CUBIC | MotionDSP

MotionDSP FORENSIC STUDIO

MotionDSP FORENSIC

MotionDSP SPOTLIGHT

# USER GUIDE

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# Getting Started

## First Steps

### Download

Last updated: 2021-02-07T14:00:58.000Z | Online Version

There are two ways to download the software installer:

1. The 72-hour temporary link in the activation email received after your online purchase
2. In these articles, available after signing in
    - Forensic Studio
    - Forensic
    - Spotlight

Note: Legacy Installers can be found here

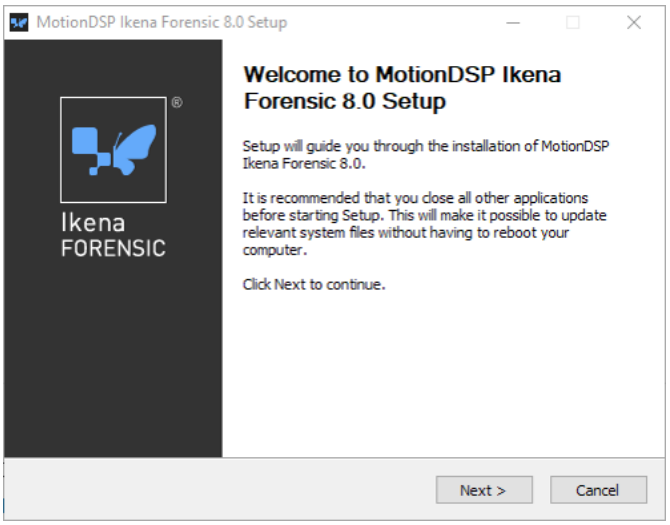
---

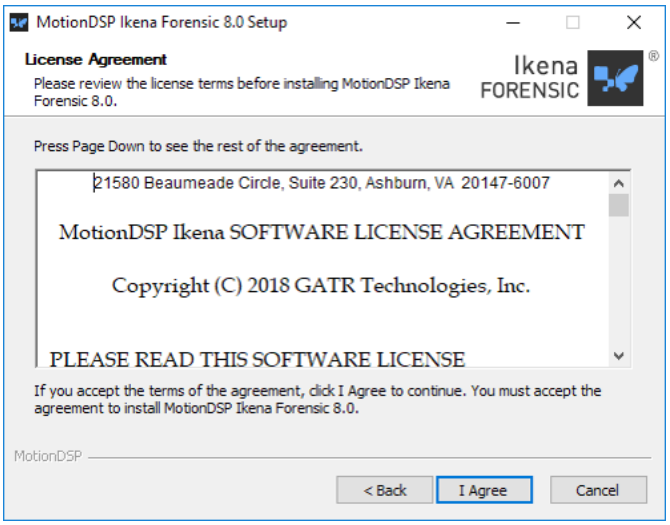
### Install

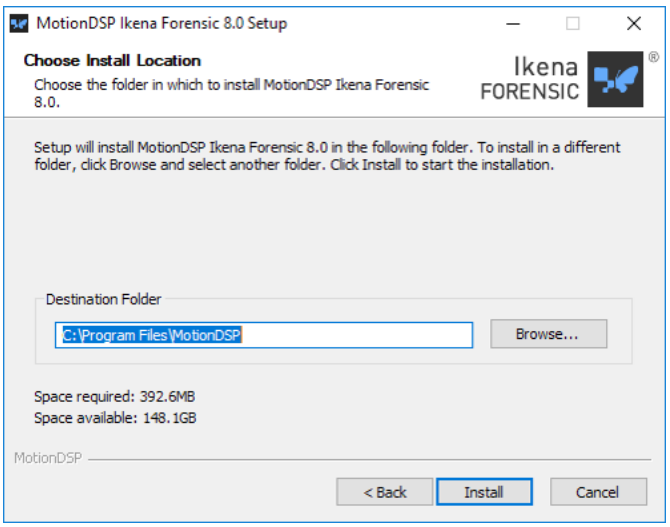
Last updated: 2021-08-29T02:05:27.000Z | Online Version

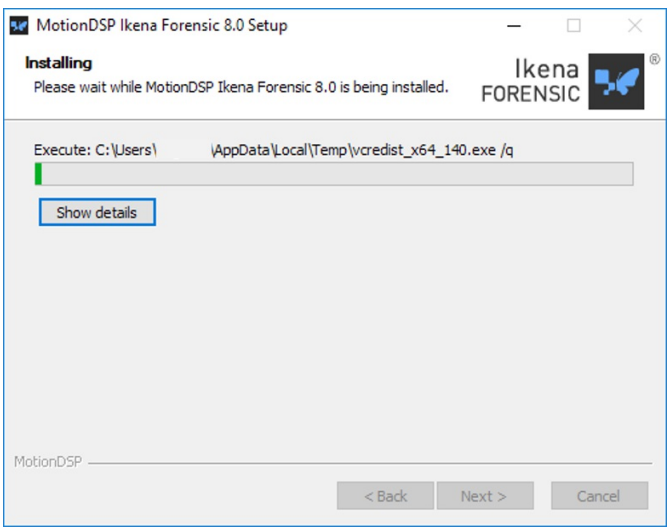
After downloading the software, launch the .exe file and navigate through the installer prompts.

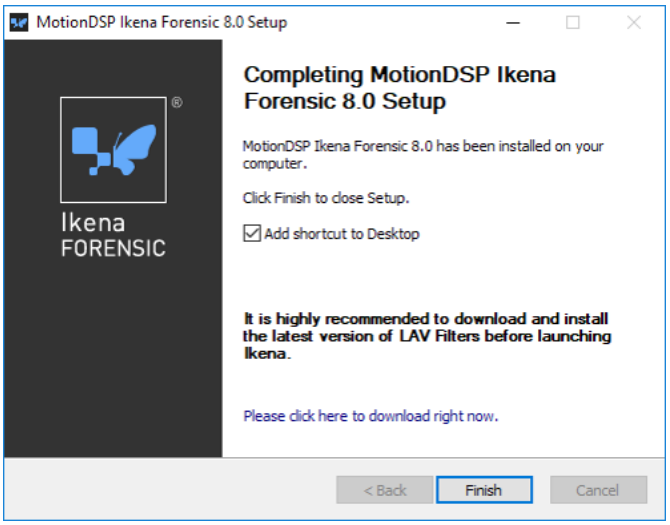
If you have installed versions of the software on the computer, please follow the prompt to uninstall previous versions prior to updating.




MotionDSP Ikena Forensic 8.0 Setup
License Agreement
Please review the license terms before installing MotionDSP Ikena Forensic 8.0.
Ikena FORENSIC
Press Page Down to see the rest of the agreement.
21580 Beaumeade Circle, Suite 230, Ashburn, VA 20147-6007
MotionDSP Ikena SOFTWARE LICENSE AGREEMENT
Copyright (C) 2018 GATR Technologies, Inc.
PLEASE READ THIS SOFTWARE LICENSE
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install MotionDSP Ikena Forensic 8.0.
MotionDSP
< Back
I Agree
Cancel


MotionDSP Ikena Forensic 8.0 Setup
Choose Install Location
Choose the folder in which to install MotionDSP Ikena Forensic 8.0.
Ikena FORENSIC
Setup will install MotionDSP Ikena Forensic 8.0 in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:\Program Files\MotionDSP
Browse...
Space required: 392.6MB
Space available: 148.1GB
MotionDSP
< Back
Install
Cancel


MotionDSP Ikena Forensic 8.0 Setup
Installing
Please wait while MotionDSP Ikena Forensic 8.0 is being installed.
Ikena FORENSIC
Execute: C:\Users\ \AppData\Local\Temp\vcredist_x64_140.exe /q
Show details
MotionDSP
< Back
Next >
Cancel




# Install LAV Filters

Last updated: 2021-01-28T17:18:40.000Z | Online Version

Download LAV Filters

In order to play video and audio, you need software which is able to translate the file into a format your computer can understand.

LAV Filters are a set of open-source DirectShow filters that does this translation for all the popular video and audio formats:

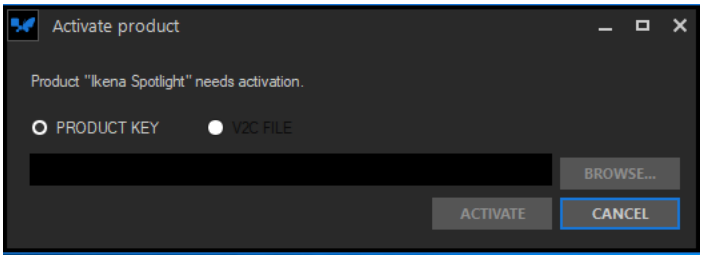
- **LAV Splitter**: a source/splitter filter required to demux video files into their separate elementary streams.
- **LAV Audio** and **Video Decoder**: powerful audio and video decoders with a focus on quality and performance.

You can find the latest version of the LAV Filters availablehere.

# Activate

Last updated: 2021-08-10T00:36:21.000Z | Online Version

There are two ways to activate your subscription:

1. In-App - The application will ask for a product key or V2C file upon launch when no valid license is available.
    - 

2. Offline Activation - If you are activating a computer behind a restrictive firewall or with no network access you can use your product key and the self-service portal available at https://activate.motiondsp.com

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# Basic Functionality

## Keyboard Shortcuts

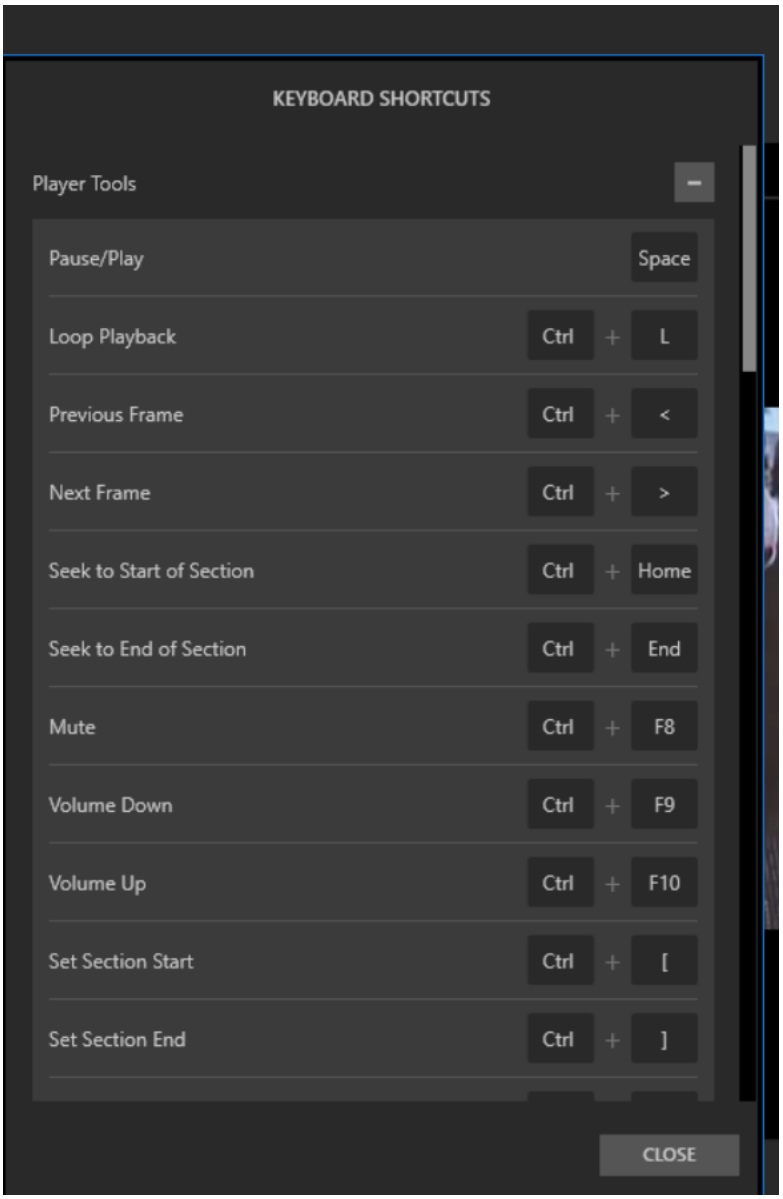
Last updated: 2021-06-17T15:16:34.000Z | Online Version

There are keyboard shortcuts that allow you to navigate the software settings without using your mouse. Located under the HELP tab, select Keyboard Shortcuts. Use the side bar to scroll down for more shortcuts.

**Click on links below for full PDF 9.0 versions**

Forensic Studio-Forensic Keyboard Shortcuts

Spotlight Keyboard Shortcuts

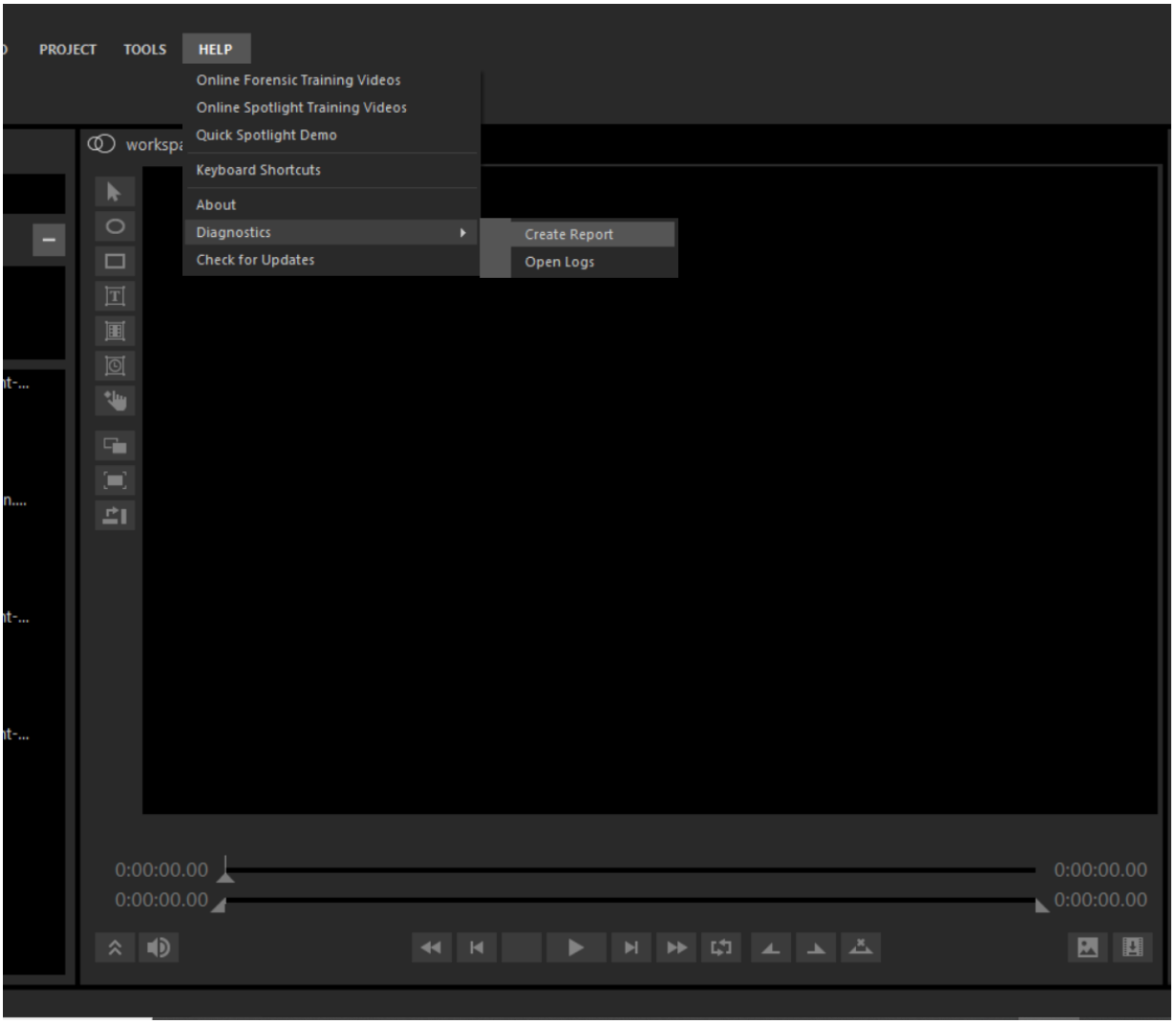

KEYBOARD SHORTCUTS
Player Tools
Pause/Play
Space
Loop Playback
Ctrl + L
Previous Frame
Ctrl + <
Next Frame
Ctrl + >
Seek to Start of Section
Ctrl + Home
Seek to End of Section
Ctrl + End
Mute
Ctrl + F8
Volume Down
Ctrl + F9
Volume Up
Ctrl + F10
Set Section Start
Ctrl + [
Set Section End
Ctrl + ]
CLOSE

# How do I generate a Diagnostic Report?

Last updated: 2021-01-28T17:19:37.000Z | Online Version

Crash reports should be generated automatically  on newer versions but if needed, here are the instructions:

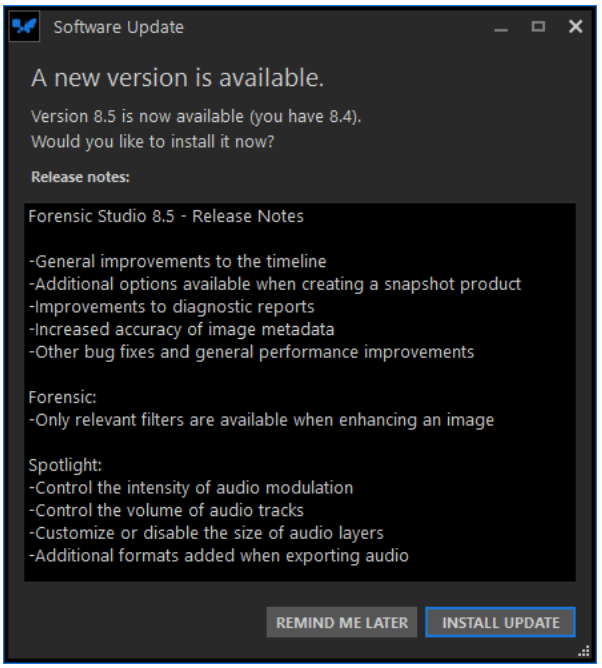
Navigate to Help, click on Diagnostics, and click Create Report



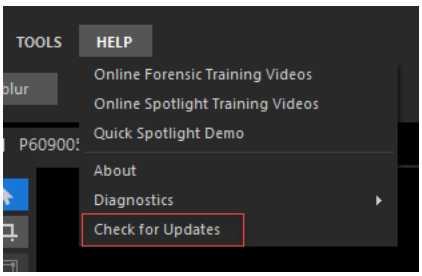
# Automatic Software Updates

Last updated: 2021-01-28T17:20:24.000Z | Online Version

All applications come equipped with an Automatic Software Updater that appears upon start-up when a newer version of the application is available. A sample of the Forensic Studio software update window is pictured below.



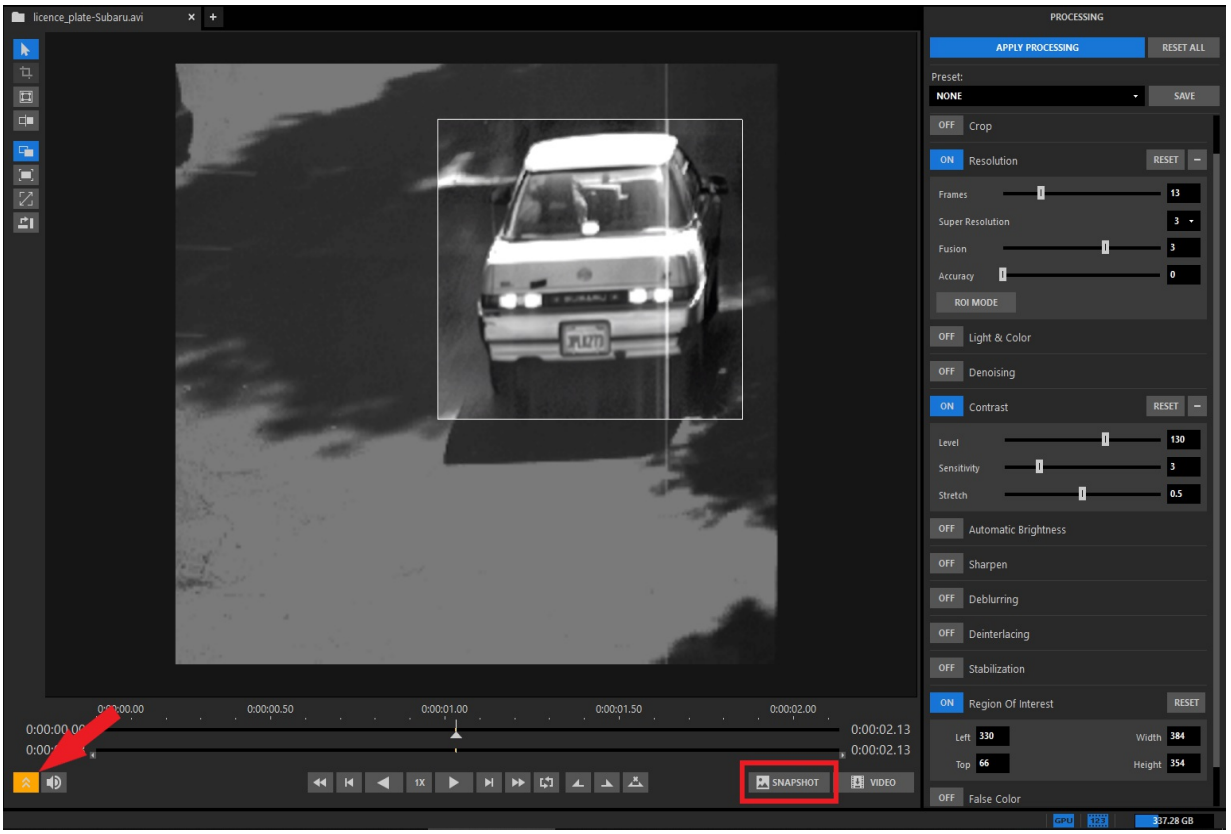

You can launch the Software Update feature manually by selecting *Check for Updates* under the Help menu of your application.



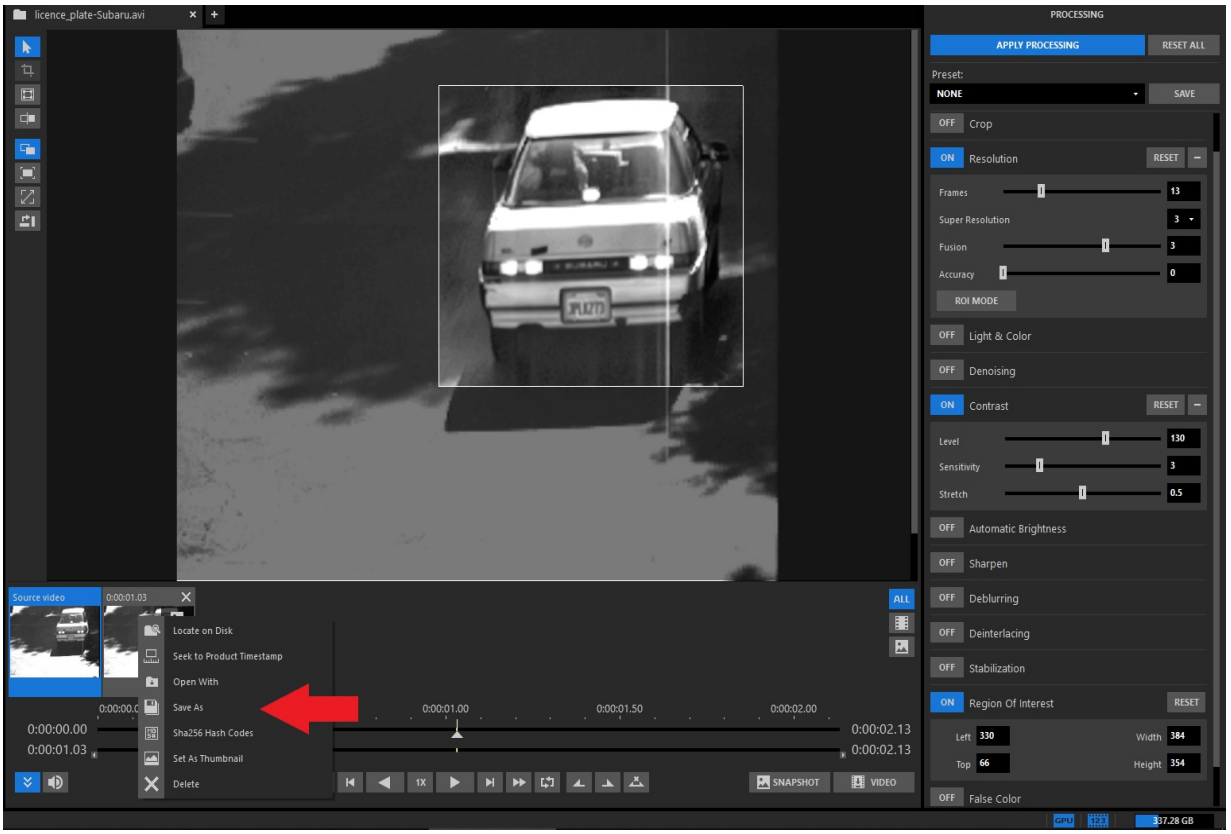

# Generating a Snapshot

Last updated: 2021-01-28T17:20:39.000Z | Online Version

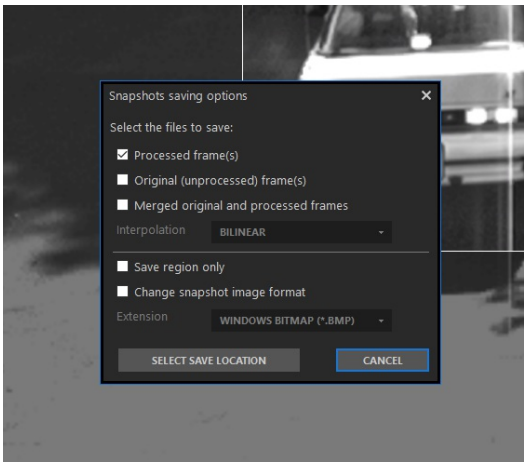
Snapshots are still image products you can generate in all MotionDSP applications. To create a snapshot click on the Snapshot button in the lower-right corner of the player. If your Product List is closed, you'll notice the product list icon will change color indicating a new product has been created.




Right-click on this new product and select Save As




Saving Snapshots has the following options

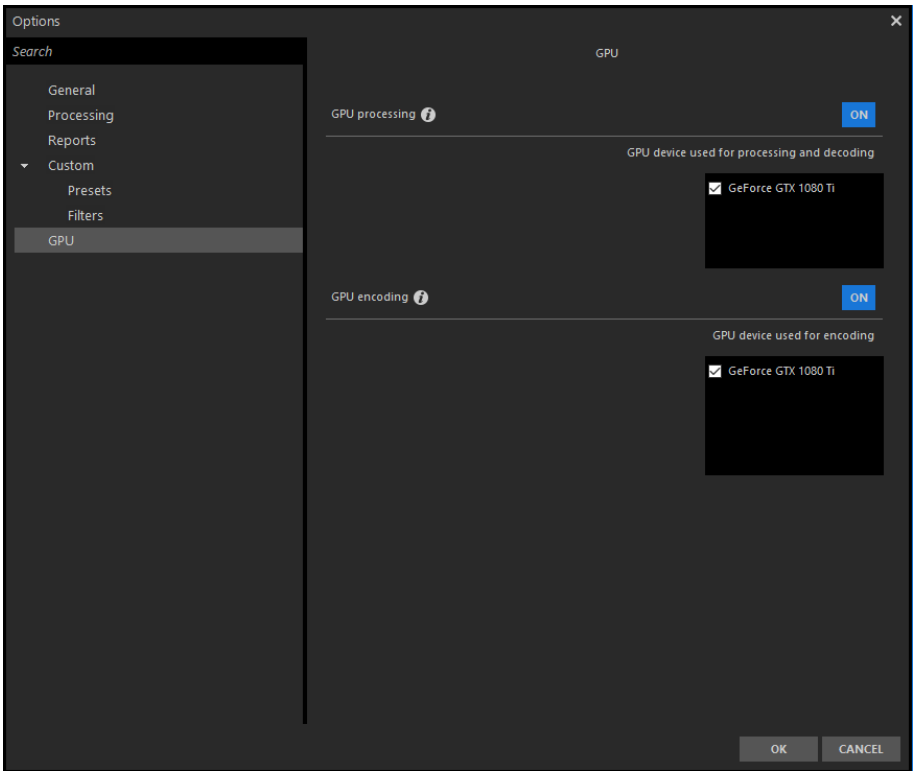


1. Processed frame(s)
    - This will save a copy of your snapshot with processing applied._*enhanced* will be appended to the filename
2. Original (unprocessed) frame(s)
    - This will save a copy of your snapshot without processing applied._*original* will be appended to the filename
3. Merged original and processed frames
    - This will save a copy of both the processed and unprocessed products side by side in one file._*merged* will be appended to the filename
4. Interpolation
    - Choose the interpolation method for creating a merged product
5. Save Region Only
    - When working with the Region of Interest tool in Forensic Studio or Forensic, selecting this option will save only the area within the defined region
6. Change snapshot image format
    - Options include: BMP, PNG, JPG, TIFF

# GPU Support

Last updated: 2021-01-28T17:20:55.000Z | Online Version

To enable real-time processing of video, our suite of applications have been optimized to leverage the additional processing power available in modern GPUs using NVIDIA's CUDA technology.




**GPU-Accelerated Processing**

**-**Offload filter processing and tracking to GPU resources

**GPU-Accelerated Encoding**

-Export H.264 video faster with GPU resources

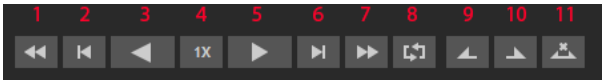
TIPS:

- MotionDSP applications only support NVIDIA GPUs with a minimum CUDA compute capability of 3.0 or higher.
- You can specify which GPU to use for which workload in the GPU options menu if more than one GPU is installed on your system.

---

# Play Controls

Last updated: 2021-01-28T17:21:15.000Z | Online Version

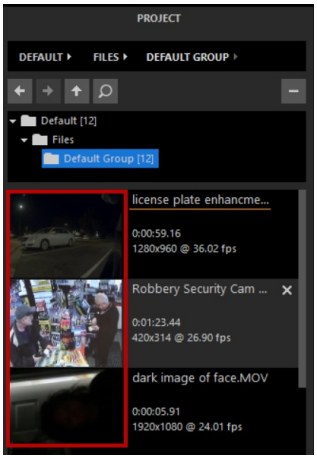



| | |
|---|---|
| 1. Start of Section/Video | Return the playhead to the beginning of the video or defined section (Ctrl+Home) |
| 2. Previous Frame | Move back one frame (Ctrl+<) |
| 3. Reverse Playback (not available in Spotlight) | Reverse playback at the set playback speed (Backspace) |
| 4. Playback Speed | Options are: 1/8*, 1/4, 1/2, 1x, 2x, 4x<br>*Not available for export |
| 5. Play/Pause | Forward playback and pause (Space) |
| 6. Next Frame | Move forward one frame (Ctrl+>) |
| 7. End of Section/Video | Move the playhead to the end of the video or defined section (Ctrl+End) |
| 8. Loop | Enable looping for the video or section (Ctrl+L) |
| 9. Set Section Start | Begin section at playhead ( Ctrl+[ ) |
| 10. Set Section End | End section at playhead (Ctrl+] ) |
| 11. Reset Section | Clear established section start and end points (Ctrl+\) |

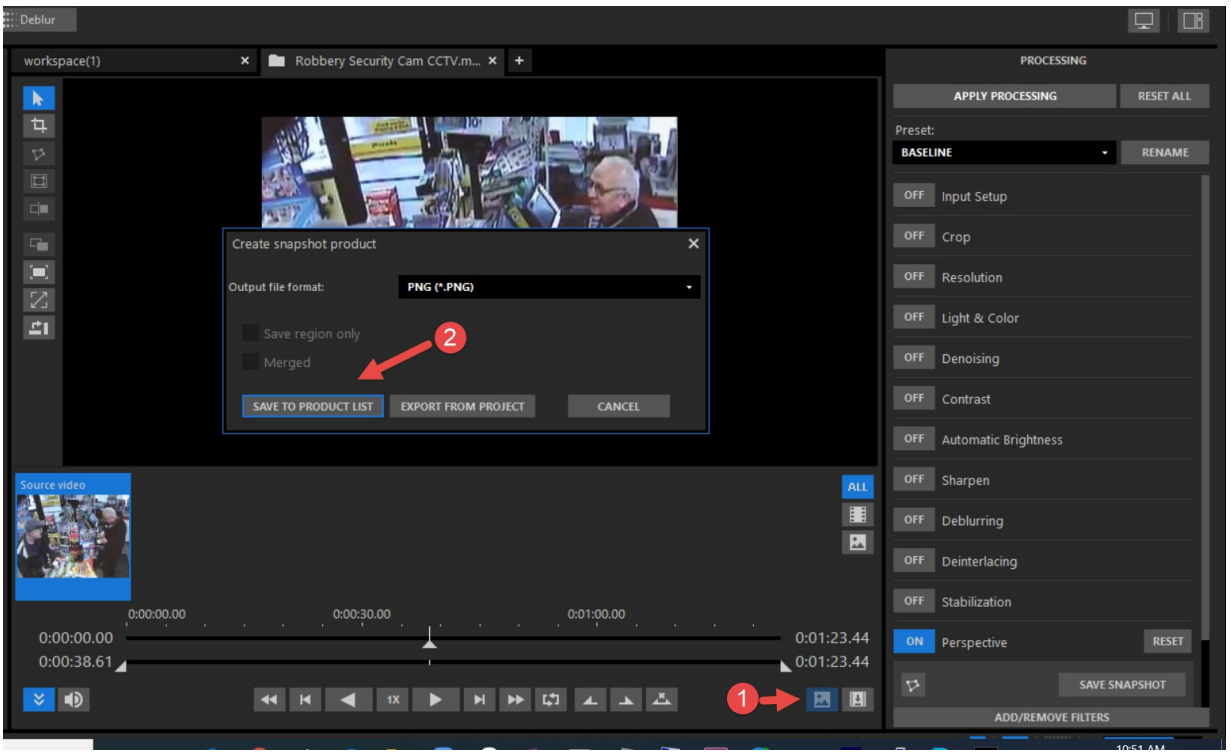
## Set as Thumbnail feature

Last updated: 2020-12-10T17:44:30.000Z | Online Version

A thumbnail is a small representation of an image that is used to identify a file by its contents intended to make it faster to manage a group of larger images.

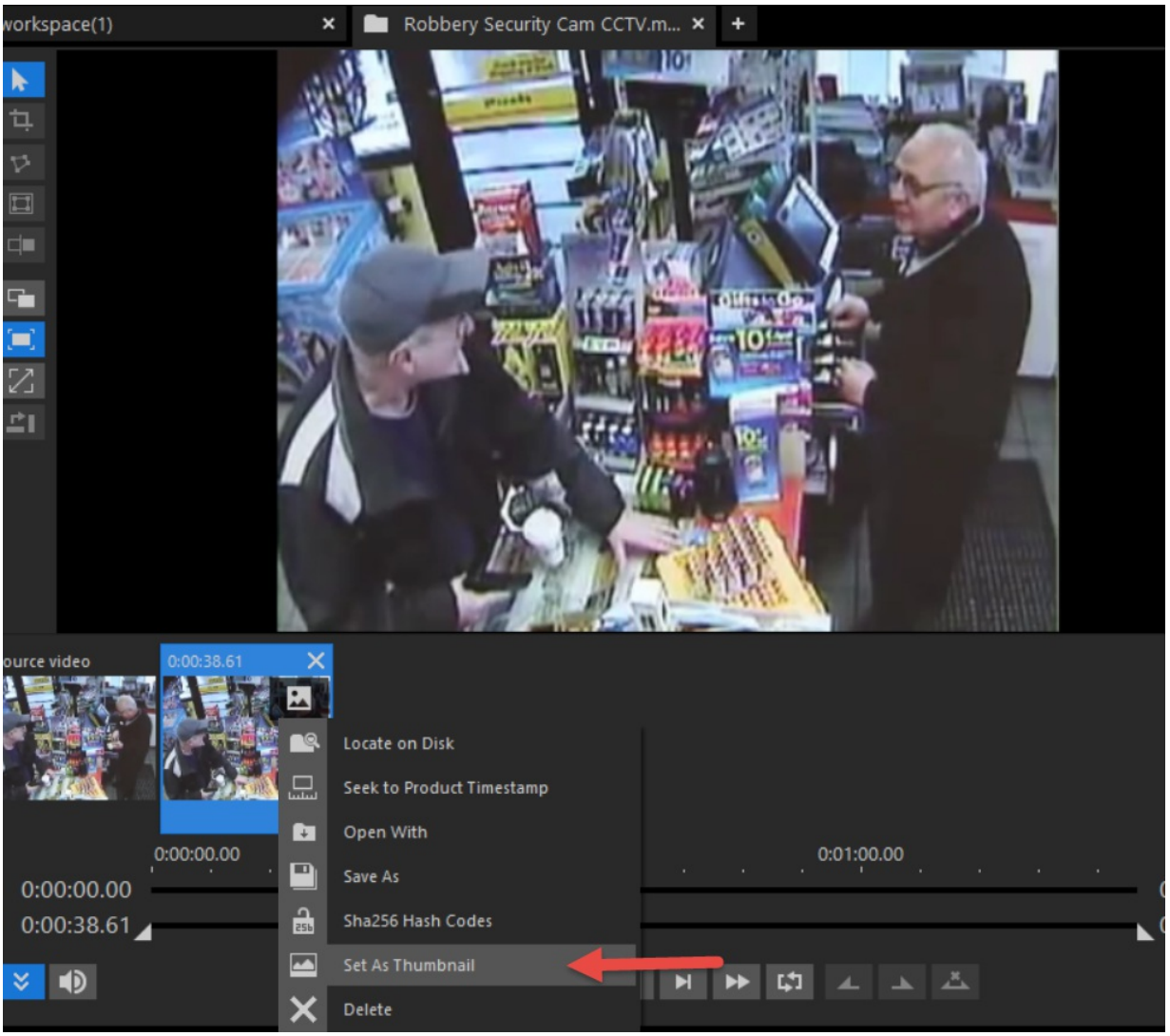



To create a thumbnail, create a snapshot of the image you would like to be displayed as the thumbnail and click "save to product list".

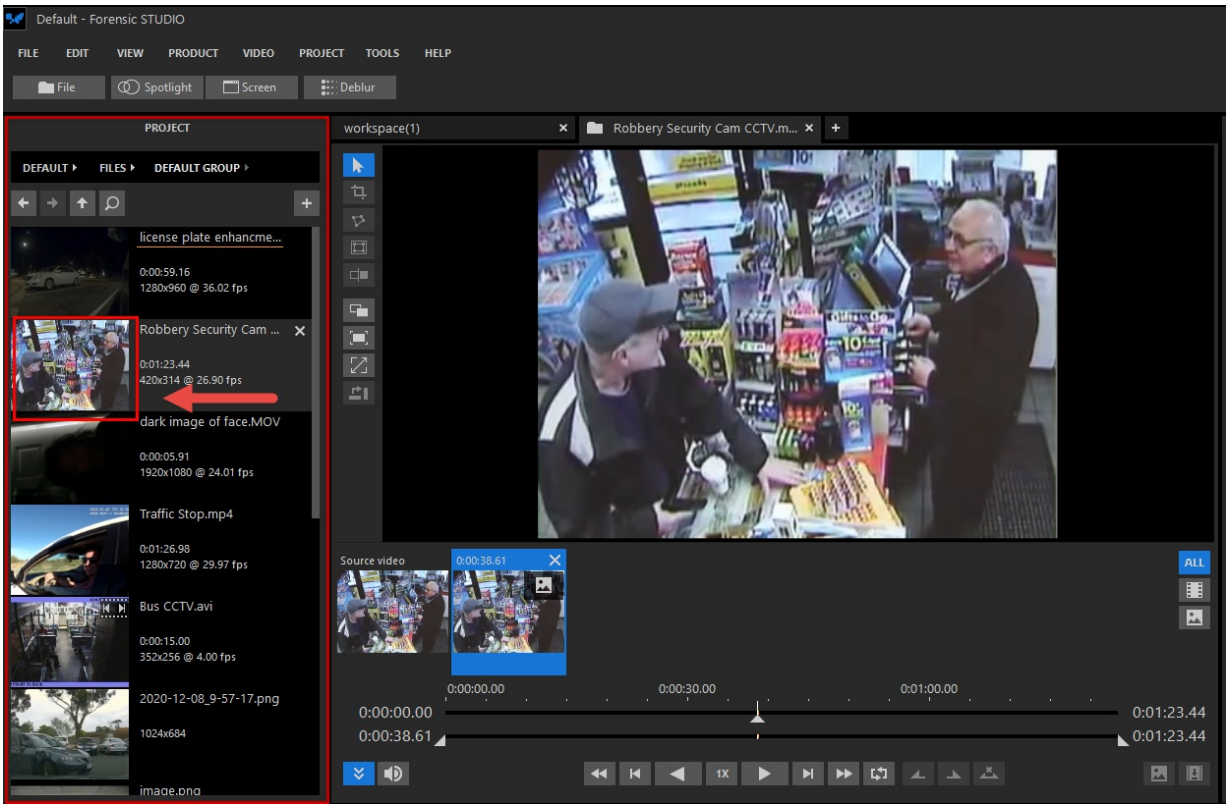



The image will display in the Product list section as seen below:

Right click on the desired snapshot and choose Set as Thumbnail



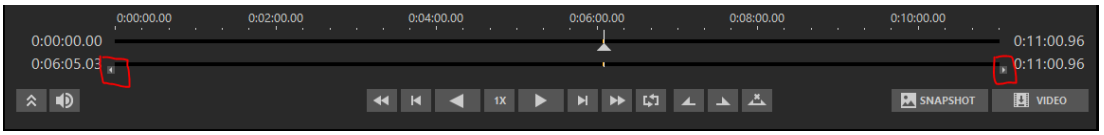

Your updated thumbnail will be displayed in the Project Panel.


Default - Forensic STUDIO
FILE
EDIT
VIEW
PRODUCT
VIDEO
PROJECT
TOOLS
HELP
File
Spotlight
Screen
Deblur
PROJECT
DEFAULT
FILES
DEFAULT GROUP
license plate enhancme...
0:00:59.16
1280x960 @ 36.02 fps
Robbery Security Cam ...
0:01:23.44
420x314 @ 26.90 fps
dark image of face.MOV
0:00:05.91
1920x1080 @ 24.01 fps
Traffic Stop.mp4
0:01:26.98
1280x720 @ 29.97 fps
Bus CCTV.avi
0:00:15.00
352x256 @ 4.00 fps
2020-12-08_9-57-17.png
1024x684
image.png
workspace(1)
Robbery Security Cam CCTV.m...
Source video
0:00:38.61
ALL
0:00:00.00
0:00:30.00
0:01:00.00
0:00:00.00
0:01:23.44
0:00:38.61
0:01:23.44
1X

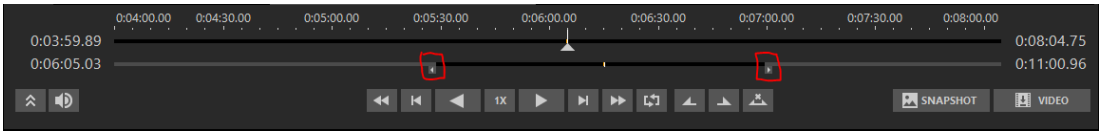
# Timeline Navigator

Last updated: 2021-01-28T17:21:29.000Z | Online Version

Some videos have a long duration that makes representing their timing on the Timeline too small. This can reduce precision when trying to select another frame or scrub through a smaller section.




The example above shows the entire 11-minute video




By dragging the Timeline Navigator handles inward the same video now only displays 4 minutes of video (minutes 4:00 - 8:00)

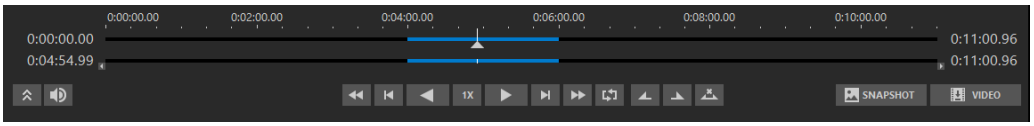
TIPS:

- The zoomed section will move forward with the playhead as it reaches the end of the zoomed area but will retain its zoom duration.

# Trim Section

Last updated: 2021-01-28T17:21:54.000Z | Online Version

Not every part of a video is as important as others. Sometimes you'd like to reduce the amount of a video that can be worked with and exported.




In the above example, the 11-minute video has been reduced to a working range from 4:00 - 6:00 using the Set Section In and Set Section Out buttons and is defined by the blue bar.

TIPS:

- The playhead can't leave the section when one is set.
- When loop is enabled only the section is looped.
- When a section is set, only that section will be exported

---

# Projects

Last updated: 2021-01-28T17:22:08.000Z | Online Version

When you launch a MotionDSP application, you will be prompted to either create a new project or to open an existing project. Projects can include one or more pieces of original video material (files) screen captured video and all enhanced snapshots and videos.

Every change you make to the settings (e.g., enhancements) is saved in the project and will be apparent the next time you open the project. Projects can be saved manually by selecting the Save Project and Save (Export) Project As menu options in the File menu. Projects are saved automatically on every change and after a user finishes working with that Project (by selecting New Project, Open Project or Exit from the File menu).

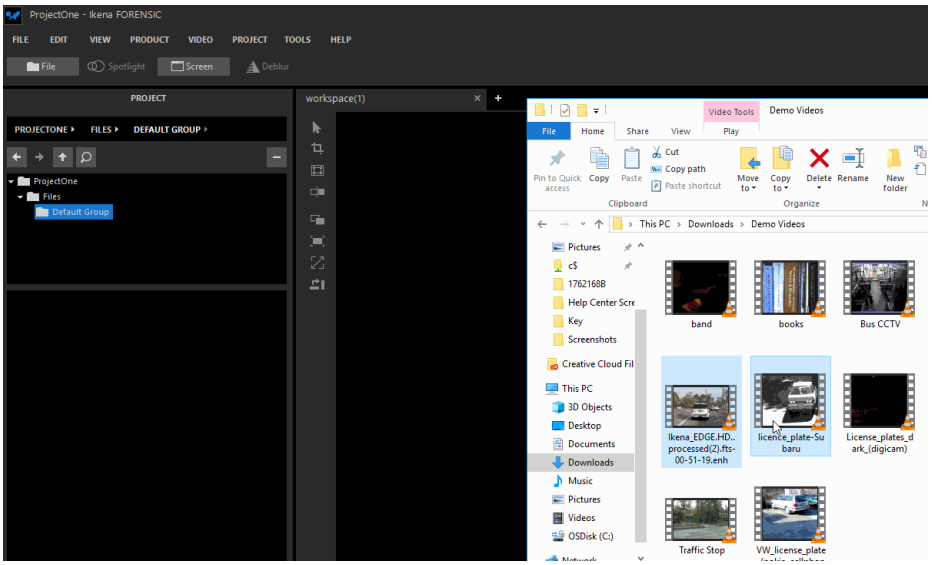
The default location for all MotionDSP projects is a folder in your default videos folder (e.g., My Videos) in Windows. Project files have an ".IPROJ" extension.

---

# Importing files

Last updated: 2021-01-28T17:23:15.000Z | Online Version

To import an audio or video file from a local or networked drive, select File>Import Video> File, or press the File button in the main toolbar, or drag-and-drop a video file into the Project Pane.

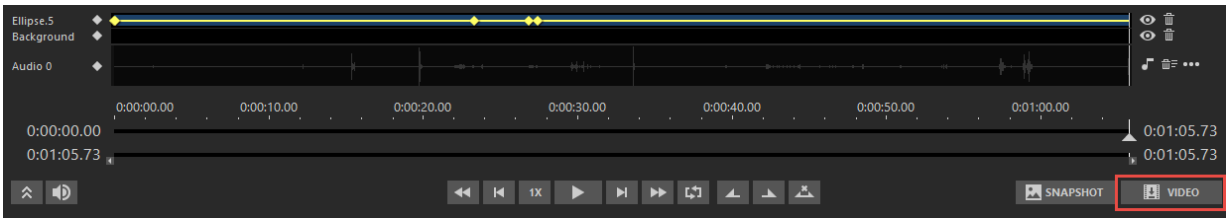



# Saving a product

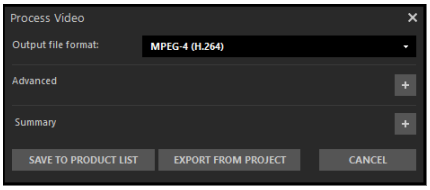
Last updated: 2021-01-28T17:22:55.000Z | Online Version

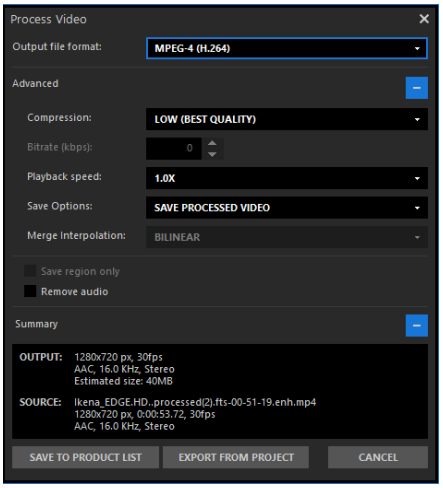
There are two ways to save a product once you have finished enhancing or redacting.

First click on the VIDEO button:




Then you will be presented with two options SAVE TO PRODUCT LIST or EXPORT FROM PROJECT:






**Save to Product List** - This will create a product that will appear in your product list and remain in the project's folder

**Export from Project** - This will create a product outside of the project folder in a folder you define in the options menu. This product will also appear in the product list as well as the project folder

| | |
|---|---|
| **Output File Format** | <u>Video:</u><br>-Uncompressed AVI<br>-Compressed AVI<br>-WMV<br>-H.264 MP4<br>-H.265 MP4*<br><u>Audio:</u><br>-MP3<br>-WMA<br>-AAC<br>-WAV |
| **Compression†** | -Determine video codec compression settings<br>*Not available when Output File Format set to Uncompressed AVI* |
| **Bitrate†** | -Set the exported video bitrate manually<br>*Only available for H.264 MP4 with 'Custom' Compression settings* |

| | |
|---|---|
| **Playback Speed†** | -Adjust the exported video playback speed<br><br>-1/4x, 1/2x, 1x, 2x, 4x |
| **Save Options†** | -Save Original (Save the video with no Forensic or Spotlight changes)<br><br>-Save Processed Video (Save the video with Forensic or Spotlight changes)<br><br>-Save Merged Video (Save a video with the original and processed version side-by-side)<br><br>-Save Both Processed and Merged (Save two videos: 1 Merged, 1 Processed - as described above) |
| **Merge Interpolation†** | -Bilinear is the recommended format for getting the best quality for most videos.<br><br>-Nearest neighbor is a format widely used by rendering engines. |
| **Save Region Only†** | -Save only the area inside the Region of Interest<br><br>*Forensic Only* |
| **Remove Audio†** | -Checkbox to completely remove all audio layers from exported video |
| **Summary** | -Information about the video to be exported |

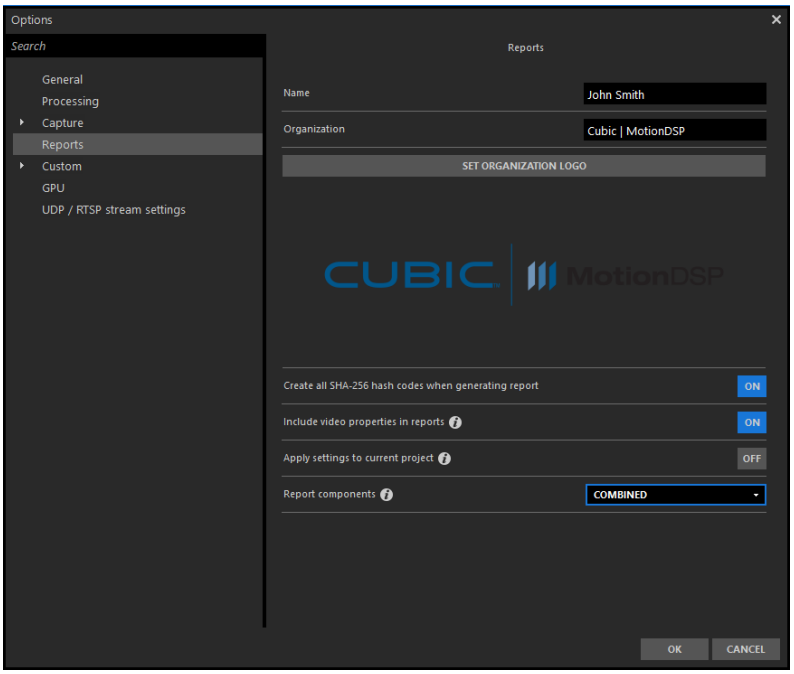
*Only available with GPU

†Only available when exporting a video product

# Generate a Report

Last updated: 2021-01-28T17:22:40.000Z | Online Version

If this is your first time generating a report please take the time to configure your report preferences in the Tools>Options>Reports menu:

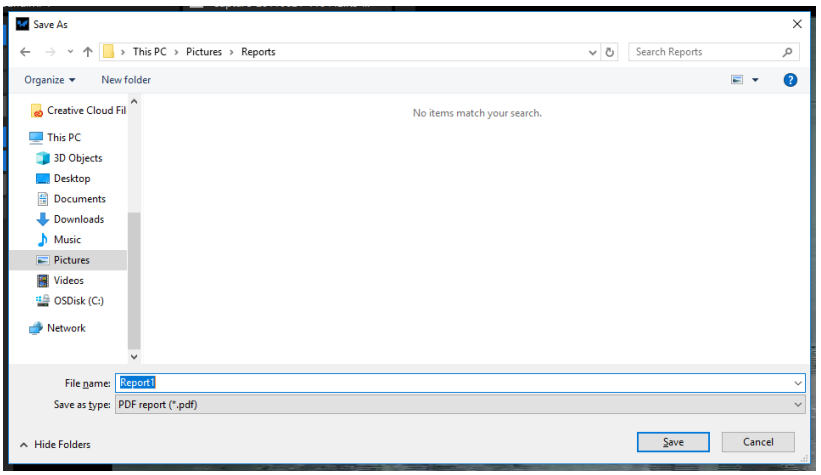



In order to generate a report, you must have two things

1. An original media file in the project panel
2. A Snapshot, Video, or Audio Product saved to the product list for the above media file.

Navigate to Tools>Generate Report (Current Video) and select.

Choose a save location, filename, and file type (PDF, RTF, XML) then save.

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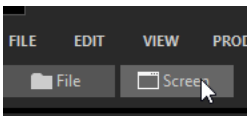
# ScreenGrabber

Last updated: 2021-01-28T17:22:24.000Z | Online Version

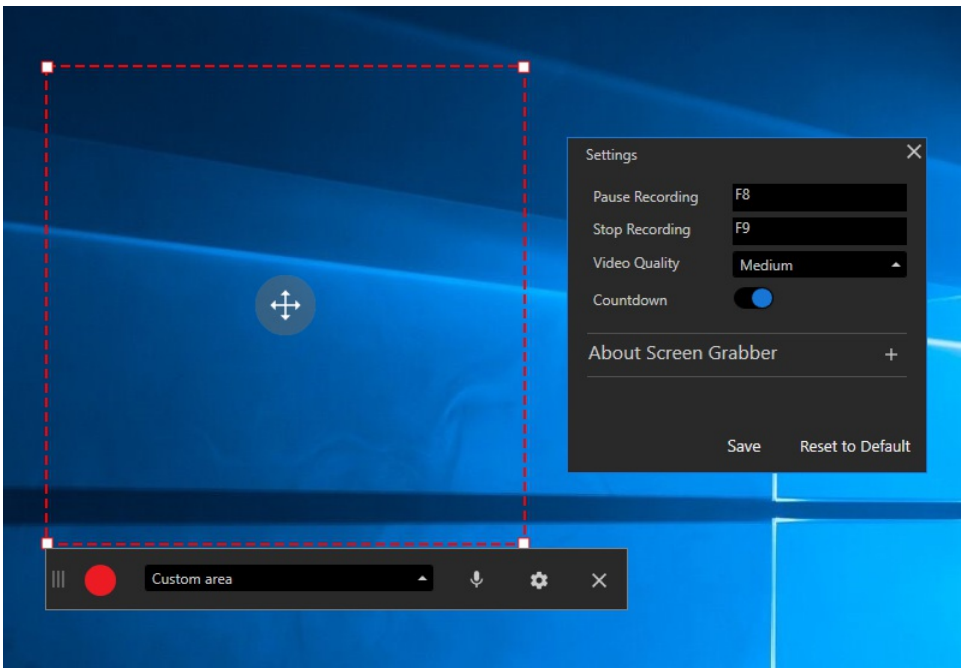
The ScreenGrabber application can record portions of the visible screen to a video file that can be processed by a MotionDSP application. It is commonly used to import CCTV footage from proprietary formats by playing the videos in specialized players and capturing the output.

The ScreenGrabber is installed in the MotionDSP application and can be invoked by the application or as a stand-alone application.

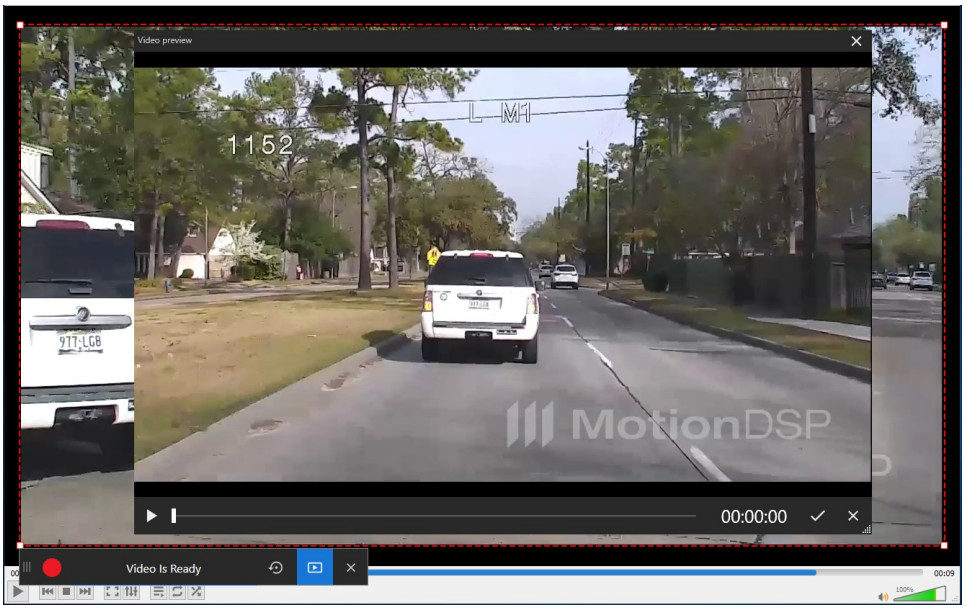
To start the ScreenGrabber as a stand-alone application click the Screen button at the top left corner under the menu.




ScreenGrabber has a very simplistic menu. Before starting a capture, a user can configure the ScreenGrabber settings by selecting the cog. Drag the corners around the video player or choose a common resolution and press record.




When your recording has finished press F9 and the video preview window will appear.




Review for accuracy then press the checkmark and select to 'Open in Application' or 'Save As' and choose a save location

# FAQ

## How do I upgrade to a different MotionDSP product?

Last updated: 2021-01-28T17:44:02.000Z | Online Version

Our Sales Team will assist you with your request at Sales@MotionDSP.com

## I have not received my Product Key and Download

Last updated: 2021-01-28T17:43:30.000Z | Online Version

Your product key and download link should have been sent to you automatically. Please verify in your Spam and Junk folders for email containing Download of software and product key from Support@motiondsp.com. If you still cannot find it, please reach out to support by emailing support@motiondsp.com and we will promptly resend your email.

# How do I add a Watermark?

Last updated: 2021-01-28T17:41:10.000Z | Online Version

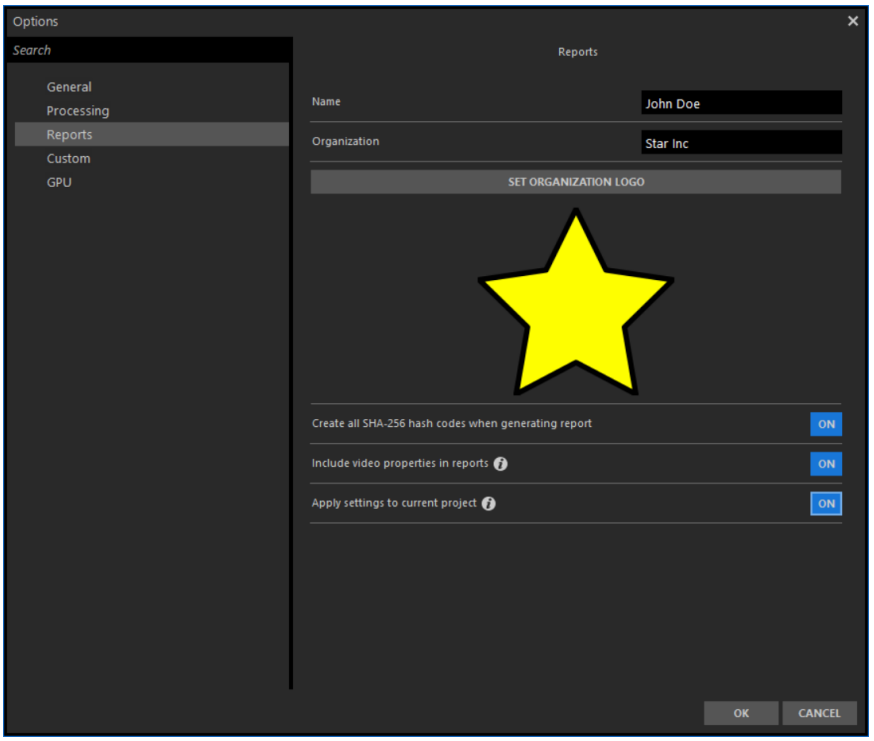
Navigate to Tools, Options, Customs. Turn ON **Enable Watermark.**

Adjust Watermark Transparency [%]. No watermark will be visible if watermark transparency is set as 100%. As watermark transparency % decreases, the more visible the watermark will be.

# How do I add a Logo on reports?

Last updated: 2021-01-28T17:41:00.000Z | Online Version

Navigate to Tools\Options\Reports. Enter Organization, select Set Organization Logo, upload logo, and turn ON**Apply settings to current project**

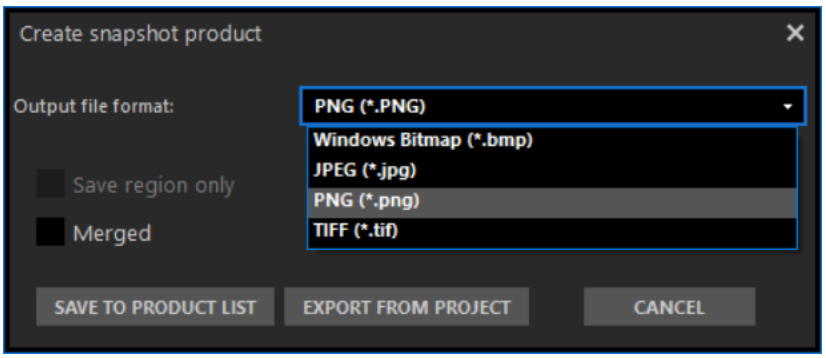


# What file formats are supported?

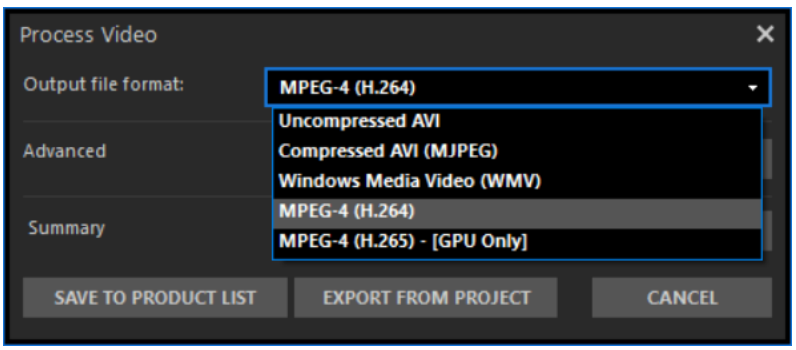
Last updated: 2021-01-28T17:53:49.000Z | Online Version

The following formats are supported by our software types:

**Snapshots**




**Videos**



## How does my subscription work?

Last updated: 2021-01-28T17:54:09.000Z | Online Version

You may learn more about the different subscriptions we have available and see which suits you best.

*Subscription & Cancellation Policy*

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## I receive an error when attempting to activate my product.

Last updated: 2021-01-28T17:27:43.000Z | Online Version

Automatic activation utilizes certain network ports and protocols that might be blocked under more restrictive networks or completely unavailable on a computer not connected to the internet. If you experience either of these situations attempt an Offline Activation on a computer with unrestricted internet access.

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## Why can't I import my file?

Last updated: 2021-01-28T17:27:18.000Z | Online Version

Forensic, Spotlight, and Forensic Studio have native support for a number of video and audio formats and codecs. We also heavily leverage the LAV Filters codec pack to expand our capabilities further.

If you are trying to import audio or video in a proprietary codec you will need to contact the manufacturer for access to the codec. In cases where the codec is not available, use ScreenGrabber.

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# General

## Miscellaneous

# Untitled

Last updated: 2021-05-19T20:15:02.000Z | Online Version

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# Ikena Measure Tool

Last updated: 2021-01-28T17:17:03.000Z | Online Version

Perpetual customers who purchased Ikena Forensic Pro can download Ikena Measure below:

Download Ikena Measure

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# Downloading Legacy Installers

Last updated: 2021-08-16T12:33:00.000Z | Online Version

Legacy MotionDSP installers are available for download to perpetual license holders with expired product maintenance. Perpetual license holders are able to use any product version installed before their product maintenance expiration date.

Note: Ikena Forensic + Spotlight Bundle and Ikena Pro Bundle customers should download the Forensic Installer

Forensic Studio:

- Forensic Studio 8.1 - November 14, 2018
- Forensic Studio 8.3 - May 9, 2019
- Forensic Studio 8.4 - July 18, 2019
- Forensic Studio 8.5 - September 11, 2019
- Forensic Studio 8.6 - December 4, 2019
- Forensic Studio 8.7 - February 19, 2020
- Forensic Studio 8.8 - May 15, 2020
- Forensic Studio 8.9 - November 20, 2020
- Forensic Studio 8.10 - March 12, 2021
- Forensic Studio 9.0 - August 13, 2021

Forensic:

- Ikena Forensic 6.1 - May 5, 2016
- Ikena Forensic 6.4 - December 20, 2016
- Ikena Forensic 7.1 - July 6, 2017
- Ikena Forensic 7.4 - December 11, 2017
- Ikena Forensic 8.0 - July 27, 2018
- Forensic 8.1 - November 14, 2018
- Forensic 8.3 - May 9, 2019
- Forensic 8.4 - July 18, 2019
- Forensic 8.5 - September 11, 2019
- Forensic 8.6 - December 4, 2019
- Forensic 8.7 - February 19, 2020
- Forensic 8.8 - May 15, 2020
- Forensic 8.9 - November 20, 2020
- Forensic 8.10 - March 12, 2021
- Forensic 9.0 - August 13, 2021

Spotlight:

- Ikena Spotlight 6.1 - May 5, 2016
- Ikena Spotlight 6.4 - December 20, 2016
- Ikena Spotlight 7.1 - July 6, 2017
- Ikena Spotlight 7.4 - December 11, 2017
- Ikena Spotlight 8.0 - July 27, 2018
- Spotlight 8.1 - November 14, 2018
- Spotlight 8.3 - May 9, 2019
- Spotlight 8.4 - July 18, 2019
- Spotlight 8.5 - September 11, 2019
- Spotlight 8.6 - December 4, 2019
- Spotlight 8.7 - February 19, 2020
- Spotlight 8.8 - May 15, 2020
- Spotlight 8.9 - November 20, 2020
- Spotlight 8.10 - March 12, 2021
- Spotlight 9.0 - August 13, 2021

# Downloading the Forensic Studio Installer

Last updated: 2021-08-28T00:06:22.000Z | Online Version

Click here to download the Forensic Studio 9.2 Installer

Forensic Studio requires the LAV Filters open-source codec pack that can play most commonly-available video files.

**NOTE:**

- Using other third-party codecs may degrade results.
- If you choose not to install the codec pack, a typical Windows machine will only be able to open a small range of video files, for example, MPEG2 and H264 video files, and Windows Media (WMV)

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# Downloading the Forensic Installer

Last updated: 2021-08-16T12:27:52.000Z | Online Version

Click here to download the Forensic 9.0 Installer

Forensic requires the LAV Filters open-source codec pack that can play most commonly-available video files.

**NOTE:**

- Using other third-party codecs may degrade results.
- If you choose not to install the codec pack, a typical Windows machine will only be able to open a small range of video files, for example, MPEG2 and H264 video files, and Windows Media (WMV)

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## Downloading the Spotlight Installer

Last updated: 2021-08-16T12:26:54.000Z | Online Version

Click here to download the Spotlight 9.2 Installer

Spotlight requires the LAV Filters open-source codec pack that can play most commonly-available video files.

**NOTE:**

- Using other third-party codecs may degrade results.
- If you choose not to install the codec pack, a typical Windows machine will only be able to open a small range of video files, for example, MPEG2 and H264 video files, and Windows Media (WMV)

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# Announcements

## Cubic | MotionDSP Beta Test Program

Last updated: 2021-01-28T17:38:08.000Z | Online Version

We are excited to extend an invitation to our new Beta Program. The purpose of the Beta Program is to enable us to develop and deliver the highest quality applications with the features you need. The program begins with an early preview of new Forensic and Spotlight features not yet available to the public.  Participation in the Beta Program is voluntary, however, feedback and input resulting from your early access will be invaluable to the ongoing development of features that really matter to users like yourself.

Participants will be asked to complete 2 short, electronic surveys delivered over 60 days, plus attend at least one 30 minute focus group discussion or 1-on-1 call so that we can best understand your needs, requirements, and experience resulting from the early release.

If you're interested in joining the Beta Program,sign up here and a Customer Service Representative will be in touch to provide access to the latest software download and more details about the program.

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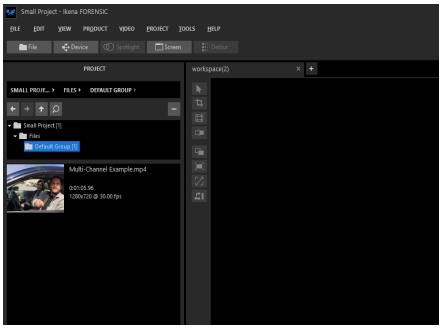
# Troubleshooting

## Application

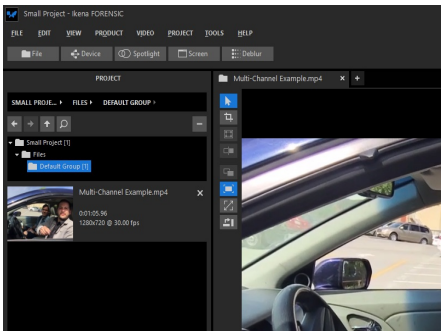
# Why can't I open Deblur?

Last updated: 2021-01-28T17:27:55.000Z | Online Version

In order to launch Deblur there must be a file for it to open. Select a video from the project pane to open it in the Workspace, after which you can select the Deblur button.



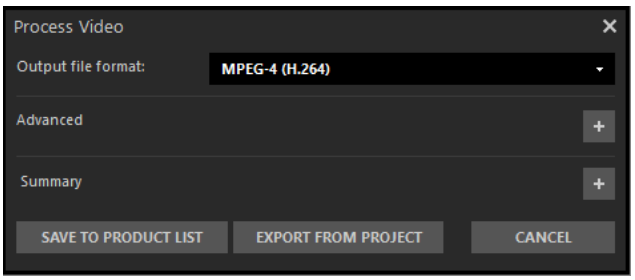
No Video Loaded - Deblur Unavailable



Video Loaded - Deblur Available

# What's the difference between exporting and saving to product list?

Last updated: 2021-01-28T17:38:47.000Z | Online Version




**Save to Product List** - This will create a product that will appear in your product list and remain in the project's folder

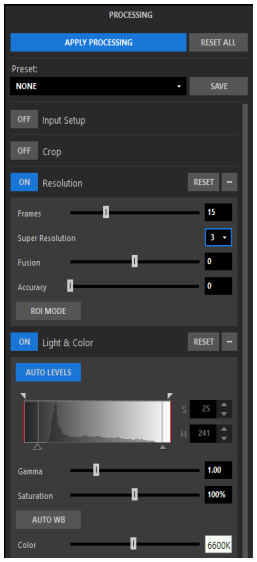
**Export from Project** - This will create a product outside of the project folder in a folder you define in the options menu. This product will also appear in the product list as well as the project folder

# I've applied filters but don't see any changes

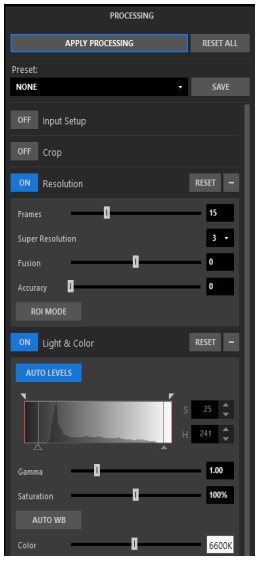
Last updated: 2021-01-28T17:27:00.000Z | Online Version

1. Make sure the Apply Processing button above the filters is turned on.(Blue)
    - 

Processing On




Processing Off



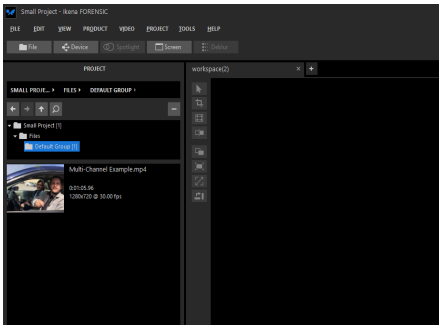

2. Choose the Compare/Switch tool to see Before/After processing side-by-side
    -

3. Use your scroll wheel to zoom in on the image, some changes are subtle

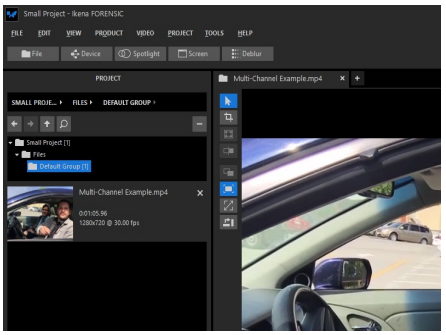
# Why can't I open Spotlight in Forensic Studio?

Last updated: 2021-01-28T17:28:03.000Z | Online Version

In order to launch Spotlight there must be a video for it to open. Select a video from the project pane to open it in the Workspace, after which you can select the Spotlight button.



No Video Loaded - Spotlight Unavailable



Video Loaded - Spotlight Available

# Why is Super-Resolution limited to 2 or 3?

Last updated: 2021-01-28T17:38:17.000Z | Online Version

Super-Resolution can only generate products as large as the available export size. For this reason, you will see the Super-Resolution options reduced to 2 or 3 for video with a resolution larger than 1280 x 720

# Video & Audio

## Why can't I import my video/audio?

Last updated: 2021-08-01T17:26:22.000Z | Online Version

Forensic, Spotlight, and Forensic Studio have native support for a number of video and audio formats and codecs. We also heavily leverage the LAV Filters codec pack to expand our capabilities further.

If you are trying to import audio or video in a proprietary codec you will need to contact the manufacturer for access to the codec. In cases where the codec is not available, use ScreenGrabber.

---

## What's the difference between a container and a codec?

Last updated: 2021-01-28T17:42:42.000Z | Online Version

A codec is a way to code (encode) and decode digital data such as a video file. It compresses the stream to reduce file size before it is transmitted to make the video playable on devices.

The container defines the structure and content of the file which can audio or video. Some containers are limited to audio, photo or video only, or combination of audio and video.

---

# License

# What is a Hardware license?

Last updated: 2021-06-21T14:55:58.000Z | Online Version

Hardware dongles are only available to annual and multi-year subscribers. We do not provide this option for monthly subscribers.

The Sentinel hardware dongle already contains an activated license which is encrypted, so you will not see any files on the dongle. It is "Plug and Play", so you will not be prompted for activation. Insert the dongle in the USB port and launch the software.

If you  do not see a red light displayed on the USB dongle, try a different USB port or update the driver so that your computer can successfully communicate with the dongle.

Since the dongle contains an activated license, please keep the dongle in a safe place. There is a nominal fee of $250 per dongle for a replacement.

---

# What is a Software License

Last updated: 2021-06-21T14:56:15.000Z | Online Version

Software License is available to monthly, annual, and multi-year subscribers.

You should receive a download install and product key via email. Please check your junk/spam folder and ensure that your email address is correct.

Your product key is good for one redemption of a software license using the automatic activation on the first launch of your application or using the Offline Activation.

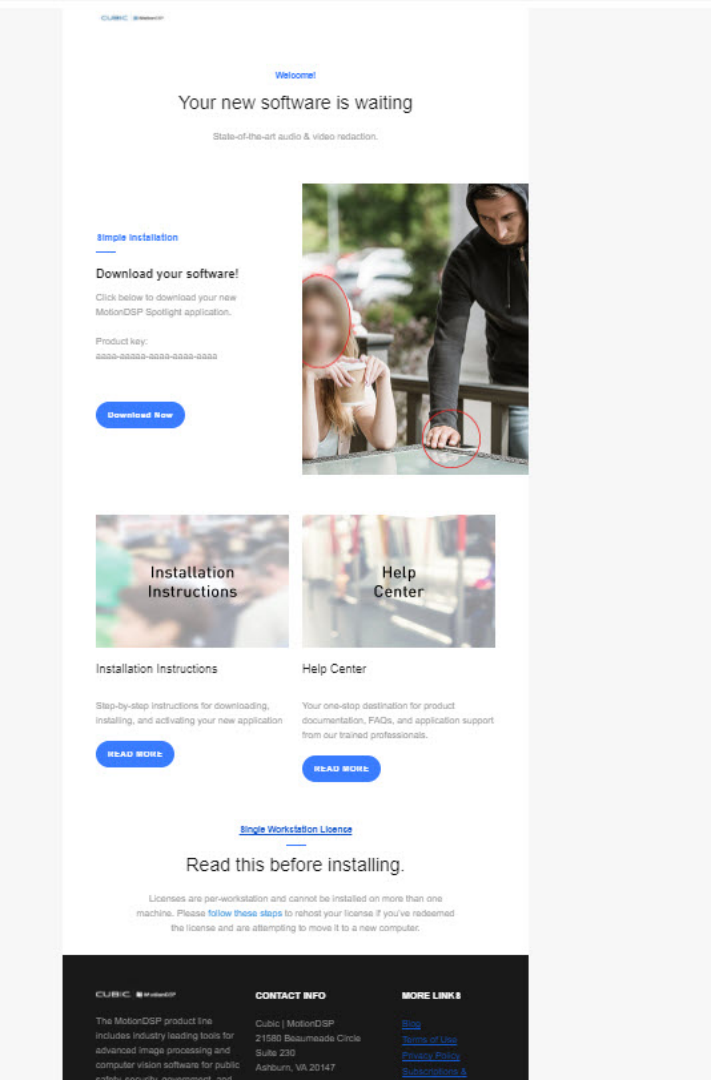
After activation, the software license is tied to the hardware on which you activated it. If your application becomes inactivated, you can reactivate the same hardware using your original V2C file.

If you need to move your license to another computer, use therehosting instructions.

Please take care when redeeming or making changes to your application workstation. Refunds or replacements will not be provided for lost or misplaced licenses.

For more information about licenses on your workstation, use theSentinel Admin Control Center.

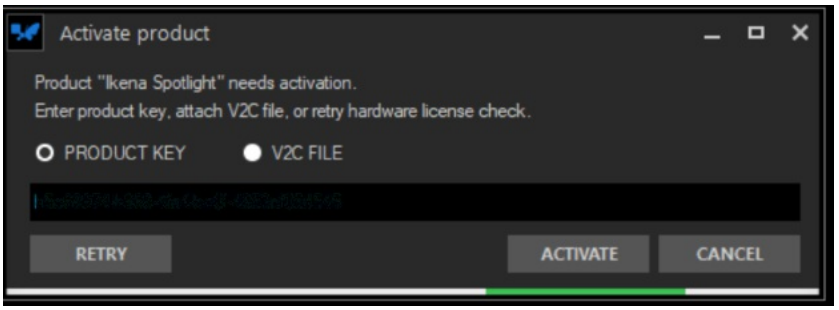
Click here for steps to re-host license


Welcome!
Your new software is waiting
State-of-the-art audio & video redaction.
Simple Installation
Download your software!
Click below to download your new MotionDSP Spotlight application.
Product key:
aaaa-aaaaa-aaaa-aaaa-aaaa
Download Now
Installation Instructions
Help Center
Installation Instructions
Step-by-step instructions for downloading, installing, and activating your new application
READ MORE
Help Center
Your one-stop destination for product documentation, FAQs, and application support from our trained professionals.
READ MORE
Single Workstation Licence
Read this before installing.
Licenses are per-workstation and cannot be installed on more than one machine. Please follow these steps to rehost your license if you've redeemed the license and are attempting to move it to a new computer.
CONTACT INFO
Cubic | MotionDSP
21580 Beaumeade Circle
Suite 230
Ashburn, VA 20147
MORE LINKS
Blog
Terms of Use
Privacy Policy

# Activate Button is not Active

Last updated: 2020-06-23T17:42:46.000Z | Online Version

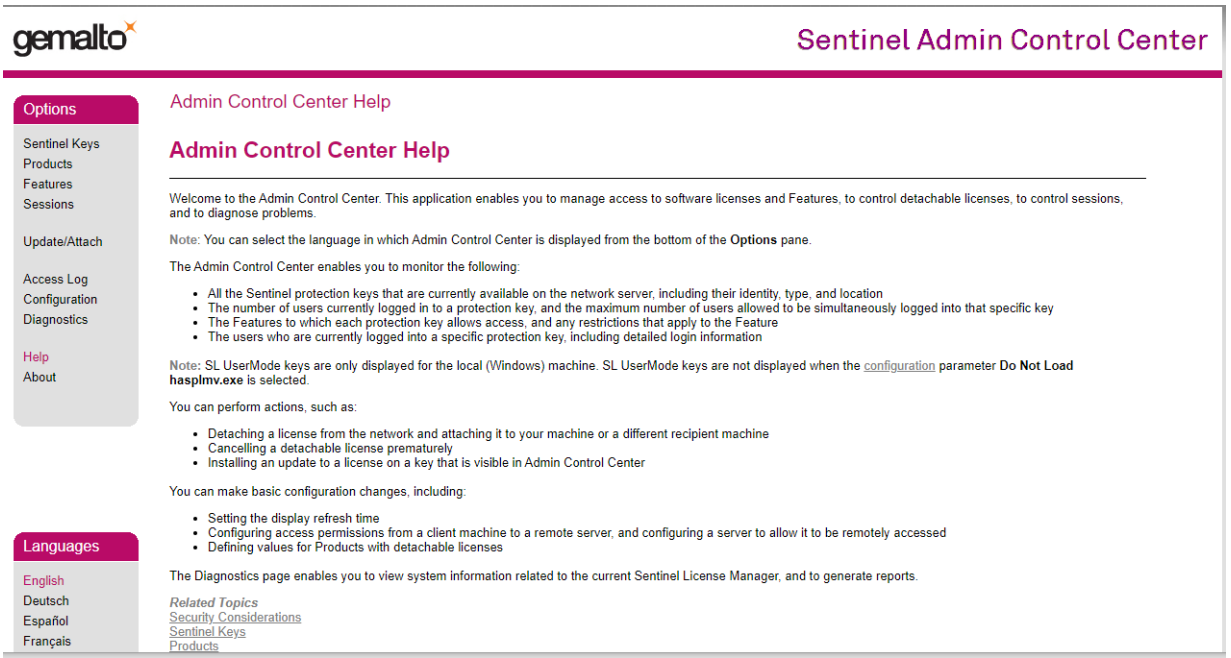
Please confirm that there is no extra space in front of the password and/or extra space after the password.  The activate button will become available when the correct number of characters are entered for the product key.



# Error message when activating license

Last updated: 2021-01-28T17:41:36.000Z | Online Version

- Navigate to localhost:1947 on your chosen web browser URL. If you are not able to access Sentinel Admin Control Center, please ensure that there's no Firewall or antivirus program blocking port 1947.
- Verify that there's no security restrictions placed on the AppData folder.
- If you're able to complete the above steps, please reach out to Support@MotionDSP.com



# Understanding the Software License

Last updated: 2021-01-28T17:40:00.000Z | Online Version

Your product key is good for one redemption of a software license using the automatic activation on the first launch of your application or using the Offline Activation.

After activation, the software license is tied to the hardware on which you activated it. If your application becomes inactivated, you can reactivate the same hardware using your original V2C file.

If you need to move your license to another computer, use therehosting instructions.

Please take care when redeeming or making changes to your application workstation. Refunds or replacements will not be provided for lost or misplaced licenses.

For more information about licenses on your workstation, use theSentinel Admin Control Center.

---

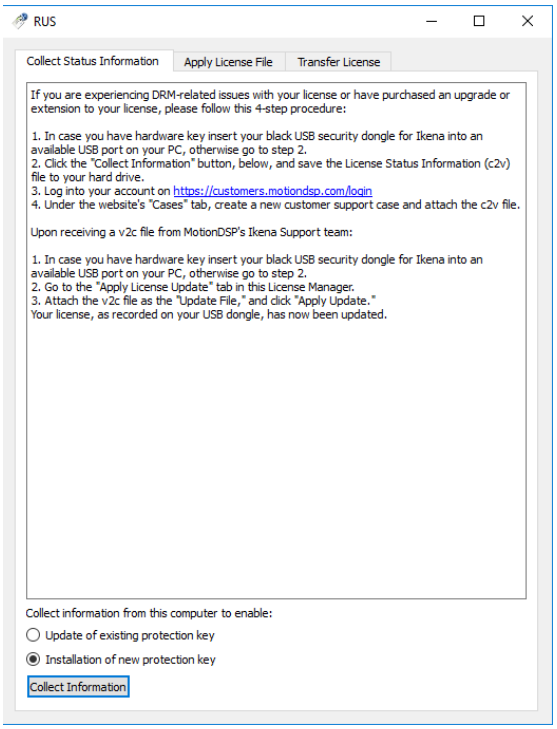
# Offline Activation

Last updated: 2021-05-25T13:37:37.000Z | Online Version

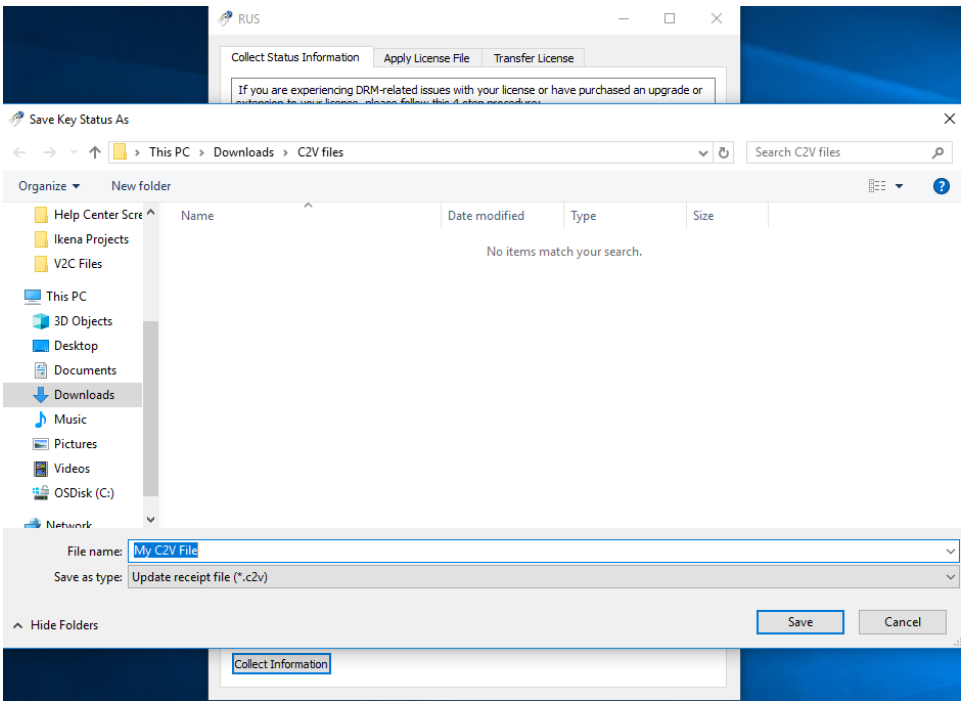
If you are unable to automatically activate your product using a product key at the application launch use the following, with Application Workstation (AW) being the computer with MotionDSP software installed, andNetwork Workstation (NW) being the computer with internet access.

If your workstation has internet access and can reachhttps://activate.motiondsp.com, ignore the AW, NW markings and perform all steps on the singular workstation.

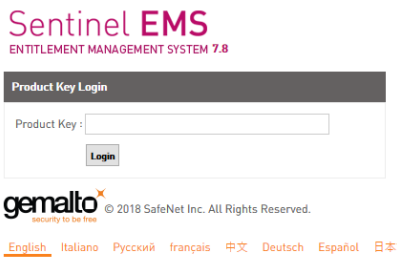
- (AW) Open the License Manager application, available in the MotionDSP Start Menu Folder, and choose the 'Installation of a new protection key' under the Collect Status Information tab.



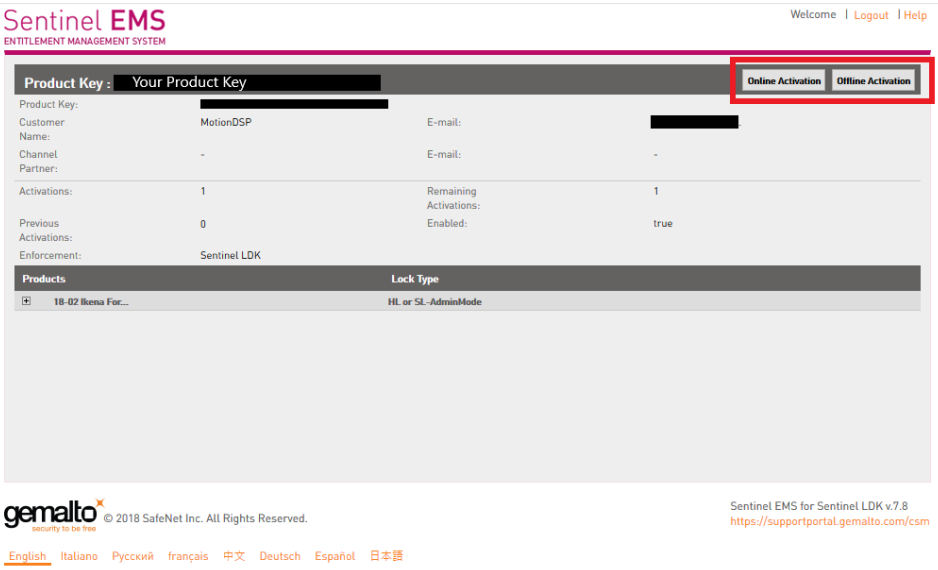

- (AW) Choose a filename and save location (like a flash drive) that you can transfer to the Network Workstation (NW)



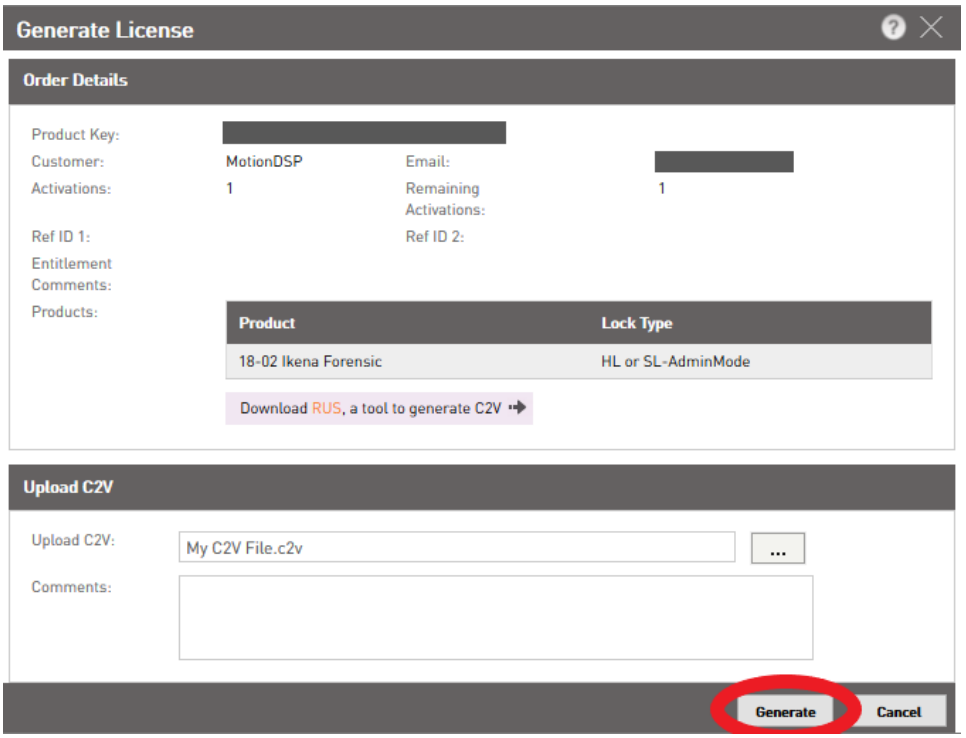

- (NW) Navigate to https://activate.motiondsp.com and enter a product key.



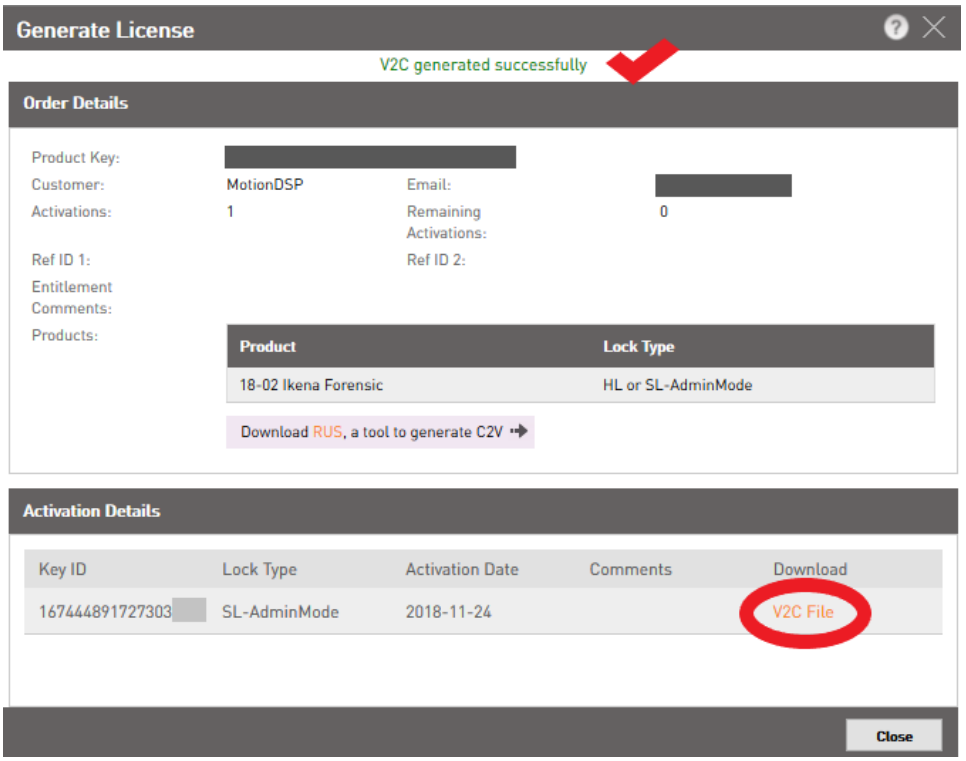

- (NW) Click Offline Activation - If you do not see these buttons,click here



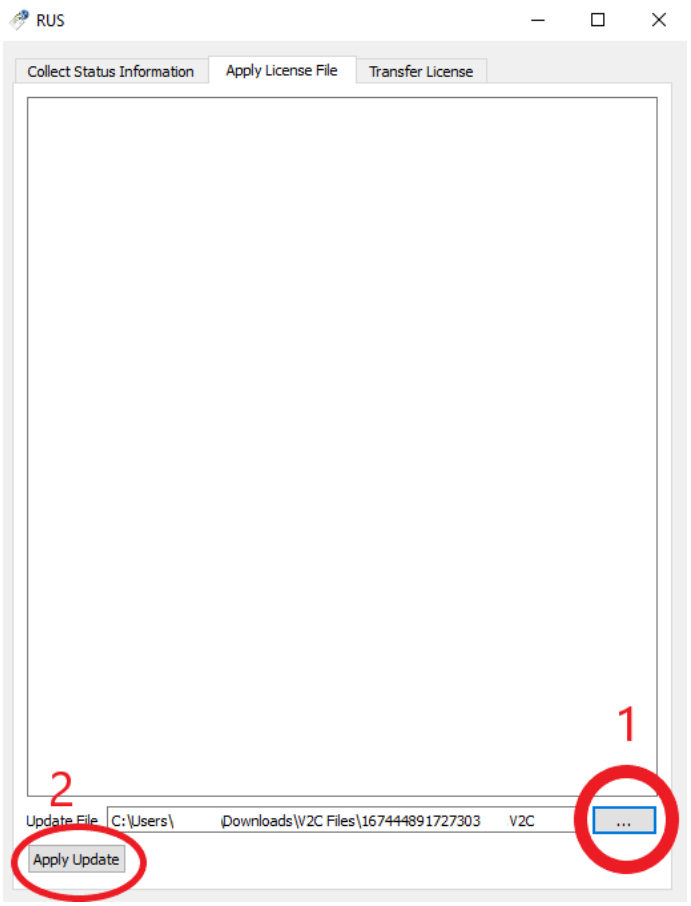

- (NW) Attach C2V file transferred from the Application Workstation and select Generate



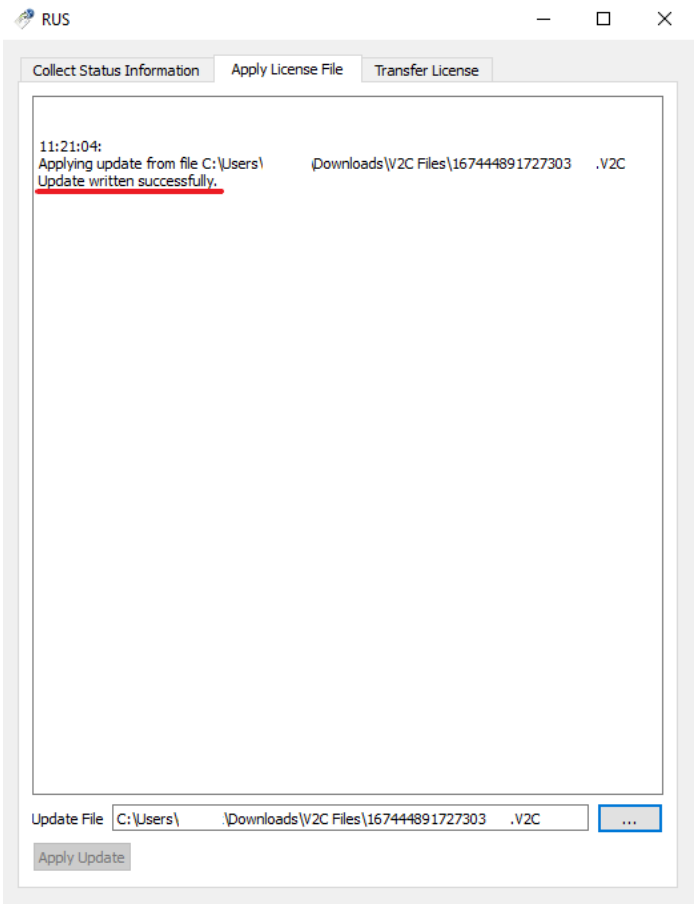

- (NW) Download the V2C File and choose a save location (like a flash drive) that you can transfer to theApplication Workstation (AW)



- (AW) Return to the License Manager application and select the second tab, Apply License File. 1: Attach the V2C file transferred from the Network Workstation 2: Apply the update




- The license has been written to the Application Workstation



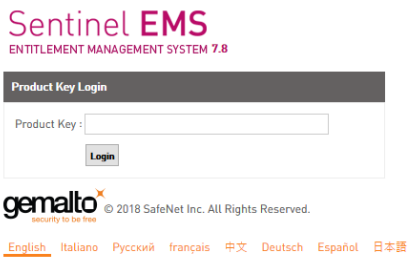

If you are using the application on a computer that required Offline Activation, please submit a request using the Help Center so that future updates to your subscription can be sent to you via email.

---

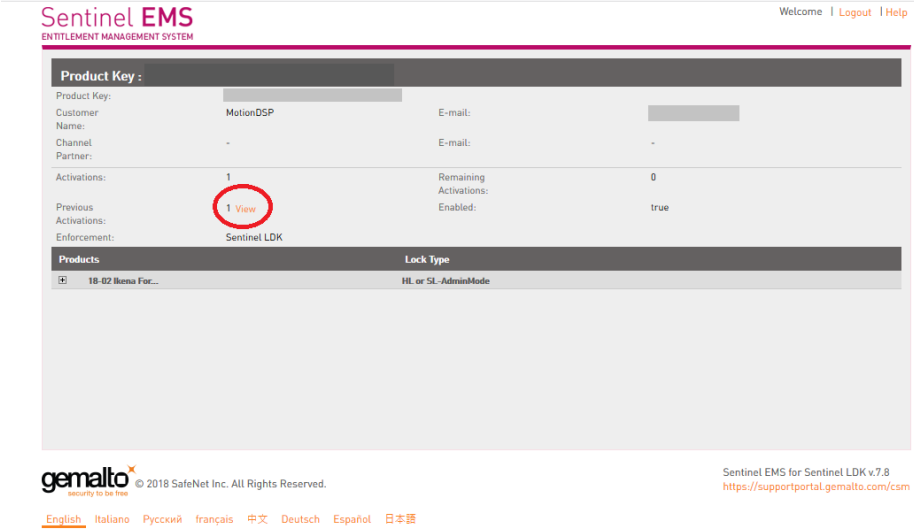
# Downloading your V2C file from a previous activation

Last updated: 2021-01-28T17:40:44.000Z | Online Version

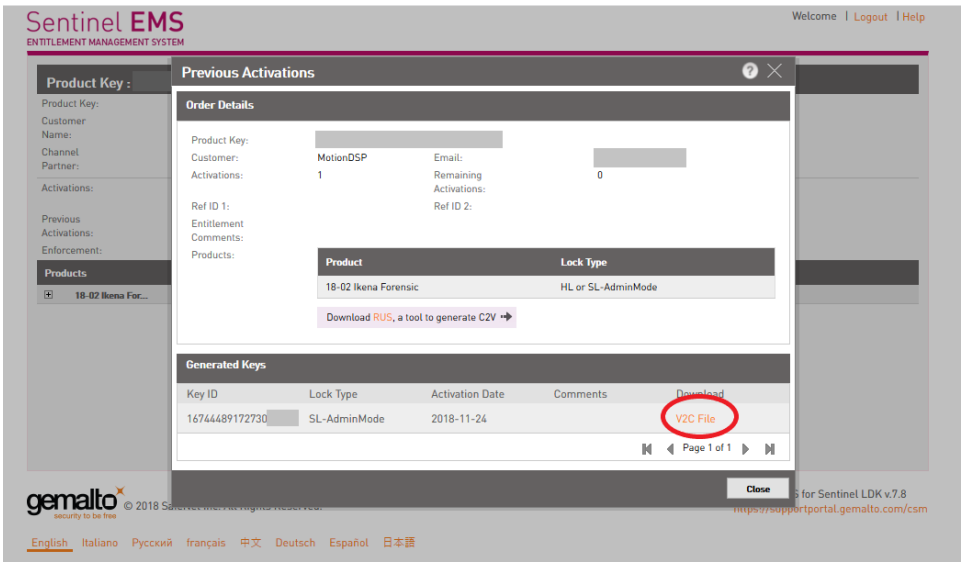
- Navigate to https://activate.motiondsp.com and enter your product key



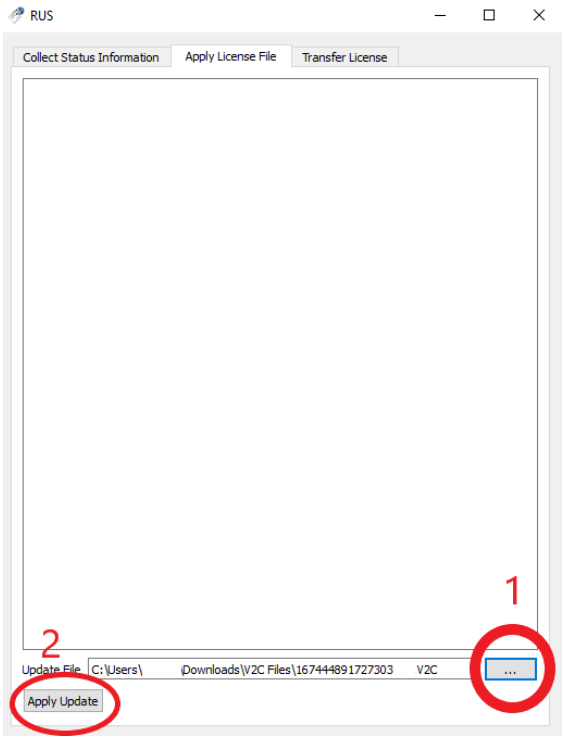

- Click view next to Previous Activations



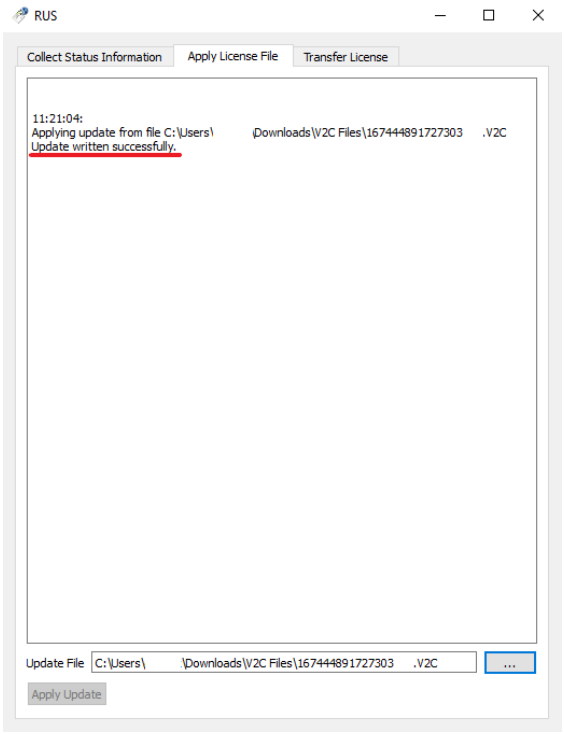

- Download the V2C file by clicking V2C file




- Open the License Manager application, available in the MotionDSP Start Menu folder and choose the second tab, Apply License File. 1: Attach your V2C file 2: Apply your V2C file




- Your license is now attached




If you're having trouble attaching your previous activation to the same workstation you initially activated, please submit a support ticket. If you're trying to move your license to another workstation please see instructions on Rehosting

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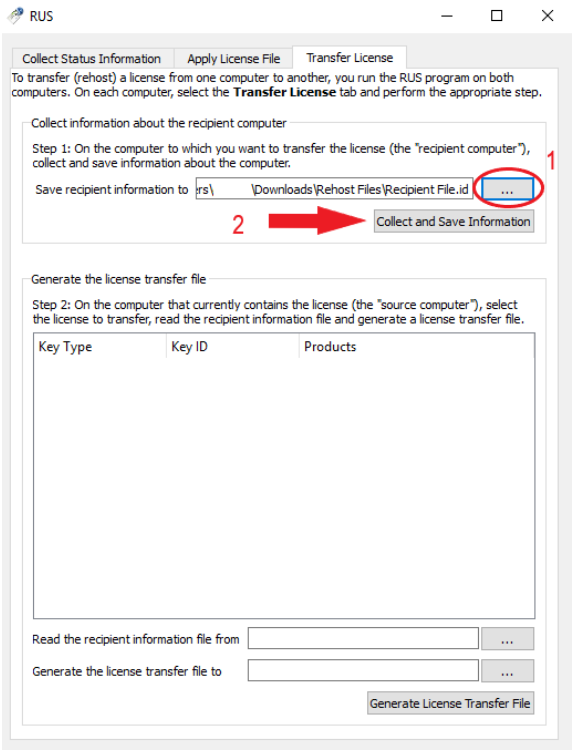
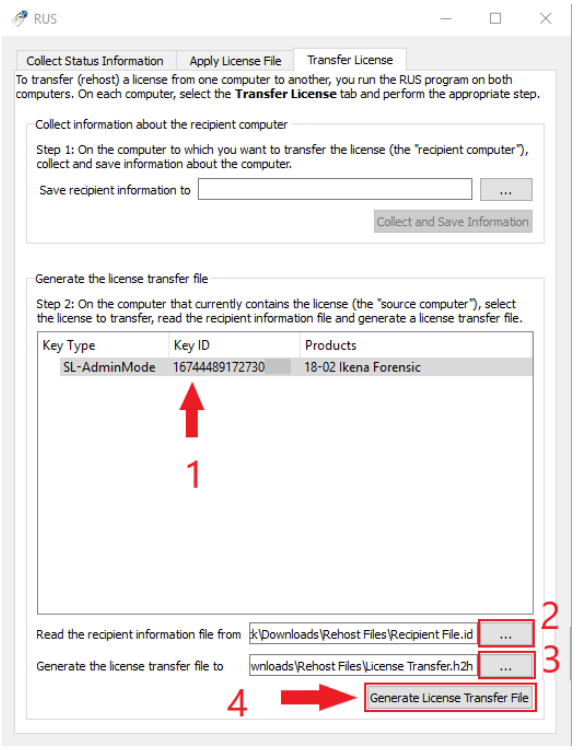
# Rehosting a Software License

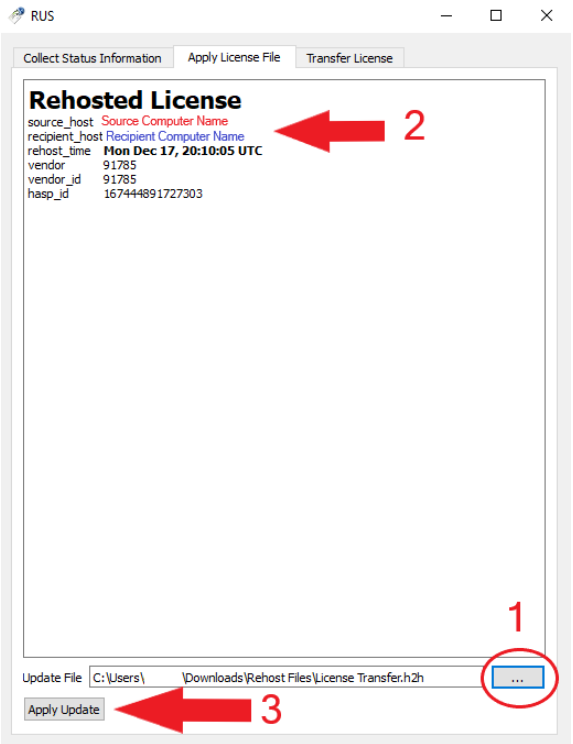
Last updated: 2021-01-28T17:38:25.000Z | Online Version

You can use the License Manager application (C:\Program Files\MotionDSP*PRODUCTNAME*) to transfer your license from one computer, the Source Computer (SC) to another, the Recipient Computer (RC). This procedure uses the License Manager on both computers so you will need to install your MotionDSP Product on the Recipient Computer before beginning. You can find your applicable MotionDSP Installer here

- (RC) Open the License Manager application and follow Step 1 on the Transfer License tab
  - 

- (SC) Transfer the Recipient Computer .id file to the Source Computer and launch the License Manager
  - 

    - 1. Select the license you'd like to transfer
    - 2. Attach the .id file you created on the Recipient Computer
    - 3. Select a location to create the .h2h license transfer file
    - 4. Select Generate License Transfer File

- (RC) Transfer the .h2h file to theRecipient Computer and attach using the second tab of the License Manager.
  - 

  - 1. Select .h2h file created on theSource Computer
  - 2. Verify computer names are accurate
  - 3. Apply License to Recipient Computer

---

# Discontinue your subscription

Last updated: 2021-01-28T17:39:32.000Z | Online Version

If you're interested in canceling your subscription, please submit acancellation request.

Cancellation requests received less than 5 days before the end of your current subscription period will apply to the next subscription period per the Subscription & Cancellation Policy

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# FAQ

## Forensic Studio-Forensic and Spotlight Keyboard Shortcuts

Last updated: 2021-06-16T16:51:13.000Z | Online Version

**Click on links below for PDF versions**

Forensic Studio-Forensic Keyboard Shortcuts

Spotlight Keyboard Shortcuts

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## Download Knowledge Base PDF

Last updated: 2021-01-28T18:03:03.000Z | Online Version

Click here to download the Knowledge Base PDF

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# Forensic

## Forensic Training Videos

## MotionDSP Forensic, Spotlight, and Forensic Studio: Re hosting your License

Last updated: 2021-03-02T18:34:04.000Z | Online Version

## MotionDSP Forensic Crop Filter

Last updated: 2021-08-09T12:54:41.000Z | Online Version

# MotionDSP Forensic Denoising Filter

Last updated: 2021-08-26T16:58:31.000Z | Online Version

# MotionDSP Forensic False Color Filter

Last updated: 2021-08-09T12:51:46.000Z | Online Version

# MotionDSP Forensic Input Setup

Last updated: 2021-08-09T12:50:56.000Z | Online Version

# MotionDSP Forensic Light and Color Filter

Last updated: 2021-08-09T12:49:54.000Z | Online Version

# MotionDSP Forensic Sharpen Filter

Last updated: 2021-08-09T12:49:01.000Z | Online Version

# MotionDSP Forensic Region of Interest

Last updated: 2021-08-09T12:48:02.000Z | Online Version

# MotionDSP Forensic and Forensic Studio Add Remove Filters

Last updated: 2021-08-09T12:43:28.000Z | Online Version

# MotionDSP Forensic Radial Distortion Filter

Last updated: 2021-08-09T12:42:41.000Z | Online Version

# MotionDSP Forensic Contrast Filter

Last updated: 2021-08-09T12:26:25.000Z | Online Version

# MotionDSP Forensic Automatic Brightness

Last updated: 2021-08-09T12:24:53.000Z | Online Version

# Forensic Studio and Spotlight 9.0 Overview

Last updated: 2021-07-03T13:12:27.000Z | Online Version

# MotionDSP Forensic - Stabilization Filter

Last updated: 2021-07-03T14:12:46.000Z | Online Version

# MotionDSP Forensic Enhancement Filters

Last updated: 2021-07-03T15:36:06.000Z | Online Version

# MotionDSP Forensic Deinterlacing Filter

Last updated: 2021-08-09T12:53:45.000Z | Online Version

## MotionDSP Forensic Preset Filters

Last updated: 2021-07-03T14:13:22.000Z | Online Version

## Perspective Filter Tutorial

Last updated: 2021-01-05T18:33:14.000Z | Online Version

## Forensic Perspective Filter

Last updated: 2021-01-05T18:29:34.000Z | Online Version

## Forensic Perspective Filter

Last updated: 2021-01-05T18:35:12.000Z | Online Version

## Saving your project in MotionDSP Forensic and Spotlight

Last updated: 2020-12-07T20:03:08.000Z | Online Version

## Add or Remove Preset Preview bar in Forensic

Last updated: 2020-12-07T19:59:32.000Z | Online Version

## Enhancing a Face using Forensic

Last updated: 2021-02-16T19:04:38.000Z | Online Version

## Creating Reports in MotionDSP Forensic

Last updated: 2020-10-30T16:55:49.000Z | Online Version

## Overview of Forensic

Last updated: 2021-01-28T17:44:32.000Z | Online Version

## Review of MotionDSP's Forensic Video Enhancement Software

Last updated: 2021-01-28T17:44:40.000Z | Online Version

## How to Enhance Security Camera Footage of a Face with Ikena Forensic

Last updated: 2021-01-28T17:42:51.000Z | Online Version

## How to Enhance Low Quality CCTV Footage of a License Plate with MotionDSP Forensic

Last updated: 2021-07-08T15:21:11.000Z | Online Version

## How to Export Reports for Presentation in Court with Forensic

Last updated: 2021-01-28T17:42:20.000Z | Online Version

## How to Enhance Low-Light Video Evidence with Forensic

Last updated: 2021-01-28T17:41:44.000Z | Online Version

# How to Enhance a License Plate from Low-Light Video Evidence with Forensic

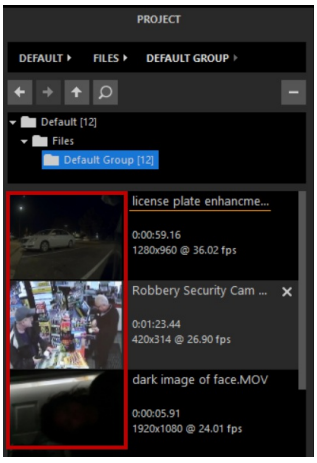
Last updated: 2021-01-28T17:41:26.000Z | Online Version

# Features

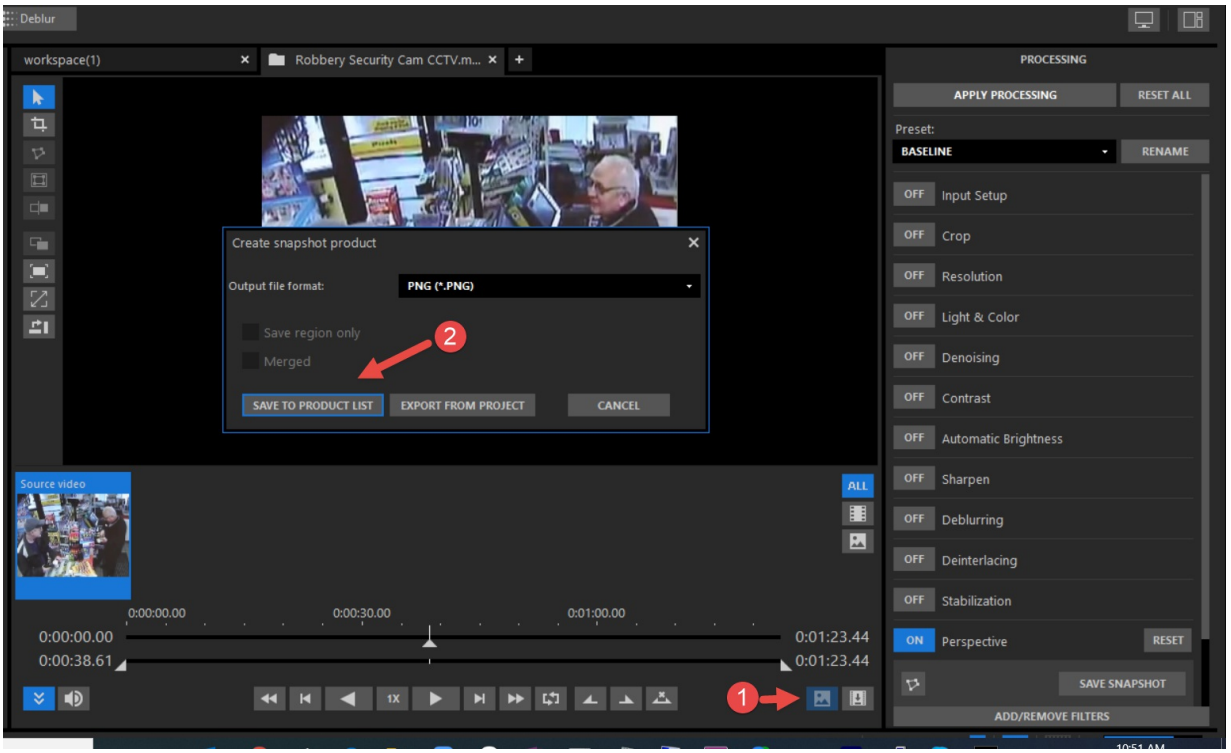
## Set as Thumbnail feature

Last updated: 2021-01-05T18:31:07.000Z | Online Version

A thumbnail is a small representation of an image that is used to identify a file by its contents intended to make it faster to manage a group of larger images.

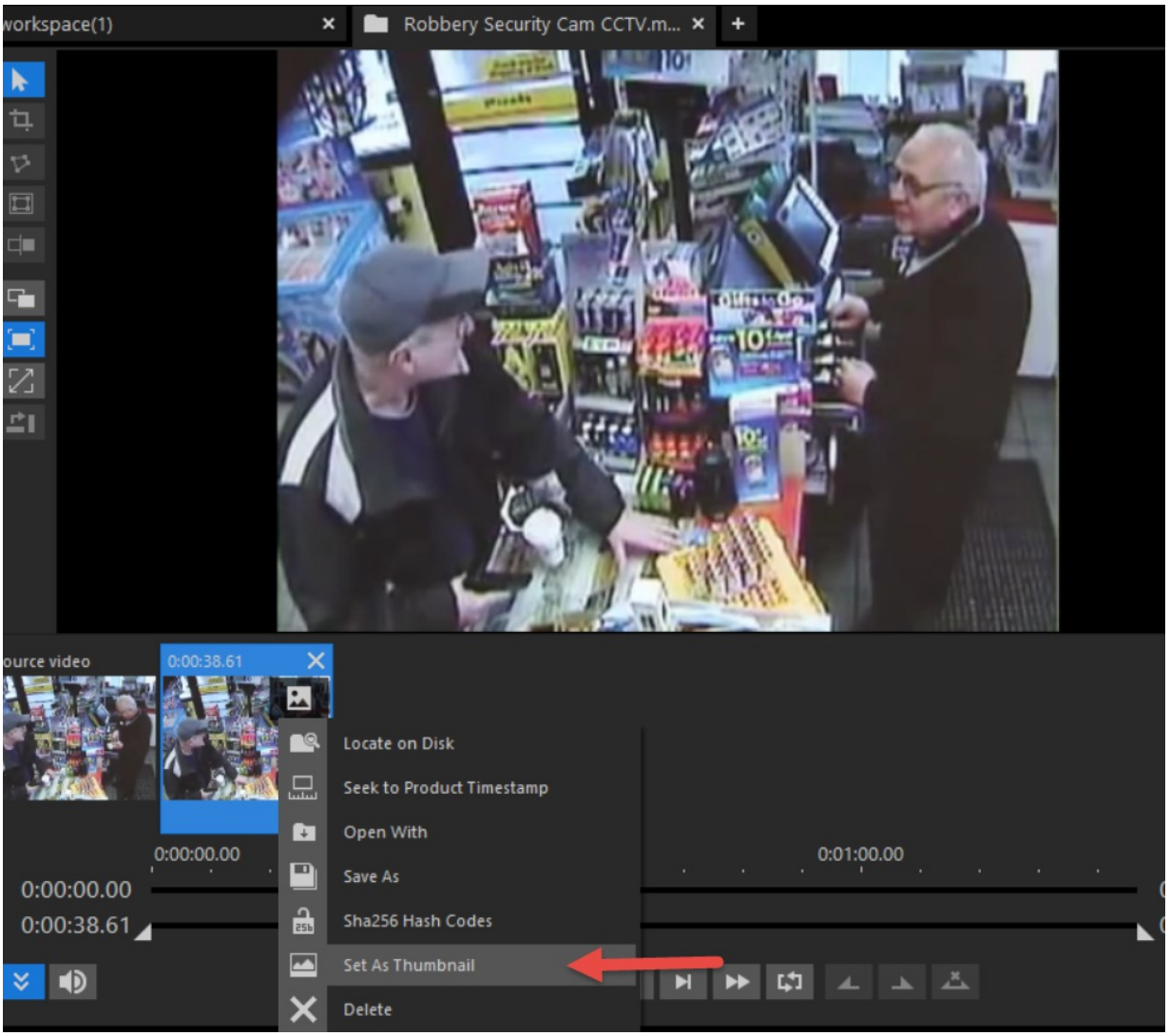



To create a thumbnail, create a snapshot of the image you would like to be displayed as the thumbnail and click "save to product list".

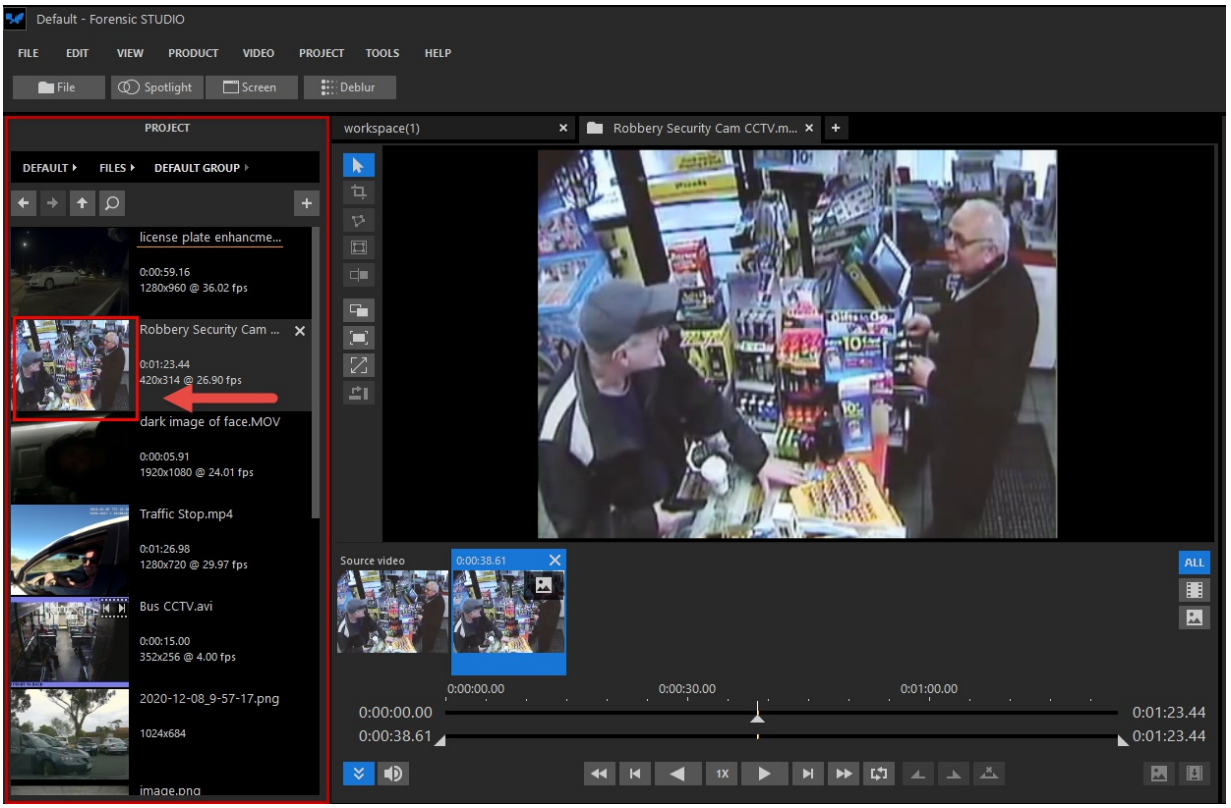



The image will display in the Product list section as seen below:

Right click on the desired snapshot and choose Set as Thumbnail




Your updated thumbnail will be displayed in the Project Panel.


Default - Forensic STUDIO
FILE
EDIT
VIEW
PRODUCT
VIDEO
PROJECT
TOOLS
HELP
File
Spotlight
Screen
Deblur
PROJECT
DEFAULT
FILES
DEFAULT GROUP
license plate enhancme...
0:00:59.16
1280x960 @ 36.02 fps
Robbery Security Cam ...
0:01:23.44
420x314 @ 26.90 fps
dark image of face.MOV
0:00:05.91
1920x1080 @ 24.01 fps
Traffic Stop.mp4
0:01:26.98
1280x720 @ 29.97 fps
Bus CCTV.avi
0:00:15.00
352x256 @ 4.00 fps
2020-12-08_9-57-17.png
1024x684
image.png
workspace(1)
Robbery Security Cam CCTV.m...
Source video
0:00:38.61
ALL
0:00:00.00
0:00:30.00
0:01:00.00
0:00:00.00
0:01:23.44
0:00:38.61
0:01:23.44
1X

# Compare/Split

Last updated: 2021-01-28T17:26:28.000Z | Online Version

Use the Compare/Split option to see the Before/After processing view of your video. This feature is helpful to see how your filter options compare to the original.

TIPS:

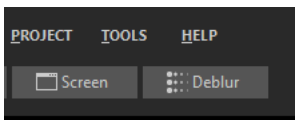
- You can click and drag the center divider to show more of the Before or After section.

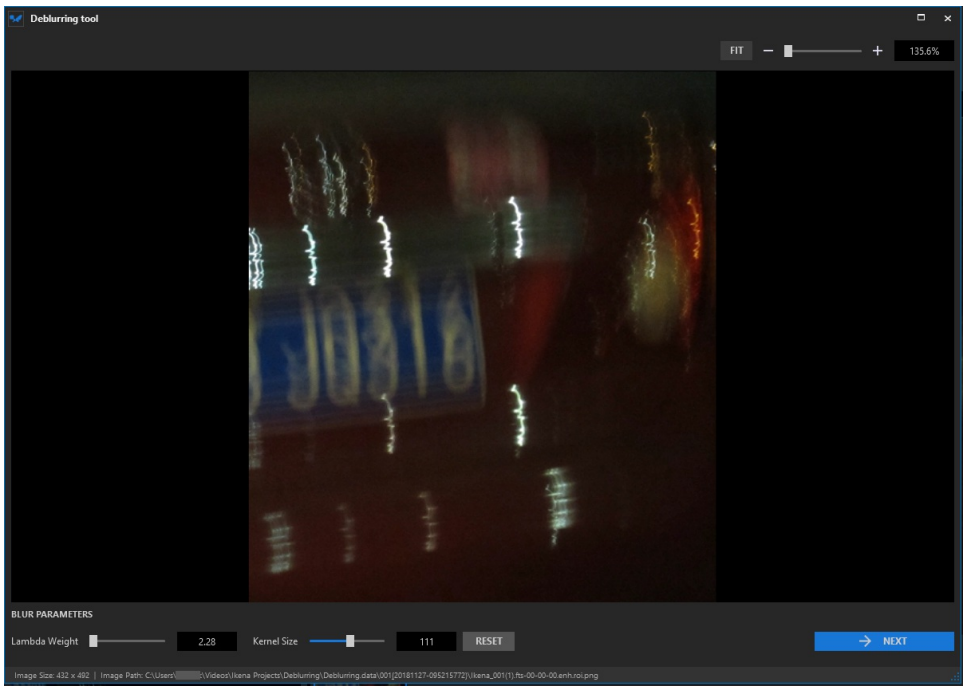
---

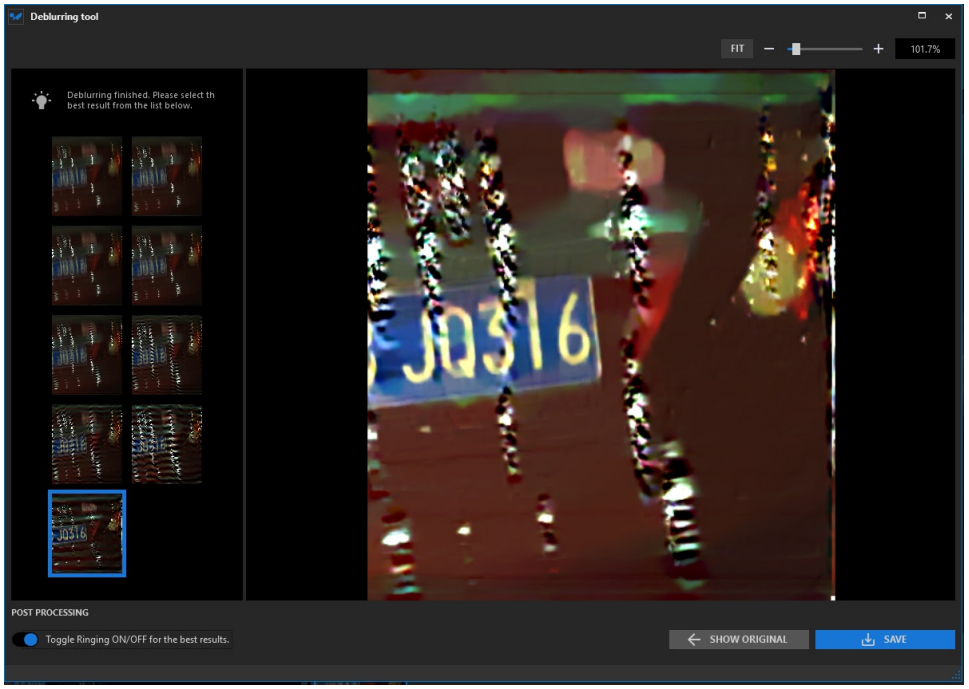
# Deblurring Tool

Last updated: 2021-07-03T14:35:22.000Z | Online Version

The Deblurring Tool is designed to reduce blur artifacts caused by defocus or motion using fewer parameters and multiple outputs.

1. Pause the video and click the Deblur button.
    - 

2. Deblurring tool interface will launch and automatically calculate estimated values for Lambda Weight and Kernal Size. Make changes based on parameter descriptions below. Click Next
    - 

3. The Deblurring tool will produce variations on your source image using the provided parameters and display them on the left. Wait for processing to complete and select the best image. If none of the images are acceptable click Show Original to go back and adjust the parameters.
    - 

4. Click Save when acceptable results are produced.

Parameters

| | |
|---|---|
| Lambda Weight | Most values are usually between 0-10. Start with the automatically calculated estimate. For lighter images, lambda will usually be lower. |
| Kernel Size | Start with the automatically calculated estimate. Increase the kernel size if the image is not deblurred enough. Decrease the kernel size if significant artifacts are created. |

TIPS:

- Use the Toggle Ringing ON/OFF switch to reduce the ring artifacts created by the deblurring tool during processing

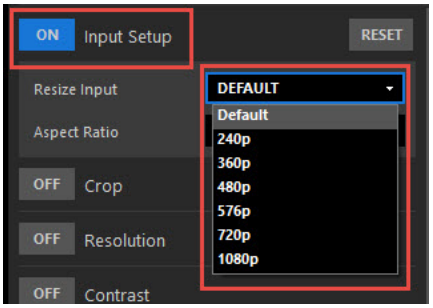
## Filters

# Input Setup Filter

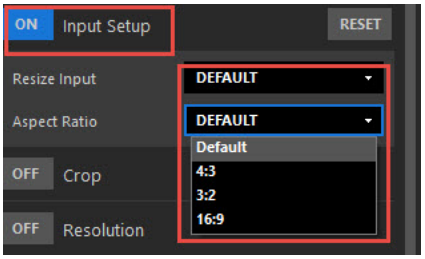
Last updated: 2021-06-22T17:15:47.000Z | Online Version

**The Input Setup Filter** Allows the user to reduce or enlarge the resolution and or aspect ratio of the project file such that the output will match this new resolution or aspect ratio setting.

**Resize Input:** This setting gives the user options to change the output video resolution, for example the project file's source resolution might be 720p and using the 1080p setting will increase the working and output resolution to 1080p.



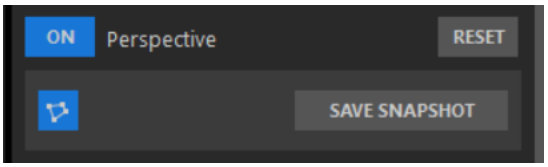

**Aspect ratio:** A proportional relationship between an image's width and height describing an image's shape. Aspect ratios are written as a formula of width to height, like this: **4:3**. This setting allows the user to change the project files working and output aspect ratio.



# Perspective Filter

Last updated: 2020-12-10T15:20:18.000Z | Online Version

Our perspective filter allows arbitrary stretching of part of an image to correct the perspective and includes the ability to leverage our other filters such as our multi-frame super resolution to achieve great results.

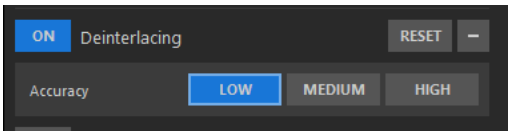



In the image below, the perspective filter was used to display a frontal view of an angled license plate in addition to using other filters to receive greater results.

# Deinterlacing

Last updated: 2021-01-28T17:24:10.000Z | Online Version

Some video sources output an interlaced video signal. Each frame is split into odd and even horizontal scan lines called fields which are sampled at different time instances. This effectively results in doubling the frame rate without increasing bandwidth requirements. To eliminate “combing” artifacts which are produced by interlaced frame acquisition, the deinterlacing enhancement should be used.




| | |
|---|---|
| **Low** | Low is the fastest and the least accurate. With this setting, deinterlacing is performed by discarding the odd field and upscaling the even field to fit the video’s vertical resolution. The processing uses a bicubic interpolation algorithm to upscale the even field. |
| **Medium** | Medium is more computationally demanding and produces better results. With this setting, deinterlacing is performed by discarding the odd field and upscaling the even field to fit the video’s vertical resolution. The processing uses a more advanced algorithm, known as kernel regression, to upscale the even field. The edge-preserving properties of the kernel regression algorithm is able to handle slant edges better than the bicubic interpolation used by the Low setting. |
| **High** | High uses both odd and even fields to perform deinterlacing. If used in combination with Resolution enhancement, this setting instructs Multi-Frame Super-Resolution processing to use both odd and even fields. |

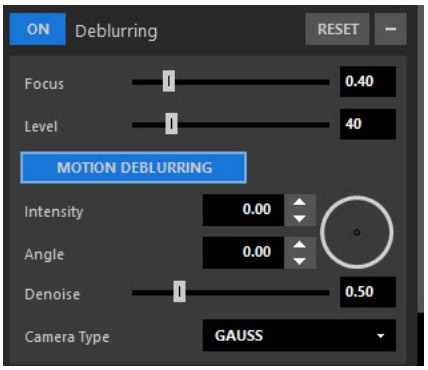
Tips:

1. Low and Medium settings may yield better results for deinterlacing videos showing a scene with non-rigid objects with uneven lines and textures, like people and animals.
2. Using High setting with Resolution enhancement may result in a significant drop in processing bandwidth

# Deblurring Filter

Last updated: 2021-06-22T17:15:34.000Z | Online Version

**Deblurring Filter** Removes distortion from blurry and noisy artifacts of images caused by defocus aberration or motion blur.




| | |
|---|---|
| **Focus** | Higher values will increase the influence of pixels which are far away, thus causing the frame to look blurry for the highest value. Lower values will decrease the influence of pixels which are far away. |
| **Level** | You can change the amount of deblurring enhancement by moving this slider from 0 (no change in contrast) to 200 (maximum deblurring enhancement). |
| **Motion Deblurring** | Removes the blur associated with linear motion |
| **Intensity** | Lower values will have more of a deblurring effect in flat regions, but textured regions will become blurry. Higher values will have less of a deblurring effect in flat regions, but better edge and corner reconstruction in textured regions. |
| **Angle** | Directional angle of the blur |
| **Denoise** | Tune processing algorithms used to adjust the smoothness (i.e. the amount of noise/texture) of the final reconstructed image. |

| | |
|---|---|
| | **Disk:** Produces a denser middle and gradually fades out moving away from center. Images of unfocused lights have sharply defined edges whereby the convolution kernel, or Point Spread Function (PSF) is disk shaped. |
| **Camera Type** | |
| | **Gauss:** Produced by convolving the image with a convolution kernel following a discrete approximation to a Gaussian distribution with normalized area. The operation is popular because it can be done relatively quickly due to fact that the two dimensional convolution is separable into horizontal and vertical one dimensional convolutions. |

# Crop

Last updated: 2021-01-28T17:28:50.000Z | Online Version

Video can be cropped to desired dimensions by using Crop enhancement. The amount of crop can be specified by setting the percentage of video size or by specifying each crop border independently. Your preferred method can be chosen with the Custom Crop button. To assist cropping, Forensic displays cropping guidelines that are visible only if Apply Enhancements button is turned off. You can also manually adjust these using the cropping mouse mode button on the upper left of the workspace.

# Resolution

Last updated: 2021-05-25T14:50:36.000Z | Online Version

The Resolution Enhancement tab is used to control the Multi-Frame Super-Resolution processing. It provides an effective means for increasing the native video resolution by utilizing information redundancy between successive frames in a video.

Applications and benefits include:

- noise reduction
- suppression of atmospheric distortions (mirage-like wobbling)
- reduction of compression blocking artifacts

| Resolution Filter - Compact | Resolution Filter - Expanded |
|---|---|

| | |
|---|---|
| **Frames** | This slider controls the number of successive frames used by the algorithm. The maximal number of frames can be set by going to Tools > Options > Processing > Cache Size |
| **Super Resolution** | This combo box is used to set the upscale factor applied to the input frame by the Multi-Frame Super-Resolution algorithm. Available options depend on the input resolution and can be 1x, 2x, 3x, or 4x.<br><br>For example, applying a Super-Resolution factor of 2x to an input video with a resolution of 320x240 results in a video with a resolution of 640x480. |
| **Fusion** | This slider controls the suppression of outlier-related processing artifacts. The first phase of the Super-Resolution algorithm is motion estimation between successive frames. However, this can generate ghosting artifacts in some cases. The Fusion parameter can reduce ghosting |
| **Accuracy** | This slider can be used to control the tradeoff between sharpness and noise suppression. Settings range from 0 (maximum noise suppression) to 1 (maximum sharpness) |
| **ROI Mode** | This button allows the user to enhance, preview, and save the ROI with a wider range of Super-Resolution (upscale) factors. |

NOTE: The maximum output video size is 1080p. Hence higher resolution video has a lower available Super-Resolution factor. However, a larger Super-Resolution factor can be set by limiting the video with ROI mode or cropping the video.

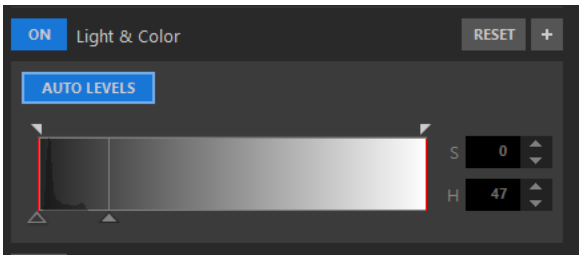
Tips:

1. To enhance the precision of the motion estimation, select an ROI which doesn't contain outliers.
2. Choosing the appropriate Frames value can be challenging. The optimal value depends on the desired performance, Super-Resolution upscale factor, and scene dynamics. For static scenes, the best results are achieved by setting the Frames value to 9 or higher and the Super Resolution set to 2x.
3. With dynamic scenes, it's best to start at the lowest setting and work your way up. With static scenes, it's best to start high and work your way down.
4. Super Resolution yields the best results for static scenes when used in conjunction with Deblurring.

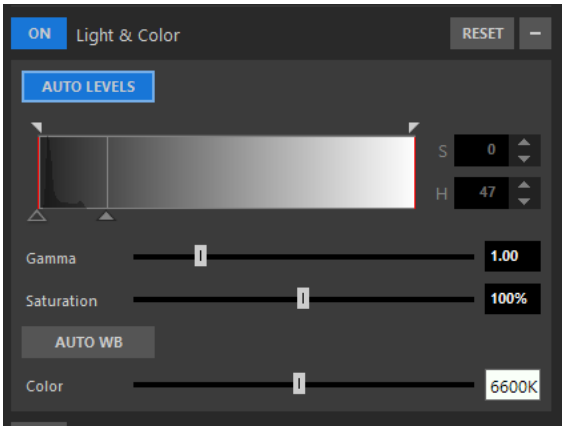
## Light & Color

Last updated: 2021-01-28T17:39:52.000Z | Online Version

The Light & Color enhancement makes it possible to reduce the effects of extreme color and light changes on image quality.




Light & Color - Compact



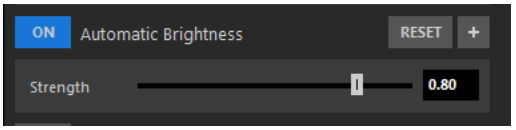

Light & Color - Expanded

| | |
|---|---|
| **Auto Levels** | This button auto-adjusts the lighting levels of the video. For manual adjustments use the Shadows and Highlights sliders. |
| **Gamma** | This slider controls the "gamma correction". The value of “1.00” means that the input and output frames are identical in terms of “gamma correction”. |
| **Saturation** | This slider controls the color saturation. 100% means that the saturation remains unchanged. |
| **Auto White Balance** | This button turns auto-adjustment of the “white balance” ON/OFF. For manual adjustments use the “Color” slider. |

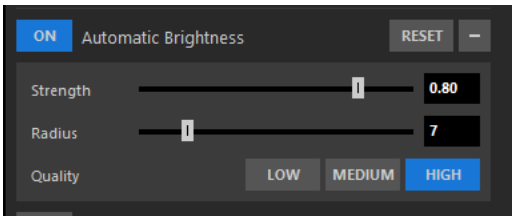
# Automatic Brightness

Last updated: 2021-01-28T17:44:20.000Z | Online Version

The automatic brightness filter is designed to adjust to dynamic brightness changes in your video using a unique implementation of MotionDSP's dehazing algorithm. Automatic Brightness is able to enhance in real-time with accuracy.




Automatic Brightness - Compact




Automatic Brightness - Expanded

| | |
|---|---|
| Strength | The level of brightness to be applied. |
| Radius | Defines locality of the algorithm (impact of neighbor pixels). This is a Radius for The Median Filter. |
| Quality | Determines level of sub-sampling of the input frame, i.e., it tells by how much the input frame is reduced and then processed:<br>l ow means 4 times per each dimension<br>m edium is twice for each dimension<br>h igh does not reduce it at all |

# Contrast

Last updated: 2021-01-28T17:24:20.000Z | Online Version

The type of sensor and lighting conditions both impact video fidelity. In either case, the quality of the video can be improved by adjusting the lighting in the video. Forensic has an advanced algorithm for contrast-limited adaptive histogram equalization.

This process uses algorithms for automatic contrast adjustments in a single frame and across multiple frames to simulate the effect of a longer exposure time. This has the effect of both suppressing noise and revealing new detail within the image/video.

Contrast - Compact

Contrast - Expanded

| | |
|---|---|
| **Level** | You can change the amount of contrast enhancement by moving this slider from 0 (no change in contrast) to 200 (maximum contrast enhancement). The default value for this parameter is 30. |
| **Sensitivity** | When the Sensitivity level is set at 1, the contrast enhancement is applied to the entire frame as a whole. Higher settings enable the processing algorithm to work on smaller regions in a frame. For example, at a setting of 5, the contrast enhancement is applied to the individual histograms in each of the 25 regions within a transparent 5x5 grid within the image. |
| **Stretch** | This parameter defines how much to stretch the processing algorithm for significant contrast variations in the image. A larger Stretch is good for resolving details in the shadows. A lower Stretch works better for relatively even light distribution. The range for the stretch parameter is [0-1]. |

# Denoising

Last updated: 2021-01-28T17:23:51.000Z | Online Version

The Denoising enhancement panel allows you to tune processing algorithms used to adjust the smoothness (i.e. the amount of noise/texture) of the final reconstructed image.

Denoising - Compact

Denoising - Expanded

| | |
|---|---|
| **Intensity** | Lower values will have more of a denoising effect in flat regions, but textured regions will become blurry. Higher values will have less of a denoising effect in flat regions, but better edge and corner reconstruction in textured regions. |
| **Focus** | Higher values will increase the influence of pixels which are far away, thus causing the frame to look blurry for the highest value. Lower values will decrease the influence of pixels which are far away. |
| **Scale** | This parameter is used to upscale the image resolution, similar to the Super Resolution parameter in the Resolution filter. Available options depend on the input resolution and can be 1x, 2x, 3x, or 4x. For example, applying a Scale factor of 2x to an input video with a resolution of 320x240 results in a video with a resolution of 640x480. |

# Sharpen

Last updated: 2021-01-28T17:24:01.000Z | Online Version

This enhancement uses Unsharp Masking, a well-known filter in image processing. It emphasizes the contrast of small details (edges of objects) in the video frame.

Sharpen - Compact

Sharpen - Expanded

| | |
|---|---|
| **Intensity** | Defines how much the edges will be pronounced on a processed image. |
| **Focus** | Defines the radius of the unsharp masking algorithm in pixels. |

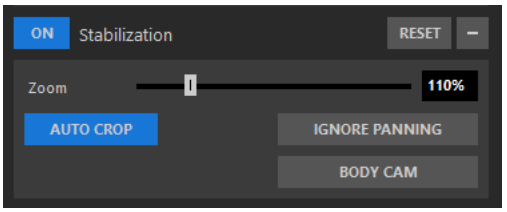
NOTE: This filter does not add any information to the image, as is the case with super resolution or deblurring filters.

# Stabilization

Last updated: 2021-01-28T17:28:40.000Z | Online Version

The Stabilization enhancement panel allows you to tune the algorithms used to reduce shaking and unwanted movement in the video

Stabilization - Compact




Stabilization - Expanded

| | |
|---|---|
| **Zoom** | Increasing this parameter zooms in on the video frame content, effectively hiding black borders. |
| **Auto Crop** | Turning this option on will suppress black borders, but as a consequence may reduce the effect of stabilization. |
| **Ignore Panning** | This button optimizes the stabilization function during extreme panning motions or when the platform's sensor is panning for an extended period of time. |
| **Body Cam** | This button optimizes for the stabilization of low-frequency shake such as that of a body cam |

TIPS:

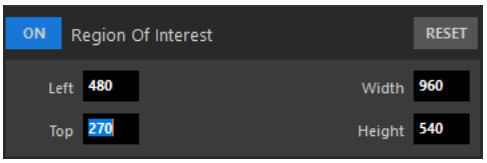
1. For the best possible stabilization, turn off Auto Crop. If the black borders are distracting increase the Zoom level. Frames will be zoomed in and stabilization quality will be retained.
2. When the most important priority is to exclude black border pixels, turn on Auto Crop. If the stabilization quality is poor, increase the Zoom level.

# Region of Interest

Last updated: 2021-01-28T17:28:30.000Z | Online Version

Forensic has the option to process only a selected area--or "region of interest" (ROI)--of the original video. This is useful to improve processing speed, and can also allow the enhancement algorithms to generate better results in a limited area when the video frame contains significant light and color variations.

The ROI can be moved and resized using the corners when the ROI tool is selected. For more accurate control use the options available in the ROI filter




**Left** - Top left corner pixel location on the X-axis

**Top** - Top left corner pixel location on the Y-axis

**Width** - Total width of the ROI

**Height** - Total height of the ROI

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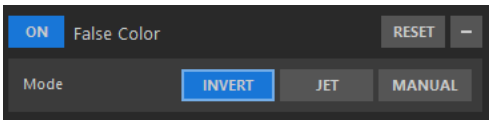
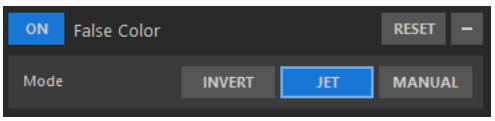
# False Color

Last updated: 2021-01-28T17:28:21.000Z | Online Version

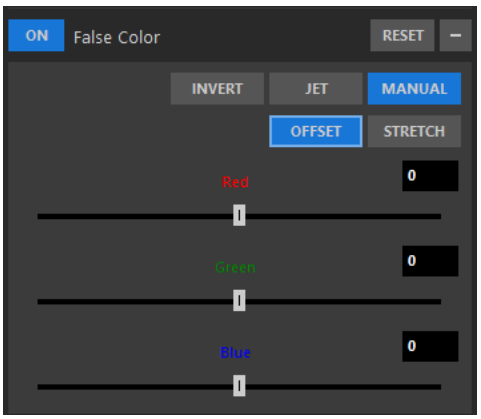
False Color can be used to change the color palette of the video display. Under some viewing conditions this may result in better perception of fine details.



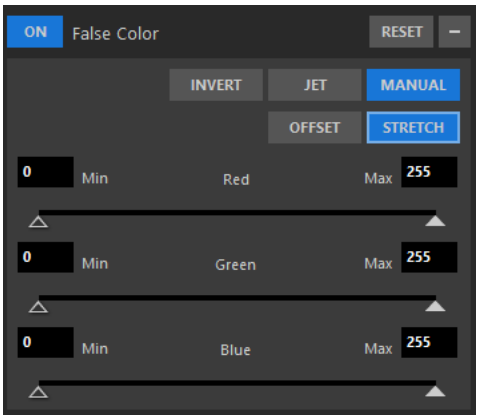

- **Invert** - Substitutes colors with their complements. Used on IR feeds, this mode effectively switches between “Black-Hot” and “White-Hot” output.




- **Jet** - Uses video luma component and represents it as a Jet false color map. As a result, variations in luminance - contrast are translated into color hue variations.




- **Manual Offset** - Adds the offset to each RGB component and clips the values to 0 - 255. You set the offset via the slider. Offset range = [-255, 255], default offset is 0.

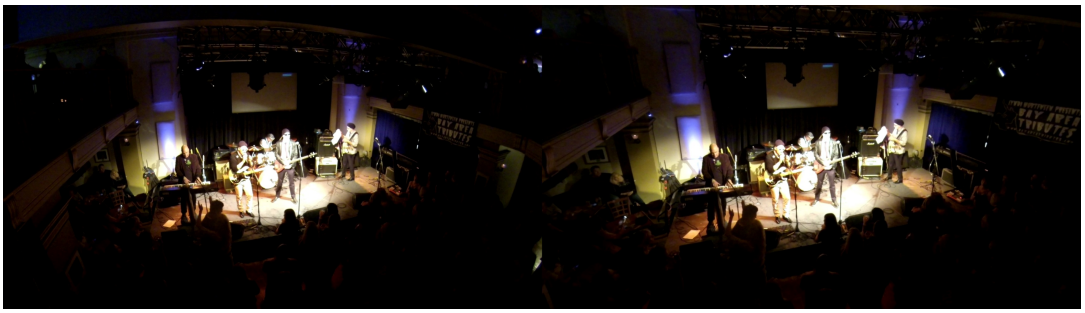



- **Manual Stretch** - Adds the offset and scales to each RGB component. You set the Minimum Clip Value and the Maximum Clip Value, similar to the Light & Color manual mode. The clip range = [0, 255], the default Minimum Clip Value is 0; the default Maximum Clip Value is 255.

# Radial Distortion

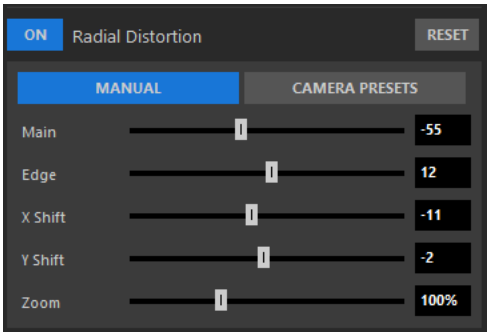
Last updated: 2021-01-28T17:28:12.000Z | Online Version

This enhancement simplifies the process of correcting optical distortion caused by a camera lens.



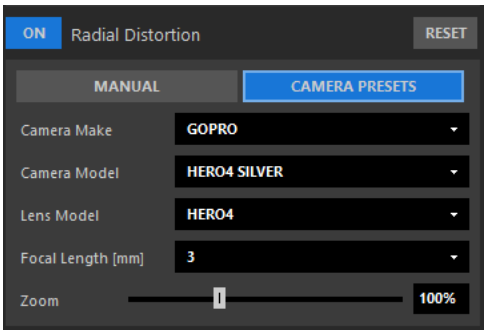
There are two modes for this filter. Manual mode allows you to make adjustments to improve the image when the camera type is not known. The Camera Presets mode allows you to automatically apply the filter for commonly known commercial camera types.

### Manual Mode



| | |
|---|---|
| **Main** | Specifies the amount of spherical correction that may be introduced. Positive values make the image convex while negative ones make it concave. The whole effect is similar to wrapping the image inside or outside a sphere. |
| **Edge** | Specifies the amount of additional spherical correction at image edges. |
| **X Shift, Y Shift** | These two options specify the shift of the image produced by not perfectly centered pairs of lenses. This option produces visible results only if the Main or Edge options are non zero. |
| **Zoom** | Specifies the amount of the image enlargement or reduction caused by the hypothetical lens. |

### Camera Presets Mode

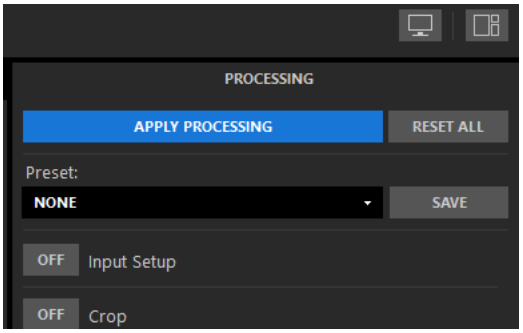



This mode enables you to quickly select presets for correcting potential radial distortion effects caused by a specific lens. In order to correct the potential lens distortion, you need to know the camera make & model and/or the lens model & focal length.

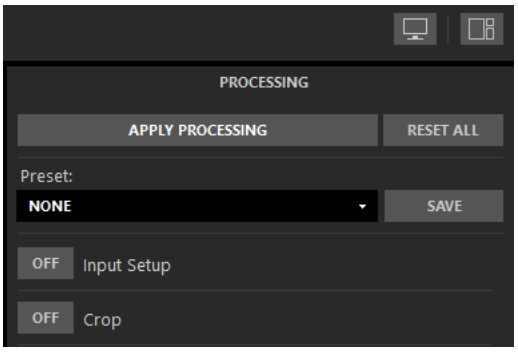
# Apply Processing

Last updated: 2021-01-28T17:27:09.000Z | Online Version

Click the Apply Enhancements button on the top to view the enhanced results of the video opened in the selected Workspace “on-the-fly” as you adjust enhancement settings. (Your original video file will never be modified.)




Apply Processing - Enabled




Apply Processing - Disabled

NOTE: Applying enhancements “on-the-fly” requires more processing power, so—depending on the responsiveness of your system—you may prefer to leave Apply Enhancements ‘ON’ at all times, or you may prefer to only periodically toggle Apply Enhancements when you want to view the enhancement results.

# Getting the best results with Forensic

Last updated: 2021-01-28T17:40:16.000Z | Online Version

Video enhancement is generally more effective on a clean video source. Ideally, users should import a video in its natively-captured format - that is, the file as it was transferred right from the camera or sensor.

A video that has been transcoded (i.e., had its format changed from one format to another, e.g., from FLV to MOV) loses many of its high-frequency details and is more difficult to enhance. A video that has had its frame rate changed (e.g., a video that has had its original frame rate of 7 frames per second changed to 15 frames per second by frame-rate doubling) is also difficult to enhance since duplicate video frames can cause problems with frame analysis.

Forensic can still produce impressive results with videos that have been transcoded or have had their frame rates modified, but enhancing a clean source will produce optimum results.

# Spotlight

## Spotlight Training Videos

### MotionDSP Spotlight Custom Watermark

Last updated: 2021-03-02T18:39:03.000Z | Online Version

### MotionDSP Spotlight Advance Timeline View

Last updated: 2021-08-09T12:39:45.000Z | Online Version

# MotionDSP Spotlight Audio Segment Moving Ability

Last updated: 2021-08-09T12:38:02.000Z | Online Version

# MotionDSP Spotlight Automatic Face Suggestion

Last updated: 2021-08-09T12:37:09.000Z | Online Version

# MotionDSP Spotlight Configurable Option for Auto Play Manual Redaction

Last updated: 2021-08-09T12:36:16.000Z | Online Version

# MotionDSP Spotlight Audio Redaction

Last updated: 2021-08-09T12:35:32.000Z | Online Version

## MotionDSP Spotlight Cycling through all layers

Last updated: 2021-08-09T12:34:22.000Z | Online Version

## MotionDSP Spotlight Hide Layer Geometry

Last updated: 2021-08-09T12:33:10.000Z | Online Version

# MotionDSP Spotlight Object Resize Manual Redaction

Last updated: 2021-08-09T12:32:20.000Z | Online Version

# MotionDSP Spotlight Object Resize using Hotkeys

Last updated: 2021-08-09T12:31:01.000Z | Online Version

## MotionDSP Spotlight Subtitle Feature

Last updated: 2021-08-09T12:29:30.000Z | Online Version

## MotionDSP Spotlight User Interface Overview

Last updated: 2021-08-09T12:28:12.000Z | Online Version

# Forensic Studio and Spotlight 9.0 Overview

Last updated: 2021-03-11T20:34:30.000Z | Online Version

# Manual Tracking in Spotlight

Last updated: 2021-03-08T16:27:50.000Z | Online Version

## MotionDSP Spotlight 3 Spotlighting Methods

Last updated: 2021-08-09T12:39:01.000Z | Online Version

## MotionDSP Forensic, Spotlight, and Forensic Studio: Re hosting your License

Last updated: 2021-03-02T18:38:28.000Z | Online Version

# MotionDSP Spotlight Concatenate

Last updated: 2021-03-02T18:37:39.000Z | Online Version

# Saving your project in MotionDSP Forensic and Spotlight

Last updated: 2020-12-07T20:02:16.000Z | Online Version

## Trimming Video Clips Spotlight

Last updated: 2020-10-30T16:56:38.000Z | Online Version

## MotionDSP Spotlight Snapshot creation

Last updated: 2020-10-30T16:57:08.000Z | Online Version

## Creating a Redaction Report in MotionDSP Spotlight

Last updated: 2020-10-30T16:58:03.000Z | Online Version

## Redacting Multiple Faces in Body Camera Video with MotionDSP Spotlight

Last updated: 2020-10-30T16:59:03.000Z | Online Version

# Redacting Audio in MotionDSP Spotlight

Last updated: 2020-10-30T16:59:33.000Z | Online Version

# Redacting Multiple Faces in Body Camera Video with Spotlight

Last updated: 2021-01-28T17:43:50.000Z | Online Version

# Spotlight Video Redaction Software

Last updated: 2021-01-28T17:43:14.000Z | Online Version

# How to Create a Redaction Report in Spotlight

Last updated: 2021-01-28T17:42:59.000Z | Online Version

# How to Redact Audio in Spotlight

Last updated: 2021-01-28T17:43:42.000Z | Online Version

# How to Trim Video Clips in Spotlight

Last updated: 2021-01-28T17:43:21.000Z | Online Version

# How to Use the Audio Waveform Bar in MotionDSP Spotlight

Last updated: 2021-01-28T17:44:11.000Z | Online Version

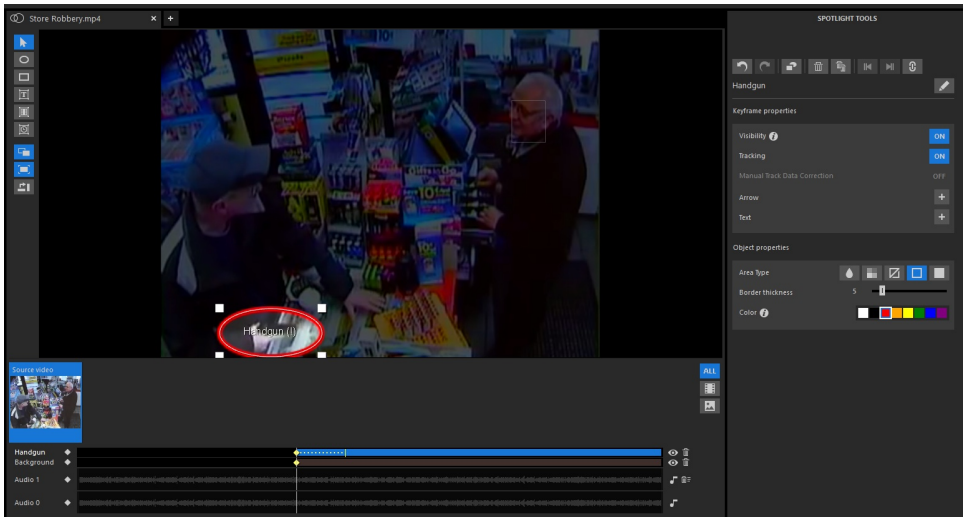
# Workflow

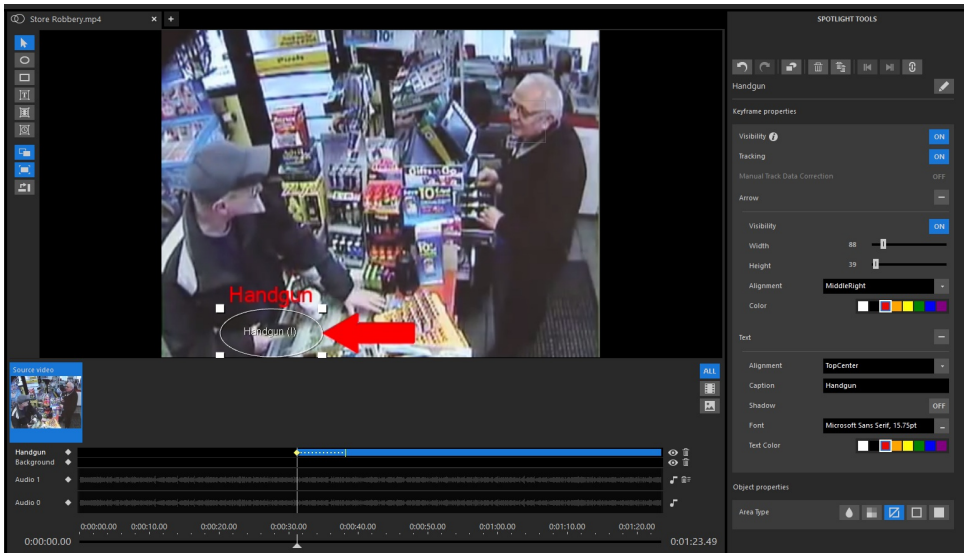
## Spotlighting

Last updated: 2021-01-28T17:25:41.000Z | Online Version

There are three ways to spotlight an individual or object in your video:

1. Use the ellipse or rectangle object and choose a *Border* area type
    -

2. Enable the background layer to darken, block, or blur the entire video. Then, use an ellipse or rectangle object and the *No Change* or *Border* area type to make the area inside the ellipse or rectangle object visible.
    - 

3. Create an ellipse or rectangle object and select *No Change*. Under the Layer Options, select either Arrow or Text to annotate the ellipse or rectangle object.
    - 

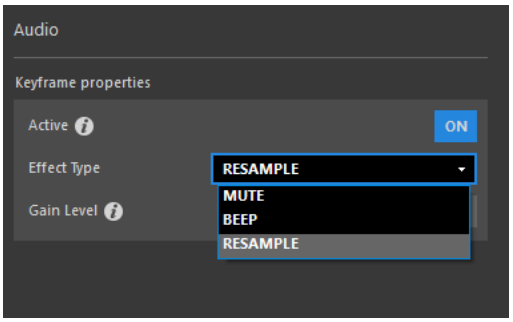

TIPS: When using an object with a *No Change* area type, the border displaying the boundaries of the object will not be visible when saved or exported. To see your project as it will be exported select Lock Object Editing under Spotlight Tools. If you would like a border, use the *Border* area type.

# Audio Redaction

Last updated: 2021-01-28T17:24:42.000Z | Online Version

Begin the audio redaction process by navigating to the section of the video where you would like the audio redaction to begin. Click the keyframe button on the left side of **Audio** layer.

Keyframe properties are displayed in the **Tools Panel** on the right side of the screen.




**Mute** is the default selection. Choose **Resample** effect type to alter the audio or **Beep** to insert a loud beeping sound over the audio.

Play the video and add the second keyframe to mark the end of the **Audio Redaction** section.

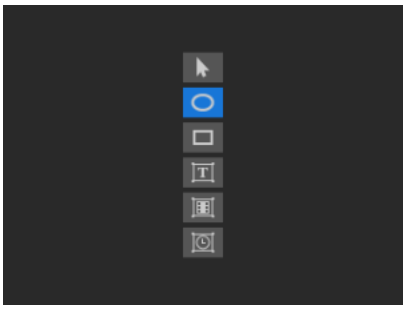
Play the video and listen carefully for audio that should be redacted. Add new keyframes before and after each time that audio is present in the video.

**NOTE: Audio redactions are not reversible. "Mute" completely removes the audio in the given section. "Beep" completely overwrites the audio through the beep signal in the given section. "Resample" distorts frequencies of the audio which changes the pitch randomly, not with a predefined value, so the audio cannot be reversed to its original state.**

# Video Redaction

Last updated: 2021-01-28T17:30:03.000Z | Online Version

In the **Workspace Panel** in the center of the screen, the video will be displayed. To begin the redaction process, select the ellipse or rectangle masking element to mark the object to be redacted.

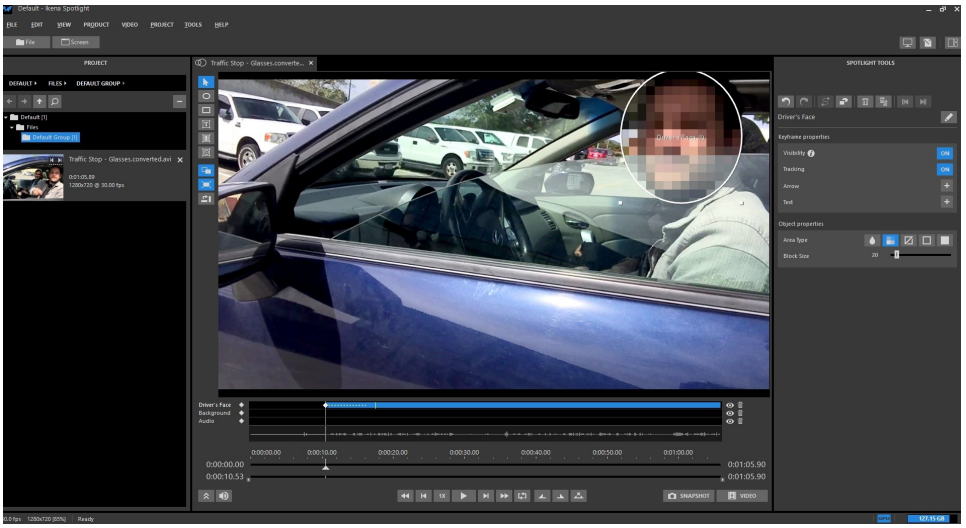


Draw either an ellipse or a rectangle around the object to be redacted. Spotlight automatically creates the object layer and adds a keyframe, displayed at the bottom of the screen.

Spotlight also creates a generic name for the object layer. It is good practice to rename the layer at this point and assign a more intuitive name, like "Driver's face", instead of the generic name of "Ellipse.2".

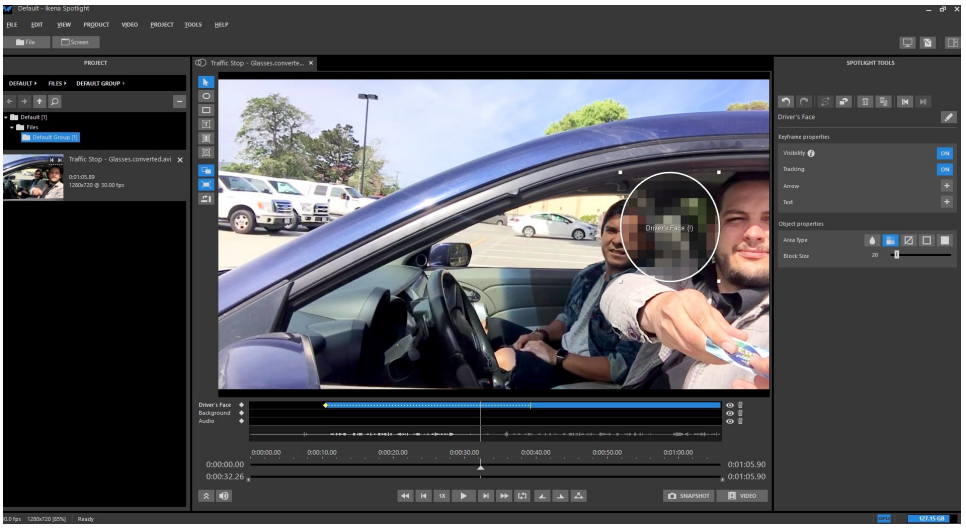
**NOTE: This layer name label is only to assist the editing process and will not appear in the final exported video product.**

Spotlight starts tracking the object automatically. The tracking is represented by a yellow dotted line appearing after the first keyframe. The tracking is performed seven (7) seconds forward from the current seeker position.



Tracking "Ghost" is the distance from current seeker position. Play the video and notice that the tracking is chasing the Ghost.

If the tracker path requires adjustment, simply drag the ellipse or rectangle to correct the tracker path as necessary.

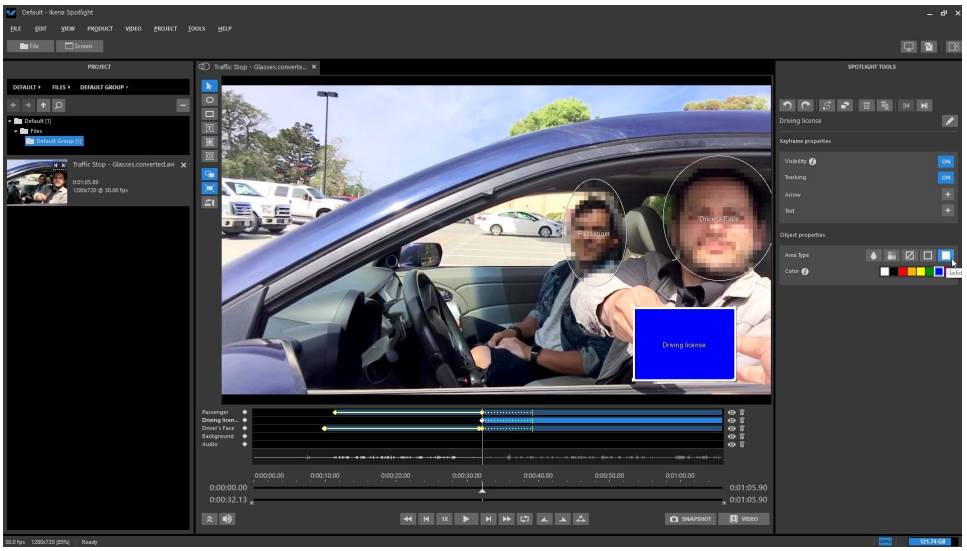


Spotlight automatically adds a keyframe and completes the tracking. You will note that the question mark sign disappears from the object name in the player as the tracking is now complete.

Repeat the redaction process for more objects, but note that Spotlight can track only three (3) objects*simultaneously*. You can redact more than three objects in your video but not all objects will be tracked at the same time.

In the example below, we are redacting the driver's face, the driver's license, and the passenger's face. All three objects will be tracked simultaneously.

By using the **Tools Panel** on the right side of the application window, you can change the video masking element properties. Options include blur, block and solid color. To prevent a redaction from being reversed, we recommend using the solid color option to redact faces and objects. The **solid color option** permanently changes the pixel values in the redacted area. For example, the driver's license is masked by the solid blue color set in the video masking element properties panel on the right side of the screen.



For objects that appear briefly in the scene, we recommend using the **Keyframe Visibility** feature. In our example, we drew the rectangle around the driver's license at the moment it entered the scene and added another keyframe at the point when it is no longer visible. We then clicked the second keyframe and turned off visibility in **Keyframe** properties in the **Tools Panel**. **Keyframe Visibility** can be turned on if the object reappears.

**TIP: Do not create a new object layer for an object that reappears later in the video. Just create a new keyframe in the original layer and visibility will be automatically turn on.**

# Features

# Objects

Last updated: 2021-01-28T17:25:19.000Z | Online Version

**Video Masking Elements (Objects)** include **Ellipse** and **Rectangle**. These can be used to blur, darken, or scramble individuals or objects in the video. A label such as a caption or an arrow can be attached to the selected video masking element. The label will move with the element.

# Toolbar

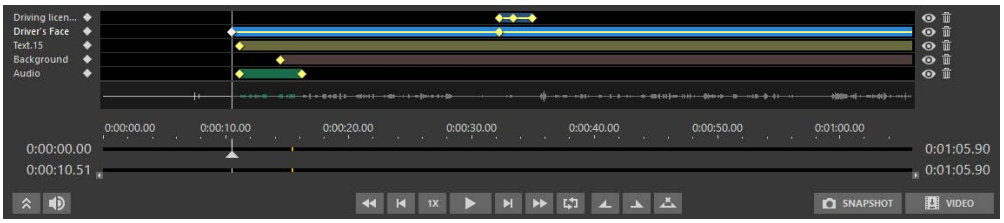
Last updated: 2021-01-28T17:40:36.000Z | Online Version

| | |
|---|---|
| 1. Select Tool | Tool for selecting and manipulating objects |
| 2. Ellipse Tool | Create an elliptical object |
| 3. Rectangle Tool | Create a rectangular object |
| 4. Text Tool | Create a text annotation object |
| 5. Video-Time Tool | Create an annotation that displays the video's timecode |
| 6. Real-Time Tool | Create an annotation that displays the real video time |
| 7. Compare (Switch) | Enable/Disable layer visibility |
| 8. Fit to Window | Zoom the video to fit inside the player |
| 9. Rotate | Rotate the video 90 degrees clockwise |

# Layers

Last updated: 2021-01-28T17:25:58.000Z | Online Version

The layer hierarchy panel shows all objects/annotations. Spotlight features four types of layers – object, annotation, background, and audio:




1. There is an object layer for each rectangle or ellipse object.
2. Annotations are text or time overlays you can add to any segment of the video.
3. The Background layer is present in every video. It includes everything that hasn't been identified as an object to be redacted.
4. The Audio layer is present if the video includes audio. An audio waveform is shown below the Audio layer to highlight the sections of the video where audio is present.

Every layer has a specific color. Objects layers are blue, annotation layers are yellow, the background layer is brown, and the audio layer color will depend on the redaction type.

There are several operations that can be performed with layers:

- **Add Keyframe to the Layer** - select the 'diamond' icon on the left side of the layer, in order to add a new keyframe to the layer
- **Drag & Drop Layer Reordering** - hover the mouse over the layer name area and you will notice a hand tool. Drag the layer and move it to another position.
- **Rename Layer** - double-click on the layer name in the Layers panel or select the Edit button next to the layer name in the tools properties panel in order to rename the layer.
- **Hide Layer** - click the 'eye' icon on the right side of the layer in order to hide or show the layer. Hidden layers won't appear either in the live preview or in the exported video product.
- **Delete Layer** - click the 'trash' icon on the right side of the layer (next to Hide/Show layer button) in order to delete the layer. The audio and background layer cannot be deleted but this action will delete all the keyframes from these layers.

TIPS: Spotlight will not display an audio layer if the workstation does not have an active sound output device

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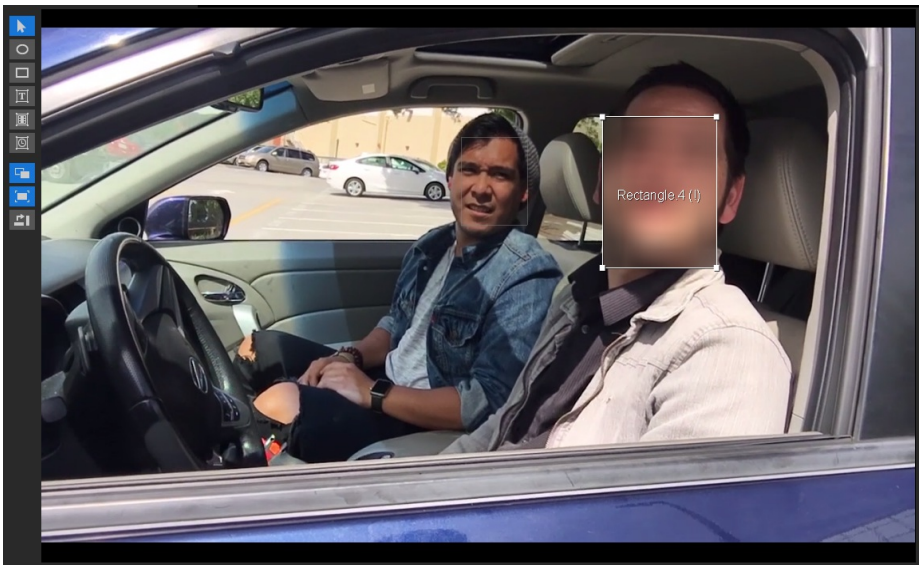
# Automatic Face Suggestions

Last updated: 2021-01-28T17:26:36.000Z | Online Version

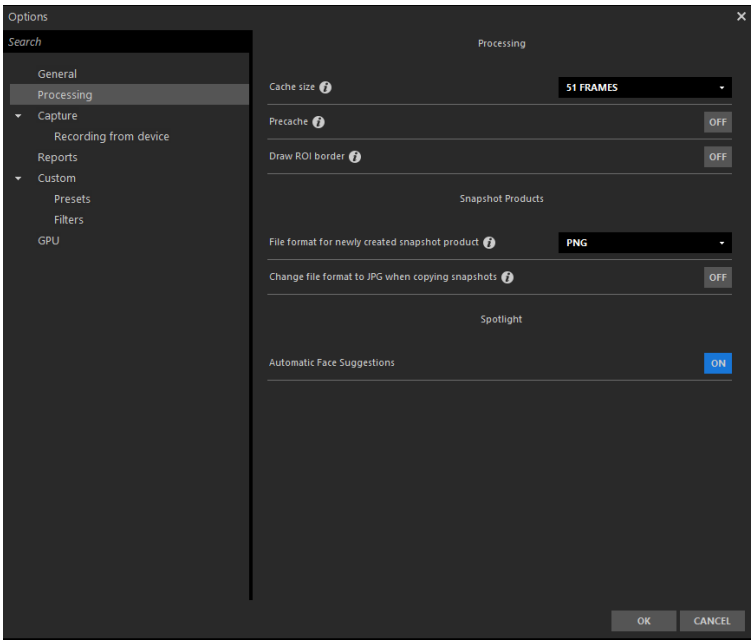
When a video is loaded into the Spotlight player in a paused state, Automatic Face Suggestions will run. Automatic Face Suggestions will search the frame for faces and draw a bounding box around the face making it as easy as selecting the box to begin the redaction and tracking process.

Automatic Face Suggestions - Select a bounding box to create redaction object




TIPS:

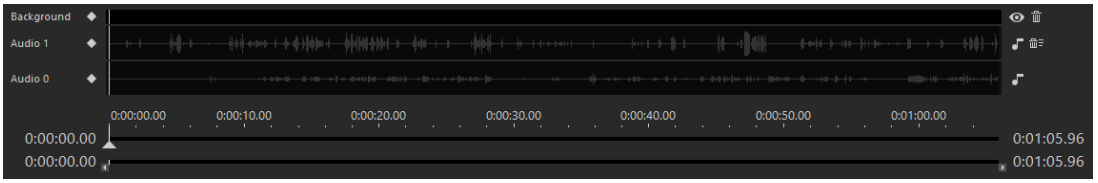
- You can disable Automatic Face Suggestions from the Tools>Options processing menu




# Multi-Channel Audio

Last updated: 2021-01-28T17:38:35.000Z | Online Version

Multi-channel audio is common in a video with sound and each channel is displayed with its own layer in Spotlight. Video with only one channel is called mono. Video with two channels is most often stereo audio, one channel for the left microphone and one channel for the right microphone.




The example track above is multi-channel audio but it is *NOT* stereo audio. The audio in this dashcam video comes from two different sources. The first source, *Audio 1*, is the audio captured from the dashcam. *Audio 0* is from the radio feed.

You can redact the audio from both tracks simultaneously or individually based on your configuration and requirements.

# Spotlight User Interface Overview

Last updated: 2021-01-28T17:26:50.000Z | Online Version

There are three main panels in Spotlight.

1. **The Project Panel** on the left allows you to select the video to load into the Workspace player.
2. **The Workspace Panel** in the middle allows you to generate and move overlay elements and set keyframes. The Workspace Panel contains: Mouse toolbar, Layer panel, and Player
3. **The Tools Panel** on the right allows you to change the properties of the overlay elements.

The panel layout can be customized around using the *View* > *Layout* selection from the menu. This can be useful for making more room for the **Workspace** and **Tools** panels when you are only working on a single video.

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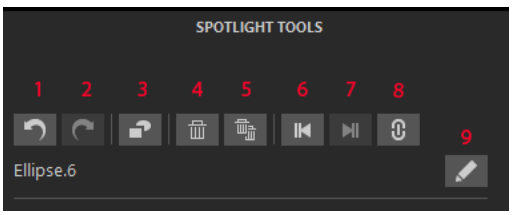
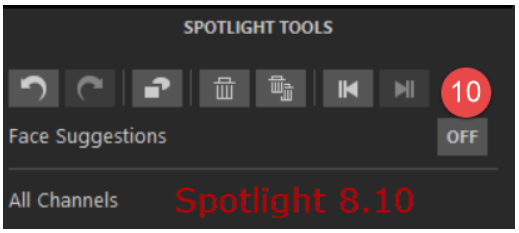
# Spotlight Tools

# Features

Last updated: 2021-04-20T03:01:23.000Z | Online Version





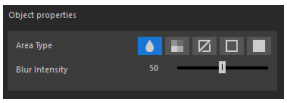

| | |
|---|---|
| 1. Undo | -Undo previous interaction |
| 2. Redo | -Redo previous undo |
| 3. Lock Object Editing | -Lock changes to all layers (shows image as it will be exported, no UI elements such as layer names and object boundaries) |
| 4. Delete Keyframe | -Delete the keyframe the playhead is on from the selected layer |
| 5. Delete All Layers | -Delete all layers from the selected video |
| 6. Previous Keyframe | -Go to the previous keyframe of the selected layer |
| 7. Next Keyframe | -Go to the next keyframe of the selected layer |
| 8. Toggle Lock Audio | -Disabled: Edit audio channels together (Useful for normal Stereo and Mono Audio)<br><br>-Enabled: Edit audio channels individually (Useful for audio with multiple sources mapped to individual channels) |
| 9. Rename | -Rename the selected layer (Currently displayed as *Ellipse.6*) |
| 10. Face Suggestion | -When you turn the face suggestion setting on, human faces will be detected in a digital image or video, allowing you to automatically generate a redaction object based on that detection |

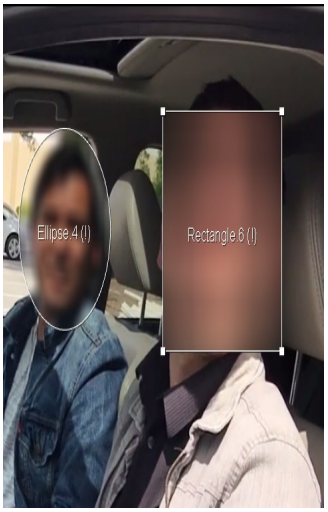
## Object Properties

Last updated: 2021-01-28T17:37:56.000Z | Online Version

Blur:

Right: Low Intensity, Left: Hight Intensity

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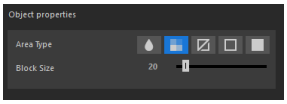
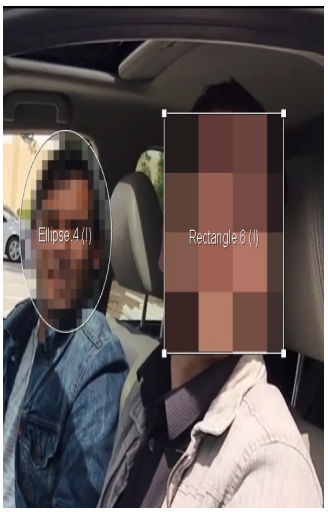
Block:

Right: Small Block Size, Left: Large Block Size

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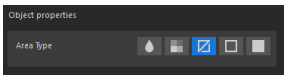
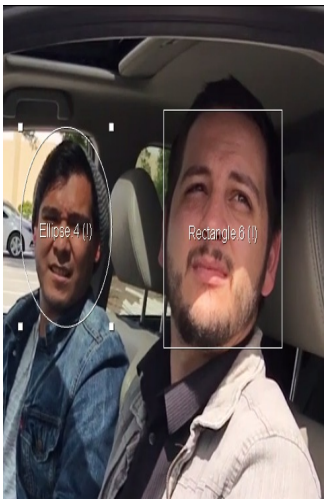
No Change:

Used in conjunction with other objects to "poke a hole" in the redaction object or background layer

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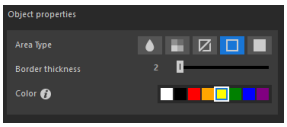
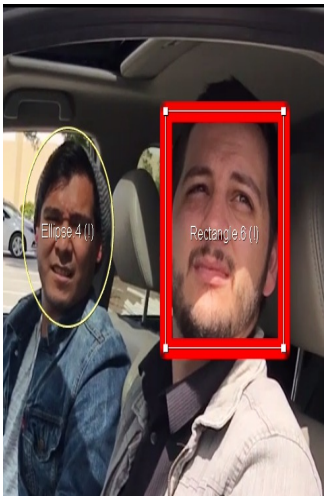
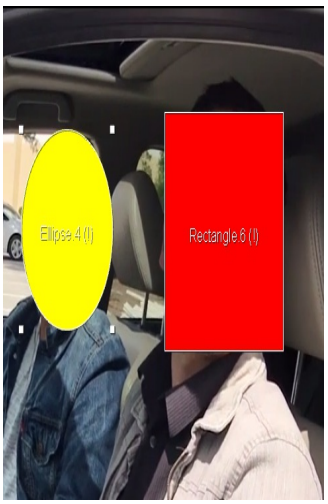
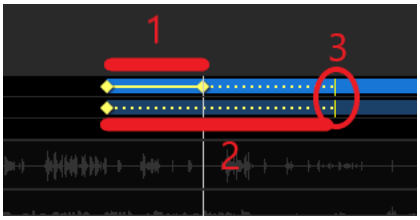
| | | |
|---|---|---|
| Border:<br><br>Right: Low Thickness, Left: High Thickness |  |  |
| Solid: | |  |

# Tracking

Last updated: 2021-01-28T17:37:40.000Z | Online Version

Tracking is automatically started whenever a new ellipse or rectangle object is created.

1. Solid Line - Object motion path between keyframes is saved
2. Dotted Line - Temporary tracking that requires a keyframe to save.
3. Tracking Progress Indicator - Tracking will only calculate 7 seconds ahead of the playhead per object as illustrated by the Tracking Progress Indicator




- Create keyframes by clicking the keyframe button on the left, next to the layer name
- A keyframe is created whenever an object is manually adjusted
- The object's motion path must be recalculated whenever a new keyframe is placed.
- Tracking can be disabled for individual layers via the Spotlight Tools menu.
- The maximum number of objects that can be tracked simultaneously is three

# Visibility

Last updated: 2021-01-28T17:25:49.000Z | Online Version

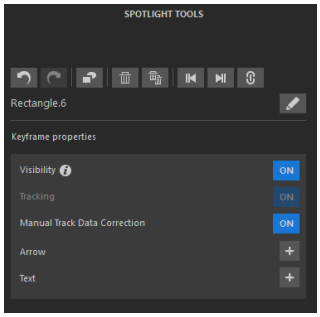
For objects that appear briefly in the scene of a video, we recommend using the **Keyframe Visibility** feature. In our example, we drew the rectangle around the driver's license at the moment it entered the scene and added another keyframe at the point when it is no longer visible. We then clicked the second keyframe and turned off visibility in **Keyframe** properties in the **Tools Panel**. **Keyframe Visibility** can be turned on if the object reappears.

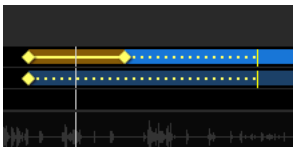
**TIP: Do not create a new object layer for an object that reappears later in the video. Just create a new keyframe in the original layer and visibility will be automatically turn on.**

# Manual Track Data Correction

Last updated: 2021-01-28T17:39:02.000Z | Online Version

In certain scenes when automated tracking is not adequate or motion is unreasonable, Manual Track Data Correction can allow you to make precise changes to the motion path of individual objects. To begin, Manual Track Data Correction must first have an object that has been tracked between two keyframes.

1. With the playhead between two keyframes and the desired object layer selected, navigate to Spotlight tools and select Manual Track Data Correction
    - 


2. Step through the desired range frame-by-frame and adjust the object as necessary.
3. When finished, disable Manual Track Data Correction and review changes

TIPS:

- Tracking status must be completed (solid line), Manual Track Data Correction cannot be completed on tracking that is in progress (dotted line)

# Arrow

Last updated: 2021-01-28T17:25:08.000Z | Online Version

A label such as a caption or an arrow can be attached to a selected video masking element.  An arrow can be used to emphasize or highlight an object in the video.