



**Video Format
Converter**

User's Guide

Version 160502-1145

Introduction

This program converts your Luma video surveillance files to other file formats to allow for ease of viewing on the platform of your choice.

Note that **once a surveillance video is converted, it loses the digital watermark** that identifies it as an original unedited surveillance video. This means that **converted video is not legally admissible evidence**. The original file still is, and of course you can show the converted file to law enforcement.

Main Features

This program has many powerful features, including:

- Can convert from multiple popular file formats.
- Accepts streams from various devices, both digital and analog.
- Converts to a variety of file formats, including MP4, MOV, and AVI.
- Can retrieve the file information from a feed.
- Playback capability.

System Requirements

Operating System: Microsoft Windows XP / Windows 7 / Windows 8 (32-bit or 64-bit).

RAM: A minimum of 512MB.

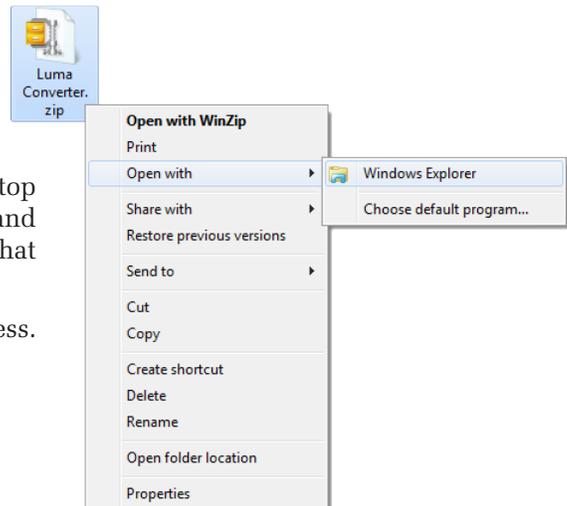
Installation

After you have downloaded the zip file, right-click on it and select *Open with > Windows Explorer*. A new window opens; it shows a program named LumaConverter.exe.

Right-click on that folder and select *Copy*. Navigate to your desktop (or whichever folder you wish), right-click in that location, and select *Paste*. This copies the uncompressed installation file to that location. You can now delete the zip file if you like.

Double-click on LumaConverter.exe to start the installation process. Follow the prompts of the setup wizard.

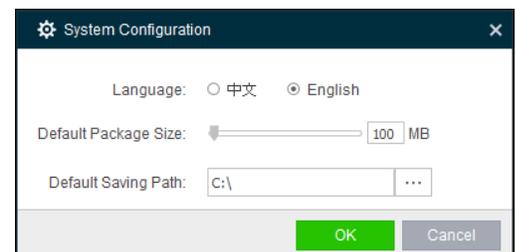
Once it's done installing, launch the program.



Configuring the Software

Click the  icon in the upper right corner and select *System Configuration* to set various parameters.

- **Language:** Choose how you'd like the menus to read.
- **Default Package Size:** This sets the default maximum size of converted files when using real-time stream conversion. You can edit the specific package size when adding real-time streams.
- **Default Saving Path:** This selects the default location for converted files. You can edit the save location when adding files or streams.



The Main Screen

1) Source Selection

Select *File Convert* to work with recordings that are saved on your computer's drive.

Select *Stream Convert* to work with a video feed currently being transmitted from your surveillance system.

2) File/Stream Manipulation

Press **+** to add files or real-time streams to the list for converting.

↑ and **↓** move the item up and down to adjust its position in the list.

✎ Edits the item's conversion parameters.

✕ Deletes the selected item.

🗑 Clears all the items in the list.

3) Conversion List

This displays the information for the added files or streams, as well as their current conversion status. Clicking on a given file or stream selects it for the various commands; it turns gray and its data show in the information display (6).

4) Conversion Controls

Start/Pause begins converting the files/streams in the list. Note that stream conversion cannot be paused. Pressing *Stop* ends conversion of the selected sources. Streams also have a timed-stop option.

5) Playback Area

You can play the selected file or stream.

▶ begins playing the selected files/stream (stream playback cannot be paused). Pressing **■** ends playback of the selected file or stream.

6) File Information Display

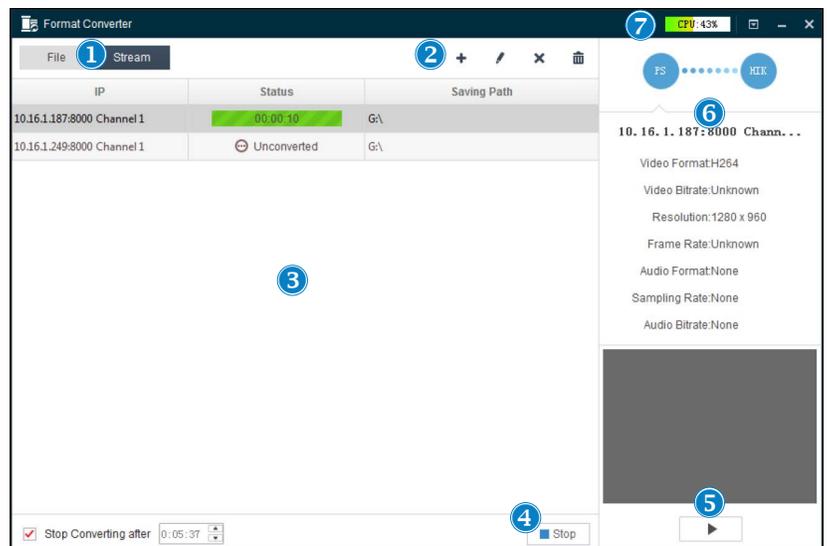
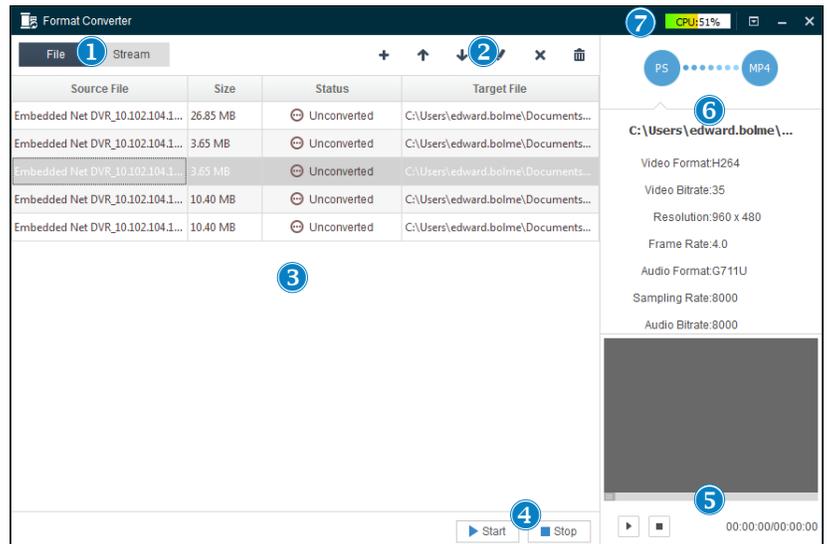
Show the parameters of the source file (or real-time stream) and the target file (based on your conversion settings).

7) Program Controls

The **CPU:11%** meter shows the current load on your computer's CPU. If this gets too high, file conversion errors may result; close other programs or reduce the number of streams that you are converting.

Press **⌵** to set system configuration, view the user manual and check the software information.

You can also minimize the window or exit the program with the standard Windows icons.



Converting Stored Files

You can convert video files that are currently stored on your PC. [For common conversion settings, see page 8.](#)

Adding Video Files

Be sure that *File* is selected in the upper left corner.

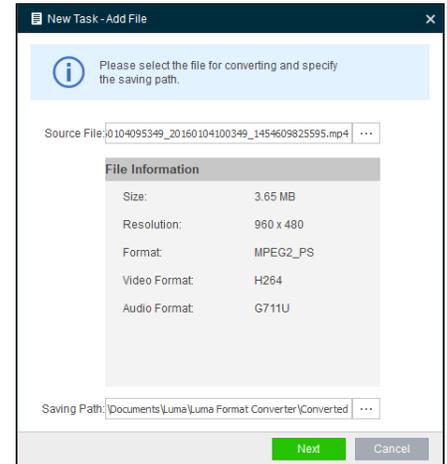
Add a Single File

Click **+**, then select *Single Add*. You can also right-click in the file list area, select *Add Task* and click *Single Add*.

To the right of the Source File box, click to navigate to and select the file to convert. The file's pertinent information displays in the center of the window.

The Saving Path box shows the default folder into which the converted file will be saved. If you want to change this location, click to the right of the path and choose where you'd like the converted file to be placed.

Click *Next* to edit the conversion parameters for the file.



Adding Multiple Files

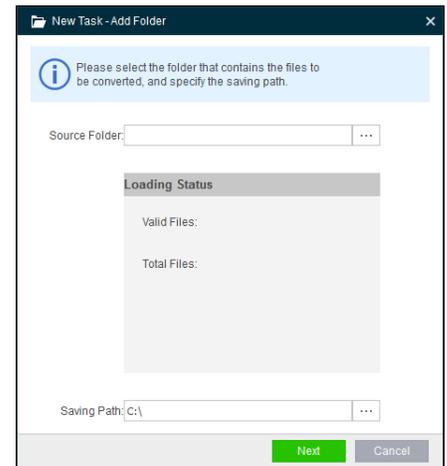
This adds all eligible files in a single folder and all of its sub-folders to the file list. You can delete unwanted individual files from the list afterward.

Click **+**, then select *Batch Add*. You can also right-click in the file list area, select *Add Task* and click *Batch Add*.

To the right of the Source Folder box, click and select the folder to scrape. The information area displays the total number of files and the number of valid files that will be added to the file list.

The Saving Path box shows the default folder into which the converted file will be saved. If you want to change this location, click to the right of the path and choose where you'd like the converted files to be placed.

Click *Next* to edit the conversion parameters for the file.



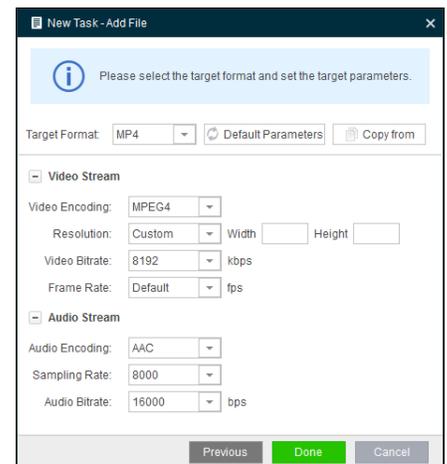
Setting Conversion Parameters

Across the top are several controls.

In the Target Format menu, select the format to convert to.

Click the *Default Parameters* button to restore the video and audio settings to their default values (it does not change the target format for your conversion). You can also click *Copy from* and select an added file or stream from the drop-down menu (derived from the files currently in the file list) to copy the conversion settings from it.

In the lower section, you set specific parameters for the converted file. In all cases, the options available are populated based on the modes supported by your chosen target format. Selecting *Default* uses the settings of the source video, and *Custom* lets you choose a non-standard setting as desired.



The lower section parameters include:

- **Video Encoding:** Select the encoding type for video stream of the file.
- **Resolution:** Select the resolution for the video.
- **Video Bitrate:** Select the maximum allowable bitrate for the video stream of the file.
- **Frame Rate:** Select the frame rate for the file.

- **Audio Encoding:** Select the encoding type for audio stream of the file.
- **Sampling Rate:** Select the sampling rate for the audio.
- **Audio Bitrate:** Select the bitrate for the audio stream of the file.

Click *Previous* to change which file(s) you are adding, *Cancel* to skip adding, or *Done* to save the settings and add the file(s) to the list with those parameters.

Converting Files

After adding the videos to the file list, you can convert the source files to their target formats. The files are converted in the order shown on the file list. **For common conversion settings, see page 8.**

View a File's Information

Whichever file is highlighted in gray has its information shown in the file information panel to the right. Click the left blue circle to check the information of the source file, and the right blue circle to check that of the target file. Note that the target file's format shows in the blue circle.

Check the Source Video

At the bottom, you can use the *Play/Pause* and *Stop* buttons to review the selected file.

Start Converting

Click the blue *Start* button below the file list to convert all of the files. The button label changes to *Pause*.

As conversion progresses, each file's status changes from Unconverted, to Waiting, to [percentage complete], to Done.

You can click *Pause* to pause the conversion, or *Stop* to terminate the conversion.

After converting one or more files, you can right-click on the file list area to open a pop-up menu. Choose *Clear*, then select *Delete Completed Items* to remove all successfully converted files from the file list.

Check the Target Files

Right-click on the file list area to open a pop-up menu. Select *Open Saving Path*, and the program opens the file folder in a new window so you can review the converted files.

Converting a Video Stream

You can convert and save video that is being streamed live from your surveillance system to your PC.

Connecting a Stream

Be sure that *Stream* is selected in the upper left corner, and that your computer is attached to the network.

Click **+**. You can also right-click in the file list area and select *Add Task*.

This opens the dialog shown at right. Enter the parameters required to find the stream on your recorder (you cannot connect directly to a camera).

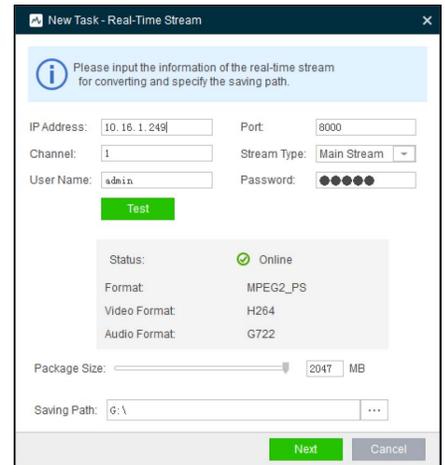
- **IP Address and Port:** This lets your PC connect to the recorder.
- **Channel:** Choose which channel (camera) you want to stream.
- **Stream Type:** Your PC streams the selected feed, using the parameters set at the source.
- **User Name and Password:** These are necessary to access the recorder.

Once these are filled in, click *Test* to connect to the source device. If the connection is successful, the status switches to *Online* and the stream's format information displays in the box in the center.

Once the stream is connected, use the *Package Size* slider to set the maximum file size for the converted stream. You can also just type a value directly into the text box. If this overruns, a new file is automatically started.

Click **...** and select the *Destination* folder for storing the converted file(s).

Click *Next* to edit the conversion parameters for the file.



Setting Conversion Parameters

Across the top are several controls.

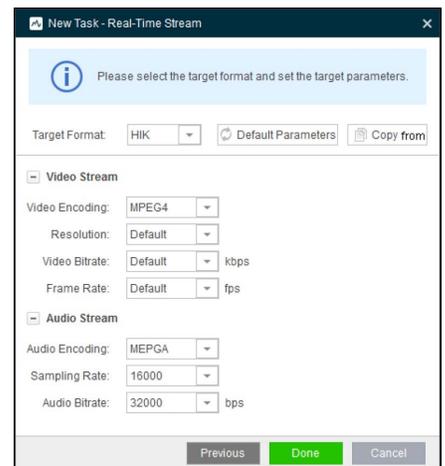
In the *Target Format* menu, select the format to convert to.

Click the *Default Parameters* button to restore the video and audio settings to their default values (it does not change the target format for your conversion). You can also click *Copy from* and select an added file or stream from the drop-down menu (derived from the files currently in the file list) to copy the conversion settings from it.

In the lower section, you set specific parameters for the converted file. In all cases, the options available are populated based on the modes supported by your chosen target format. Selecting *Default* uses the settings of the source video, and *Custom* lets you choose a non-standard setting as desired.

The lower section parameters include:

- **Video Encoding:** Select the encoding type for video stream of the file.
- **Resolution:** Select the resolution for the video.
- **Video Bitrate:** Select the maximum allowable bitrate for the video stream of the file.
- **Frame Rate:** Select the frame rate for the file.
- **Audio Encoding:** Select the encoding type for audio stream of the file.
- **Sampling Rate:** Select the sampling rate for the audio.
- **Audio Bitrate:** Select the bitrate for the audio stream of the file.



Click *Previous* to change which file(s) you are adding, *Cancel* to skip adding, or *Done* to save the settings and add the file(s) to the list with those parameters.

Converting Streams

After adding the streams to the stream list, you can convert the streams to the target format. **For common conversion settings, see page 8.**

View a Stream's Information

Whichever stream is highlighted in gray has its information shown in the file information panel to the right. Click the left blue circle to check the information of the source file, and the right blue circle to check that of the target file. Note that the target stream's format shows in the blue circle.

Check the Source Video

At the bottom, you can use the *Play/Stop* button to review the selected file.

Start Converting

Click to select a stream. Only one stream can be converted at a time, though you can have multiple streams queued.

Click the blue *Start* button below the file list to convert all of the files. The button label changes to *Pause*.

As conversion progresses, each file's status changes from *Unconverted*, to [the amount of time converted], to *Done*.

You can click *Stop* to terminate the conversion at any time. You can also activate the *Stop Converting after* box and choose how long you want the converted feed file to be.



After converting one or more files, you can right-click on the file list area to open a pop-up menu. Choose *Clear*, then select *Delete Completed Items* to remove all successfully converted streams from the list.

Check the Target Files

Right-click on the file list area to open a pop-up menu. Select *Open Saving Path*, and the program opens the file folder in a new window so you can review the converted files.

Recommended Conversion Settings

Disclaimer

This information is provided as a service without warranty of any kind in terms of correctness, accuracy, reliability, obsolescence, or otherwise. We do not warrant, guarantee, or make any representations regarding the use, or the results of use, of this information; and we are not responsible for any damages incurred by use of this information.

This section is provided as a starting point. Experiment to find the best results for your purposes. VLC recommended.

PC, iPad/iPhone

For more on iOS settings, see <http://blog.zencoder.com/2012/01/24/encoding-settings-for-perfect-ipadiphone-video/>

- **Target Format:** MP4 (AVI and MOV also work but are not as crisp)

Video Stream

- **Video Encoding:** MPEG4 (preferred) or H.264
- **Resolution:** Default up to 1024x768.
- **Video Bitrate:** 384 or 512
- **Frame Rate:** 25.

Audio Stream

- **Audio Encoding:** AAC or G711U (or default)
- **Sampling Rate:** 8000
- **Audio Bitrate:** 64000

YouTube

For more details, visit <https://support.google.com/youtube/answer/1722171>

- **File Size:** 2GB as a general rule, but 20GB is allowed with an up-to-date browser.
- **Target Format:** MP4

Video Stream

- **Video Encoding:** H.264
- **Resolution:** Default up to 2160p. Note that YouTube uses a 16:9 aspect ratio for its displays.
- **Video Bitrate:** No bitrate limit required, though we recommend the following:

| Type | Frame Rates 24–30 | Frame Rates 48–60 |
|------------|-------------------|-------------------|
| 2160p (4k) | 35–45 Mbps | 53–68 Mbps |
| 1440p (2k) | 16 Mbps | 24 Mbps |
| 1080p | 8 Mbps | 12 Mbps |
| 720p | 5 Mbps | 7.5 Mbps |
| 480p | 2.5 Mbps | 4 Mbps |
| 360p | 1 Mbps | 1.5 Mbps |

- **Frame Rate:** Default.

Audio Stream

- **Audio Encoding:** AAC
- **Sampling Rate:** 16000
- **Audio Bitrate:** 16000

