



Vantage
Application Note

Using Colorfront's Colorfront Engine in Vantage®



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Overview

The Colorfront color space conversion filter uses Colorfront's state of the art advanced color volume remapping engine and complex Human Perceptual Model for multiple display mastering which maintains creative image design intent. The Vantage integration with Colorfront adds the capability to submit and receive files from the powerful Colorfront color space conversion engine using the familiar and user friendly Vantage interface and powerful automated workflow capabilities.

The Colorfront filter is implemented in the Flip64 action and requires an optional Colorfront license available from Telestream.

Note: The Colorfront filter in Vantage supports the following gamuts: HDR10, HDR10 (limited to 100 nits), HLG, HLG (limited to 100 nits), BT.709, P3DCI (Gamma 2.6), DCI-P3, and XYZ (Gamma 2.6).

Getting Started

Telestream recommends that you read the [Overview](#) as a first step, to understand the big picture.

Next, if required, install any software required—proceed to [Software Requirements](#).

Note: This guide is written for video professionals who are familiar with using Vantage. To implement applications in Vantage, you should know how to create workflows and submit jobs. If you aren't familiar with Vantage, we suggest that you review the *Vantage User's Guide* and *Vantage Domain Management Guide* as needed.

Software Requirements

Before you can use the Colorfront Engine in your Vantage domain, the following Telestream software must be installed, licensed, and operating:

Your Vantage domain consisting of the following components should be installed, licensed, and operating properly.

- Vantage 8.0 with Update Pack 3 or Update Pack 4.
- Obtain and activate the appropriate Vantage license(s). Contact Telestream Sales for full licensing details and requirements.
 - A separate license is required to enable Colorfront. The V-COLORFRONT-SW license integrates Colorfront software with Vantage.
 - Requires a Vantage Transcode Pro license.

Creating a Workflow using the Colorfront Filter

Creating color space conversion workflows that integrate with Colorfront Engine is straightforward and similar to other workflow configurations you are familiar with in Vantage. For additional workflow design concepts, consult the Vantage User Guide and Vantage Domain Management Guide available directly in Workflow Designer and the Vantage Management Console or from the Telestream website.

Flip64 Action Configuration

In the Flip64 action inspector, you can set the Colorfront configuration parameters as described here.

Note: Controls with a green Browse button may be bound to a variable to dynamically assign their setting or value. You can assign the value to the variable in a previous action in the workflow or use the variable's default value. Click Browse to select the variable or create a new one to use.

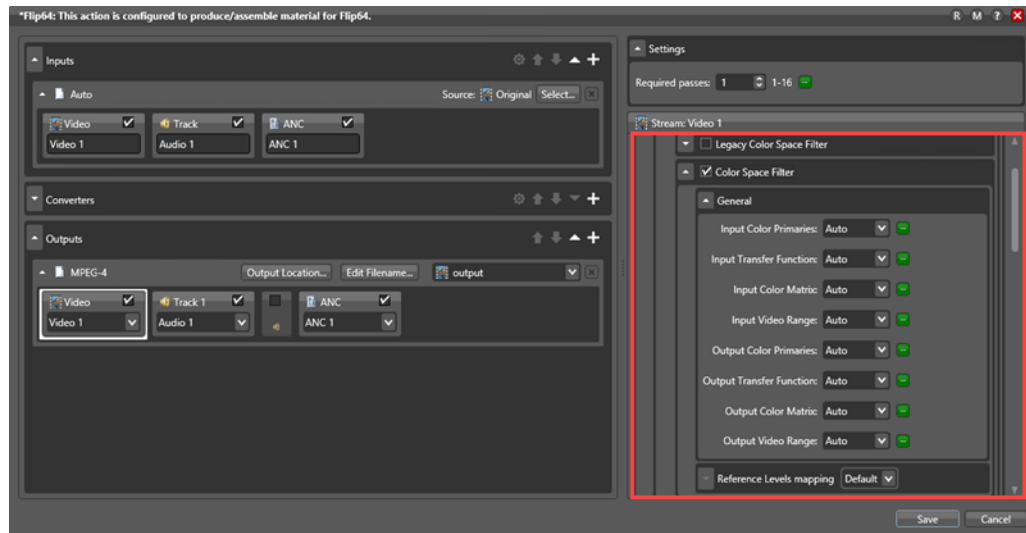
Using the Color Space Filter for Standard Definition (SD) Outputs

Configuring the Color Space Filter is required when you are configuring the Colorfront filter. The Color Space Filter settings should match the source media input.

The output of the Color Space Filter will set the input configuration of the Colorfront Filter. Typically, the output Color Space Filter settings are the same as the input, however they can differ if a conversion is needed before sending the media to the Colorfront Filter.

Adding the Color Space Filter

1. To add the Color Space Filter, select the Output Video stream. The Video drop-down menu becomes active.
2. In the Stream: Video menu on the right, select Color Processing.
3. From within the Color Processing configuration groups, select the Color Space Filter.
4. Enter all parameter settings as they apply to your desired workflow.

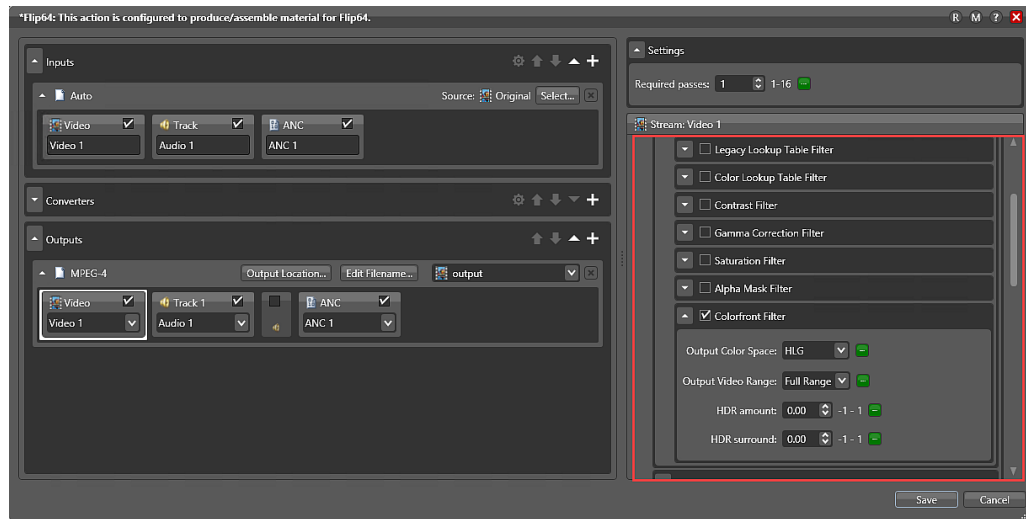


- Input Color Primaries:
- Input Transfer Function:
- Input Color Matrix:
- Input Video Range:
- Output Color Primaries:
- Output Transfer Function:
- Output Color Matrix:
- Output Video Range:
- Reference Levels mapping

Adding the Colorfront Filter

1. To add the Colorfront Filter, select the Output Video stream. The Video drop-down menu becomes active.
2. In the Stream: Video menu on the right, select Color Processing.
3. From within the Color Processing configuration groups, select the Colorfront Filter.

4. Enter all parameter settings as they apply to your desired workflow.



Output Color Space: Specifies the desired output color space setting. The default is HLG.

- HDR10 – HDR10 Media Profile, more commonly known as HDR10, is an open HDR standard announced on 27 August 2015 by the Consumer Technology Association.
- HDR10 (limited to 100 nits)
- HLG – Hybrid Log Gamma is defined in standard ARIB ST B-67 Essential Parameter values for the Extended Image Dynamic Range Television System for Program Production.
- HLG (limited to 100 nits)
- BT.709 – A standard developed by ITU-R for image encoding and signal characteristics of high-definition television.
- P3DCI (Gamma 2.6) – DCI-P3 uses a pure 2.6 gamma curve.
- XYZ (Gamma 2.6) – Gamma 2.6 encoding of CIE-XYZ, with a reference white at 48 cd/m².

Note: HDR10 (limited to 100 nits) and HLG (limited to 100 nits) are SDR outputs used as a proxy or preview of HDR outputs in an HDR workflow.

Output Video Range:

- Studio Range
- Full Range

HDR amount: Specifies the adjustment to the dynamic intensity of the image. It is configurable from negative one (-1) to positive one (+1). Zero (0) is the default setting. Adjusting the value negatively lowers the dynamic intensity. Adjusting the value positively increases dynamic intensity. This feature is often used on an HDR image to

reduce an overly bright background. Adjustments are perceptually constant in that perceived color, hue, and saturation are not affected.

HDR surround: Specifies compensation for the brightness of the viewing environment in order to maintain a consistent look. Configurable from negative one (-1) to positive one (+1). Zero (0) is the default setting. Adjusting the value negatively is typically used for dark surrounding environments such as a traditional cinema. Adjusting the value positively is typically used for brighter surrounding environments such as daylight.

More Information

For more information on using the Colorfront filter in Vantage, click the 'M' icon in the title bar to view help pages. For general information on using Vantage, click the '?' icon to open the Vantage User's Guide. Visit the Telestream web site and [Telestream Support](#) for additional information and the latest updates.

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To obtain product information, technical support, or provide comments on this guide set, contact us using our web site, email, or phone number as listed in the table below.

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| Telestream Technical Support | Web Site: http://www.telestream.net/telestream-support |
| Telestream Cloud Support | Web Site: https://cloud.telestream.net Telephone: +1 (866) 233-3187 Email: cloudsupport@telestream.net |
| Vantage Technical Support | Web Site: http://www.telestream.net/telestream-support/vantage/support.htm Support Web Mail: http://www.telestream.net/telestream-support/vantage/contact-support.htm US Enterprise Product Support: (877) 257-6245 International Enterprise Support: +49 228 280 9141 |

| Resource | Contact Information |
|--------------------------------------|---|
| Telestream, LLC | Web Site: www.telestream.net Sales and Marketing Email: info@telestream.net Telestream 848 Gold Flat Road Nevada City, CA. USA 95959 |
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