other configuration is required.
- If no DHCP server is configured on the network, you need to manually configure the static IP address and default gateway address of the OPS-USB NIC.
- If a DNS server is deployed on the network, configure the DNS server address.

OPS and Large Screen Use Different Networks

An independent network cable needs to be inserted into the OPS and network parameters need to be configured.

- If a DHCP server has been configured on the network, the OPS automatically obtains a dynamic IP address after the network cable is properly connected. No other configuration is required.
- If no DHCP server is configured on the network, you need to manually configure the static IP address and default gateway address of the OPS-Ethernet NIC.
- If a DNS server is deployed on the network, configure the DNS server address.

Connection Using a Wireless Network

The wireless networks of the OPS and large screen cannot be shared. If wireless access is used, configure the wireless networks of the OPS and large screen separately.

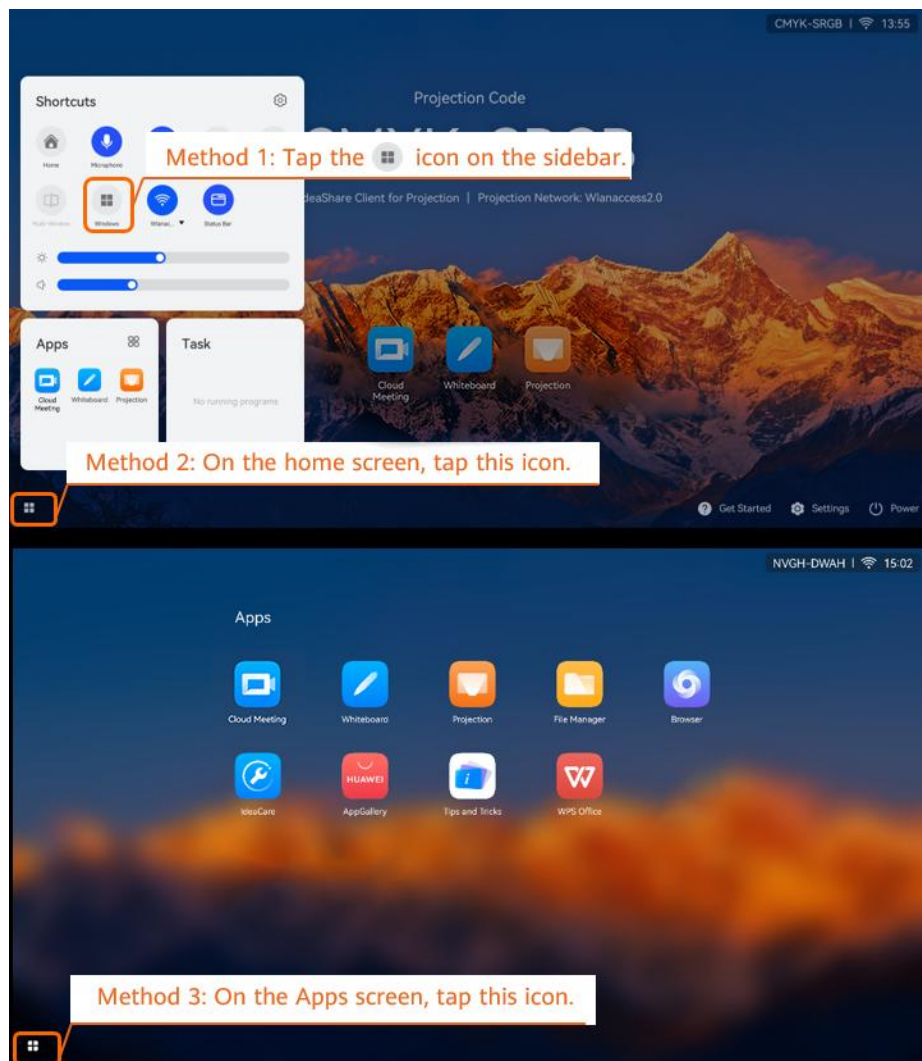
3 Access to the Windows UI

The large screen can be in HarmonyOS or Windows mode. By default, the large screen enters the HarmonyOS mode. You can access the Windows UI from the HarmonyOS mode by tapping the Windows app or switch from the HarmonyOS mode to Windows mode.

Accessing the Windows App UI from the HarmonyOS Mode

The HarmonyOS mode supports native projection, meeting, and whiteboard apps. The large screen can access the Windows app UI from the HarmonyOS mode. After the large screen is restarted, it enters the HarmonyOS mode by default. There are three methods to access the Windows app UI from the HarmonyOS mode. See [Figure 1](#).

Figure 1 Accessing the Windows app UI



NOTE

Method to access the HarmonyOS mode from the Windows app UI: Tap the  icon on the sidebar to exit the Windows app UI.

Switching from the HarmonyOS Mode to Windows Mode

On the home screen of the large screen in HarmonyOS mode, choose **Settings > Advanced > System > System Mode** and select **Windows mode** to switch to Windows mode.

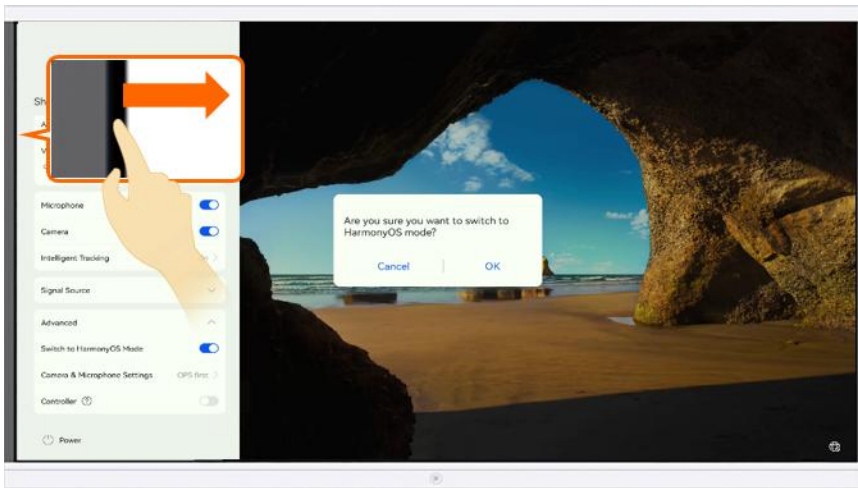
After the large screen is switched to the Windows mode, the system enters the Windows mode by default when the large screen is powered on or restarted. The method of using the large screen in Windows mode is the same as that of using a PC.

NOTE

[Figure 2](#) shows how to switch the Windows mode to HarmonyOS mode.

In Windows mode, swipe right from the left edge of the large screen to display the shortcut operation page. Tap **Advanced** and then tap **Switch to HarmonyOS Mode**. On this screen, you can adjust the brightness and volume, switch the intelligent tracking mode, and power off or restart your large screen.

Figure 2 Switching to HarmonyOS mode



4 Basic Configuration

This section describes how to perform configurations to invoke the soft keyboard and inner camera and microphone of the large screen on the Windows UI.

Using the Soft Keyboard

In the lower left corner of the Windows UI, tap  and choose **Settings > Device > Input > Touch keyboard** and enable **Show the touch keyboard when not in tablet mode and there's no keyboard attached**.

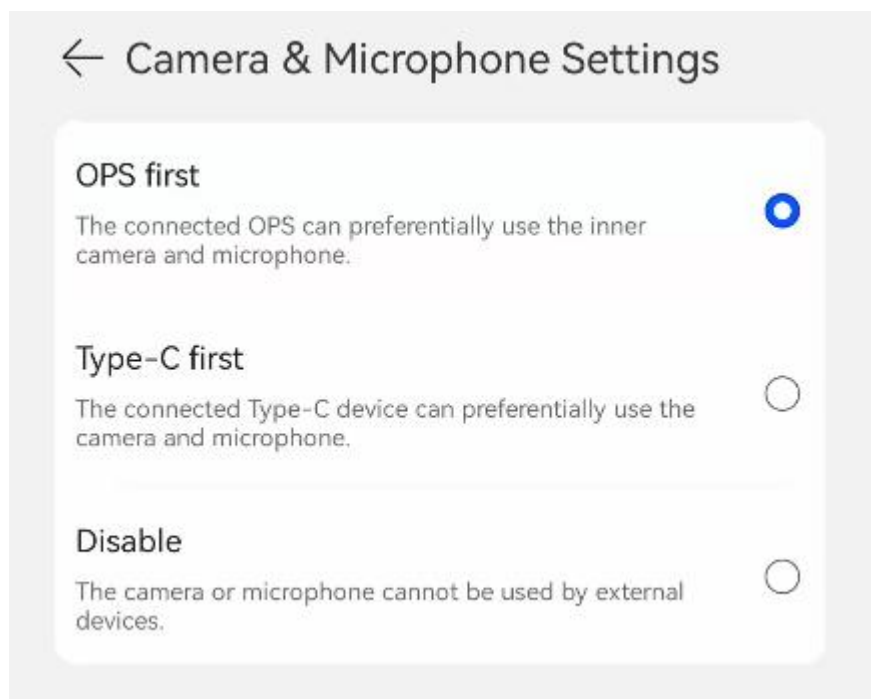
Using the Inner Camera and Microphone of the Large Screen

To use the inner camera and microphone of the large screen on the Windows UI, perform the following steps:

1. In Windows mode, swipe right from the left edge of the large screen to display the shortcut operation page, choose **Advanced > Camera & Microphone Settings**, and select **OPS first**, as shown in [Figure 1](#).

In HarmonyOS mode, choose **Settings > Advanced > Input/Output > Camera & Microphone Settings** from the lower right corner of the large screen's home screen, and select **OPS first**.

Figure 1 Camera & Microphone Settings



2. Use the inner camera and microphone of the large screen.

5 Meeting Configuration

The OPS supports third-party meeting apps (such as Tencent Meeting) running Windows. To use the meeting function, you are advised to check the meeting configuration as follows:

During the check, you are advised to hold a test meeting, observe the sound pickup and playing effects and camera effect in real time, and adjust the meeting configuration to the optimal state.

Checking Whether Remote Sites Can Hear the Local Site

If remote sites cannot hear the local site, perform the following steps:

1. Check whether the local microphone can pick up sounds properly.
Log in to the web interface. Choose **Device Control > Audio Control > Input** and check whether the volume bar is moving when you are speaking.
2. Check whether **OPS first** is set at both the local and remote sites.
In Windows mode, swipe right from the left edge of the large screen to display the shortcut operation page, choose **Advanced > Camera & Microphone Settings**, and select **OPS first**.
3. Check whether the IdeaSpeakerphone audio adapter is selected and enabled.
On the Windows UI, tap and hold  in the lower right corner of the screen, and choose **Sound > Recording > Capture Input terminal (IdeaSpeakerphone) > Properties > Device usage > Use this device (enable)**.

Adjusting the Volume of the Local Site Heard by Remote Sites

If the volume heard by remote sites is too low or too high, perform the following steps:

1. Check whether the volume of the remote speaker is too low or too high.
In Windows mode, swipe right from the left edge of the large screen to display the settings page and adjust the output volume.
2. If the problem persists after you perform step 1, increase the UAC gain of the local site.
In HarmonyOS mode, choose **Settings > Advanced > Input/Output** and adjust **UAC Gain**.
3. If the problem persists after you perform steps 1 and 2, check whether the volume of the local microphone is too low or too high.
Use Zoom as an example. Tap the ^ icon next to **Mute**. On the page that is displayed, choose **Audio Settings > Audio**, deselect **Automatically adjust microphone volume**, and then adjust the microphone volume.

Adjusting the Sound Effects of the Local Site Heard by Remote Sites

If the voice heard by remote sites is dull, loud, or blurry, perform the following steps:

1. Check whether the sampling rate of the IdeaSpeakerphone audio adapter on the local OPS is 48 kHz.
In Windows mode, tap and hold the speaker icon in the lower right corner of the screen, and choose **Sound > Recording > Capture Input terminal (IdeaSpeakerphone) > Properties > Advanced > 2 channel, 16 bit, 48000 Hz (DVD Quality)**.
2. Adjust reverberation suppression in special scenarios.
If the sound is not clear enough after you have performed the operations in step 1, check whether the reverberation in the local environment is excessive (the sound reverberation in glass room, living room, open exhibition hall, and classroom is relatively excessive). If yes, adjust the reverberation suppression strength mode (to a higher strength) to decrease the reverberation and improve sound clearness through internal algorithms.
In HarmonyOS mode, choose **Settings > Advanced > Input/Output**, enable **Reverberation Suppression**, and select a proper suppression mode.

Adjusting the Echo Cancellation Strength of the Meeting

If continuous echoes occur in a meeting, you can use the echo suppression strength or echo detection function to avoid echoes in the meeting. Use either of the methods:

Method 1: Adjust the echo suppression strength of the large screen as follows: In the lower right corner of the home screen of the large screen, choose **Settings > Advanced > Input/Output** and set **Echo Suppression Strength** as required.

Method 2: Use the echo detection function for automatic adjustment. Choose **Maintenance > Diagnostics > Echo Detection** on the web interface. Click **Start** for the system to automatically adjust the value of **Echo Suppression Strength** based on the actual scenario.

Checking Whether Voice Tracking Can Be Implemented in a Meeting

The inner camera and microphone of the large screen support voice tracking.

In the lower right corner of the large screen's home screen, choose **Settings > Camera** and enable **Camera** and **Intelligent Tracking** to select **Voice Tracking** or **Auto-Framing**.

6 External Devices

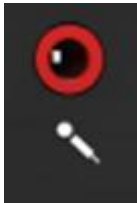
In Windows mode, external devices can be connected in the following ways: 1. Connect an external microphone, speaker, and camera to the OPS. 2. Connect an external microphone and speaker to the large screen.

Connecting External Devices to the OPS

External Microphone

You can simply connect an external microphone to the 3.5 mm audio input port (as shown in [Figure 1](#)) of the OPS for plug-and-play experience.

Figure 1 3.5 mm audio input port



NOTE

Echo occurs when the external microphone is used with the built-in speaker of the large screen. It is recommended that the external microphone and speaker be connected at the same time.

External Speaker

You can simply connect an external speaker to the 3.5 mm audio output port (shown in [Figure 2](#)) of the OPS for plug-and-play experience.

Figure 2 3.5 mm audio output port



External Camera

You can simply connect an external camera (for example, Camera 200 Cloud) to the USB 3.0 port (shown in [Figure 3](#)) of the OPS for plug-and-play experience.

Figure 3 USB 3.0 port



Connecting External Devices to the Large Screen

The following table lists the capabilities and methods of connecting external devices to ports of a large screen in Windows mode.

Table 1

Port	Supported or Not	Configuration Mode	Remarks
USB	Yes	In HarmonyOS mode, choose Settings > Advanced > Input/Output > USB and set USB Mode to Windows mode .	-
LINE IN	No	-	-
LINE OUT	Yes	-	-
HDMI IN	No	-	The B3 and Board 3 endpoints have two HDMI IN ports.
HDMI OUT	Yes	Log in to the web interface, choose System Settings > Input/Output > Audio , set Audio output to HDMI , and click Save .	-

7 Software Installation

On the Windows UI, you can search for and download the software using a browser or insert a USB flash drive to install the software.

Download via a Browser

On the Windows UI, open the browser, search for the software name, and download and install the software.

 NOTE

Before downloading the software, ensure that the device is connected to the Internet.

Download via a USB Flash Drive

Method 1: Use the USB function of the large screen.

1. On the Windows UI, configure the USB mode as follows before you use the USB function of the large screen: In the lower right corner of the home screen in HarmonyOS mode, choose **Settings > Advanced > Input/Output > USB** and set **USB Mode** to **Windows mode**.
2. Insert a USB device, for example, a USB flash drive, to the large screen in the lower right corner of the large screen.
3. Open **This PC**, open the downloaded installation package in the USB flash drive, copy the package to the Windows disk, and install the software.

Method 2: Use the USB function of the OPS.

1. Connect a USB device, such as a USB flash drive, to the OPS.
2. Open **This PC**, open the downloaded installation package in the USB flash drive, copy the package to the Windows disk, and install the software.

8 Content Sharing

On the Windows UI, two common methods can be used to share content: use a USB device to share content or use the OPS service end for projection sharing.

Content Sharing Using a USB Flash Drive

Method 1: Use the USB function of the large screen.

1. On the Windows UI, configure the USB mode as follows before you use the USB function of the large screen: In the lower right corner of the home screen in HarmonyOS mode, choose **Settings > Advanced > Input/Output > USB** and set **USB Mode** to **Windows mode**.
2. Insert a USB device, for example, a USB flash drive, to the large screen in the lower right corner of the large screen.
3. Open **This PC** and open the file in the USB flash drive to share it.

Method 2: Use the USB function of the OPS.

1. Connect a USB device, such as a USB flash drive, to the OPS.
2. Open **This PC** and open the file in the USB flash drive to share it.

Projection Using the OPS Service End

Open a browser on the OPS page, enter **huaweicloud.com** in the address box, search for **IdeaShare**, and perform operations below to download and install the OPS service end. After the installation, open the app and follow the onscreen instructions for projection. See [Figure 1](#).

Figure 1 Downloading the OPS service end

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