MAGEWELL®
Digital Video Essentials

Capture Express
For ⊞ Windows

User Manual, Reference and FAQ

TABLE OF CONTENTS

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
- Eco Capture
- Gen 1

System Requirements

Operating System

- Windows 7, 8, 8.1, 10 (x86)
- Windows 7, 8, 8.1, 10, Server 2008 R2, Server 2012, Server 2016 (x64)

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+

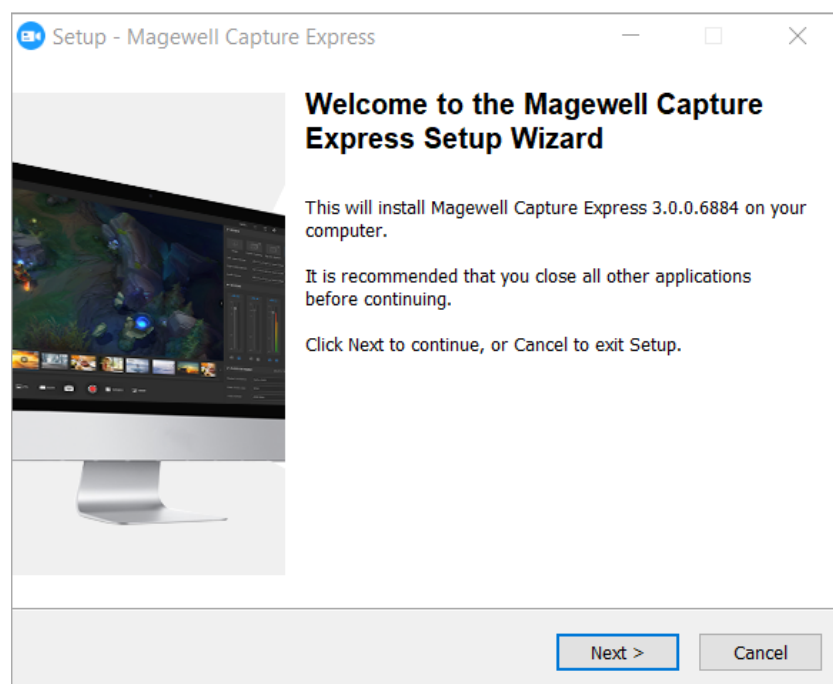 *NOTE:* Nvidia or Intel Graphics Cards required for 4K video encoding

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.
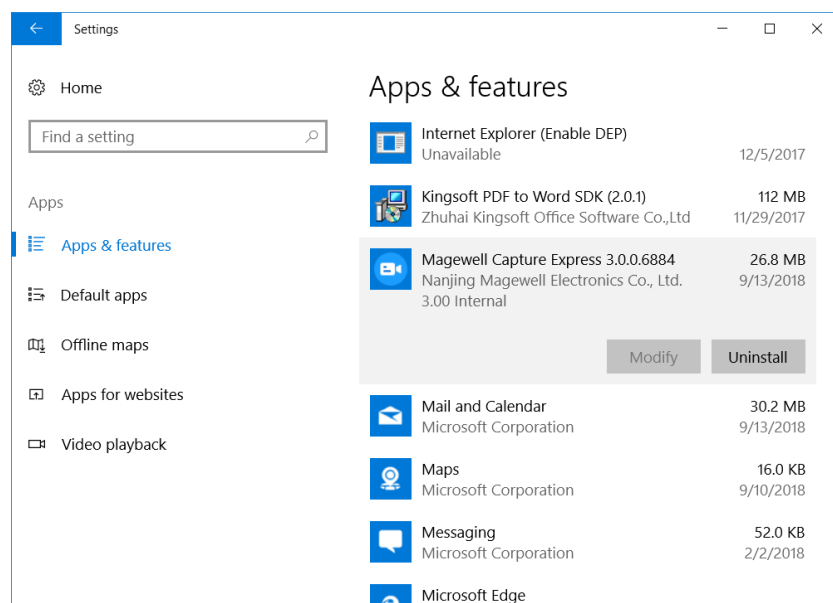

Figure 2. Uninstall Capture Express in the Windows "Apps & features" page

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.
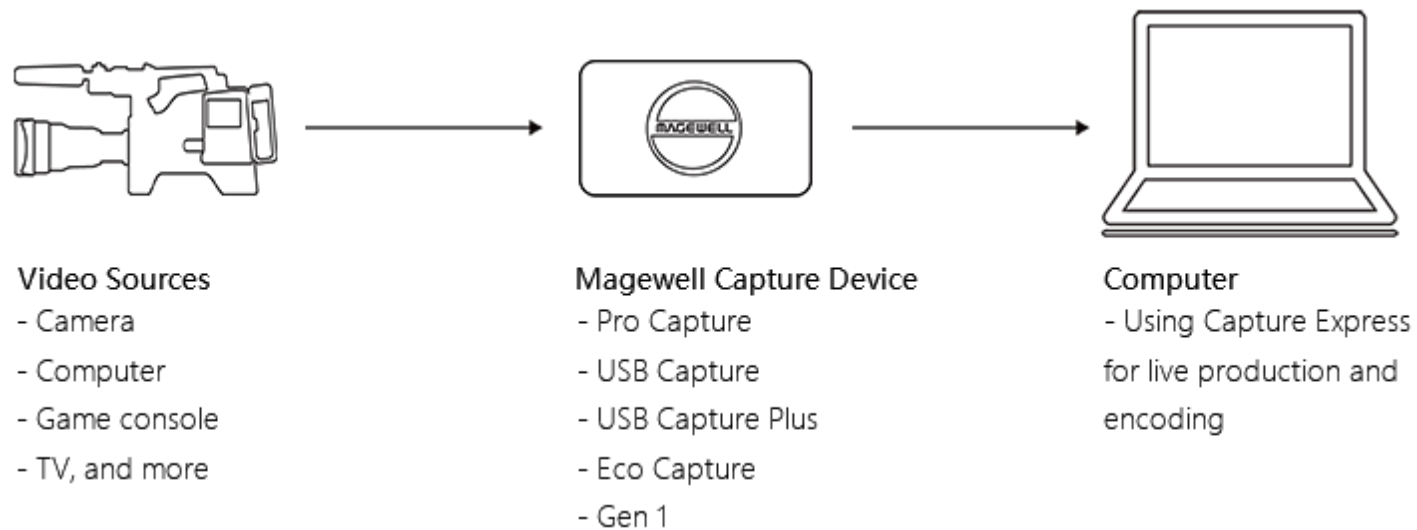Since each tutorial builds on the skills and knowledge you've learned from the previous tutorials, it is recommended that you take the tutorials in order.
As you gain hands-on experience through inputting, capturing and outputting the video, you'll gain a deeper knowledge of Capture Express's organizational 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.

Video Sources
- Camera
- Computer
- Game console
- TV, and more

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

Computer
- Using Capture Express
for live production and
encoding

Layout

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

Preview Area
- Displays the preview of the output video.

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

MAGEWELL Capture Express

Auto

Auto scan : SDI input 0
4096x2160p, 60.00 Hz
48.00 kHz, 16 bits

▼ DEVICE

Video device: USB Capture HDMI+ (C2041809... ▼

Audio device: HDMI (USB Capture HDMI+) ▼

▶ VOLUME

▶ LIVE

▶ OUTPUT FORMAT   MATCH SOURCE

▶ COLOR

JPG | Single | Source | Better

Disk free   Time left
17.6GB   09h59m

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

Select storage disk path in the Options dialog box

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, 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.   Select storage disk path

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 output video will be stored.

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*;

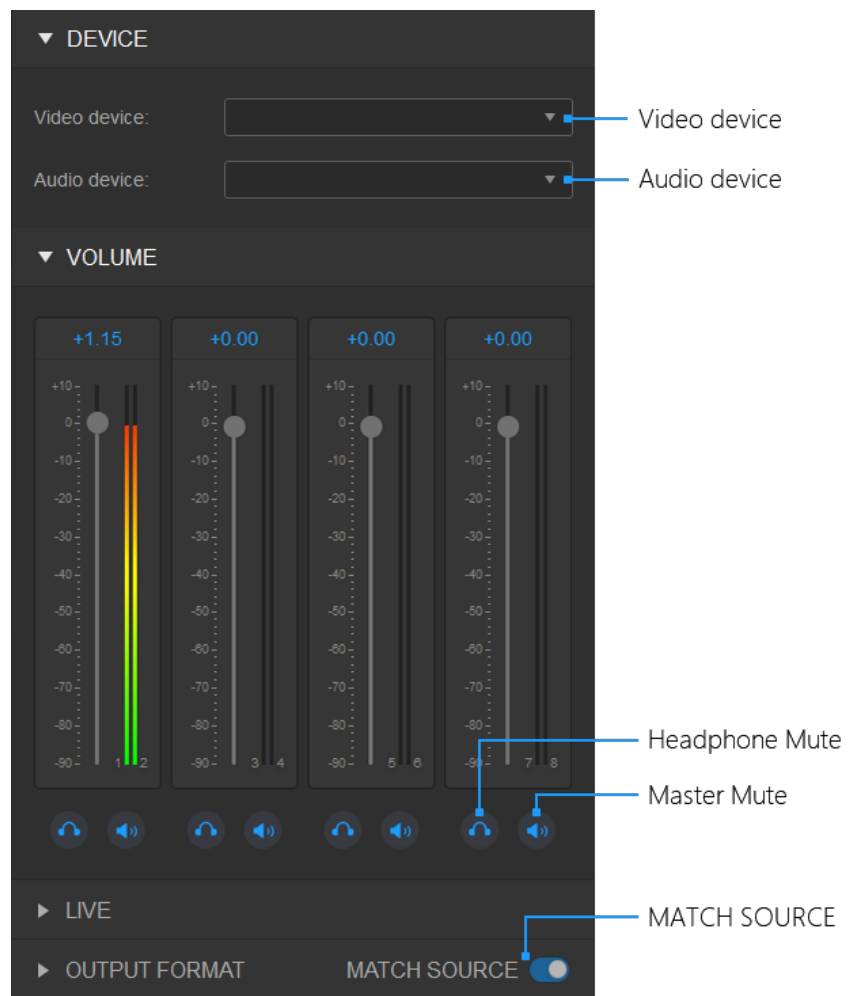2. expand the VOLUME tab, light up the *Headphone Mute* and *Master Mute* buttons, and then adjust the volumes to appropriate levels;

3. expand the OUTPUT FORMAT tab, and then enable MATCH SOURCE.
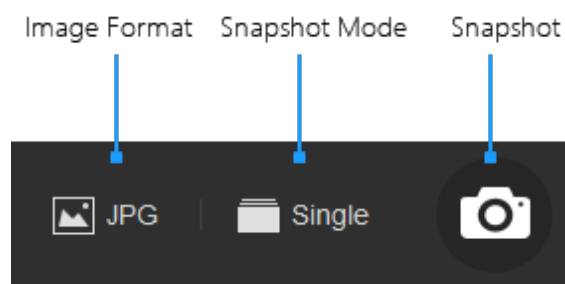
Snapshot controls in the Control/Statistics Bar

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

Configure RTMP server in the Capture Settings Panel

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*;

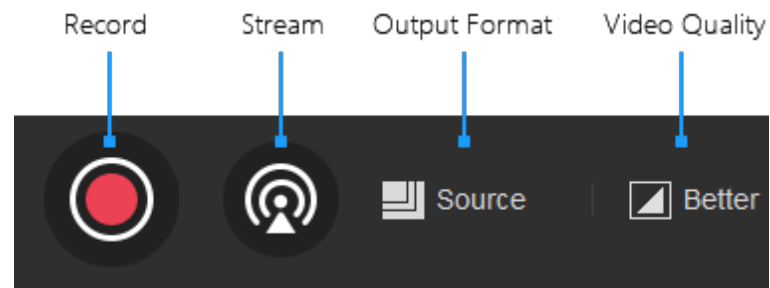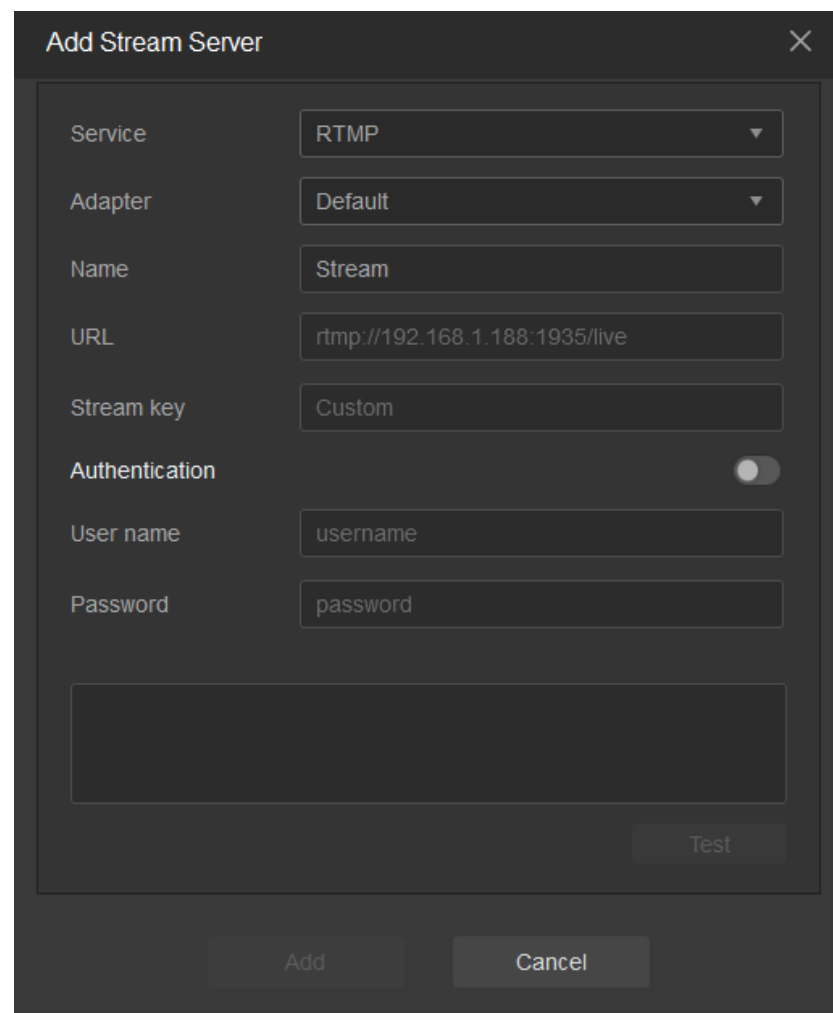3. click the *Record* button to start video recording;

4. click the *Record* button again to stop the video recording.

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 form 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.
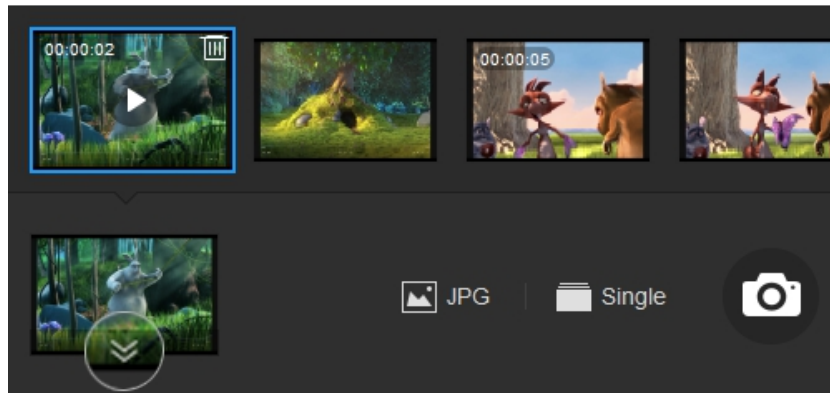
Album

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 first window automatically displays the index "#1", and 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. When you enter this view, it displays the album, control/statistics bar, and toolbar. These components will be hidden after a few seconds of user inactivity, and be displayed when you move the mouse.

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 or press Esc to exit;

- click ⤢ in the toolbar to enter the *Full Screen* view, or click this button again 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

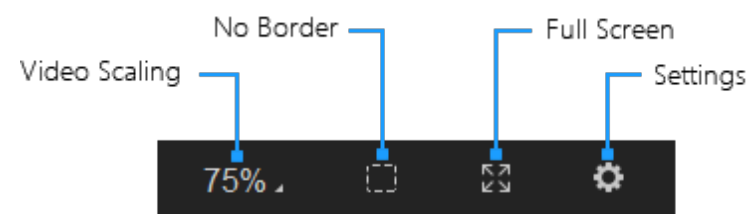Click to select a scaling ratio to apply to the preview video. You can select *Auto-Adaption* to automatically fill the overall image to the available dimensions of the *Preview Area*.

No Border

Click to display the preview video in no border mode. When the no border mode is in use, you can click this button again or press Esc to exit.

Full Screen

Click to display the preview video in full screen mode. When the full screen mode is in use, you can click this button again or press Esc to exit.
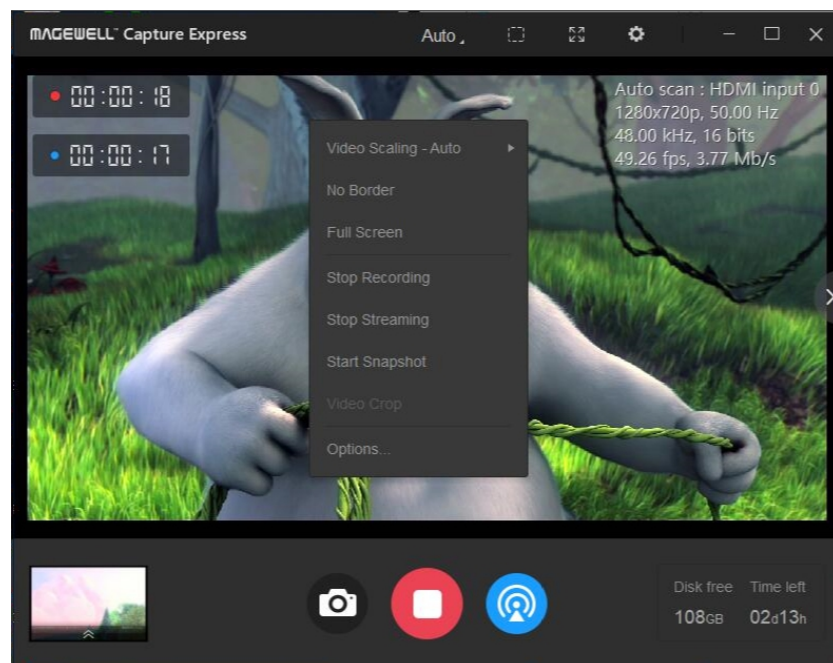
Settings

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. You can press the shortcut keys "Alt+S" to switch between 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, and whether the audio is LPCM-encoded or not.

  ○ 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. 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. When the no border mode is in use, you can click this menu option again or press Esc to exit.

- **Full Screen:** Click to display the preview video in full screen mode. When the full screen mode is in use, you can click this menu option again 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*. You can 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), you can 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)
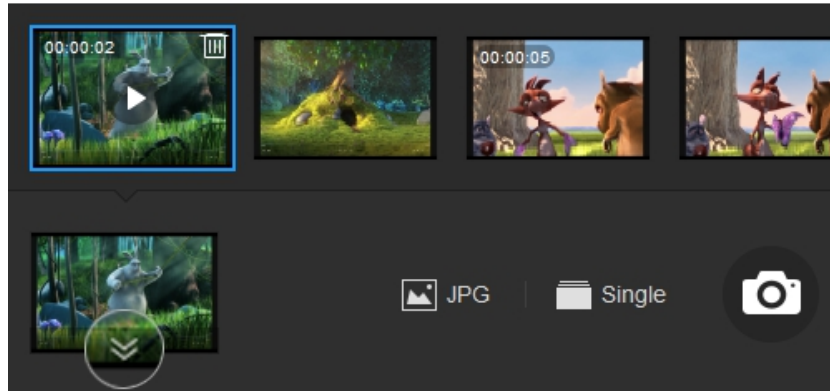
Album

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.

Image Format   Snapshot Mode   Snapshot

JPG | Single
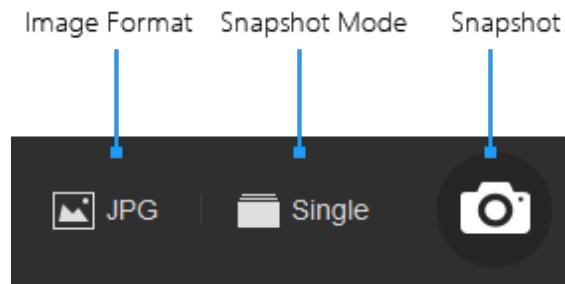
Snapshot Controls

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.

Record   Stream   Output Format   Video Quality

Source | Better
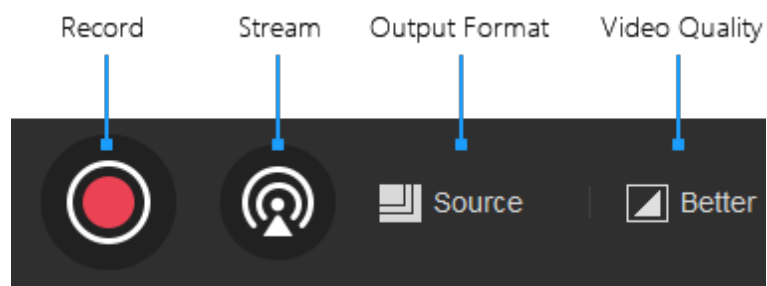
Recording Controls

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.

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.

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.
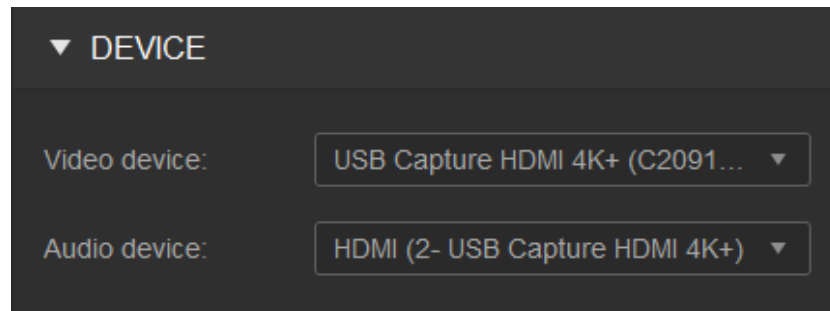
DEVICE Tab

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

Video device
Click to select the video input device.
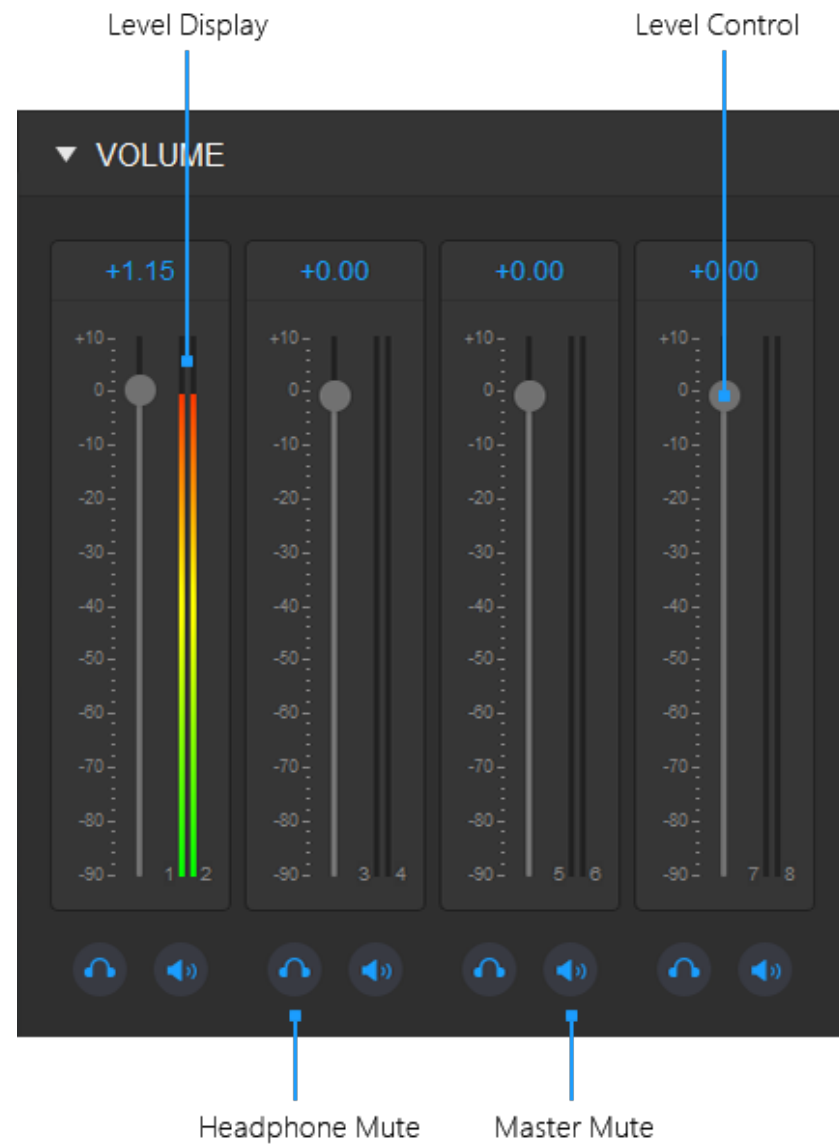
Audio device
Click to select the audio input device.

> ☼ 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.

Level Display   Level Control

▼ VOLUME

+1.15   +0.00   +0.00   +0|00

Headphone Mute   Master Mute

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.
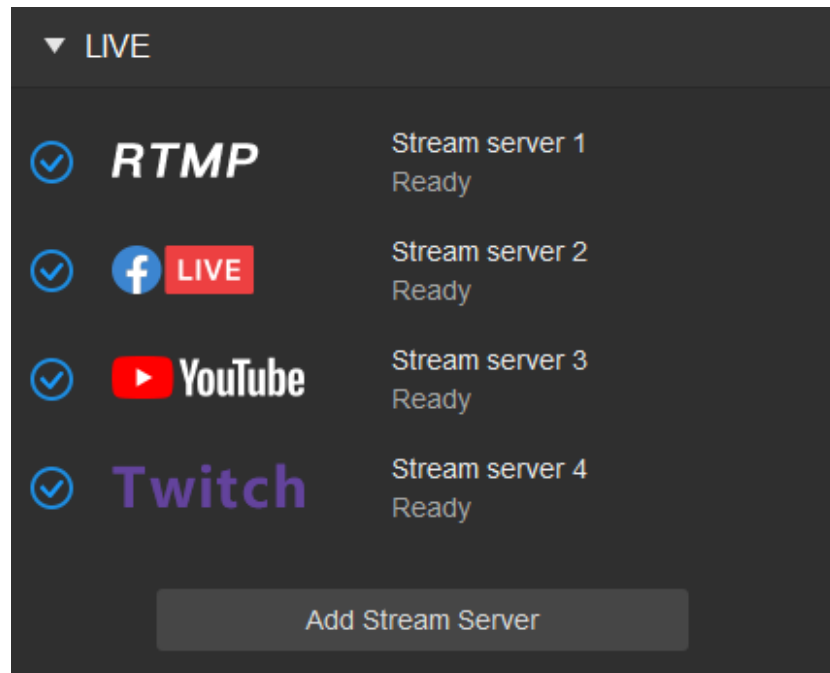
Level Display

Displays the levels (left and right) 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 card.
- **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. You can still manually choose a YouTube/Twitch server.
- **Stream key:** Enter the stream key you obtained from the live stream platform.

RTMP Server

Most live stream platforms support the 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 card.
- **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.

Add Stream Server ✕

Service	SRT Listener ▾
Adapter	Default ▾
Name	Stream
Port	8000
Latency	120 ms ▾
Bandwidth overhead	25 % ▾
Encryption type	Not Used ▾
Password phrase	password00

Test

Add   Cancel

SRT Listener

If you want to use your computer as the SRT listener and push streams to the SRT server, set the following properties.

> ☼ Video streams from the SRT listener can be received by up to 4 channels.

- **Service:** Select SRT Listener.

- **Adapter:** Select a network card.

- **Name:** Enter the listener's name, which will be displayed in the LIVE tab.

- **Port:** Enter the service port (1-65535), using port 8000 by default.

- **Latency:** Select the maximum latency.

- **Bandwidth overhead:** Select the maximum bandwidth overhead, which is the portion of the total bandwidth of a stream that is required for the exchange of SRT control and recovered packets.

- **Encryption type:** Select the encryption type of the video stream.

- **Password phrase:** If you want to encrypt the video stream, enter the password phrase here. The length range of password phrase is 10-79.

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 must not be set up by Capture Express.

- **Service:** Select SRT Caller.

- **Adapter:** Select a network card.

- **Name:** Enter the caller's name, which will be displayed in the LIVE tab.

- **Address:** 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.

- **Port:** Enter the service port (1-65535), using port 8000 by default.

- **Latency:** Select the maximum latency.

- **Bandwidth overhead:** Select the maximum bandwidth overhead, which is the portion of the total bandwidth of a stream that is required for the exchange of SRT control and recovered packets.

- **Encryption type:** Select the encryption type of the video stream.

- **Password phrase:** If you want to encrypt the video stream, enter the password phrase here. The length range of password phrase is 10-79.

TS over RTP

- **Service:** Select TS over RTP.

- **Adapter:** Select a network card. If your computer is equipped with multiple network cards, it will randomly select a card to push stream by default, thus it's recommended to manually specify a card.

- **Name:** Enter the server's name, which will be displayed in the LIVE tab.

- **Address:** Enter the IP address of server.

- **Port:** Enter the service port (1-65535), using port 5004 by default.

TS over UDP

- **Service:** Select TS over UDP.

- **Adapter:** Select a network card. If your computer is equipped with multiple network cards, it will

randomly select a card to push stream by default, thus it's recommended to manually specify a card.

- **Name:** Enter the server's name, which will be displayed in the LIVE tab.

- **Address:** Enter the IP address of server.

- **Port:** Enter the service port (1-65535), using port 5004 by default.

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.
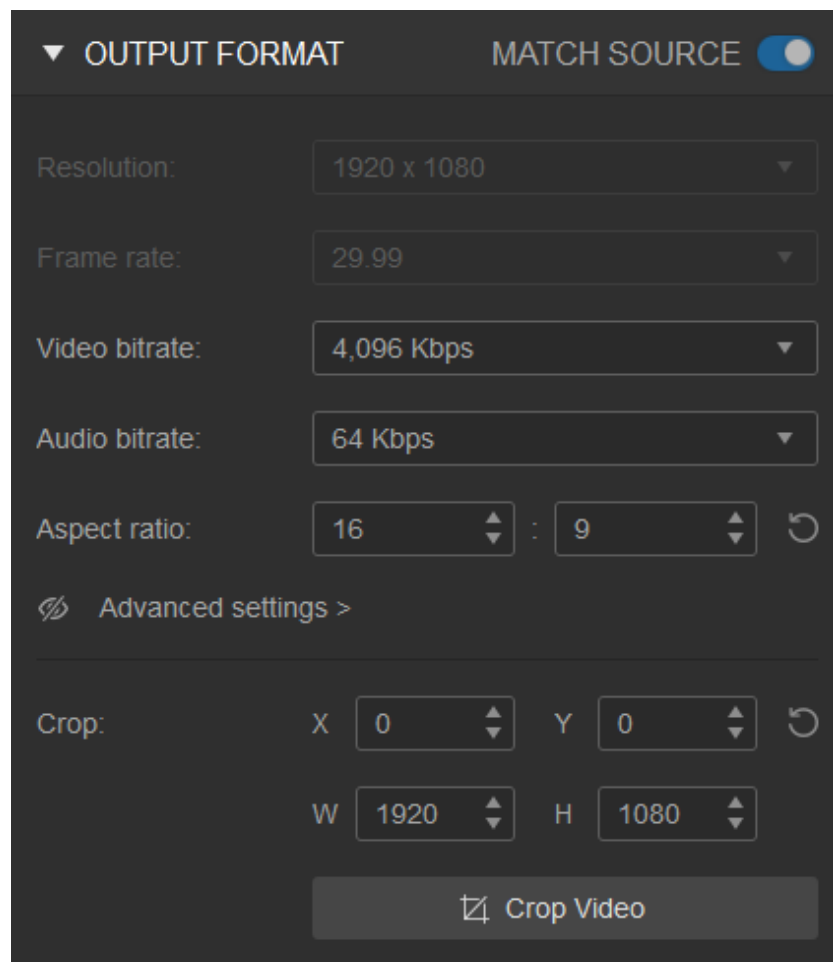
OUTPUT FORMAT Tab

The OUTPUT FORMAT tab is used to set the output signal format, including resolution, frame rate, video bitrate, audio bitrate, aspect ratio, video cropping range, and advanced settings about encoding.

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)
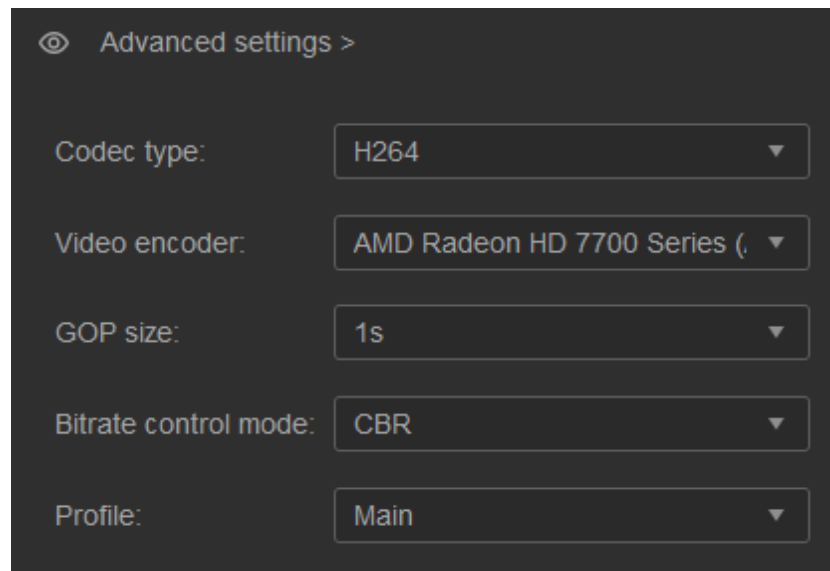
Video bitrate

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.

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.

- **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.

  - *VBR*: Variable bit rate. In this mode, the encoder dynamically increases or decreases the bit rate based on the image bitrate needs.

- **Profile**:

  - For *H264*, options are *High*, *Main*, and *Baseline*, with a high, medium, low compression ratio respectively.

  - 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 cropping range.

- **Y:** The distance from the top edge of the original video to the top left point of the cropping range.

- **W:** The width of the cropping range.

- **H:** The height of the cropping range.

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 cropping range input boxes (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 cropping range can be set without any ratio limits.

2. Drag the rectangle marquee to adjust the cropping range; or input the values of X, Y, W, and H to set the cropping range.

3. Click ✓ to confirm the cropping.
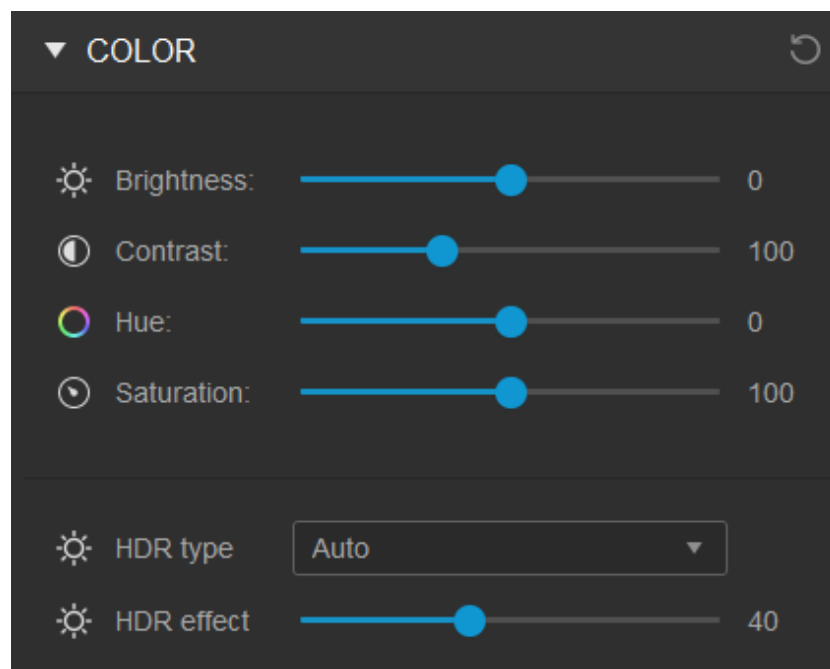
COLOR Tab

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 increases 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 adjust 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.
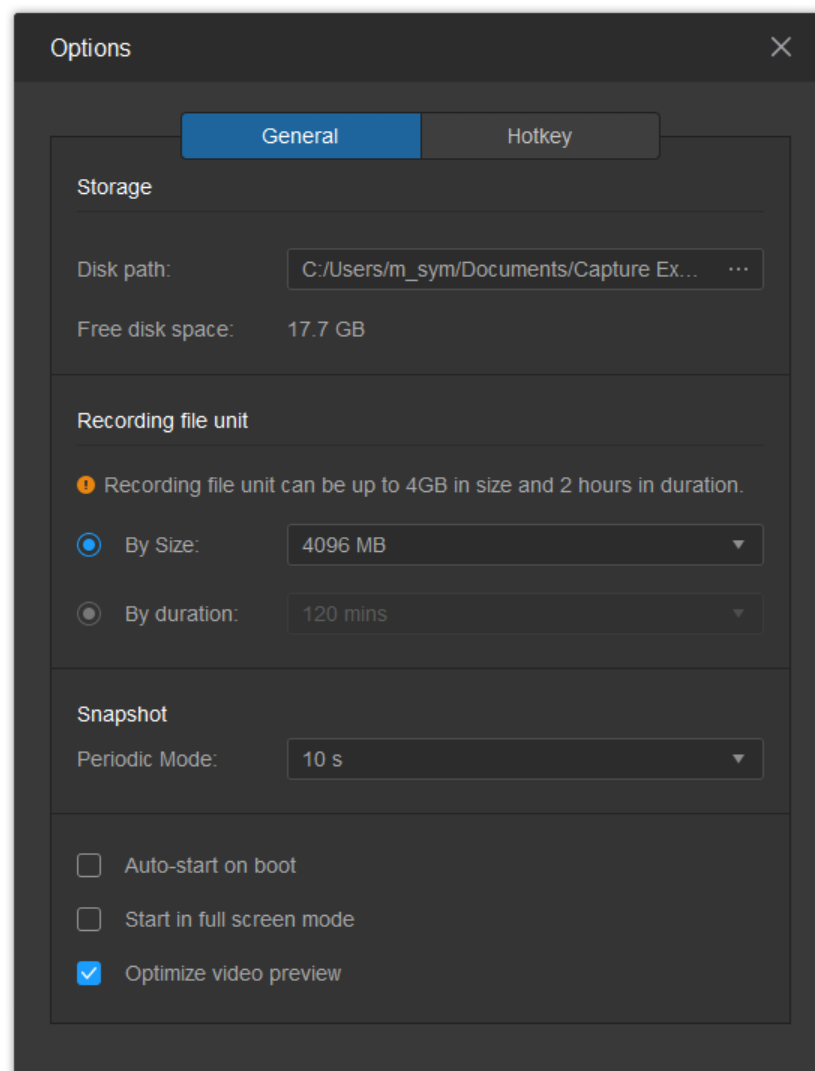
General

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.

By duration

Select the recording file unit by duration.

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.
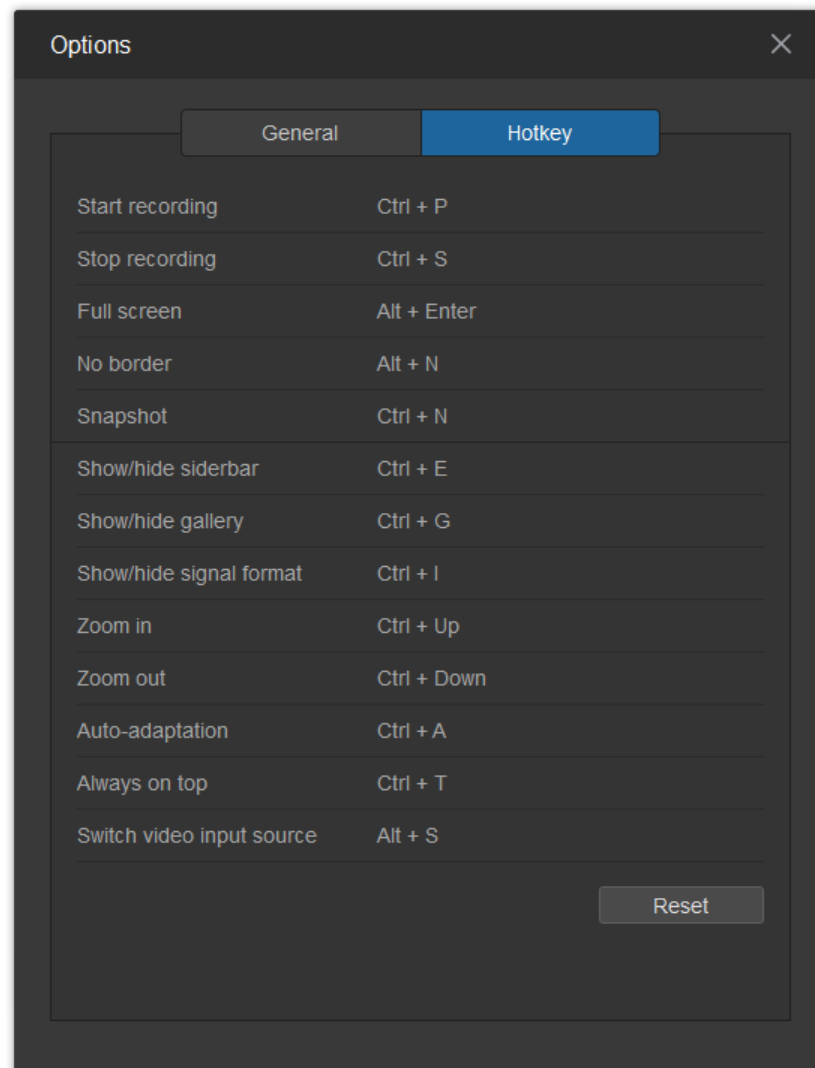
Software Startup Options

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.

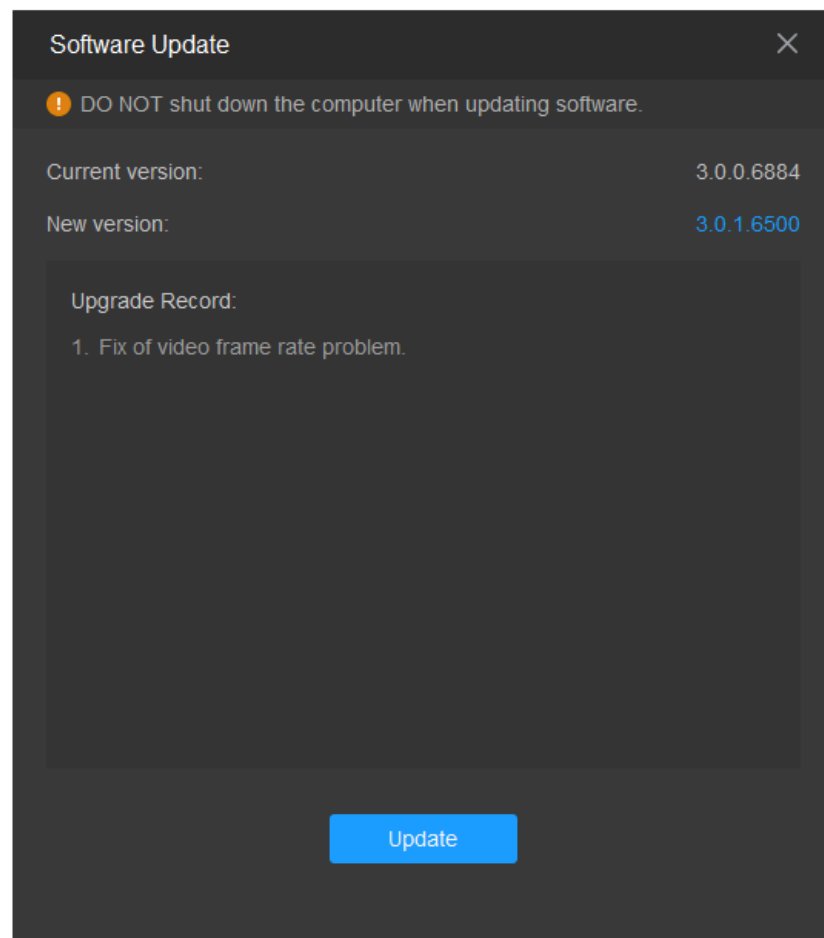| Options		✕
General	**Hotkey**	
Start recording	Ctrl + P	
Stop recording	Ctrl + S	
Full screen	Alt + Enter	
No border	Alt + N	
Snapshot	Ctrl + N	
Show/hide siderbar	Ctrl + E	
Show/hide gallery	Ctrl + G	
Show/hide signal format	Ctrl + I	
Zoom in	Ctrl + Up	
Zoom out	Ctrl + Down	
Auto-adaptation	Ctrl + A	
Always on top	Ctrl + T	
Switch video input source	Alt + S	
	Reset	

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

In the *Settings* menu, 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 (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.