

USB Fusion

User Manual, Reference and FAQs



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Introduction



Product Overview

Combining capture and production functions, USB Fusion is your best choice for delivering a high-quality [presentation](#). This device allows you to simultaneously capture three 1080p60fps streams from your computer, [HDMI](#) camera and [webcam](#) while easily leveraging imported media files to your advantage. It can edit different sources the way you need, combine them into a picture-in-picture or side-by-side layout, and output the desired production through a USB 3.0 port to a wide variety of [webcam](#)-compatible software, such as Zoom, Skype, OBS. Switching between different scenes is as easy as a tap away. You can also annotate the images with various tools while presenting. And you need not worry about complex setup and configuration. Just connect your A/V sources to USB Fusion, and USB Fusion to your computer. It simply works.

USB Fusion features the following:

- Two [HDMI](#) inputs and one USB [webcam](#) input with support for signals up to 1080p at 60fps
- Support importing media files to enrich presentations
- Switch between sources or combine two simultaneously into one output for capture via USB 3.0 interface
- [HDMI](#) output for conveniently monitoring source or program
- Automatic, driver-free installation with support for Windows®, Mac® and Linux® operating systems

- Standard UVC/UAC device offering broad compatibility with popular software
- High-quality video processing with zero CPU usage
- Record to built-in storage
- Simple-to-use Web UI for configuration and management
- Intuitive app for easy switchover and annotation



Typical Applications

USB Fusion applies to a variety of scenarios, such as video conferencing, online education, and live streaming e-commerce.

Video Conferencing

Using USB Fusion for online meeting is easy and effective. You have much flexibility in selecting your meeting software. Before your meeting, you can show some background image or play some music. While presenting, you can present your meeting materials and yourself one after another, or in a picture-in-picture layout. You can also use annotation tools to mark your [presentation](#) materials so that your audience can get your points easily. The meeting can be recorded for later usage.

Online Education

USB Fusion provides all-in-one service for online teaching. You no longer need to worry about whether the file format of your teaching material is compatible with the online-teaching software. You can present your image throughout the teaching to help sustain the attention of your students. And your professional-quality stream will definitely out-compete the many mundane [webcam](#) streams out there. With annotation tools at hand for marking and summarizing, your teaching can be just as effective as in a real classroom. The annotations can be exported as a file for sharing after class. You can even choose various social platforms for teaching to leverage their wide popularity.

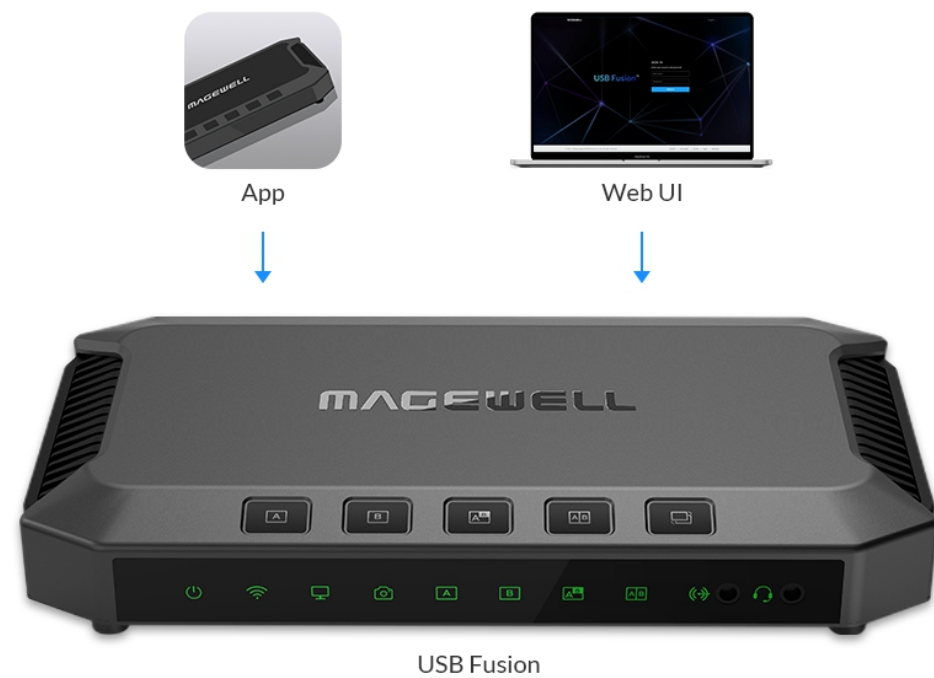
Live Streaming E-commerce

As live streaming e-commerce is gaining momentum, USB Fusion will be your

best tool to attract more fans and outrun your competitors with high-quality images. You can use DSLR, mirrorless cameras and even professional cameras for live streaming, differentiating your stream with overwhelming quality. Multiple cameras can be connected simultaneously for you to capture products from different angles and best present their highlights. Besides, you can fully leverage video and audio media files to create richly diversified shows to engage your audience.

Web UI and App Functions

USB Fusion provides a Web UI for device configuration and management, and an App for creation and real-time control of your [presentation](#).



The following is an overview of the Web UI and App functions.

Function	App	Web UI
Create/manage presentations	√	√
Create/manage scenes	√	√
Edit scenes	√	×
Import video/pictures/music	√	√
Manage video/pictures/music	×	√
Create notes	√	×
Manage notes	√	√
Annotate	√	×
Switch scenes/notes	√	√
Add/play background music	√	√
Record/take screenshots	√	×
Manage the album	√	√
Adjust volume	√	√
Check device status	×	√
Configure inputs & outputs	×	√
Manage the App	×	√
Configure/Manage the system	×	√

System Requirements

Host Configuration

Operating System Versions

- Windows
Windows 7 and later, Server 2008 and later (x86 & x64)
- Linux
Linux system with kernel 2.6.35 and later (x86, x64 & ARM)
- Mac
OS X 10.9 and later, macOS 10.12 and later

Port

USB 3.0 port (recommended)

Browsers Compatible with Web UI

- Google Chrome version 49 and later
- All Microsoft Edge versions
- Mozilla Firefox version 61 and later
- Apple Safari 11.1 and later
- Opera 55.0.2994.44 and later

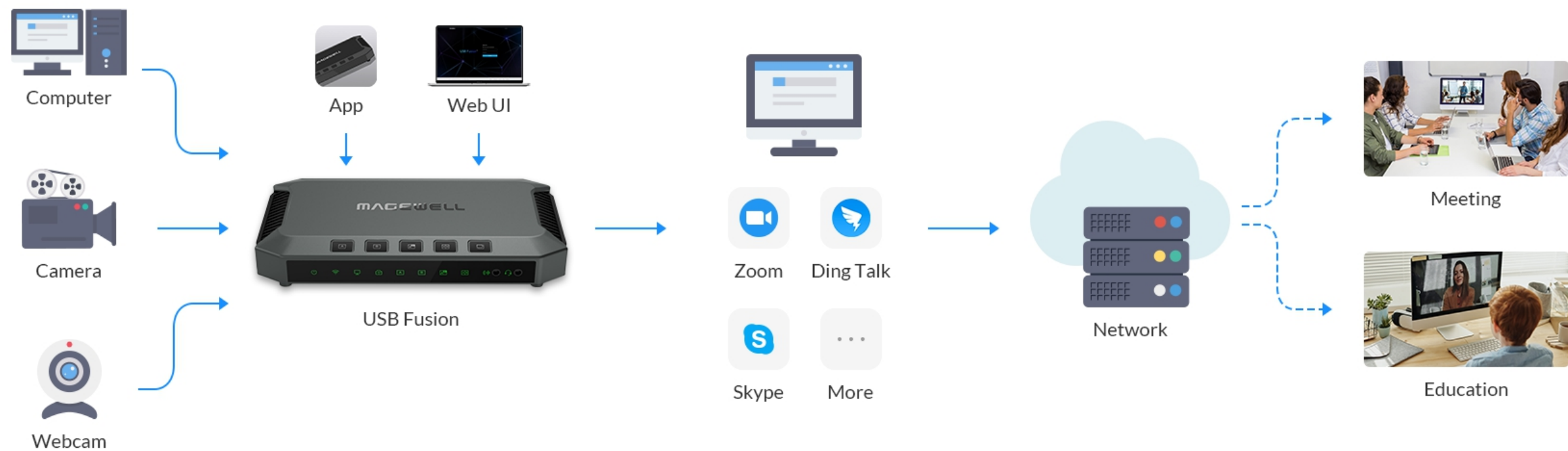
Compatible Software

- Skype
- Zoom
- Microsoft Teams
- OBS
- XSplit
- Wirecast
- Feishu
- Tencent Meeting
- DingTalk
- Other UVC/UAC-compliant software

Getting Started

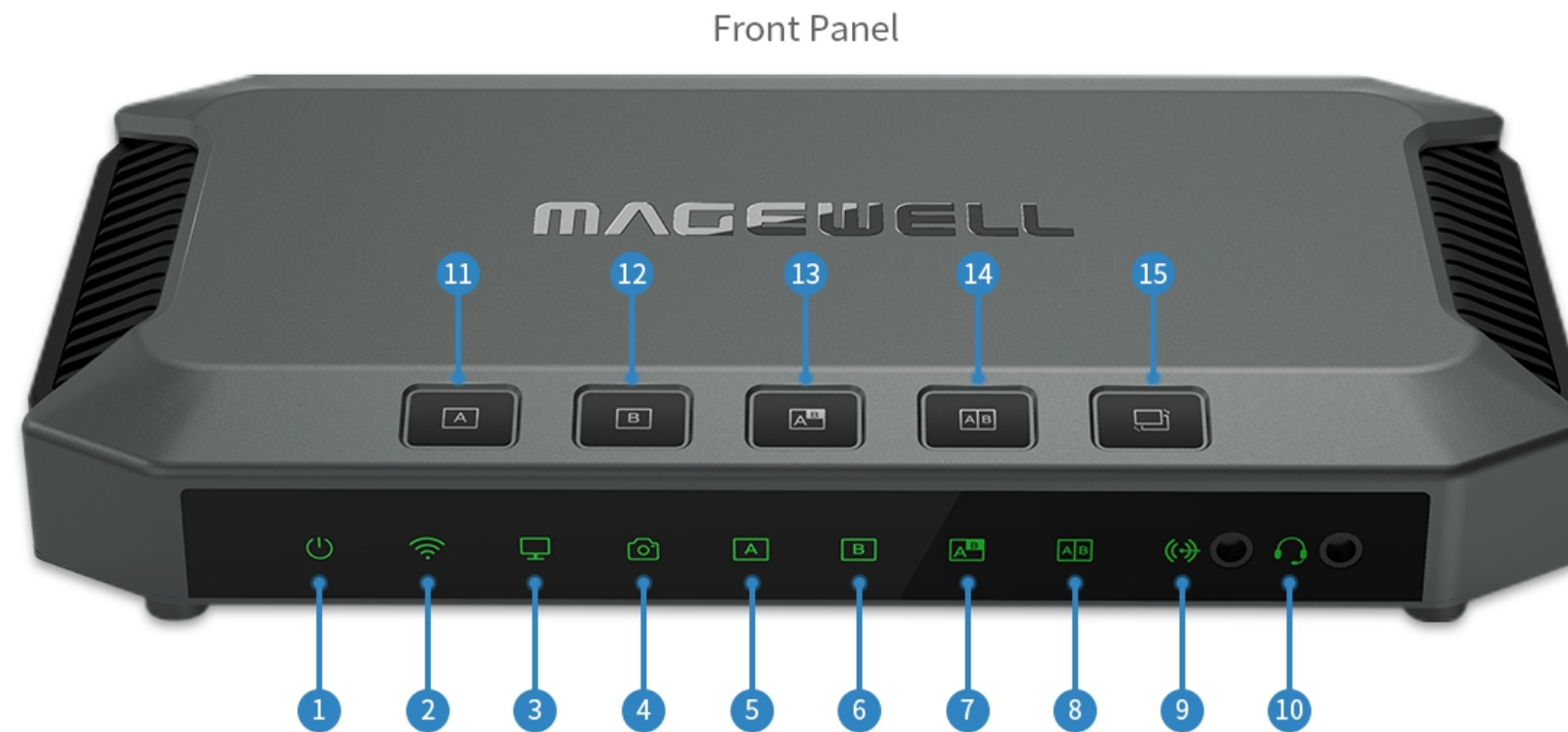
USB Fusion is easy to use. No complicated configuration is required to implement high-quality capture and production. This chapter tells you how to use USB Fusion for your [presentation](#), including:

1. Connect devices
2. Connect to third-party software
3. Produce your [presentation](#)



End-to-end workflow of USB Fusion

Getting to Know USB Fusion



Connection lights: connected or not. On: yes. Off: no.

- 1 Power
- 2 Wi-Fi
- 3 Computer
- 4 Camera

Image lights: image presenting or not. On: yes. Off: no.

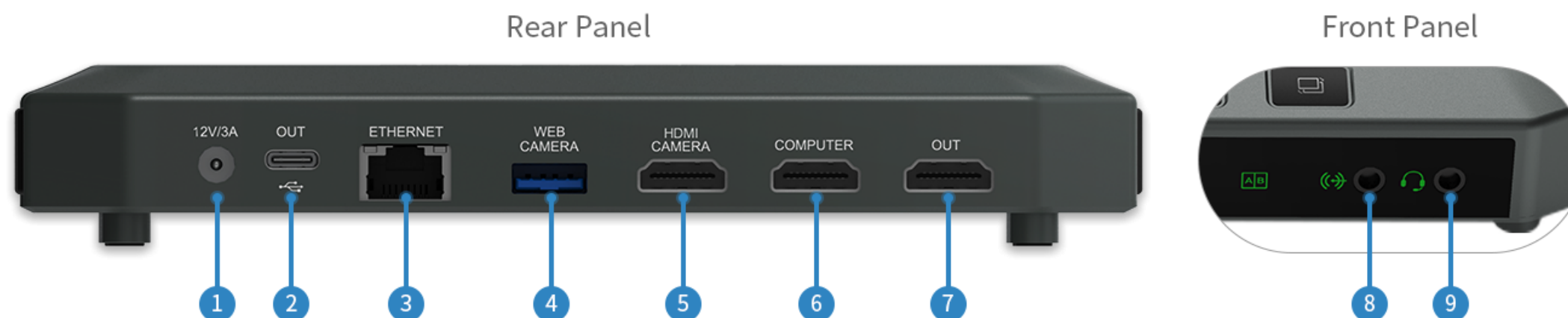
- 5 Computer image
- 6 Camera image
- 7 Picture in picture
- 8 Side by side

Audio lights: connected or not. Pulsing: no. On: yes.

- 9 Line in
- 10 Headset

Buttons: switch or composite sources.

- 11 Switch to computer source
- 12 Switch to camera source
- 13 Picture in picture. Press again to change position.
- 14 Side by side. Press again to change ratio.
- 15 Swap, namely, exchange A and B

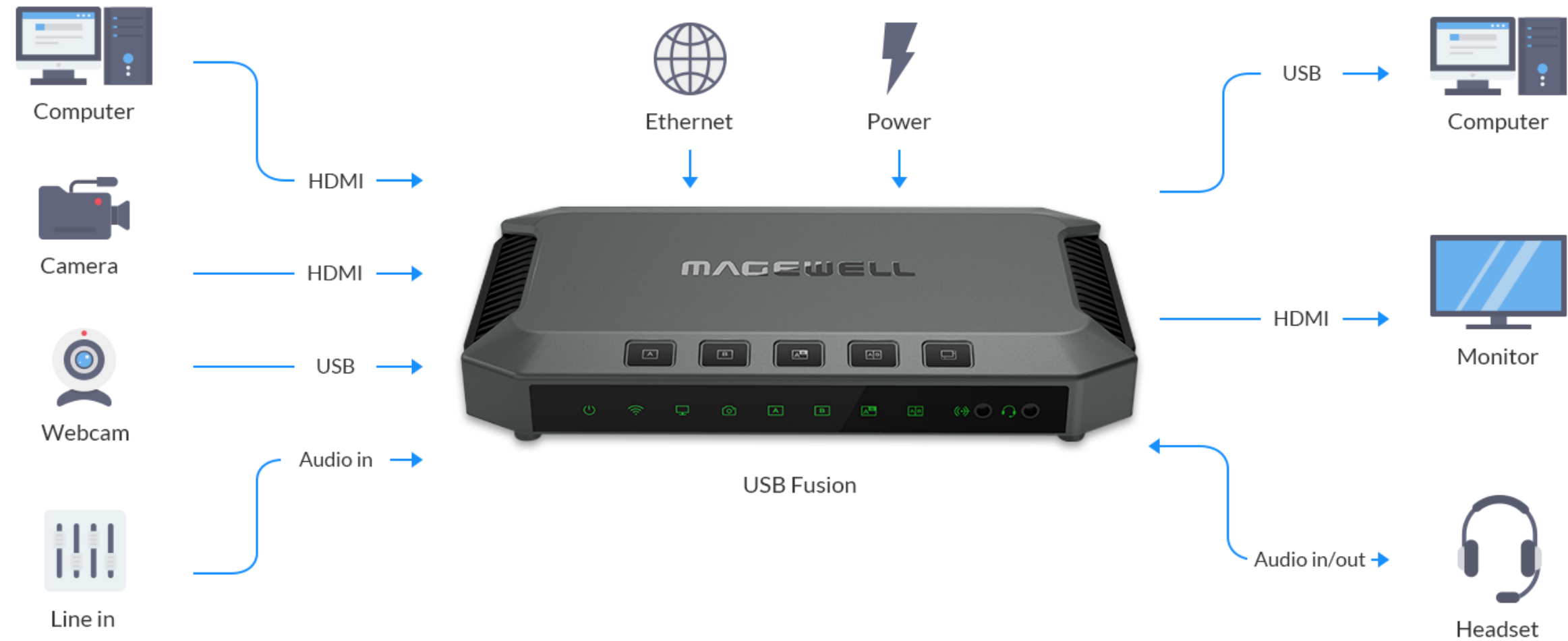


Ports:

- | | |
|---------------------------------------|---|
| 1 Power: connect to power | 2 USB OUT: connect a computer to output to 3rd-party software |
| 3 ETHERNET: connect to Ethernet | 4 WEB CAMERA: connect a webcam or other USB A/V device |
| 5 HDMI CAMERA: connect an HDMI camera | 6 COMPUTER: connect a computer |
| 7 HDMI OUT: connect to a monitor | 8 Line in: connect a line-in device |
| 9 Headset: connect a headset with mic | |
- This port uses CTIA standard. Adapter required for OMTP device.

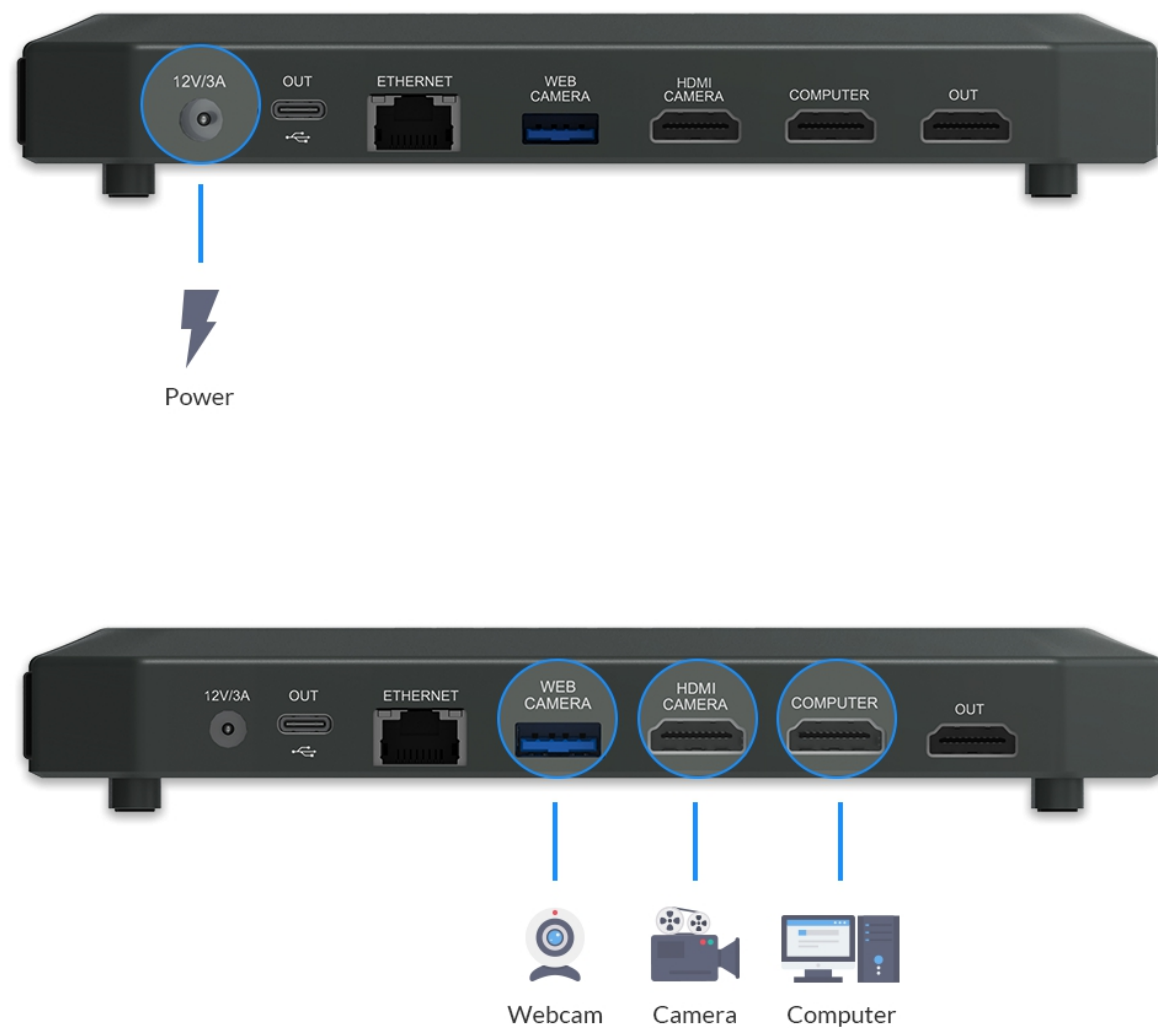
Connecting Devices

To use USB Fusion, you need to first connect power, network and various video/audio devices. USB Fusion supports the following connections:



Power	1x power port	Connect to power via a power adapter.
Video input	1x HDMI input: COMPUTER	Connect a source computer*.
	1x HDMI input: HDMI CAMERA	Connect a HDMI camera.
	1x USB input: WEB CAMERA	Connect a webcam or other USB video/audio device.
Audio	1x 3.5mm port: line-in port	Connect a line-in device.
	1x 3.5mm port: headset port	Connect a headphone (with microphone).
Video output	1x USB output	Connect to a streaming computer**.
	1x HDMI output	Connect to a monitor for monitoring.
Network	1x RJ45 port	Connect to Ethernet to allow the Web UI or App to access the device.

- *Source computer: the computer that connects to the COMPUTER port of USB Fusion, which serves as an HDMI source for USB Fusion, such as a computer for presenting PowerPoint materials.
- **Streaming computer: the computer that connects to the USB OUT port of USB Fusion, which receives A/V content from USB Fusion for a meeting software or streaming software to deliver the content.



Connecting to Power

Use the supplied power adapter to connect the power port on USB Fusion and power supply. After connected, the power indicator lights up.

The device starts working after connected to power.

Connecting Video Inputs

USB Fusion can simultaneously connect three video inputs, including a computer, an [HDMI](#) camera, and a [webcam](#).

The video inputs can be used separately or composited into a picture-in-picture or side-by-side layout.

Connecting a Computer

Connect an [HDMI](#) cable from an [HDMI](#) output port on the computer to the COMPUTER port on the USB Fusion. After connected, the computer connection indicator lights up.

- The connected source is ready for use immediately after the connection. You can also [set the input ports](#) on the Web UI.
- To capture audio from the computer, ensure that USB Fusion is selected as the audio output device in the system audio settings on the computer.
- This port can also connect other [HDMI](#) sources.

Connecting an HDMI Camera

Connect an [HDMI](#) cable from the [HDMI](#) port on a camera to the [HDMI CAMERA](#) port on USB Fusion. After connected, the [HDMI](#) camera connection indicator lights up.

- The connected source is ready for use immediately after the connection. You can also [set the input ports](#) on the Web UI.
- The embedded audio (if any) is captured automatically.
- This port can also connect other [HDMI](#) sources.

Connecting a Webcam

Connect a USB cable from a [webcam](#) to the [WEB CAMERA](#) port on USB Fusion.

- The connected video source is ready for use immediately after the connection. You can also [set the WEB CAMERA Video](#) on the Web UI.
- This port can also connect a Magewell USB capture device, or a USB Hub that connects multiple USB video/audio devices.
- This port supports two-channel audio input and output, which are disabled by default and can be enabled on the Web UI. If you need the audio input from this port to follow the WEB CAMERA video, see [Setting WEB CAMERA Audio](#); if you need to use the audio input and output from this port as a global microphone and audio output, see [Selecting USB Audio Devices](#).
- For more information on the WEB CAMERA port, see [How to use](#)



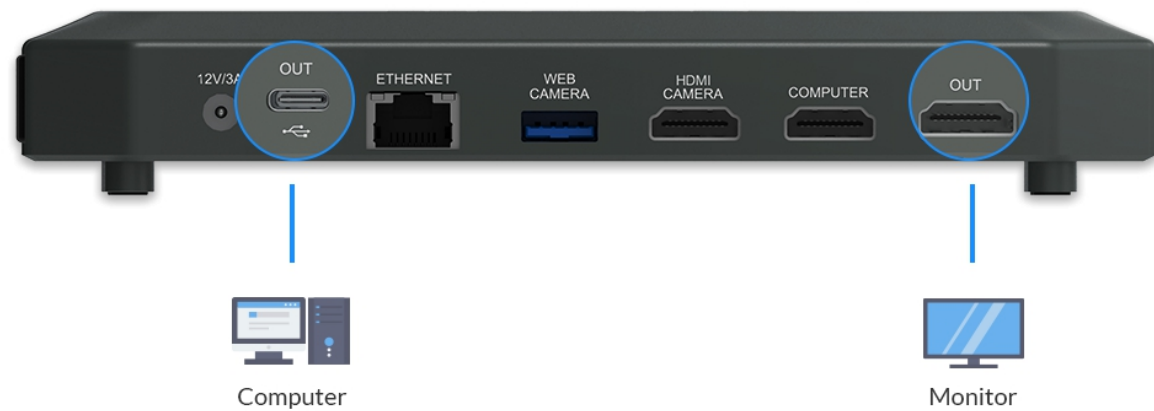
the WEB CAMERA port.

Connecting Audio

- Connect a line-in device to the line-in port on USB Fusion.
- Connect a headset (with microphone) to the headset port on USB Fusion.

After connected, the line-in and headset indicators light up.

- The line-in port supports two-channel audio input.
- The headset port supports two-channel audio input and output (for monitoring).
- The headset port uses the CTIA standard. For an OMTP-compliant device, you need to connect it through an OMTP-CTIA adapter.
- The connected source is ready for use immediately after the connection. If you need to adjust volume, you can go to the [Web UI](#) or [App](#).



Connecting Video Outputs

USB Fusion delivers video to a [streaming computer](#) via the USB OUT port, and to a monitor via the [HDMI](#) OUT port.

Connecting to a Streaming Computer

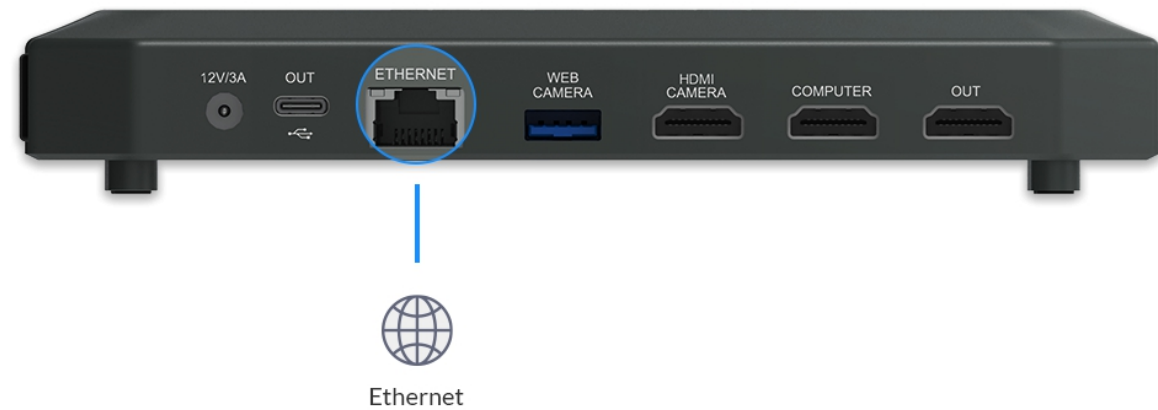
Connect the supplied USB Type-C cable from the USB OUT port to the [streaming computer](#).

- The USB OUT port supports USB 3.0 for high frame rate, high resolution video. It is also compatible with USB 2.0. However, since the limited bandwidth of USB 2.0 might lead to frame drop, blurry image or other exceptions, you are advised to use a USB 3.0 port on the [streaming computer](#).
- The actual output of USB OUT is determined by the negotiation between USB Fusion and the receiving software.
- This port outputs two-channel audio along with the video.

Connecting a Monitor

Connect an [HDMI](#) cable from the [HDMI](#) OUT port on USB Fusion to a monitor.

- By default, this port outputs the same content as the USB OUT port. You can also [select the output content](#) on the Web UI.
- The default output resolution is selected based on the monitor capability. You can [set the output resolution](#) on the web UI. If the aspect ratio of the source differs from that of the monitor, there will be black borders around the source.



- This port can output two-channel audio for monitoring.

Connecting to Ethernet

Connect an Ethernet cable to the Ethernet port on USB Fusion. This port supports 1000 Mbit/s Ethernet.

- After USB Fusion is connected to network, the USB Fusion App can connect to the device for operations.
- After network is connected, other computers in the same LAN can access the web UI of USB Fusion for configuration. For details, see [Web UI Settings](#).
- On the web UI, you can also [connect to Wi-Fi](#).

Connecting to a Third-party Software

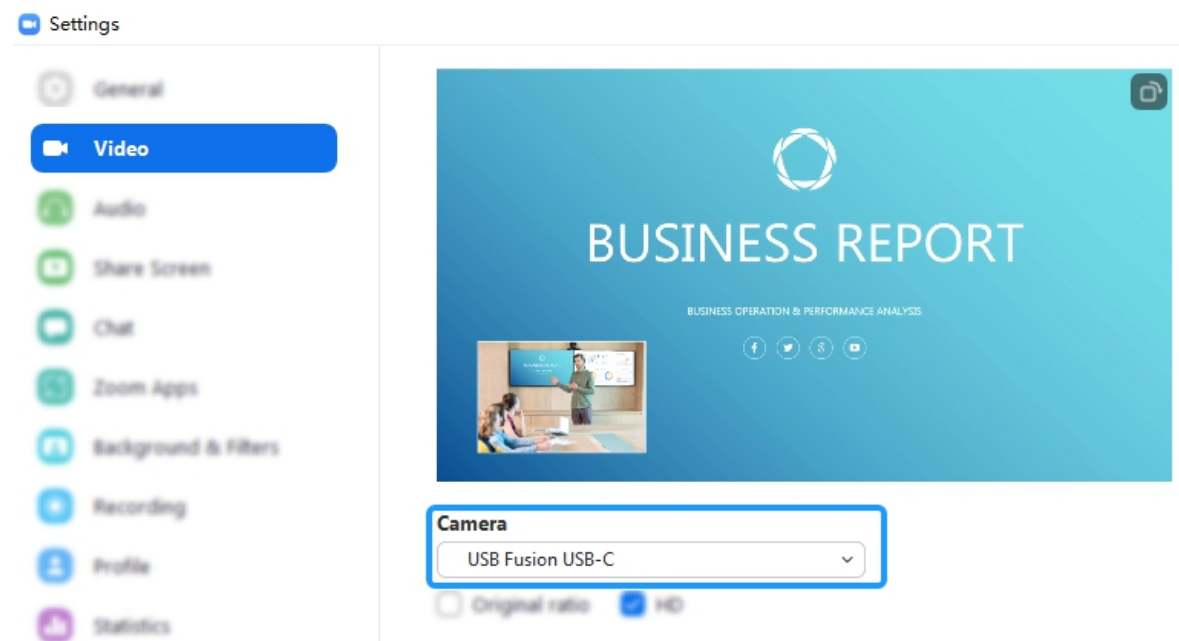
Once USB Fusion is connected to the streaming software, it is recognized as a [webcam](#). Therefore, you can use the device in almost any software that supports [webcam](#), as long as you select USB Fusion as the video and audio device in the software, as you will do for a [webcam](#). This makes USB Fusion really flexible. It not only supports common streaming software like OBS and vMix, but is also friendly to video conferencing/education software that accepts only a single source, like Skype and Zoom. The following tells you how to use USB Fusion in two popular applications, OBS and Zoom.

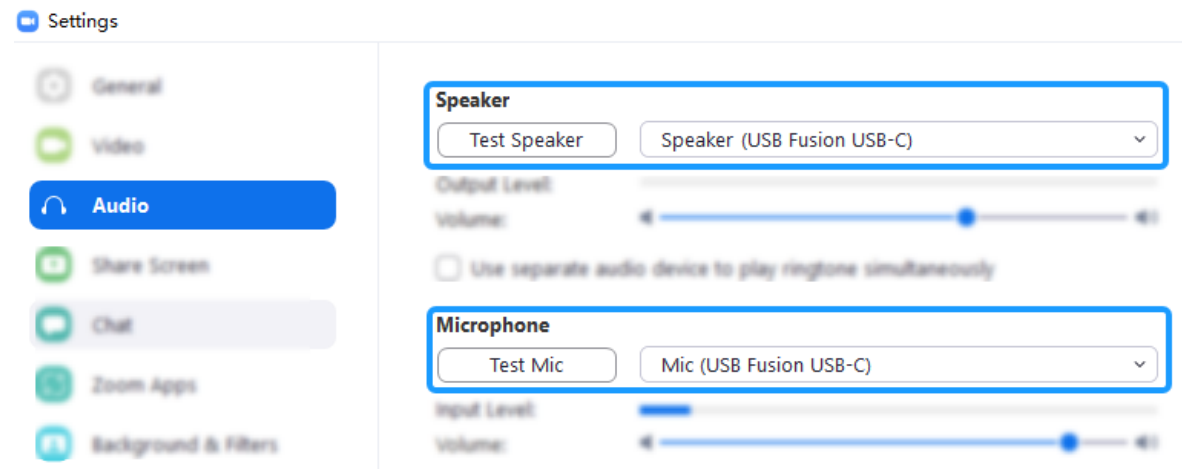
Connecting to Zoom

Zoom is a widely used video conferencing software.

The following uses Zoom for Windows to illustrate how to use USB Fusion in Zoom.

1. You have completed [Connecting Devices](#).
2. Open the Zoom client and log in.
If not installed, you can go to [Zoom website](#) to download the software.
3. Select USB Fusion as the video input device.
 - i. In the upper right corner, click **Settings**, and then click the **Video** tab.
 - ii. On the **Video** tab, select **USB Fusion USB-C** or a similar name from the **Camera** drop-down box.
The preview area will show the video output by USB Fusion.
4. Select USB Fusion as the audio input device.
 - i. On the **Settings** page, click the **Audio** tab.

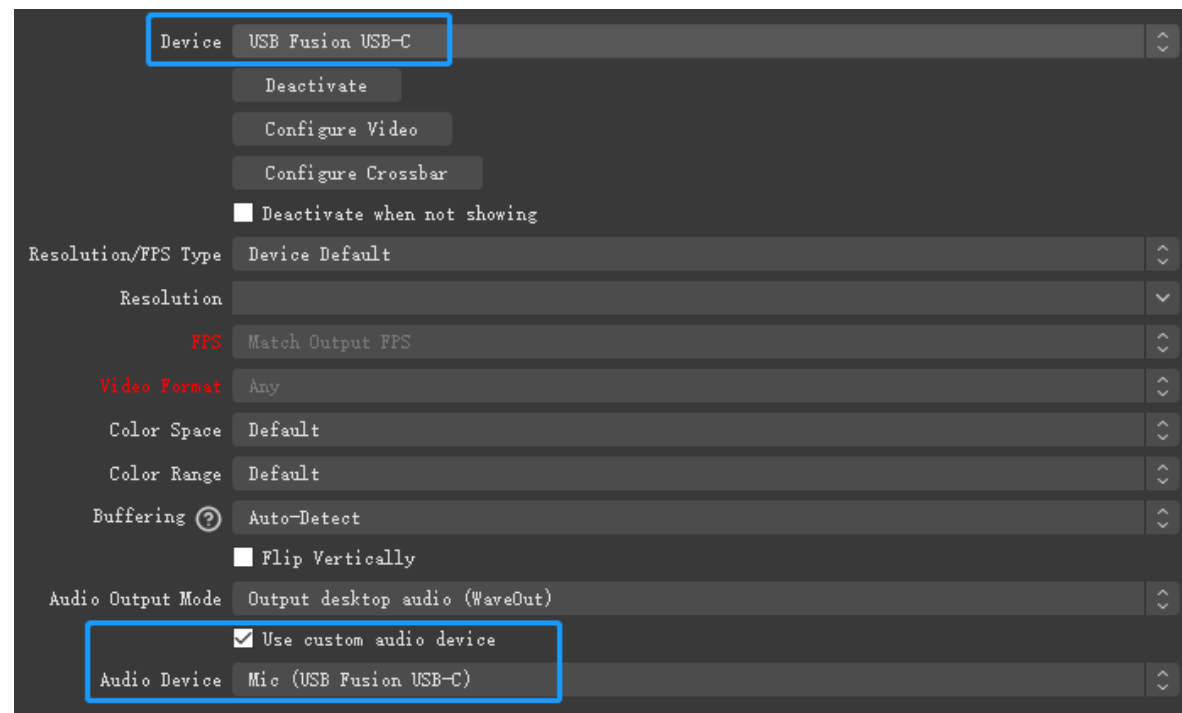
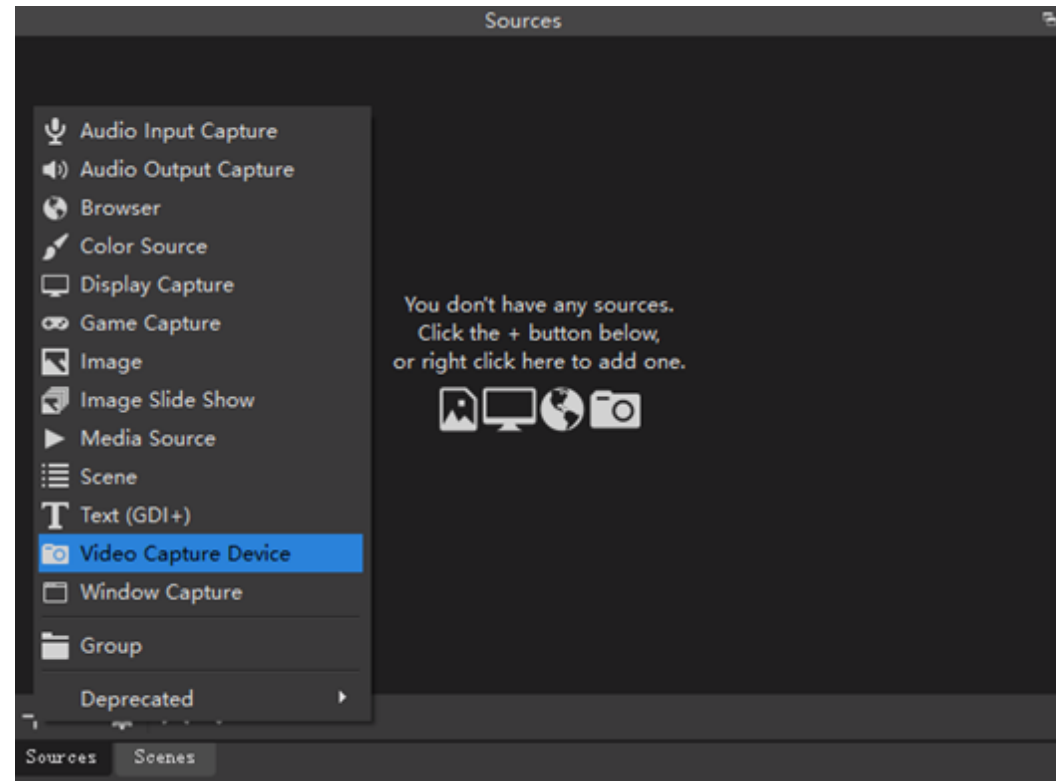




- ii. If you need to hear the speech from other meeting attendees on USB Fusion, on the **Audio** tab page, select **USB Fusion USB-C** or a similar name from the **Speaker** drop-down box.
You can click **Test Speaker** to test. You will hear the test audio if everything works.
- iii. If you need to send out the audio from USB Fusion, on the **Audio** tab page, select **USB Fusion USB-C** or a similar name from the **Microphone** drop-down box.
You can click **Test MIC** to test. Record your speech first and then play it. If everything works, you will hear your speech.

After the settings are complete, Zoom will use USB Fusion for video conferencing.

💡 Before the meeting, make tests to ensure that the system runs properly.



Connecting to OBS

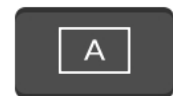
OBS is an open source streaming software popular in game streaming and e-commerce streaming.

The following uses OBS for Windows to illustrate how to use USB Fusion in OBS.

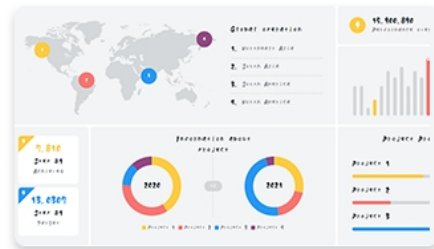
1. You have completed [Connecting Devices](#).
2. Open the OBS software.
If not installed, go to [OBS website](#) to download the software.
3. Select USB Fusion as the video/audio input device.
 - i. In the **Sources** area of OBS, click **+**, select **Video Capture Device**, and click **OK**.
 - ii. In the displayed dialog box, select **USB Fusion USB-C** or a similar name from the **Device** drop-down box.
The preview area will show the video output by USB Fusion.
 - iii. If you need to use the audio from USB Fusion, at the bottom, select **Use custom audio device**, and select **USB Fusion USB-C** or a similar name from the **Audio device** drop-down box.
 - iv. Click **OK**.

After the settings are complete, OBS will use USB Fusion for streaming.

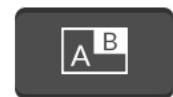
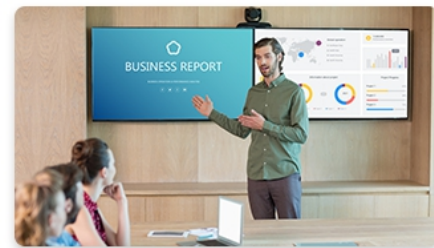
💡 Before streaming, make tests to ensure that the system runs properly.



Source A



Source B



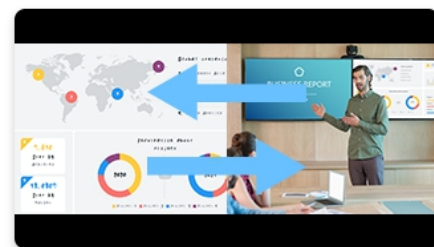
Picture in Picture



Side by Side



Swap






Producing a Presentation

When presenting, you have the following ways to produce your [presentation](#):


- Directly use the buttons on the USB Fusion device to switch scenes.
- Use the USB Fusion App to perform more diversified operations on a mobile device, including switching scenes, adjusting volume, and making annotations.
- Use the Web UI on a computer to switch scenes and adjust volume.

Using Buttons


On the USB Fusion device, press the following buttons to switch between sources or composite sources:

-  : computer source, namely the output from the connected computer, such as a PowerPoint [presentation](#).
-  : camera source, namely the output from an [HDMI](#) camera or a [webcam](#). When both cameras are connected, the output from the [HDMI](#) camera is displayed; the output from the [webcam](#) is displayed only when the [HDMI](#) camera is disconnected.
-  : [picture in picture](#), namely, compositing the computer source and camera source into a picture-in-picture layout, where the computer source is the big picture while the camera source is the small picture. By default, the small picture appears at the lower left corner. You can also move it to the upper left, upper right, lower right corners. Press the button again to change the position of the small picture.

The small picture will retain the aspect ratio of the source.

-  : [side by side](#), namely, compositing the computer scene and camera scene into a side-by-side layout, with the computer source on the left, and camera source on the right.

The side-by-side layout can be evenly divided into two parts, or divided into a large left part and small right part, or into a small left part and large right part.



-  : swap sources, namely, exchanging the COMPUTER source and camera source, or the two sources in the picture-in-picture layout or side-by-side layout.




Using the App

1. Download the USB Fusion App.
The USB Fusion App supports iOS 11 and later and Android 8.0 and later. You can search for **USB Fusion** in the app store to download.

Currently the App is only available on tablets.

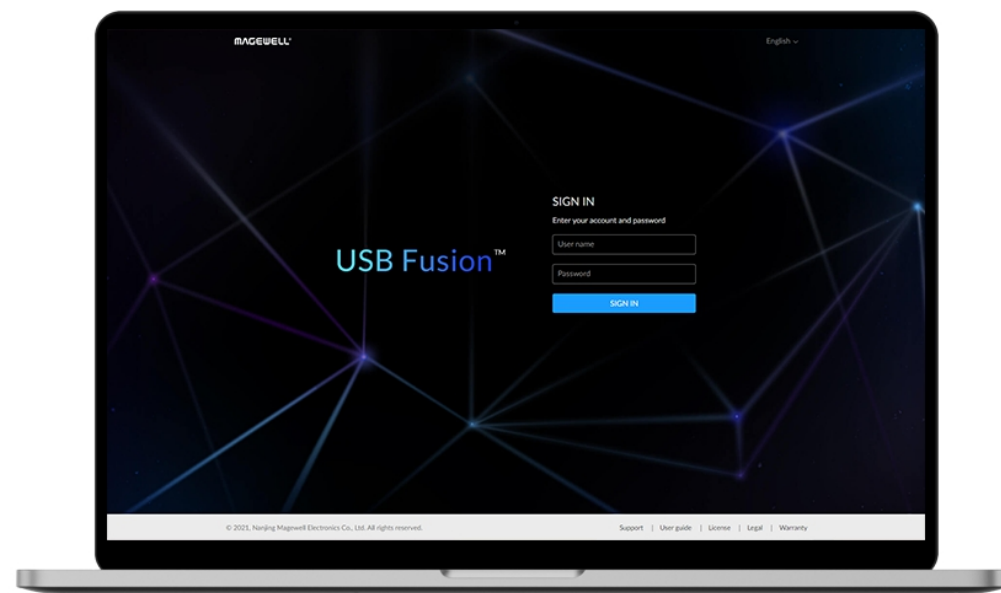
2. Connect to the USB Fusion.
Ensure that your iOS/Android device is connected to the same network as the target USB Fusion device. Open the USB Fusion App, select a USB Fusion device, and click **Connect**.
After connected, you will enter the default [presentation](#).
3. Perform [presentation](#) operations. For example:
 - Tap  **Scene** at the upper right corner to switch between different scenes.
 - Tap  **Volume** at the upper right corner to adjust volume.

- Tap the annotation tool  at the lower left corner to annotate on the current scene.

In the App, you can add more content to the current [presentation](#), such as video/audio files, or you can even create other presentations. You can also edit the sources, record your [presentation](#), export notes and more. For details, see chapters [Starting to Use the App](#) through [Recording and Taking Screenshots](#).

Using the Web UI

1. On the computer connected to the USB OUT port, open a browser and enter the USB RNDIS IP address of USB Fusion to access the web UI login page.
The default address is 192.168.66.1. You are advised to retain this address unless there are conflicts in the LAN.
2. Log in to the Web UI.
The default user name / password is Admin / Admin.
3. At the upper part of the Web UI, click the [Presentation](#) tab.
4. At the lower part of the page, click **Default**, and click the buttons below to switch or composite sources.
The button functions are the same as [the device buttons](#).
5. At the upper part of the Web UI, click the **Audio** tab, and adjust volume in the **Volume** area.
 - Drag the slider on a volume bar to increase or decrease volume.
 - Click the mute button to mute or unmute.



On the Web UI, you can add more content to the current [presentation](#), such as video/audio files, or you can even create other presentations. You can also process the sources, manage the resources and more. For details, see [Creating and Managing Presentations](#).

Starting to Use the App

USB Fusion comes with an app that allows easy and flexible operations while you are presenting. The USB Fusion App can be used to create presentations, switch scenes, make annotations, and more.

App UI





Downloading the USB Fusion App

The USB Fusion App supports iOS 12 and later and Android 7.0 and later. You can search for **USB Fusion** in the app store to download.

Currently the App is available only on tablets.

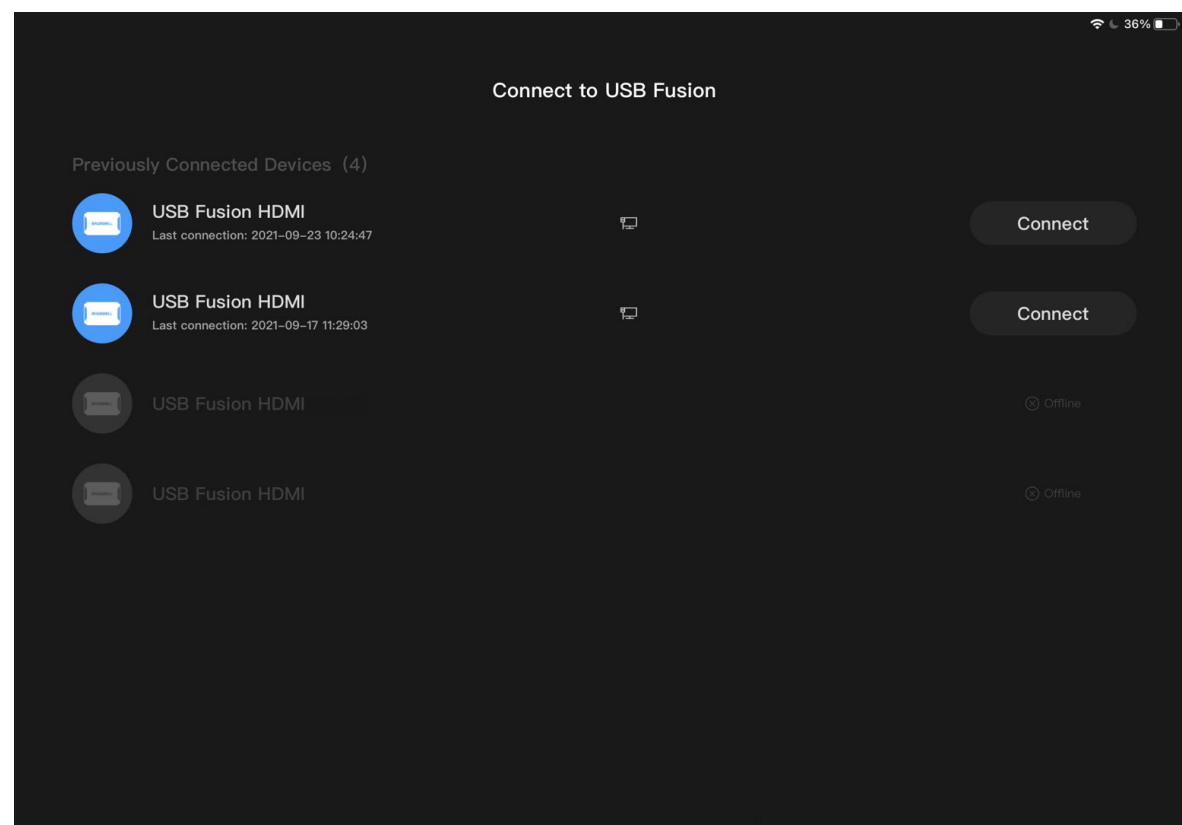
Connecting to a USB Fusion Device

When using the USB Fusion App, you need to first connect to the USB Fusion device for communication.




Manually Connecting to a Device

The first time you use the USB Fusion App, you need to manually establish the connection. When you later use the app, if you have not logged out from the connected device, the app will automatically make the connection; if you have logged out, you need to manually connect again.

1. Make sure your mobile device where the USB Fusion App is installed has connected to the same network as USB Fusion.
2. Open the USB Fusion App on your mobile device.
The App will automatically search for and display the list of USB Fusion devices in the same network. The list consists of two parts:
 - **Previously Connected Devices:** devices that have been connected. If a device is not online, the device is greyed out, and you can swipe to the left to delete it.
 - **Other Online Devices:** devices not connected before.




Each item in the list includes the following information:

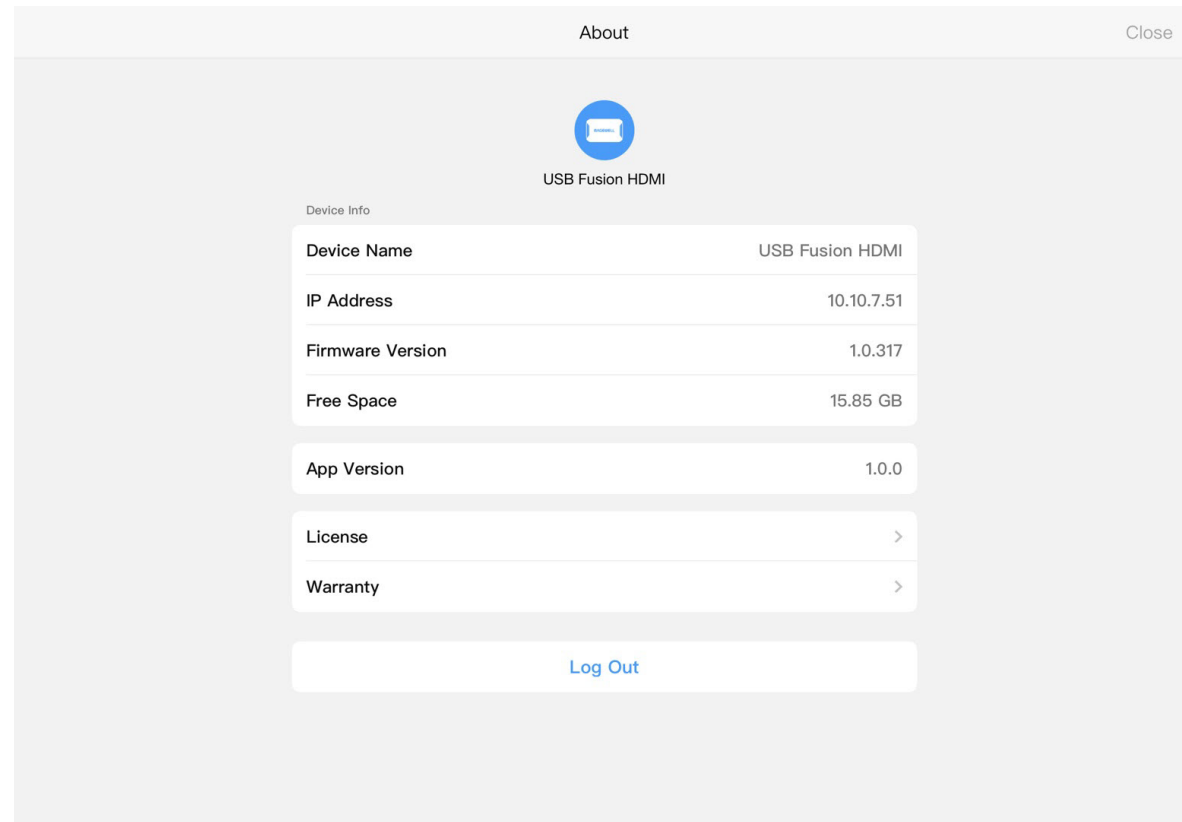
- Device information: device name, and last connection time.
- Password authentication:  indicates that a password is required for connecting to the device. To set the password, see [Setting the Login Password](#). By default, the icon is not displayed, indicating that no password is required.
- Network type: network used by USB Fusion.  indicates Ethernet, while  indicates Wi-Fi.
- Connect button or device status: If the device is online and not in use, you can tap **Connect**. If the device is in use or offline, the **In use** or **Offline** status is displayed in place of the **Connect** button.

3. In the device list, tap the **Connect** button of your selected device.



If password authentication is required, enter the password and connect.

The input password is hidden. You can tap  at the upper right corner to display the password.



When the connection is established, the main UI of the app is displayed.



Logging Out from a Device

1. At the upper right corner of the main UI, tap  >  to access the **About** page.
2. On the **About** page, tap **Log Out** at the bottom.
After logging out, you need to manually connect to a device next time you use the app.

Checking Device Information

At the upper right corner of the main UI, tap  >  to check basic information about the USB Fusion device and app.



- **Device Name:** name of the connected USB Fusion device
- **Serial Number:** serial number of the connected USB Fusion device
- **IP Address:** IP address of the connected USB Fusion device
- **Firmware Version:** firmware version of the connected USB Fusion device
- **Free Space:** available disk space on the connected USB Fusion device
- **App Version:** current version of USB Fusion App
- **License:** end user license agreement for USB Fusion App
- **Warranty:** product warranty for USB Fusion hardware

App Tutorials

The following tutorials will enable you to master the major functions of USB Fusion App.



To know more about the App functions, see chapters [Creating a Presentation](#) through [Recording and Taking Screenshots](#).

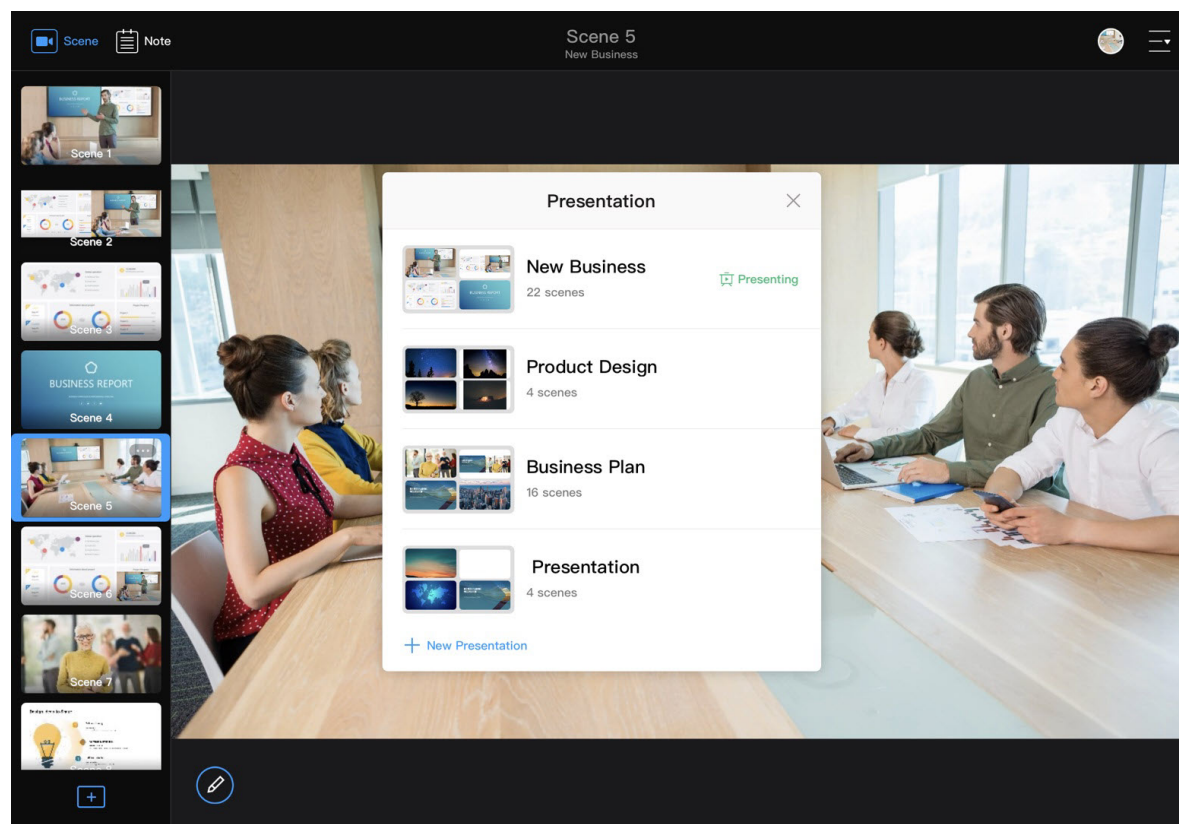
Adding a Presentation

1. At the upper right corner of the App, tap  >  [Presentation](#).
2. At the lower left corner of the [presentation](#) list, tap **+ New Presentation**.
3. In the **New Presentation** dialog box, enter a name for the [presentation](#). The name allows 1 to 32 characters.
4. Tap **Create**.

Importing Videos/Pictures

Before you add video/picture files to your [presentation](#), you need to first import them.

1. At the upper left corner of the App, tap  **Scene**.
2. Tap  at the bottom of the scene list.
3. At the lower right corner of the scene editing page, tap **Import**.
4. Select the category where your file is stored.
Use importing from the local system album as an example. On an iOS device, tap **Album**; on an Android device, tap the menu button at the upper left corner and select the local system album.
5. Tap a resource to import.









Supported formats: MOV, MP4, MKV video file (MKV is not supported on iOS devices); JPEG, PNG, BMP image file

Imported files will be appended to the rightmost of the thumbnail list at the bottom of the scene editing page. The same resource cannot be imported for a second time.

Adding Scenes

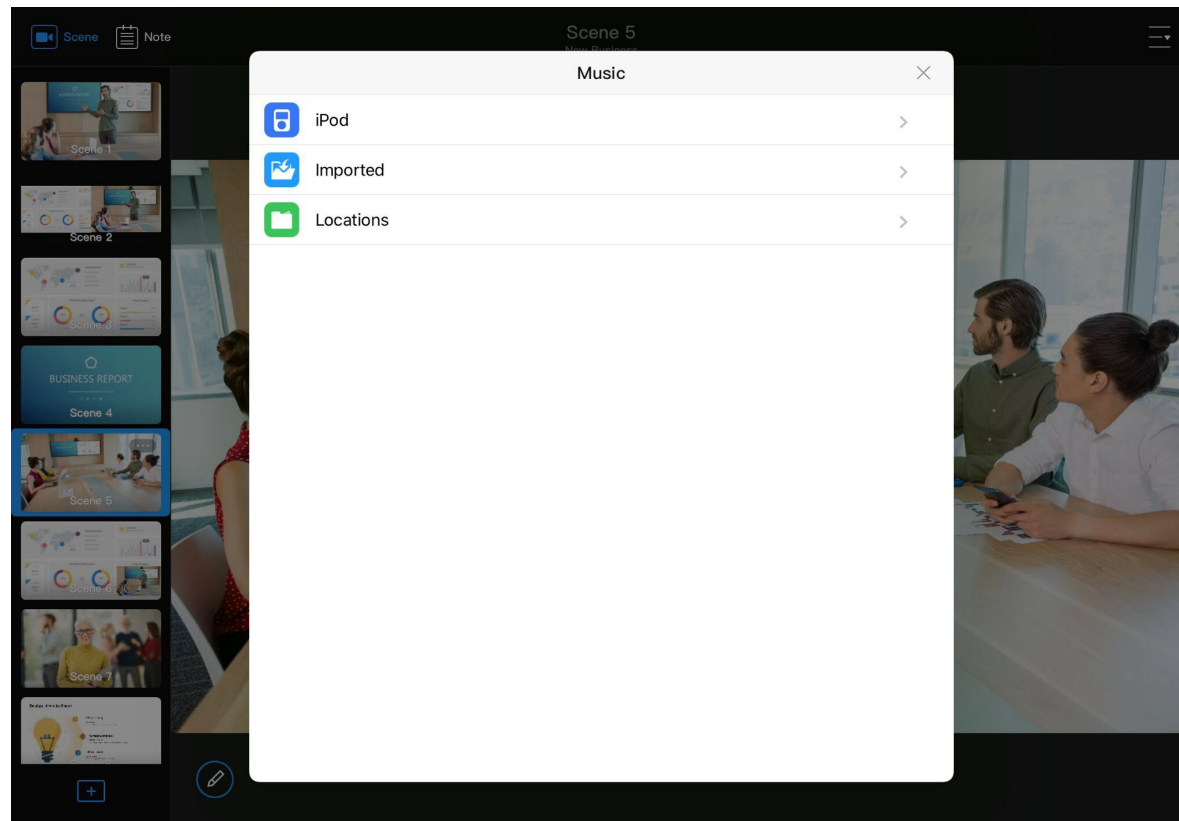
You can add single-view scenes, picture-in-picture scenes, or side-by-side scenes. The following uses a picture-in-picture scene as an example.

1. At the upper left corner of the App, tap .
2. Tap  at the bottom of the scene list.
3. At the upper part of the image editing page, tap , and then tap .
4. Tap within each frame, and tap a thumbnail at the bottom. You can also drag the thumbnail to the frame.

The first three thumbnails are the COMPUTER image, [HDMI CAMERA](#) image, and Web CAMERA image. If the corresponding source is not connected to USB Fusion, a **No Signal** message is displayed. Otherwise, the corresponding image is displayed.

A thumbnail can be added to only one frame. Only one of the two frames can contain a video file resource.

5. Use the scene editing tools at the upper part of the page to edit the two sources.
6. Tap **Done** at the upper right corner.
The added scene will be displayed in the scene list and named as **Scene X**.





7. (Optional) Repeat the above steps to add more scenes.

Using Background Music

Adding Background Music

In order to add background music, you need to first import the music to USB Fusion, and then add the music to your [presentation](#).

1. At the upper right corner of the main UI, tap  >  **BGM**.
2. At the bottom of the playlist, tap **+ Add**.
This opens the **Imported Music** list, which shows the music that has been imported to the connected USB Fusion device.
3. At the bottom of the imported music list, tap **+ Upload**.
4. Select the category where your file is stored.
Use importing from the local system as an example. On an iOS device, tap **Album**; on an Android device, tap the menu button at the upper left corner and select the local location where music is stored.
5. Tap a resource to import.
Supported formats: MP3, M4A, WAV
The imported resource will appear in the imported music list.
6. In the imported music list, tap the imported item.
The item will be added to the playlist. The same resource cannot be imported for a second time.









Playing Background Music

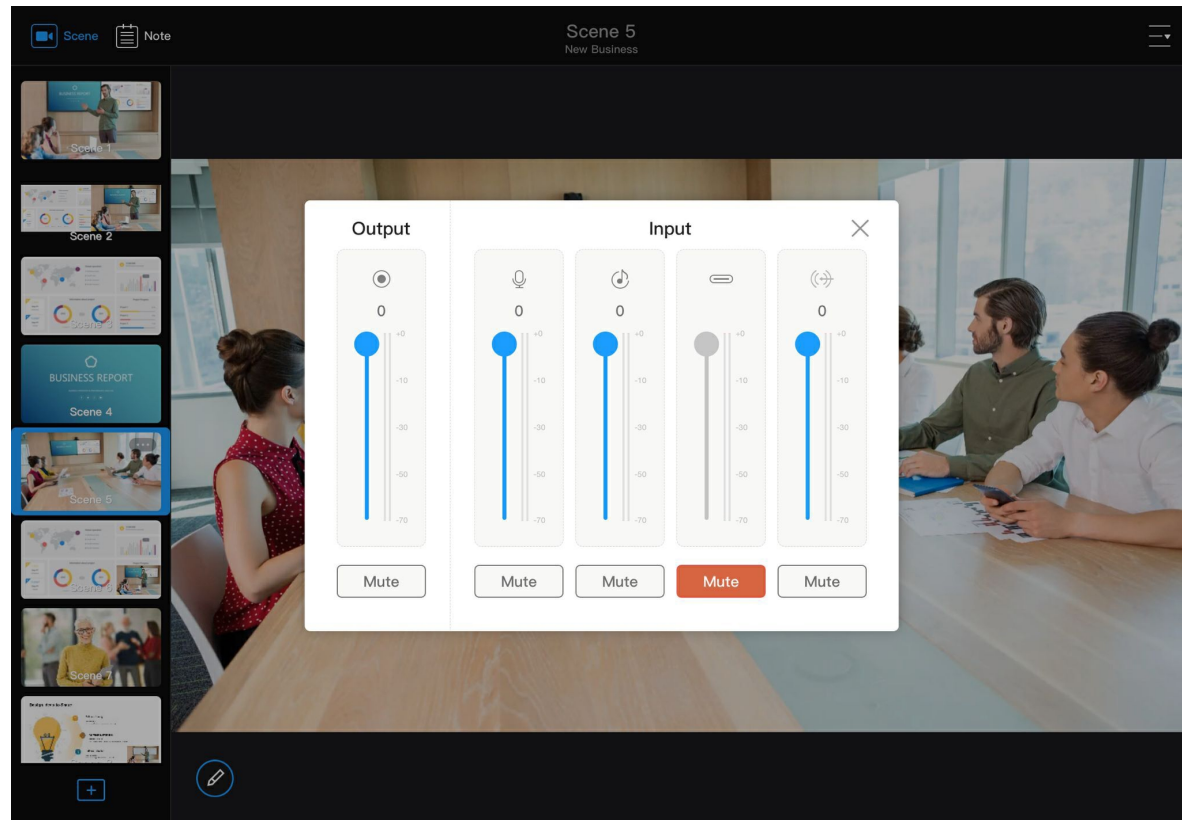
1. At the upper right corner on the main UI, tap  > **BGM**.

2. In the playlist, tap an item to play.

The audio will not play out on the device with the App installed.




3. Above the playlist:

- Tap  to play or  to pause.
- Tap  to play the previous song or  to play the next song.
- Drag the playhead to a specified position.
- Tap the button next to the playback progress bar to set the loop policy:
 -  : play by order
 -  : shuffle the list
 -  : loop the list
 -  : loop a single song




Adjusting Volume

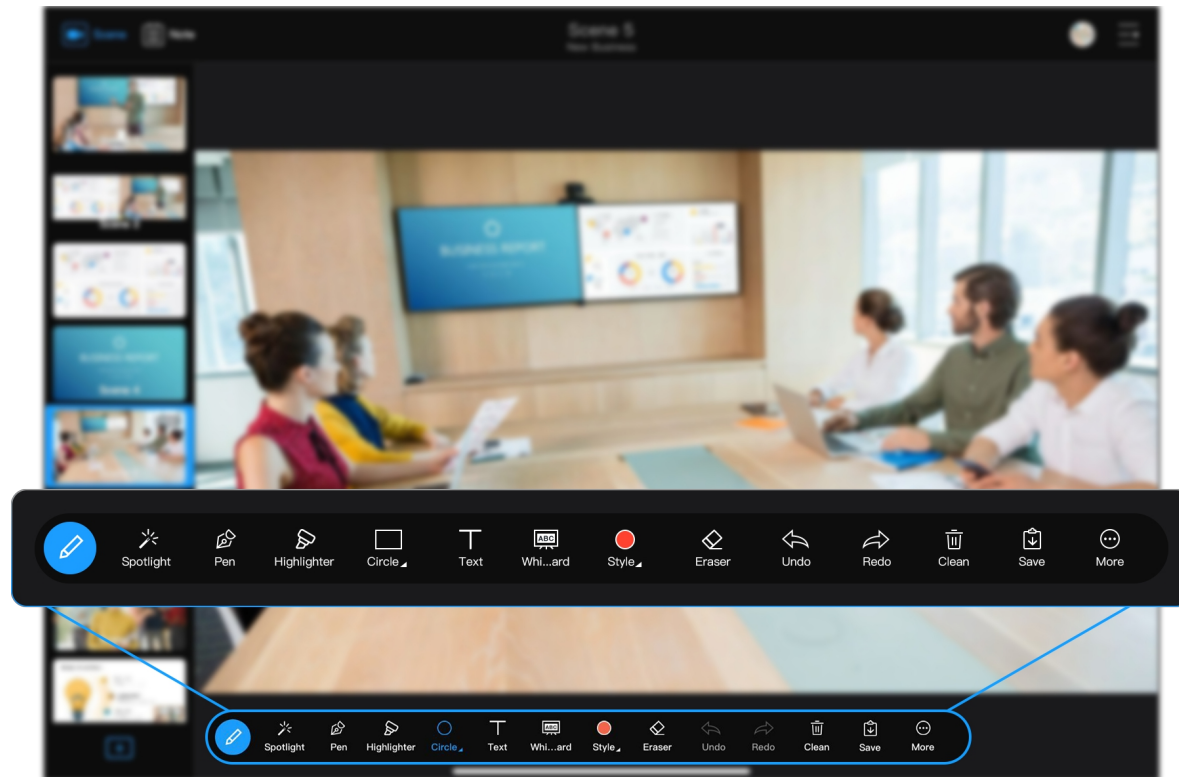
Each scene has its independent audio mixer.

1. At the upper left corner of the App, tap .
2. In the scene list, tap a scene thumbnail.
3. At the upper right corner of the main UI, tap  > .
4. On the audio mixer:
 - Tap the mute button to mute or unmute.
 - Drag the volume slider to adjust volume.




For more details on audio, see [Controlling Audio](#).

Switching between Scenes





1. At the upper left corner of the App, tap .
2. In the scene list on the left, scroll up & down the scene list to view the scene thumbnails, and tap a scene to switch to it.



Annotating in Real Time

1. On the main UI, tap  at the lower left corner, and use the pens, shapes and text tool to annotate on a scene.
2. To save the annotation, tap  **Save**.
3. To switch to the saved annotation, tap  at the upper left corner, and tap the corresponding annotation thumbnail in the notes list.

Recording and Taking Screenshots

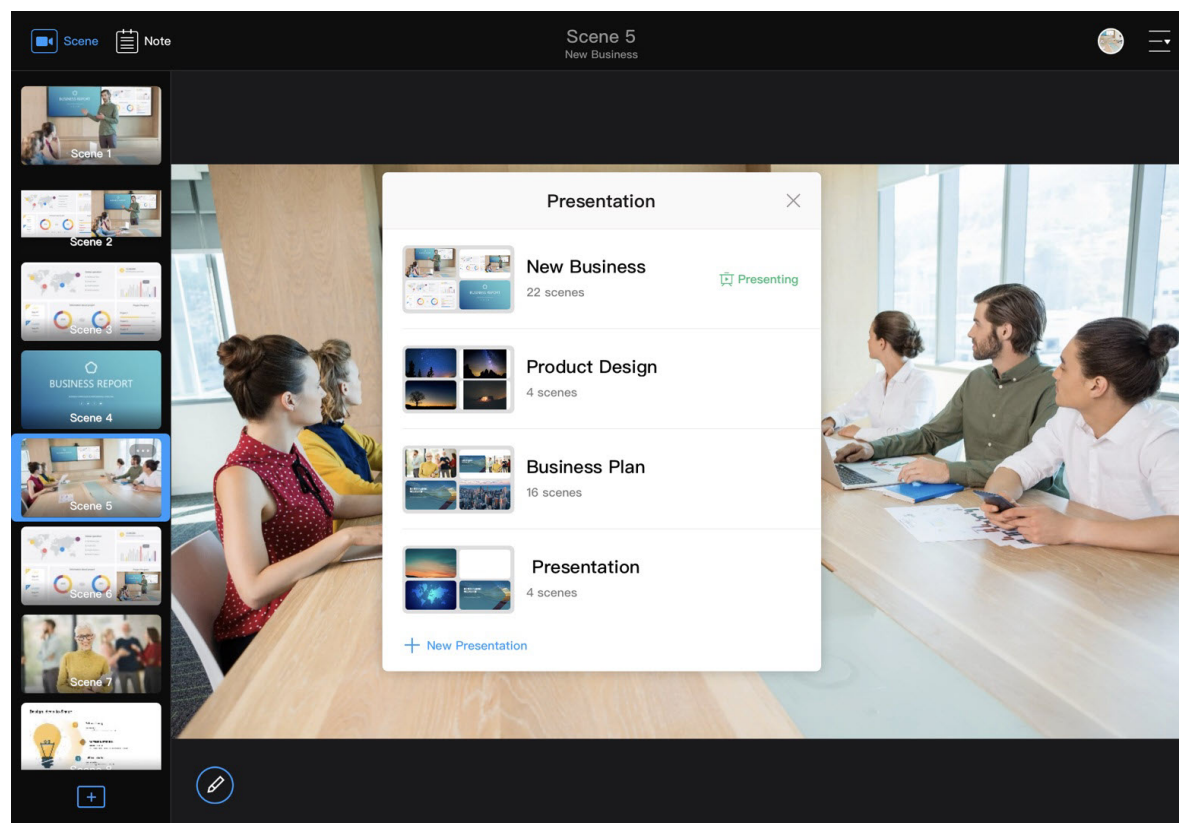
- Start recording: At the upper right corner of the main UI, tap  >  **Record**.
The recording status and duration will show at the upper part of the page.
- Stop recording: At the upper right corner of the main UI, tap .
The recording will be saved to the USB Fusion album.
- Take screenshots: At the upper right corner of the main UI, tap  > **Screenshot**.

Creating a Presentation

A [presentation](#) is the collection of audio/video content you create on USB Fusion as a complete production for output. You can create multiple presentations on USB Fusion. Each [presentation](#) can comprise as many scenes, notes, and background music as your use case needs.

- Scene: A scene can be in a single, picture-in-picture, or side-by-side view. It can come from the following sources:
 - Imported videos or pictures: files imported to USB Fusion through the App or Web UI
 - Captured videos: images captured from the connected computer, [HDMI](#) camera, or [webcam](#), such as a PPT, a presenter
- Note: annotations made in real time during [presentation](#), such as marking certain areas or listing key points
- Background music: music imported to USB Fusion through the App or Web UI



The following describes how to use the App to create a [presentation](#). You can also create presentations on the Web UI. For details, see [Creating and Managing Presentations](#).

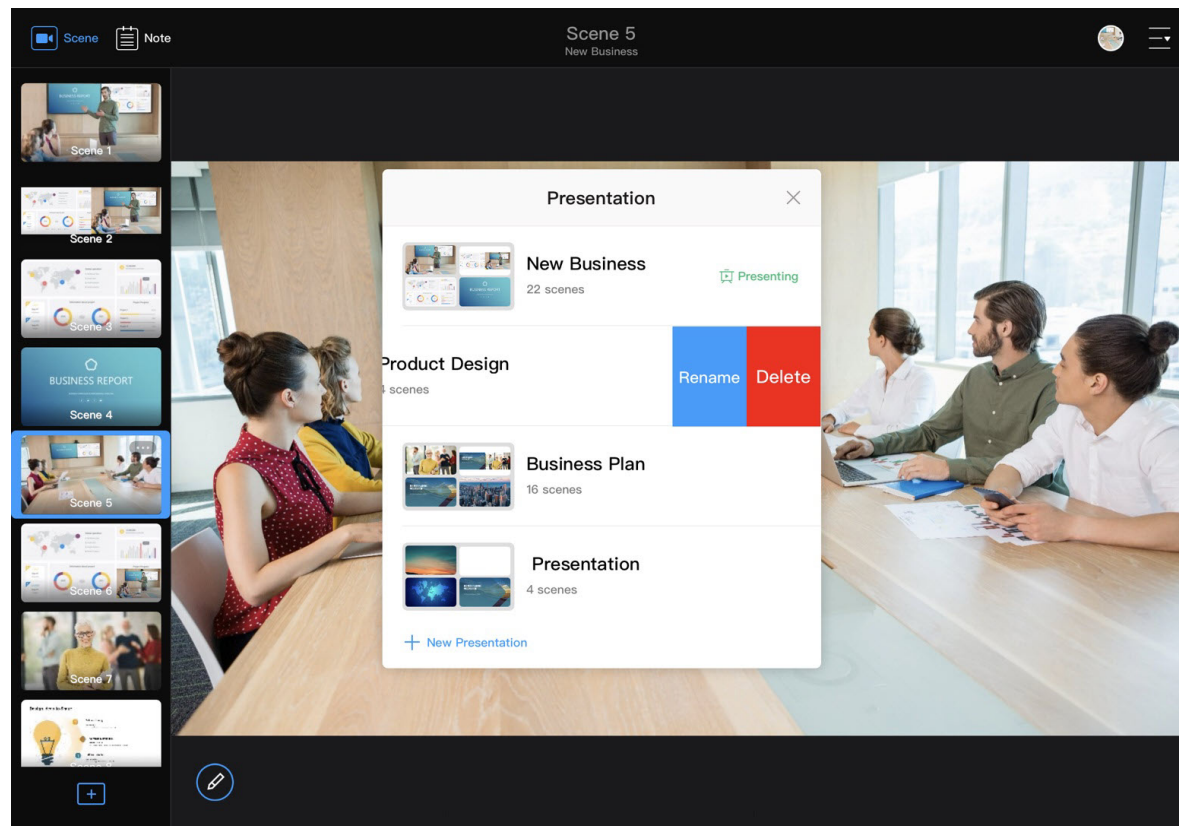


Creating a Presentation


The USB Fusion App comes with a default [presentation](#) which contains the default image and the COMPUTER, [HDMI](#) CAMERA and WEB CAMERA sources. You can use the default [presentation](#) directly with no configuration. Or you can create your own [presentation](#).

Adding a Presentation

1. At the upper right corner of the App, tap  >  [Presentation](#).
2. At the lower left corner of the [presentation](#) list, tap **+ New Presentation**.
3. In the **New Presentation** dialog box, enter a name for the [presentation](#). The name allows 1-32 characters.





4. Tap **Create**.

The new **presentation** is displayed. You can tap  at the lower left corner to add scenes for the **presentation**.

Managing Presentations



You can rename or delete presentations.

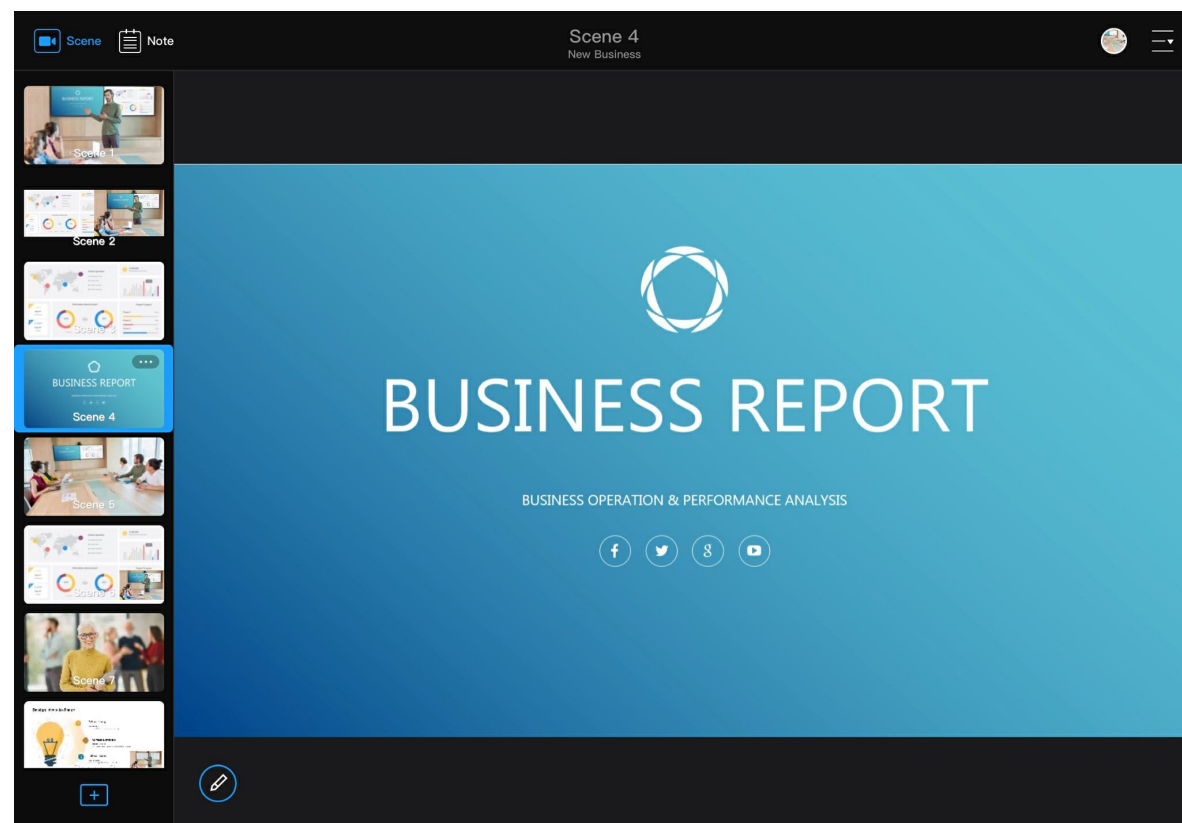
Renaming a Presentation

1. At the upper right corner of the App, tap  >  **Presentation**.
2. In the **presentation** list, swipe a **presentation** to the left and tap **Rename**.
3. In the **Rename Presentation** dialog box, enter a new **presentation** name (1-32 characters).
4. Tap **Done**.

Deleting a Presentation



This operation only deletes the **presentation** but not the resources used by it.

1. At the upper right corner of the App, tap  >  **Presentation**.
2. In the **presentation** list, swipe a **presentation** to the left and tap **Delete**.
The **presentation** being presented cannot be deleted.
3. In the **Delete Presentation** dialog box, tap **Delete**.



Switching Presentations

While presenting, you can seamlessly switch from one [presentation](#) to another.

1. At the upper right corner of the App, tap  >  [Presentation](#).
2. In the [presentation](#) list, tap a [presentation](#) to switch to it.

Creating Scenes

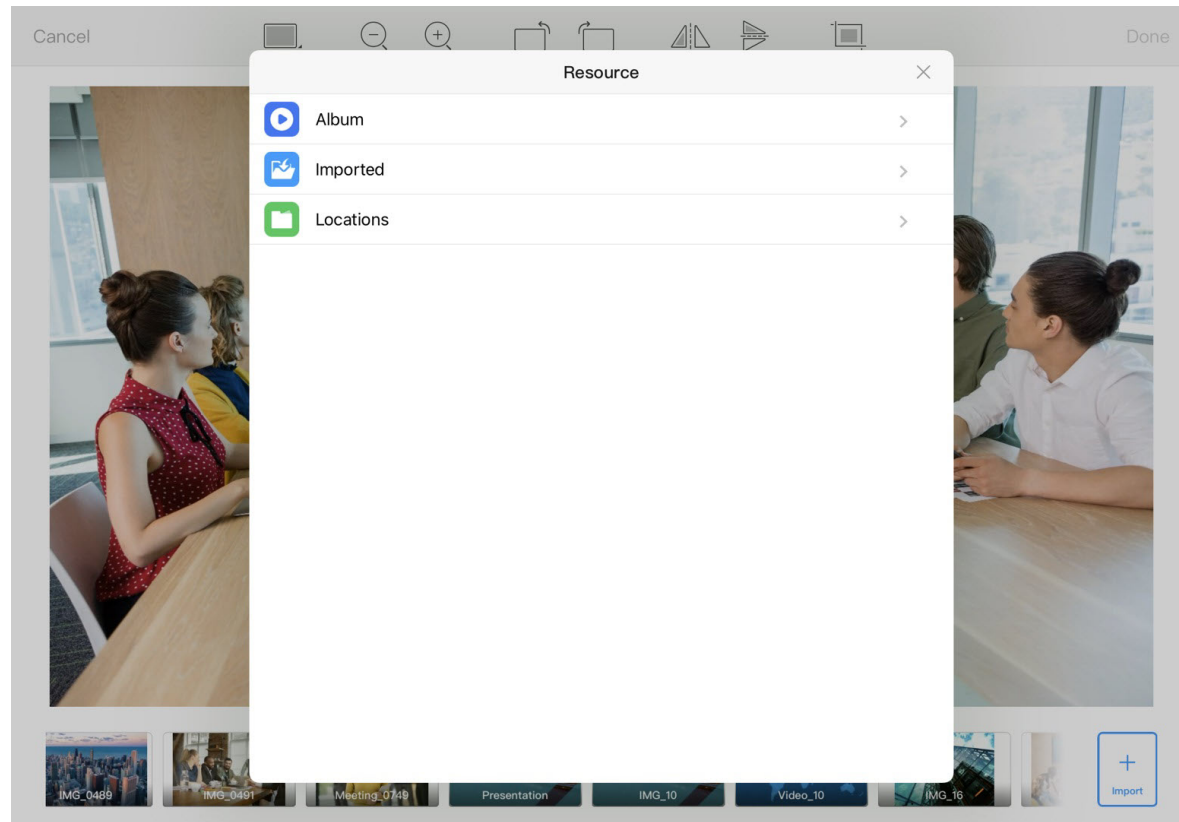
USB Fusion can accept images from different sources and present them in different layouts.

Supported sources include:

- Captured videos: images captured from the connected computer, [HDMI](#) camera, or [webcam](#), such as a PPT, a presenter
- Imported videos or pictures: files imported to USB Fusion through the App or Web UI

Using these sources you can create scenes in the following layouts:

- Single-view scene: The scene consists of a single video or picture.
- Multi-view scene: The scene consists of two different videos or pictures in either layout:
 - Picture-in-picture: a small video/picture is placed on top of a big video/picture
 - Side-by-side: two videos/pictures are placed [side by side](#) with no overlapping



Importing Video/Picture Files



Unlike the captured streams, video/picture files must first be imported to USB Fusion before you can use them in your presentations.

In the App, you can import files from the local system album or other supported locations (such as cloud storage). Imported videos/pictures can be added to different presentations.

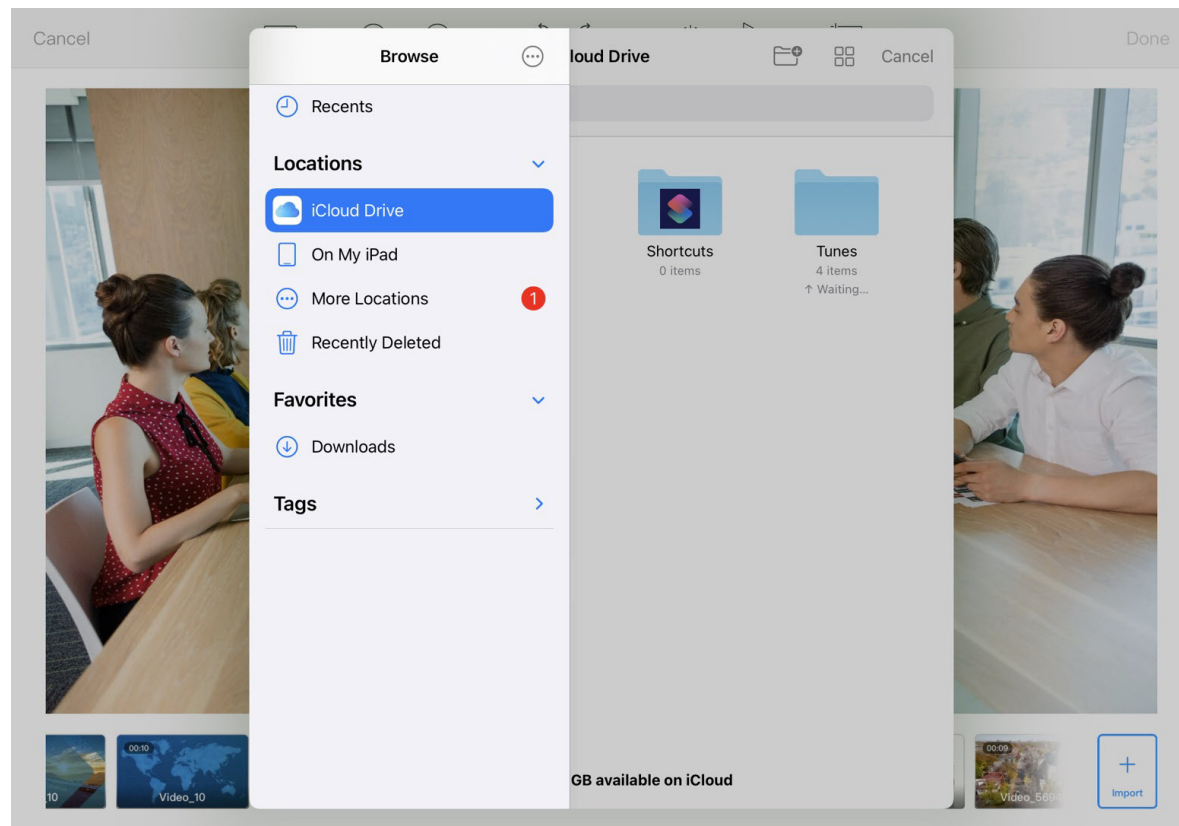
You can also use the Web UI to import the video/picture resources to USB Fusion. For details, see [Importing Pictures](#) and [Importing Videos](#).

Importing on iOS Devices

On an iOS device, you can import files from the local system album and other locations including cloud storage, file server, and connected devices.

1. At the upper left corner of the App, tap .
2. Tap  at the bottom of the scene list.
3. At the lower right corner of the scene editing page, tap **Import**.
4. Tap one of the following to access files:
 - **Album:** videos or pictures in the iOS system album
 - **Imported:** videos or pictures already imported to the USB Fusion App

On iOS devices, resources imported to the USB Fusion are also saved in the App. When importing a file to the USB Fusion device, importing from the App is faster than importing from the iOS system or other locations, especially for large files. If you need to delete a resource, long-press the resource and tap the delete button.



- **Locations:** non-local videos or pictures that can be accessed by the iOS system, including files on cloud storage (such as Box, Dropbox), file servers and connected devices (such as USB flash drives and SD cards). The following describes how to access cloud storage. For methods to access other locations, see [Apple Website](#).
When importing files from cloud storage, tap **Browse** (at the top or bottom, depending on the iOS version), and tap a cloud storage app under **Locations** to select a file.
 - If you import from Cloud Drive, you need to first enable iCloud Drive. For details, see [How to import a resource from iCloud Drive](#).
 - If you import from other cloud storage, you need to first install and log in to the cloud storage app. The operations to access different cloud storage services are similar. For details, see [How to import a resource from Google Drive](#).

Only the cloud storage apps that allow the system to manage will be displayed under **Locations**. If a cloud storage app does not grant the management right to the File App, you cannot import files from the cloud storage using this method.

5. Tap a file to import.

Supported formats: MOV, MP4 video file; JPEG, PNG, BMP image file



The files will be imported to the storage of the connected USB Fusion device. Imported files will be appended to the rightmost of the thumbnail list at the bottom of the scene editing page. You can manage the imported files on the Web UI. For details, see [Managing Videos](#) and [Managing Pictures](#).

The same resource cannot be imported for a second time.

6. (Optional) Repeat the above steps to import more files.

Importing on Android Devices

On an Android device, you can import a local file or a file from cloud storage.

1. At the upper left corner of the App, tap .
2. Tap  at the bottom of the scene list.
3. At the lower right corner of the scene editing page, tap **Import**.
4. Tap the menu icon at the upper left corner, and tap an item in the **Open File** list.

The **Open File** list contains local files and cloud storage services.

When importing from a cloud storage service, you need to first install and log in to the cloud storage app. The operations to access different cloud storage services are similar. For details, see [How to import a resource from Google Drive](#).

Only the cloud storage apps that allow the system to manage will be displayed under the **Open File** list. If a cloud storage app does not grant the management right to the File App, you cannot import files from the cloud storage using this method.

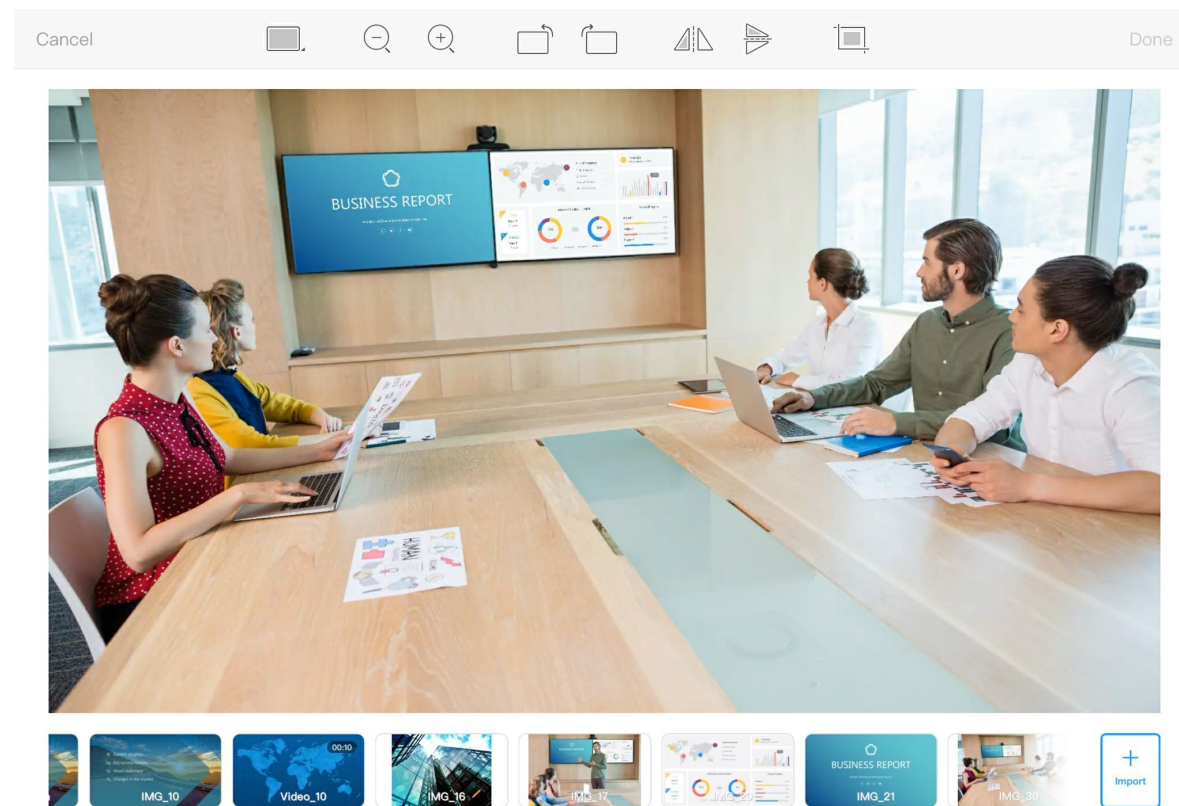
5. Tap a file to import.
Supported formats: MOV, MP4 video file; JPEG, PNG, BMP image file
The files will be imported to the storage of the connected USB Fusion device. Imported files will be appended to the rightmost of the thumbnail list at the bottom of the scene editing page. For details, see [Managing](#)

Videos and Managing Pictures.



The same resource cannot be imported for a second time.

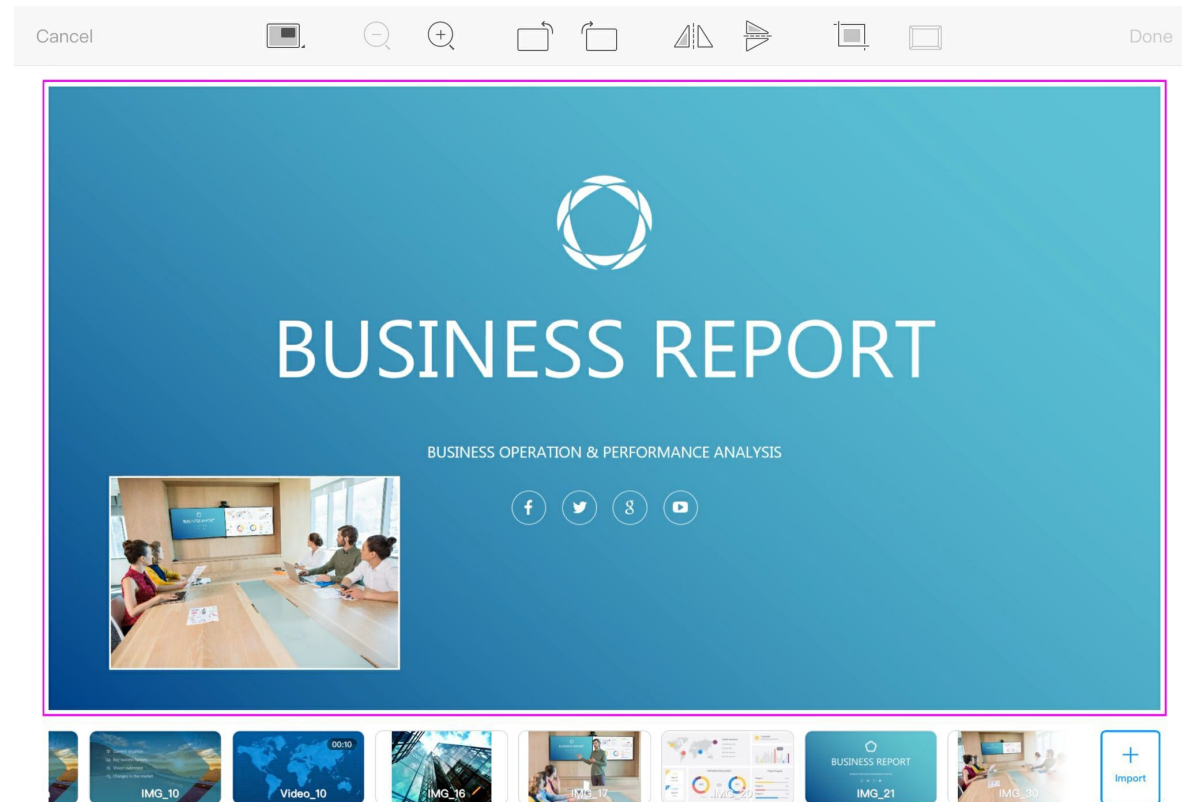
If you want to cancel importing files, tap the system back button to go back. For example, on a Samsung device, tap the back button at the bottom.

- (Optional) Repeat the above steps to import more files.







Creating a Single-View Scene

- At the upper left corner of the App, tap .
- Tap  at the bottom of the scene list.
- On the scene editing page, tap a thumbnail at the bottom, or drag the thumbnail to the canvas area.
The first three thumbnails are the COMPUTER image, [HDMI CAMERA](#) image, and Web CAMERA image. If the corresponding source is not connected to USB Fusion, a **No Signal** message is displayed. Otherwise, the corresponding image is displayed.
Subsequent thumbnails are imported video/picture files.
- Use gestures or the tools at the upper part of the page to edit the scene, such as scaling, rotating, mirroring, and cropping.
For details, see [Editing a Scene](#).
- Tap **Done** at the upper right corner.
The added scene will be displayed in the scene list and named as **Scene X**.
- (Optional) Repeat the above steps to add more scenes.



Creating a PIP Scene

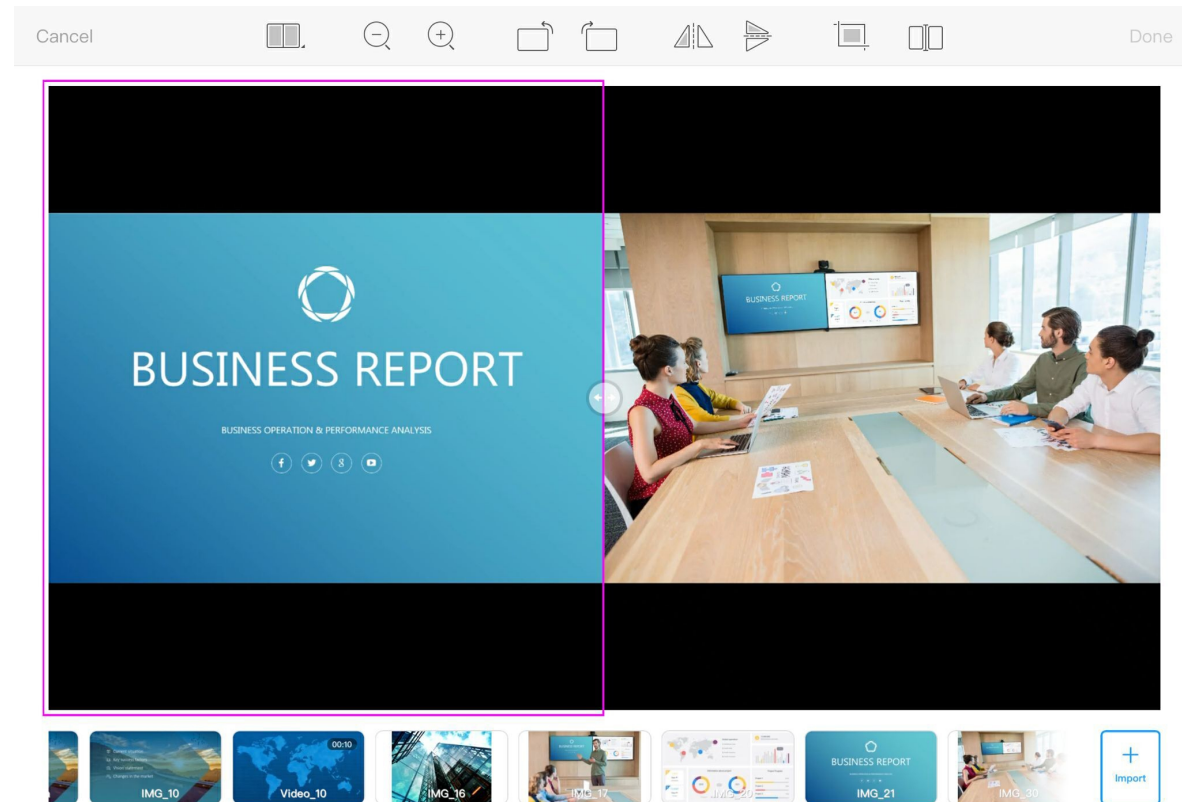
1. At the upper left corner of the App, tap .
2. Tap  at the bottom of the scene list.
3. At the upper part of the image editing page, tap  and then tap .
4. Tap within the big frame in the canvas, and tap a thumbnail at the bottom to add it as the big picture.
You can also drag the thumbnail to the big frame.
5. Tap within the small frame, and tap a thumbnail at the bottom to add it as the small picture.

You can also drag the thumbnail to the small frame.






The small picture is at the lower left corner by default and retains the aspect ratio of the source.

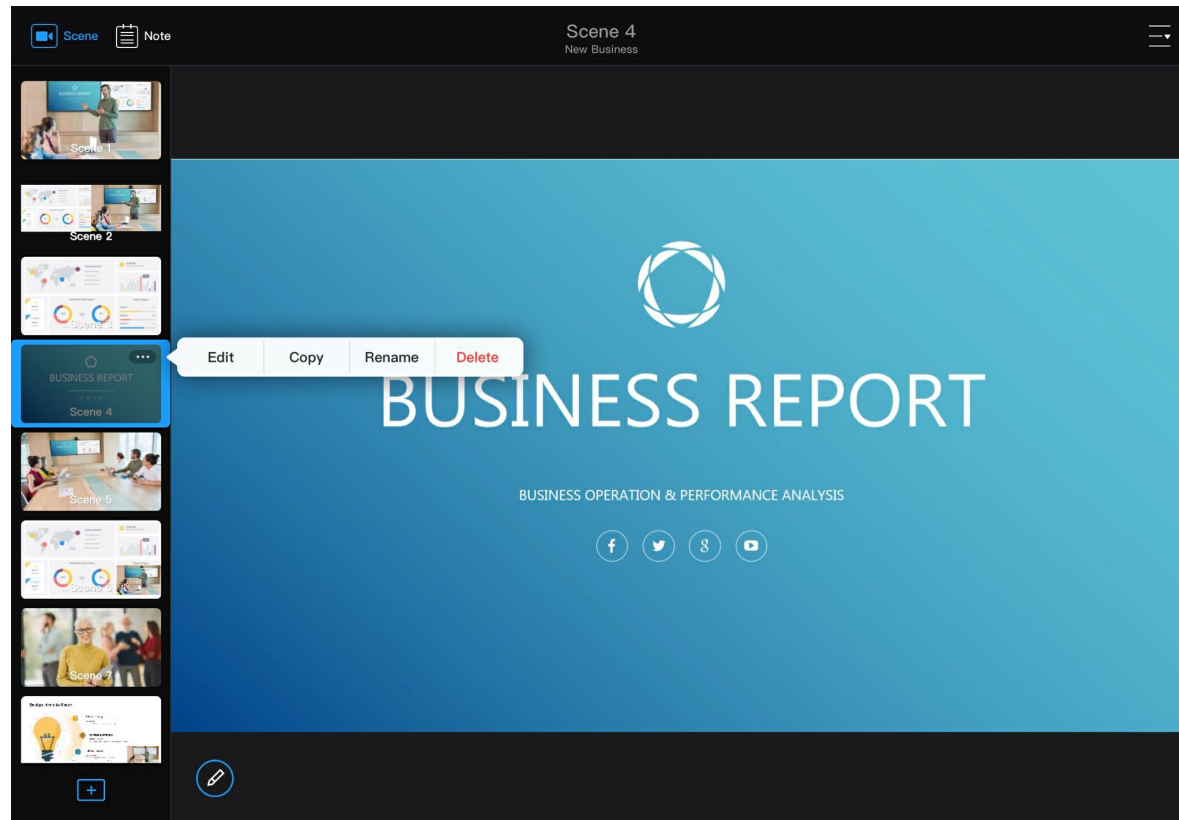
A thumbnail can be added to only one frame. Only one of the two frames can contain a video file resource.

6. Tap within either frame, and use gestures or the scene editing tools at the upper part of the page to edit the scene.
For editing details, see [Editing a Scene](#).
Besides common editing tools, a PIP scene also supports [editing the small frame](#), [scaling the small picture](#), [changing the small picture position](#).
7. Tap **Done** at the upper right corner.
The added scene will be displayed in the scene list and named as **Scene X**.
8. (Optional) Repeat the above steps to add more scenes.





Creating a Side-by-side Scene

1. At the upper left corner of the App, tap .
 2. Tap  at the bottom of the scene list.
 3. At the upper part of the image editing page, tap , and then tap .
By default the scene is evenly divided into two frames, with a  button in between but no separator line.
 4. Tap within either frame, and tap a thumbnail at the bottom.
You can also drag the thumbnail to the frame.
- A thumbnail can be added to only one frame. Only one of the two frames can contain a video file resource.
5. Tap within either frame, and use gestures or the scene editing tools at the upper part of the page to edit the scene.
For editing details, see [Editing a Scene](#).
Besides common editing tools, a side-by-side scene also supports [separator editing](#) and [ratio change](#).
 6. Tap **Done** at the upper right corner.
The added scene will be displayed in the scene list and named as **Scene X**.
 7. (Optional) Repeat the above steps to add more scenes.



Copying a Scene



You can copy a scene to create a new scene. The new scene will retain the properties of the original scene.

1. At the upper left corner of the App, tap .
2. In the scene list, long press a thumbnail or tap  at the upper right corner of the thumbnail.
3. In the displayed menu, tap **Copy**.
The new scene will be copied next to the original scene and named *Source scene name (number)*.



Managing Scenes

You can delete or rename a scene.

Deleting a Scene

1. At the upper left corner of the App, tap .
2. In the scene list, long press a thumbnail or tap  at the upper right corner of the thumbnail.
3. In the displayed menu, tap **Delete**.
4. In the displayed dialog box, tap **Delete**.


Renaming a Scene

1. At the upper left corner of the App, tap .
2. In the scene list, long press a thumbnail or tap  at the upper right corner of the thumbnail.
3. In the displayed menu, tap **Rename**.

4. In the **Rename** dialog box, enter a new name (32 characters at most).
If you set the name to empty, the default name **Scene X** will be used.
5. Tap **Done**.


Sorting Scenes

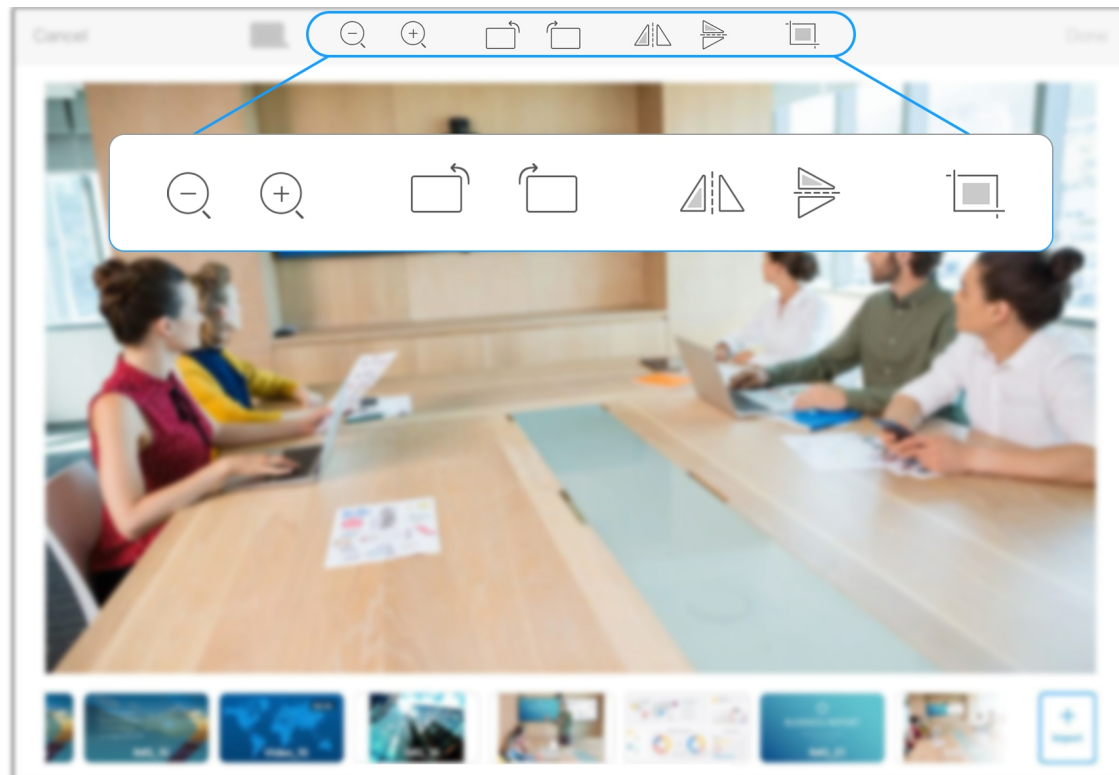
The scenes are ordered by their creation time by default. You can also sort the scenes.

1. At the upper left corner of the App, tap .
2. In the scene list, long press a thumbnail and drag it to a desired position.

Editing a Scene

USB Fusion provides common editing tools. You can edit a scene when or after adding it.

1. In the scene list, long press a thumbnail or tap  at the upper right corner of the thumbnail.
2. In the displayed menu, tap **Edit**.
3. Use gestures or the scene editing tools at the upper part of the page to edit the scene. Supported tools include:



- [Fit & Fill](#)
- [Scale Up & Down](#)
- [Rotate](#)
- [Flip](#)
- [Crop](#)
- [Edit the Small Frame](#)
- [Scale the Small Picture](#)
- [Change the Small Picture Position](#)
- [Edit the Separator](#)
- [Change the Side-by-side Ratio](#)

4. Tap **Done** at the upper right corner to save the editing.

Fit & Fill

The canvas size is 1920x1080, and its aspect ratio is 16:9. When a source has black borders around or at both sides, you can double-tap to switch between the Fit and Fill modes.

- Fit means that the source will be proportionally scaled to the maximum that can be completely contained in the canvas. There might still be black borders at the upper/down side or left/right side.
- Fill means that the source will be proportionally scaled so that it exactly fills the canvas with no black border, and its excess part outside the canvas will be cropped.

Scale Up & Down



You can use scaling tools or gestures to scale sources.

- When a source is larger than the canvas (1920x1080), it will be automatically scaled down to be fully shown in the canvas.



- The small picture in a PIP layout does not support this operation. If you need to scale the small picture, you can refer to [scale the small picture](#).

Using the Scaling Tools

1. On the canvas, tap a source. Skip this step for a single-view scene.
2. Tap or long press the scaling tools above the canvas.
 -  : scale up. Tapping once scales up by 1%, while long pressing continuously scales up the source.
After scaling up, you can scroll up/down or right/left to choose the section you want to show.
 -  : scale down. Tapping once scales down by 1%, while long pressing continuously scales down the source.
You cannot further scale down when the source reaches its initial size on the canvas.

Using Gestures

Place two fingers on the source to be scaled, and move the two fingers apart to scale up. After scaling up, you can scroll up/down or right/left to choose the section you want to show.

Pinch the two fingers to scale down. You cannot further scale down when the source reaches its initial size on the canvas.



Rotate

You can rotate an image by 90 / 180 / 270 degrees.

1. On the canvas, tap a source to rotate. Skip this step for a single-view

scene.

2. Tap the rotating tools above the canvas.



-  : Each tap rotates the source to the left by 90 degrees.
-  : Each tap rotates the source to the right by 90 degrees.

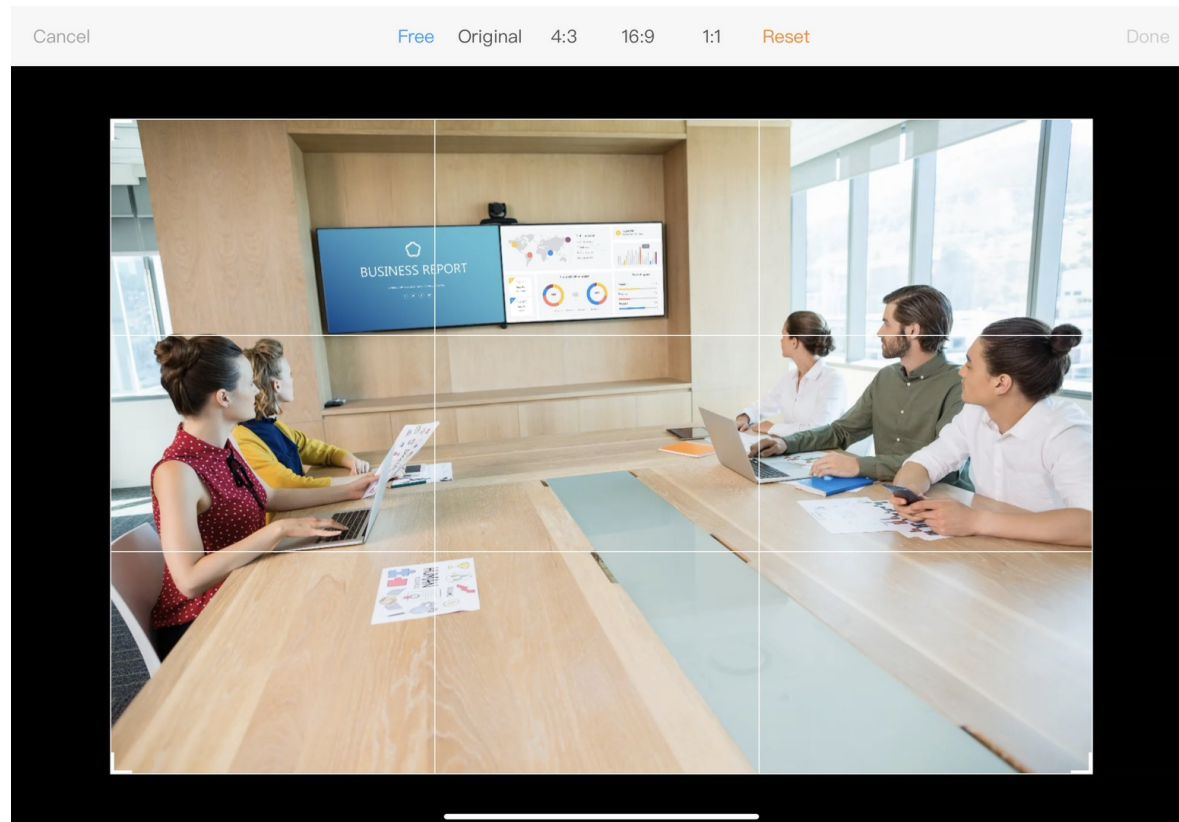
Flip

When the text in your source is in reverse order, you can use the flip tools to revert the image.

1. On the canvas, tap a source to flip. Skip this step for a single-view scene.


2. Tap the flip tools above the canvas.

-  : flip horizontally
-  : flip vertically



Crop

The cropping tool can crop out unnecessary parts of a source or crop the source to a desired aspect ratio.


1. On the canvas, tap a source to crop. Skip this step for a single-view scene.
2. Tap the cropping tool  above the canvas to access the cropping page.
3. At the upper part on the cropping page, select a cropping aspect ratio. By default, the **Free** aspect ratio is used, which allows you to crop at any aspect ratio.
4. Drag a corner or border of the crop frame to select the part you want to retain.
You can also drag within the crop frame to move the crop frame around.
If you want to cancel the current cropping, tap **Reset** to revert to the original source.
5. Tap **Done** at the upper right corner.

When you enter the cropping page for a second time after first cropping, you still crop based on the original source.



Edit the Small Frame

You can edit the frame of the small picture in a PIP layout. By default, the small frame is used.

1. Tap the small picture in a PIP layout.
2. Tap the frame tool  above the canvas.
3. In the drop-down box, select the frame width. By default, the S (small) frame is used.
4. Select a frame color. The default color is white.
5. Tap outside the drop-down box to complete the editing.

Scale the Small Picture

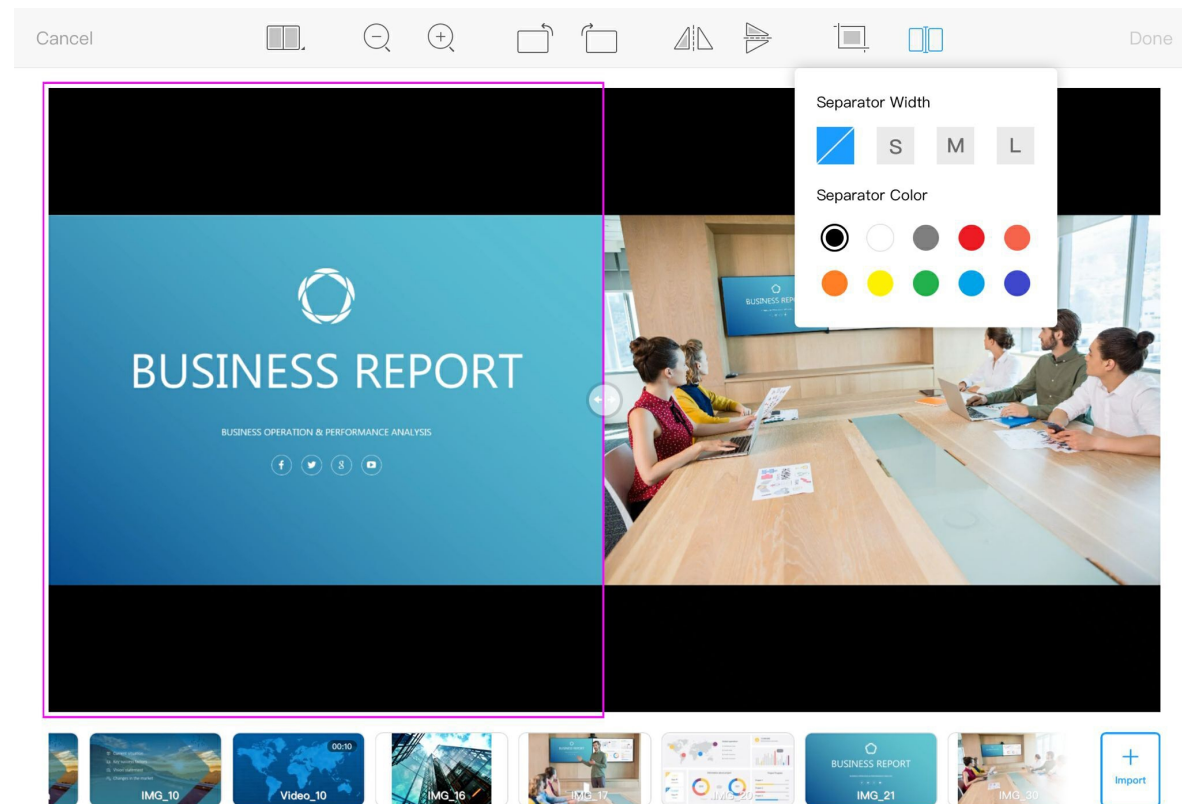
The small picture is 1/16 the size of the canvas by default. You can scale the picture to 1/4 the canvas at most and 1/256 the canvas size at least.

1. Tap the small picture in a PIP layout.
2. Drag any of the four corners to scale up/down the picture.

Change the Small Picture Position


By default, the small picture is placed at the lower left corner of the canvas. You can drag the small picture to move it to any place within the canvas.

Besides the scene editing page, you can also change the position of the small picture on the main UI page.




Edit the Separator

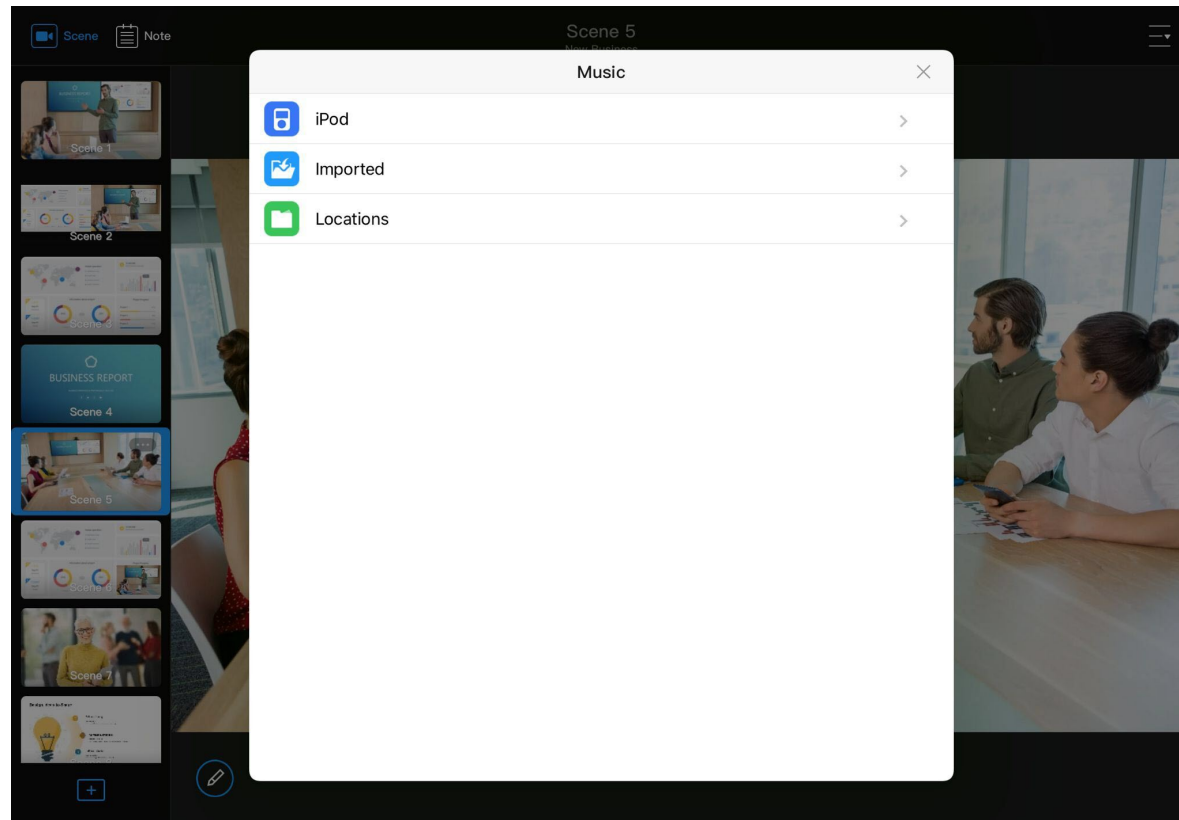
You can add a separator for a side-by-side scene. There is no separator by default.

1. On a side-by-side scene, tap the left or right source.
2. Tap the separator tool  above the canvas.
3. In the drop-down box, select a width for the separator. By default there is no separator.
4. Select a color for the separator. The default color is white.
5. Tap outside the drop-down box to complete the editing.

Change the Side-by-Side Ratio

By default, a side-by-side scene is evenly divided into two frames. You can drag the  button to the left or right to change the ratio of the two sources. A source is at least 1/16 wide as the canvas.

Besides the scene editing page, you can also change the proportion of the two side-by-side sources on the main UI page.



Creating Background Music

You can add background music to your [presentation](#). You can also add other audio materials, such as listening materials for a lesson.

When creating background music, you need to first import the music into USB Fusion, and then add them to your [presentation](#). All the scenes in a [presentation](#) share the same background music list.



Importing Background Music

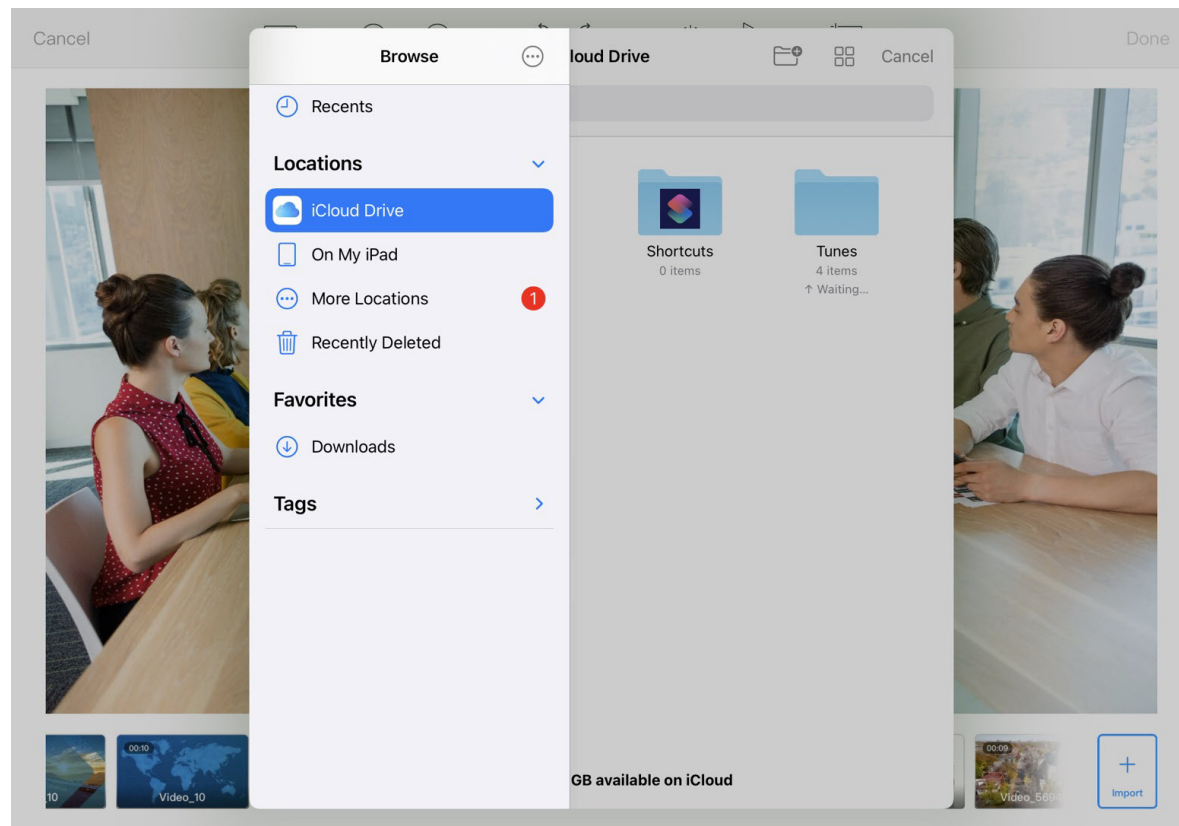
In the App, you can import music to the connected USB Fusion device. Imported music can be added to different presentations.

You can also import music on the Web UI. For details, see [Importing Music](#).

Importing on iOS Devices

On an iOS device, you can import files from the local system album and other locations including cloud storage, file server, and connected devices.

1. At the upper right corner of the App, tap  >  **BGM**.
2. At the bottom of the playlist, tap **+ Add**.
This opens the **Imported Music** list, which shows the music that has been imported to the connected USB Fusion device.
3. At the bottom of the imported music list, tap **+ Upload**.
4. Tap one of the following to access files:
 - **iPod**: music stored in the local iOS system
 - **Imported**: music that has been imported to the App



On iOS devices, resources imported to the USB Fusion are also saved in the App. When importing a file to the USB Fusion device, importing from the App is faster than importing from the iOS system or other locations, especially for large files. If you need to delete a music item, swipe an item to the left and tap the delete button.

- **Locations:** non-local music that can be accessed by the iOS system, including files on cloud storage (such as Box, Dropbox), file servers and connected devices (such as USB flash drives and SD cards). The following describes how to access cloud storage. For methods to access other locations, see [Apple Website](#).

When importing files from cloud storage, tap **Browse** (at the top or bottom, depending on the iOS version), and tap a cloud storage app under **Locations** to select a file.

- If you import from Cloud Drive, you need to first enable iCloud Drive. For details, see [How to import a resource from iCloud Drive](#).
- If you import from other cloud storage, you need to first install and log in to the cloud storage app. The operations to access different cloud storage services are similar. For details, see [How to import a resource from Google Drive](#).

Only the cloud storage apps that allow the system to manage will be displayed under **Locations**. If a cloud storage app does not grant the management right to the File App, you cannot import files from the cloud storage using this method.

5. Tap a file to import.

Supported formats: MP3, M4A, WAV


The source will be imported to the storage of the connected USB Fusion device. The imported file will show on the imported music list. You can manage imported music on the Web UI. For details, see [Managing Music](#).

The same resource cannot be imported for a second time.

6. (Optional) Repeat the above steps to import more files.

Importing on Android Devices

On an Android device, you can import a local file or a file from cloud storage.

1. At the upper right corner of the App, tap  >  **BGM**.

2. At the bottom of the playlist, tap **+ Add**.

This opens the **Imported Music** list, which shows the music that has been imported to the connected USB Fusion device.

3. At the bottom of the imported music list, tap **+ Upload**.

4. Tap the menu icon at the upper left corner, and tap an item in the **Open File** list.

The **Open File** list contains local files and cloud storage services.

When importing from a cloud storage service, you need to first install and log in to the cloud storage app. The operations to access different cloud storage services are similar. For details, see [How to import a resource from Google Drive](#).

Only the cloud storage apps that allow the system to manage will be displayed under the **Open File** list. If a cloud storage app does

not grant the management right to the File App, you cannot import files from the cloud storage using this method.

5. Tap a file to import.

Supported formats: MP3, M4A, WAV

The file will be imported to the storage of the connected USB Fusion device. The imported file will show on the imported music list. You can manage imported music on the Web UI. For details, see [Managing Music](#).



The same resource cannot be imported for a second time.

If you want to cancel importing files, tap the system back button to go back. For example, on a Samsung device, tap the back button at the bottom.

6. (Optional) Repeat the above steps to import more files.

Adding Background Music

You can add music imported to the USB Fusion to your [presentation](#).

1. At the upper right corner of the App, tap  >  **BGM**.
2. At the bottom of the playlist, tap **+ Add**.

This opens the **Imported Music** list, which shows the music that has been imported to the connected USB Fusion device.



3. In the **Imported Music** list, tap an item. This item will be added to the playlist.

Sorting Background Music

1. At the upper right corner of the App, tap  >  **BGM**.

-
2. In the playlist, long-press an item and move it up or down to change its order.

Deleting Background Music

1. At the upper right corner of the App, tap  >  **BGM**.
2. In the playlist, swipe an item to the left and tap the **Delete** button.


Producing a Presentation

When using the USB Fusion to present, you can perform a series of operations to produce your [presentation](#), such as switching scenes, annotating, and playing music. The following describes how to use the App to produce a [presentation](#). Some functions are also available on the Web UI. For details, see [Creating and Managing Presentations](#).



Switching Scenes



You can use the USB Fusion App to switch between the scenes in a [presentation](#) in real time.

1. At the upper left corner of the App, tap .
2. In the scene list on the left, tap a scene to switch to it.
You can scroll up & down the scene list to view the scene thumbnails.
When you switch to a scene, the preview area will show the corresponding scene.

You can also switch scenes on the Web UI. For details, see [Switching Scenes](#).

Hiding/Showing the Scene List

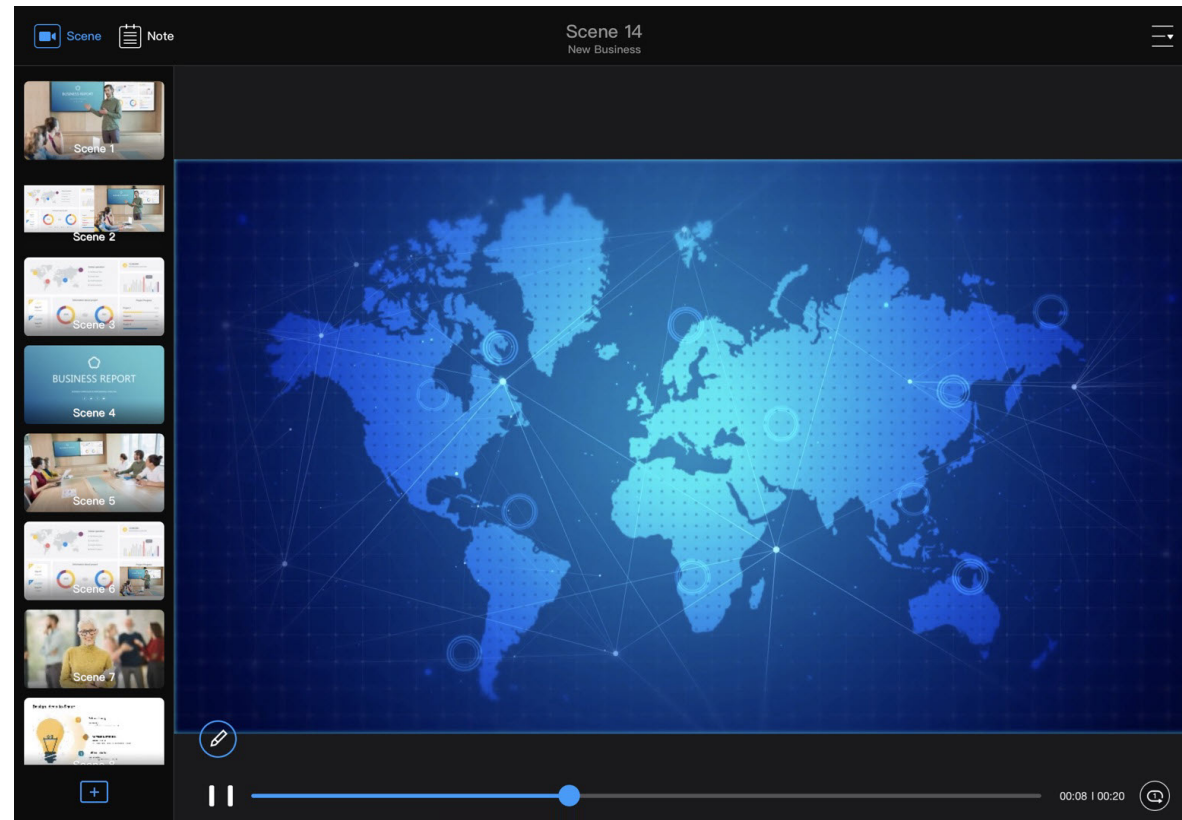
You can flexibly choose whether to hide the scene list, which allows a larger preview area to display a scene more fully.

- Hide the scene list: Tap  at the upper left corner, or swipe the scene list to the left.
- Show the scene list: Tap  at the upper left corner, or swipe from the leftmost of the page to the right.

Adjusting a Multi-view Scene

While presenting, you can change the layout of a PIP or side-by-side scene.





- **Change the position of the small picture:** In the preview area on the main UI, drag the small picture in a PIP scene to move it to any place within the canvas.
- **Swap the images in a PIP scene:** In the preview area on the main UI, tap within the small image to exchange the positions of the two sources.
- **Change the proportion of the two sources in a side-by-side scene:** In the preview area on the main UI, drag at the separator of a side-by-side scene to the left or right to change the size of the two sources. A source is at least 1/16 wide as the canvas.



Controlling Video Playback


When the current scene contains a video file, you can control its playback.

For a video file in a picture-in-picture layout, you can only view its playback progress but not control its playback.

- Fast-forward/fast-backward: On the scene, swipe left to fast backward and swipe right to fast forward.
- Seek: Tap the scene in the preview area to reveal the playback controls at the bottom. Drag the playhead to a desired position on the progress bar.
- Pause/resume: Tap the scene in the preview area to reveal the playback controls at the bottom. Tap the  or  button to pause or resume playback.
- Set the loop policy: Tap the scene in the preview area to reveal the playback controls at the bottom. Tap  to play only once and  to play the video repeatedly.
- Check the playback progress: In the preview area, there will be a blue progress bar to indicate the playback progress.



Annotating

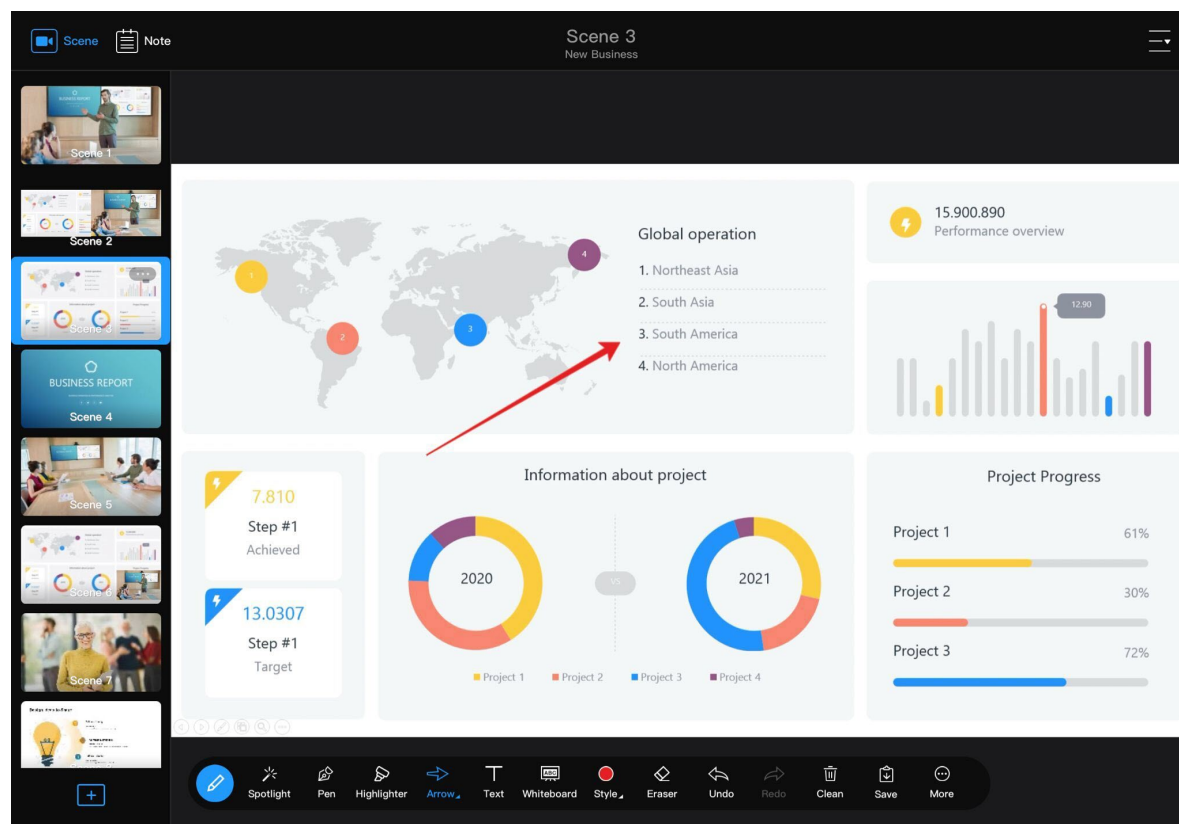
When presenting, you can annotate on the scenes or notes. Tap the  button at the lower left corner and you can use various tools to annotate.

The annotation tool bar is placed at the lower part of the page. You can move it to the upper part of the page.


Annotating on a Scene or a Note Page

You can annotate not only on a scene but also on a note page. The differences are as follows:


- A scene does not support setting the background, while a note page does not support the Auto Dismiss function and whiteboard.
- The annotations on a scene must be manually saved, while those on a note page are saved automatically.
- You can annotate on a scene only in real time, while you can annotate on a note page in advance or in real time.

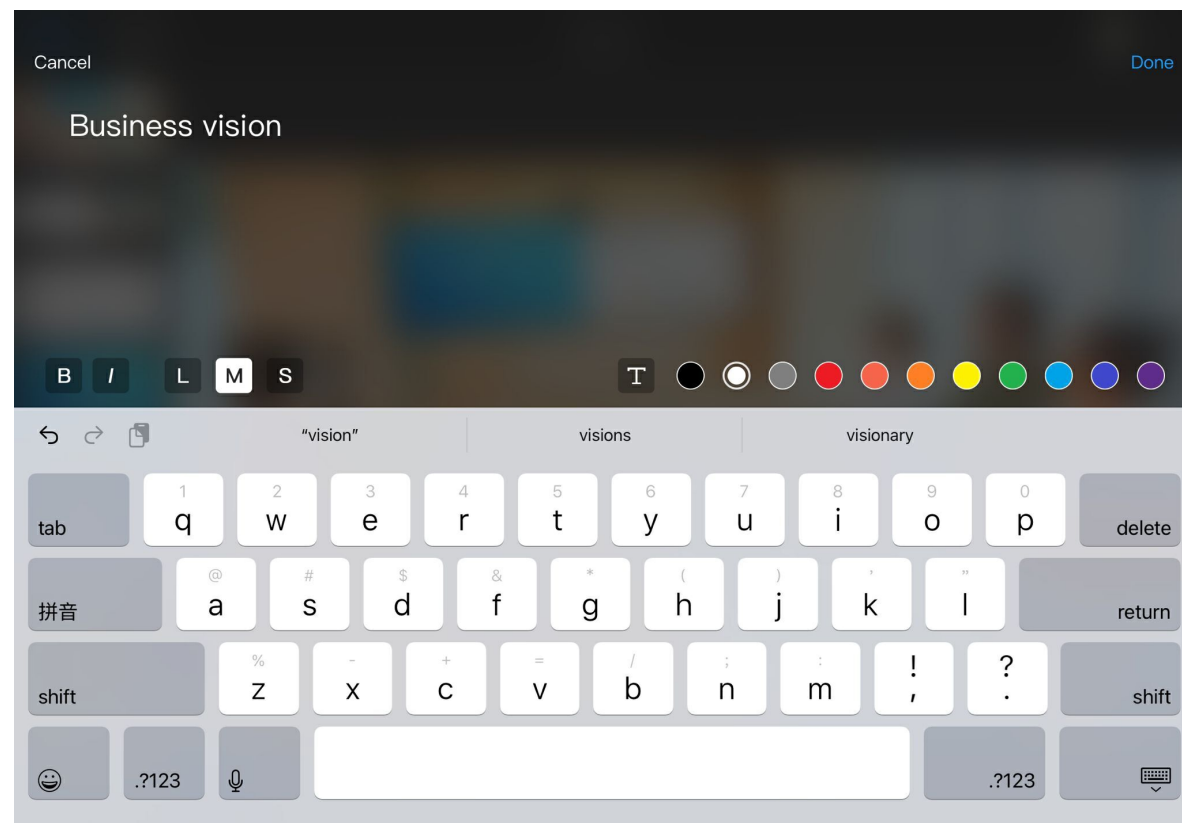


Spotlight


Spotlight can mark a position obviously. Tap  and then tap any place on the scene or note page. A spotlight will appear at the corresponding place.

Pen

A pen is used for writing or marking. Tap  to use a pen. You can also configure the pen properties in [Style](#).



Highlighter


A highlighter is quite suitable for highlighting content. Tap  to use the highlighter. You can also configure the highlighter properties in [Style](#).

Shape



You can use different shapes to annotate, including lines, arrows, rectangles, and circles. Tap **Shape** on the annotation bar and select a shape to annotate. You can also configure the shape properties in [Style](#).

Text

You can add text on a scene or note page, and configure its style, size and position.

1. On the annotation tool bar, tap .
2. On the text editing page, type in text.
You can type in a maximum of 1024 characters.
3. Set text style.
 - B: bold
 - /: italic
 - Large, medium, small: font size
 - T: text background color
 - Color: This sets the text color when text background color is disabled. Otherwise, it sets the text background color (in which case the text color remains white).
4. Tap **Done** at the upper right corner.




The text will be displayed on the scene or note page with a text box. You can:

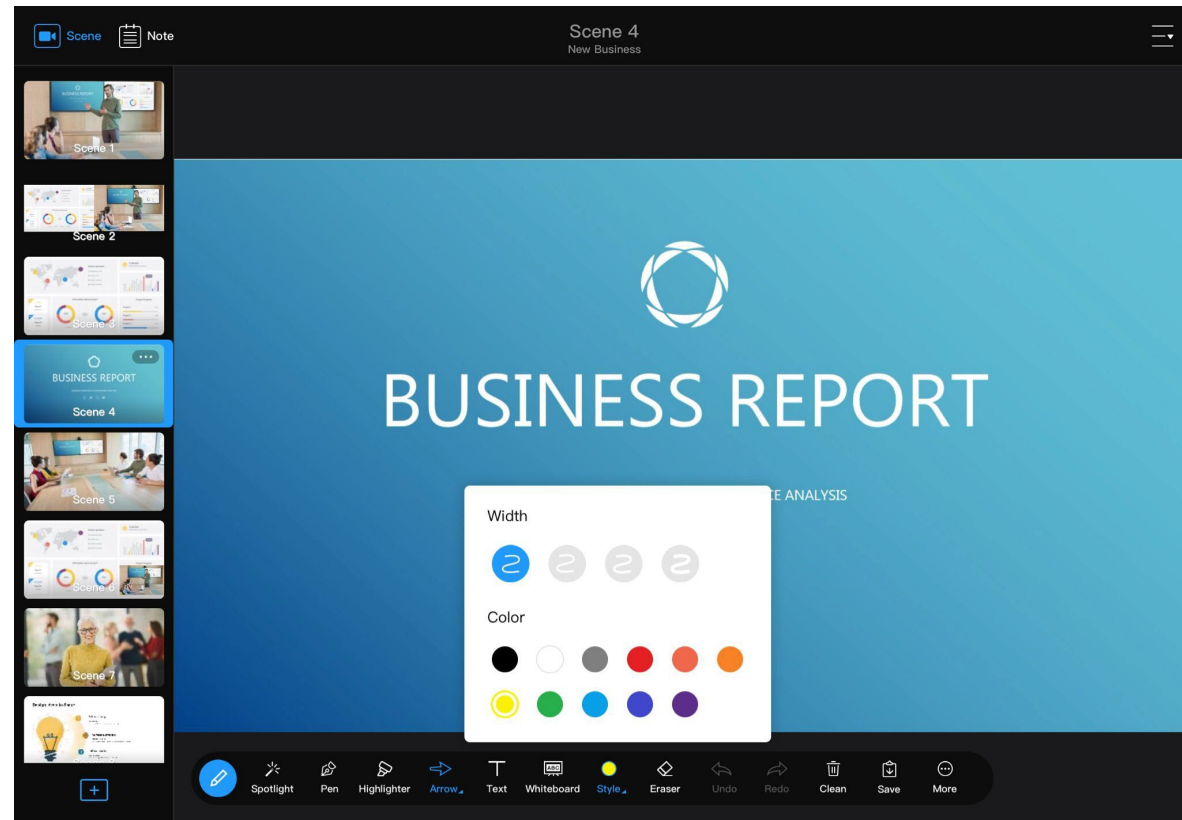
- Tap within the text box to edit the text again.
 - Tap  at the upper left corner of the text box to delete the text.
 - Drag  at the lower right corner to scale the text.
 - Drag the text box to change the position of the text.
5. Tap outside the text box to complete the editing.
- After this, you can no longer do any of the operations in the above step.

Whiteboard

Using a whiteboard or blackboard can highlight your annotations.

This tool is available only for annotating on a scene.

1. In the annotations tool bar, tap  to open a whiteboard.
2. Tap the  button on the right to switch between a whiteboard and blackboard.
3. Use other annotation tools to annotate on the whiteboard/blackboard.
4. Tap  on the right to close the whiteboard/blackboard.




Style

Style does not apply to text and spotlight.




1. On the annotation bar, tap **Style**.
2. Select the line width.
This style applies to pen, highlighter, shapes, and eraser.
3. Select a color.
This style applies to pen, highlighter, and shapes.
When the shape is a rectangle or circle, you can set the border color and fill color separately.

Eraser

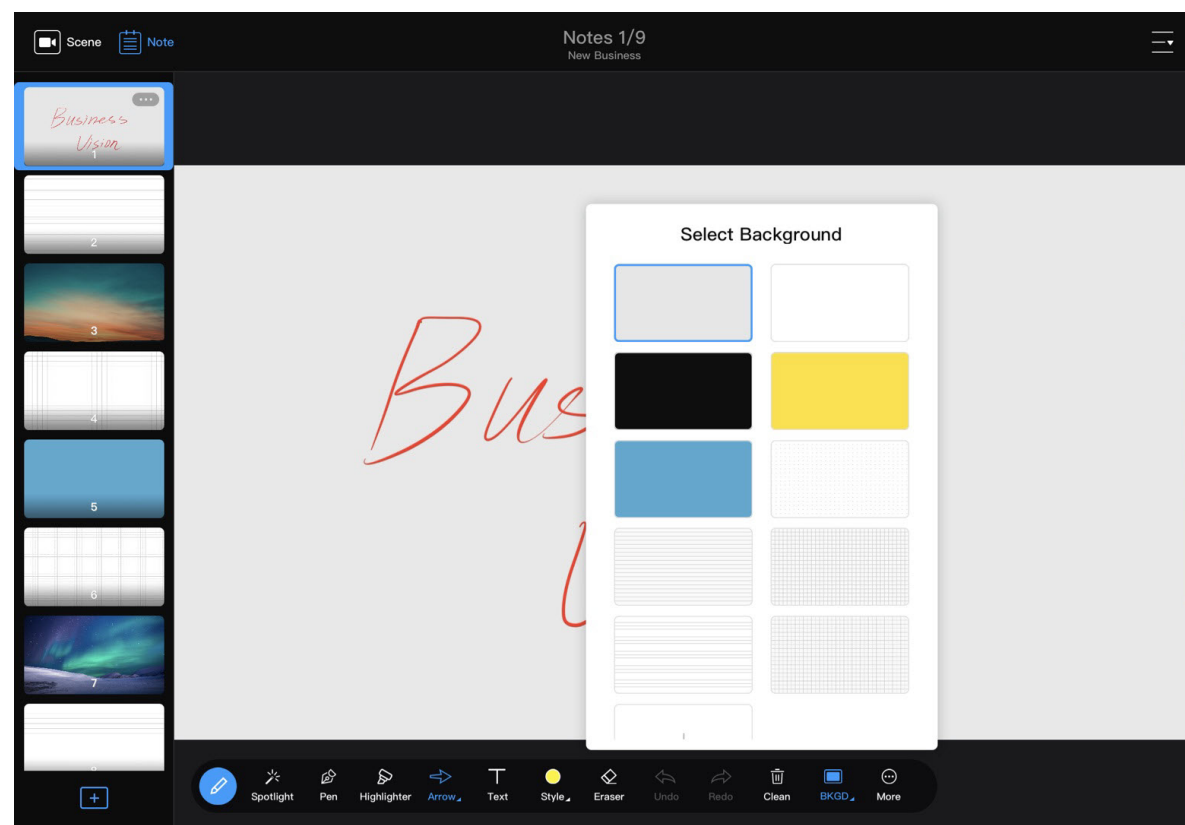
Tap  to erase various annotations. You can also configure eraser properties in [Style](#).

Undo, Redo, and Clear

The Undo, Redo, and Clear tools are used to delete or recover annotations.

-  Undo: Undo the last step. Tapping once undoes one step.
-  Redo: Redo an undone step. Tapping once redoes one step.
-  Clear: Clear all annotations on the scene or annotations page.


For a scene, the annotations automatically clear when you switch to another scene/note page. For a note page, the annotations are automatically saved when you switch to another note/page; when you switch back to the note page, you can clear the annotations, but not undo/red.



Save

You can save the annotations on a scene. The annotations are saved to the notes list.

This tool is available only when you annotate on a scene.


1. Annotate on the current scene.
2. On the annotation tool bar, tap  .
The scene and the annotations on it will be saved to the annotation list.

Background

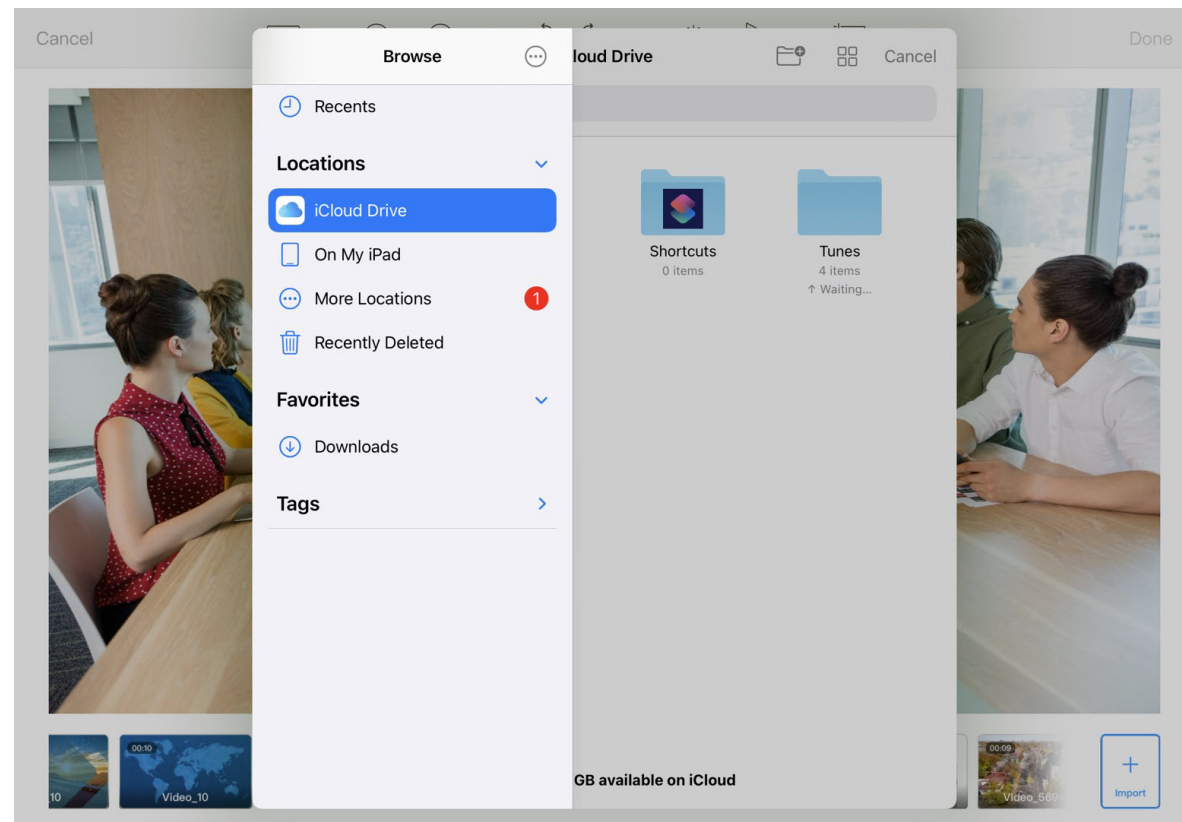
The note page has a white background by default. You can change the background to other colors or textures. Besides the background images provided in the App, you can also import other background images of your choice.

This tool is available only when you annotate on a created note page, not one saved from a scene.


Selecting a Background

1. On the annotation tool bar, tap  **BKGD**.
2. In the background image list box, scroll up/down to view the background images, and tap one to select it.

Importing Background Images on iOS Devices



On an iOS device, you can import files from the local system album and other locations including cloud storage, file server, and connected devices.

1. On the annotation tool bar, tap  **BKGD**.
2. In the background image list box, scroll up to the bottom, and tap the add button +.
3. Tap one of the following to access files:
 - **Album:** pictures in the iOS system album
 - **Imported:** pictures already imported to the USB Fusion App

On iOS devices, resources imported to the USB Fusion are also saved in the App. When importing a file to the USB Fusion device, importing from the App is faster than importing from the iOS system or other locations, especially for large files. If you need to delete a resource, long-press the resource and tap the delete button.

- **Locations:** non-local pictures that can be accessed by the iOS system, including files on cloud storage (such as Box, Dropbox), file servers and connected devices (such as USB flash drives and SD cards). The following describes how to access cloud storage. For methods to access other locations, see [Apple Website](#).

When importing files from cloud storage, tap **Browse** (at the top or bottom, depending on the iOS version), and tap a cloud storage app under **Locations** to select a file.

- If you import from Cloud Drive, you need to first enable iCloud Drive. For details, see [How to import a resource from iCloud Drive](#).

- If you import from other cloud storage, you need to first install and log in to the cloud storage app. The operations to access different cloud storage services are similar. For details, see [How to import a resource from Google Drive](#).

Only the cloud storage apps that allow the system to manage will be displayed under **Locations**. If a cloud storage app does not grant the management right to the File App, you cannot import files from the cloud storage using this method.

4. Tap a file to import.

Supported formats: JPEG, PNG, BMP


The files will be imported to the storage of the connected USB Fusion device. The imported background will show in the background list. You can manage the imported files on the Web UI. For details, see [Managing Pictures](#).

The same resource cannot be imported for a second time.

5. (Optional) Repeat the above steps to import more files.

Importing Background Images on Android Devices

On an Android device, you can import a local file or a file from cloud storage.

1. On the annotation tool bar, tap  **BKGD**.
2. In the background image list box, scroll up to the bottom, and tap the add button **+**.
3. Tap the menu icon at the upper left corner, and tap an item in the **Open File** list.

The **Open File** list contains local files and cloud storage services.

When importing from a cloud storage service, you need to first install and log in to the cloud storage app. The operations to access different cloud storage services are similar. For details, see [How to import a resource from Google Drive](#).

Only the cloud storage apps that allow the system to manage will be displayed under the **Open File** list. If a cloud storage app does not grant the management right to the File App, you cannot import files from the cloud storage using this method.

4. Tap a file to import.

Supported formats: JPEG, PNG, BMP

The files will be imported to the storage of the connected USB Fusion device. The imported background will show in the background list. You can manage the imported files on the Web UI. For details, see [Managing Pictures](#).

The same resource cannot be imported for a second time. If you want to cancel importing files, tap the system back button to go back. For example, on a Samsung device, tap the back button at the bottom.

5. (Optional) Repeat the above steps to import more files.





Using a Stylus

On stylus-enabled devices, you can use a stylus to annotate instead of just gestures. Compared to gestures, a stylus is much more similar to our daily writing experience and can provide more fluent and more precise annotation. USB Fusion also optimizes your annotation experience using a stylus, allowing you to set strokes, enable stylus only, and directly annotate even when the annotation tool bar is not open.

Stroke

When using a stylus, you can enable the stroke feature to have more personalized writing style.



This feature does not apply to writing using fingers.

1. On the annotation tool bar, tap  **More**.
2. Enable  **Stroke**.

After enabled, this feature will generate strokes based on your writing speed and force.

Stylus Only

When using a stylus, your fingers may accidentally touch the screen and generate unwanted annotations. To prevent this, you can enable the **Stylus Only** function, so that you can only use a stylus to annotate, not gestures.

1. On the annotation tool bar, tap  **More**.
2. Enable  **Stylus Only**.

Annotate Directly


Before using gestures to annotate, you need to open the annotation tool bar.

When you collapse the tool bar, you cannot make annotations using gestures. However, this is not the case for a stylus. A stylus can annotate even when the tool bar is collapsed. And the tool used for annotating is the one selected on the tool bar.

Auto Dismiss

By default, annotations do not dismiss automatically. You need to manually clear them. You can also enable the **Auto Dismiss** feature for the annotations to disappear automatically after a specified period.

This feature does not apply to spotlight and text, which need to be manually cleared.

1. On the annotation tool bar, tap **More**.
2. Enable  **Auto Dismiss**, and set the duration for the annotations to stay before they automatically dismiss.

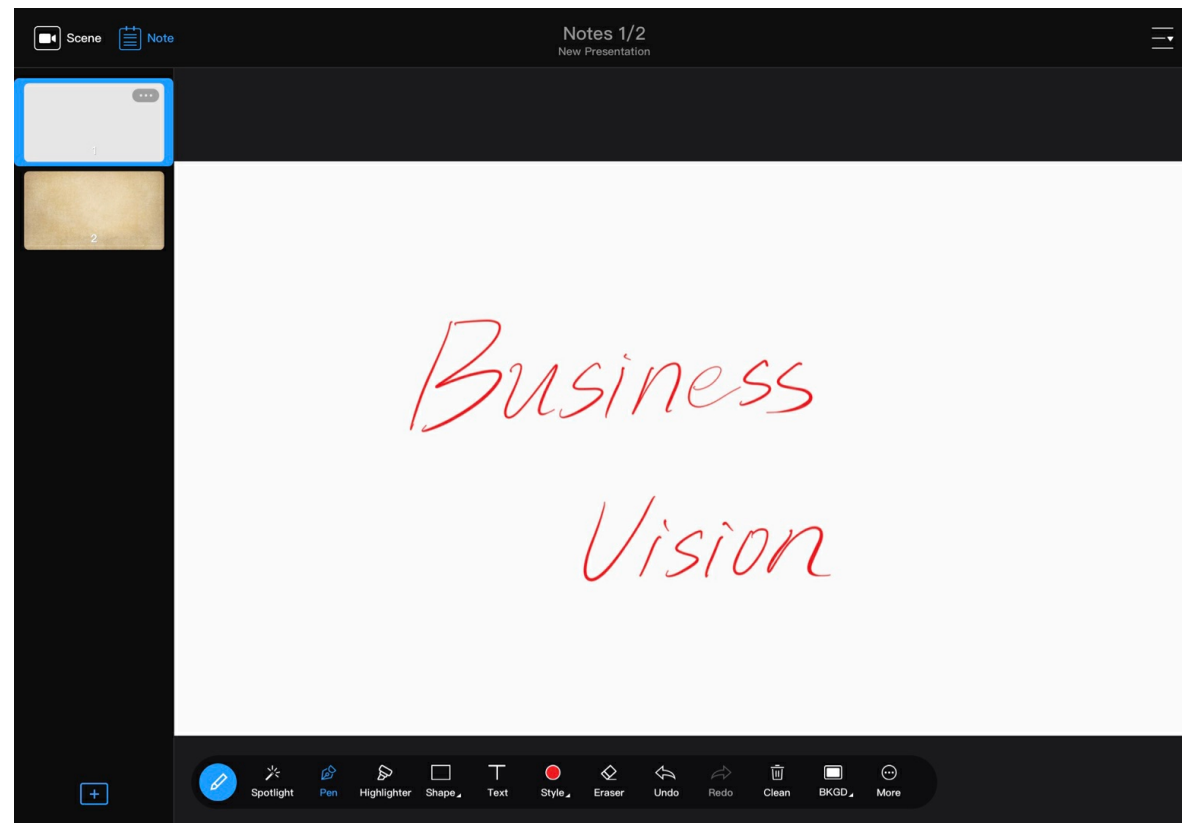
The time range is 2 to 10 seconds.

Freezing a Scene

Annotations can be made not only on a static scene but also on a dynamic one with a video file or captured video. When the video source is in rapid motion, you can also freeze the source to better annotate.

This function is available only when you use gestures, not a stylus. Before using this function, make sure that the annotation tool bar is collapsed.

- Freeze a scene: On a source consisting of a video file or captured video,



double tap to freeze image, that is, a video file will pause, and a captured video will stop at the current frame.

- Unfreeze a scene: Double tap the scene to unfreeze.


Using Notes

Notes are used to add or save annotations. Using the notes function, you can also switch back to annotations you have made previously, and export annotations for sharing.



Adding Notes

You can save annotations on a scene as a note, and add a note in the notes list.

Saving Scene Annotations as a Note

1. On a scene, open the annotation tool bar to annotate.
2. Tap  **Save** on the annotation tool bar.
The scene and the annotations on it will be saved to the notes list.

Adding a Blank Note Page



1. On the App Main UI, tap  at the upper left corner.
2. Under the notes list, tap  .
You can also long press a note thumbnail and tap **Manage**. On the notes management page, tap **+ Add Notes** at the bottom.
A new note page will be added to the notes list and automatically numbered.

A new note page will automatically use the background of the note page proceeding it. The default background is grey.

3. Use the annotation tools to annotate on the note page.
The annotations will be automatically saved.


Copying Notes

You can create a new note page by copying.

1. On the App Main UI, tap  at the upper left corner.
2. In the notes list, long press a note thumbnail or tap  at its upper right corner. In the displayed menu, tap **Copy**.
The new note page will be generated under the source note page.


Switching Notes

While presenting, you can switch to the annotations that you have saved to the notes list.





1. On the App Main UI, tap  at the upper left corner.
2. In the notes list, scroll up/down to view the notes and tap one to switch to it.

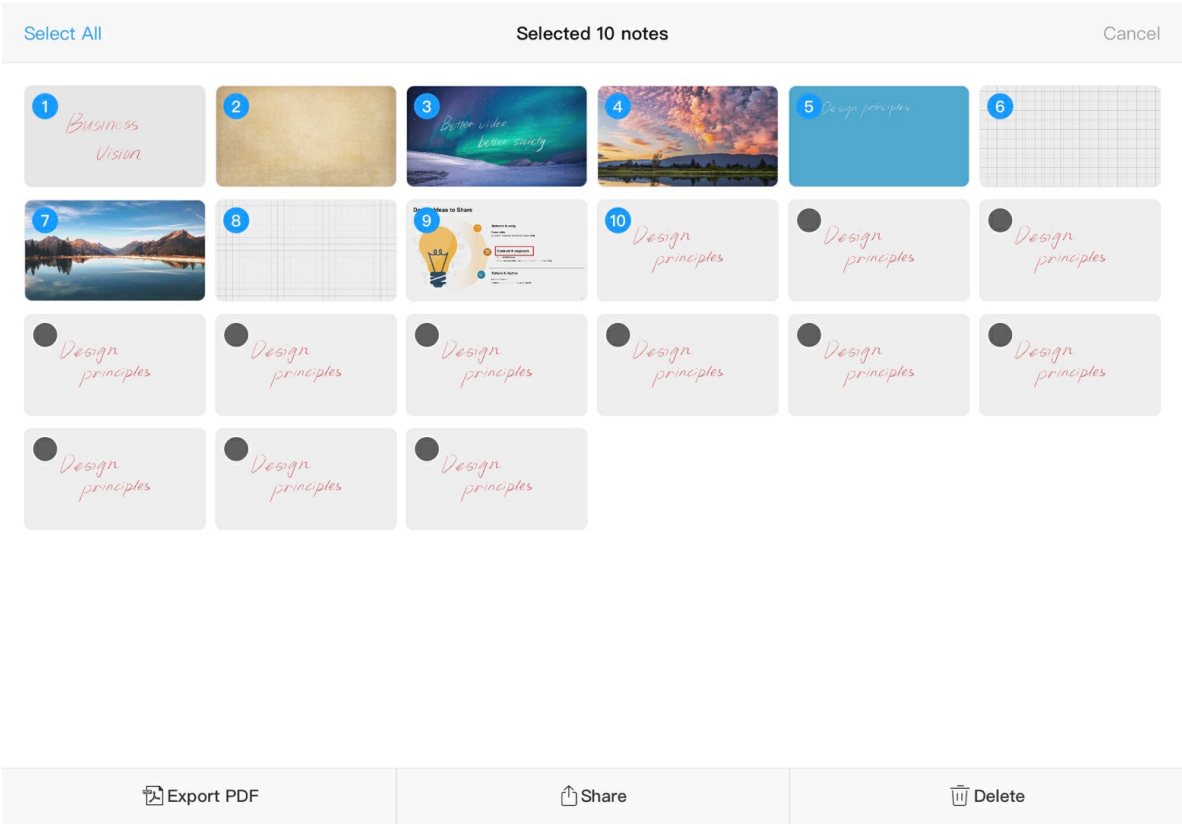
Hiding/Showing the Notes List

The notes list can be hidden for the preview area to display a note page more fully.

- Hide the notes list: Tap  at the upper left corner, or swipe the notes list to the left.

In this mode, you can switch notes or access the notes management page on the right of the page:



- Tap  to switch to the previous note page or  to switch to the next note page.
- Tap  to access the notes management page.
- Show the notes list: Tap  at the upper left corner, or swipe from the leftmost of the page to the right.



Managing Notes



You can view, export, share, and delete notes.

Viewing Notes

1. On the App Main UI, tap  at the upper left corner.
2. In the notes list, long press a note thumbnail or tap  at its upper right corner. In the displayed menu, tap **Manage**.
3. On the notes management page, view all notes.

Exporting Notes



Export multiple notes to a PDF file.

1. On the App Main UI, tap  at the upper left corner.
2. In the notes list, long press a note thumbnail or tap  at its upper right corner. In the displayed menu, tap **Manage**.
3. On the notes management page, tap **Select** at the upper left corner.
4. Tap **Select All** at the upper left corner, or tap notes thumbnails to select.



5. Tap **Export PDF** at the bottom.
6. On the export preview page, scroll up/down to preview the PDF file to be exported, and tap **Export** at the upper right corner.
7. Select an application to receive the PDF file.


Sharing Notes

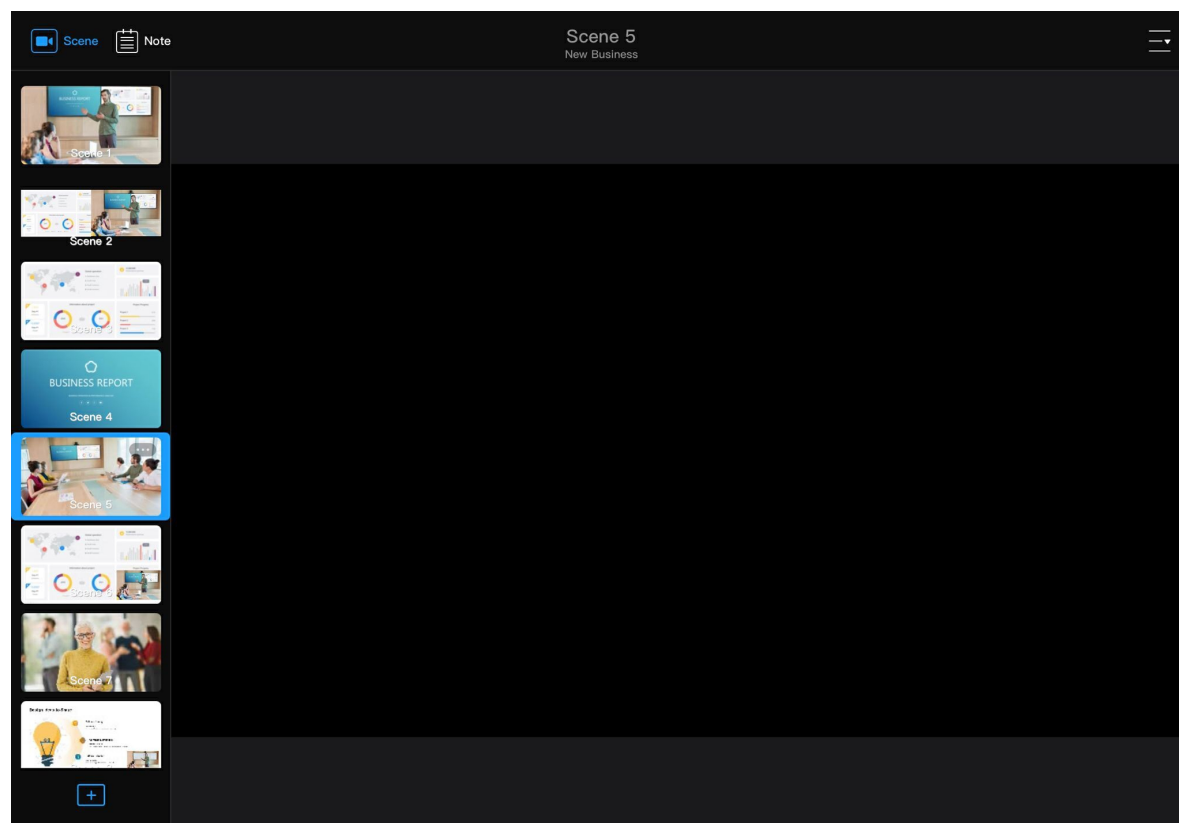
Share notes as separate images.

1. On the App Main UI, tap  at the upper left corner.
2. In the notes list, long press a note thumbnail or tap  at its upper right corner. In the displayed menu, tap **Manage**.
3. On the notes management page, tap **Select** at the upper left corner.
4. Tap **Select All** at the upper left corner, or tap notes thumbnails to select.
5. Tap **Share** at the bottom.
6. Select the application to receive the notes.
The notes will be shared in PNG format.

Deleting Notes

1. On the App Main UI, tap  at the upper left corner.
2. Use any of the following methods to delete notes:
 - In the notes list on the main UI:
 - i. Long press a note thumbnail or tap  at its upper right corner. In the displayed menu, tap **Delete**.
 - ii. In the **Delete Note** dialog box, tap **Delete**.
 - On the notes management page:

- i. In the notes list, long press a note thumbnail or tap  at its upper right corner. In the displayed menu, tap **Manage**.
- ii. On the notes management page, tap **Select** at the upper left corner.
- iii. Tap **Select All** at the upper left corner, or tap notes thumbnails to select.
- iv. Tap **Delete** at the bottom.
- v. In the dialog box at the lower right corner, tap **Delete X notes**.

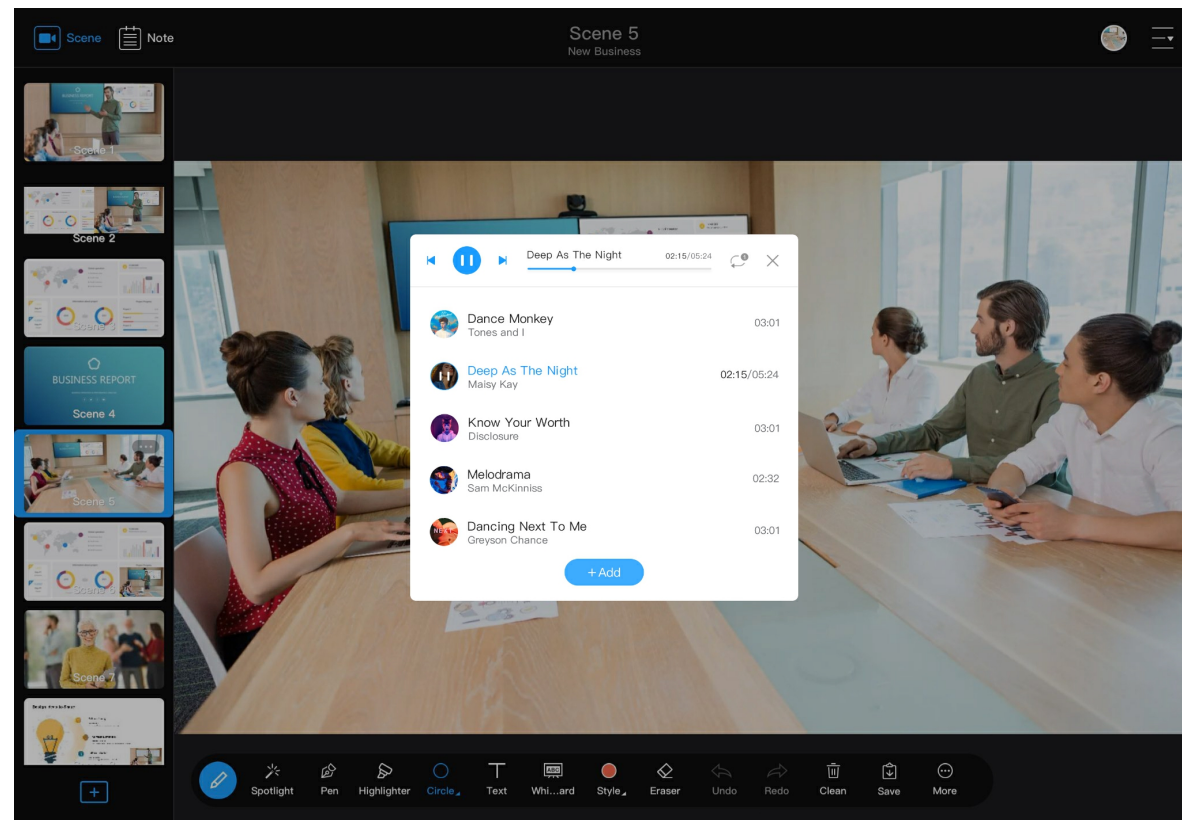


Fading to Black (FTB)

The Fading to Black (FTB) feature fades everything you are presenting into black and mutes the audio.











At the upper right corner on the App Main UI, tap  > .

To bring back the [presentation](#), tap  again. When you switch to another scene or note, it automatically cancels FTB.



Controlling BGM Playback

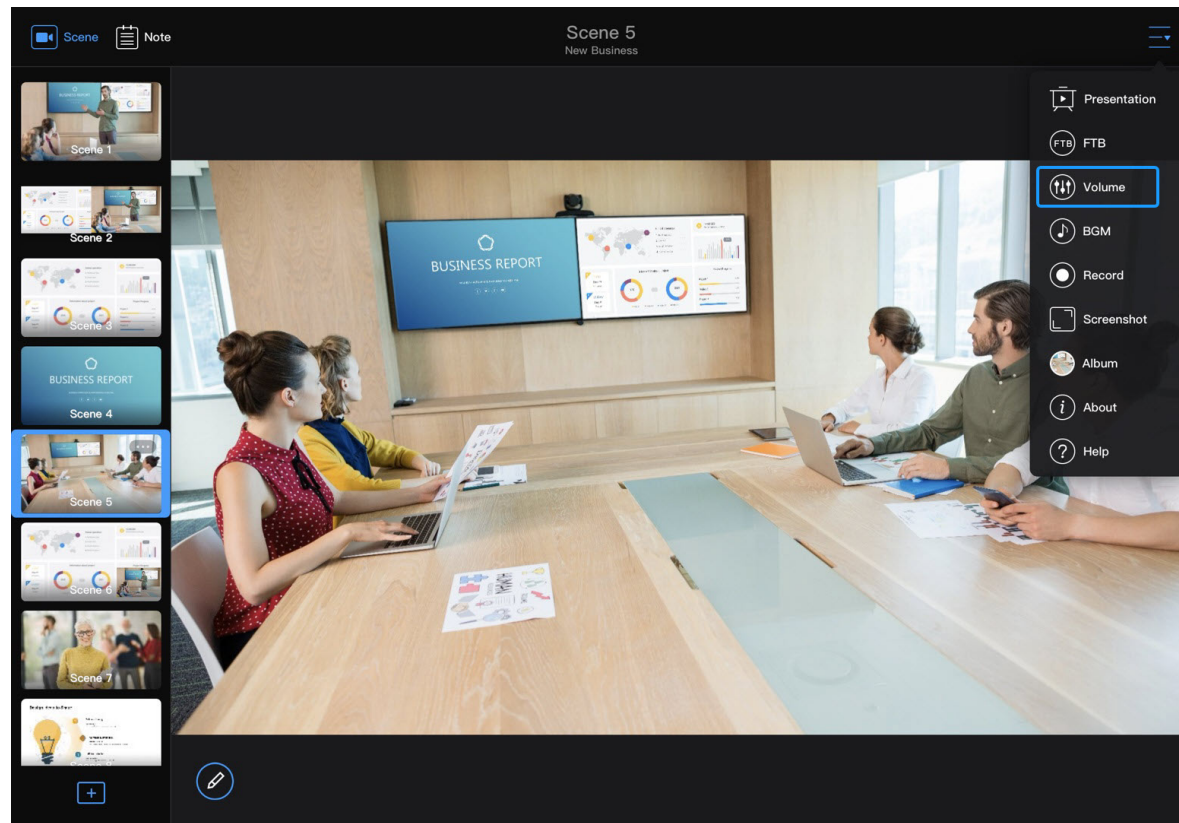
While presenting, you can control the playback of background music, including selecting songs, pause/resume, previous/next song, and setting the loop policy.

1. At the upper right corner on the App Main UI, tap  >  BGM.
2. In the playlist, tap a song to play.
3. In the playback control bar above the playlist, you can:
 - Tap  to play or  to pause.
 - Tap  to play the previous song or  to play the next song.
 - Drag the playhead to a specified position.
 - Tap the button next to the playback progress bar to set the loop policy:
 -  : play by order
 -  : shuffle the list
 -  : loop the list
 -  : loop a single song

Controlling Audio



USB Fusion allows you to adjust and monitor the input/output audio, both before and during your [presentation](#).

The following describes how to use the App to adjust volume. You can also adjust volume and configure other audio-related settings on the Web UI. For details, see [Setting the Audio](#).




Knowing the Audio Mixer

Each scene has its independent audio mixer.

When a scene is selected, at the upper right corner of the App Main UI, tap  >  **Volume** to open the audio mixer for the current scene.









The mixer will display the audio inputs and output involved in the current scene:

Output  : Sets the output audio, namely, USB OUT audio, and audio for monitoring, which is output through the headset port, WEB CAMERA port, [HDMI OUT](#) port.

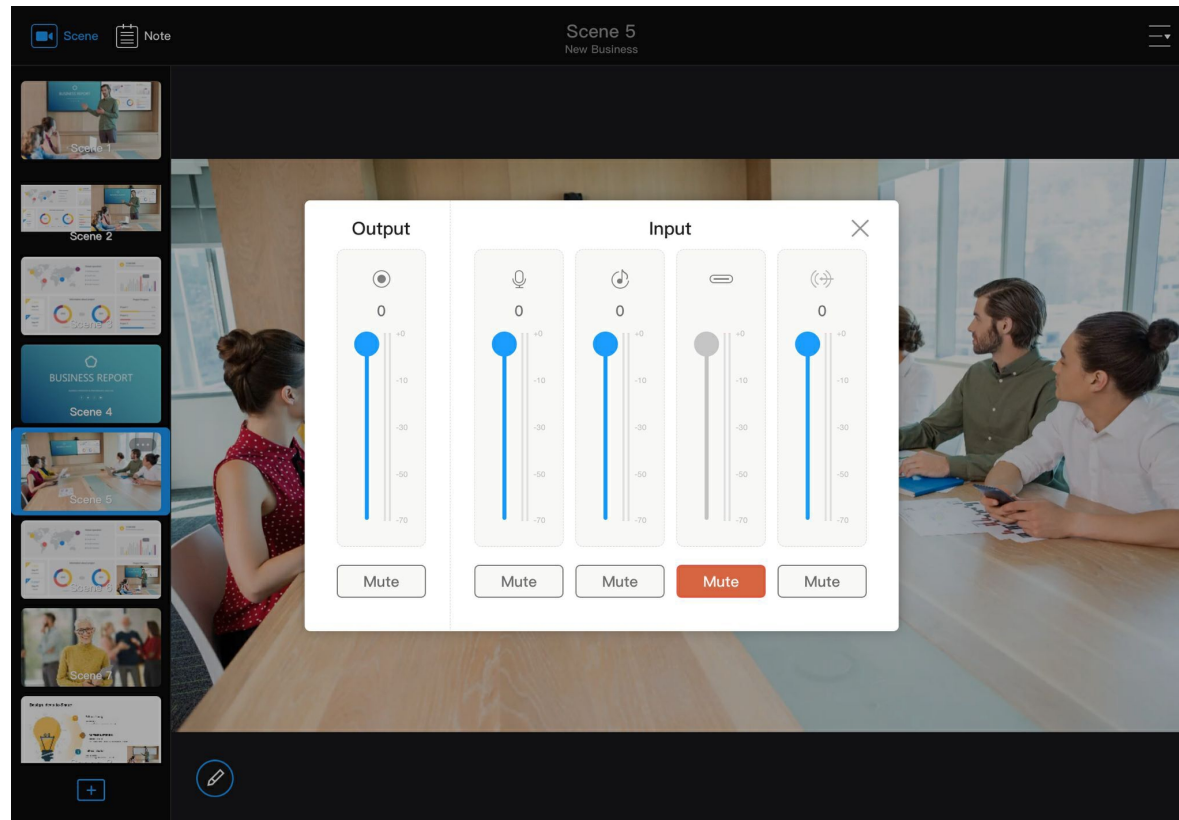
- By default, the monitored audio does not include the global microphone audio. If you need to monitor this audio, you need to [enable microphone monitoring](#) on the Web UI.
- By default, the WEB CAMERA port does not output monitoring audio. To enable output, you need to [select an USB audio output device](#) on the Web UI.

Input: Sets the different audio inputs:

- Global audio: audio present across a [presentation](#). Adjustment to such audio applies to the whole [presentation](#).

-  : audio input from a microphone. Microphones connected to both the headset port and the WEB CAMERA port can be used as global microphones and their volume are both adjusted here. The microphone on the headphone plugged into the headset port can be used immediately. For the microphone connected to the WEB CAMERA port, you need to first [select it as a global USB microphone](#) on the Web UI before it can be used. The two microphones can work simultaneously.
-  : background music.
-  : audio from the [streaming computer](#) via the USB OUT port. This audio only outputs to monitoring devices. It will not output through the USB OUT port.
-  : audio from the line-in port.
- Scene audio: audio specific to a scene, which switches in/out along with the scene. Adjustment to such audio applies only to the current scene. The following audio types are supported, but only the audio used in the current scene will be displayed.
 -  : audio from the COMPUTER port.
 -  : audio from the [HDMI](#) CAMERA port.
 -  : audio from the WEB CAMERA port. The audio is disabled by default. To enable it, you need to [set WEB CAMERA audio](#) on the web UI.
 -  : audio from a video file.

If you switch to a notes page, there will be only global audio inputs, no scene audio inputs.



Muting/Unmuting

Tap **Mute** to unmute, and **Mute** to mute.

Each audio input can be separately muted/unmuted.

Adjusting Volume

Drag along the volume bar to adjust volume.

- Input volume: Each audio enters USB Fusion at 100% its original volume, which corresponds to the position 0 in the volume bar. You can adjust the volume down. If the original volume is too low, you can make adjustments in [Advanced Settings](#) on the Web UI.
Separately setting the audio inputs can create rich audio effects. For example, you can lower the volume of the background music while raising the volume of your speech.
- Output volume: The output volume is adjusted based on the input volume.

The App does not play out audio.

Checking Real-time Volume

On the mixer, you can check the volume meter for the real-time volume. The left and right volume meters correspond to left and right audio channels. When an audio input is detected, the volume meter jumps up/down to show the real-time volume of the audio. When only one channel is input, only one volume meter jumps.

After you exit the mixer, you can also view the real-time output volume on the

right of the main UI. If there is no audio output, there will be no volume meter.

Using the WEB CAMERA Audio Input/Output

The WEB CAMERA port supports two-channel audio input and output, which are disabled by default. The audio cannot be enabled on the App. You need to enable it on the Web UI.

- Audio input: can be used as a global microphone or WEB CAMERA audio
 - Global microphone: audio that is used throughout a [presentation](#) and does not switch along with any scene. For configuration details, see [Selecting a Global USB Microphone](#).
 - WEB CAMERA audio: audio that switches in and out along with the WEB CAMERA video. For configuration details, see [Setting WEB CAMERA Audio](#).

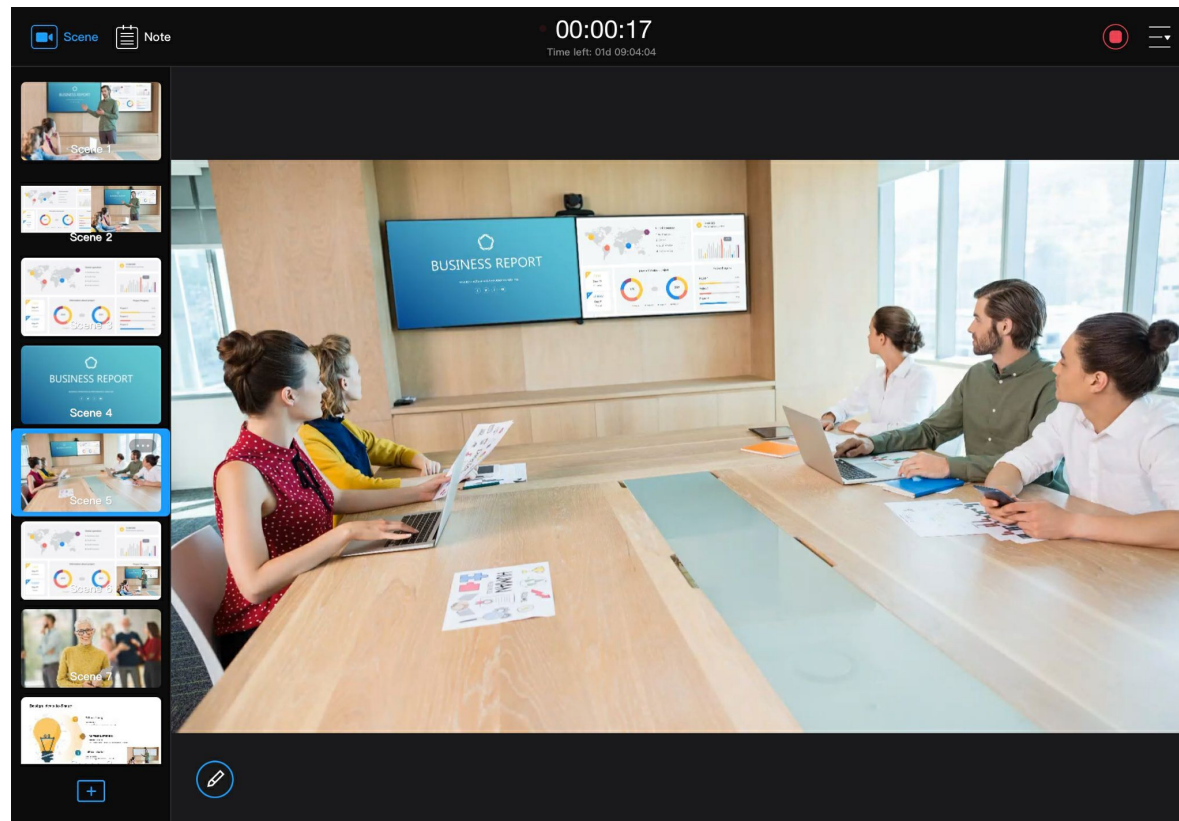
The same audio input device can be selected as either the global microphone or the WEB CAMERA audio. If multiple audio devices are connected, then different devices can be selected for different purposes.

- Audio output: The audio output can be used for monitoring. For configuration details, see [Selecting a USB Audio Output Device](#).

Recording and Taking Screenshots



When the USB Fusion is streaming your [presentation](#), you can also record the [presentation](#) and take screenshots for later usage. The recordings and screenshots will be saved to the USB Fusion album, which you can view and manage in the App.



You need to use the App to record and take screenshots.



Recording




The recording is taken at 1080p, 60fps, 8Mbps by default. Before the recording, you can [set the recording format](#) on the web UI. You cannot change the recording format during the recording.

- Start recording: At the upper right corner of the App Main UI, tap  >  **Record**.
 - When the recording starts, the upper part of the main UI will show a pulsing red light indicating that recording is ongoing, and the recording duration. Underneath is displayed **Time left: xxd xx:xx:xx**, indicating the available recording time allowed by the storage of the connected USB Fusion device.
 - When the recording duration lasts less than 1 second, the recording will fail.
 - When the available disk space of USB Fusion can support only less than 10 minutes of recording, the time left text will become orange; when it reaches less than 5 minutes, the time left text will become red; when it reaches 10 seconds, the recording will stop automatically.

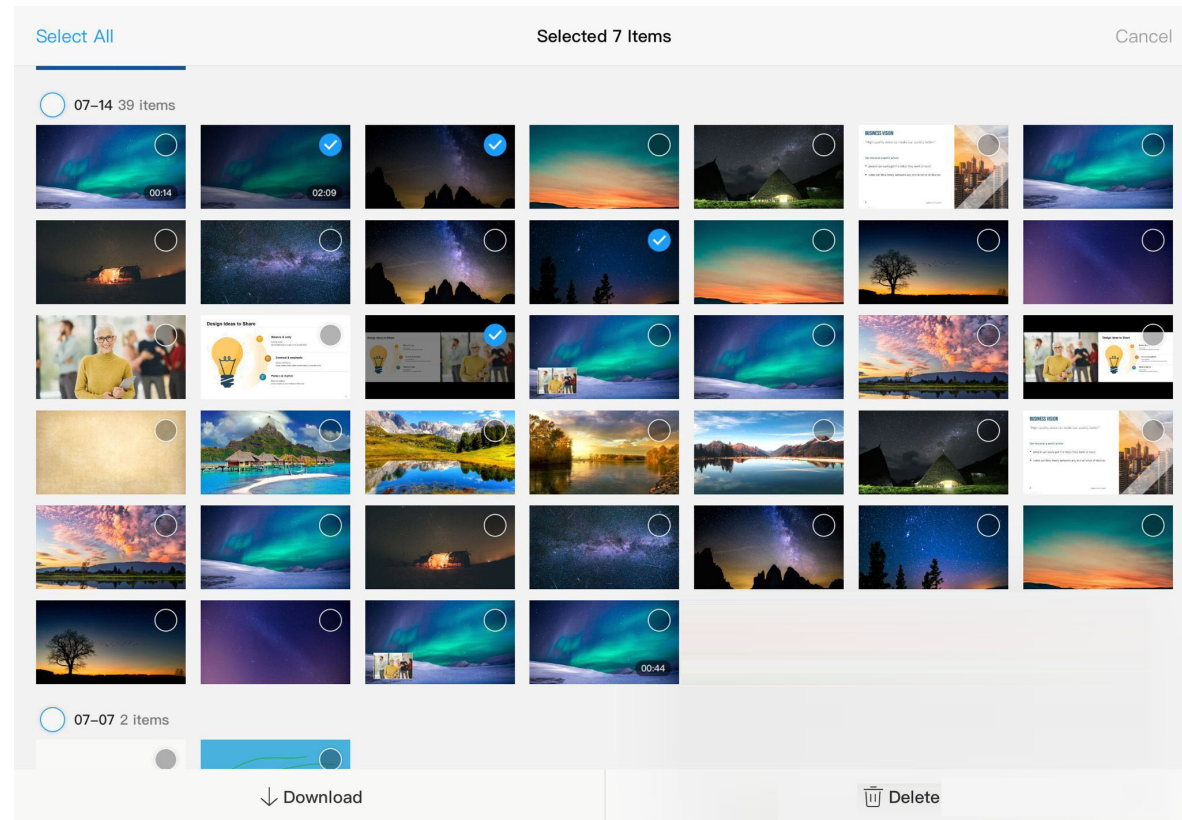
- The recording will be an H.264-encoded mp4 file saved to the storage of the connected USB Fusion device. The file is named with the recording start time, for example 2021.06.21 09:16AM.
- Stop recording: At the upper right corner of the App Main UI, tap . When the recording stops, you can tap the album button before  to view the recording.

The recording can be exported from the Web UI. For details, see [Downloading Videos/Screenshots](#).

Taking Screenshots

At the upper right corner of the App Main UI, tap  >  **Screenshot**. The screenshot is saved to the disk of USB Fusion as a JPEG file. You can tap the album button before  to view the screenshot.

A screenshot will be taken at the resolution same as that output to the USB OUT port.





Managing the Album



The album stores the recordings and screenshots. You can view, download, and delete the files in the album.

You can also manage the album on the Web UI. For details, see [Managing the Album](#).

Viewing the Album



1. After you have recorded some content or taken a screenshot, tap the album button before  to access the album.
You can also tap  > **Album** to access the album.
2. View the files in the album.
The videos and pictures in the album are sorted by date. Video files will show their duration on their thumbnails.
 - Tap a picture to view it in full screen.
 - Tap a video to play it in full screen, during which you can perform playback control.

Downloading Files from the Album

1. After you have recorded some content or taken a screenshot, tap the album button before  to access the album.
You can also tap  > **Album** to access the album.
2. Tap **Select** at the upper left corner.

3. Tap to select a file. Or tap **Select All** at the upper left corner to select all files.
4. Tap the **Download** button at the lower left corner.
The file will be downloaded from the USB Fusion device to the system album of your iOS or Android device.

Deleting Files from the Album

1. After you have recorded some content or taken a screenshot, tap the album button before  to access the album.
You can also tap  > **Album** to access the album.
2. Tap **Select** at the upper left corner.
3. Tap to select a file. Or tap **Select All** at the upper left corner to select all files.
4. Tap the **Delete** button at the lower right corner.
5. Tap **Delete X items** in the dialog box displayed at the lower right corner.
The file will be removed from the USB Fusion device.

Web UI Settings

USB Fusion provides a web UI for user to check device status, configure device functions, create and manage presentations, and more. After a computer connects to the same network as USB Fusion, the computer can access the web UI of USB Fusion.

Web UI Layout

The screenshot displays the MAGEWELL USB Fusion web UI. The top navigation bar includes links for Dashboard, Input, Output, Audio, Presentation, Source, App, and System, along with an Admin user profile. The main content area is divided into two sections: USB Fusion and USB OUT.

USB Fusion Section:

- Device Information:**
 - Device name: USB Fusion HDMI
 - Serial number: A506210720008
 - Hardware version: A
 - Firmware version: 1.0.317
- Input/Output Settings:**
 - IN (COMPUTER):** 1920x1080p, 59.94fps
 - IN (HDMI CAMERA):** 1920x1080p, 59.94fps
 - IN (WEB CAMERA):** 1024x576p, 30fps
 - OUT (PROGRAM):** 1920x1080p, 60fps
- System Health:**
 - CPU: 39.01%
 - Memory: 25.09%
 - Temperature: 68.50 deg C
 - Up Time: 5 h 18 m
 - Free Space: 15.85 GB
 - Fan Speed: 9805 RPM

USB OUT Section:

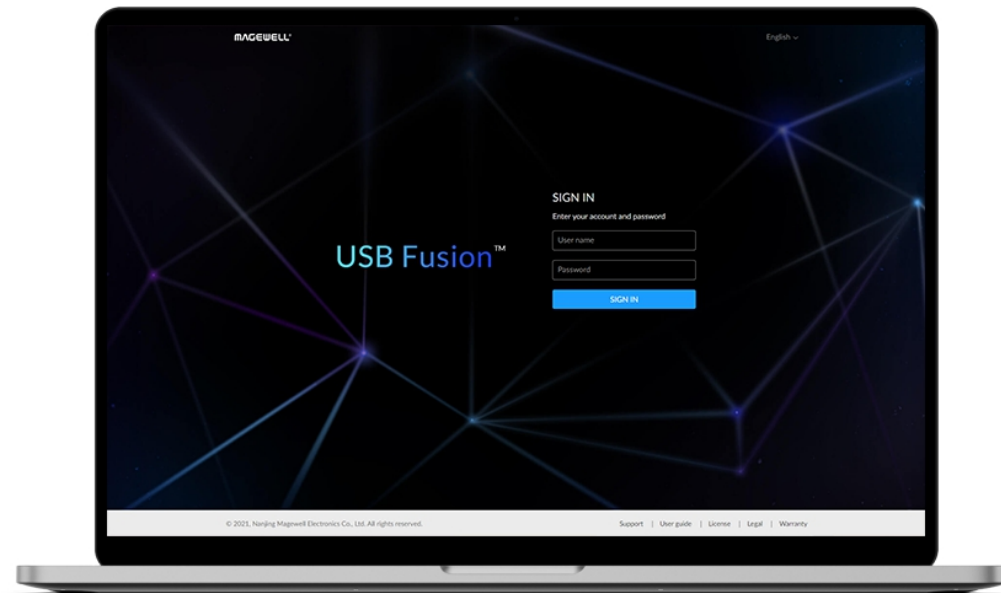
- Video:** Resolution 1280X720
- Audio:** Sampling 48000, 16 bits
- QoS:** Video frame drop 0

You can use the tabs at the upper part of the web UI to navigate:

- **Dashboard:** View basic device information, including device status, USB output status, and network status. This is the page displayed when you access the web UI.
- **Input:**
 - **COMPUTER:** View the computer signal information, set video properties, view and set the [EDID](#).
 - **HDMI CAMERA:** View the [HDMI](#) Camera signal information, set video properties, view and set the [EDID](#).
 - **WEB CAMERA:** Set the basic properties for a [webcam](#).
- **Output:**
 - **HDMI:** Configure [HDMI](#) output, view the output [EDID](#).
 - **USB:** View the USB output specification.

- **Audio:** Set the input/output volume, microphone-related functions, advanced audio functions, and select WEB CAMERA audio devices
- **Presentation:** Create and manage presentations and perform switchover.
- **Source:** Upload and manage pictures, videos, and BGM, and manage recordings and screenshots.
- **App:** Set the App login password, stream encoding format, and communication ports.
- **System:** Configure general settings, set the network, update firmware, manage users, and export logs.

In the user information area at the upper right corner, you can also change password, log out, and reboot the device.



Accessing the Web UI

Accessing the Web UI through a Network Connection

USB Fusion can connect to a network via Ethernet, Wi-Fi, or USB RNDIS/ECM. It supports flexible methods for accessing its web UI, including:

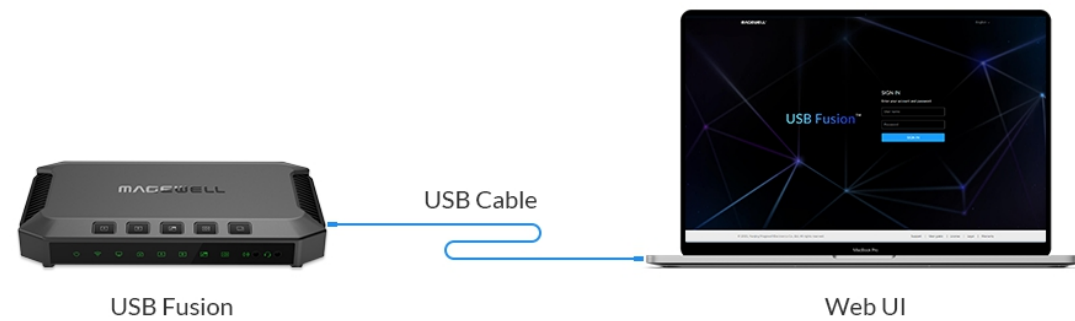
- Through an IP address: an Ethernet, Wi-Fi, or USB RNDIS/ECM IP address
- Through Windows network discovery

When first accessing the Web UI, you can use the following methods:

Access Method	Applicable OS	Remarks
Use an USB RNDIS/ECM IP address	Windows, Linux, macOS	Only the computer connected to USB Fusion with an USB cable can access the Web UI.
Use Windows network discovery	Windows 7/8/8.1/10	If USB RNDIS is used, only the computer connected to USB Fusion with an USB cable can access the web UI. If other network connections are used, any computer in the same network as USB Fusion can access its web UI.

When you have known the Ethernet/Wi-Fi IP address of USB Fusion, you can also use the IP address to access the web UI on Windows, Linux, and macOS.

Access Method	Applicable OS	Remarks
Use an Enternet/Wi-Fi IP address	Windows, Linux, macOS	Any computer in the same network as USB Fusion can access its web UI.



Using an USB RNDIS/ECM IP Address

USB RNDIS (for Windows) or ECM (for macOS/Linux) provides a virtual network connection. Using this technology, you only need to connect USB Fusion and your computer with a USB cable so that your computer can access USB Fusion. When no Ethernet/Wi-Fi network connection is available, you can conveniently use this method to access the web UI.

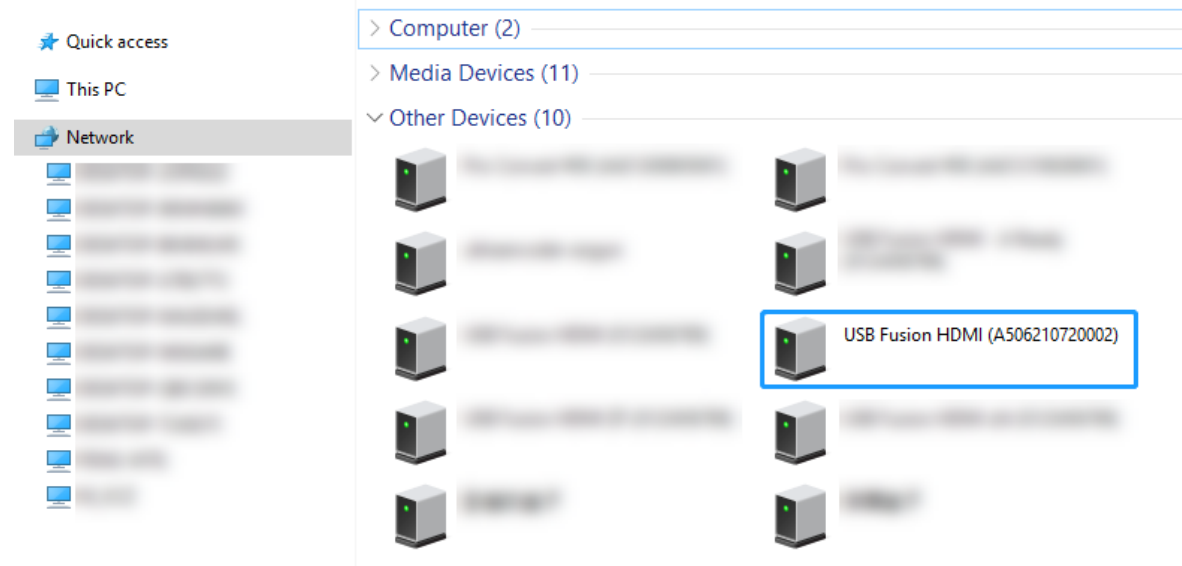
1. Make sure that USB Fusion has connected to power.
2. Connect a USB cable from the USB OUT port of USB Fusion to a computer. The cable connection will establish a network connection between your computer and USB Fusion through USB RNDIS/ECM.
3. Open a browser on the computer, enter the static IP address for USB RNDIS/ECM, and press **Enter**.

The default address for USB RNDIS/ECM is 192.168.66.1.

Using Windows Network Discovery

USB Fusion supports SSDP-based network discovery, which you can use to access the device.





On Windows, you can use the File Explorer to discover USB Fusion. This method applies to Windows 7/8/8.1/10.



The following uses Windows 10 as an example.

1. Ensure that USB Fusion has connected to power.
2. Connect your computer and USB Fusion to the same network.
You can use the following network connections:
 - Use USB RNDIS: Connect a USB cable from the USB OUT port of USB Fusion to your computer.
 - Use Ethernet: Use an Ethernet cable to connect USB Fusion to the same network that your computer connects to.
 - [Use Wi-Fi](#): On the Web UI, connect USB Fusion through Wi-Fi to the same network that your computer connects to.

Since Wi-Fi connection is set up on the Web UI, you cannot use Wi-Fi for the first access to the Web UI.

3. On the computer, open **File Explorer**. You can:
 - Click the **Start** button , and select **File Explorer** in the start menu.
 - Hold down the  key and press E on your keyboard.
4. At the left panel of **File explorer**, click **Network**.
If network discovery is disabled, you need to first enable it by referring to the following method:
Choose  > , then choose **Network and Internet** > **Network and Sharing Center** > **Change advanced sharing settings**. Under the current network (the one marked as **current profile**), click **Turn on network discovery**.
5. In the **Other Devices** area, find your USB Fusion device based on the *Device name + Serial number*.

- The default device name is **USB Fusion** + model name, such as USB Fusion [HDMI](#). You can [set the device name](#) on the web UI.
- The serial number of USB Fusion is the one that can be found on the device, for example B401180706008.

6. Double-click the device icon to access the web UI login page.

Using an Ethernet/Wi-Fi IP Address

This method does not apply to the first-time access to the Web UI, because the Ethernet/Wi-Fi IP Address is unknown in this case.

USB Fusion uses a DHCP-assigned IP address by default, which can effectively avoid IP address conflict, but can also result in constant IP address changes.

USB Fusion also supports [using a static IP address](#), so that the IP address remains stable.

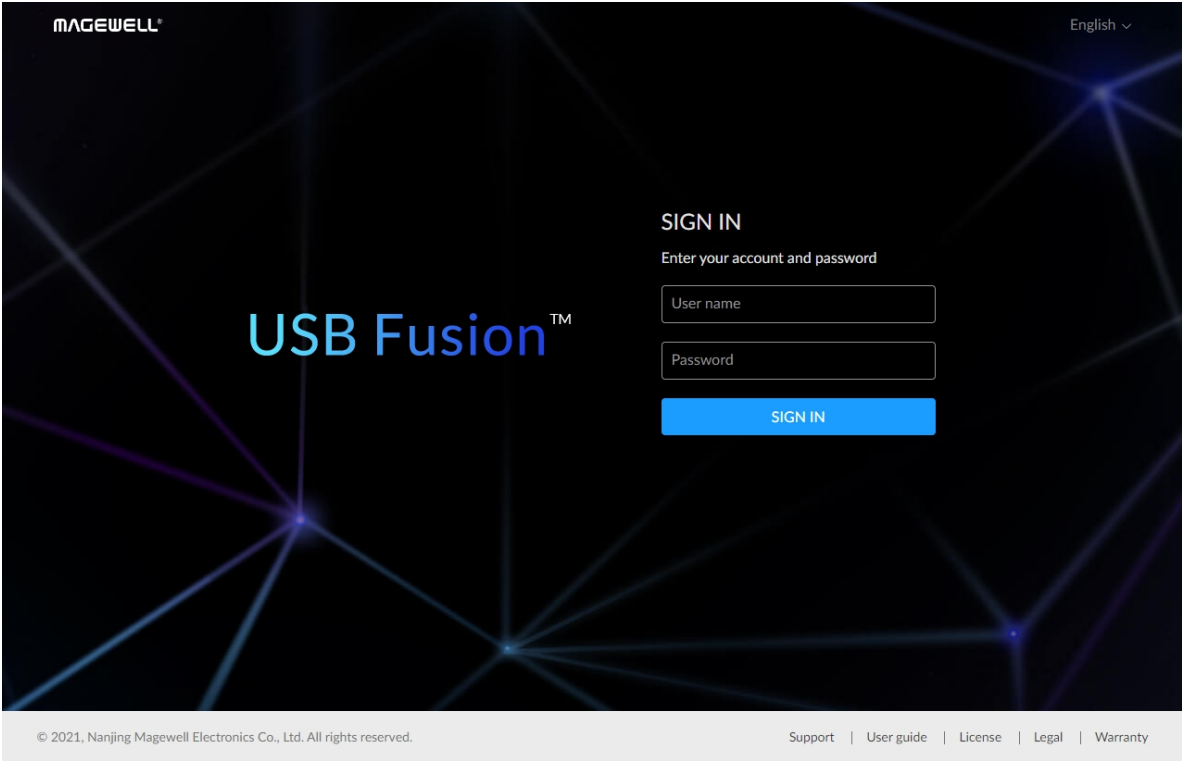
If you have obtained the dynamic or static Ethernet IP address, or the Wi-Fi IP address, you can use the address to access the Web UI of USB Fusion. This method applies to Windows, Linux, and macOS.

1. Ensure that USB Fusion has connected to power.
2. Connect your computer and USB Fusion to the same network.

You can use the following method:

- Use Ethernet: Use an Ethernet cable to connect USB Fusion to the same network that your computer connects to.
- [Use Wi-Fi](#): On the Web UI, connect USB Fusion to a Wi-Fi network that is in the same network as your computer.

3. On the computer, open a browser, enter the IP address, and press **Enter**.



Logging Into the Web UI

To ensure system stability and security, USB Fusion grants permissions based on role. The roles and permissions are as follows:

Role	Default Name	Permission
Administrator	Admin	Basic view and configuration permissions, and system management and configuration permissions, which include user management, network configuration, firmware update. This role cannot be deleted nor changed name.
Common user	None	Basic view and configuration permissions. No system management and configuration permissions. Common users are created and managed by the administrator.

USB Fusion allows multiple users to simultaneously log in to the web UI and perform configurations. However, this may lead to previous configurations being overwritten by latter configurations. Therefore, to prevent configuration conflicts, different users should avoid changing configurations at the same time.

- **Sign in:** Enter your account name and password on the web UI login page.

To access the login page, see [Accessing the Web UI](#).

The default account name is **Admin**, and password is **Admin**, both of which are case sensitive:

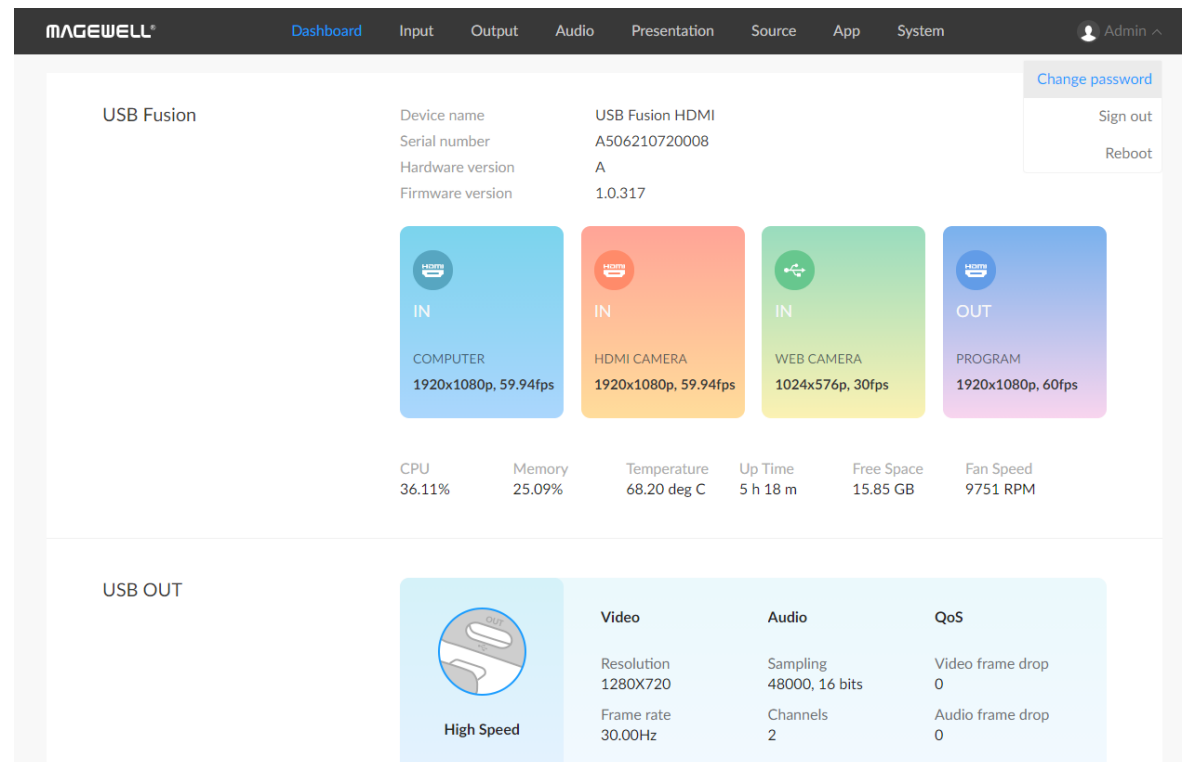
If you forget the login password:

- For a common user: Use the admin account to reset your password. For details, see [Resetting the Password](#).
- For the administrator: Reset the device, and use the default admin account to log in. For details about device resetting, see [Resetting USB Fusion](#).

- **Sign out:** After you log in, click the user name at the upper right corner, and click **Sign out**.

After using the web UI, make sure you log out so as to prevent unauthorized access.

If you do not perform any operation for 10 minutes after you log in, the web UI will log you out automatically.



Changing the Login Password

Periodically changing the login password can improve your account security.

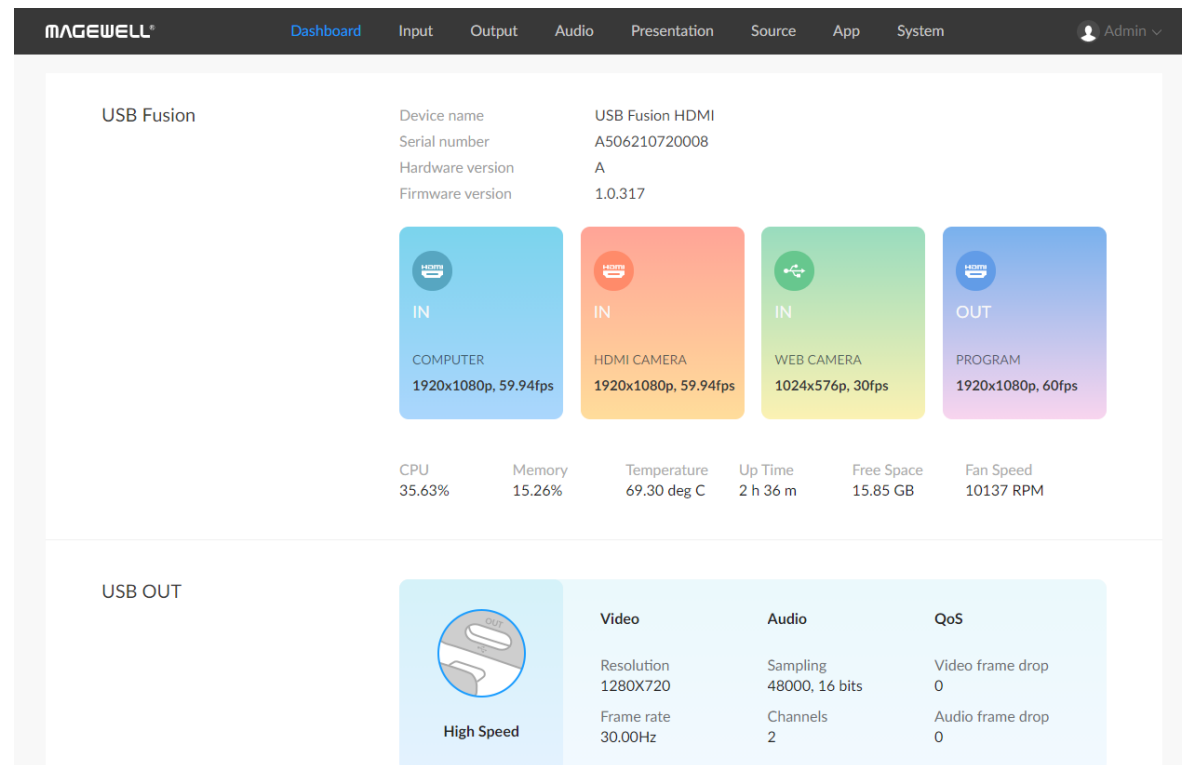
For account security, you are advised to change the default password for the Admin user.

1. Log in to the web UI using an account.
2. Click the user name at the upper right corner, and click **Change Password**.
3. In the displayed dialog box, enter the old password, new password, and confirm the new password.
The password is case sensitive, ranging from 1 to 32 characters. Supported characters are as follows: A-Z, a-z, 0-9, and special characters
_~!@#\$%^&*~+=
4. Click **OK**.

Besides changing its own password, the Admin user can also reset passwords for common users. For details, see [Resetting the Password](#).

Changing the Web UI Language

The Web UI supports two languages, English (default) and Chinese. At the upper right corner of the web UI login page, you can click the current language to select a different language.



Viewing Device Information

When using USB Fusion, you can learn about the device status on the

Dashboard page of the web UI, including:

- Basic device information
- Real-time device status
- USB output status
- Network connection status

Basic Device Information

- **Device name:** USB Fusion device name
This name can be changed on **System > General**. Only the Admin user can [set the device name](#) on the web UI.
- **Serial number:** serial number of the connected USB Fusion device. The serial number can also be found on the device.
- **Hardware version:** hardware version of the connected USB Fusion device
- **Firmware version:** hardware version of the connected USB Fusion device. Only the Admin user can update the firmware on **System > Firmware**. For details, see [Firmware Update](#).

Real-time Device Status

- **IN (COMPUTER):** input status of the COMPUTER port
 - **No signal:** no input
 - *Resolution/frame rate:* input resolution and frame rate, such as 1920x1080p, 60fps

💡 Click in this area to jump to **Input** > **COMPUTER**.

- **IN (HDMI CAMERA):** input status of the [HDMI](#) CAMERA port
 - **No signal:** no input
 - *Resolution/frame rate:* input resolution and frame rate, such as 1920x1080p, 60fps

💡 Click in this area to jump to **Input** > [HDMI](#) CAMERA.

- **IN (WEB CAMERA):** input status of the WEB CAMERA port
 - **No signal:** no input
 - *Resolution/frame rate:* input resolution and frame rate, such as 1920x1080p, 60fps

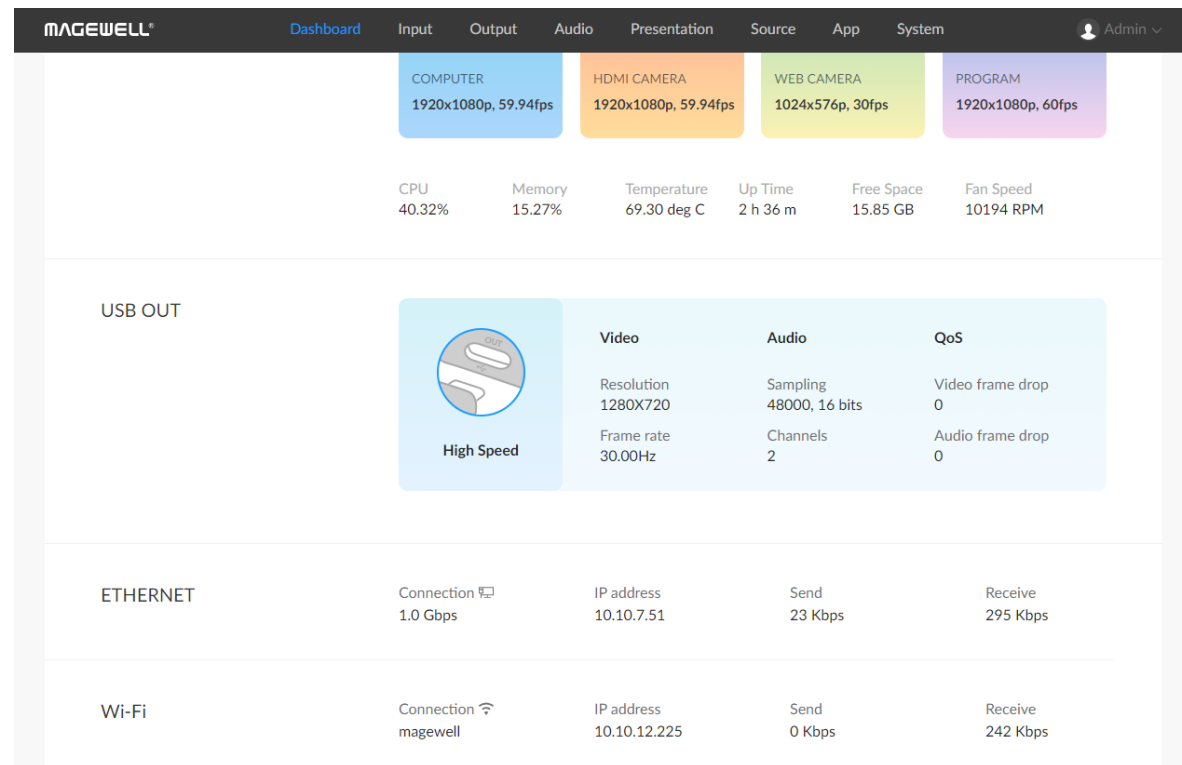
💡 Click in this area to jump to **Input** > **WEB CAMERA**.

- **OUT:** output content and output status of the [HDMI](#) OUT port
Output content of the [HDMI](#) OUT port includes:
 - **COMPUTER:** output the video captured from the COMPUTER port
 - [HDMI](#) CAMERA: output the video captured from the [HDMI](#) CAMERA port
 - **PROGRAM:** output the program, namely the same content as that output through the USB OUT port
 Output status of the [HDMI](#) OUT port includes:
 - **No signal:** no output
 - *Resolution/frame rate:* input resolution and frame rate, such as

1920x1080p, 60fps

💡 Click in this area to jump to **Output**.

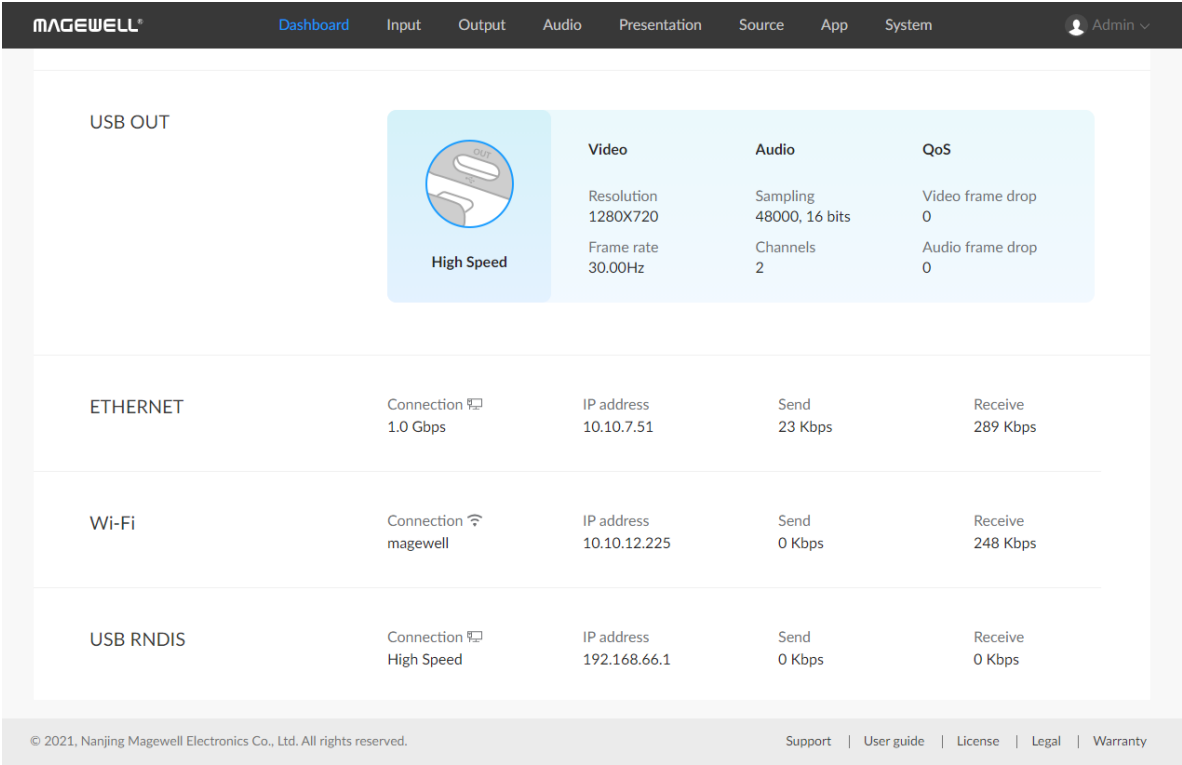
- **CPU:** CPU usage of USB Fusion, in percentage.
More complex video will require higher CPU usage.
- **Memory:** memory usage of USB Fusion, in percentage.
- **Temperature:** temperature of the chipset on USB Fusion.
To avoid overheat, ensure that USB Fusion is working in a well-aired environment with proper temperature. When the temperature approaches 100 degrees, you need to reduce the temperature, such as by using a fan.
- **Up Time:** duration that USB Fusion keeps running since last startup.
- **Free Space:** available storage of USB Fusion.
- **Fan Speed:** rotation speed of the fan per minute. This changes based on the temperature of USB Fusion.



USB Output Status

The Video, Audio, and QoS data is displayed only when USB Fusion is selected as the camera and being used in the receiving software.

- **Connection:** connection status of the USB OUT port
 - **Disconnected:** no device connected.
 - **Full Speed:** USB 1.1 speed at 12 Mbps
 - **High Speed:** USB 2.0 at 480 Mbps
 - **Super Speed 5G:** USB 3.0 speed at 5 Gbps
- **Video:** basic information about video output
 - **Resolution:** resolution of the video output
 - **Frame rate:** frame rate of the video output
- **Audio:** basic information about audio output
 - **Sampling:** sampling rate and depth for the audio output
 - **Channel:** number of channels for the audio output
- **QoS:** frame drop statistics of the previous second
 - **Video frame drop:** number of video frames dropped in the previous second
 - **Audio frame drop:** number of audio frames dropped in the previous second



Network Connection Status

Ethernet, Wi-Fi, and USB RNDIS are supported for network connections.

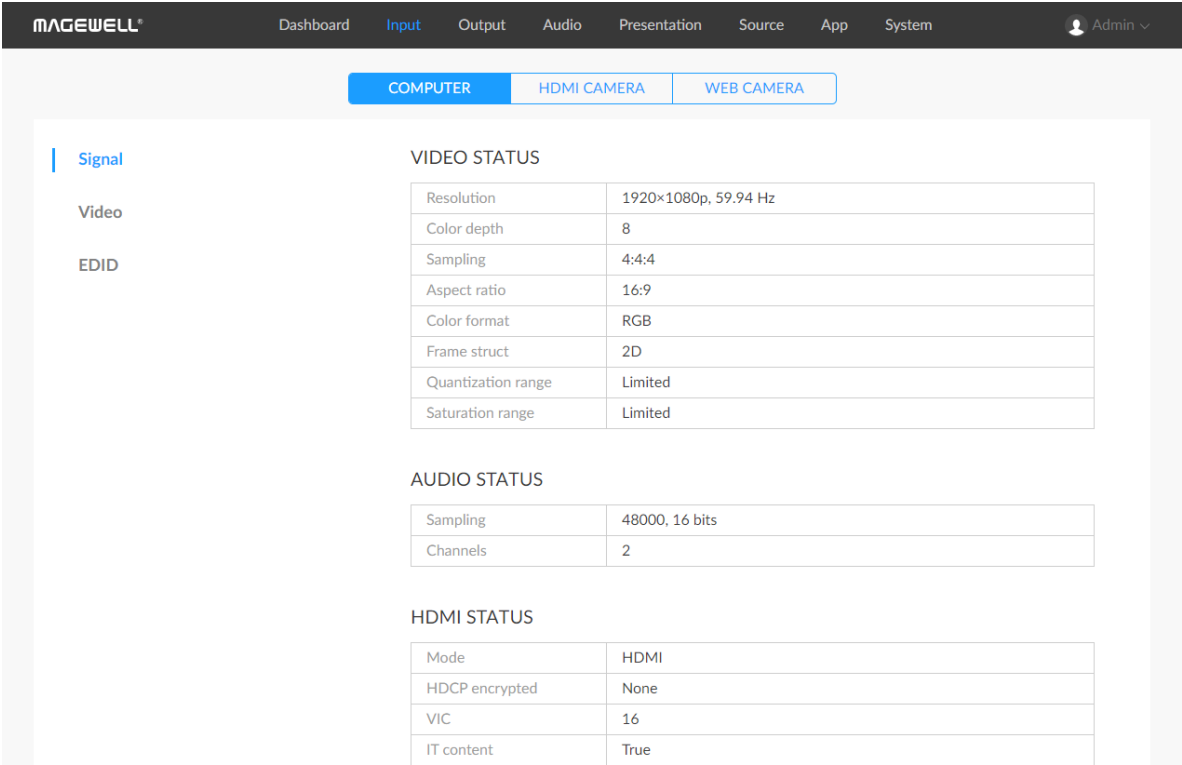
- **Connection:** connection status.
Ethernet:
 - **Down:** The network port is down.
 - **Disconnected:** No network is connected.
 - 10 Mbps, 100 Mbps, 1.0 Gbps, 2.5 Gbps, 5 Gbps, 10 Gbps: Ethernet connection speed

USB RNDIS:

- **Down:** The network port is down.
- **Disconnected:** No network is connected.
- **Full Speed:** USB 1.1 speed at 12 Mbps
- **High Speed:** USB 2.0 at 480 Mbps
- **Super Speed 5G:** USB 3.0 speed at 5 Gbps

Wi-Fi:

- **Down:** The network port is down.
- **Disconnected:** No network is connected.
- *Network name:* name of the connected network
- **IP Address:** IP address of USB Fusion
- **Send:** speed for sending data
- **Receive:** speed for receiving data



Viewing and Setting the Input

USB Fusion can capture from computers, [HDMI](#) cameras, and webcams. When a source device is connected to USB Fusion, the web UI automatically discovers the source signals and displays their basic information. The web UI also allows you to configure the input signals.

Viewing and Configuring COMPUTER/HDMI CAMERA Input

The COMPUTER input and [HDMI](#) CAMERA input are both [HDMI](#) input, which supports viewing signal information, setting video properties, and changing [EDID](#).

Viewing Signal Information

1. In the navigation bar at the upper part of the Web UI, click **Input** .
2. Click **COMPUTER** or [HDMI CAMERA](#) at the upper part, and then click **Signal** on the left to view the signal information.
If **Not connected** is displayed, the source device is not connected.

Viewing Video Status

- **Resolution**: resolution and frame rate of the video input
- **Color depth**: color depth of the video input, in bit
- **Sampling**: sampling rate of the video input, such as 4:4:4
- **Aspect ratio**: aspect ratio of the video input
- **Color format**: color space of the input video, such as RGB

- **Frame struct:** The frame structure can be 2D or 3D (including 3D left right half, 3D top bottom half, 3D top bottom half).
- **Quantization range:** The quantization range can be Full or Limited.
- **Saturation range:** The saturation range can be Full, Extended, or Limited.

Viewing Audio Status

- **Sampling:** sampling rate and depth of the audio input
- **Channels:** number of channels of the audio input

Viewing [HDMI](#) Status

The following parameters are displayed only when the input signal is [HDMI](#) signal.

- **Mode:** Input signal type. For USB Fusion [HDMI](#), the mode is [HDMI](#).
- **HDCP encrypted:** whether the signal is HDCP-encrypted. If yes, the corresponding HDCP version is displayed. If no, **None** is displayed. To conform to laws, the device does not support HDCP-encrypted signal.
- **VIC:** CEA-specified video identifier. Different values indicate different combinations of resolution, frame rate, aspect ratio and etc.
- **IT content:** whether the picture content is composed according to common IT practice. If yes, the content is unsuitable for analog reconstruction or filtering.

MAGEWELL®DashboardInputOutputAudioPresentationSourceAppSystemAdmin

Sampling	48000, 16 bits
Channels	2

HDMI STATUS

Mode	HDMI
HDCP encrypted	None
VIC	16
IT content	True
Pixel rate	148 MHz
Timing-H total	2200 Pixels
Timing-H active	1920 Pixels
Timing-H back porch	88 Pixels
Timing-H sync width	44 Pixels
Timing-H front porch	148 Pixels
Timing-V total	1125 Lines
Timing-V active	1080 Lines
Timing-V back porch	4 Lines
Timing-V sync width	5 Lines
Timing-V front porch	36 Lines

InfoFrame

AVI

Type	0x82
------	------

- **3D struct:** layout of the two views of a 3D video frame, including [Side by side](#) half, Top and bottom, Frame packing. This parameter is displayed only for a 3D signal.
- **3D sub-sampling:** Sub-sampling method for a 3D video. This parameter is displayed only for a 3D signal in the [Side by side](#) half mode.
- **Pixel rate:** pixel clock rate, which indicates the maximum number of pixels that can be written to local storage per second.
- **Timing - H total:** total number of horizontal pixels
- **Timing - H active:** number of horizontal active pixels, namely the horizontal pixels of the current video
- **Timing - H back porch:** number of horizontal back porch pixels
- **Timing - H sync width:** number of horizontal sync pixels
- **Timing - H front porch:** number of horizontal front porch pixels
- **Timing - V total:** number of vertical total pixels
- **Timing - V active:** number of vertical active pixels, namely the vertical pixels of the current video
- **Timing - V back porch:** number of vertical back porch pixels
- **Timing - V sync width:** number of vertical sync pixels
- **Timing - V front porch:** number of vertical front porch pixels

Viewing InfoFrame Information

The following parameters are displayed only when the input signal is [HDMI](#) signal.

InfoFrame information includes AVI, Audio and many other data types. For details, you can refer to the CEA-861-x standard. This page only displays the data types that are present in InfoFrame. Each data includes the following parameters:

- **Type:** InfoFrame data type. For example, the value for the AVI frame is 0x82.
- **Version:** InfoFrame data version
- **Length:** length of the InfoFrame
- **Checksum:** checksum of the InfoFrame
- **Data:** data in the InfoFrame

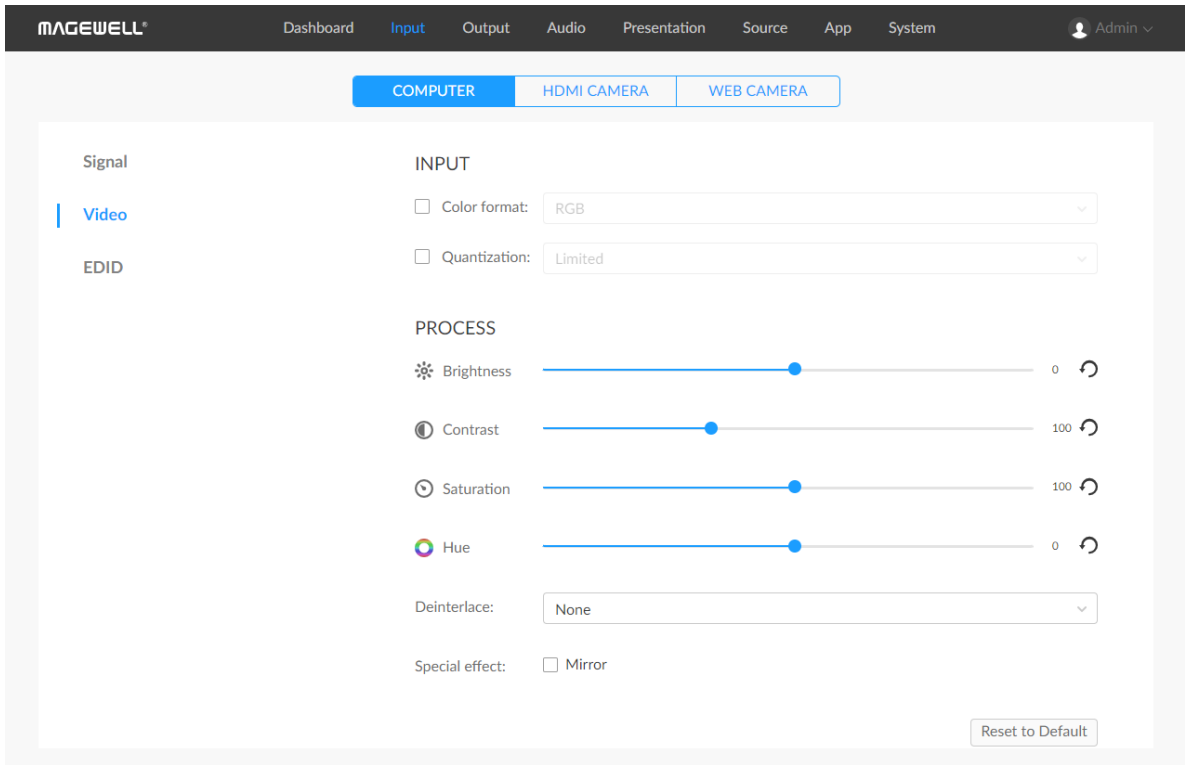
Setting Video

1. In the navigation bar at the upper part of the web UI, click **Input** .
2. Click **COMPUTER** or **HDMI CAMERA** at the upper part, and then click **Video** on the left to set the video formats.
If **Not connected** is displayed, the source device is not connected.

Calibrating the Video Input

Generally, USB Fusion can correctly recognize the input signal. If the input signal is non-standard or incorrectly parsed, you can manually adjust the parsing result. By default, parameters under **INPUT** are the formats parsed by USB Fusion.

- **Color format:** Different color spaces defines different image characteristics, such as supported frame rates, resolutions, color depth, color primaries, and codec.



After you check this, you can select a color space from the drop-down list box, including:

- RGB
- YUV BT.601: applies to SD video
- YUV BT.709: applies to HD video
- YUV BT.2020: applies to UHD video
- **Quantization range:** After checking this box, you can select a range from the drop-down list box, including:
 - Full: full quantization. This usually applies to IT content.
 - Limited: limited quantization. This usually applies to TV content.


Processing Video Input

USB Fusion web UI allows you to adjust source properties, de-interlace signal, and mirror your content.

- **Brightness**

Drag the slider to adjust the brightness of the video source. Click  to revert to the original.


- **Contrast**

Drag the slider to adjust the contrast of the video input. Click  to revert to the original.

- **Saturation**

Drag the slider to adjust the saturation of the video input. Click  to revert to the original.

- **Hue**

Drag the slider to adjust the hue of the video input. Click  to revert to the original.

- **Deinterlace**

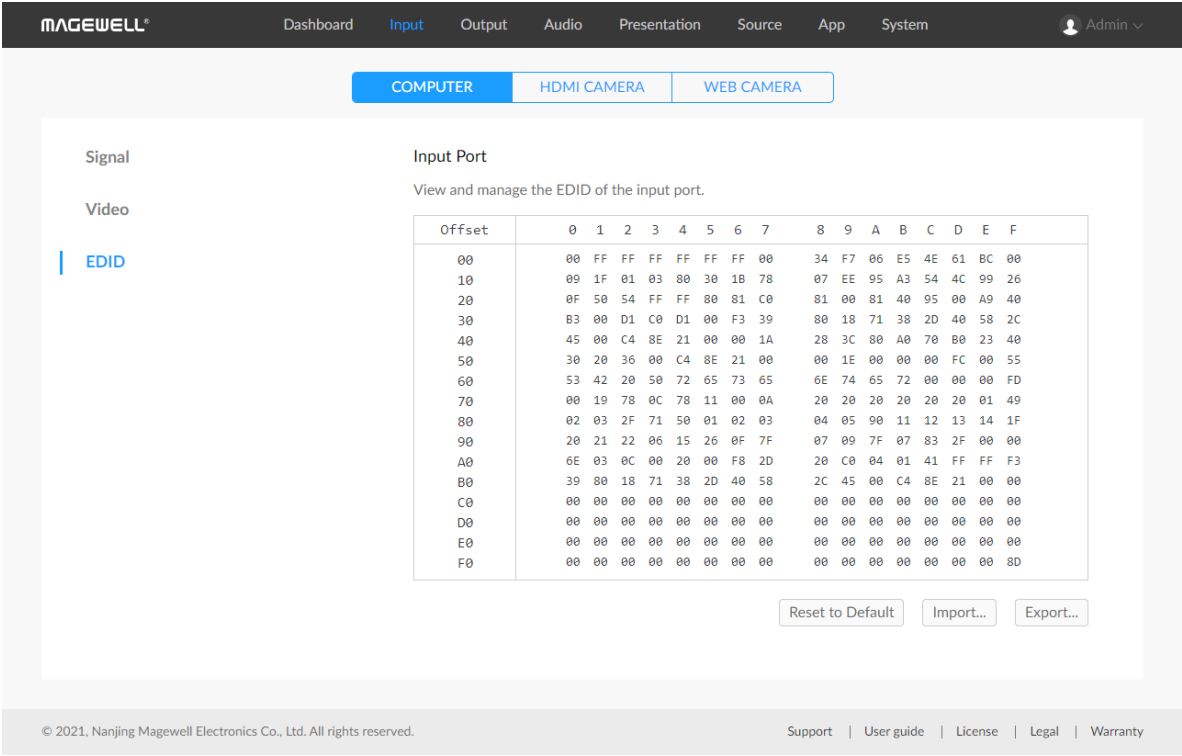
When the video input is interlaced, it may lead to jigsaw edges or shadows, especially for dynamic videos. In this case, you can deinterlace the source to resolve the problem. Select a [deinterlacing](#) method from the drop-down list box:

- **None** (default): No de-interlacing.
- **Bob**: Doubles the lines of each field to make a full frame.
- **Motion adaptive**: Detects changes in motion and adaptively changes the [deinterlacing](#) method.
- **Motion compensated**: Track and analyze a group of consecutive frames instead of just single frames to perform de-interlacing. This method usually yields the best result but also requires the most processing resources.

This function applies only to interlaced signals, not progressive signals.

- **Special effect**

Check this to mirror the video, namely flipping it horizontally. This is useful when you have text in reverse order in your video.



Setting the EDID

EDID is the capability description information provided by USB Fusion to the video source, including supported resolutions, frame rates, and aspect ratios. When a video source is connected to USB Fusion, it will read the EDID of the input port to determine the signal that it can send.

1. In the navigation bar at the upper part of the Web UI, click **Input**.
2. Click **COMPUTER** or **HDMI CAMERA** at the upper part, and then click **EDID** on the left to view and set the EDID of the corresponding input port.

Viewing the EDID

You can export the EDID of the input port and use an EDID reader to view the EDID.

1. Click **Export** at the lower right corner under the EDID area.
2. (Optional) In the **Export** window, enter the EDID file name. The file name ranges from 1 to 64 characters.
3. In the **Export** window, click **Export** to export the current EDID into a .bin file.

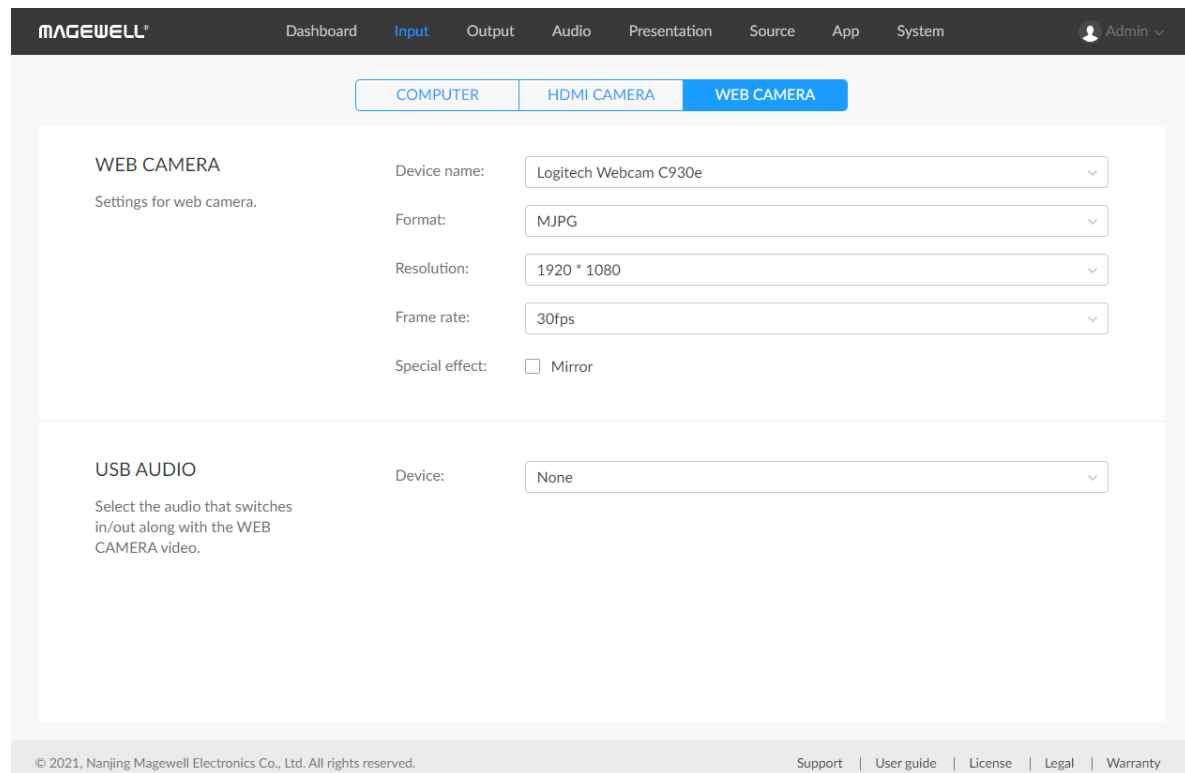
Changing the EDID

Generally, the default EDID of USB Fusion can successfully connect a video source. If you need to force the video source to output a specific format to the input port, you need to change the EDID of the input port.

Click **Import** and import a new EDID file from your local directory. The new EDID will overwrite the old EDID.

Resetting the EDID

When you need to restore the default [EDID](#), for example, you may no longer need a custom [EDID](#), you can click **Reset to Default** to reset the [EDID](#) of the port to the default.



Setting the WEB CAMERA Input

On the Web UI, you can set the audio input and video input connected to the WEB CAMERA port.

1. In the navigation bar at the upper part of the Web UI, click **Input** .
2. Click **WEB CAMERA** at the upper part to view and set related information about the device connected to the WEB CAMERA port.

Setting WEB CAMERA Video

In the **WEB CAMERA** area, you can set the following parameters for the video input connected through the WEB CAMERA port.

- **Device name**
Name of the current device connected to the WEB CAMERA port. When multiple devices are connected, you can select one from the drop-down list box.
- **Format**
Output format of the device connected to the WEB CAMERA port, such as YUYV.
For the WEB CAMERA input, USB Fusion currently supports YUYV, H.264, MJPEG, YU12, UYUV, NV12 formats. YUYV is selected by default if available.
- **Resolution**
Select a resolution from the drop-down list box, which lists all the resolutions supported by the connected device. 720p is selected by default if available.
- **Frame rate**

Select a frame rate from the drop-down list box, which lists all the frame rates supported by the connected device. 30fps is selected by default if available.

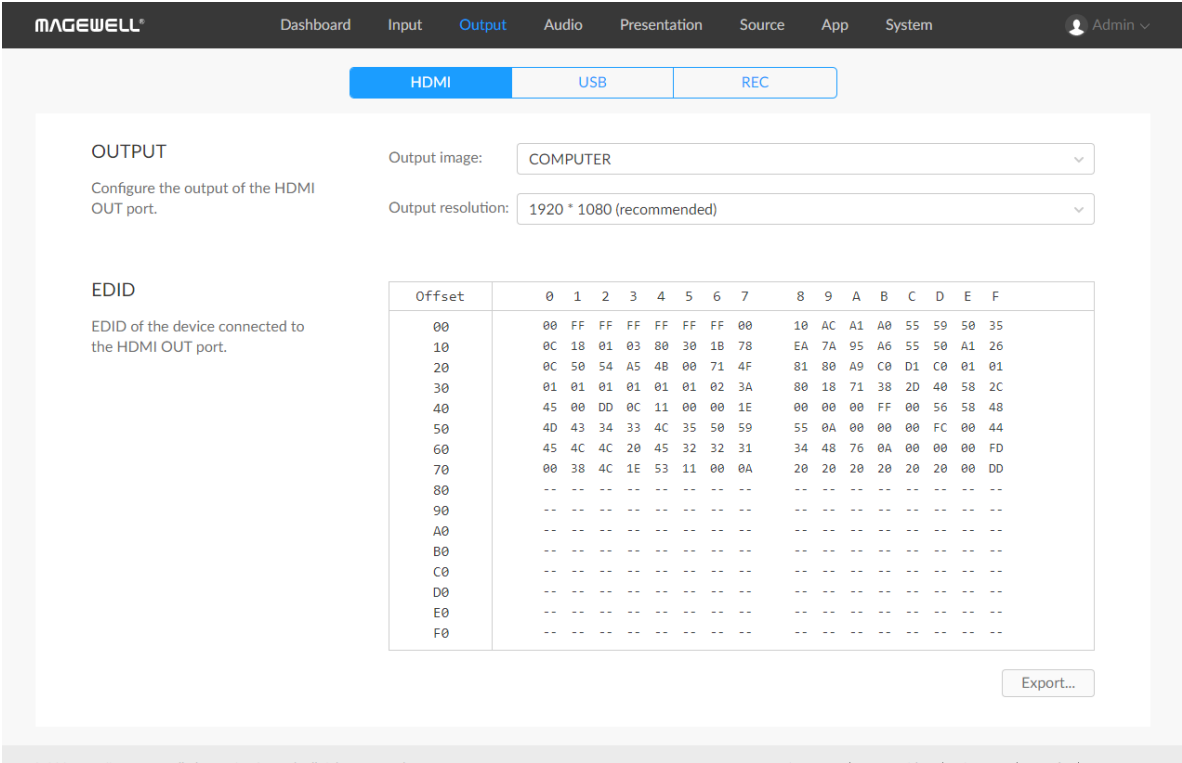
- **Special effect**

Check this to mirror the input, namely, flip the video horizontally.

Setting WEB CAMERA Audio

In the **USB AUDIO** area, you can select an audio device as the WEB CAMERA audio, that is, the audio that switches along with the WEB CAMERA video.

The audio input from the WEB CAMERA port can be used as a global microphone (which is used throughout a [presentation](#) and does not switch in/out with any scene) or WEB CAMERA audio. When you select the audio input as the global microphone, you can no longer [select it as a global microphone](#).



Viewing and Setting the Output

USB Fusion supports the following video outputs:

- **HDMI** OUT: output to a monitor for monitoring.
- **USB** OUT: output to a [streaming computer](#) for streaming.
- **REC**: record or take screenshots to the built-in disk of USB Fusion.

Setting the HDMI Output

1. In the navigation bar at the upper part of the Web UI, click **Output** .
2. Click **HDMI** at the upper part to view and configure **HDMI** output.
If **Disconnected** is displayed, no device is connected to the **HDMI** OUT port.

Selecting the Output Content

The **HDMI** OUT port can output the input sources and the final output program.

In the **OUTPUT** area, select an item from the **Output image** drop-down list box.

- **COMPUTER**: COMPUTER input
- **HDMI CAMERA**: **HDMI** CAMERA input
- **PROGRAM** (default): final output program, namely the same output as the **USB** OUT port

For example, when a computer and an **HDMI** camera are connected to USB Fusion, and USB Fusion switches to a PIP layout consisting of the computer image and **HDMI** camera image, if the **Output image** is set to **COMPUTER**, the

computer image is displayed; if set to **PROGRAM**, the PIP image is displayed.

Setting the Output Resolution

By default, USB Fusion selects the best resolution supported by the connected screen to output. You can also select another resolution supported by the screen.

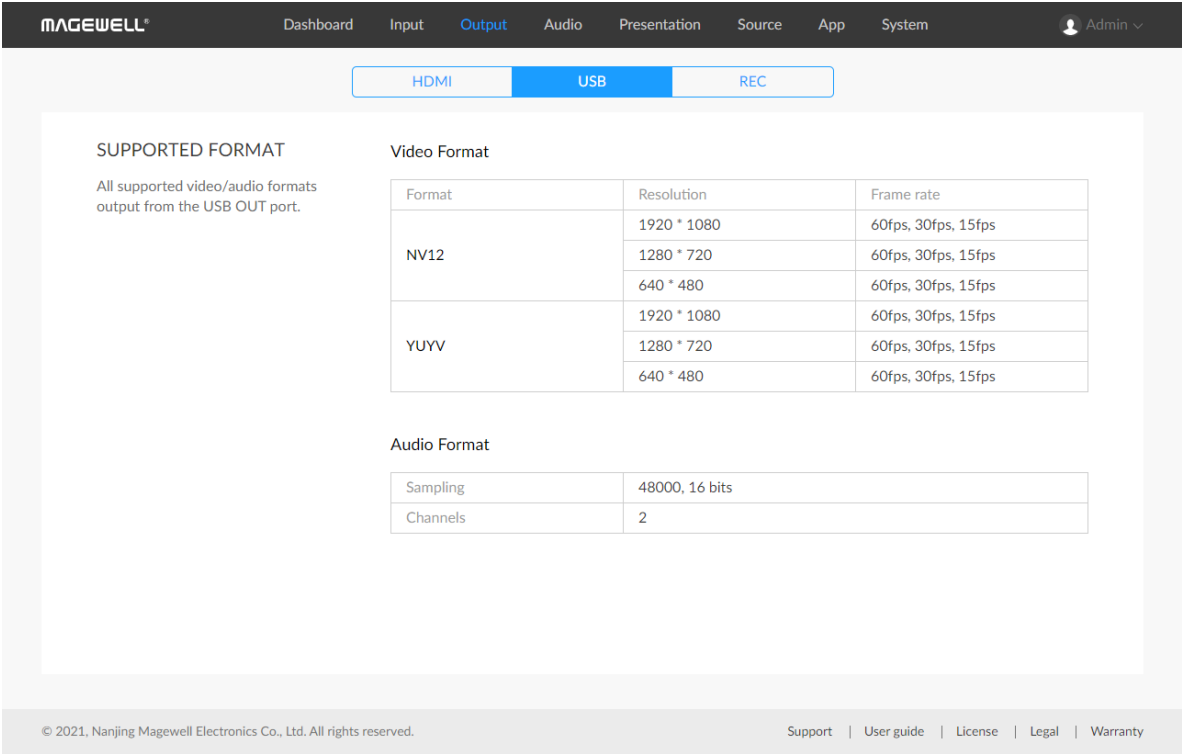
In the **OUTPUT** area, select a resolution from the **Output resolution** drop-down list box.

This drop-down list box lists all the resolutions supported by the connected screen, in which * (*recommended*) is the resolution recommended by the screen.

Exporting EDID

The **EDID** displayed on the **HDMI** output page is the **EDID** of the connected screen. You can export this **EDID** and use an **EDID** reader to view the capabilities of the screen.

Click **Export** at the lower right corner of the **EDID** area to export an **EDID** file in the .bin format.



Viewing the USB Output

1. In the navigation bar at the upper part of the Web UI, click **Output**.
2. Click **USB** at the upper part to view the formats supported by the USB OUT port.

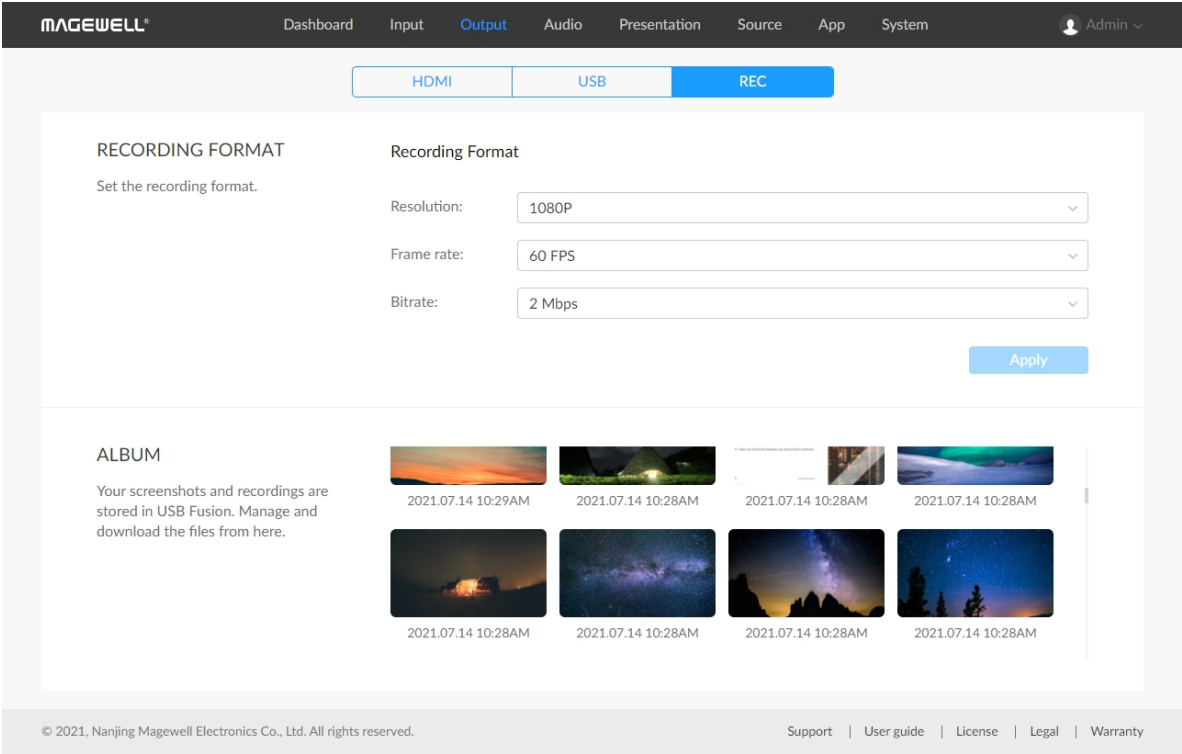
Supported USB video format:

- Format: NV12, YUYV
- Resolution: 1920x1080, 1280x720, 640x480
- Frame rate: 60fps, 30fps, 15fps

Supported USB audio format:

- Sampling: 48 KHz sampling rate, 16 bit depth
- Channel: 2 channels

The actual output of USB OUT is determined by the negotiation between USB Fusion and the receiving software. For the real-time status of USB output, view the **USB OUT** area on the **Dashboard** page.



Managing the Recordings/Screenshots

On the Web UI, you can adjust the recording format and manage the recordings/screenshots.

Setting the Recording Format

When USB Fusion is recording, you cannot change the recording format.

1. In the navigation bar at the upper part of the Web UI, click **Output**.
2. Click **REC** at the upper part.
3. In the **Recording Format** area, set the recording parameters.
 - **Resolution**: supports 720P and 1080P. The default is 1080P.
 - **Frame rate**: supports 10 FPS, 15 FPS, 24 FPS, 30 FPS and 60 FPS. The default is 60 FPS.
 - **Bit rate**: supports 256 Kbps through 20 Mbps. The default is 8 Mbps.
4. Click **Apply**.

Managing the Album

The album stores the videos recorded and screenshots taken on the App.


Viewing Videos/Screenshots

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **REC** tab at the upper part of the page.
3. In the **Album** area, view the recordings and screenshots.

The **Album** area displays both recorded videos and screenshots. The files are named by the time the video or screenshot is taken.


A video file has a duration displayed on its thumbnail while a screenshot does not.

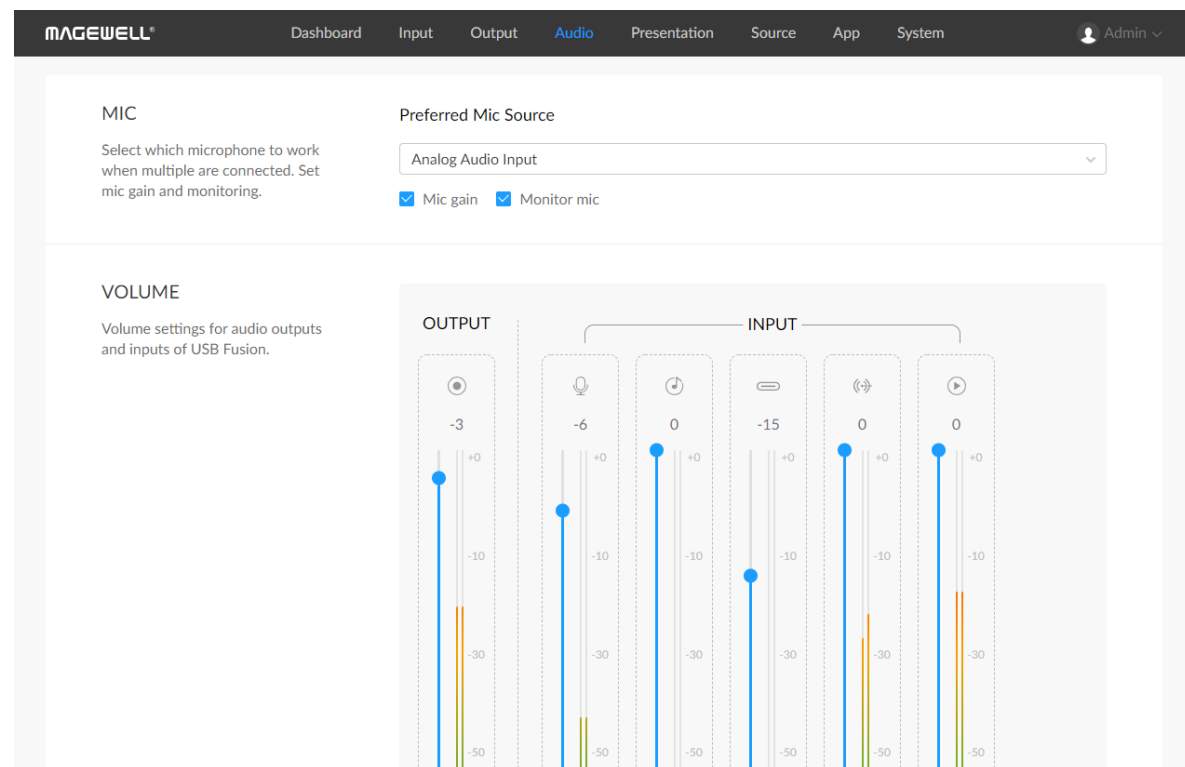
Downloading Videos/Screenshots

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **REC** tab at the upper part of the page.
3. In the **Album** area, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Download**.

The video/screenshot will be downloaded to the local computer.

Deleting Videos/Screenshots

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **REC** tab at the upper part of the page.
3. In the **Album** area, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Delete**.
4. On the displayed dialog box, click **Delete**.



Setting the Audio

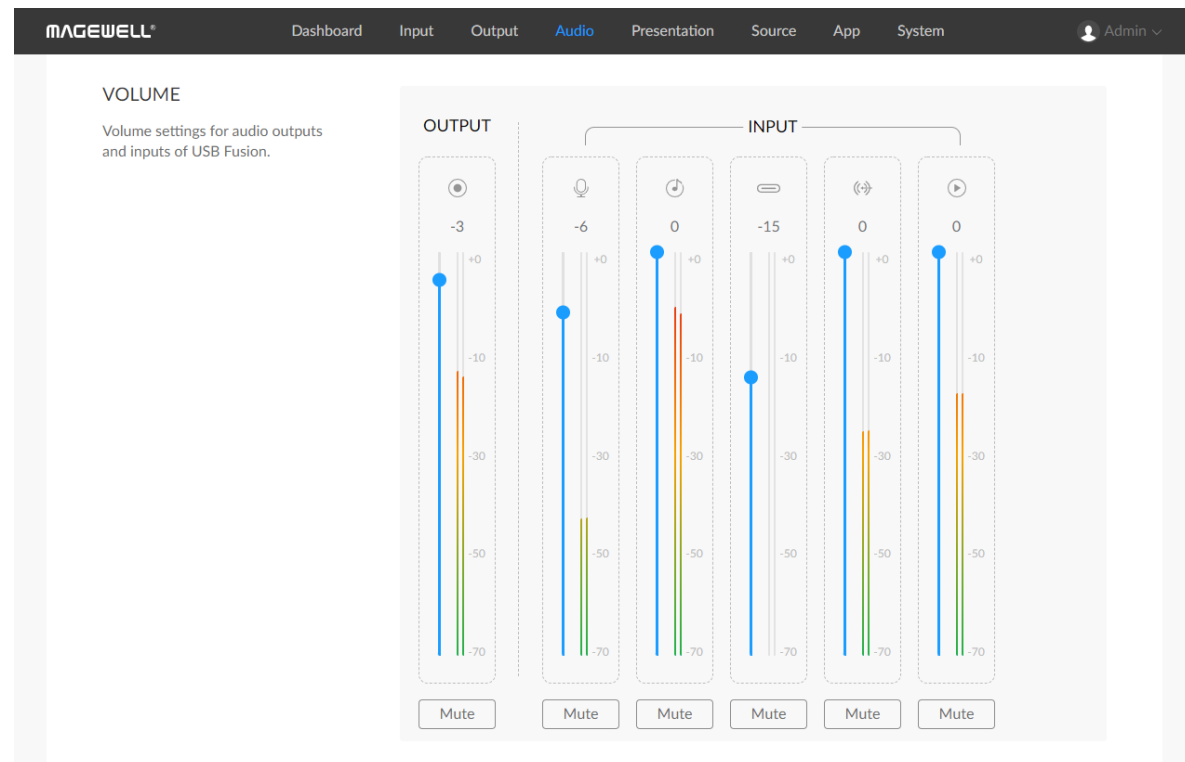
In the navigation bar at the upper part of the Web UI, click **Audio** to configure the audio inputs and outputs.

USB Fusion supports the following audio:

- Input audio: line-in audio, input from the headset port, COMPUTER audio, [HDMI CAMERA](#) audio, WEB CAMERA audio, video file audio, BGM, [streaming computer](#) audio
- Output audio: output from the headset port, output from the WEB CAMERA port, [HDMI OUT](#) audio, USB OUT audio


Each type of audio can consist of two channels. When the source is a single channel, it will be copied to form two channels.

When there are multiple audio sources, USB Fusion will mix them into two channel audio for output.






Adjusting Volume

Various audio inputs and output of the current [presentation](#) will be displayed in the **VOLUME** area.






OUTPUT  : Sets the output audio, namely, USB OUT audio, and audio for monitoring, which is output through the headset port, WEB CAMERA port, and [HDMI](#) OUT port.

- By default, the monitored audio does not include the global microphone audio. If you need to monitor this audio, you need to [enable microphone monitoring](#) on the Web UI.
- By default, the WEB CAMERA port does not output monitoring audio. To enable output, you need to [select an USB audio output device](#) on the Web UI.

INPUT: Sets the different audio inputs:

- Global audio: audio present across a [presentation](#). Adjustment to such audio applies to the whole [presentation](#).
-  : audio input from a microphone. Microphones connected to both the headset port and the WEB CAMERA port can be used as global microphones and their volume are both adjusted here. The microphone on the headphone plugged into the headset port can be used immediately. For the microphone connected to the WEB CAMERA port, you need to first [select it as a global USB microphone](#) on the Web UI before it can be used. The two microphones can work simultaneously.
-  : background music.
-  : audio from the [streaming computer](#) via the USB OUT port. This

audio only outputs to monitoring devices. It will not output through the USB OUT port.

-  : audio from the line-in port.
- Scene audio: audio specific to a scene, which switches in/out along with the scene. Adjustment to such audio applies only to the current scene. The following audio types are supported, but only the audio used in the current scene will be displayed.
 -  : system audio from the COMPUTER port.
 -  : audio from the [HDMI CAMERA](#) port.
 -  : audio from the WEB CAMERA port. The audio is disabled by default. To enable it, you need to [set WEB CAMERA audio](#) on the web UI.
 -  : audio from a video file.

If you switch to a notes page, there will be only global audio inputs, no scene audio inputs.

Each audio has a volume meter, volume slider, and mute button.

Before and during a [presentation](#), you can:

- **Monitor audio**

View the real-time volume on the volume meter. The left meter is for the left channel while the right is for the right channel. When an audio input is detected, the volume meter jumps up/down to show the real-time volume of the audio. When only one channel is input, only one volume meter jumps.

- **Adjust volume**



Drag the volume slider to adjust volume. The value above the volume slider is the volume value.

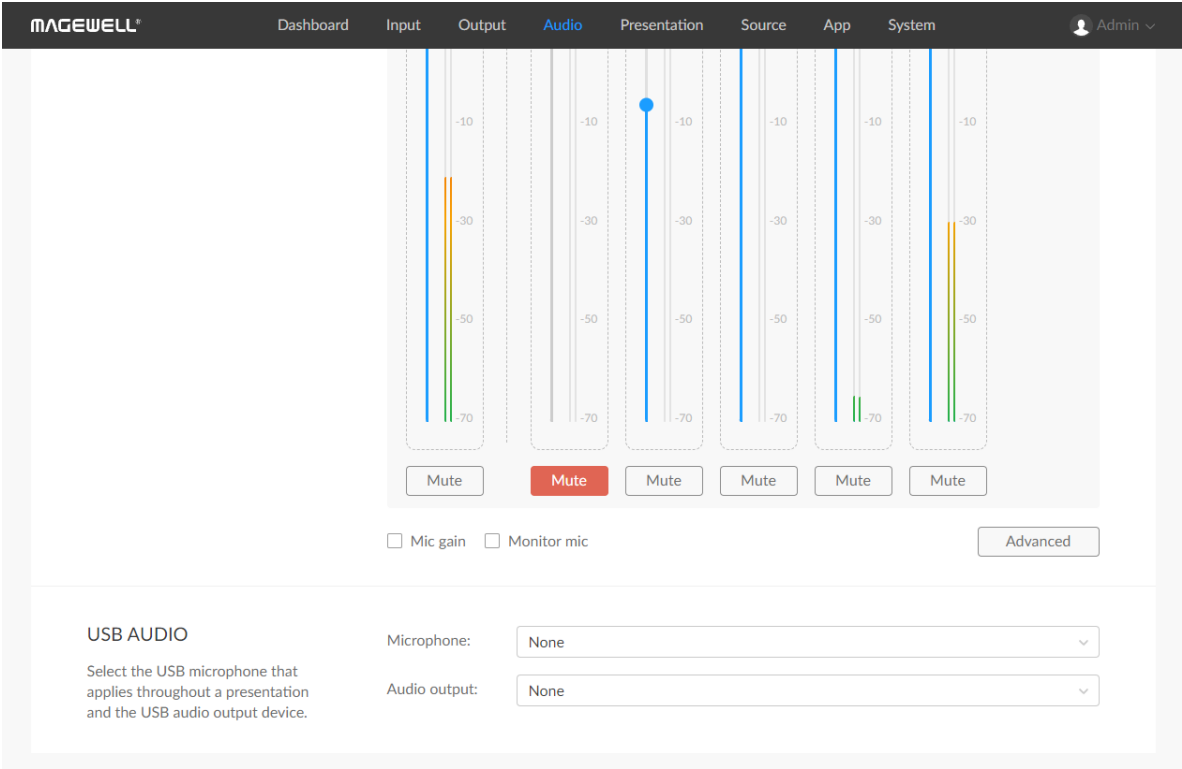
- Input volume: Each audio enters USB Fusion at 100% its original volume, which corresponds to the position 0 in the volume bar. You can adjust the volume down. If the original volume is too low, you can make adjustments in [Advanced Settings](#).

Separately setting the audio inputs can create rich audio effects. For example, you can lower the volume of the background music while raising the volume of your speech.

- Output volume: The output volume is adjusted based on the input volume.

- **Mute/Unmute**

Click the mute button under the slider to mute the audio.  indicates muted while  indicates unmuted.



Setting the Microphone Gain

A microphone can output audio at a relatively low volume. In this case, you can enable microphone gain for the input to raise the volume. By default, microphone gain is disabled.

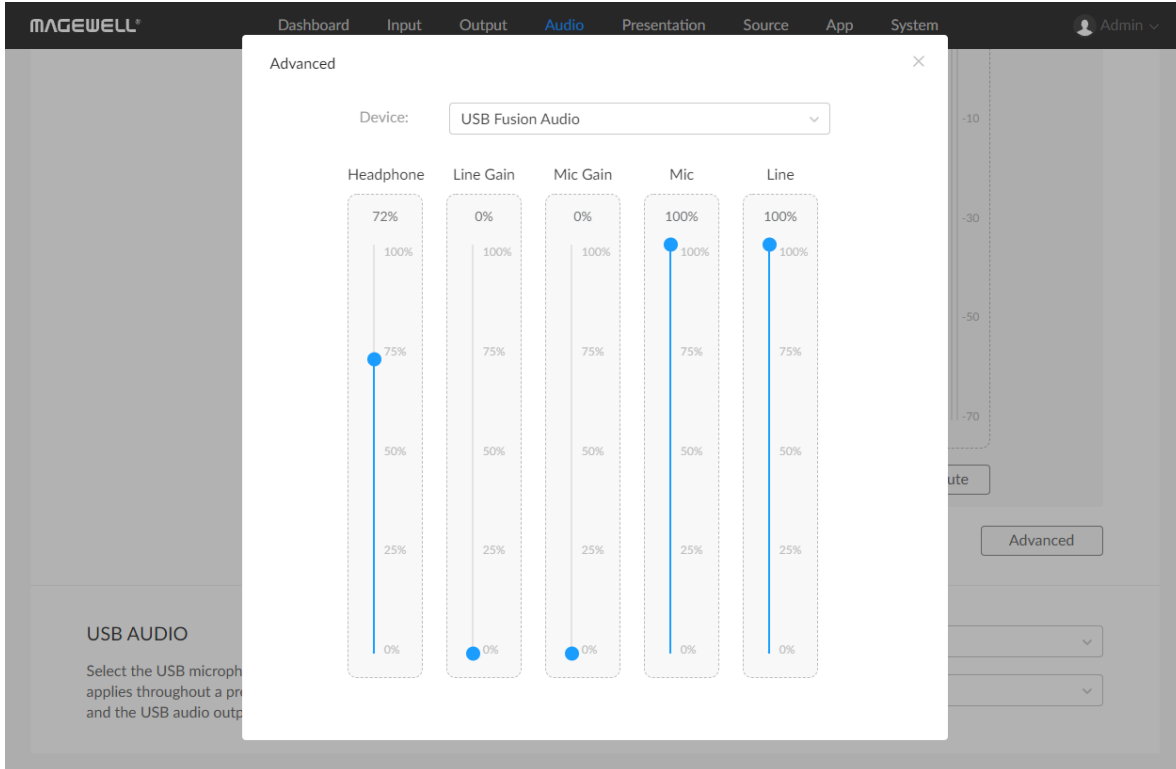
In the **VOLUME** area, check **Mic gain**. USB Fusion will automatically gain the microphone input to the maximum, namely, 40 dB. You can also adjust the gain in [Advanced Settings](#).

This gain currently applies only to the microphone connected through the headset port, not to the one connected through the WEB CAMERA port.

Enabling Microphone Monitoring

To avoid that a user can hear his or her own voice, USB Fusion disables microphone monitoring by default. You can enable it if required.

In the **VOLUME** area, check **Monitor mic**. After enabled, the global microphone audio will be output to the audio devices connected to the headset port, WEB CAMERA port, and [HDMI](#) OUT port.



Advanced Settings

When the input original volume is too low, for example, the audio volume from some microphone may be low, you can increase the volume or set gain in advanced settings.

The advanced settings allows you to adjust volume or the line in device, headset device, and WEB CAMERA device.

In the **VOLUME** area, click **Advanced**. From the **Device** drop-down list box, select **USB Fusion Audio** or *Device connected to WEB CAMERA port*.

When multiple device are connected through an USB Hub, multiple *Device connected to WEB CAMERA port* items will be displayed.

- **USB Fusion Audio:** Adjust volume for devices including the line in device and headset.
 - **Headphone:** Adjust output volume for the headset port.
 - **Mic Gain:** Set gain for the microphone connected to the headset port. By default, there is no gain.
 - **Line Gain:** Set gain for the device connected to the line in port. By default, there is no gain.

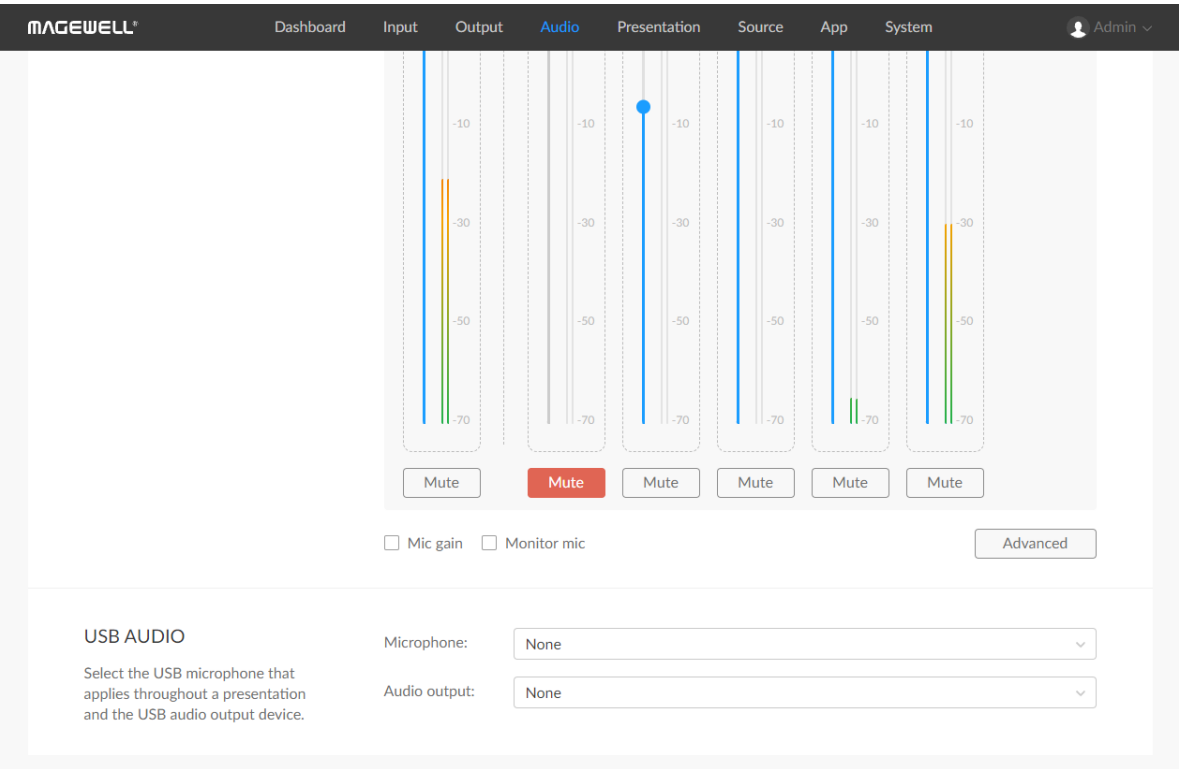
💡 When you plug a microphone directly to the line in port, you may need to adjust the line gain in order to make the microphone input audible, for the microphone signal may be too low.

- **Mic:** Adjust the original volume of the microphone connected to the headset port.
- **Line:** Adjust the original volume of the device connected to the line in

port.

- *Device connected to WEB CAMERA port:* Adjust volume for the device connected to the WEB CAMERA port.

The item displayed varies from device to device. For example, when you connect a [webcam](#) with both a microphone and a speaker, both the microphone and the speaker can be adjusted.



Selecting USB Audio Devices

In the **USB AUDIO** area, you can select devices connected to the WEB CAMERA port as a global microphone and audio output devices.

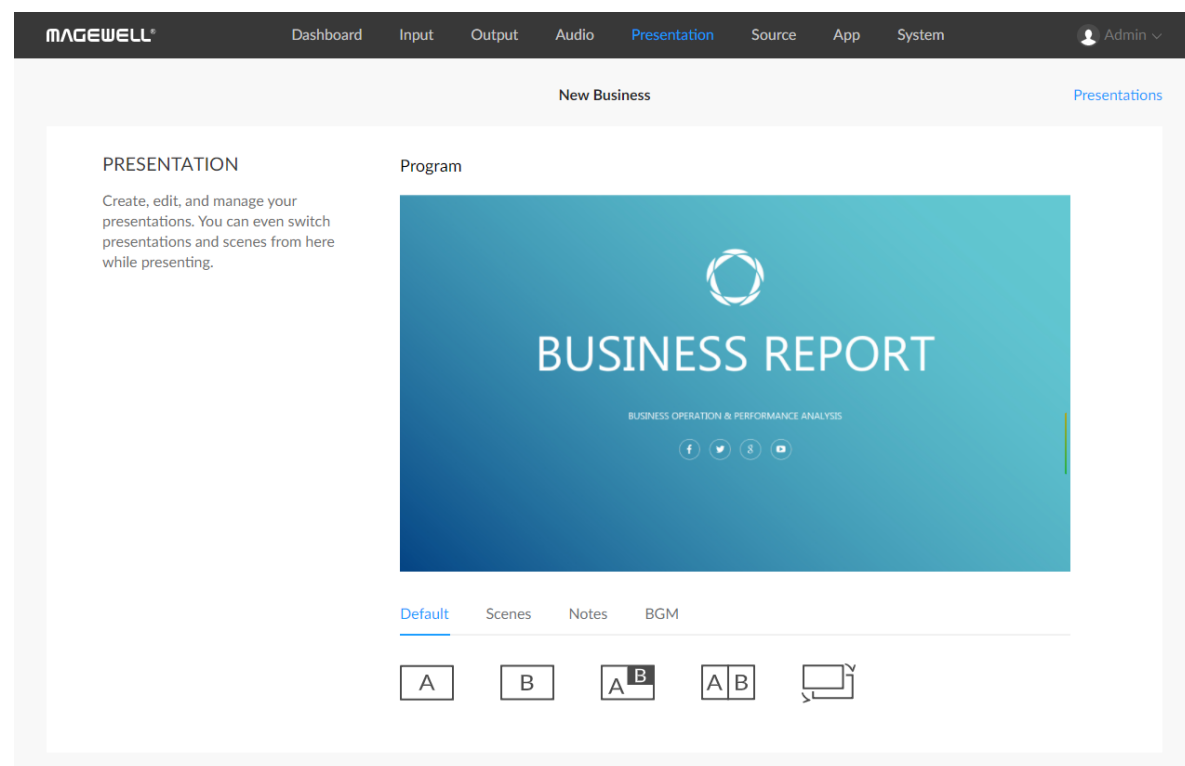
Selecting a Global USB Microphone

In the **USB AUDIO** area, select an audio device from the **Microphone** drop-down list box. The device will be used as a global microphone, which can be used throughout a [presentation](#) and does not switch in/out with any scene. By default, no input device is selected.

- The audio input from the WEB CAMERA port can be used as a global microphone or WEB CAMERA audio (namely audio that switches along with the WEB CAMERA video). When you select the audio input as the global microphone, you can no longer [select it as WEB CAMERA audio](#).
- Both this microphone and the microphone connected to the headset port work as a global microphone. Both microphones can work simultaneously.

Selecting an USB Audio Output Device

In the **USB AUDIO** area, select a device from the **Audio output** drop-down list box as the audio output device. The audio output can be used for monitoring. By default, no output device is selected.



Creating and Managing Presentations

You can create, edit, and manage presentations on **Presentation** tab page of the web UI. You can even switch between the different content in a presentation.

Switching Default Scenes


USB Fusion comes with a default presentation consisting of a scene from the COMPUTER source and a scene from a camera source (HDMI camera or webcam). You can press buttons to switch between the scenes or composite them into a picture-in-picture or side-by-side layout.

1. In the navigation bar at the upper part of the Web UI, click the **Presentation** tab.
2. At the lower part of the page, click the **Default** tab and then click a button:
 - **A** : computer scene, namely the output from the connected computer, such as a PowerPoint presentation.
 - **B** : camera scene, namely the output from an HDMI camera or a webcam. When both cameras are connected, the output from the HDMI camera is displayed; the output from the webcam is displayed only when the HDMI camera is disconnected.
 - **A B** : picture in picture, namely, compositing the computer source and camera source into a picture-in-picture layout, where the computer source is the big picture while the camera source is the small picture.


By default, the small picture appears at the lower left corner. You can also move it to the upper left, upper right, lower right corners. Press

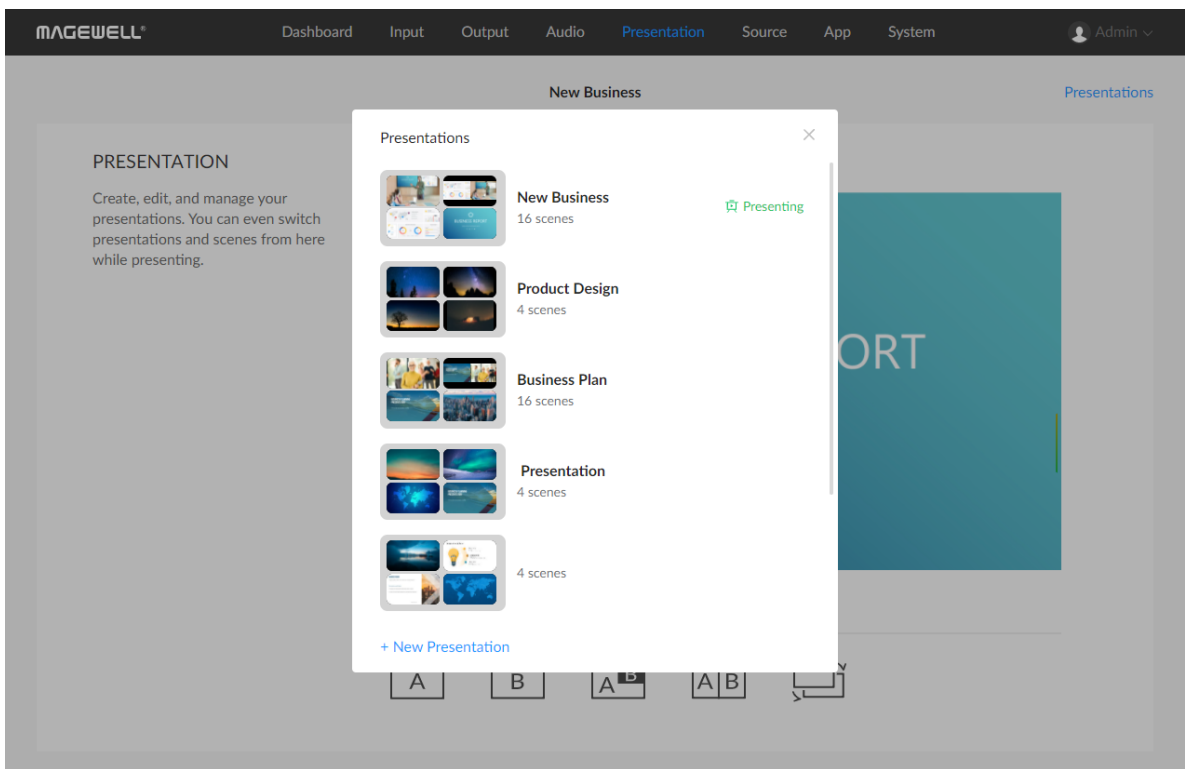
the button again to change the position of the small picture.

The small picture will retain the aspect ratio of the source.

-  : [side by side](#), namely, compositing the computer scene and camera scene into a side-by-side layout, with the computer source on the left, and camera source on the right.

The side-by-side layout can be evenly divided into two parts, or divided into a large left part and small right part, or into a small left part and large right part. Press the buttons again to change the layout.

-  : swap sources, namely, exchanging the COMPUTER source and camera source, or the two sources in the picture-in-picture layout or side-by-side layout.




Creating a Presentation

Adding a [Presentation](#)


1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the upper right corner, click **Presentations**.
3. At the lower left corner of the displayed [presentation](#) list, click **+ New Presentation**.
4. In the **New [Presentation](#)** dialog box, enter the [presentation](#) name (1-32 characters) and click **New**.

The new [presentation](#) will be displayed in the [presentation](#) list.

Renaming a [Presentation](#)

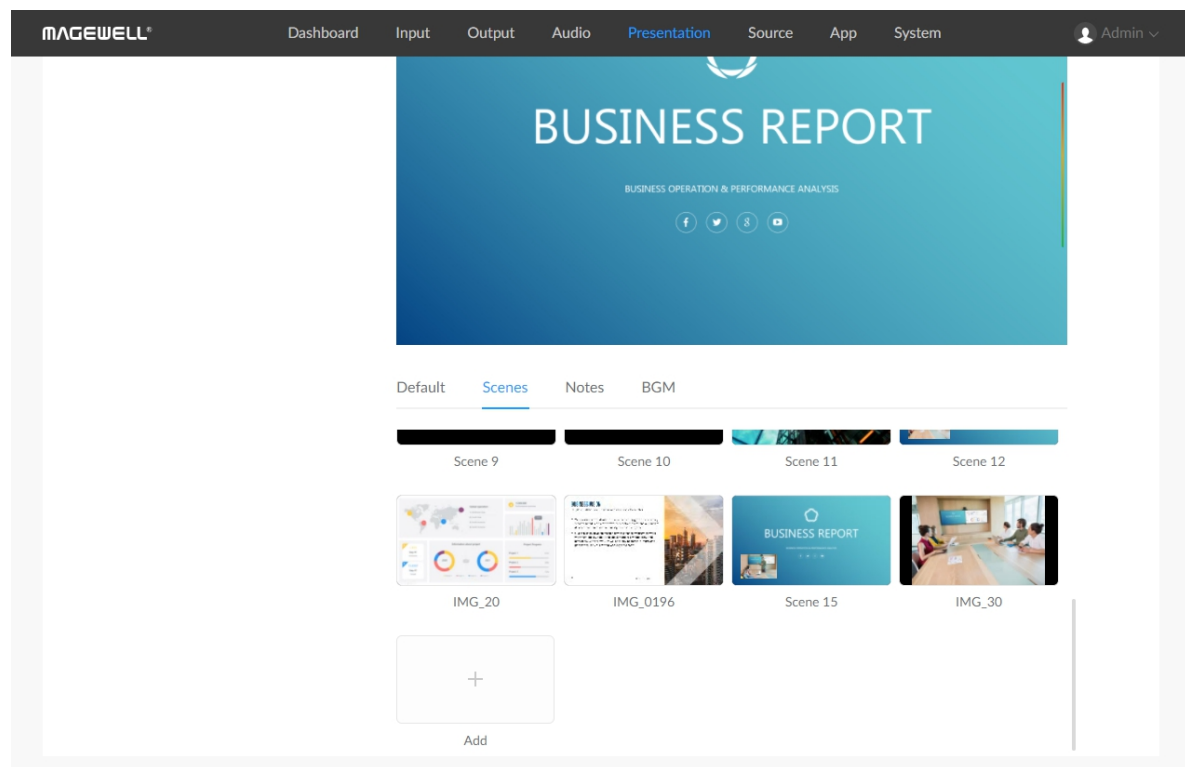
1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the upper right corner, click **Presentations**.
3. In the displayed [presentation](#) list, hover your mouse over a [presentation](#) and click the edit button  on the right.
4. Enter a new name for the [presentation](#) (1-32 characters), and click **Rename**.

Deleting a [Presentation](#)

1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the upper right corner, click **Presentations**.
3. In the displayed [presentation](#) list, hover your mouse over a [presentation](#) and click the delete button  on the right.
A [presentation](#) being presented cannot be deleted.
4. In the **Delete [Presentation](#)** dialog box, click **Delete**.

Switching Presentations

1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the upper right corner, click **Presentations**.
3. In the displayed [presentation](#) list, use the scroll bar on the right to browse the presentations.
The [presentation](#) with the text "Presenting" on the left is the one being presented currently.



4. In the [presentation](#) list, click a [presentation](#) to switch to it.


Creating Scenes

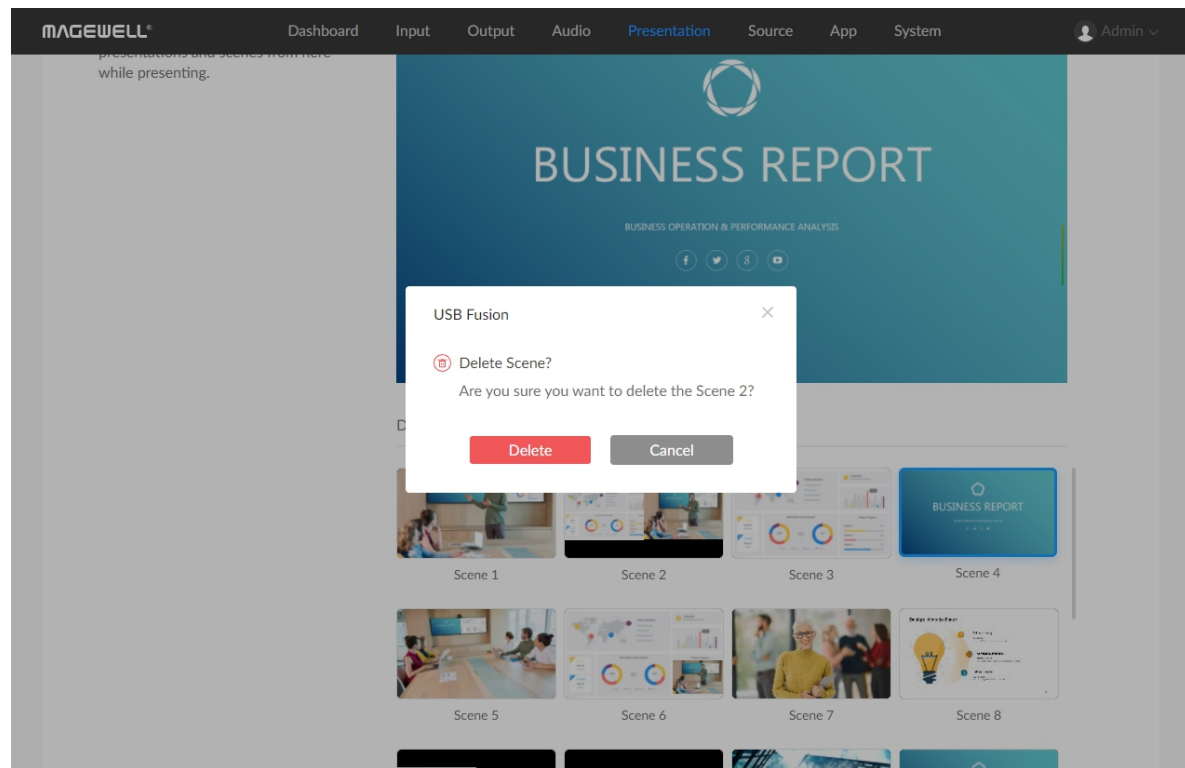
After adding a [presentation](#), you can add scenes to it.

Adding a Scene


1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **Scene** tab.
3. In the **Scene** tab page, click the **+** button.
4. In the **Input** tab page or **Media** tab page, click a source to add.
You can also click **Upload** on the **Source** tab page to import videos or pictures on your local computer, and then add them to your [presentation](#).
Supported formats are MOV, MP4, MKV video files and JPEG, PNG, BMP image files.

Renaming a Scene

1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **Scene** tab.
3. In the **Scene** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Rename**.
4. Enter a new name (32 characters at most).
If you set the name to empty, the default name **Scene X** will be used.
5. Click **Rename**.



Deleting a Scene

1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **Scene** tab.
3. In the **Scene** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Delete**.
4. In the **Delete Scene** dialog box, click **Delete**.

Switching Scenes


1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **Scene** tab.
3. In the **Scene** tab page, click a scene thumbnail. The clicked scene will be presented.

Managing Notes


After you [create notes](#) on the App for the current [presentation](#), you can manage the notes. Notes cannot be created on the Web UI.

Downloading Notes

1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **Notes** tab.

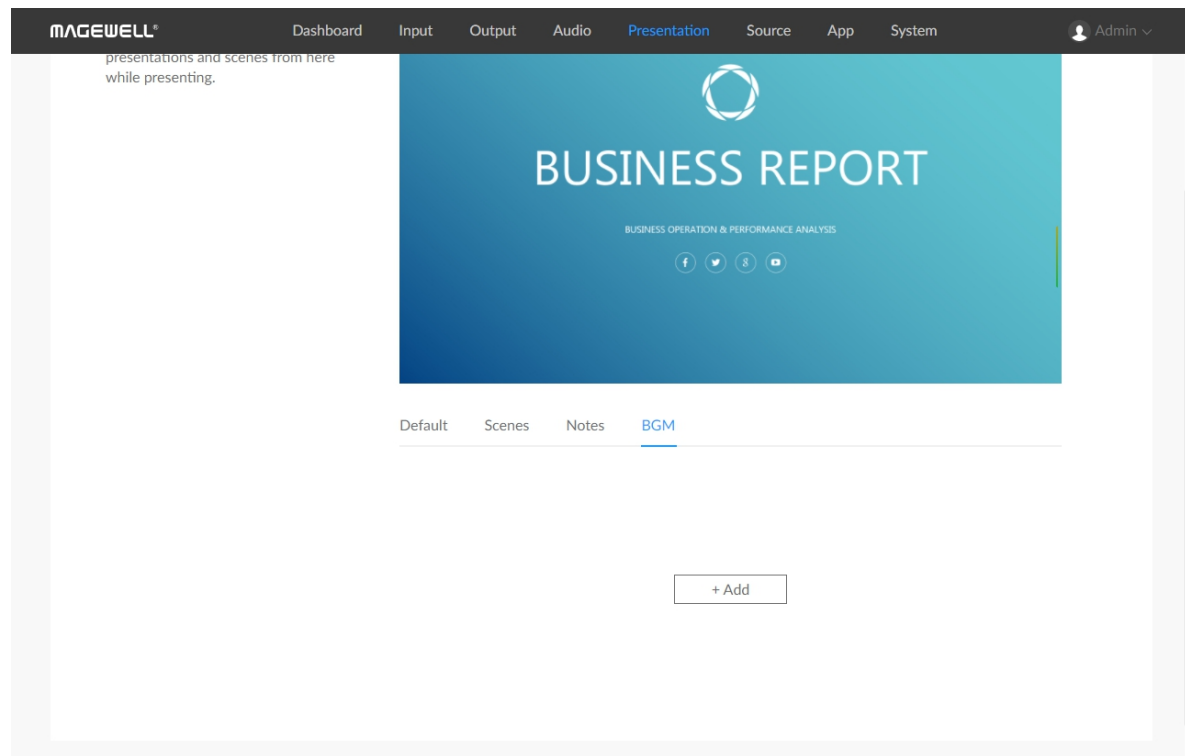
3. On the **Notes** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Download**.
The note will be downloaded to the local computer.

Deleting Notes

1. In the navigation bar at the upper part of the Web UI, click the **Presentation** tab.
2. At the lower part of the page, click the **Notes** tab.
3. On the **Notes** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Delete**.
4. In the **Delete Notes** dialog box, click **Delete**.

Switching Notes

1. In the navigation bar at the upper part of the Web UI, click the **Presentation** tab.
2. At the lower part of the page, click the **Notes** tab.
3. On the **Notes** tab page, click a note thumbnail. The clicked note will be presented.





Creating BGM

You can add music or other audio materials for your [presentation](#).

Adding BGM


1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **BGM** tab.
3. On the **BGM** tab page, click the **+ Add** button.
If any BGM item exists, the **+ Add** button will be displayed at the upper right corner of the tab page.
4. In the **Media** list, click an item to add it to the [presentation](#).
You can also click **+ Upload** at the lower right corner to import local audio files and then add it to the [presentation](#). Supported formats are MP3, M4A, WAV files.

Sorting BGM

1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **BGM** tab.
3. On the **BGM** tab page, hover your mouse over a BGM item and click the Up button  or Down button  on the right.

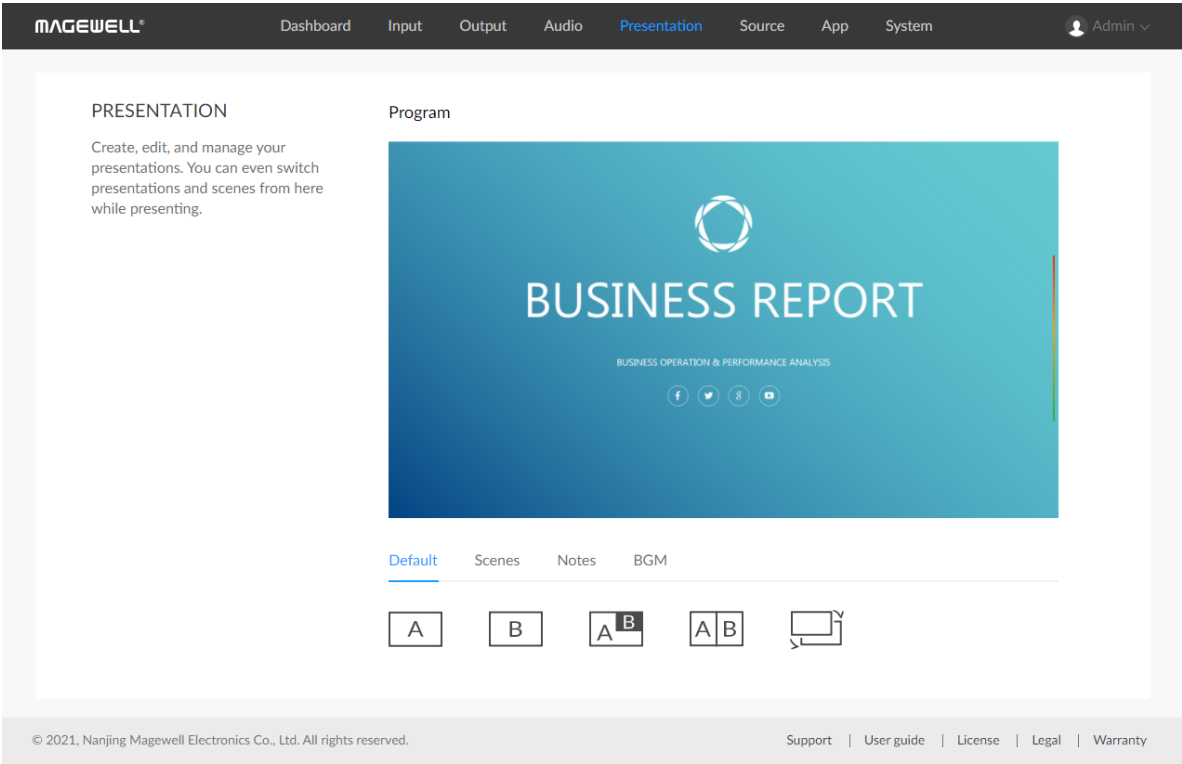
Deleting BGM

1. In the navigation bar at the upper part of the Web UI, click the [Presentation](#) tab.
2. At the lower part of the page, click the **BGM** tab.

- 3. On the **BGM** tab page, hover your mouse over a BGM item and click the delete button  on the right.
- 4. In the **Delete BGM** dialog box, click **Delete**.

Playing BGM

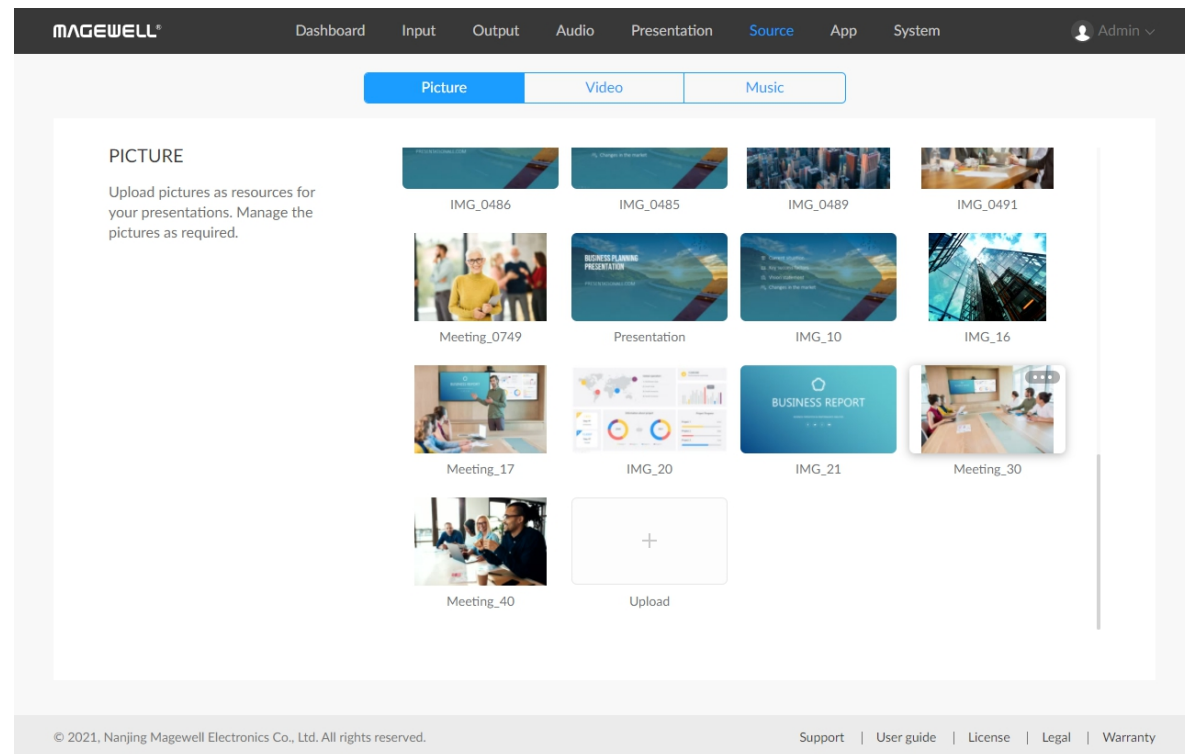
- 1. In the navigation bar at the upper part of the Web UI, click the **Presentation** tab.
- 2. At the lower part of the page, click the **BGM** tab.
- 3. On the **BGM** tab page, click an item to play the music.
In the playback control bar, you can control the playback, such as pause, play, next song, previous song, seek, and set the loop policy.



Previewing Output

- 1. In the navigation bar at the upper part of the Web UI, click the **Presentation** tab.
- 2. In the **Program** area, preview the content being presented.
When you switch scenes or notes, the scene/note switched to will be displayed in the preview area.
For a video clip, there will be a playback button and progress bar at the bottom. You can click the playback button to play or stop the video, and drag on the progress bar to seek.

The image in the preview area is updated once per second instead of in real time.



Managing the Sources

On the Web UI, you can manage the sources in USB Fusion. sources include the pictures, videos, and BGM imported to USB Fusion.

Managing Pictures

Importing Pictures

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Picture** tab at the upper part of the page.
3. On the **Picture** tab page, click the **+ Upload** button at on the page, and import a picture from the local computer.


Supported formats are JPEG, PNG, BMP image files.

The resource will be imported to USB Fusion.


Previewing Pictures

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Picture** tab at the upper part of the page.
3. On the **Picture** tab page, click a thumbnail to preview the picture.

Renaming Pictures


1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Picture** tab at the upper part of the page.
3. On the **Picture** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Rename**.
4. Enter a new name (1-32 characters) and click **Rename**.

Downloading Pictures

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Picture** tab at the upper part of the page.
3. On the **Picture** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Download**.

The picture will be downloaded to the local computer.

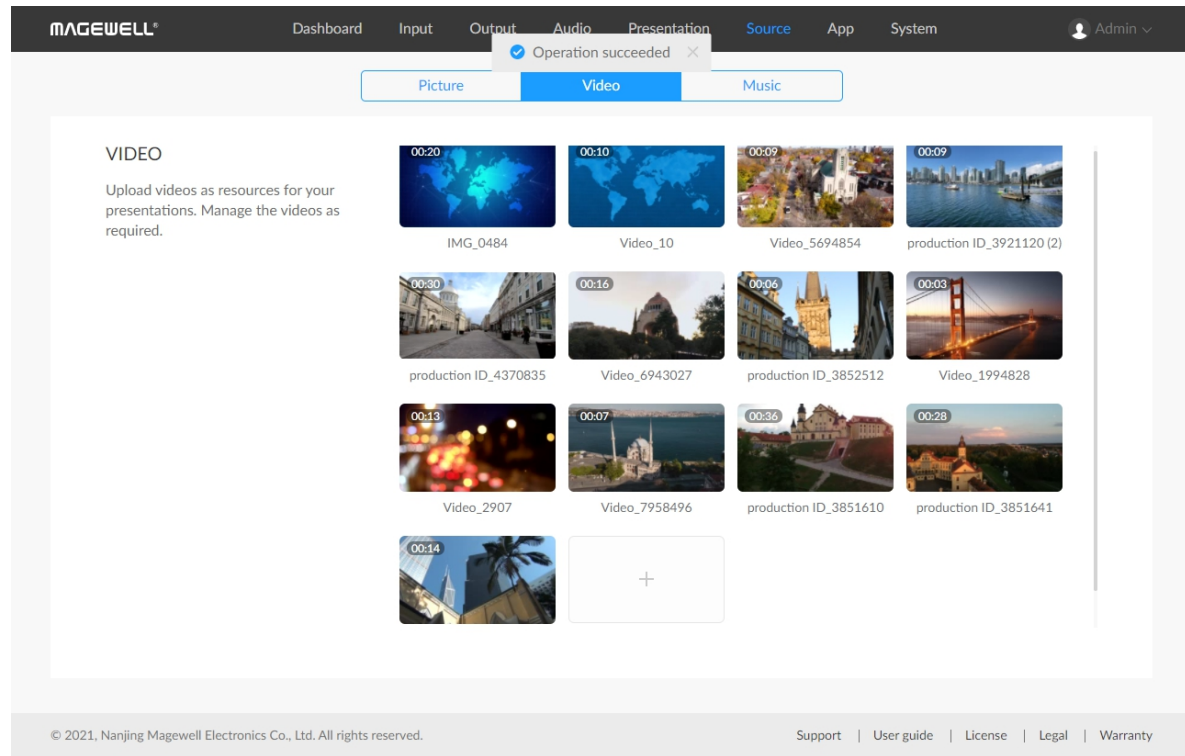
Deleting Pictures

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Picture** tab at the upper part of the page.
3. On the **Picture** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Delete**.

4. On the displayed dialog box, click **Delete**.

The picture will be removed from USB Fusion.

The resource currently being presented cannot be deleted.



Managing Videos

Importing Videos

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Video** tab at the upper part of the page.
3. On the **Video** tab page, click the **+ Upload** button on the page, and import a video from the local computer.
Supported formats are MOV, MP4, MKV video files.
The resource will be imported to USB Fusion.

Previewing Videos

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Video** tab at the upper part of the page.
3. On the **Video** tab page, click a thumbnail to preview the video.

Renaming Videos


1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Video** tab at the upper part of the page.
3. On the **Video** tab page, move the mouse to the **...** icon at the upper right corner of a thumbnail, and click **Rename**.
4. Enter a new name (1-32 characters) and click **Rename**.

Downloading Videos

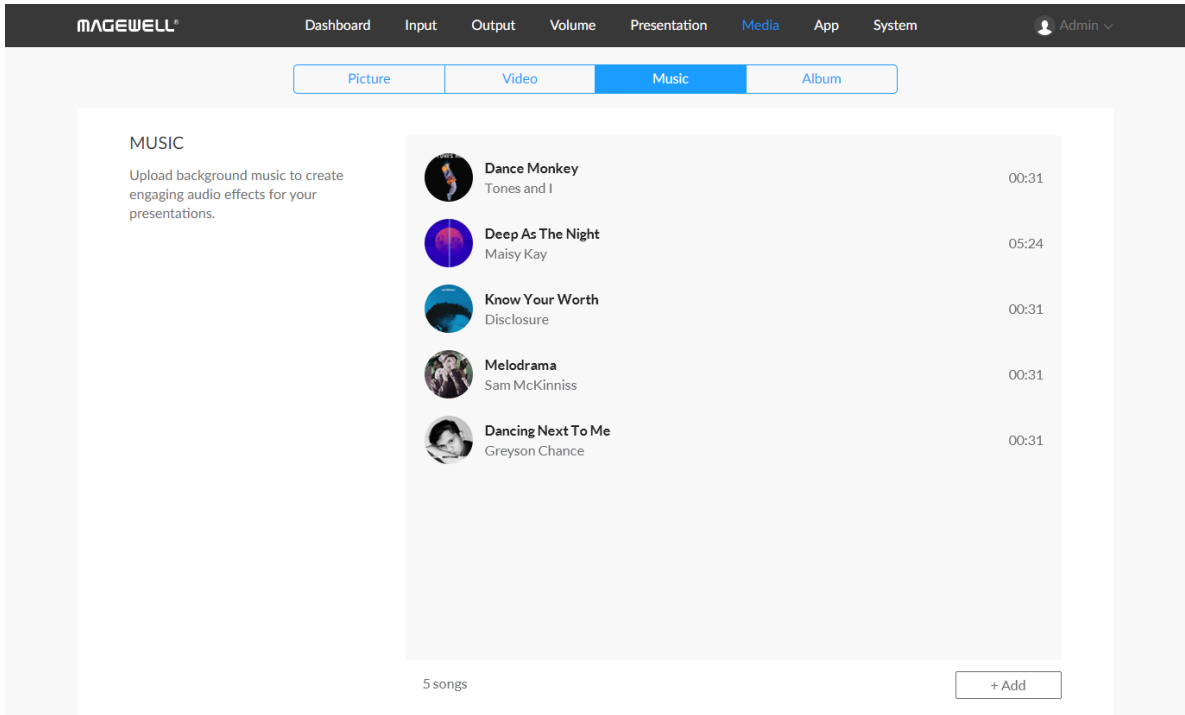
1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Video** tab at the upper part of the page.
3. On the **Video** tab page, move the mouse to the **...** icon at the upper

right corner of a thumbnail, and click **Download**.
The video will be downloaded to the local computer.

Deleting Videos

- 1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
 - 2. Click the **Video** tab at the upper part of the page.
 - 3. On the **Video** tab page, move the mouse to the  icon at the upper right corner of a thumbnail, and click **Delete**.
 - 4. On the displayed dialog box, click **Delete**.
- The video will be removed from USB Fusion.

The resource currently being presented cannot be deleted.




Managing Music

Importing Music


- 1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
- 2. Click the **Music** tab at the upper part of the page.
- 3. On the **Music** tab page, click the **+ Upload** button at the lower right part of the page, and import music from the local computer.
Supported formats are MP3, M4A, WAV files.
The resource will be imported to USB Fusion.

Downloading Music

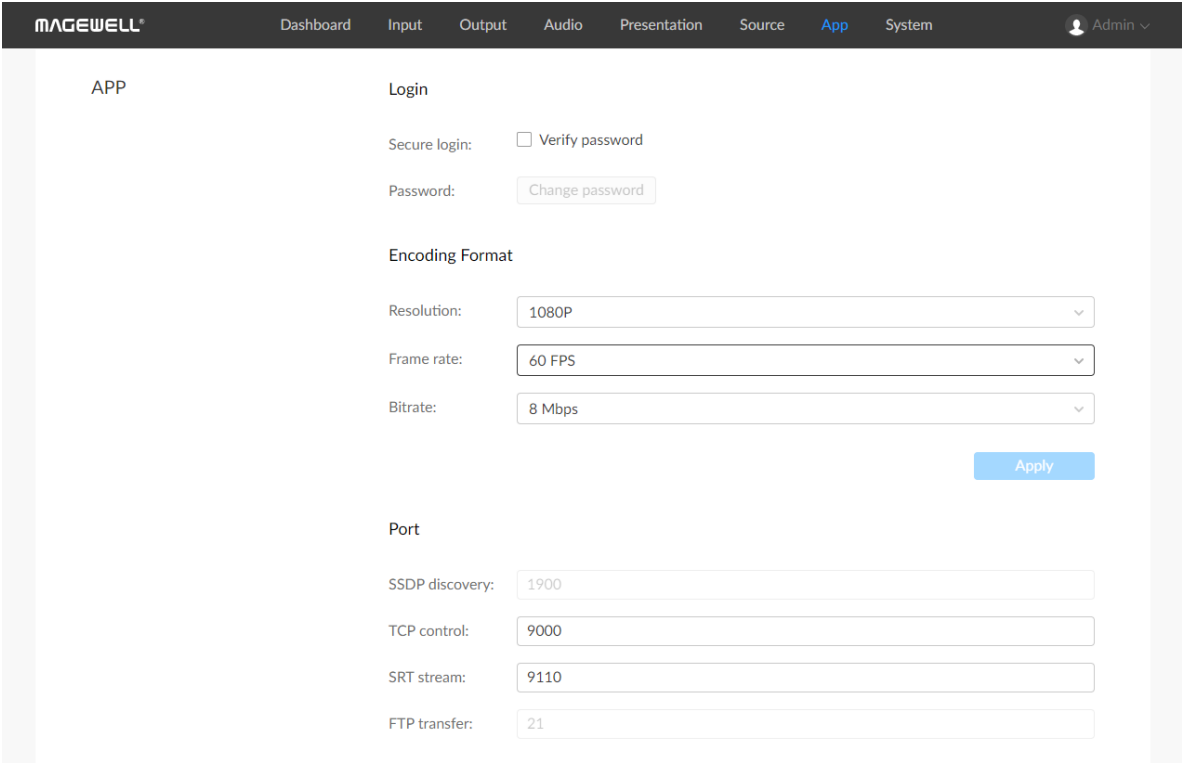
- 1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.

2. Click the **Music** tab at the upper part of the page.
3. On the **Music** tab page, move the mouse over an item and click the download button  on the right.
The music will be downloaded to the local computer.

Deleting Music

1. In the navigation bar at the upper part of the Web UI, click the **Source** tab.
2. Click the **Music** tab at the upper part of the page.
3. On the **Music** tab page, move the mouse over an item and click the delete button  on the right.
4. On the displayed dialog box, click **Delete**.
The music will be removed from USB Fusion.

The resource currently being presented cannot be deleted.



Setting the App

In the navigation bar at the upper part of the Web UI, click the **Source** tab to set the app login password, encoding format, and communication ports.

Setting the Login Password

When the App connects to a USB Fusion device, no password is required by default. You can set a password to enhance security.

Enabling Password Verification

1. In the navigation bar at the upper part of the Web UI, click the **App** tab.
2. In the **Login** area, check **Verify password** after **Secure login** to enable password authentication.
3. In the **Set Password** dialog box, enter a password, and click **OK**.
 - The password is case sensitive, ranging from 1 to 32 characters. Supported characters are as follows: A-Z, a-z, 0-9, and special characters _~!@#\$\$%^&*~+=
 - You need to set the password only upon the first time you enable password authentication. When you later disable and then enable it, you will not be prompted to enter a password. The password you set last time is still valid.

After setting the password:

- If you forget the password, click **Change password** to make the change.
- If you need to disable password verification, uncheck **Verify password**.

Setting the Encoding Format

The encoding format is used by the USB Fusion device to deliver video streams to the App. You can set these parameters based on your network conditions. A higher resolution/frame rate/bit rate will require more bandwidth.

1. In the navigation bar at the upper part of the Web UI, click the **App** tab.
2. In the **Encoding Format** area, set the encoding parameters.
 - **Resolution:** supports 720P and 1080P. The default is 720P.
 - **Frame rate:** supports 10 FPS, 15 FPS, 24 FPS, 30 FPS and 60 FPS. The default is 30FPS.
 - **Bit rate:** supports 256 Kbps through 20 Mbps. The default is 2 Mbps.
3. Click **Apply**.

Setting Communication Ports

Set the ports used for communication between the USB Fusion device and the App, for example, when a default port number is disabled in the network.

1. In the navigation bar at the upper part of the Web UI, click the **App** tab.
2. In the **Port** area, set the communication ports.
 - **SSDP discovery:** network discovery port. The SSDP protocol is used. The default is 1900 and cannot be changed.
 - **TCP control:** port for delivering control instructions. The TCP protocol is used. The default port is 9000 and can be modified. The value range is 1 to 65535.
 - **SRT stream:** port for delivering video streams to the App. The SRT protocol is used. The default port is 9110 and can be modified. The value range is 1 to 65535.

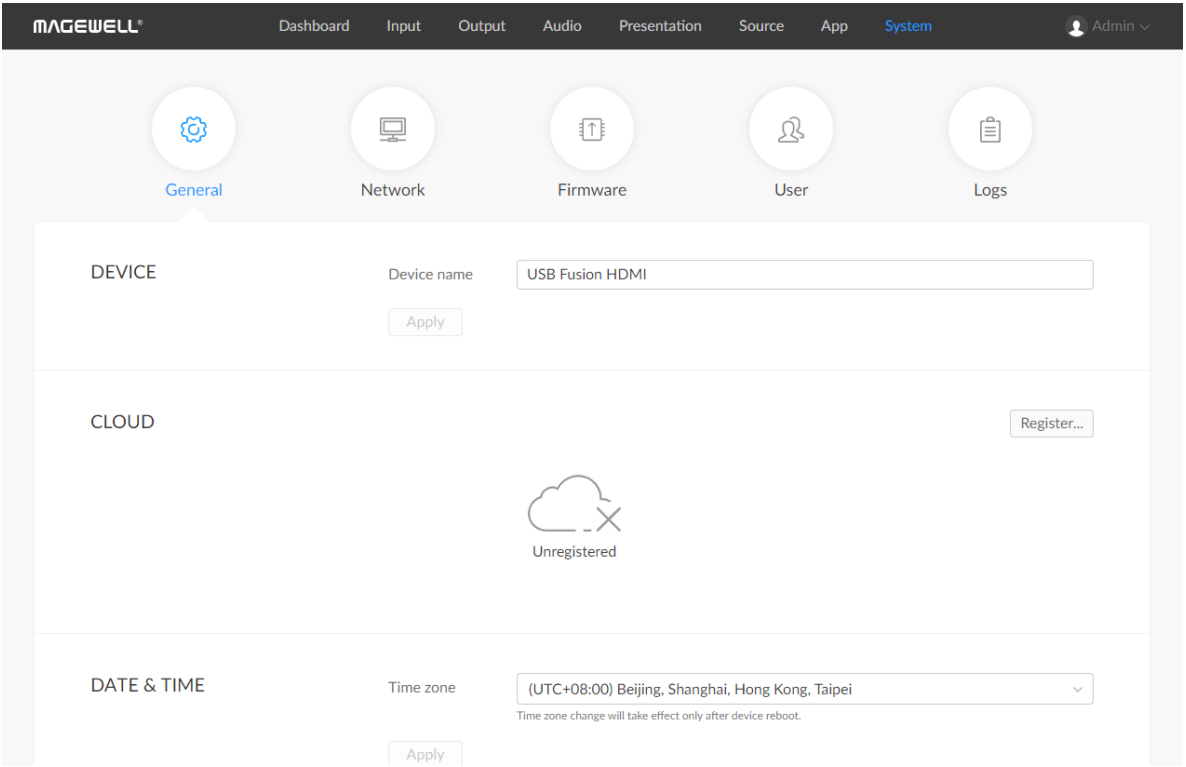
3. Click **Apply**.

After a port number is changed, the connection between the USB Fusion device and USB Fusion App will be interrupted. You need to manually connect the app to the device.

Configuring and Maintaining the System

USB Fusion supports system configuration and maintenance, including general configuration, network configuration, firmware update, user administration, logs, device reboot, and device reset.

Except the device reset function, all the other system configuration and maintenance functions are available only to the Admin user, not to common users.



General Configuration

Set the device name and system time.

Setting the Device Name

The device name is the **Device Name** parameter displayed on the **Dashboard** page, and the device name shown in network discovery as well as in USB Fusion App.

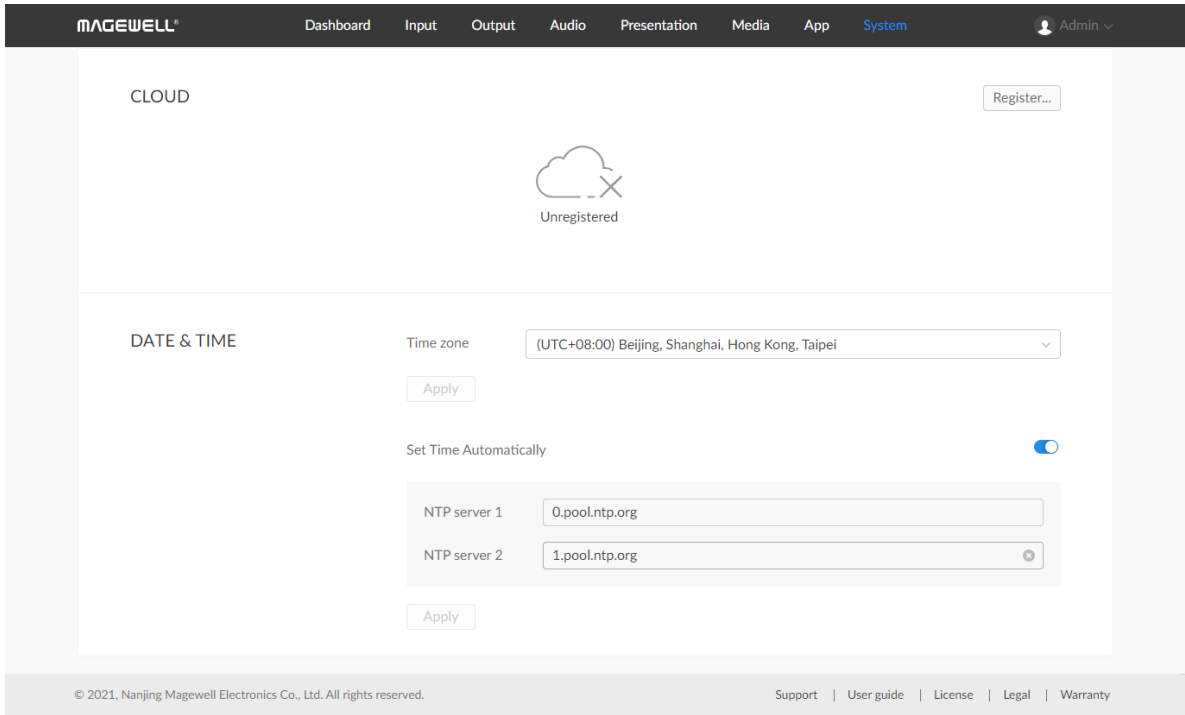
- 1. [Log in to the web UI as the Admin user.](#)
- 2. Choose **System** > **General**.
- 3. In the **DEVICE** area, set **Device name**.

The device name can consist of 1-60 characters. Supported characters: A-Z, a-z, 0-9, spaces and ._-+'. Spaces cannot be at the start or end.

- 4. Click **Apply**.

Make sure you click this button after configuring. Otherwise, your configuration will become invalid.

- 5. Click **Dashboard** in the navigation bar. Check whether **Device name** in the **USB Fusion** area is changed to the new name.
The device name displayed in network discovery and in USB Fusion App will also change accordingly.



Setting the System Time

USB Fusion uses the system time for time-stamping the A/V input as well as logging and naming files.
Before using this device, you need to select your time zone and adjust time to ensure time accuracy.

Selecting a Time Zone

- 1. [Log in to the web UI as the Admin user.](#)
- 2. Choose **System** > **General**.
- 3. In the **DATE & TIME** area, select a time zone from the **Time zone** drop-down list box. USB Fusion uses **(UTC+08:00) Beijing, Shanghai, Hongkong, Taipei** by default.
- 4. Click **Apply**.
- 5. On the displayed dialog box, click **Reboot**.
The device will reboot. If you click **Later**, your configuration change will not apply until after next reboot.

Setting Time Automatically

You can automatically synchronize time from the network.

By default, USB Fusion automatically synchronizes time from NTP servers.

Network Time Protocol (NTP) servers provide network-based time synchronization service.

There are many NTP servers available on the Internet. You may also deploy your own ones. USB Fusion uses the NTP servers provided by ntp.org by default. You can change these NTP servers as needed. For example, you may change to nearer servers to reduce network latency and improve time accuracy. ntp.org also provides [recommended practices for configuring NTP servers](#).

1. [Log in to the web UI as the Admin user](#).
2. Choose **System** > **General**.
3. In the **DATE & TIME** area, enable **Set Time Automatically**.

The **Set Time Automatically** switch is enabled by default. If it is disabled, you need to first enable it.

4. Set domain names for NTP servers.
 - **NTP server 1**: Domain name for NTP server 1, mandatory. The default is **0.pool.ntp.org**. Make sure you enter a valid domain name.
 - **NTP server 2**: Domain name for NTP server 1, optional. The default is **1.pool.ntp.org**. Make sure you enter a valid domain name.
5. Click **Apply**.

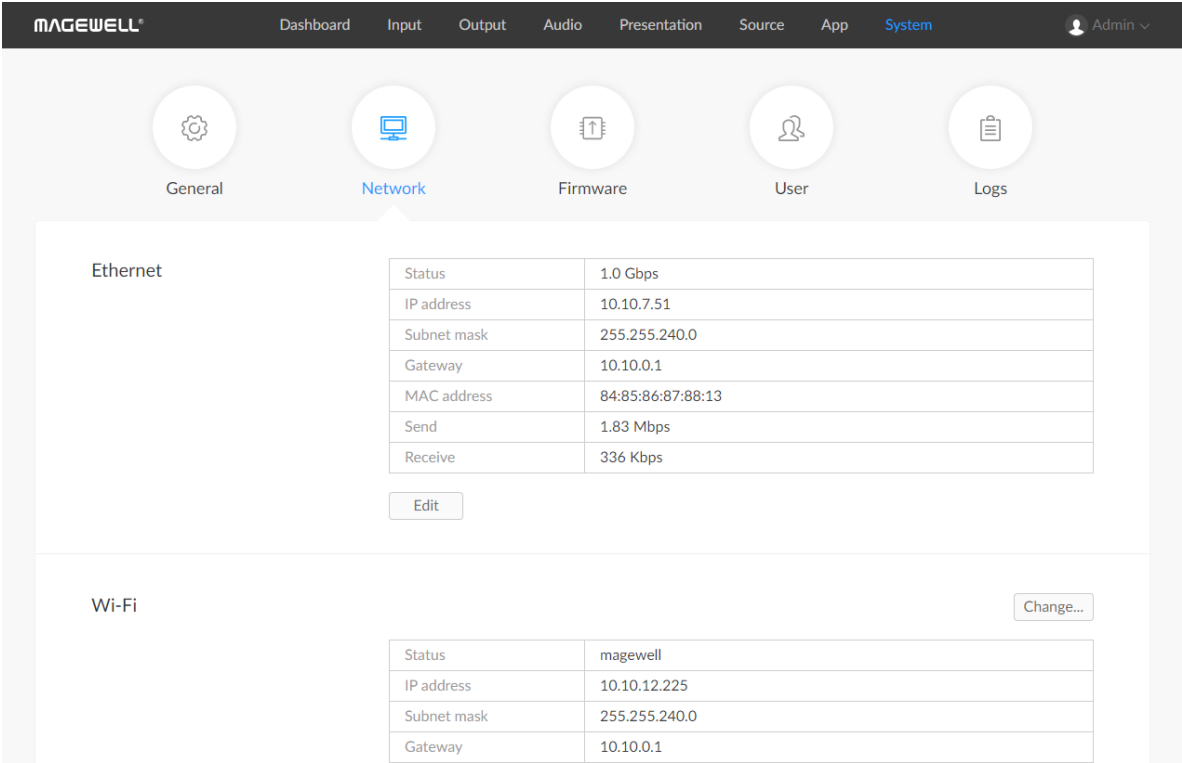
Make sure you click this button after configuring. Otherwise, your configuration will become invalid.

Setting Time Manually

You can also manually calibrate your system time.

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **General**.
3. In the **DATE & TIME** area, disable **Set Time Automatically**.
4. Set **Date** and **Time**, and click **Apply**.
Select data and time from the drop-down list boxes.
5. Click **Apply**.

Make sure you click this button after configuring. Otherwise, your configuration will become invalid.



Network Configuration

After connected to a network, USB Fusion can be accessed through an App and a web UI for related operations and configurations.

USB Fusion can connect to a network in the following ways:

- Ethernet: provides stable network connection
- Wi-Fi: provides flexible network connection
- USB RNDIS/ECM: provides virtual network connection after two devices are connected via a USB cable. This method can be used when no Ethernet nor Wi-Fi is available.

Setting Ethernet

Viewing Network Information

After USB Fusion connects to an Ethernet network, you can view the following Ethernet connection information in the **Ethernet** area on the **Network** page.

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **General**.
3. In the **Ethernet** area, view Ethernet connection information.
 - **Connection:** Ethernet connection status
 - **Down:** The network port is down.
 - **Disconnected:** No network is connected.
 - 10 Mbps, 100 Mbps, 1.0 Gbps, 2.5 Gbps, 5 Gbps, 10 Gbps: Ethernet connection speed
 - **IP Address:** IP address of the USB Fusion device
 - **Subnet Mask:** a 32-bit mask that divides an IP address into two parts,

network address and host address

- **Gateway:** IP address of the gateway, which connects different networks
- **Mac address:** MAC address of the current network adapter
- **Send:** data sending speed of USB Fusion
- **Receive:** data receiving speed of USB Fusion

Using a Static IP Address

USB Fusion uses an DHCP-assigned IP address by default, which can effectively avoid IP address conflict, but can also result in constant IP address changes.

if no DHCP service is available in a network, you can manually set a static IP address for USB Fusion. The static IP address will remain unchanged. However, you must make sure that this IP address is not used by any other device on the same network.

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **General**.
3. In the **Ethernet** area, click **Edit**.
4. On the displayed window, enable **Set IP Address Manually**, and set **IP Address**, **Submask**, and **Gateway**.

The current network settings are used by default. Only IPv4 addresses are supported, while IPv6 address are not.

To change back to using the DHCP service to obtain an IP address, disable **Use Static IP Address** and click **Apply**. The parameters in the dialog box will be restored to their defaults.

5. Click **Apply**.

If you are currently accessing the web UI using an Ethernet IP address, since the original IP address can no longer be used for access, the device will automatically reboot so as to use the new IP address for access. The reboot will take a few minutes. After the reboot, you will be directed to the login page.

- 6. In the address bar of a browser, enter the new IP address to ensure it can be used to access USB Fusion.

If you are currently using an Ethernet IP address for access, skip this step.

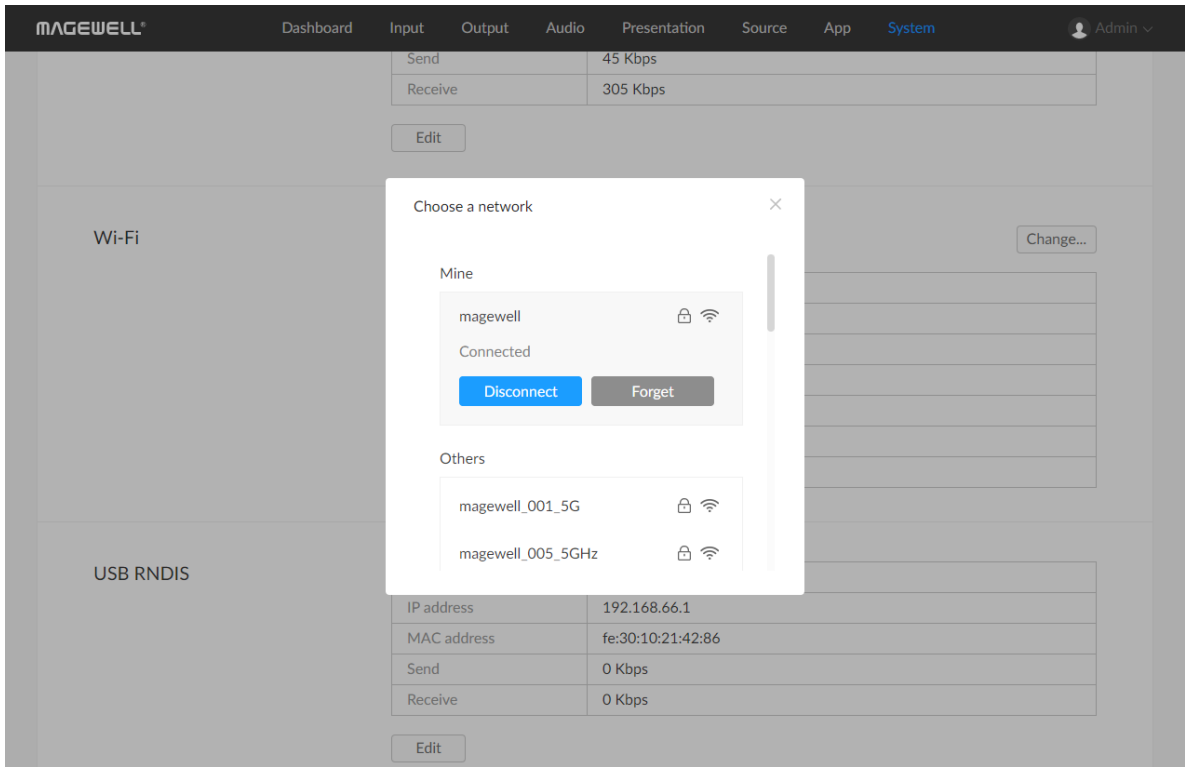
Setting Wi-Fi

On the Web UI, you can configure USB Fusion to use a Wi-Fi network.

Connecting to a Wi-Fi Network

You are advised to use a 5GHz Wi-Fi network for more stable connection and better performance. 2.4GHz Wi-Fi is more susceptible to interference and can result in unstable connection when multiple networks exist in the same environment or many devices connect to the same network.

- 1. Log in to the web UI as the Admin user.
- 2. Choose **System** > **Network**.
- 3. In the **Wi-Fi** area, click **Change....**
A list of available Wi-Fi networks are displayed.
 - **Mine**: lists all networks that has been connected previously. The currently connected network will display at the top.



- **Others:** lists other available networks.

A lock icon indicates that the network requires a password to connect.

The Wi-Fi icon indicates the network connection strength.

4. In the Wi-Fi list, click a network and click **Connect**.

- If a network requires a password, you need to first enter the password.

- If you want to automatically connect to the network, check **Auto connect**.

If the current Wi-Fi is disconnected, USB Fusion will automatically attempt to connect to the network with **Auto connect** enabled. If this is enabled for multiple networks, it will connect to the first detected one.

If no Wi-Fi network is checked the Auto connect option, the device cannot automatically connect to a Wi-Fi network after device reboot or Wi-Fi disconnection.

A connected network will show in the **Mine** area with the **Connected** status. You can:

- Click **Disconnect** to disconnect from the network. The next time you connect to the network that requires password, you no longer need to enter the password.
- Click **Forget** to forget the network. After this, the network will be removed from the **Mine** list. If the network requires password, next time you will need to enter a password when connecting to it.

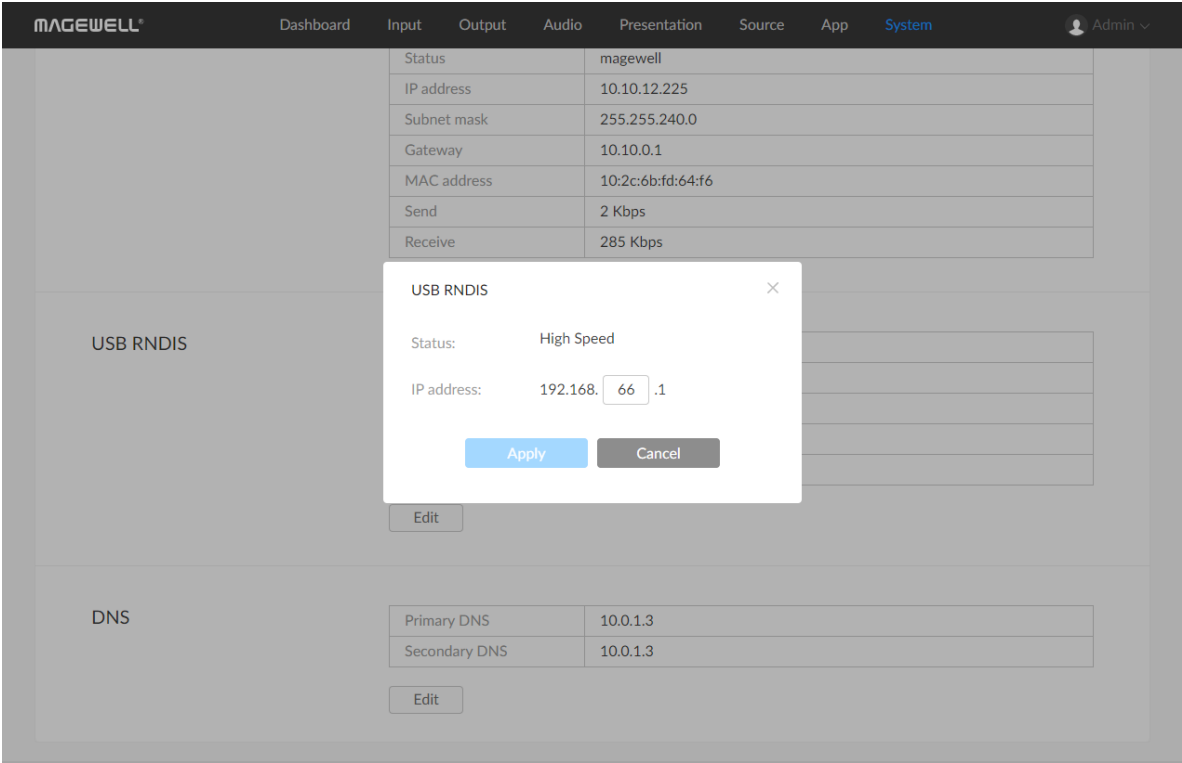
5. Click the close button at the upper right corner.

The **Wi-Fi** area will show the current Wi-Fi connection information.

Viewing Wi-Fi Connection Information

After connecting to a Wi-Fi network, you can view the Wi-Fi connection information in the **Wi-Fi** area. If no Wi-Fi is connected, **Wi-Fi not available** will be displayed.

1. Log in to the web UI as the Admin user.
2. Choose **System** > **Network**.
3. In the **Wi-Fi** area, view Wi-Fi connection information:
 - **Connection:** Wi-Fi connection status
Down: The network port is down. **Disconnected:** No network is connected. *Network name:* name of the connected network
 - **IP Address:** IP address of the USB Fusion device
 - **Subnet Mask:** a 32-bit mask that divides an IP address into two parts, network address and host address
 - **Gateway:** IP address of the gateway, which connects different networks
 - **Send:** data sending speed of USB Fusion
 - **Receive:** data receiving speed of USB Fusion



Setting USB RNDIS

When no Ethernet nor Wi-Fi is available, you can use the USB RNDIS function to establish a virtual network between a computer and USB Fusion. USB Fusion comes with a default RNDIS IP, namely 192.168.66.1.

Viewing USB RNDIS Information

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **Network**.
3. In the **USB RNDIS** area, view USB RNDIS connection information:
 - **Connection:** USB RNDIS connection status
Down: The network port is down. **Disconnected:** No network is connected. **Full Speed:** USB 1.1 speed at 12 Mbps **High Speed:** USB 2.0 at 480 Mbps **Super Speed 5G:** USB 3.0 speed at 5 Gbps
 - **IP Address:** IP address of the USB Fusion device
 - **Subnet Mask:** a 32-bit mask that divides an IP address into two parts, network address and host address
 - **Gateway:** IP address of the gateway, which connects different networks
 - **Send:** data sending speed of USB Fusion
 - **Receive:** data receiving speed of USB Fusion

Changing the USB RNDIS IP Address

- If there is no conflict within the network, it is not recommended to change the USB RNDIS IP address.
- It is not recommended to connect multiple USB Fusion devices to the same computer. If you connect multiple devices, only the first

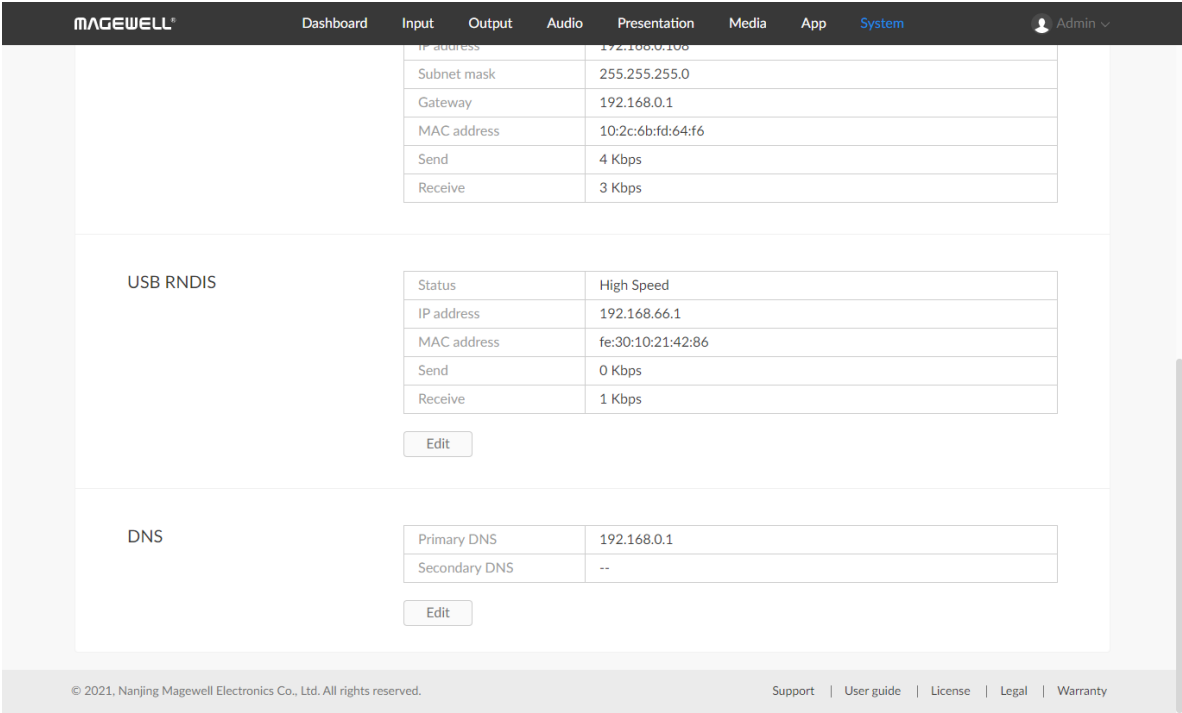
device is assigned the default IP address. You will need to change the IP address of previous devices for the subsequent devices to successfully connect to the computer.

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **Network**.
3. In the **USB RNDIS** area, click **Edit**.
4. In the displayed dialog box, set **IP address**.
You can only change the third segment of the address. Make sure that the new IP address is not occupied in the local network.
5. Click **Apply**.

If you are currently accessing the web UI using an USB RNDIS IP address, since the original IP address can no longer be used for access, the device will automatically reboot so as to use the new IP address for access. The reboot will take a few minutes. After the reboot, you will be directed to the login page.

6. [Use USB RNDIS/ECM](#) to access the web UI to ensure that the new IP address can be used for access.

If you are currently using USB RNDIS/ECM for access, skip this step.



Setting DNS

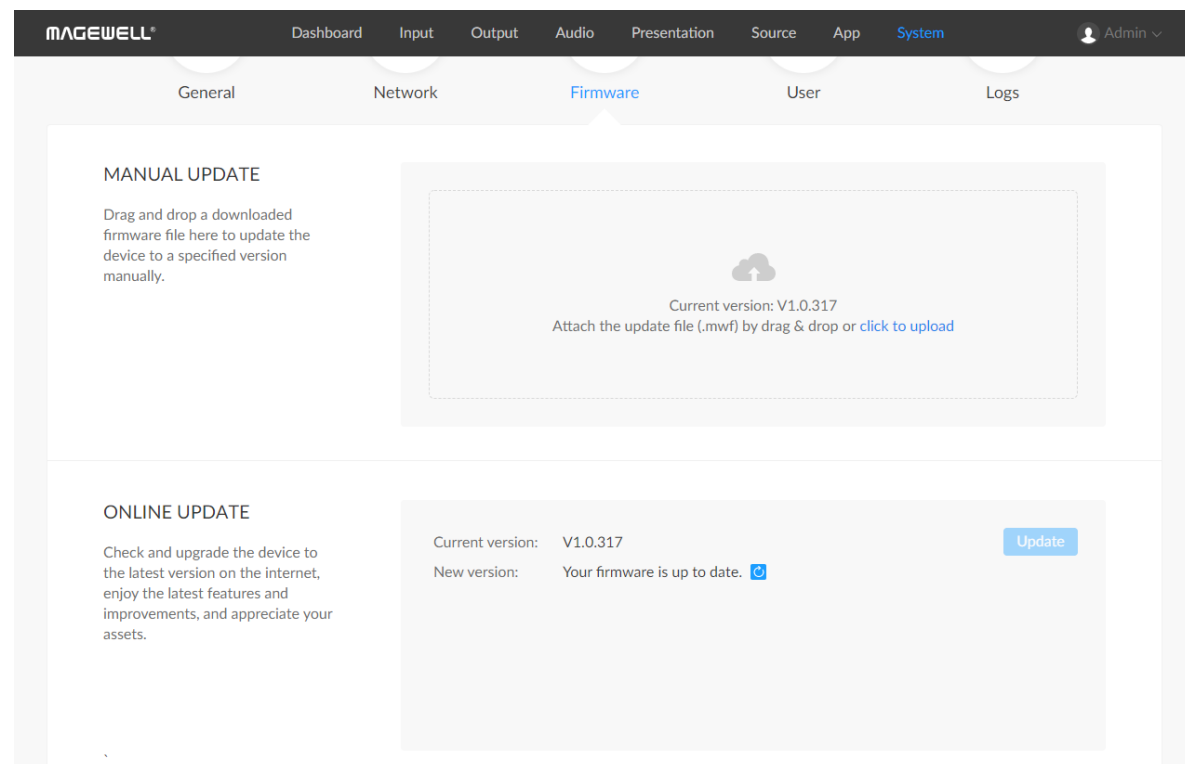
A DNS server provides domain name resolution service, namely resolving a domain name to an IP address. When DHCP is used, the DHCP server will automatically obtain the DNS service. When the network does not support DHCP, you need to manually set DNS servers.

You can set primary and secondary DNS servers to enhance availability. When the primary server is down, the secondary server will take over.

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System > Network**.
3. In the **DNS** area, click **Edit**.
4. In the displayed dialog box, enable **Set DNS Manually**. Set the following parameters:
 - **Primary DNS:** IP address of the primary DNS server. Mandatory. The default is the current network setting. Ensure you enter a valid DNS server address, which must be an IPv4 address, not an IPv6 address.
 - **Secondary DNS:** IP address of the secondary DNS server. Optional. The value is left empty by default. Ensure you enter a valid DNS server address, which must be an IPv4 address, not an IPv6 address.

To change back to using the DHCP service to obtain an IP address, disable **Set DNS Manually** and click **Apply**. The DNS addresses will be restored to the automatically obtained ones.

5. Click **Apply**.



Firmware Update

Both manual update and online update are supported. Manual update allows you to import any version while online update automatically updates to the latest version.


Manually Updating Firmware

Before updating, download the firmware from the official website to your local computer.

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System > Firmware**.
In the **MANUAL UPDATE** area, you can view the current firmware version.
3. In the **MANUAL UPDATE** area, click **click to upload** in the file upload box to select the firmware file stored locally and upload.
You can also drag the firmware file to the file upload box.
The device will automatically verifies if the update file is valid. If yes, the device then loads the file.
4. In the **Manual Update** window, click **Update**.
 - The update consists of operations including erasing and writing, so you need to wait for a while.
 - While updating, do not shut down/reboot the device, or disconnect from the network.
 - If the update is interrupted due to unexpected exceptions (such as power outage or network disconnection), the firmware will roll back to the factory version, and you need to update the firmware again.

5. When the update is completed, click **Reboot**.
The reboot will automatically disconnect from and then connect to the network. when the reboot is completed, you will be directed to the web UI login page.
6. Log in to the web UI again and check **Firmware version** in the **USB Fusion** area on the **Dashboard** page.
The firmware version should be the one you just updated to.

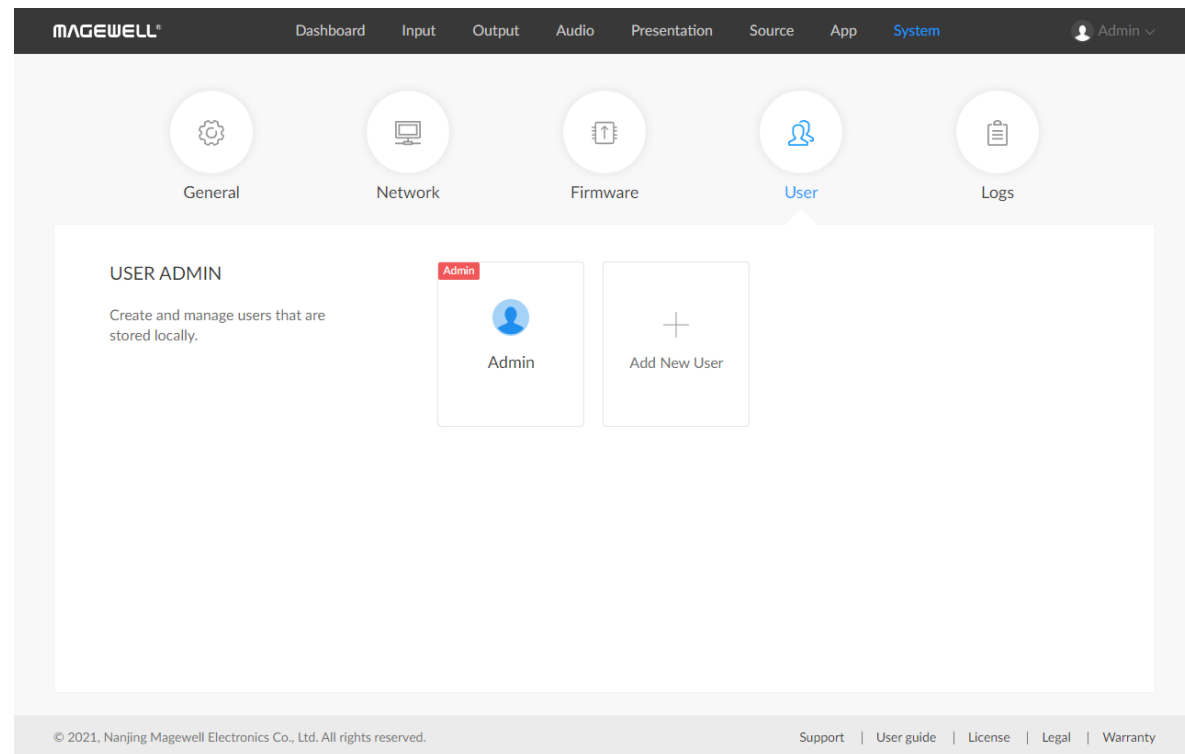
Updating Firmware Online

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **Firmware**.
3. In the **ONLINE UPDATE** area, check if any update is available.
You can click the update icon  next to **New version** to refresh.
4. If update is available, click the **Update** button.
 - The update consists of operations including erasing and writing, so you need to wait for a while.
 - While updating, do not shut down/reboot the device, or disconnect from the network.
 - If the update is interrupted due to unexpected exceptions (such as power outage or network disconnection), the firmware will roll back to the factory version, and you need to update the firmware again.
5. When the update is completed, click **Reboot**.
The reboot will automatically disconnect from and then connect to the network. when the reboot is completed, you will be directed to the web UI login page.
6. Log in to the web UI again and check **Firmware version** in the **USB Fusion**

area on the **Dashboard** page.

The firmware version should be the one you just updated to.

Online update does not support version rollback. If you need to roll back, use manual update.



Managing Users

USB Fusion has a preset Admin user that cannot be deleted. The Admin user can create and manage users for the current USB Fusion device.

Creating Users

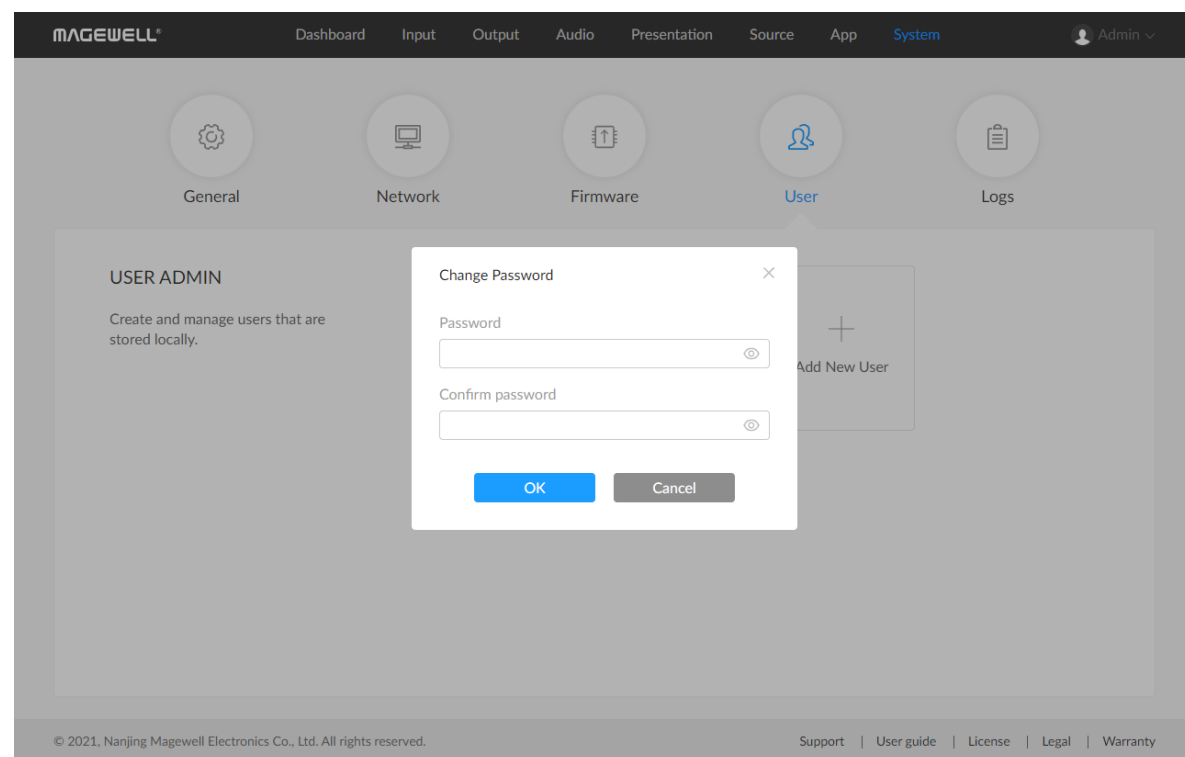
Multiple users can access the same device for monitoring or other operations.

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **User**.
3. On the **User** tab page, click the **Add New User** button.
4. Enter the user name and password, and confirm the password.
 - The user name is case sensitive, ranging from 3 to 12 characters consisting of A-Z, a-z, 0-9 and underscores (_).
 - The password is case sensitive, ranging from 1 to 32 characters consisting of A-Z, a-z, 0-9, and special characters _-~!@#\$%^&*~+=
5. Click **OK**.
6. Repeat steps 3 to 5 to add more users.

Deleting Users

1. [Log in to the web UI as the Admin user.](#)
2. Choose **System** > **User**.
3. On the **User** tab page, move the mouse to a user and click the **X** icon at the upper right corner.

The **Admin** user cannot be deleted.
4. In the displayed dialog box, click **Yes**.



Resetting the Password

1. [Log in to the web UI as the Admin user.](#)

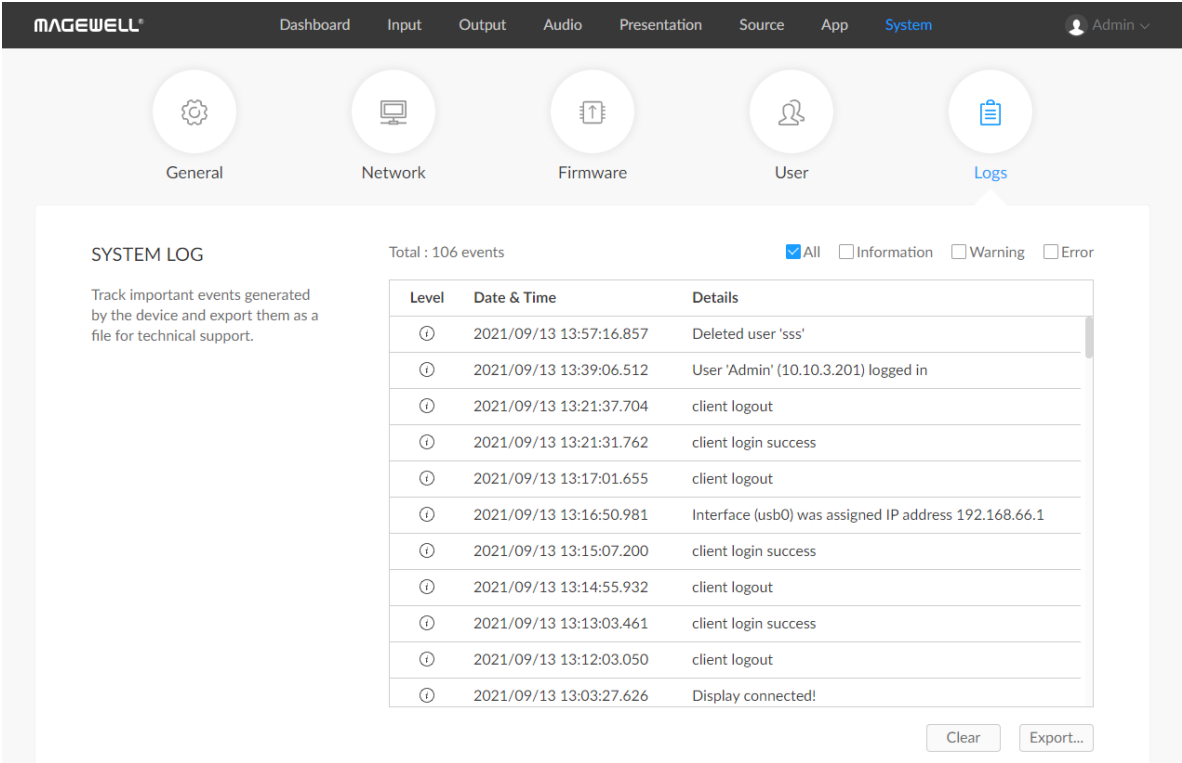
If you need to reset the password of the Admin user, you need to reset the device to restore to the default Admin account. For details, see [Resetting USB Fusion](#).

2. Choose **System** > **User**.
3. On the **User** tab page, move the mouse to a user and click **Set password**.
4. In the displayed window, enter the new password, and confirm the new password.

The password is case sensitive, ranging from 1 to 32 characters consisting of A-Z, a-z, 0-9, and special characters _~!@#\$%^&*~+=

5. Click **Yes**.

The new password will take effect immediately.



Managing Logs

When you need support service, providing logs to support engineers can often help troubleshooting your problem. Only the Admin user can export logs.

1. [Log in to the web UI as the Admin user.](#)

2. Choose **System > Logs**.

3. (Optional) In the **System Log** area, filter logs.

By default, all logs are displayed in the table. Check the following boxes to display corresponding logs:

- **All:** Check to display all logs.
- **Information:** Check to display information logs. This log level records user operations and system events, such as login and signal locking.
- **Warning:** Check to display warning logs. This log level records system exceptions, such as Ethernet disconnection, and signal not locked.
- **Error:** Check to display error logs. This log level records serious system errors, such as device initiation failure.

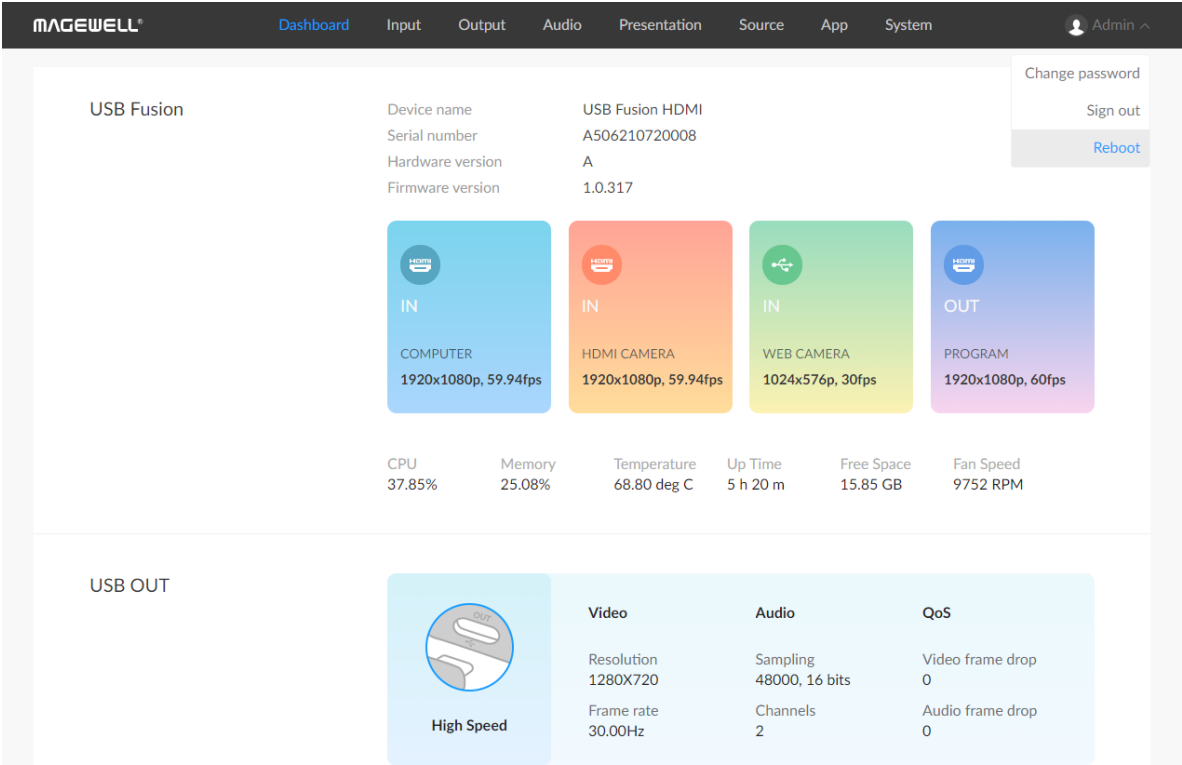
The total number of logs is also displayed above the log list.

4. (Optional) Click **Export...** to export a log file in .html format.

In the displayed window, click **Export**.

5. (Optional) Click **Clear** to remove all logs.

In the displayed window, click **Yes**.

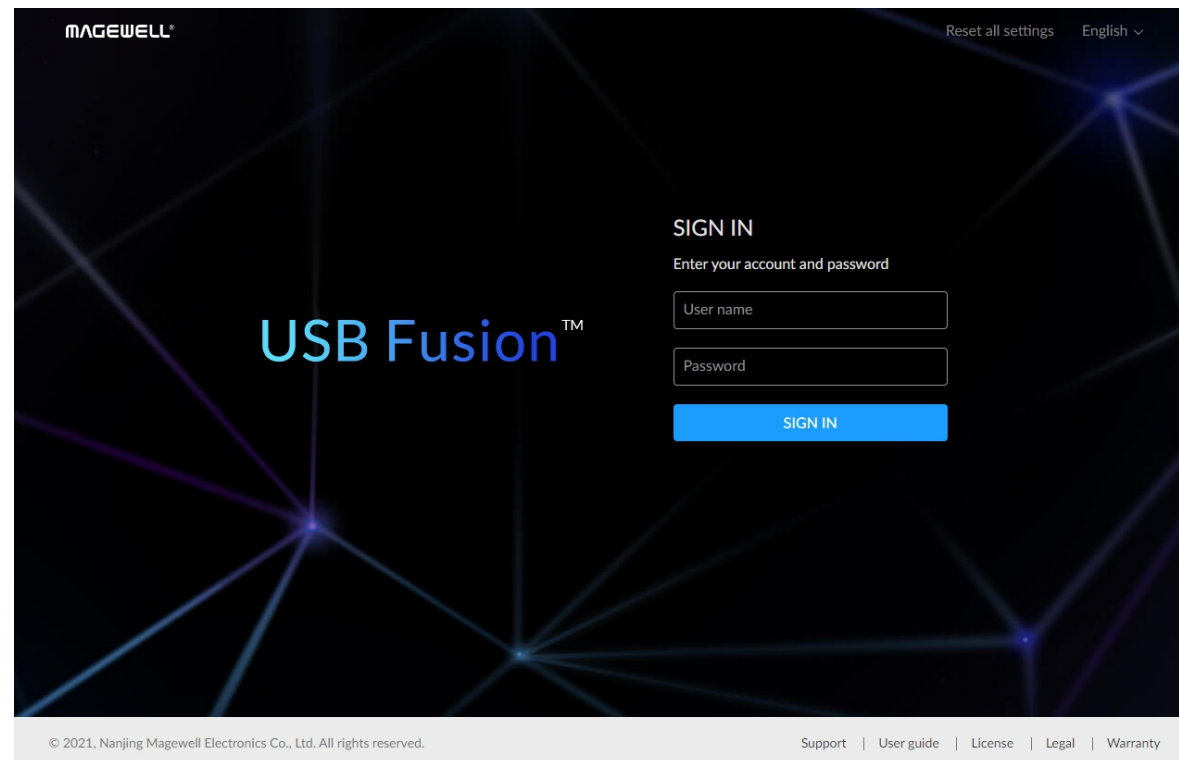


Rebooting USB Fusion

When USB Fusion cannot run properly, you can reboot the device for troubleshooting.

⚠ Rebooting will not make the current device settings invalid.

1. [Log in to the web UI as the Admin user.](#)
2. At the upper right corner of the web UI, click the user name, and click **Reboot**.
3. In the displayed window, click **Reboot**.
The reboot will automatically disconnect from and then connect to the network. when the reboot is completed, you will be directed to the web UI login page.



Resetting USB Fusion

Both the Admin user and common users can reset USB Fusion. To avoid unintended resetting, you can only reset the device after connecting to it through USB RNDIS.

⚠ Note: The resetting will restore your device to default settings. You will lose your custom settings, presentations, sources, recordings, etc.

1. Use an USB cable to connect USB Fusion and your computer.
2. On the computer, open a browser and enter the USB RNDIS IP address in the address bar.
The default IP address is 192.168.66.1. You are not advised to change this address unless IP address conflict exists in the local network.
3. Click **Reset all settings** at the upper right corner of the web UI login page. In the displayed window, click **Reset**.
Resetting may take a few minutes to complete. Do not shut down or operate the device during the resetting.

FAQs

General

How is USB Fusion different from other capture devices?

USB Fusion is a member of Magewell capture product family, but features more advanced functions compared to other capture devices, mainly:

- Enhanced capture capability: simultaneously support two [HDMI](#) HD inputs and one USB HD input
- Production capability: support switching sources and compositing sources into a multi-view layout ([picture in picture](#) or [side by side](#)). When used in conjunction with the Web UI and App, USB Fusion allows using video/audio files, and supports many more video processing and production functions, including video processing, recording, and annotating.

Is USB Fusion plug-and-play?

Yes. After configuring input and output devices to USB Fusion, you can immediately use the video/audio captured by USB Fusion on your computer, without any configuration of USB Fusion.

How do I produce my presentation with USB Fusion?

USB Fusion provides three ways for you to produce a [presentation](#):

- Buttons: Directly use the buttons on the USB Fusion device to switch sources or composite them into a PIP or side-by-side layout.
 - Web UI: More production functions are available on the Web UI. Besides switching and compositing sources, you can also process the sources, adjust the volume, create multiple presentations, configure and manage the device, and more.
 - App: More production functions are available on the Web UI. Besides switching and compositing sources, you can also edit sources, annotate on the scenes, add notes, adjust volume, create multiple presentations, record your [presentation](#), and more.
- When hardware buttons are used, the [HDMI](#) camera source and [webcam](#) source cannot be used simultaneously. When both cameras are connected, only the output from the [HDMI](#) camera can be displayed; the output from the [webcam](#) is displayed only when the [HDMI](#) camera is disconnected.

- When the USB Fusion App or the non-default mode on the Web UI is used to switch scenes, both the [HDMI](#) camera source and the [webcam](#) source can be used simultaneously.

How do I configure USB Fusion?

USB Fusion is easy to use. You can even use it without any configuration.

If you need to configure it to meet custom needs, you can go to the Web UI to configure the inputs, outputs, audio, [presentation](#), media, and system.

How do I confirm the A/V inputs are successfully connected?

1. Check whether the corresponding light is on.
2. Check the A/V inputs on the Web UI.
 - On the **Input** tab page, check the connection status and signal information.
 - In the **Volume** area on the **Audio** tab page, check whether the corresponding volume meter jumps.

Can I use one computer as both the streaming computer and source computer?

[Streaming computer](#) means the computer connected to the USB OUT port of USB Fusion, which is where the meeting software or streaming software is located.

Source computer means the computer connected to the COMPUTER port of USB Fusion, which can be used to show [presentation](#) materials.

It is common practice to use one computer as both the [streaming computer](#) and the source computer. However, you will need some extra configuration to make the video and audio normal. For example, in order for the computer to show only the [presentation](#) PPT and no other irrelevant software (such as the meeting software in use), you need to set up dual monitors on your computer. If you need to use the computer audio, you need to select the device whose name containing **USB Fusion** (instead of **USB Fusion USB-C**) as your audio output device in your computer system settings.

Video

How many video sources can USB Fusion simultaneously capture?

USB Fusion has two [HDMI](#) input ports and one WEB CAMERA port. The two [HDMI](#) ports can simultaneously capture video.

Whether the WEB CAMERA port and [HDMI](#) CAMERA port can simultaneously capture video depends on how you use USB Fusion:

- If you only use the buttons on USB Fusion (or the default buttons on the Web UI), the WEB CAMERA port and [HDMI](#) CAMERA port cannot simultaneously capture video. When both ports are connected with devices, the [HDMI](#) port will capture video while the WEB CAMERA port will not. When the device is disconnected from the [HDMI](#) CAMERA port, then the WEB CAMERA port will capture.
- If you use the App or Web UI, the Web CAMERA port and [HDMI](#) CAMERA port can simultaneously capture video.

Can an HDMI camera connect to the COMPUTER port?

The COMPUTER port is designed to connect a computer to accommodate common use cases. However, this port is a standard [HDMI](#) port and therefore can connect different types of [HDMI](#) sources, including the [HDMI](#) camera.

You can connect two [HDMI](#) cameras to capture video from different angles.

What is the format output from the USB OUT port?

The actual output of USB OUT is determined by the negotiation between USB Fusion and the receiving software. The upper limit is 1920x1080p, 60fps. All supported formats are as follows:

- Resolutions: 1920x1080, 1280x720, 640x480
- Frame rates for all resolutions: 60fps, 30fps, 15fps
- Color space: 8-bit YUYV 4:2:2, 8-bit NV12 4:2:0

Can the HDMI OUT port loop the source videos?

By default, the [HDMI](#) OUT port output the same content as the USB OUT port, namely the PROGRAM.

On the Web UI, you can also configure the [HDMI](#) OUT port to loop the source connected to the COMPUTER port or [HDMI](#) CAMERA port. For details, see [Selecting the Output Content](#).

The [HDMI](#) OUT port cannot simultaneously output PROGRAM and the COMPUTER or [HDMI](#) CAMERA source.

How do I record my presentation and obtain the recordings?

You need to use the USB Fusion App for recording. The recording will be stored in the disk embedded in USB Fusion. For details, see [Recording](#). You can download the recordings using the USB Fusion App or the Web UI. For details, see [Downloading Files from the Album \(App\)](#) [Downloading Videos/Screenshots \(Web UI\)](#).

Audio

What audio inputs/outputs do USB Fusion support?

USB Fusion supports the following audio inputs and outputs:

- Audio inputs, including global audio and scene-specific audio:
 - Global audio includes microphone input connected through the headset port or WEB CAMERA port, line in input, BGM, and the system audio of the [streaming computer](#).
 - Scene-specific audio includes the COMPUTER audio, [HDMI](#) CAMERA audio, WEB CAMERA audio, and video file audio.
- Audio outputs: USB OUT output audio, monitoring audio (output through the headset port, WEB CAMERA port, and [HDMI](#) OUT port).

How do I adjust volume?

You can use the Web UI or USB Fusion App to adjust volume. For details, see [Adjusting Volume \(Web UI\)](#) or [Adjusting Volume \(App\)](#).

How to use the WEB CAMERA port?

The WEB CAMERA port is a standard USB Type-A port that can supports USB A/V sources, which can accommodate a variety of usage scenarios.

Supported Devices

The WEB CAMERA port supports webcams as well as audio input and output, such as the microphones and speakers on webcams.

This port can also connect Magewell USB Capture devices, with which you can connect a wider range of A/V devices.



Moreover, beside a single device, this port also allow multiple devices to connect and work, for example, multiple webcams through a USB Hub.

Using Video

A video device can work immediately after it is connected. If multiple video devices are connected, USB Fusion will use the first one discovered. You can select devices on the Web UI and set the video format. For details, see [Setting WEB CAMERA Video](#).

Using Audio

The WEB CAMERA port supports two-channel audio input and output, which are disabled by default and can be enabled on the Web UI.

- Audio input: can be used as a global microphone or WEB CAMERA audio
 - Global microphone: audio that is used throughout a [presentation](#) and does not switch along with any scene. For configuration details, see [Selecting a Global USB Microphone](#). When adjusting its volume, you need to adjust the volume of .
 - WEB CAMERA audio: audio that switches in and out along with the WEB CAMERA video. For configuration details, see [Setting WEB CAMERA Audio](#). When adjusting its volume, you need to adjust the volume of .

The same audio input device can be selected as either the global microphone or the WEB CAMERA audio. If multiple audio devices are connected, then different devices can be selected for different purposes.

- Audio output: The audio output can be used for monitoring. For configuration details, see [Selecting a USB Audio Output Device](#).



How to use global microphones with USB Fusion?

Global microphones will work throughout a [presentation](#), and do not switch in/out with any scene. USB Fusion provides three ports that allows global microphone input, namely, the headset port, the line in port, and the WEB CAMERA port. All the global microphone inputs can work simultaneously.

- When the headset port is connected with a headphone (with microphone), the microphone can work directly without any configuration.
- When the line in port is connected with a microphone, the microphone can also work immediately. However, the volume of the microphone input may be low, because the microphone signal is low compared with line in signal. In this case, you need to set line in gain to boost the microphone. For details, see [Advanced Settings](#).
- When the WEB CAMERA port is connected with a device with microphone input, the microphone input is disabled by default and you need to manually enable it on the Web UI. For configuration details, see [Selecting a USB Audio Output Device](#).

Why is there no audio from the source connected to the COMPUTER port?

Check whether on the computer connected to the COMPUTER port, USB Fusion is selected as the audio output device. Only when USB Fusion is selected will the computer output audio to USB Fusion.

The configuration varies depending on the OS system. For example, on Windows 10, choose  > , then choose **System** > **Sound**, and select the name containing **USB Fusion** (instead of **USB Fusion USB-C**) from the **Choose your output device** drop-down list box.

Why is there only noise when I plug a headphone to the headset port?

Check whether your headphone uses the CTIA standard. The headset port uses the CTIA standard, so when an OMTP-compliant headphone connects to the port, there will be some anomaly. In this case, you need to connect your headphone through an OMTP-to-CTIA converter.

Can I hear the speech from other meeting attendees on USB Fusion?

Yes, you just need to select USB Fusion USB-C as the speaker in your meeting software.

Why do I hear an echo when monitoring audio?

Check whether the receiving software on your [streaming computer](#) has enabled monitoring. If yes, disable the monitoring and you will no longer hear the echo.

USB Fusion can monitor a source audio, and the system audio of the [streaming computer](#). When a source audio reaches the receiving software on a [streaming computer](#), and the software has enabled monitoring, the source audio will become part of the system audio of the [streaming computer](#), and sent back to USB Fusion, which means you will hear the audio a second time (the source audio itself, and the source audio returned as the system audio of the [streaming computer](#)), thereby causing the echo.

Web UI

How do I access the Web UI for the first time?

On Windows, Linux, and macOS, you can use the static IP address to access the Web UI for the first time:

1. Make sure that USB Fusion has connected to power.

2. Connect a USB cable from the USB OUT port of USB Fusion to a computer.
The cable connection will establish a network connection between your computer and USB Fusion through USB RNDIS/ECM.
3. Open a browser on the computer, enter the static IP address for USB RNDIS/ECM, and press **Enter**.
The default address for USB RNDIS/ECM is 192.168.66.1.

How can I access the Web UI?

USB Fusion supports flexible method for accessing its Web UI:

- Through an IP address
 - The default USB RNDIS/ECM IP address is 192.168.66.1.
 - The Ethernet or Wi-Fi IP address can be obtained from the Web UI.
- Through Windows network discovery

For details, see [Accessing the Web UI](#).

App

USB Fusion is connected to a network, but the App cannot find it?

Check that USB Fusion and the mobile device with the USB Fusion App installed are connected to the same network. If no, the USB Fusion device will not show or will be in the offline state on the App device connection page.

A Wi-Fi connected iOS device cannot find USB Fusion devices?

On iOS 14 and later, if the iOS device has connected to the same network as USB Fusion but still cannot find USB Fusion, you need to consider whether the required permission is enabled.

On iOS 14 and later, when you first use USB Fusion App, you will be prompted to allow the App to find and connect to devices on the local network. If you do not allow, the App will not be able to find USB Fusion devices on the local network.

To allow the App to find USB Fusion devices, go to **Settings** > **Privacy** > **Local Network**, find the USB Fusion App, and turn on the switch next to it.

Can the App control the start and end of my presentation?

The App does not have a switch for starting or ending your [presentation](#).

When USB Fusion is connected to a computer through the USB OUT port, the device starts delivering video/audio streams to the computer. The start of your [presentation](#) depends on the receiving software on the computer.

For ending the [presentation](#), even though there is no end button, you can use the [FTB](#) button for your [presentation](#) to fade into black and become muted, which has the same effect as an end button.

How do I annotate a scene in rapid motion?

A scene in rapid motion may be difficult to annotate on the App. In this case, you can use the Freeze function.

Whether the source is a captured video or a video file, you can double-tap on the scene to freeze the scene, making the scene still, and then annotate. After you finish annotating, you can double-tap the scene to unfreeze.

Can I set the recording format on the App?

Currently you cannot set the recording format on the App. The default recording format is 1080P, 60 FPS, 8 Mbps. If you need to change the recording format, you can configure the settings on the web UI. For details, see [Setting the Recording Format](#).

What to do when I forget the device connection password?

By default, no password is required when your USB Fusion App connects to a USB Fusion device. If you have enabled password verification but forgot the password, you can directly set a new password on the web UI. Specifically, you can go to the **App** tab page on the Web UI, and click **Change Password** next to **Password** in the **Login** area, and then enter and confirm a new password.

How to import a resource from iCloud Drive

- iCloud Drive is not available on Android phones.
- Ensure your iOS version is 11 or later.

1. Ensure you have signed in to your iPhone using your Apple ID.
2. If you have not signed in, you can follow the steps below:
 - i. Tap the *Settings* icon on your phone.
 - ii. Tap *Sign in to your iPhone* on the top of the *Settings* page.
 - iii. Enter your Apple ID and password, and tap *Sign in* at the upper right corner.



3. Ensure you have enabled iCloud Drive.

To enable iCloud Drive:

- i. Tap the *Settings* icon on your phone.
 - ii. Tap your Apple ID on the top of the *Settings* page.
 - iii. On the *Apple ID* page, tap *iCloud*.
 - iv. On the *iCloud* page, find *iCloud Drive* and switch it on.
4. Ensure that your iCloud Drive stores the resources you will use, like video clips, pictures, and songs.
To add resources to iCloud Drive, see the section "How do I access my files in iCloud Drive?" on the [official website](#).

5. In USB Fusion App, import a source from iCloud Drive.

You can import a *Video Clip*, *Picture or Logo* or music from iCloud Drive. The following uses importing a video clip as an example.

- i. At the upper left corner of the App, tap .
- ii. Tap  at the bottom of the scene list.
- iii. At the lower right corner of the scene editing page, tap **Import**.
- iv. Tap *Locations*.
This opens the file system page of iOS, where you can find apps or cloud drives managed by the Files App.
- v. Tap *Browse* at the bottom of the page.
- vi. Under *Locations*, tap *iCloud Drive*.
- vii. On the *iCloud Drive* page, tap the video clip you want.

The video clip is then imported to USB Fusion.

- If the video clip is on the cloud, indicated by a cloud icon on the upper right corner of the video clip thumbnail, the video clip is first downloaded and then imported to USB Fusion.
- If the video clip is already downloaded, it is directly imported to USB Fusion.

When you import video clips, other resource types such as pictures and songs cannot be tapped, and vice versa.

How to import a resource from Google Drive

For iPhone, ensure your iOS version is 11 or later.

1. Ensure you have installed the Google Drive app on your phone.

If you have not, download the app from your app store.

2. Ensure you have signed in to your Google Drive.

To sign in:

- i. Tap the Google Drive app on your phone to open it.

Opening the app will prompt you to sign in to Google Drive using your Google account.

- ii. On the *Sign in* page, enter your Google account.

If you do not have a Google account yet, tap *Create account* and follow the instructions to create your Google account and sign in.

3. In USB Fusion App, import a resource from Google Drive.

You can import a *Video Clip*, *Picture or Logo* or music from Google Drive. The following uses importing a video clip as an example.

- **On iOS:**

- i. At the upper left corner of the App, tap .

- ii. Tap  at the bottom of the scene list.

- iii. At the lower right corner of the scene editing page, tap **Import**.

- iv. Tap *Locations*.



This opens the file system page of iOS, where you can find apps or cloud drives managed by the Files App.

- v. Tap *Browse* at the bottom of the page.
- vi. Under *Locations*, tap *Google Drive*.
- vii. On the *Google Drive* page, tap the video clip you want.

The video clip is then imported to USB Fusion.

When you import video clips, other resource types such as pictures and songs cannot be tapped, and vice versa.

- **On Android:**

- i. At the upper left corner of the App, tap .
- ii. Tap  at the bottom of the scene list.
- iii. At the lower right corner of the scene editing page, tap **Import**.
- iv. Tap the menu list icon on the upper left corner.
- v. In the *Open From* list, tap the Google Drive icon.
- vi. Tap *My Drive*, *Shared with me*, or *Starred*.
- vii. Tap a video clip you want.

The video clip is then imported to USB Fusion.

When you import video clips, other resource types such as pictures and songs cannot be tapped, and vice versa.

Others

Does USB Fusion need a network connection to work?

USB Fusion does not need a network connection to capture and video and audio to the [streaming computer](#).

After the device is connected to a network, you can use the Web UI and App to access the device for configuration and operations. For example, you can configure the input video format and select the source for [HDMI](#) OUT output on the Web UI, and you can edit the sources and annotate on the App.

What to do when firmware update is interrupted unexpectedly?

While updating, do not shut down/reboot the device, or disconnect from the network, so as to prevent exceptions. If the update is interrupted due to unexpected exceptions (such as power outage or network disconnection), the firmware will roll back to the factory version, and you need to update the firmware again.

Glossary and Abbreviations

4K

4K resolution refers to a horizontal display resolution of approximately 4,000 pixels. Digital television and digital cinematography commonly use several different 4K resolutions. In television and consumer media, 3840×2160 (4K UHD) is the dominant 4K standard, whereas the movie projection industry uses 4096×2160 (DCI 4K).

EDID

metadata format for display devices to describe their capabilities to a video source (e.g. graphics card or set-top box) includes manufacturer name, basic display parameters, color characteristics, timings supported by the display, etc.

FTB

Fade to black. FTB allows your show to slowly disappear into a black, usually indicating the end of a scene or show.

HDMI

A proprietary audio/video interface for transmitting uncompressed video data and compressed or uncompressed digital audio data

PGM

Content being presented, namely, the content output from the USB OUT port.

Webcam

A video camera that feeds or streams an image or video in real time to or through a computer to a computer network, such as the Internet.

Side by side

Two images are placed side by side on the same screen, each presenting different content.

Picture in picture

One source is displayed as a small window on another source displayed in full screen, each presenting different content. For example, in a meeting, the big window can display the presentation materials, while the small window can show the presenter.

Deinterlacing

Deinterlacing is the process of converting interlaced video into a non-interlaced or progressive form.

Streaming Computer

The computer that receives the content from USB Fusion and delivers the content out, namely, the computer where the conferencing or streaming software (such as Zoom, OBS) is located.



Presentation

The collection of audio/video content you create on USB Fusion as a complete production for output. A presentation can consist of scenes, notes, and background music.

Support

Get the Latest Information

If you have any problems using Magewell products or need more technical information, please visit the official website www.magewell.com/usb-fusion for product introduction, user manual, and more.

To access help information for the USB Fusion App, you can open the App and tap  >  **Help** at the upper right corner of the app main UI.

Technical Support

- Go to the [Knowledge Base](#) to find answers to your problem. If you cannot find an answer, click **Contact Us** at the bottom to contact the support team.
- Submit your questions in the online Ticket System: tickets.magewell.com, or contact the Magewell Technical Support Team at support@magewell.net.

Warranty

Limited Warranty

Except otherwise set between you and Magewell in advance in a written form, the free limited warranty service starts from the date on your proof of purchase. The proof can be: sales contract, formal sales receipt, invoice or delivery note. The earliest date of these proofs is the starting date of the free limited warranty.

The period of free limited warranty goes as below:

- USB Fusion Family: one (1) year
- Accessories: one (1) year

How to get the limited warranty

1. Please contact the Magewell support team by email (support@magewell.net) first, to determine whether your problem can only be solved by returning it to Magewell for repair. Magewell might ask you to take photos of the front and back of the defective products.
2. Magewell will issue an RMA letter to you if it is confirmed that you need to return the faulty product for further examination or repair. Please fill in the RMA with necessary information as required.
If it is regular repair, you will be responsible for the shipping cost, duties and insurance cost (if applicable); if the product is DOA, Magewell will be responsible for the shipping cost.
3. If some components need to be replaced, Magewell will decide to repair, renovate or replace the components by itself. Magewell may use new or repaired component to repair the product. The repaired product can be expected to work normally and the performance to remain the same. Repaired products can work in a good working condition and at least function the same as the original unit. The original replaced component will become the property of Magewell and components which are replaced for the client will become his/her property.
4. If the product is within warranty, Magewell will repair or replace the faulty units at its own discretion. In circumstances where the faulty unit is replaced by another one, Magewell may use new, repaired or renovated units. The faulty unit will then become the property of Magewell while the replacement unit will become the property of the purchaser.
5. If the warranty expires, Magewell will inform the purchaser whether the products can be repaired and the maintenance costs they need to pay. If purchasers

decide to repair, Magewell will repair, renovate, or replace the components after receiving the maintenance costs. If purchasers give up repairing, Magewell will dispose of the faulty unit if the purchaser chooses that option.

6. The repaired or replaced product assumes 1) the remaining term of the Warranty of the replaced unit or faulty unit; 2) ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. The extended warranty is only valid for repaired/replaced components.
7. The period of service depends on the client's location (country and area) and the product.

To view the complete warranty policy, please visit [Terms and Conditions of Limited Warranty of Hardware Products](#).