



Capture Express

For  Windows

User Manual, Reference and FAQ

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Getting Started

Introducing Capture Express

Capture Express is a lightweight live video production software designed specifically for Magewell capture devices. It supports 4K Ultra-HD and SD video encoding, and provides a series of functions such as snapshot, recording, video cropping and color adjustment to help you easily create snapshots and video clips.

Supported Product Families

💡 The product families supported by Capture Express may change. Please refer to [this web page](#) for the latest information.

- Pro Capture
- USB Capture
- USB Capture Plus
- USB Capture Pro
- Eco Capture
- Gen 1

System Requirements

Operating System

- Windows 7 x64/x86 and above
- Windows Server 2008 x64/x86 and above

Processor

- Minimum: i3 dual-core @ 3.30GHz

- Recommended: i7 quad-core @ 2.66GHz+

Memory

- Minimum: 2GB RAM
- Recommended: 8GB+ RAM

Graphics Card

- Minimum: OpenGL 2.0
- Recommended: OpenGL 3.0+

NOTE: Nvidia or Intel Graphics Cards required for 4K video encoding

Installation

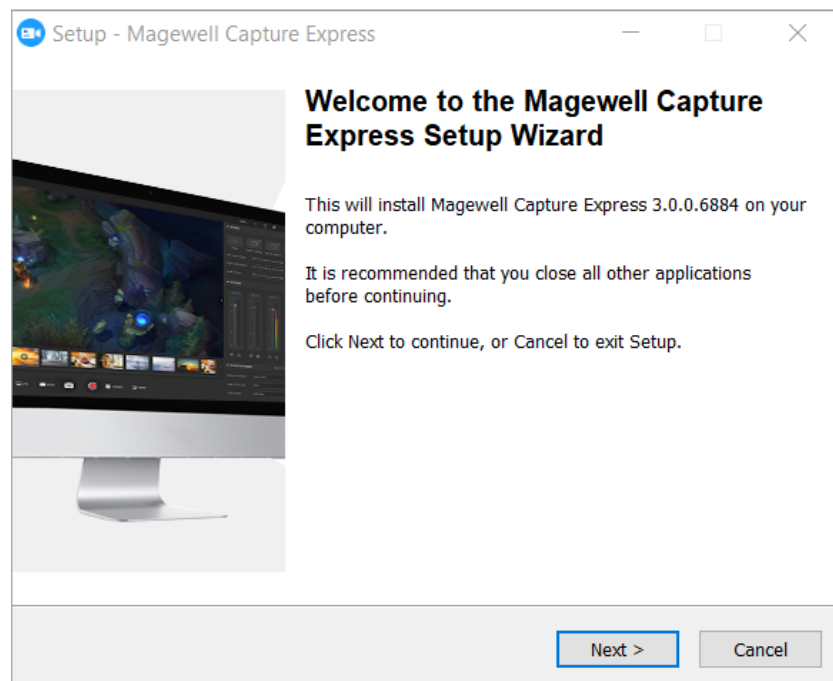


Figure 1. Magewell Capture Express Setup Wizard

Introduction

This chapter guides you through installing Capture Express.



Installation

To install Capture Express, follow these steps below:

1. Download the installer from [this web page](#).
2. Run the installer program (see figure 1) and follow the instructions provided.

Uninstallation

To uninstall Capture Express, follow these steps:

1. In the Windows *Start* menu , click *Settings*  > *Apps* to enter the *Apps & features* page. (See figure 2)
2. Select *Magewell Capture Express* and then click *Uninstall* to run the uninstaller.
3. The installer asks if you want to remove Capture Express and all its components. Select *Yes* to uninstall them.

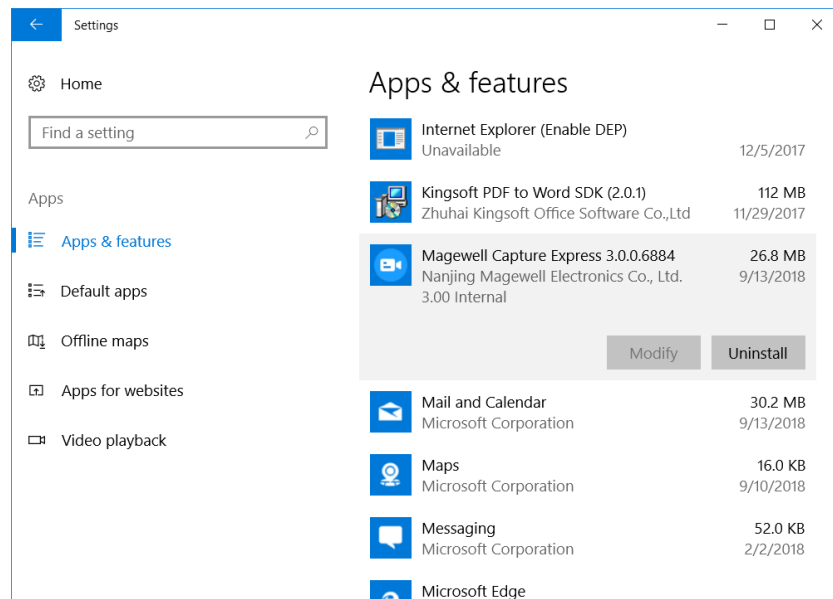


Figure 2. Uninstall Capture Express in the Windows "Apps & features" page

Tutorials

Introduction

The best way to get started using Capture Express is quickly working through all its main features. We provide you with a series of three tutorials to help you understand how to use this software to capture and record video.

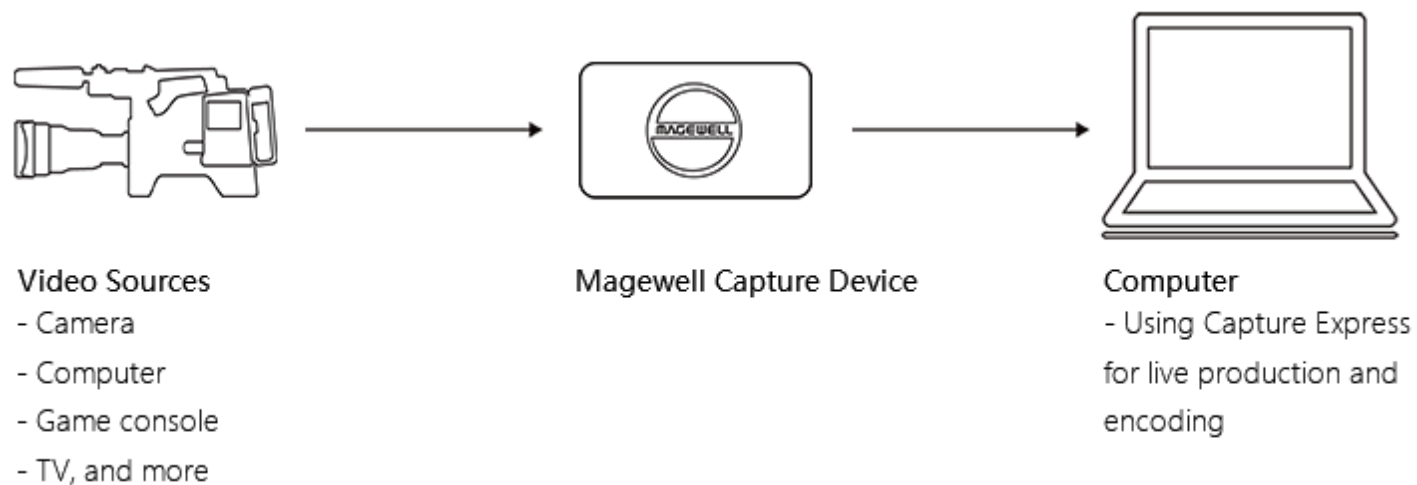
Since each tutorial builds on the skills and knowledge you've learned from the previous tutorials, it is recommended that you take the tutorials in order.

As you gain hands-on experience through inputting, capturing and outputting the video, you'll gain a deeper knowledge of Capture Express's organizational structure and working methods, thereby enhancing the proficiency in using it.

Tutorial 1: Basic Concepts

Tutorial Preparation

Before using Capture Express, you should connect the hardware according to the diagram below and turn on the video source and the computer.



Layout

The layout of the main window of Capture Express is shown in the following figure.

The screenshot shows the MAGEWELL Capture Express application window. The main preview area displays a 3D rendered scene of a forest with a large tree and a small cave entrance. The interface includes a toolbar at the top right, a settings panel on the right side, and a control/statistics bar at the bottom. The settings panel is expanded to show device and output format options. The control/statistics bar shows recording controls and system status information.

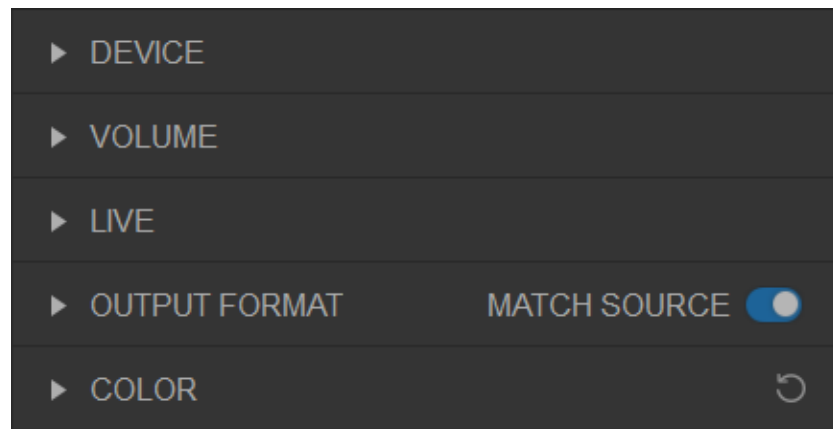
Preview Area
- Displays the preview of the output video.

Toolbar
- Contains the Video Scaling, No Border, Full Screen, and Settings buttons.

Album
- Displays the video clips and snapshots saved to your local directory.

Control/Statistics Bar
- Contains snapshot controls, recording controls, streaming controls, and statistics of the available recording space and time.

Capture Settings Panel
- Enables you to set the capture properties.



Capture Settings Panel

Tutorial 2: Setting Capture Properties

To set capture properties, click the arrow at the right of the main window to expand the Capture Settings Panel.

The Capture Settings Panel consists of these tabs: DEVICE, VOLUME, LIVE, OUTPUT FORMAT, and COLOR.


- **DEVICE tab:** Select the video capture device and audio capture device.
- **VOLUME tab:** Adjust the volume and monitor the audio level.
- **LIVE tab:** Configure live stream servers.
- **OUTPUT FORMAT tab:** Set the format of the output video, including resolution, frame rate, video bitrate, audio bitrate, aspect ratio, deinterlace, video cropping range, and advanced settings about encoding.
- **COLOR tab:** Set the color properties of the video, including brightness, contrast, hue, and saturation. When your capture card supports [HDR](#), you can also set the [HDR](#) type and [HDR](#) effect.

For details on how to use the Capture Settings Panel, see [Capture Settings Panel](#).

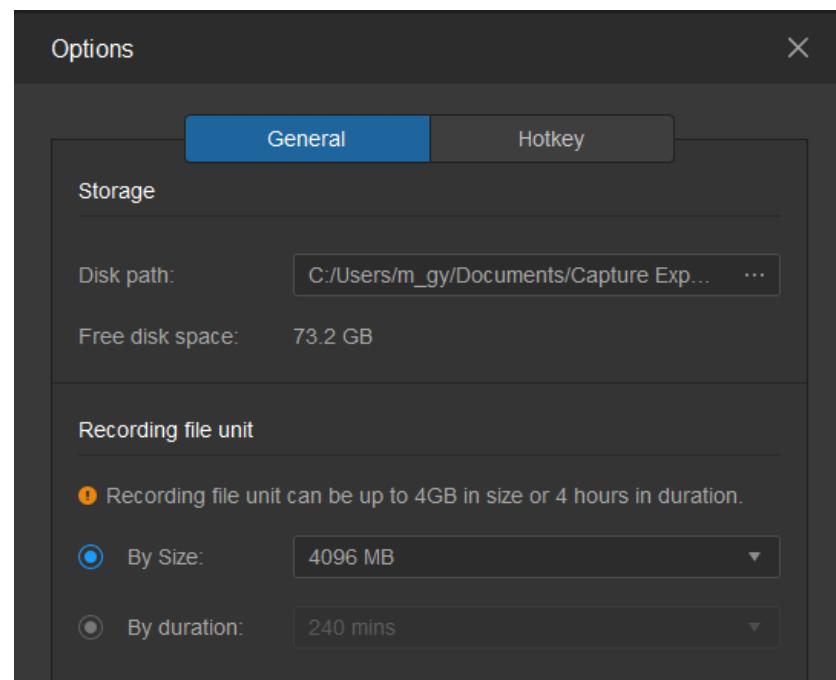
Tutorial 3: Recording & Streaming

This tutorial demonstrates how to quickly capture snapshots and video clips using Magewell's capture device.

Step 1. Specify the storage disk path and recording file unit

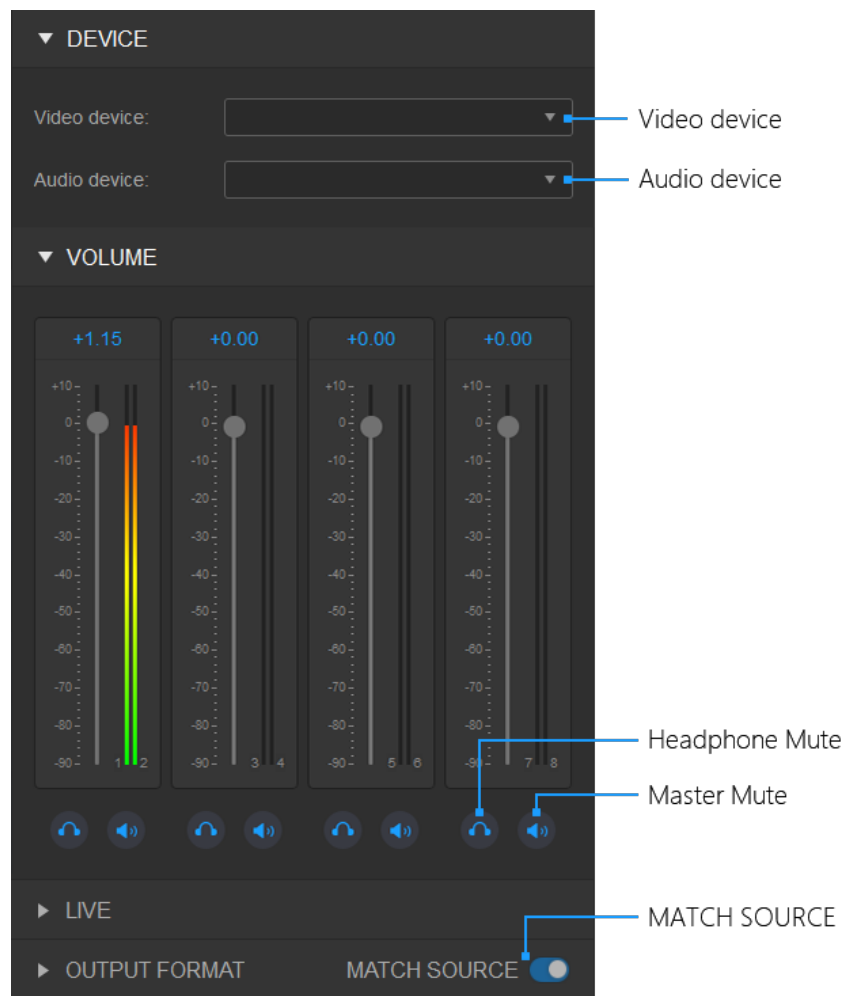
1. In the *Toolbar*, click *Settings*  and then select *Options*.
2. When the *Options* dialog box displays, enter the *General* tab, and then select the *Disk path* where the recorded video will be stored and per video size.

By size, the video unit can be 1024 MB, 2048 MB, 4096 MB, and by duration, the



Select storage disk path in the Options dialog box

video unit can be 1 to 240min.

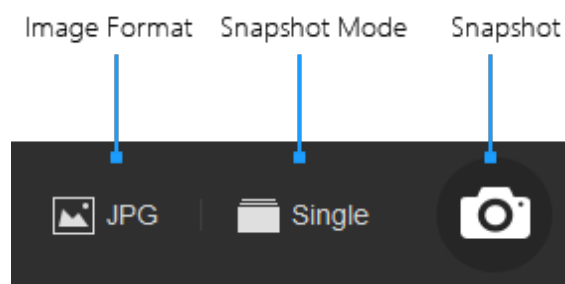


Set Capture Properties in the Capture Settings Panel

Step 2. Set capture properties

In the *Capture Settings Panel*,

1. expand the *DEVICE* tab, and then select the *Video device* and *Audio device*;
2. expand the *VOLUME* tab, light up the *Headphone Mute* and *Master Mute* buttons, and then adjust the volumes to appropriate levels;
3. expand the *OUTPUT FORMAT* tab, and then enable *MATCH SOURCE*.

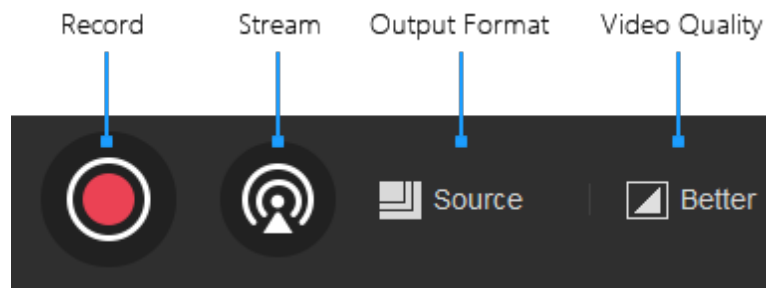


Snapshot controls in the Control/Statistics Bar

Step 3. Capture video snapshots

In the *Control/Statistics Bar*,

1. click the *Image Format* button and select *JPG*;
2. click the *Snapshot Mode* button and select *Single-Frame Mode*;
3. click the *Snapshot* button to capture the current video frame.

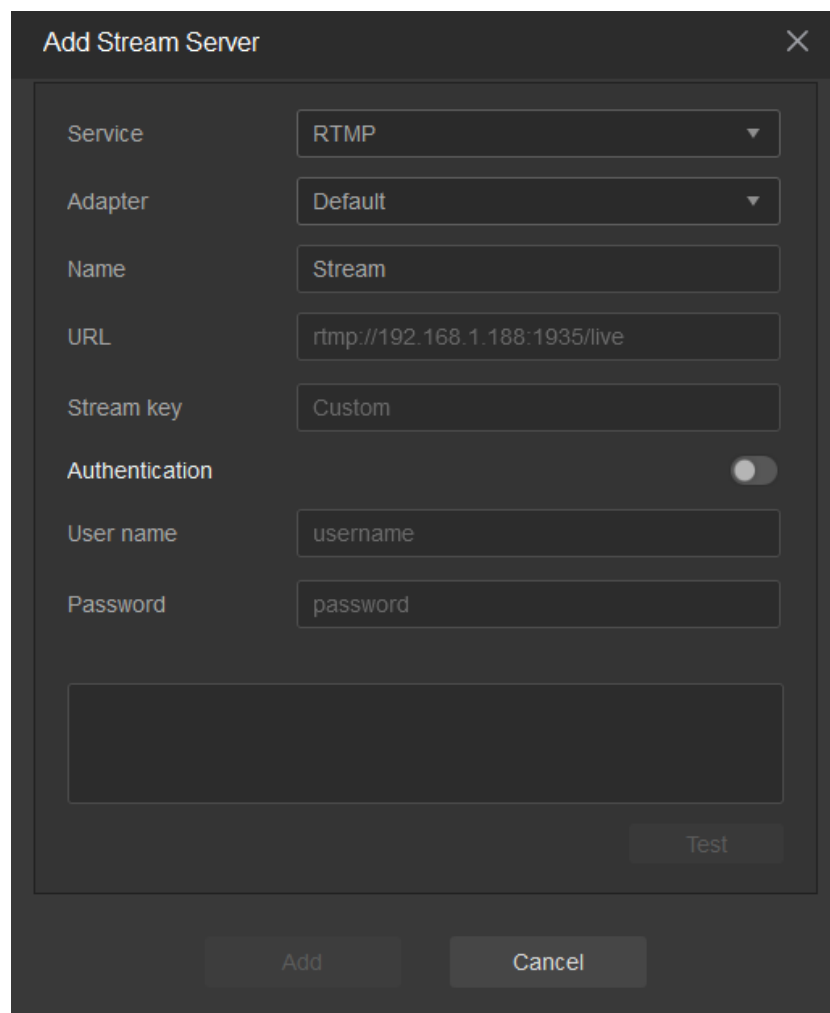


Recording controls in the Control/Statistics Bar

Step 4. Record video clips

In the *Control/Statistics Bar*,

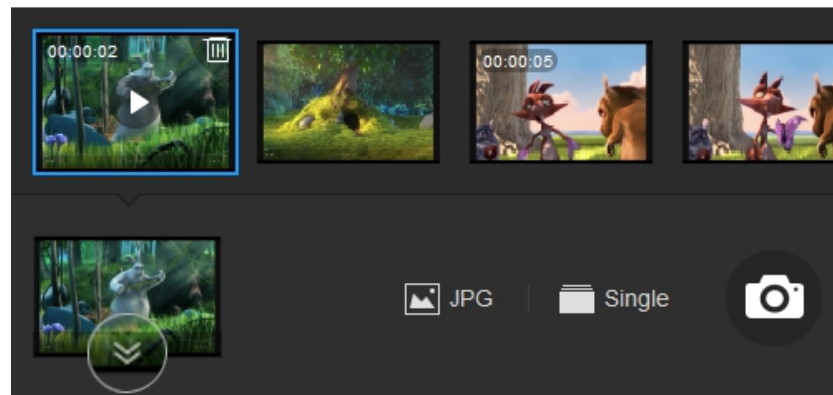
1. click the *Output Format* button and select *Match Source*;
2. click the *Video Quality* button and select *Better*;
3. click the *Record* button to start video recording;
4. click the *Record* button again to stop the video recording.

Configure [RTMP](#) server in the Capture Settings Panel**Step 5.** Broadcast video streams

1. In the *Capture Settings Panel*, click *LIVE > Add stream server*.
2. In the *Add stream server* dialog box, set the following properties to add a [RTMP](#) server:
 - Service: Select [RTMP](#).
 - Adapter: Select a network card.
 - Name: Enter the name of this server, which will be shown in the LIVE tab page.
 - URL: Enter the [RTMP](#) address that you obtained from the live stream platform.
 - Stream key: Enter the stream key that you obtained from the live stream platform.

💡 See [LIVE Tab](#) for information about other streaming servers.

3. Click *Test* to test whether the video can be successfully streamed to the live streaming platform.
4. Click *Add* to add this server to the LIVE tab page.
5. In the *Control/Statistics Bar*, click the *Stream* button to start video streaming.
6. Click the *Stream* button again to stop the video streaming.



Album

Step 6. View the snapshots and video clips

1. Click the double-arrow button on the icon at the left bottom of the main window to open the *Album*.
2. View the snapshots and video clips you've saved in the *Album*.

Tutorial 4: Running Multiple Instances of Capture Express

This tutorial demonstrates how to run multiple instances of Capture Express simultaneously to perform independent video processing tasks.

Task

Opening two Capture Express windows to let them work in parallel and using "Capture device A" and "Capture device B" to capture video respectively.

Procedure

Step 1. Create the first window to use "Capture device A"

1. Double-click the startup icon of Capture Express to open the first window.
2. In the *Capture Settings Panel* of the first window, expand the DEVICE tab, and then select "Capture device A" as the *Video device*.
3. Use "Capture device A" to capture video. (See [Tutorial 3: Recording & Streaming](#))

Step 2. Create the second window to use "Capture device B"

1. Double-click the startup icon of Capture Express to open the second window. Then the name of the second window automatically displays "#2".
2. In the *Capture Settings Panel* of the second window, expand the DEVICE tab, and then select "Capture device B" as the *Video device*.
3. Use "Capture device B" to capture video. (See [Tutorial 3: Recording & Streaming](#))

Tutorial 5: Setting Up Work Views



Capture Express supports three modes of working views: Normal, No Border, and Full Screen. This tutorial demonstrates how to set up Capture Express's work view.

Introducing Work Views

- **Normal:** This view displays the toolbar, preview area, capture settings panel, album, and control/statistics bar.
- **No Border:** This view hides the capture settings panel, album, and control/statistics bar, and displays the preview area. In the toolbar, the *No Border* button is the only displayed component. The toolbar will be hidden after a few seconds of user inactivity, and be displayed when you move the mouse.
- **Full Screen:** This view hides the capture settings panel and displays the preview area in full screen.

Switching Work Views


To switch Capture Express's work view from the Normal view to others,

- click  in the toolbar to enter the *No Border* view, or click this button again to exit;
- click  in the toolbar to enter the *Full Screen* view, or double click this window or press Esc to exit.

Setting Up the Default Work View

By default, Capture Express is started in normal view. But you can also make Capture Express start in full screen view.

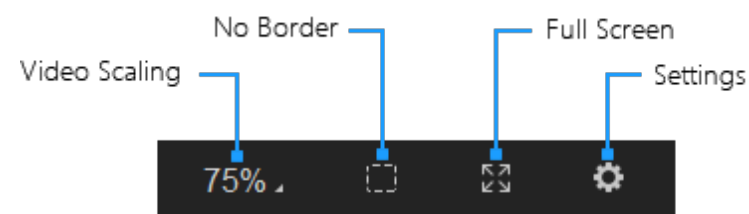
To start Capture Express in full screen view,

1. in the toolbar at the top of the main window, click *Settings*  > *Options* to open the *Options* window;
2. Enter the *General* tab page of the *Options* window, and then select *Start in full screen mode*.

Main Window

Introduction

This chapter gives an orientation on the user interface of the main window, providing a quick tour of what tools are available, where to find them, and how these tools work together to help you capture snapshots or video clips.



Toolbar

The *Toolbar* is located at the top of the main window and contains four buttons: *Video Scaling*, *No Border*, *Full Screen*, and *Settings*.

Video Scaling

Click to select a scaling ratio to apply to the preview video. You can select *Auto-Adaption* to automatically fill the overall image to the available dimensions of the *Preview Area*.

No Border

Click to display the preview video in no border mode, or click this button again to exit.

Full Screen

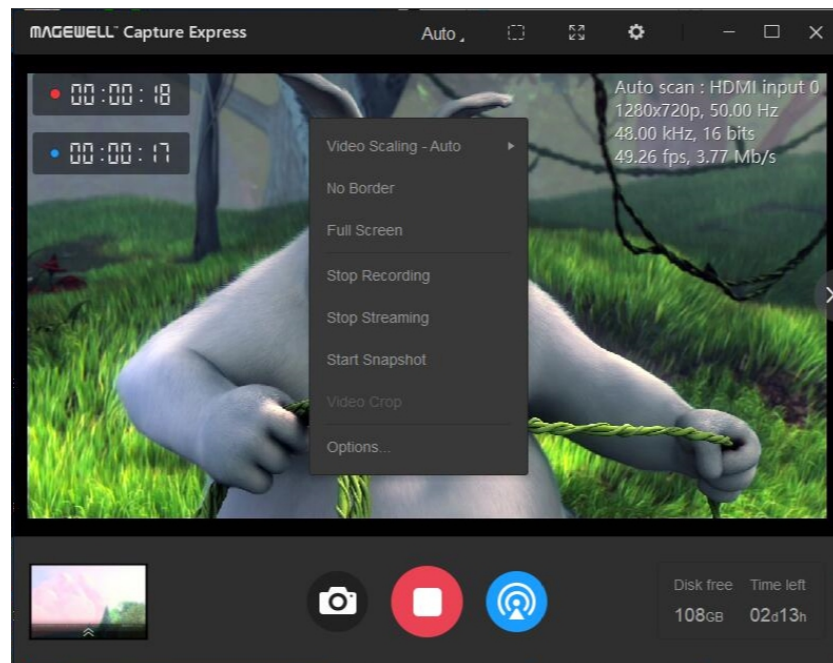
Click to display the preview video in full screen mode, or double click this window or press Esc to exit full screen.

Settings

Click to open the *Settings* menu, which contains the following options:

- **Options:** Open the *Options* dialog to set file storage formats, software startup mode, and hotkeys. (See [Options](#))

- **Official Website:** Open the official website of Magewell.
- **Software Update:** Open the *Software Update* dialog box to update Capture Express. (See [Software Update](#))
- **About:** Open the *About* dialog box to view version and copyright information about Capture Express.



Preview Area

In the central part of the main window, the *Preview Area* displays the preview video before the video signal is encoded and compressed. All changes related to the capture settings will immediately appear on the preview video.

After the video recording begins, the following information will be displayed at the top of the *Preview Area*:

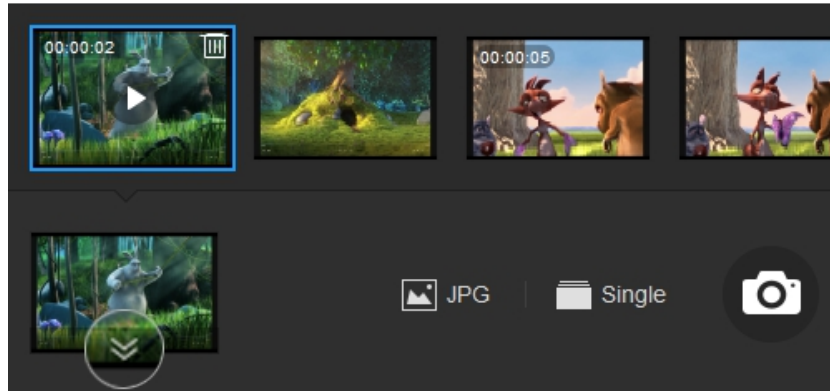
- The recording and live streaming duration, shown in the top left corner.
- The video and audio signal formats, shown in the top right corner, including the following information:
 - Line 1: Displays the currently used video input channel. When your capture device captures multiple video sources, you can press the shortcut keys "Alt+S" to switch between the video sources.
 - Line 2: Displays the resolution and refresh rate of the input video.
 - Line 3: Displays the sampling rate and bit depth of the input audio.
 - Line 4: Displays the frame rate and bitrate of video encoding.

You can determine whether to display these input signal formats through the hotkey. (See [Hotkey](#))

Shortcut Menu in the Preview Area

Right-clicking anywhere in the *Preview Area* opens a shortcut menu with the following options:


- **Video Scaling:** Click the *Video Scaling* triangle to open the video scaling menu, and then select a scaling ratio to apply to the preview video. Supported options are Auto, 200%, 150%, 100%, 75%, 50%.
Auto means to automatically fill the overall image to the available dimensions of the *Preview Area*. A percentage indicates to scale the width and height of the original image by the percentage.
- **No Border:** Click to display the preview video in no border mode, or click this menu option again to exit.
- **Full Screen:** Click to display the preview video in full screen mode, or double click this window or press Esc to exit.
- **Start Recording:** Click to start the video recording. Once the recording begins, the text of this menu option will change to *Stop Recording*. You can click *Stop Recording* to stop recording.
- **Start Streaming:** Click to start the video streaming. Once the streaming begins, the text of this menu option will change to *Stop Streaming*, or click *Stop Streaming* to stop streaming.
- **Start Snapshot:** Click to start take snapshots of the video. When the *Snapshot Mode* is *Periodic Mode* (see [Snapshot Controls](#)), or click Stop Snapshot to periodically taking snapshots.
- **Snapshot:** Click to capture the current video frame.
- **Video Crop:** Click to open the cropping toolbar to crop the video. (See [Crop](#))
- **Options:** Click to open the *Options* dialog box. (See [Options](#))



Album

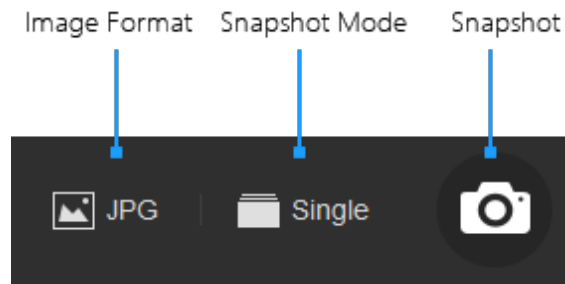
Hidden by default, the *Album* can be opened by clicking the double-arrow button on the icon at the left bottom of the main window, and appears beneath the *Preview Area* when it's open. The *Album* shows you every clip you have saved, giving you a way to play clips, delete unwanted clips and view the basic file details.

To manage the clips (or snapshots) in the *Album*:

- **To open a clip:** Click the icon of a clip, or right-click the icon and then select *Open* in the context menu.
- **To open the storage folder:** Right-click the icon of a clip and then select *Open Folder Location* in the context menu.
- **To delete a clip:** Hover the pointer over the icon of a clip, then click the delete button  that appears at the upper right corner of the icon; or right-click the icon and then select *Delete* in the context menu.
- **To delete all clips:** Right-click the icon of a clip and then select *Empty the Folder* in the context menu.
- **To view file details:** Hover the pointer over the icon of a clip, then file details, including *Name*, *Size*, *Duration* (for video clips only), and *Date created*, appears in a tooltip a moment later. Or right-click the icon and then select *Properties* in the context menu to open the *Properties* dialog box of the chosen clip.

Control/Statistics Bar

The *Control/Statistics Bar* lies at the bottom of the main window. It consists of the snapshot controls, recording controls, and statistics of the available recording space and time.



Snapshot Controls

Image Format

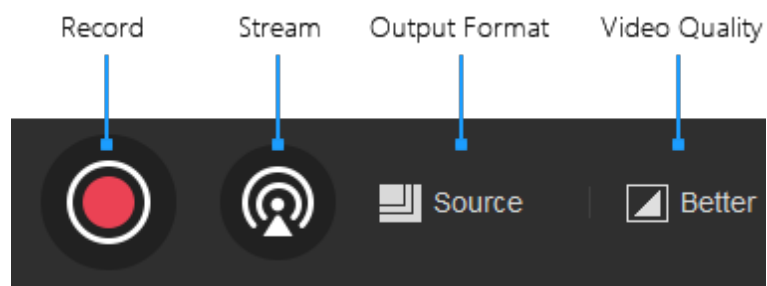
Click to select the storage format of the snapshot, including JPG, PNG, and BMP.

Snapshot Mode

Click to select the capture mode of the snapshot, including the *Single-Frame Mode*, *Burst Mode* and *Periodic Mode*. In the Burst Mode, five video frames are continuously captured. In the Periodic Mode, the snapshot is taken every 10 seconds by default. If you want to change the time interval of the Periodic Mode, see [Snapshot](#).

Snapshot

Click to select this button to take frame snapshots.



Recording/Streaming Controls

Video Quality

Click to select the video quality, including *Normal*, *Better*, *Best*, and *Custom*. If you want to change the *Custom* video quality, open the OUTPUT FORMAT tab of the *Capture Settings Panel* and then modify the *Video bit rate* and *Audio bit rate*.

Output Format

Click to select the output format of the video, including 4 recommended formats, *Match Source* and *Custom*. When *Match Source* is selected, the resolution and frame rate of the output video are consistent with those of the input video. When *Custom* is selected, you can go to *Capture Settings Panel* > OUTPUT FORMAT tab to customize your output format.

💡 Note that changes you make in the OUTPUT FORMAT tab of the *Capture Settings Panel* also affect the properties of the *Video Quality* and *Output Format* controls.

- If the output format in the *Capture Settings Panel* matches any of the above recommended formats, the corresponding recommended format will be assigned to these controls.
- If you turn on the MATCH SOURCE function in the *Capture Settings Panel*, *Match Source* will be assigned to the *Output Format* control.
- If you use a custom output format in the *Capture Settings Panel*, *Custom* will be assigned to these controls.

Recording

Click to start or stop the video recording.

The recording file is in the MP4 format. You can configure recording-related parameters (recording file size, save path, etc) on the [Options](#) page.

- When the available disk space is less than 128 MB, the recording will not start. If this limit is reached during recording, the recording will automatically stop and be properly saved to a file.
- When the recording file unit is by duration, if recording for the specified duration will generate a file size exceeding the upper limit allowed by the current file system, the recording will not start. This is done to prevent file corruption and recording content loss caused by oversized file. For example, the FAT32 file system allows a file size of 4GB at most, so when you want to record at the bitrate 4096Kbps for 240 minutes, which will generate a file of about 7 GB that is well above the upper limit of FAT32, you will not be allowed to record. In this case, you can select a shorter duration on the [Options](#) page or a lower bitrate in the [Output Format](#) tab to record.
- Recording supports the repair-free feature, that is, when a normal recording (with no frame rate drop) is interrupted unexpectedly, only a maximum of 30 seconds of data will be lost

instead of that the whole file get corrupted. In such case, if you cannot find the file in the "Album" section of the software, you can find it in the recording save path.

Streaming

Click to start or stop video streaming. Note that you need to select a stream server to the *Capture Settings Panel* before you start streaming. See [LIVE Tab](#).

Statistics

Disk free

Displays the remaining space of your storage disk. You can specify the storage disk in the *Options* dialog box. (See [Disk path](#))

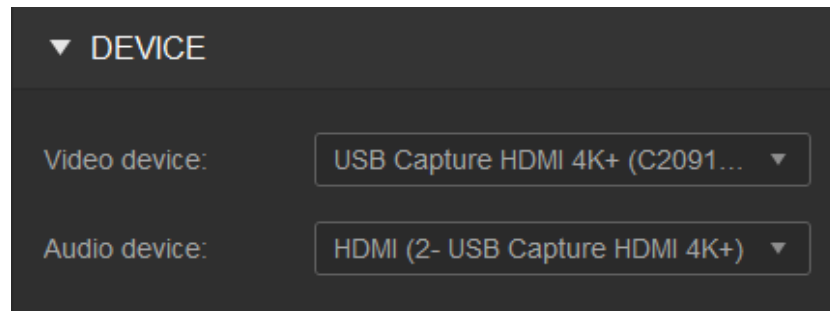
Time left

Displays the time available to record video before the storage disk is filled up. To increase the *Time left*, you can lower the *Video Quality* and *Output Format* in the Recording Controls, or clean up the storage disk to expand the free disk space.

Disk free Time left
7.43GB 02h06m

Capture Settings Panel

The Capture Settings Panel is used to set capture properties related to device, volume, live stream server, signal output format, and color. You can decide whether to show or hide the panel by default through clicking the arrow at the right of the main window.



DEVICE Tab

The DEVICE tab is used to select video and audio capture devices.

Video device

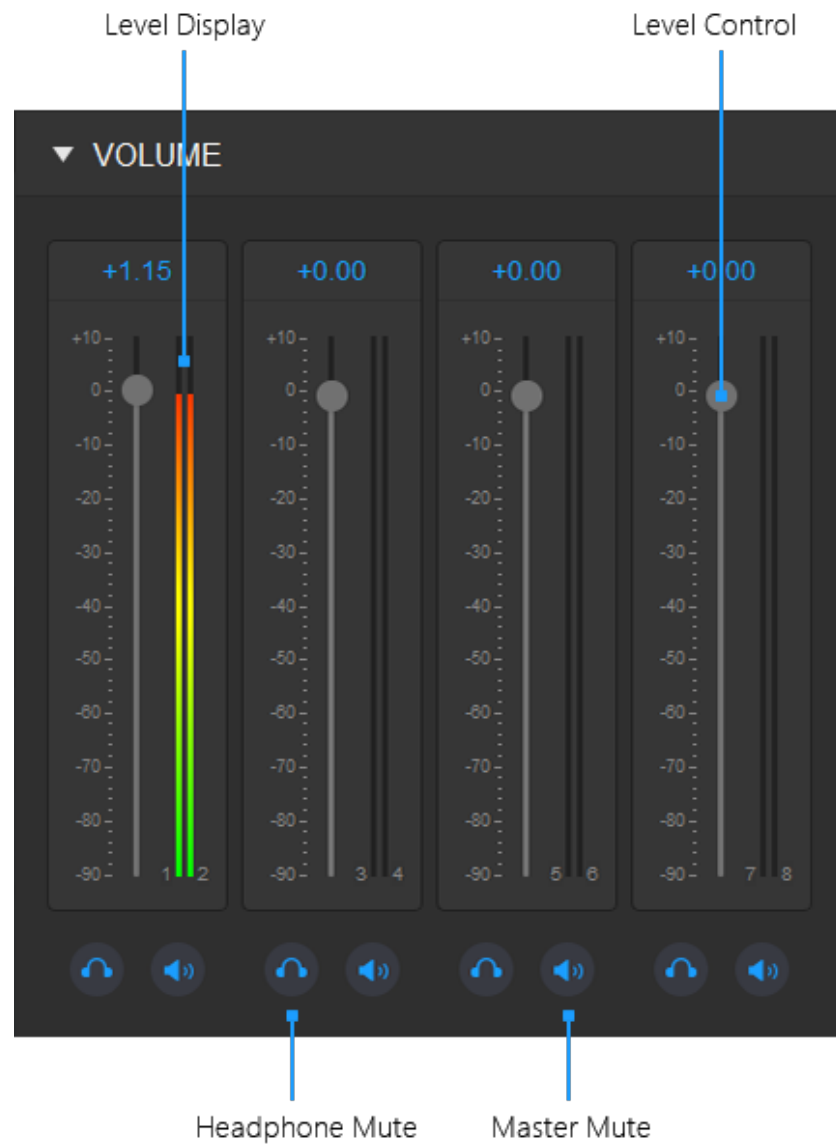
Click to select the video input device.

Audio device

Click to select the audio input device.

💡 When the USB Capture (Plus) device is chosen as the video input device, the audio source for different audio devices are as follows:

- **HDMI, SDI:** Embedded audio from the [HDMI/SDI](#) video source.
- **Computer:** System audio from the computer.
- **Mic, Line In:** Audio from the microphone or line input device.



VOLUME Tab

The VOLUME tab is used to adjust the volume and monitor the audio level.

Level Control

Adjusts the audio level of the audio output.

Level Display

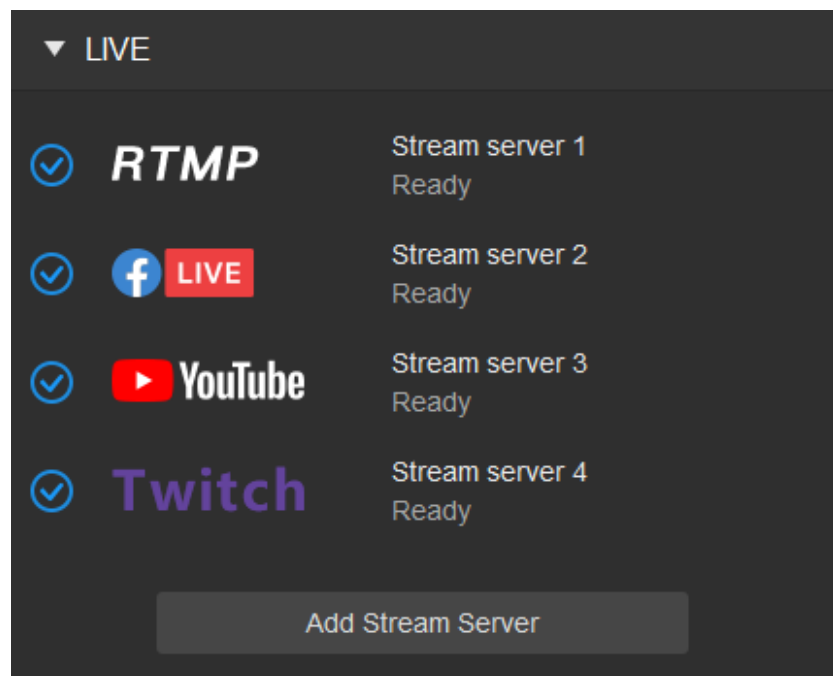
Displays the levels of the audio outputs. The number below each level bar stands for the channel index.

Headphone Mute

Toggles the monitor audio output in the headphones without affecting the recording or streaming audio output.

Master Mute

Toggles the preview, recording, and broadcast audio output.



LIVE Tab

In the LIVE tab, you can add, edit, and delete live stream servers. Clicking the *Add stream server* button opens a window with the same name. The properties in this window are described as below.

Facebook/YouTube/Twitch Server

- **Service:** Select a server.
- **Adapter:** Select a network adapter. If your computer is equipped with multiple network adapters, **Default** means a network adapter will be selected to send the stream based on routing priorities .
- **Name:** Enter the server's name, which will be displayed in the LIVE tab.
- **Server:** Select a server. For Facebook/YouTube/Twitch servers, the software will automatically choose the nearest/fastest server, but you can still manually choose the server.
- **Stream key:** Enter the stream key you obtained from the live stream platform.

RTMP Server

Most live stream platforms support [RTMP](#) protocol. So, if you want to push streams to other stream platforms except Facebook/YouTube/Twitch, you can set the following properties.

- **Service:** Select [RTMP](#).
- **Adapter:** Select a network adapter. If your computer is equipped with multiple network adapters, **Default** means a network adapter will be selected to send the stream based on routing priorities .
- **Name:** Enter the server's name, which will be displayed in the LIVE tab.
- **URL:** Enter the [RTMP](#) address you obtained from the live stream platform.
- **Stream key:** Enter the stream key you obtained from the live stream platform.

If you need to authorize your account on the live stream platform, turn on *Authentication*, and then set the following properties:

- **User name:** Enter your user name on the live stream platform.
- **Password:** Enter your password on the live stream platform.

SRT Listener

If you want to use your computer as the [SRT](#) Listener, in which case [SRT](#) Callers can get streams from your computer, set the following properties.

💡 An [SRT](#) Listener can simultaneously send 4 streams at most.

- **Service:** Select [SRT](#) Listener.
- **Adapter:** Select a network adapter. If your computer is equipped with multiple network adapters, **Default** means all the network adapters are available for obtaining streams from. If you specify an adapter, only the specified one is available for obtaining streams.
- **Name:** Enter the Listener's name, which will be displayed in the LIVE tab.
- **Port:** Enter the service port of the Listener. The port number must be an UDP port not in use. When the message "Listening" displays while you are testing, it means the port number is not occupied.
- **Latency:** Select the [SRT](#) latency. A higher latency provides more reliable transmission on an unstable network, but increases the waiting time on the viewer's end. A lower latency means shorter waiting time but can also adversely affect the video quality when network connection problems occur. Options are 120 ms, 500 ms, 1000 ms, 5000 ms, 8000 ms. The default is 120 ms.

The latency can be configured on both the [SRT](#) Caller and Listener. The higher of the two values is used for the [SRT](#) stream. [SRT](#) Alliance recommends setting the latency to four times the RTT of the current link on a fairly good network. For more details, see [SRT Deployment Guide](#).

- **Bandwidth overhead:** Select the bandwidth overhead, namely the bandwidth required for sending

[SRT](#) control packets and re-transmitting packets. The value is calculated as a percentage of the A/V bit rate, with the supported options 10%, 25%, 50%, 75%. Noisier networks will require a higher overhead. The default is 25%.

The maximum bandwidth required by [SRT](#) is the A/V bit rate plus this bandwidth overhead. When this total bandwidth is less than or equal to the available bandwidth between the [SRT](#) Listener and Caller, the [SRT](#) stream should flow without incident. [SRT](#) Alliance recommends a maximum value of 50%. For more details, see [SRT Deployment Guide](#).

- **Encryption type:** Select the encryption type of the video stream. Supported options are AES-128, AES-192, AES-256. The default is Not Used. When an [SRT](#) Caller attempts to obtain streams from the [SRT](#) Listener, its encryption settings should be the same as specified here.
- **Password phrase:** If you want to encrypt the video stream, enter the password phrase here. The length range of password phrase is 10-79. When an [SRT](#) Caller attempts to obtain streams from the [SRT](#) Listener, its encryption settings should be the same as specified here.

SRT Caller

If you want to use your computer as the [SRT](#) caller and push streams to a remote [SRT](#) Listener, set the following properties.

⚠ The remote [SRT](#) Listener cannot be configured by Capture Express.

- **Service:** Select [SRT](#) Caller.
- **Adapter:** Select a network adapter. If your computer is equipped with multiple network adapters, **Default** means a network adapter will be selected to send the stream based on routing priorities.
- **Name:** Enter the caller's name, which will be displayed in the LIVE tab.

- **Address:** IP address or domain name of the [SRT Listener](#).
 - IP address: Enter the If the [SRT Listener](#) and caller are on the same LAN, enter the private IP address of the [SRT Listener](#) on the LAN. If the [SRT Listener](#) and caller are in different network environments, enter the public IP address of the [SRT Listener](#).
 - Domain name: Support a maximum of 256 characters.
- **Port:** Enter the service port of the [SRT Listener](#).
- **Latency:** Select the latency. A higher latency provides more reliable transmission on an unstable network, but increases the waiting time on the viewer's end. A lower latency means shorter waiting time but can also adversely affect the video quality when network connection problems occur. Options are 120 ms, 500 ms, 1000 ms, 5000 ms, 8000 ms. The default is 120 ms.

The latency can be configured on both the [SRT Caller](#) and [Listener](#). The higher of the two values is used for the [SRT](#) stream. [SRT Alliance](#) recommends setting the latency to four times the RTT of the current link on a fairly good network. For more details, see [SRT Deployment Guide](#).

- **Bandwidth overhead:** Select the bandwidth overhead, namely the bandwidth required for sending [SRT](#) control packets and re-transmitting packets. The value is calculated as a percentage of the A/V bit rate, with the supported options 10%, 25%, 50%, 75%. Noisier networks will require a higher overhead. The default is 25%.

The maximum bandwidth required by [SRT](#) is the A/V bit rate plus this bandwidth overhead. When this total bandwidth is less than or equal to the available bandwidth between the [SRT Listener](#) and [Caller](#), the [SRT](#) stream should flow without incident. [SRT Alliance](#) recommends a maximum value of 50%. For more details, see [SRT Deployment Guide](#).

- **Stream ID:** Enter the unique ID that identifies a stream. Obtain the stream ID from the [SRT Listener](#).

- **Encryption type:** Select the encryption type of the video stream. Supported options are AES-128, AES-192, AES-256. The default is Not Used. The setting must be the same as that on the [SRT Listener](#).
- **Password phrase:** If you want to encrypt the video stream, enter the password phrase here. The length range of password phrase is 10-79. The setting must be the same as that on the [SRT Listener](#).

TS over RTP



- **Service:** Select TS over RTP.
- **Adapter:** Select a network adapter. If your computer is equipped with multiple network adapters, **Default** means a network adapter will be selected to send the stream based on routing priorities .
- **Name:** Enter the server's name, which will be displayed in the LIVE tab.
- **Address:** Enter the IP address of the server.
- **Port:** Enter the service port of the server.


TS over UDP

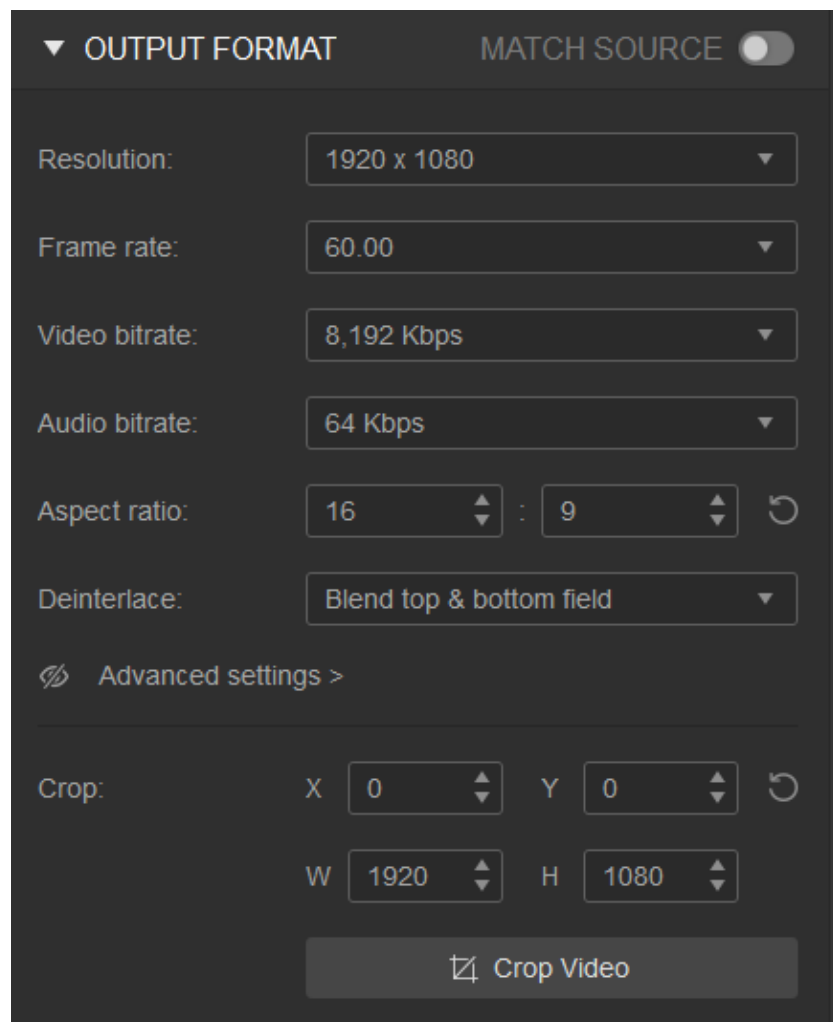
- **Service:** Select TS over UDP.
- **Adapter:** Select a network adapter. If your computer is equipped with multiple network adapters, **Default** means a network adapter will be selected to send the stream based on routing priorities .
- **Name:** Enter the server's name, which will be displayed in the LIVE tab.
- **Address:** Enter the IP address of the server.
- **Port:** Enter the service port of the server.

Test Server

After completing the above configurations, add the server to the LIVE tab page by following these steps:

1. Click *Test* to test whether the video can be successfully streamed to the live streaming platform.
2. Click *Add* to add the server to the LIVE tab page.
3. If you want to modify or delete the server in the LIVE tab page, hover over the server, and then click  to edit the server's properties, or click  to delete the server.

 You can add up to 8 stream servers to the LIVE tab page, and stream up to 4 channels of video streams simultaneously. You can select a destination server by checking the checkbox before a server on the LIVE tab page.



OUTPUT FORMAT Tab

The OUTPUT FORMAT tab is used to set the output signal format.

MATCH SOURCE

Toggles the MATCH SOURCE function on or off. When MATCH SOURCE is turned on, the output resolution and frame rate are automatically set according to the input signal format. When turned off, you can manually set the output resolution and frame rate.

Resolution

Select the resolution of the video output.

Frame rate

Select the frame rate of the video output. When using a high output frame rate, you can turn on *Automatically decrease the preview frame rate* in the *Options* dialog to display images with faster rendering speed. (See [Automatically decrease the preview frame rate](#))


Video bitrate

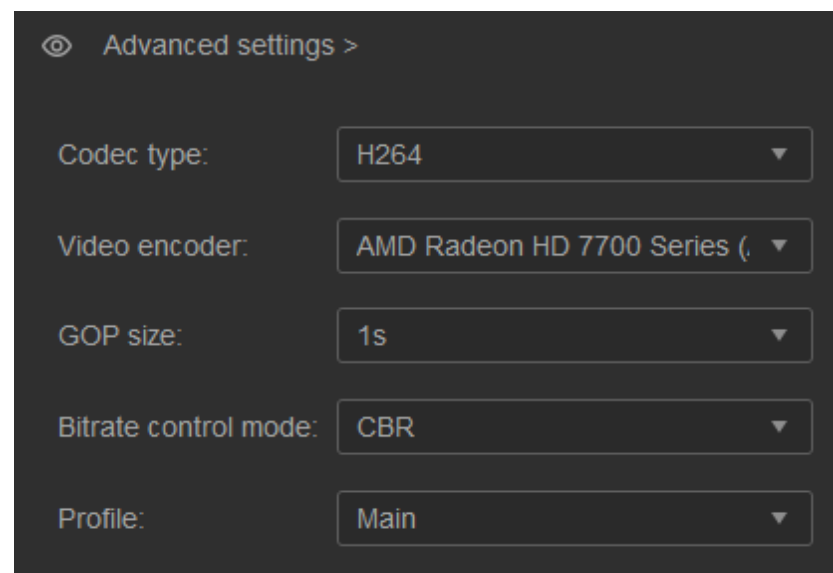
Select the video bitrate of the video output.

Audio bitrate

Select the audio bitrate of the audio output.

Aspect ratio

Click the arrows next to the input boxes to adjust the aspect ratio of the video output. You can click  to reset the output aspect ratio to the default value.



Deinterlace

Select a de-interlacing mode. This parameter applies only to interlacing signals. The options are:

- **Blend top & bottom field (default):** Blends a pair of fields to be displayed as one frame.
- **Weave:** Combines the top field and bottom field into a frame without any other process. This method is mainly used for static images or when the original data needs to be captured.
- **Top field only:** Retains only the top field and discards the bottom field. Doubles the lines of the top field to make a full frame.
- **Bottom field only:** Retains only the bottom field and discards the top field. Doubles the lines of the bottom field to make a full frame.

Advanced settings

Click "Advanced settings" to expand and set encoding-related parameters.

- **Codec type:** Options are *H264* and *H265*. *H265* offers higher bandwidth efficiency than *H264* while *H264* has wider compatibility.
- **Video encoder:** Options are the available graphics cards on the computer. For *H264*, there is an extra option of *OpenH264*.
- **GOP size:** Options range from 1s to 5s. A larger **GOP** size offers more efficient compression and requires less bandwidth and storage space. On the other hand, for complex content, a shorter **GOP** size can result in better video quality. Generally 2s is recommended for live streaming.
- **Bitrate control mode:** Options are *CBR* and *VBR*.
 - *CBR*: Constant bit rate. A stream will be encoded using the selected bit rate over all the time. This mode is generally used for streaming in order to achieve more stable quality.
 - *VBR*: Variable bit rate. In this mode, the encoder dynamically increases or decreases the bit rate based on the image bitrate needs. For recording, this mode can generate a smaller file for the

same level of quality compared to CBR.

- **Profile:**

- For *H264*, options are *High*, *Main*, and *Baseline*, with a high, medium, low compression ratio respectively. *High* is usually used for HD broadcasting while the other profiles are used in SD scenarios.
- For *H265*, there is only one profile, *Main*.



Crop




Crop the output video to a rectangular range that is determined by four values: X, Y, W, and H.

- **X:** The distance from the left edge of the original video to the top left point of the crop area.
- **Y:** The distance from the top edge of the original video to the top left point of the crop area.
- **W:** The width of the crop area. The minimum value is 128.
- **H:** The height of the crop area. The minimum value is 128.

You can crop the image in the following ways:

- On the **Crop** tab page, manually input values for X, Y, W, H, or click the up/down arrows to set these parameters. The cropping ratio is free.
- Click **Crop Video** to crop the image.

To crop video:

Click to open the cropping toolbar in the *Preview Area*. The cropping toolbar contains a rectangular marquee tool, a cropping ratio menu, four crop area parameters (X, Y, W, H), a reset button , a confirm button , and a cancel button .

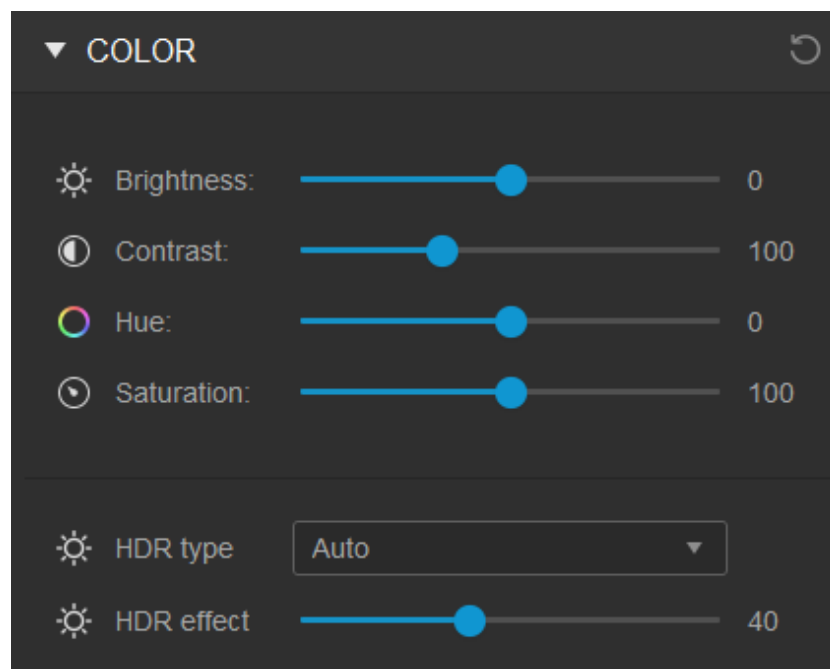
To use the cropping toolbar to crop video, follow these steps:

1. Select a cropping ratio. When the cropping ratio is a fixed value, the width and height of the crop

range will be locked at this ratio; when the cropping ratio is set as *Free crop*, the width and height of the crop area can be set without any ratio limits.

2. Drag the rectangle marquee to adjust the crop area; or set the values of X, Y, W, and H to specify the crop area.
3. Click ✓ to confirm the cropping.

The cropped image will zoom out proportionally based on the original image size.



COLOR Tab

The COLOR tab is used to set the color properties of the video output, including brightness, contrast, hue, saturation. When your capture card supports HDR,, you can also set the HDR type and HDR effect.

You can click ↺ to reset all the parameters to their default values.

Brightness

Adjust the brightness of the video output.

Contrast

Adjust the contrast of the video output.

Hue

Adjust the tint of the video output.

Saturation

Adjust the saturation of the video output.

HDR type

Select a dynamic range. Options are as follows:

- **Auto:** Automatically selects a dynamic range for video output. If the input signal contains **HDR** information, the output is the same as when **HDR type** is set to **HDR**. Otherwise, the output is the same as when **HDR type** is set to **SDR**.
- **HDR:** Outputs **HDR** video to preview, recording and broadcast based on the input video type and codec type, as listed in the table below. **HDR** (High dynamic range) increases the detail of both the shadows and highlights of a scene.

Input Video	Codec Type	Preview	Recording	Broadcast
SDR video	H264	HDR video	Not supported	Not supported
	H265	HDR video	SDR video	SDR video
HDR video	H264	HDR video	Not supported	Not supported
	H265	HDR video	HDR video	HDR video

- When *Codec type* is set to *H265*, if the recording or streaming fails with the prompt that no codec device is available, it indicates that your codec device does not support H265.
- Whether the **HDR** effect can be viewed by the audience depends on the capability of the receiving end.

- **SDR:** Outputs **SDR** video regardless of the input video type, namely, the video you preview, record, and stream will be **SDR** video. Compared to **HDR**, **SDR** (Standard dynamic range) can only represent a fraction of the dynamic range that **HDR** is capable of and hence can show less details in the shadows and highlights of a scene.

HDR effect

Adjust the [HDR](#) effect value to increase the detail of the shadows or highlights. This parameter is effective only when the output is [HDR](#) video.

The value ranges from 0 to 100. 0 indicates complete darkness. A greater value increases brightness and also adjusts the image colors to show more details in shadows and highlights. The default value is 40.

Generally, when a scene is too bright, you can set a lower [HDR](#) effect value to allow more details to be viewed. And when a scene is too dark, a higher [HDR](#) effect value can reveal more subtlety.

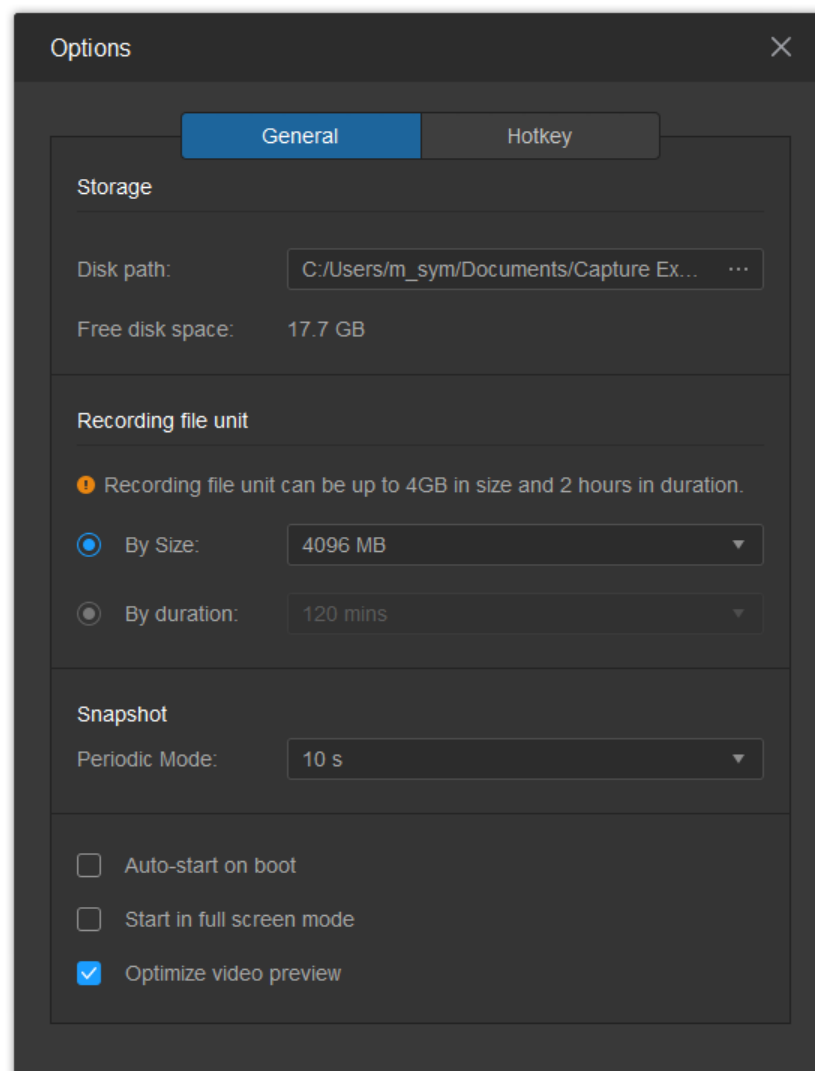
The [HDR type](#) and [HDR effect](#) parameters are available only when your capture card supports [HDR](#). For details about the support for [HDR](#) by Magewell capture cards, see [FAQ 1](#).

Options

Introduction

The *Options* window is used to set the file storage options, software startup options, and hotkeys. This chapter introduces how to use the *Options* window.

To open the *Options* window, select *Options* from the Settings  menu.



General

Among the parameters below, **Disk path**, **Recording file unit**, **Periodic Mode** are non-global parameters, applying only to the current Capture Express instance. **Auto-start on boot**, **Start in full screen mode**, **Automatically decrease the preview frame rate** are global parameters that are effective to all Capture Express instances.

Storage

Disk path

Select the disk path to store the video clips and snapshots.

Free disk space

Displays the free space of the storage disk.

Recording file unit

The recording file unit limits the maximum size of a recording file. Once the size of a recording file reaches this recording file unit, the recording file will be saved, and a new recording file will be generated to continue recording the video.

By size

Select the recording file unit by size. Supported options are 4096 MB, 2048 MB, 1024 MB.

By duration

Select the recording file unit by duration. Supported options are 240 mins, 210 mins, 180 mins, 150 mins, 120 mins, 60 mins, 30 mins, 20 mins, 10 mins, 1 min.

Snapshot

Periodic Mode

Select a time interval for the periodic mode of the snapshot function.

- 💡 You can also customize the recording file unit and size, and the snapshot time interval of the periodic mode by modifying the configuration file:
1. In the software's installation directory, use notepad to open the configuration file "CaptureExpress.ini".
 2. In the configuration file, the parameters that you can modify include *RecordingUnitList_Size* (recording file units by size), *RecordingUnitList_Duration* (recording file units by duration), and *SnapshotDurationList* (snapshot time interval). The values of the parameters should be arranged from large to small, separated by commas.

Software Startup Options

Auto-start on boot

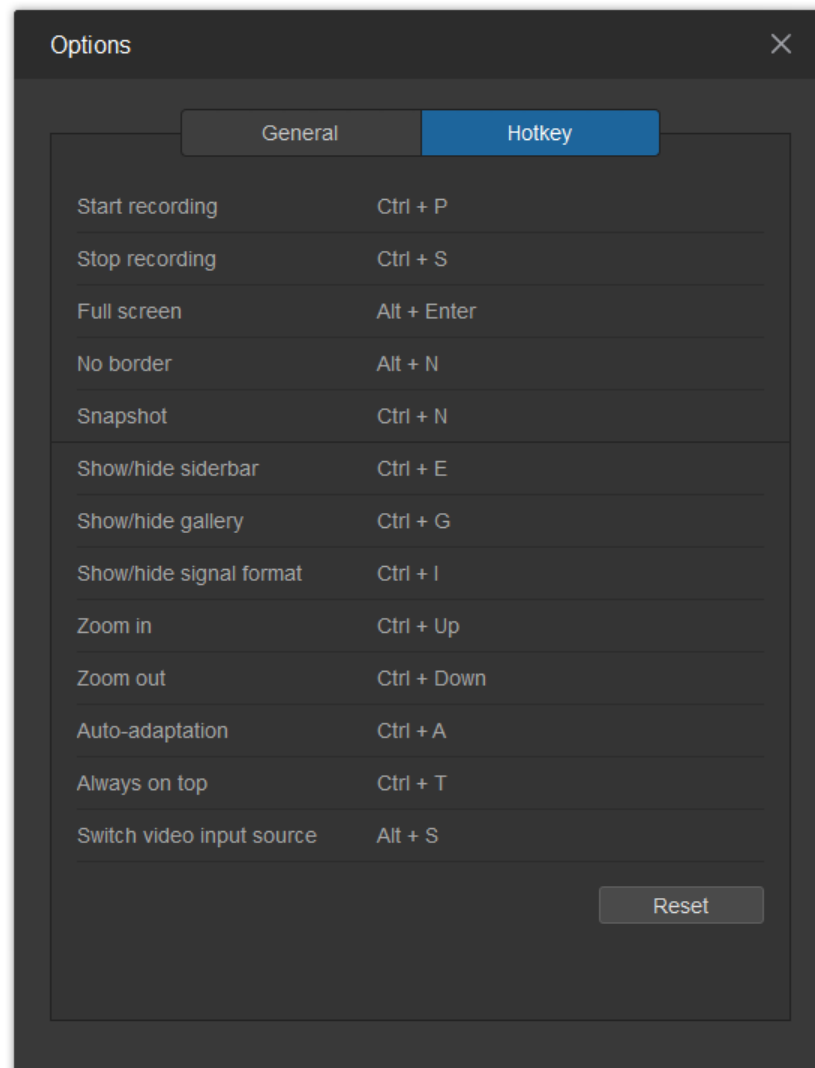
When *Auto-start on boot* is selected, Capture Express will start automatically after you log into the operating system.

Start in full screen mode

When *Start in full screen mode* is selected, Capture Express will start in full screen mode.


Automatically decrease the preview frame rate

Enables you to either display images with faster interactivity or at full render quality. When *Automatically decrease the preview frame rate* is selected, Capture Express will render the video at a lower rendering rate to increase the processing speed when the frame rate of the output video is high. Unselecting this option results in a full quality render to the preview area.



Hotkey

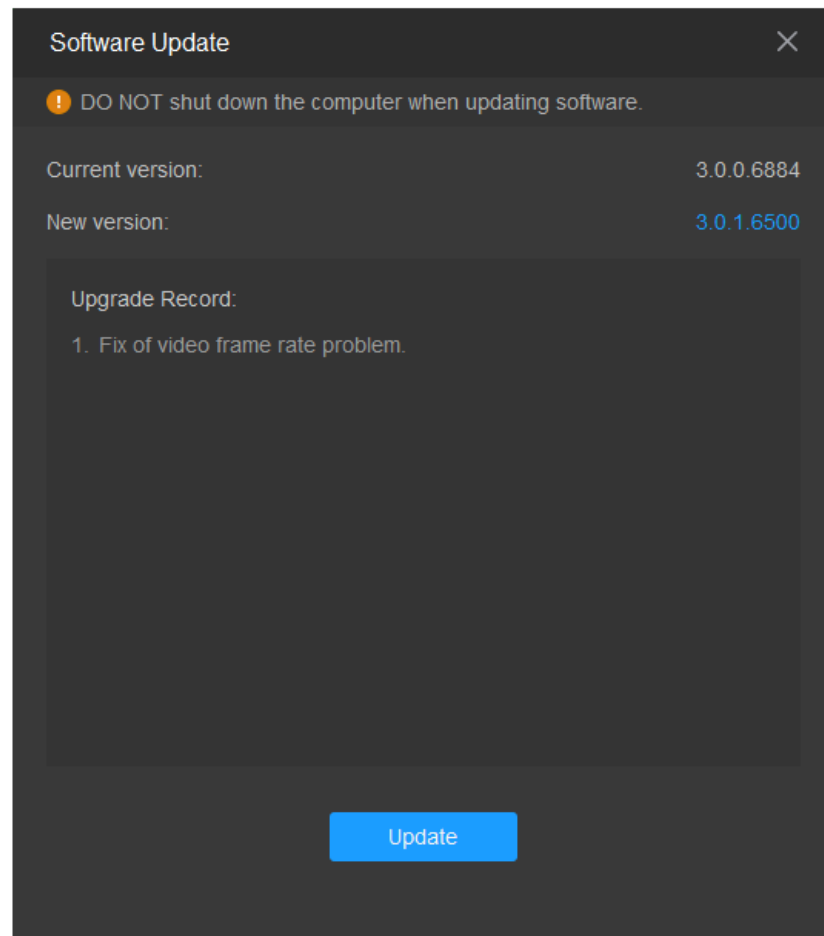
Hotkeys for common functions are listed in the *Hotkey* tab. Methods of resetting the hotkeys are as follows:

- **To reassign a hotkey:** Click the hotkey to enter the edit mode, then press and hold the new key combination on the keyboard.
- **To remove a hotkey:** Click the hotkey to enter the edit mode, then click  at the right of the input box.
- **To reset all hotkeys:** Click *Reset* at the bottom of the *Hotkey* tab.

Software Update

Introduction

This chapter guides you through updating Capture Express.




Update Procedure

When Capture Express starts, it automatically checks whether there is any update. If yes, it displays the *Software Update* window.

You can also go to the *Settings* menu to check for updates. If a red badge appears next to the *Software Update* option, a new version of Capture Express is available.

To update Capture Express, follow these steps:

1. In the *Settings*  menu, click *Software Update* to check for updates.
2. In the *Software Update* window, if a new version is found, the release notes for the new version will be displayed. Click *Update* to start downloading the new version.
3. In the *Uninstall* dialog box, click *Yes* to uninstall the old version.
4. The update program automatically installs the new version.

FAQ

1 Support for HDR by Magewell Capture Cards

Multiple Magewell capture cards support [HDR](#), including the following:

- Pro Capture [HDMI](#) 4K Plus
- Pro Capture [HDMI](#) 4K Plus LT
- Pro Capture Dual [HDMI](#) 4K Plus LT
- Pro Capture AIO 4K Plus

To capture [HDR](#) video, you can use the any of the above capture cards and import an [HDR](#)-supported EDID to the capture card. If you do not import an [HDR](#)-supported EDID, [SDR](#) video is captured.

Support

Getting Latest Materials

The latest materials, including brief introduction, user manual and installation package, can be found at the Magewell website's introduction page of [Capture Express](#).

Getting Technical Support

You can get technical support in the following two ways:

- The [Knowledge Base](#) on Magewell official website is a helpful resource where you can visit for more information and troubleshooting. If existed answers can't help you address the issue, please click *No. Report a Problem* at the bottom of the page to send a support request to us.
- Contact [Magewell support team](mailto:support@magewell.net) (support@magewell.net) for help.

Glossary and Abbreviations

GOP

Group of Pictures, which contains an I picture and all the pictures that depend on it, which is used for video encoding.

HDMI

High-Definition Multimedia Interface

HDR

High dynamic range, which increases the detail of both the shadows and highlights of a scene

RTMP

Real-Time Messaging Protocol, used for streaming audio, video and data over the Internet.

SDI

Serial Digital Interface

SDR

Standard dynamic range, which can only represent a fraction of the dynamic range that HDR is capable of and hence can show less details in the shadows and highlights of a scene.

SRT

Secure Reliable Transport, an open source video transport protocol that uses secure streams and easy firewall traversal to optimize streaming performance and deliver high-quality video over even the most unreliable networks.