Notice to users

Disclaimers

Original images will change in appearance after performing image conversion with this product. Therefore, to prevent copyright infringement on copyrighted material, obtain the proper permissions from the copyright holder of the original images before conversion. IN NO EVENT SHALL SONY CORPORATION BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, WHETHER BASED ON TORT, CONTRACT, OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THIS MANUAL, THE SOFTWARE OR OTHER INFORMATION CONTAINED HEREIN OR THE USE THEREOF. This software may not be used for purposes other than those specified. Sony Corporation reserves the right to make any modification to this manual or the information contained herein at any time without notice.

Software copyrights

This manual or the software described herein, in whole or in part, may not be reproduced, translated or reduced to any machine-readable form without prior written approval from Sony Creative Software Inc. © 2018

Sony Creative Software Inc.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>5</td>
</tr>
<tr>
<td>Introduction</td>
<td>7</td>
</tr>
<tr>
<td>What's new in version 2018.1</td>
<td>7</td>
</tr>
<tr>
<td>The Catalyst Prepare window</td>
<td>8</td>
</tr>
<tr>
<td><strong>Working with libraries</strong></td>
<td>11</td>
</tr>
<tr>
<td>Creating or opening a library</td>
<td>11</td>
</tr>
<tr>
<td>Closing the library</td>
<td>12</td>
</tr>
<tr>
<td>Adding media to a library</td>
<td>12</td>
</tr>
<tr>
<td>Organizing media in a library</td>
<td>16</td>
</tr>
<tr>
<td>Editing library clips</td>
<td>22</td>
</tr>
<tr>
<td>Working with subclips in a library</td>
<td>23</td>
</tr>
<tr>
<td>Exporting media from a library</td>
<td>24</td>
</tr>
<tr>
<td>Transcoding presets</td>
<td>49</td>
</tr>
<tr>
<td>Relinking library media</td>
<td>51</td>
</tr>
<tr>
<td>Backing up a volume</td>
<td>51</td>
</tr>
<tr>
<td><strong>Finding media</strong></td>
<td>53</td>
</tr>
<tr>
<td>Supported video formats</td>
<td>56</td>
</tr>
<tr>
<td>Supported video devices</td>
<td>69</td>
</tr>
<tr>
<td><strong>Playing media</strong></td>
<td>71</td>
</tr>
<tr>
<td>Previewing video</td>
<td>72</td>
</tr>
<tr>
<td>Navigating the timeline</td>
<td>75</td>
</tr>
<tr>
<td>Marking in and out points for playback</td>
<td>76</td>
</tr>
<tr>
<td>Creating a snapshot of a frame</td>
<td>77</td>
</tr>
<tr>
<td>Adjusting and monitoring audio levels</td>
<td>79</td>
</tr>
<tr>
<td>Editing clip settings</td>
<td>80</td>
</tr>
<tr>
<td><strong>Working with clips</strong></td>
<td>81</td>
</tr>
<tr>
<td>Viewing and editing metadata</td>
<td>81</td>
</tr>
<tr>
<td>Working with clip lists</td>
<td>83</td>
</tr>
</tbody>
</table>
Working with storyboards .................................................................................. 86
Working with EDLs .............................................................................................. 92
Combining relay clips ......................................................................................... 93
Synchronizing multicamera clips ......................................................................... 93
Repairing flash bands .......................................................................................... 93
Applying color correction ................................................................................... 95
  Editing Color Adjustments controls .............................................................. 95
  Applying color-correction settings .............................................................. 103
  Using a Tangent control ................................................................................ 104
  Video-style (Rec.709) color grading .............................................................. 105
  Log (cinematic) color grading ....................................................................... 108
  Advanced cinematic (ACES) color grading ................................................... 109
  High Dynamic Range (HDR) color grading .................................................... 111
  Exporting color-correction settings .............................................................. 113
Editing Catalyst Prepare options ....................................................................... 119
Keyboard shortcuts ............................................................................................ 125
Gestures ............................................................................................................. 131
Index .................................................................................................................. 132
Introduction

Catalyst Prepare is the fast, simple, reliable path from camera to post. You can use Catalyst Prepare to copy and back up clips, organize your media clips, create subclips, apply color correction, and export clips.

What’s new in version 2018.1

- Added a Create Sony Professional Disc partitions check box in the Export pane to enable rendering XAVC Intra, XAVC Long, and XDCAM files with multiple body partitions.
  
  Files created with multiple body partitions may not be recognized properly by some Sony camcorders, decks, or servers.

- Improved color-management workflow for choosing color spaces, applying color adjustments, and transcoding clips with color adjustments:
  - In Options, Color management settings have been grouped together. Grade in has been changed to Working color space, and Display color space settings have been changed to Preview color space and External monitor color space.
  - In Adjust Color mode, the Inspector pane now displays the Preview and External monitor color space (if an external monitor is enabled). If the selected color space is not compatible with the source color space and cannot be exported, a warning is displayed to notify you.
  - When exporting a clip with color adjustments, the Output color space is now based on the Preview color space or External monitor color space to ensure the transcoded clip matches your preview.
  - When exporting a clip with color adjustments, the output format and transcoding presets are limited those supported by the selected Output color space.

- The Transcode Tools menu in the Export pane now allows you to load, save, and delete transcoding presets.

- Added support for mapping audio channels during transcoding.

- Added support for adding a watermark image during transcoding.

- Changed the Allow timecode in letterbox/pillarbox area check box to Allow burn in within letterbox/pillarbox area to allow the timecode and clip name to be burned into the letterbox/pillarbox area of transcoded files. When the check box is cleared, burned-in timecode and clip names will be limited to the source frame area.

- Saved transcoding settings are now applied when transcoding clips, EDLs, and storyboards or repairing flashbands.

- The Save settings switch in Transcode Tools is now on by default.
- Added support for expanding and collapsing the Favorite Folders, Devices, Recent, Bins, and Storyboards headings in Organize mode and in file-browse dialogs.
- Improved the accuracy of the remaining time estimate when copying clips.
- Improved clip numbering when using the Rename files check box in the Copy and Export panes: the clip number is now reset when you choose a different output destination or choose a different setting from the Numbering drop-down list.
- Improved performance when playing back some AVC clips (macOS only).
- Combined the Username/Email and Domain login methods when uploading to Sony Ci.

The Catalyst Prepare window

The Catalyst Prepare window can be displayed in two modes:

- In Organize mode, you can make a checksum-verified, full-volume backup; browse your computer for media files; copy media to your computer; add to your media libraries; organize library clips using bins; export clips to additional volumes or devices; upload to Sony Media Cloud Services Ci; and transcode files.
- In Edit mode, you can preview media, mark in and out points, and apply looks and color correction.

Click the Organize or Edit button at the top of the Catalyst Prepare window to change modes.

Media Browser mode
Edit mode

- Mode Selector
- Options
- Video Preview
- Media Browser
- Toolbar
Working with libraries

You can use libraries in Catalyst Prepare to organize your media.

Creating or opening a library

You can use different libraries to manage your media. A library helps you organize your clips, and you can use bins for even more control.

For example, creating a separate library for each project helps you keep your media organized and allows you to quickly find the right media for each project.

In Catalyst Prepare, you can have one library open at a time.

Creating a library

1. Click the Media Browser button at the top of the Catalyst Prepare window.

2. Click the Library button at the bottom of the Catalyst Prepare window and choose New from the menu.

3. Use the New Library dialog to choose the folder and file where you want to save your new library.

4. Click OK.

Opening a library

1. Click the Media Browser button at the top of the Catalyst Prepare window.

2. Click the Library button at the bottom of the Catalyst Prepare window and choose Open from the menu.

3. Browse to the library folder you want to load, select it, and click Open.

💡 You can also double-click a .cpreplib file in Windows Explorer or macOS Finder.
Closing the library

If you want to work with clips independently of a library, you can use the **Close** command. After you’ve closed the library, **(No Library)** is displayed in the application’s title bar.

⚠️ Some Catalyst Prepare features are unsupported without an open library:

- When no library is opened, color adjustments are applied globally to all clips for previewing. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see **“Transcoding clips” on page 24.**
  
  Color adjustments to clip lists or spanned clips are not available when a library is open.

- When no library is opened, Channel Assignment controls in the Inspector are not available. For more information, see **“Assigning audio channels” on page 82.**

- When no library is opened, storyboard support is not available. For more information, see **“Working with storyboards” on page 86.**

- When no library is opened, bin support is not available. For more information, see **“Adding bins to a library” on page 17.**

1. Click the **Media Browser** button at the top of the Catalyst Prepare window.

2. Click the **Library button** at the bottom of the Catalyst Prepare window and choose **Close** from the menu.

Adding media to a library

To add media to a Catalyst Prepare library, you can copy clips from folders or devices attached to your computer, or you can choose to add clips without copying them to your computer.

💡 To add a local folder to the library without copying clips, click the **Bin button** at the bottom of the Catalyst Prepare window in Organize mode, choose **Create from folder,** and browse to a folder on your computer. The folder and any clips in the folder are added to the current library.

When you edit a clip that is not included in the current library, the metadata is saved to the library without modifying the original clip. The clip is added to the Automatically Added bin. The following actions will add a clip to the Automatically Added bin in the current library:

- Changing in/out points.
- Adjusting color correction.
- Editing metadata.
- Editing audio channel assignments.

When browsing your clips, a badge is displayed in grid mode or list mode to identify clips that are included in the current library. Click the badge to display more information about the clip.

⚠️ Clip lists and spanned clips are not supported in Catalyst Prepare libraries.
Copying media from a device

Copying media allows you to import clips from cameras or decks to your computer, to another camera or deck, or to a centralized storage device.

1. Click the Media Browser button at the top of the Catalyst Prepare window.
   The Places pane on the left side of the Catalyst Prepare window displays a list of the decks, cameras, and card readers that are connected to your computer.

2. Click the Library button to choose the library where you want to add media (or create a new library).

3. Select a device in the Devices list to display its media.

4. Select the media clips you want to import.
   - Click a file to select it.
   - Hold Shift and click the first and last file you want to select to select a range of files.
   - Hold Ctrl (Windows) or Command (macOS) to select multiple files.
     - Click the Select button to select multiple files without using keyboard modifiers.

5. Click the Copy button at the top of the Catalyst Prepare window.
6. Use the Copy pane to choose a destination for your files.

a. Choose how you want to copy the selected clips:
   - Select **Copy clips to library** to copy the clips from your device to your computer and add them to the current library. The clips will be copied to a timestamped folder (YYYY-MM-DD hh.mm.ss) in the library (_cprelib) folder.
   - Select **Copy clips to custom destination** if you want to choose where to copy the clips when adding them to the current library. Click the **Browse** button to choose a folder, and select the **Create subfolder** check box if you want to copy the selected clips to a named or timestamped subfolder in the destination.

   The **Create subfolder** check box is not available when copying to a known folder structure.

b. Select the **Add to bin** check box and choose a bin from the drop-down list if you want to copy the clips to a bin in the selected library (or create a new bin). For more information, see “Organizing media in a library” on page 16.

   The **Add to bin** check box is not available when copying from a library.

c. If you want to rename files, select the **Rename files** check box. Renaming ensures that source files will not be overwritten.
   - Type a string in the **Prefix** box if you want to start all file names with the same text.
   - Choose a setting from the **Numbering** drop-down list to indicate whether you want to number clips or use their original file names.
   - Type a string in the **Suffix** box if you want to end all file names with the same text.

   For example, if you wanted to name clips using a convention such as **Commercial_001_Camera1.mxf**, you would type **Commercial_** in the **Prefix** box, choose **3 digits** from the **Numbering** drop-down list, and type **Camera1** in the **Suffix** box.

   If you’re exporting a still-image sequence for use in an editor that has specific file-naming requirements, you can use the **Rename files** controls to ensure your exported files are compliant with your editor’s requirements.

d. Select the **Copy all related media** check box if you want to copy all media related to the selected clips (metadata, proxy clips, and extra files).

e. Select the **Copy clips only** radio button if you want to copy only full-resolution clips.

f. Select the **Copy proxy only** radio button if you want to copy only proxy-resolution clips and all media related to the selected clips (metadata, proxy clips, and extra files).
g. Select the **Copy only between mark points** check box if you want to copy only the media between the in and out points. For more information, see “Marking in and out points for playback” on page 76.

💡 If you’ve logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the **Default transcode format** setting in Options. For more information, see “Marking in and out points for playback” on page 76 or “Editing Catalyst Prepare options” on page 119.

h. Select the **Copy with verification** check box if you want to use an MD5 checksum to verify clips as they are copied.

7. Click the **Copy** button to copy the selected clips and add them to your library.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window. Each copy job can contain multiple files if you have multiple files selected in step 2 above. If you have multiple jobs queued, a separate progress indicator is displayed for each job.

The imported clips will be available in Media Browser mode in the folder you selected above.

---

**Adding media from a device without copying**

If you want to include clips in your library without copying the files to your computer, you can drag them from the device to a library bin.

1. Click the **Media Browser** button at the top of the Catalyst Prepare window.

   The **Places** pane on the left side of the Catalyst Prepare window displays a list of the decks, cameras, and card readers that are connected to your computer. If the device you want to use is not displayed, click **Add source** and select the device.

2. Click the **Library** button to choose the library where you want to add media (or create a new library).

3. Select a device in the **Devices** list to display its media.

4. Select the media clips you want to add to the library.

   - Click a file to select it.
   - Hold Shift and click the first and last file you want to select to select a range of files.
   - Hold Ctrl (Windows) or Command (macOS) to select multiple files.

  💡 Click the **Select** button to select multiple files without using keyboard modifiers.

5. Drag the clips from the middle pane to a bin on the left side of the Catalyst Prepare window.

  💡 You can also drag clips from the Organize pane to a bin or storyboard in the Places pane.

   The device’s clips are added to the library and are identified with a badge when you browse your device in grid mode or list mode.
Organizing media in a library

Organize mode allows you to view the clips on your computer’s file system, attached devices, and libraries.

Select a folder in the Places pane to view the clips in a folder or device.

💡 To navigate quickly, click the File button at the bottom of the Media Browser and choose Go to location.

To add the current folder to the Favorite Folders list in the Places pane, click the File button at the bottom of the Media Browser and choose Add to Favorites.

To remove a folder from the Favorite Folders list, select the folder in the Places pane and click the X button:

Select a library bin or storyboard in the Current Library pane to view a library’s clips.

For more information, see “Adding media to a library” on page 12.

Choosing a library

1. Click the Organize button at the top of the Catalyst Prepare window.

2. The Places pane lists the current library. Click the Library button to choose a different library or create a new library.

   The library’s media is displayed in the right side of the Catalyst Prepare window.

💡 Click the button to toggle thumbnail and list mode.

For more information, see “Creating or opening a library” on page 11.
Adding bins to a library

Bins are virtual folders within libraries that you can use to organize your media files. Bins are saved with your library and do not affect the way media is saved on your computer.

Click the Bin button at the bottom of the Catalyst Prepare window and choose a command from the menu:

- Choose New to add a new bin to the library. You can use bins to organize media within a library.

- Choose Create from folder to quickly add a local folder to the library without copying clips. The folder and any clips in the folder are added to the current library.

💡 To create multiple bins quickly, select folders in the folder contents pane, right-click and choose Add selected folders as bins. A bin is created for each selected folder, and the folders’ clips are added to the current library.

Adding clips to a bin

1. Use the Media Browser to browse your computer for video files.
2. Drag a clip (or folder) from the Media Browser to a bin in the Bins list.

💡 To include a clip in more than one bin, drag it from the All Clips bin (or a local folder or device) to each bin where you want to include a link to the clip.

    You can also drag a clip from one bin to another to move it.

    You can also choose to add a clip to a bin when adding it to your library. For more information, see “Adding media to a library” on page 12.

⚠️ Clip lists or spanned clips cannot be added to bins.

Deleting bins from a library

1. Select a bin in the Bins list.
2. Click the Bin button at the bottom of the Catalyst Prepare window and choose Delete from the menu.

    You’re prompted with a confirmation dialog. If you also want to delete the source files from your computer, select the check box.
3. Click Delete.

💡 If a folder or media file is moved or deleted outside of Catalyst Prepare, it is displayed with the following icon: ⚠️
Renaming bins
1. Select a bin in the Bins list.
2. Click the Bin button at the bottom of the Catalyst Prepare window and choose Rename from the menu.
3. Type a new name in the box and click OK.

Cleaning a bin
1. Select a bin in the Bins list.
2. Click the Bin button at the bottom of the Catalyst Prepare window and choose Clean. The Clean dialog is displayed.
3. Select the check box for each type of clip you'd like to remove from the selected bin:
   - Delete items older than X days: Removes clips that were added to the library before the number of days you specify.
   - Delete items that can no longer be found: Removes clips that are no longer available on disk or are on disks that are not connected.

The dialog displays a list of clips that will be removed from the selected bin.
4. Click OK.

Exporting a library's bins as folders
1. Click the Organize button at the top of the Catalyst Prepare window.
2. The Places pane lists the current library. Click the Library button to choose a different library or create a new library.
   The library's media is displayed in the right side of the Catalyst Prepare window.
   - Click the button to toggle thumbnail and list mode.
3. Click the Library button and choose Export bins as folders.
4. Choose the folder where you want to export your library’s bins, and then click OK.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window.

💡 The exported folders are named to match the library’s bin names.

Only the portion of the video between the mark in and mark out points will be copied. For more information, see “Marking in and out points for playback” on page 76.

If you’ve logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the Default transcode format setting in Options. For more information, see “Marking in and out points for playback” on page 76 or “Editing Catalyst Prepare options” on page 119.

Exporting a library’s bins to Premiere

1. Click the Organize button at the top of the Catalyst Prepare window.

2. The Places pane lists the current library. Click the Library button to choose a different library or create a new library.

   The library’s media is displayed in the right side of the Catalyst Prepare window.

💡 Click the button to toggle thumbnail and list mode.

3. Click the Library button and choose Export bins to Premiere.

4. Choose the folder where you want to create a new Premiere Pro project containing your library’s bins and clips, and then click OK.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window.

💡 The exported folders are named to match the library’s bin names.

Only the portion of the video between the mark in and mark out points will be copied. For more information, see “Marking in and out points for playback” on page 76.

If you’ve logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the Default transcode format setting in Options. For more information, see “Marking in and out points for playback” on page 76 or “Editing Catalyst Prepare options” on page 119.
Exporting a library’s bins to Final Cut Pro X

1. Click the Organize button at the top of the Catalyst Prepare window.

2. The Places pane lists the current library. Click the Library button to choose a different library or create a new library.

   The library’s media is displayed in the right side of the Catalyst Prepare window.

   ![Click the button to toggle thumbnail and list mode.]

3. Click the Library button and choose Export bins to Final Cut Pro X.

4. Choose the folder where you want to create a new Final Cut Pro X project containing your library’s bins and clips, and then click OK.

   Progress is displayed in the activity pane at the top of the Catalyst Prepare window.

   ![The exported folders are named to match the library’s bin names.]

   Only the portion of the video between the mark in and mark out points will be copied. For more information, see “Marking in and out points for playback” on page 76.

   If you’ve logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the Default transcoding format setting in Options. For more information, see “Marking in and out points for playback” on page 76 or “Editing Catalyst Prepare options” on page 119.

Working with storyboards

You can create and edit storyboards to create a video project that is comprised of multiple, shorter video clips.

For more information, see “Working with storyboards” on page 86.

Moving clips between bins

When you’re using bins to organize your library, you can easily move clips between bins.

1. In the Places pane on the left side of the Catalyst Prepare window, select the bin that contains the clips you want to move.

2. Select the clips you want to move in the Media Browser.

3. Click the Move button at the bottom of the Media Browser.

4. Choose your destination folder from the Move clip to bin drop-down list.
5. Click the **Move** button.

   You can also drag a clip from one bin to another to move it.

   To include a clip in more than one bin, drag it from the All Clips bin (or a local folder or device) to each bin where you want to include a link to the clip.

**Renaming clips**

Renaming a library clip allows you to edit the name that is displayed in your Catalyst Prepare library. Renaming a clip does not rename the source media file on the disk.

   If you want to rename a file on disk, browse to a device or local folder in the Places pane, and select a clip. Click the **File** button at the bottom of the Media Browser, choose **Rename**, and type a new name in the edit box. The file and all instances of the file in your library are updated.

1. Select a clip in the Media Browser.

2. Click the **Clip** button at the bottom of the Media Browser, choose **Rename**, and type a new name in the edit box.

**Removing clips from a library (or bin)**

1. Select a clip in the Media Browser.

2. Click the **Clip** button at the bottom of the Catalyst Prepare window and choose **Remove** from the menu.

   The Remove Clips dialog is displayed to allow you to choose to remove the selected clip only or all clips that use the source media.

   If you want to remove all clips that use the source media, you can select the **Also delete the associated source file from disk** check box to delete the source file from disk. Selecting this check box automatically selects the **Also remove the clip from other bins** check box.

   If you want to remove the clip from all bins without deleting the source clip, select only the **Also remove the clip from other bins** check box.

   If a folder or media file is moved or deleted outside of Catalyst Prepare, it is displayed with the following icon: 🔴
Consolidating a library
Consolidating a library gathers all the library's clips to a single folder. When you consolidate a library, clips are copied to the new destination folder; the original clips are not moved.

1. Click the Organize button at the top of the Catalyst Prepare window.

2. In the Places pane, click the Library button and choose Consolidate from the menu.
   
   If any of the library's clips cannot be found, you'll be prompted to relink the library clips. For more information, see “Relinking library media” on page 51.

3. Click OK to start copying media.

Saving and renaming a library (Save As)
You can use Save As to create a copy of the current library with a new name or to a different folder.

1. Click the Organize button at the top of the Catalyst Prepare window.

2. In the Places pane, click the Library button and choose Save As from the menu.

3. Choose the folder where you want to save the library.

4. Select the Consolidate media with new library check box if you want to copy clips to a subfolder in the destination folder. You can choose to copy the selected clips to a named or timestamped subfolder in the destination.

5. Click OK to start copying media.

Showing source clips

1. Select a file.

2. Click the Clip button at the bottom of the Media Browser and choose Show in Finder (macOS) or Show in Explorer (Windows) to view the source clip in its containing folder.

Editing library clips

In Edit mode, you can preview media, log mark in and out points, and apply looks and color correction.

1. Click the Media Browser button at the top of the Catalyst Prepare window.

2. Select the clip you want to edit.

   The left pane allows you to navigate the folders in your library, and the middle pane displays the contents of the selected folder.
3. Click the Edit button at the top of the Catalyst Prepare window to open the selected clip in Edit mode.

💡 You can also double-click a clip in Media Browser mode to open it in Edit mode.

In Edit mode, the left pane allows you to browse the file system or the library's clips; the center pane allows you to preview the file, log mark in and mark out points, and apply color correction; and the right pane allows you to view and edit metadata for the selected file in the Inspector.

- For more information about previewing media, please see “Previewing video” on page 72.
- For more information about logging mark in and out points, please see “Marking in and out points for playback” on page 76.
- For more information about applying color correction, please see “Applying color correction” on page 95.
- For more information about using the Inspector, please see “Viewing and editing metadata” on page 81.

**Working with subclips in a library**

A subclip is a library reference to a clip. You might create a subclip that uses different color correction than the source media or that uses different mark in and mark out points.

Subclips save disk space when transferring media to the NLE: you can transcode only material of interest and apply a meaningful name to simplify the editing stage.

When you view your library in Organize mode, subclips are labeled with the original clip name and a number — MainClip - Subclip 1, MainClip - Subclip 2, and so on — or you can provide your own name.

**Creating subclips**

1. Click the Media Browser button at the top of the Catalyst Prepare window.
2. Double-click a clip to open it in Edit mode.
3. Use the Mark In and Mark Out buttons to adjust the length of your subclip. For more information, see “Marking in and out points for playback” on page 76.
4. Click the Create Subclip button. The Subclip Name dialog is displayed.

   The subclip is created using the base name of the original clip. Edit the clip name if needed and click OK to add the subclip to your library.

   ![The Create Subclip button is displayed under a Log button](image)

**Deleting subclips**

1. Click the Media Browser button at the top of the Catalyst Prepare window.
2. Select the subclip you want to delete.
3. Click the Clip button at the bottom of the Media Browser and choose Remove.

The Remove Clips dialog is displayed to allow you to choose to remove the selected clip only or all clips that use the source media.

If you choose to remove all clips that use the source media, you can select the Also delete the associated source file from disk check box to delete the source file from disk.

Exporting media from a library

Catalyst Prepare provides you with several methods to transcode and share clips from your library.

Transcoding clips

Transcoding clips allows you to convert clips to another format. The original clips are not affected (overwritten, deleted, or altered) during the exporting process.

1. Select the clips you want to export in Media Browser or Edit mode.

   The left pane allows you to navigate the folders in your library, and the middle pane displays the contents of the selected folder
   - Click a file to select it.
   - Hold Shift and click the first and last file you want to select to select a range of files.
   - Hold Ctrl (Windows) or ⌘ (macOS) to select multiple files.
   - Click the Select button to select multiple files without using keyboard modifiers.

2. Click the Export button at the top of the Catalyst Prepare window.
3. Use the Export pane to choose a destination and format for your exported files.
   
a. The Export clips to box displays the path to the folder where the selected files will be exported. You can type a path in the box or click the Browse button to choose a folder.

b. If you want to rename files, select the Rename files check box. Renaming ensures that source files will not be overwritten.
   
   - Type a string in the Prefix box if you want to start all file names with the same text.
   - Choose a setting from the Numbering drop-down list to indicate whether you want to number clips or use their original file names.
   - Type a string in the Suffix box if you want to end all file names with the same text.

   For example, if you wanted to name clips using a convention such as `Commercial_001_Camera1.mxf`, you would type `Commercial_` in the Prefix box, choose 3 digits from the Numbering drop-down list, and type `_Camera1` in the Suffix box.

   If you’re exporting a still-image sequence for use in an editor that has specific file-naming requirements, you can use the Rename files controls to ensure your exported files are compliant with your editor’s requirements.

   
c. If you want to use a transcode preset to choose the settings for your exported files, choose a setting from the Transcode preset drop-down list, and then click Export.

   If you want to choose custom transcoding settings, choose Custom from the Transcode preset drop-down list and continue to step c.

   For more information, see “Transcoding presets” on page 49.

   - High-quality upscaling is applied during transcoding when you choose an HD or UHD render preset.
   - Please note that some systems with limited GPU memory are not supported.
d. When exporting to a video format, choose a setting from the **Color adjustments** drop-down list to choose whether your exported files will include any color adjustments.

- **None**: No color adjustments are included in the exported files. If you’ve applied color space conversion, the conversion is preserved in the exported file. For more information, see “Converting between HDR/wide color gamut color spaces” on page 99.

- **Source settings only**: Only adjustments from the Color Space and Source Settings headings in the Inspector in the Adjust Color workspace are included in the exported files.

  ![Source settings only] is available only when transcoding available when transcoding RAW, X-OCN, or S-Gamut media.

- **All**: All color adjustments from the Adjust Color workspace are included in the exported files.

For more information, see “Editing Color Adjustments controls” on page 95.

e. When exporting to a video format, choose a setting from the **Output color space** drop-down list to choose the color space that will be used for rendering the new files.

- If you selected **All** in the **Color Adjustments** drop-down, you can choose **Same as preview** or **Same as external monitor** (if an external monitor is enabled) to match the output color space to your video preview or external monitor setting.

  For more information, see “Choosing a color space for the video preview and external monitor” on page 121.

  ![If the selected output color space is not compatible with the source color space, a warning is displayed to notify you that the clip cannot be exported using the current settings.](image)

- If you selected **Source settings only** or **None** in the **Color Adjustments** drop-down, you can choose a specific output color space when transcoding S-Gamut, RAW, and X-OCN source clips.

f. Choose a setting from the **Format** drop-down list to indicate the file format you want to use for your exported files.

- **Format** settings that are not supported by the selected **Output color space** will not be available.

- When transcoding to DPX format, you can type a value in the **Starting frame index** box to append a numeric index to transcoded file names.

  ![OpenEXR is available only for S-Gamut, RAW, or X-OCN sources when Color adjustments is set to None or Source settings only, and Output color space is set to ACES, Rec.2020/Linear, S-Gamut/Linear or S-Gamut3/Linear.](image)

  ![ProRes is available on macOS only.](image)
g. Choose a setting from the **Render preset** drop-down list to choose the settings that will be used for the exported files.

- Choose the **Best match** preset if you want Catalyst Prepare to choose the most appropriate preset for each selected clip.

- **Render preset** settings that are not supported by the selected **Output color space** and **Format** will not be available.

h. Select the **Create Sony Professional Disc partitions** check box if you want to create a file with multiple body partitions. When the check box is cleared, the file will use a single body partition.

- This check box is available only when **XAVC Intra**, **XAVC Long**, or **XDCAM** is selected in the **Format** drop-down list.

- Files created with multiple body partitions may not be recognized properly by some Sony camcorders, decks, or servers.

i. Choose a setting from the **Crop type** drop-down list to choose the aspect ratio for your transcoded file:

- **Letterbox/pillarbox**: if the source frame is wider than the destination frame, black bars are displayed at the top and bottom (letterbox). If the source frame is narrower than the destination frame, black bars are displayed on the sides of the frame (pillarbox).

- **Center crop (cut edges)**: if the source frame does not match the output frame, the frame is centered, and the edges are cropped as needed.

- **Cinemascope**: crops the frame to a 2.39:1 cinemascope aspect.

j. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.

k. Choose a setting from the **Audio channels** drop-down to choose how audio will be rendered in the output file:

- **Same as source**: the rendered file will contain the same number of audio channels as the source clip.

- **Map audio channels**: you can choose how audio channels from the source clip will be mapped to audio channels in the rendered file.

  Each channel in the rendered file will be displayed with a drop-down list so you can choose which source channel should be rendered to that channel.
I. Select the **Burn in timecode** check box if you want to include timecode in the transoded video.

Click the position control below the check box to indicate where timecode will be positioned in the frame.

The transcoded file will include the source clip’s timecode. If you’re transcoding a storyboard, each clip will display its source timecode.

m. Select the **Burn in clip name** check box if you want to include the clip name in the transcoded video.

Click the position control below the check box to indicate where the clip name will be positioned in the frame.

If you rename a clip, the custom name will be displayed. For more information, see “Renaming clips” on page 21.

If you’re transcoding a storyboard, each clip will display its source clip name.

n. If the **Burn in timecode** and/or **Burn in clip name** check boxes are selected, you can select the **Allow burn in within letterbox/pillarbox area** check box if your output format will include letterboxing or pillarboxing and you want to allow the timecode/clip name to be placed in the letterbox/pillarbox area.

When the check box is cleared, the timecode/clip name will be limited to the source frame area.

o. Select the **Add watermark** check box if you want to include a watermark image in the transcoded video.

Click **Browse** to choose a JPEG or PNG image file.

Drag the **Opacity** slider to set the transparency/opacity of the watermark image.

Click the position control below the **Opacity** slider to indicate where the watermark image will be positioned in the frame:

- If you need to render multiple frame sizes, create a full-frame transparent PNG using the dimensions of your largest target frame size, and the watermark image will be scaled as needed for the smaller frame sizes.

- If your watermark image is smaller than the target frame size, no scaling is applied and the image will be anchored at the selected position control.

p. Select the **Use flip and stretch settings** check box if you’re working with video that was filmed with an anamorphic lens and want to preserve the **Flip horizontal**, **Flip vertical**, and **Anamorphic desqueeze** settings when transcoding. When the check box is not selected, letterboxing will be applied.

For more information, see “Editing clip settings” on page 80.

q. Select the **Repair flash bands automatically** check box if want to automatically detect and repair flash bands when transcoding.

For more information, see “Repairing flash bands” on page 93.
r. Select the **Use mark in/out points** check box if you want to transcode only the portion of the video between the mark in and mark out points. For more information, see “Marking in and out points for playback” on page 76.

s. Select the **Add padding to clips** check box and type a number in the **Seconds** box if you want to preserve media before the mark in/mark out points.

t. Select the **Transcode using proxy source clip** check box if you want to use the proxy as the source clip when transcoding. When you're transcoding a lower-resolution clip, using the proxy as your source media is faster.

u. Select the **Override start timecode** check box and type a number in the edit box to specify the starting timecode for your transcoded clip. When the check box is cleared, the clip's timecode is used.

⚠️ The **Override start timecode** check box is available when transcoding MXF clips to DNxHD, SStP, XAVC-I, XAVC-L, and XDCAM formats.

💡 If you want to save your transcoding settings, click the **Transcode Tools** button in the Transcode Settings heading.

- Select the **Save settings** switch to use the current settings the next time you transcode a clip.
- Click **Reset settings** to return all transcoding settings to their default values.

4. Click **Export**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window. Each export job can contain multiple files if you have multiple files selected in step 2 above. If you have multiple export jobs queued, a separate progress indicator is displayed for each job.

### Copying clips to a device

Copying clips allows you to copy clips (or clip lists) from your library to another location. The original clip name and format are preserved if possible, and color correction is not applied to the copied clips.

💡 You can drag a clip to a folder on a drive or device in the Places pane to copy the entire clip (with no transcoding, color correction, or renaming).

1. Select the clips you want to copy in Media Browser or Edit mode.

The left pane allows you to navigate the folders in your library, and the middle pane displays the contents of the selected folder

- Click a file to select it.
- Hold Shift and click the first and last file you want to select to select a range of files.
Hold Ctrl (Windows) or ⌘ (macOS) to select multiple files.

💡 Click the **Select** button to select multiple files without using keyboard modifiers.

2. Click the **Copy** button at the top of the Catalyst Prepare window.
3. Use the Copy pane to choose a destination for your files.
   
a. The Copy clips to box displays the path to the folder where the selected files will be copied. You can type a path in the box or click the Browse button to choose a folder.

b. Select the Create subfolder check box if you want to copy the selected clips to a subfolder in the destination.
   
   ○ If you want to name the subfolder based on the date and time you copied the files, choose Time stamped from the drop-down list.
   
   ○ If you want to name the subfolder yourself, choose Custom folder name from the drop-down list and type a name in the box.

   ! The Create subfolder check box is not available when copying to a known folder structure.

c. If you want to rename files, select the Rename files check box. Renaming ensures that source files will not be overwritten.
   
   ○ Type a string in the Prefix box if you want to start all file names with the same text.
   
   ○ Choose a setting from the Numbering drop-down list to indicate whether you want to number clips or use their original file names.
   
   ○ Type a string in the Suffix box if you want to end all file names with the same text.

   For example, if you wanted to name clips using a convention such as Commercial_001_Camera1.mxf, you would type Commercial_ in the Prefix box, choose 3 digits from the Numbering drop-down list, and type _Camera1 in the Suffix box.

  💡 If you’re exporting a still-image sequence for use in an editor that has specific file-naming requirements, you can use the Rename files controls to ensure your exported files are compliant with your editor’s requirements.

d. Select the Copy all related media radio button if you want to copy all media related to the selected clips (metadata.proxy clips, and extra files).

e. Select the Copy clips only radio button if you want to copy only full-resolution clips.

f. Select the Copy proxy only radio button if you want to copy only proxy-resolution clips and all media related to the selected clips (metadata.proxy clips, and extra files).

💡 When you edit the metadata for a proxy file, the metadata for the full-resolution clip is updated when you copy the proxy clip back to the device. For more information, see “Viewing and editing metadata” on page 81.
g. Select the **Copy only between mark points** check box if you want to copy only the media between the in and out points when copying files. For more information, see “Marking in and out points for playback” on page 76.

💡 If you’ve logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the **Default transcode format** setting in Options. For more information, see “Marking in and out points for playback” on page 76 or “Editing Catalyst Prepare options” on page 119.

h. Select the **Use fast device-to-device copy** check box if you want to copy clips directly between an XDCAM device and another device via FTP.

When this check box is selected, clips are copied directly between the devices without copying to your computer.

⚠️ **Device access is not available during a fast device-to-device copy:**

- Copy progress is not displayed.
- Device-to-device copy operations cannot be canceled.

i. Select the **Copy with verification** check box if you want to use an MDS checksum to verify clips as they are copied.

j. Select the **Override start timecode** check box and type a number in the edit box to specify the starting timecode for your transcoded clip. When the check box is cleared, the clip’s timecode is used.

⚠️ The **Override start timecode** check box is available when copying MXF clips.

4. Click **Copy**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window. Each copy job can contain multiple files if you have multiple files selected in step 2 above. If you have multiple jobs queued, a separate progress indicator is displayed for each job.

### Rendering a storyboard as separate files

You can convert a storyboard’s clips to another format. A separate file is created for each clip, and the original clips are not affected (overwritten, deleted, or altered) during the exporting process.

1. Click a storyboard in the Storyboards section of the left pane.
2. Select the clips you want to export.
3. Click the **Export** button at the top of the Catalyst Prepare window.
4. Use the Export pane to choose a destination and format for your exported files.

   a. Select the Render clips as separate files radio button.

   b. The Export clips to box displays the path to the folder where the selected files will be exported. You can type a path in the box or click the Browse button to choose a folder.

   c. If you want to rename files, select the Rename files check box. Renaming ensures that source files will not be overwritten.

      - Type a string in the Prefix box if you want to start all file names with the same text.

      - Choose a setting from the Numbering drop-down list to indicate whether you want to number clips or use their original file names.

      - Type a string in the Suffix box if you want to end all file names with the same text.

         For example, if you wanted to name clips using a convention such as Commercial_001_Cameral.mxf, you would type Commercial_ in the Prefix box, choose 3 digits from the Numbering drop-down list, and type _Cameral in the Suffix box.

        💡 If you’re exporting a still-image sequence for use in an editor that has specific file-naming requirements, you can use the Rename files controls to ensure your exported files are compliant with your editor’s requirements.

   d. If you want to use a transcode preset to choose the settings for your exported files, choose a setting from the Transcode preset drop-down list, and then click Export.

      If you want to choose custom transcoding settings, choose Custom from the Transcode preset drop-down list and continue to step c.

      For more information, see “Transcoding presets” on page 49.

        💡 When you select a video processing device other than your CPU in the application settings dialog, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets. For more information, see “Choosing a video processing device” on page 119.

         - High-quality upscaling is applied during transcoding when you choose an HD or UHD render preset.

         - Please note that some systems with limited GPU memory are not supported.
e. When exporting to a video format, choose a setting from the Color adjustments drop-down list to choose whether your exported files will include any color adjustments.
   - **None**: No color adjustments are included in the exported files. If you’ve applied color space conversion, the conversion is preserved in the exported file. For more information, see “Converting between HDR/wide color gamut color spaces” on page 99.
   - **Source settings only**: Only adjustments from the Color Space and Source Settings headings in the Inspector in the Adjust Color workspace are included in the exported files.
     - **Source settings only** is available only when transcoding available when transcoding RAW, X-OCN, or S-Gamut media.
   - **All**: All color adjustments from the Adjust Color workspace are included in the exported files.
   
   For more information, see “Editing Color Adjustments controls” on page 95.

f. When exporting to a video format, choose a setting from the Output color space drop-down list to choose the color space that will be used for rendering the new files.
   - If you selected **All** in the Color Adjustments drop-down, you can choose Same as preview or Same as external monitor (if an external monitor is enabled) to match the output color space to your video preview or external monitor setting.
   
   For more information, see “Choosing a color space for the video preview and external monitor” on page 121.
   - If the selected output color space is not compatible with the source color space, a warning is displayed to notify you that the clip cannot be exported using the current settings.
   - If you selected **Source settings only** or **None** in the Color Adjustments drop-down, you can choose a specific output color space when transcoding S-Gamut, RAW, and X-OCN source clips.

g. Choose a setting from the Format drop-down list to indicate the file format you want to use for your exported files.
   - Format settings that are not supported by the selected Output color space will not be available.
   - When transcoding to DPX format, you can type a value in the Starting frame index box to append a numeric index to transcoded file names.
     - **OpenEXR** is available only for S-Gamut, RAW, or X-OCN sources when Color adjustments is set to **None** or **Source settings only**, and Output color space is set to ACES, Rec.2020/Linear, S-Gamut/Linear or S-Gamut3/Linear.
     - **ProRes** is available on macOS only.
h. Choose a setting from the **Render preset** drop-down list to choose the settings that will be used for the exported files.

💡 Choose the **Best match** preset if you want Catalyst Prepare to choose the most appropriate preset for each clip in the storyboard.

🔍 **Render preset** settings that are not supported by the selected **Output color space** and **Format** will not be available.

i. Select the **Create Sony Professional Disc partitions** check box if you want to create a file with multiple body partitions. When the check box is cleared, the file will use a single body partition.

💡 This check box is available only when **XAVC Intra**, **XAVC Long**, or **XDCAM** is selected in the **Format** drop-down list.

⚠️ Files created with multiple body partitions may not be recognized properly by some Sony camcorders, decks, or servers.

j. Choose a setting from the **Crop type** drop-down list to choose the aspect ratio for your transcoded file:

- **Letterbox/pillarbox**: if the source frame is wider than the destination frame, black bars are displayed at the top and bottom (letterbox). If the source frame is narrower than the destination frame, black bars are displayed on the sides of the frame (pillarbox).
- **Center crop (cut edges)**: if the source frame does not match the output frame, the frame is centered, and the edges are cropped as needed.
- **Cinemascope**: crops the frame to a 2.39:1 cinemascope aspect.

k. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.

l. Choose a setting from the **Audio channels** drop-down to choose how audio will be rendered in the output file.

- **Same as source**: the rendered file will contain the same number of audio channels as the source clip.
- **Map audio channels**: you can choose how audio channels from the source clip will be mapped to audio channels in the rendered file.

  Each channel in the rendered file will be displayed with a drop-down list so you can choose which source channel should be rendered to that channel.
m. Select the **Burn in timecode** check box if you want to include timecode in the transcoded video.

   Click the position control below the check box to indicate where timecode will be positioned in the frame.

   The transcoded file will include the source clip's timecode. If you're transcoding a storyboard, each clip will display its source timecode.

n. Select the **Burn in clip name** check box if you want to include the clip name in the transcoded video.

   Click the position control below the check box to indicate where the clip name will be positioned in the frame.

   If you rename a clip, the custom name will be displayed. For more information, see "Renaming clips" on page 21.

   If you're transcoding a storyboard, each clip will display its source clip name.

o. If the **Burn in timecode** and/or **Burn in clip name** check boxes are selected, you can select the **Allow burn in within letterbox/pillarbox area** check box if your output format will include letterboxing or pillarboxing and you want to allow the timecode/clip name to be placed in the letterbox/pillarbox area.

   When the check box is cleared, the timecode/clip name will be limited to the source frame area.

p. Select the **Add watermark** check box if you want to include a watermark image in the transcoded video.

   Click **Browse** to choose a JPEG or PNG image file.

   Drag the **Opacity** slider to set the transparency/opacity of the watermark image.

   Click the position control below the **Opacity** slider to indicate where the watermark image will be positioned in the frame:

   - If you need to render multiple frame sizes, create a full-frame transparent PNG using the dimensions of your largest target frame size, and the watermark image will be scaled as needed for the smaller frame sizes.

   - If your watermark image is smaller than the target frame size, no scaling is applied and the image will be anchored at the selected position control.

q. Select the **Use flip and stretch settings** check box if you're working with video that was filmed with an anamorphic lens and want to preserve the **Flip horizontal**, **Flip vertical**, and **Anamorphic desqueeze** settings when transcoding. When the check box is not selected, letterboxing will be applied.

   For more information, see "Editing clip settings" on page 80.

r. Select the **Repair flash bands automatically** check box if you want to automatically detect and repair flash bands when transcoding.

   For more information, see "Repairing flash bands" on page 93.
s. Select the **Use mark in/out points** check box if you want to transcode only the portion of the video between the mark in and mark out points. For more information, see “Marking in and out points for playback” on page 76.

t. Select the **Transcode using proxy source clip** check box if you want to use the proxy as the source clip when transcoding. When you’re transcoding a lower-resolution clip, using the proxy as your source media is faster.

u. Select the **Override start timecode** check box and type a number in the edit box to specify the starting timecode for your transcoded clip. When the check box is cleared, the timecode from the storyboard clips is used.

5. Click **Export**.

   Progress is displayed in the activity pane at the top of the Catalyst Prepare window. Each export job can contain multiple files if you have multiple files selected in step 2 above. If you have multiple export jobs queued, a separate progress indicator is displayed for each job.

**Rendering a storyboard as a single clip**

In addition to exporting individual storyboard clips, you can convert a storyboard to a single media file. The original clips are not affected (overwritten, deleted, or altered) during the exporting process.

1. Click a storyboard in the Storyboards section of the left pane.

2. Click the **Export** button at the top of the Catalyst Prepare window.
3. Use the Export pane to choose a destination and format for your exported file.

a. Select the **Render storyboard as single file** radio button.

b. The **Export selected storyboard to** box displays the path to the folder where the selected file will be exported. You can type a path in the box or click the **Browse** button to choose a folder.

c. Type a name in the **File name** box to set the file name that will be used for your rendered file.

d. If you want to use a transcode preset to choose the settings for your exported files, choose a setting from the **Transcode preset** drop-down list, and then click **Export**.

If you want to choose custom transcoding settings, choose **Custom** from the **Transcode preset** drop-down list and continue to step c.

For more information, see “Transcoding presets” on page 49.

💡 When you select a video processing device other than your CPU in the application settings dialog, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets. For more information, see “Choosing a video processing device” on page 119.

- High-quality upscaling is applied during transcoding when you choose an HD or UHD render preset.
- Please note that some systems with limited GPU memory are not supported.

e. Choose a setting from the **Include** drop-down list to choose whether your exported files will include any color adjustments.

- **No color adjustments**: No color adjustments are included in the exported files. If you've applied color space conversion, the conversion is preserved in the exported file. For more information, see “Converting between HDR/wide color gamut color spaces” on page 99.

- **Input settings only**: Only adjustments from the Color Space and Source Settings headings in the Inspector in the Adjust Color workspace are included in the exported files.

- **All color settings**: All color adjustments from the Adjust Color workspace are included in the exported files.

For more information, see “Editing Color Adjustments controls” on page 95.
f. When exporting to a video format, choose a setting from the Output color space drop-down list to choose the color space that will be used for rendering the new files.
   - If you selected All in the Color Adjustments drop-down, you can choose Same as preview or Same as external monitor (if an external monitor is enabled) to match the output color space to your video preview or external monitor setting.

   For more information, see “Choosing a color space for the video preview and external monitor” on page 121.

   If the selected output color space is not compatible with the source color space, a warning is displayed to notify you that the clip cannot be exported using the current settings.
   - If you selected Source settings only or None in the Color Adjustments drop-down, you can choose a specific output color space when transcoding S-Gamut, RAW, and X-OCN source clips.

g. Choose a setting from the Format drop-down list to indicate the file format you want to use for your exported file.

   Format settings that are not supported by the selected Output color space will not be available.

   When transcoding to DPX format, you can type a value in the Starting frame index box to append a numeric index to transcoded file names.

   OpenEXR is available only for S-Gamut, RAW, or X-OCN sources when Color adjustments is set to None or Source settings only, and Output color space is set to ACES, Rec.2020/Linear, S-Gamut/Linear or S-Gamut3/Linear.

   ProRes is available on macOS only.

h. Choose a setting from the Render preset drop-down list to choose the settings that will be used for the exported file.

   Choose the Best match preset if you want Catalyst Prepare to choose the most appropriate preset based on the first clip in the storyboard.

   Render preset settings that are not supported by the selected Output color space and Format will not be available.

i. Select the Create Sony Professional Disc partitions check box if you want to create a file with multiple body partitions. When the check box is cleared, the file will use a single body partition.

   This check box is available only when XAVC Intra, XAVC Long, or XDCAM is selected in the Format drop-down list.

   Files created with multiple body partitions may not be recognized properly by some Sony camcorders, decks, or servers.
j. Choose a setting from the **Crop type** drop-down list to choose the aspect ratio for your transcoded file:
   - **Letterbox/pillarbox**: if the source frame is wider than the destination frame, black bars are displayed at the top and bottom (letterbox). If the source frame is narrower than the destination frame, black bars are displayed on the sides of the frame (pillarbox).
   - **Center crop (cut edges)**: if the source frame does not match the output frame, the frame is centered, and the edges are cropped as needed.
   - **Cinemascope**: crops the frame to a 2.39:1 cinemascope aspect.

k. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.

l. Choose a setting from the **Audio channels** drop-down to choose how audio will be rendered in the output file:
   - **Same as source**: the rendered file will contain the same number of audio channels as the source clip.
   - **Map audio channels**: you can choose how audio channels from the source clip will be mapped to audio channels in the rendered file.

   Each channel in the rendered file will be displayed with a drop-down list so you can choose which source channel should be rendered to that channel.

m. Select the **Burn in timecode** check box if you want to include timecode in the transcoded video.

   Click the position control below the check box to indicate where timecode will be positioned in the frame.

   The transcoded file will include the source clip’s timecode. If you’re transcoding a storyboard, each clip will display its source timecode.

n. Select the **Burn in clip name** check box if you want to include the clip name in the transcoded video.

   Click the position control below the check box to indicate where the clip name will be positioned in the frame.

   If you rename a clip, the custom name will be displayed. For more information, see “Renaming clips” on page 21.

   If you’re transcoding a storyboard, each clip will display its source clip name.

o. If the **Burn in timecode** and/or **Burn in clip name** check boxes are selected, you can select the **Allow burn in within letterbox/pillarbox area** check box if your output format will include letterboxing or pillarboxing and you want to allow the timecode/clip name to be placed in the letterbox/pillarbox area.

   When the check box is cleared, the timecode/clip name will be limited to the source frame area.
p. Select the **Add watermark** check box if you want to include a watermark image in the transcoded video.

Click **Browse** to choose a JPEG or PNG image file.

Drag the **Opacity** slider to set the transparency/opacity of the watermark image.

Click the position control below the **Opacity** slider to indicate where the watermark image will be positioned in the frame:

- If you need to render multiple frame sizes, create a full-frame transparent PNG using the dimensions of your largest target frame size, and the watermark image will be scaled as needed for the smaller frame sizes.
- If your watermark image is smaller than the target frame size, no scaling is applied and the image will be anchored at the selected position control.

q. Select the **Use flip and stretch settings** check box if you’re working with video that was filmed with an anamorphic lens and want to preserve the **Flip horizontal**, **Flip vertical**, and **Anamorphic desqueeze** settings when transcoding. When the check box is not selected, letterboxing will be applied.

For more information, see “**Editing clip settings**” on page 80.

r. Select the **Repair flash bands automatically** check box if want to automatically detect and repair flash bands when transcoding.

For more information, see “**Repairing flash bands**” on page 93.

s. Select the **Use mark in/out points** check box if you want to transcode only the portion of the video between the mark in and mark out points. For more information, see “**Marking in and out points for playback**” on page 76.

t. Select the **Transcode using proxy source clip** check box if you want to use the proxy as the source clip when transcoding. When you’re transcoding a lower-resolution clip, using the proxy as your source media is faster.

4. Click **Export**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window. If you have multiple export jobs queued, a separate progress indicator is displayed for each job.

**Exporting a storyboard to another editor**

You can convert a storyboard to a project that you can edit in a video editor.

1. Click a storyboard in the Storyboards section of the left pane.

2. Click the **Export** button at the top of the Catalyst Prepare window.
3. Use the Export pane to choose a destination and format for your exported files.
   
a. Select the Export storyboard as project radio button.
   
b. Choose an export format from the Project format drop-down list:
      - Apple Final Cut Pro X (*.fcpxml)
      - Adobe Premiere (*.prproj)
      - Avid Media Composer (*.aaf)
      - Vegas Pro EDL (*.txt)
   
c. Choose a setting from the Media format drop-down list if you want to transcode the storyboard’s media to another format when exporting. If you want to link to the original clips in the original locations, choose Do not transcode.
   
d. The Destination folder box displays the path to the folder where the project will be exported. You can type a path in the box or click the Browse button to choose a folder.
   
e. Type a name in the File name box to set the file name that will be used for your exported project file.
   
f. Click Export.

   Progress is displayed in the activity pane at the top of the Catalyst Prepare window. If you have multiple export jobs queued, a separate progress indicator is displayed for each job.

   An HTML report file is created in the same folder as the exported project with details about the export. Any warnings or errors will be displayed in the report.

Uploading files to Ci Workspace

1. Select the files you want to upload in Media Browser or Edit mode.
2. Click the Share button at the top of the Catalyst Prepare window.
3. From the Upload clip to drop-down list, choose Sony Ci.
4. Use the Share pane to log on to your Ci account and follow the on-screen instructions to upload the selected files to your Ci workspace.

   Choose a setting from the Login method drop-down list to choose whether you want to log in with a username/email or a Contributor Code.

   🌐 If your account has multiple workspaces available, you can use the Workspace drop-down to choose the workspace that will be used by default.
5. Select the **Upload original clips** radio button if you want to upload the source clips, or select **Transcode clips before upload** and choose your transcoding settings if you want to convert the clips to another format before uploading.

When you upload the original clips, the source format is preserved, and no color adjustments are applied. When you transcode before uploading, you can choose file format and color-adjustment settings for the uploaded files:

- If you want to use a transcoding preset to choose the settings for your exported files, choose a setting from the **Transcode preset** drop-down list, and then click **Export**.

 If you want to choose custom transcoding settings, choose **Custom** from the **Transcode preset** drop-down list and continue to step c.

 For more information, see “**Transcoding presets**” on page 49.

💡 When you select a video processing device other than your CPU in the application settings dialog, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets. For more information, see “**Choosing a video processing device**” on page 119.

  - High-quality upscaling is applied during transcoding when you choose an HD or UHD render preset.
  - Please note that some systems with limited GPU memory are not supported.

- When exporting to a video format, choose a setting from the **Color adjustments** drop-down list to choose whether your exported files will include any color adjustments.

  - **None**: No color adjustments are included in the exported files. If you’ve applied color space conversion, the conversion is preserved in the exported file. For more information, see “**Converting between HDR/wide color gamut color spaces**” on page 99.

  - **Source settings only**: Only adjustments from the Color Space and Source Settings headings in the Inspector in the Adjust Color workspace are included in the exported files.

    - **Source settings only** is available only when transcoding available when transcoding RAW, X-OCN, or S-Gamut media.

  - **All**: All color adjustments from the Adjust Color workspace are included in the exported files.

 For more information, see “**Editing Color Adjustments controls**” on page 95.
c. When exporting to a video format, choose a setting from the **Output color space** drop-down list to choose the color space that will be used for rendering the new files.
   - If you selected **All** in the **Color Adjustments** drop-down, you can choose **Same as preview** or **Same as external monitor** (if an external monitor is enabled) to match the output color space to your video preview or external monitor setting.
   
   For more information, see “Choosing a color space for the video preview and external monitor” on page 121.

   - If the selected output color space is not compatible with the source color space, a warning is displayed to notify you that the clip cannot be exported using the current settings.

   - If you selected **Source settings only** or **None** in the **Color Adjustments** drop-down, you can choose a specific output color space when transcoding S-Gamut, RAW, and X-OCN source clips.

d. Choose a setting from the **Format** drop-down list to indicate the file format you want to use for your exported files.
   
   **Format** settings that are not supported by the selected **Output color space** will not be available.

   When transcoding to DPX format, you can type a value in the **Starting frame index** box to append a numeric index to transcoded file names.

   - **OpenEXR** is available only for S-Gamut, RAW, or X-OCN sources when **Color adjustments** is set to **None** or **Source settings only**, and **Output color space** is set to ACES, Rec.2020/Linear, S-Gamut/Linear or S-Gamut3/Linear.

   - **ProRes** is available on macOS only.

e. Choose a setting from the **Render preset** drop-down list to choose the settings that will be used for the exported files.

   - **Choose the Best match** preset if you want Catalyst Prepare to choose the most appropriate preset for each clip in the storyboard.

   - **Render preset** settings that are not supported by the selected **Output color space** and **Format** will not be available.

f. Select the **Create Sony Professional Disc partitions** check box if you want to create a file with multiple body partitions. When the check box is cleared, the file will use a single body partition.

   - **This check box is available only when** **XAVC Intra**, **XAVC Long**, or **XDCAM** is selected in the **Format** drop-down list.

   - **Files created with multiple body partitions may not be recognized properly by some Sony camcorders, decks, or servers.**
g. Choose a setting from the **Crop type** drop-down list to choose the aspect ratio for your transcoded file:

- **Letterbox/pillarbox**: if the source frame is wider than the destination frame, black bars are displayed at the top and bottom (letterbox). If the source frame is narrower than the destination frame, black bars are displayed on the sides of the frame (pillarbox).
- **Center crop (cut edges)**: if the source frame does not match the output frame, the frame is centered, and the edges are cropped as needed.
- **Cinemascope**: crops the frame to a 2.39:1 cinemascope aspect.

h. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.

i. Choose a setting from the **Audio channels** drop-down to choose how audio will be rendered in the output file.

- **Same as source**: the rendered file will contain the same number of audio channels as the source clip.
- **Map audio channels**: you can choose how audio channels from the source clip will be mapped to audio channels in the rendered file.

Each channel in the rendered file will be displayed with a drop-down list so you can choose which source channel should be rendered to that channel.

j. Select the **Burn in timecode** check box if you want to include timecode in the transcoded video.

Click the position control below the check box to indicate where timecode will be positioned in the frame.

The transduced file will include the source clip’s timecode. If you’re transcoding a storyboard, each clip will display its source timecode.

k. Select the **Burn in clip name** check box if you want to include the clip name in the transcoded video.

Click the position control below the check box to indicate where the clip name will be positioned in the frame.

If you rename a clip, the custom name will be displayed. For more information, see “Renaming clips” on page 21.

If you’re transcoding a storyboard, each clip will display its source clip name.

l. If the **Burn in timecode** and/or **Burn in clip name** check boxes are selected, you can select the **Allow burn in within letterbox/pillarbox area** check box if your output format will include letterboxing or pillarboxing and you want to allow the timecode/clip name to be placed in the letterbox/pillarbox area.

When the check box is cleared, the timecode/clip name will be limited to the source frame area.
m. Select the **Add watermark** check box if you want to include a watermark image in the transcoded video.

   Click **Browse** to choose a JPEG or PNG image file.

   Drag the **Opacity** slider to set the transparency/opacity of the watermark image.

   Click the position control below the **Opacity** slider to indicate where the watermark image will be positioned in the frame:

   - If you need to render multiple frame sizes, create a full-frame transparent PNG using the dimensions of your largest target frame size, and the watermark image will be scaled as needed for the smaller frame sizes.
   - If your watermark image is smaller than the target frame size, no scaling is applied and the image will be anchored at the selected position control.

n. Select the **Use flip and stretch settings** check box if you’re working with video that was filmed with an anamorphic lens and want to preserve the **Flip horizontal**, **Flip vertical**, and **Anamorphic desqueeze** settings when transcoding. When the check box is not selected, letterboxing will be applied.

   For more information, see “**Editing clip settings**.”

o. Select the **Repair flash bands automatically** check box if you want to automatically detect and repair flash bands when transcoding.

   For more information, see “**Repairing flash bands**.”

p. Select the **Use mark in/out points** check box if you want to transcode only the portion of the video between the mark in and mark out points. For more information, see “**Marking in and out points for playback**.”

q. Select the **Add padding to clips** check box and type a number in the **Seconds** box if you want to preserve media before the mark in/mark out points.

r. Select the **Transcode using proxy source clip** check box if you want to use the proxy as the source clip when transcoding. When you’re transcoding a lower-resolution clip, using the proxy as your source media is faster.

s. Select the **Override start timecode** check box and type a number in the edit box to specify the starting timecode for your transcoded clip. When the check box is cleared, the clip’s timecode is used.

6. Click **Upload**.

   Progress is displayed in the activity pane at the top of the Catalyst Prepare window. If you have multiple upload jobs queued, a separate progress indicator is displayed for each job.

**Uploading files to YouTube**

1. Select the files you want to upload in Media Browser or Edit mode.

2. Click the **Share** button at the top of the Catalyst Prepare window.

3. From the **Upload clip to** drop-down list, choose **YouTube**.
4. Use the Share pane to log on to your Google account and follow the on-screen instructions to upload the selected file.

   a. Rename your uploads if needed:
      - When you’re uploading a single clip, the **Title** box displays the file name of the selected clip. You can type a new title to identify your video.
      - When you’re uploading multiple clips, select the **Rename files** check box.
         - Type a string in the **Prefix** box if you want to start all file names with the same text.
         - Choose a setting from the **Numbering** drop-down list to indicate whether you want to number clips or use their original file names.
         - Type a string in the **Suffix** box if you want to end all file names with the same text.
         For example, if you wanted to name clips using a convention such as **Commercial_001_Camera1**, you would type **Commercial_** in the **Prefix** box, choose **3 digits** from the **Numbering** drop-down list, and type **_Camera1** in the **Suffix** box.

   b. Type a description of your movie in the **Description** box.

   c. Type keywords you want to associate with your movie in the **Tags** box. Use words that relate to your movie and describe its content. These tags will be used when searching YouTube. Use commas to separate multiple keywords.

   d. From the **Privacy** drop-down list, choose a setting to set broadcast options for your movie. Public videos can be seen by any YouTube user; private videos can be seen only by members you specify; unlisted videos can be seen by anyone who has a link to the video, but they are not included in YouTube searches.

   e. Choose a setting from the **Category** drop-down list. The category you choose is used to classify videos on the YouTube site.

   f. Choose a setting from the **Resolution** drop-down list to choose the frame size of the video.

   g. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.
h. Choose a setting from the Audio channels drop-down to choose how audio will be rendered in the output file.
   - **Same as source**: the rendered file will contain the same number of audio channels as the source clip.
   - **Map audio channels**: you can choose how audio channels from the source clip will be mapped to audio channels in the rendered file.
     Each channel in the rendered file will be displayed with a drop-down list so you can choose which source channel should be rendered to that channel.

i. Select the **Burn in timecode** check box if you want to include timecode in the transcoded video.

   Click the position control below the check box to indicate where timecode will be positioned in the frame.

   The transcoded file will include the source clip's timecode. If you're transcoding a storyboard, each clip will display its source timecode.

j. Select the **Burn in clip name** check box if you want to include the clip name in the transcoded video.

   Click the position control below the check box to indicate where the clip name will be positioned in the frame.

   If you rename a clip, the custom name will be displayed. For more information, see "Renaming clips" on page 21.

   If you're transcoding a storyboard, each clip will display its source clip name.

k. If the **Burn in timecode** and/or **Burn in clip name** check boxes are selected, you can select the **Allow burn in within letterbox/pillarbox area** check box if your output format will include letterboxing or pillarboxing and you want to allow the timecode/clip name to be placed in the letterbox/pillarbox area.

   When the check box is cleared, the timecode/clip name will be limited to the source frame area.
l. Select the Add watermark check box if you want to include a watermark image in the transcoded video.

Click Browse to choose a JPEG or PNG image file.

Drag the Opacity slider to set the transparency/opacity of the watermark image.

Click the position control below the Opacity slider to indicate where the watermark image will be positioned in the frame:

- If you need to render multiple frame sizes, create a full-frame transparent PNG using the dimensions of your largest target frame size, and the watermark image will be scaled as needed for the smaller frame sizes.
- If your watermark image is smaller than the target frame size, no scaling is applied and the image will be anchored at the selected position control.

m. Select the Use flip and stretch settings check box if you’re working with video that was filmed with an anamorphic lens and want to preserve the Flip horizontal, Flip vertical, and Anamorphic desqueeze settings when transcoding. When the check box is not selected, letterboxing will be applied.

For more information, see “Editing clip settings.”

n. Select the Repair flash bands automatically check box if you want to automatically detect and repair flash bands when transcoding.

For more information, see “Repairing flash bands.”

o. Select the Use mark in/out points check box if you want to transcode only the portion of the video between the mark in and mark out points. For more information, see “Marking in and out points for playback.”

p. Select the Add padding to clips check box and type a number in the Seconds box if you want to preserve media before the mark in/mark out points.

5. Click Upload.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window. If you have multiple upload jobs queued, a separate progress indicator is displayed for each job.

Transcoding presets

Transcode presets make it easy to transcode multiple files with the same settings.

Presets are saved in the following folders by default:

- Windows: C: \Users\<user>\Documents\Sony\Catalyst\Transcode Presets\n- macOS: /Users/<user>/Documents/Sony/Catalyst/Transcode Presets/

Importing transcode presets

Importing a preset allows you to browse to a preset file (.ctranscode) and add it to Catalyst Prepare. After you load a preset, you can select it from the Transcode preset drop-down list in the Export pane.
If you’re transferring preset files across computers, copy the .ctranscode files from the source computer to the destination computer. Presets are saved in the following folders by default:

- **Windows:** C:\Users\<user>\Documents\Sony\Catalyst\Transcode Presets\n- **macOS:** /Users/<user>/Documents/Sony/Catalyst/Transcode Presets/

1. Click the **Export** button at the top of the Catalyst Prepare window.
2. Click the **Transcode Tools** button in the Transcode Settings.
3. Click **Import transcode preset** in the Transcode Tools menu.
4. Browse to and select the .ctranscode file you want to use and click **OK**.

### Saving transcoding presets

Saving a preset allows you to reuse transcoding settings easily and transfer settings across computers.

1. Click the **Export** button at the top of the Catalyst Prepare window.
2. Use the Transcode Settings section of the Export pane to adjust your settings as needed. For more information, see “Transcoding clips” on page 24.
3. Click the **Transcode Tools** button in the Transcode Settings.
4. Click **Save transcode preset** in the Transcode Tools menu.
5. Type name for your preset in the **File name** box and click **OK**.

Preset files are saved in the following folders by default:

- **Windows:** C:\Users\<user>\Documents\Sony\Catalyst\Transcode Presets\n- **macOS:** /Users/<user>/Documents/Sony/Catalyst/Transcode Presets/

### Deleting transcoding presets

Deleting a preset removes it from your computer.

1. Click the **Export** button at the top of the Catalyst Prepare window.
2. From the **Transcode preset** drop-down list, select the preset you want to delete.
3. Click the **Transcode Tools** button in the Transcode Settings.
4. Click **Delete transcode preset** in the Transcode Tools menu.
5. When prompted to confirm deleting the preset, click **Delete**.
Relinking library media

Relinking allows you to relink media files within a library when you move a library to a different drive or use media from an external drive.

1. Open a library. For more information, see “Creating or opening a library” on page 11.

2. In the Places pane, click the Library button and choose Relink from the menu.

3. For each clip, the Relink Clips dialog displays the original clip and its linked clip. Click a folder path and browse to a new location to choose a new location for your source clips.

   Click Locate Folder or Locate File (if a clip is missing) or a clip’s path and browse to a new file to choose a replacement file.

   📜 Click the button to display the full path.

4. Click Relink. The paths to the library clips are replaced, and your library is updated.

Backing up a volume

Catalyst Prepare allows you to create verified backups of your discs and cards. A backup is an exact replica of the original storage media — with all files and volume structure — backed up for long-term safety and storage.

1. Click the Organize button at the top of the Catalyst Prepare window.

   The Places pane on the left side of the Catalyst Prepare window displays a list of the available volumes.

2. Select a volume in the Places pane.

3. Click the Back Up Source button at the bottom of the Places pane.

4. The Destination folder box displays the path to the parent folder where the backup will be created. You can type a path in the box or click the Browse button to choose a folder.

5. The Subfolder box displays the name of the folder where the backup will be created.

6. Choose a setting from the Verify mode drop-down list to choose the method (MD5, SHA1, or CRC32) that will be used to verify your backup file, or choose None to skip verification.

7. Click OK to start the backup.
Finding media

Media Browser mode allows you to browse your computer for media files that you want to add to your media libraries, organize the clips in your media libraries, export clips to additional volumes or devices, and transcode files.

For more information, see “Adding media to a library” on page 12 or “Organizing media in a library” on page 16.

An auf a thumbnail indicates that an error was detected with the clip.

A auf a thumbnail indicates a clip from an Optical Disc Archive volume.

An auf a thumbnail indicates that a clip spans multiple discs on an Optical Disc Archive volume. When you play a clip that spans discs, an indicator is displayed in the timeline to identify the point where the clip switches discs:

An auf a thumbnail indicates a proxy clip that does not have a full-resolution clip available.

Clip lists and spanned clips are not supported in Catalyst Prepare libraries.

Connect to a device via FTP

Click the Tools button in the Places pane and choose Add remote server to specify a server’s connection settings.

To disconnect from a server, select the server in the Places pane and click the button.

To reconnect to a server, click the server in the Remote Devices list.

To remove a remote server from the Remote Devices list, select it and then click the Tools button in the Places pane and choose Remove remote server.
Displaying files in a list or thumbnail mode

Click the button to toggle thumbnail and list mode.

In thumbnail mode, the Media Browser displays thumbnail images and file names.

In list mode, you can click the headings in the Media Browser to sort the file list by various attributes. Click the heading again to sort in ascending or descending order. An arrow is displayed to indicate the current sorting method:
Searching for clips

1. Select the folder you want to search. Subfolders will be included in your search.

2. Click the Search button to display the Search bar at the top of the Media Browser.

3. Type your search terms in the Search bar. The Media Browser displays all clips in the selected folder that contain your search terms in the file name or Summary metadata.

   ![Select a clip and click Go to folder to navigate to a clip's folder.]

   Click the Close button to close the Search bar and clear the search results from the Media Browser.

   Select a different folder to clear your search terms and start a new search in the selected folder.

   - Click a file to select it.
   - Hold Shift and click the first and last file you want to select to select a range of files.
   - Hold Ctrl (Windows) or Command (macOS) to select multiple files.

   ![Click the Select button to select multiple files without using keyboard modifiers.]

Showing source clips

1. Select a file.

2. Click the File/Clip button at the bottom of the Media Browser and choose Show in Finder (macOS) or Show in Explorer (Windows) to view the source clip in its containing folder.

Managing SxS and Professional Disc volumes

If you need to format an SxS card, please use the Memory Media Utility.

If you need to format or finalize an XDCAM Professional Disc volume, please use the XDCAM Drive Software.
### Supported video formats

Catalyst Prepare supports reading the following video formats from volumes or as independent clips:

#### XDCAM

**SD format**

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Frame Rate</th>
<th>Field Order</th>
<th>Video Codec</th>
<th>Bit Rate</th>
<th>Audio Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>720x480</td>
<td>59.94i</td>
<td>Lower</td>
<td>DV</td>
<td>25 CBR</td>
<td>4x16 bit</td>
</tr>
<tr>
<td>DV</td>
<td>720x576</td>
<td>50i</td>
<td>Lower</td>
<td>DV</td>
<td>25 CBR</td>
<td>4x16 bit</td>
</tr>
<tr>
<td>MPEG IMX</td>
<td>720x512</td>
<td>59.94i</td>
<td>Upper</td>
<td>MPEG-2 Intra</td>
<td>30, 40, 50</td>
<td>4x24 bit / 8x16 bit</td>
</tr>
<tr>
<td>MPEG IMX</td>
<td>720x608</td>
<td>50i</td>
<td>Upper</td>
<td>MPEG-2 Intra</td>
<td>30, 40, 50</td>
<td>4x24 bit / 8x16 bit</td>
</tr>
<tr>
<td>Uncompressed</td>
<td>720x486</td>
<td>59.94i</td>
<td>Upper</td>
<td>Uncompressed</td>
<td>90 CBR</td>
<td>4x24 bit / 8x16 bit</td>
</tr>
<tr>
<td>Uncompressed</td>
<td>720x576</td>
<td>50i</td>
<td>Upper</td>
<td>Uncompressed</td>
<td>90 CBR</td>
<td>4x24 bit / 8x16 bit</td>
</tr>
</tbody>
</table>

#### HD format

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Pixel Aspect Ratio</th>
<th>Frame Rate</th>
<th>Video Codec</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPEG HD</td>
<td>1280x720</td>
<td>1.0</td>
<td>50p, 59.94p</td>
<td>MPEG-2 Long GOP</td>
<td>25 CBR</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1280x720</td>
<td>1.0</td>
<td>50p, 59.94p</td>
<td>MPEG-2 Long GOP</td>
<td>35 VBR</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1280x720</td>
<td>1.0</td>
<td>50p, 59.94p</td>
<td>MPEG-2 Long GOP</td>
<td>50 CBR</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1440x1080</td>
<td>1.333</td>
<td>23.976p, 25p, 29.97p, 50i, 59.94i</td>
<td>MPEG-2 Long GOP</td>
<td>17.5 CBR</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1440x1080</td>
<td>1.333</td>
<td>23.976p, 25p, 29.97p, 50i, 59.94i</td>
<td>MPEG-2 Long GOP</td>
<td>25 CBR</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1440x1080</td>
<td>1.333</td>
<td>23.976p, 25p, 29.97p, 50i, 59.94i</td>
<td>MPEG-2 Long GOP</td>
<td>35 CBR</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1440x540</td>
<td>0.667</td>
<td>23.976p, 25p, 29.97p, Over Crank</td>
<td>MPEG-2 Long GOP</td>
<td>8.75 CBR</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1440x540</td>
<td>0.667</td>
<td>23.976p, 25p, 29.97p, Over Crank</td>
<td>MPEG-2 Long GOP</td>
<td>12.5 CBR</td>
</tr>
<tr>
<td>Format</td>
<td>Frame Size</td>
<td>Pixel Aspect Ratio</td>
<td>Frame Rate</td>
<td>Video Codec</td>
<td>Bit Rate</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>--------------------</td>
<td>-----------------------</td>
<td>-------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>MPEG HD</td>
<td>1440x540</td>
<td>0.667</td>
<td>23.976p, 25p, 29.97p, Over Crank</td>
<td>MPEG-2 Long GOP</td>
<td>17.5 CBR</td>
</tr>
<tr>
<td>MPEG HD422</td>
<td>1920x1080</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50i, 59.94i</td>
<td>MPEG-2 Long GOP</td>
<td>35 CBR, 50 CBR</td>
</tr>
<tr>
<td>MPEG HD422</td>
<td>1920x540</td>
<td>0.5</td>
<td>23.976p, 25p, 29.97p, Over Crank</td>
<td>MPEG-2 Long GOP</td>
<td>25 CBR</td>
</tr>
</tbody>
</table>

**XDCAM EX**

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Pixel Aspect Ratio</th>
<th>Frame Rate</th>
<th>Field Order</th>
<th>Video Codec</th>
<th>Audio Codec</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>720x480</td>
<td>0.9091</td>
<td>59.94p</td>
<td>Lower</td>
<td>DV</td>
<td>PCM, 48 kHz, 16 bit</td>
<td>25 CBR</td>
</tr>
<tr>
<td>DV</td>
<td>720x576</td>
<td>1.0926</td>
<td>50i</td>
<td>Lower</td>
<td>DV</td>
<td>PCM, 48 kHz, 16 bit</td>
<td>25 CBR</td>
</tr>
<tr>
<td>MPEG HD (EX-HQ)</td>
<td>1280x720</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-2 Long GOP</td>
<td>35 VBR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPEG HD (EX-SP)</td>
<td>1440x1080</td>
<td>1.333</td>
<td>50i, 59.94i</td>
<td>MPEG-2 Long GOP</td>
<td>25 CBR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPEG HD (EX-HQ)</td>
<td>1440x1080</td>
<td>1.333</td>
<td>23.976p, 25p, 29.97p, 50i, 59.94i</td>
<td>MPEG-2 Long GOP</td>
<td>35 VBR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPEG HD422 (EX-HQ)</td>
<td>1920x1080</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50i, 59.94i</td>
<td>MPEG-2 Long GOP</td>
<td>35 VBR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Format</td>
<td>Frame Size</td>
<td>Pixel Aspect Ratio</td>
<td>Frame Rate</td>
<td>Video Codec</td>
<td>Audio Channels (PCM, 48 kHz, 24 bit)</td>
<td>Bit Rate</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>------------</td>
<td>--------------------</td>
<td>-----------------------------</td>
<td>-------------</td>
<td>--------------------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>1440x1080</td>
<td>1.333</td>
<td>50i, 59.94i, 23.976p, 25p, 29.97p</td>
<td>MPEG-4</td>
<td>CBG</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>1920x1080</td>
<td>1.0</td>
<td>50i, 59.94i, 23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>CBG</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>1920x1080</td>
<td>1.0</td>
<td>50i, 59.94i, 23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>CBG</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>1920x1080</td>
<td>1.0</td>
<td>50p, 50i, 59.94p, 59.94i</td>
<td>MPEG-4</td>
<td>CBG</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>HFR</td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>2048x1080</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>VBR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>2048x1080</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>CBG</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>3840x2160</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>VBR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>3840x2160</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>CBG</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>4096x2160</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>VBR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>4096x2160</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4</td>
<td>CBG</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AVC Intra</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### XAVC Long-GOP

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Pixel Aspect Ratio</th>
<th>Frame Rate</th>
<th>Video Codec</th>
<th>Audio</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>XAVC Long</td>
<td>1280x720</td>
<td>1.0</td>
<td>50p, 59.94p</td>
<td>MPEG-4 AVC Long, High 422 Profile</td>
<td>4-channel PCM, 48 kHz, 24 bit</td>
<td>80 (Maximum)</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>1920x1080</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 50i, 59.94p, 59.94i</td>
<td>MPEG-4 AVC Long, High 422 Profile</td>
<td>4-channel PCM, 48 kHz, 24 bit</td>
<td>80 (Maximum)</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>3840x2160</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>4-channel PCM, 48 kHz, 24 bit</td>
<td>200 (Maximum)</td>
</tr>
<tr>
<td>XAVC Long Proxy</td>
<td>480x270</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>1 or .5 Mbps</td>
</tr>
<tr>
<td>XAVC Long Proxy</td>
<td>640x360</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>3 Mbps</td>
</tr>
<tr>
<td>XAVC Long Proxy</td>
<td>1280x720</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>9 Mbps</td>
</tr>
</tbody>
</table>
## XAVC S

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Aspect Ratio</th>
<th>Frame Rate</th>
<th>Video Codec</th>
<th>Audio</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>XAVC Long Proxy</td>
<td>480x270</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>4</td>
</tr>
<tr>
<td>XAVC Long Proxy</td>
<td>640x360</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>10</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>1280x720</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>2-channel PCM or AAC, 48 kHz, 16 bit</td>
<td>40</td>
</tr>
<tr>
<td>XAVC Long Proxy</td>
<td>1280x720</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>16</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>1280x720</td>
<td>1.0</td>
<td>100p, 119.88p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>2-channel PCM or AAC, 48 kHz, 16 bit</td>
<td>80</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>1440x1080</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>2-channel PCM or AAC, 48 kHz, 16 bit</td>
<td>80</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>1920x1080</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>2-channel PCM or AAC, 48 kHz, 16 bit</td>
<td>80</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>1920x1080</td>
<td>1.0</td>
<td>100p, 119.88p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>2-channel PCM or AAC, 48 kHz, 16 bit</td>
<td>150</td>
</tr>
<tr>
<td>XAVC Long Proxy</td>
<td>1920x1080</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>25</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>3840x2160</td>
<td>1.0</td>
<td>23.976p, 25p, 29.97p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>2-channel PCM or AAC, 48 kHz, 16 bit</td>
<td>188</td>
</tr>
<tr>
<td>XAVC Long</td>
<td>3840x2160</td>
<td>1.0</td>
<td>50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>2-channel PCM or AAC, 48 kHz, 16 bit</td>
<td>300</td>
</tr>
</tbody>
</table>
### XAVC Proxy

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Frame Rate</th>
<th>Video Codec</th>
<th>Audio</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>XAVC Proxy 480x270</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>XAVC Proxy 640x360</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>XAVC Proxy 720x480</td>
<td>59.94i</td>
<td>MPEG-4 AVC Long, Main Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>XAVC Proxy 720x576</td>
<td>50i</td>
<td>MPEG-4 AVC Long, Main Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>XAVC Proxy 1280x720</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>XAVC Proxy 1920x1080</td>
<td>50i, 59.94i, 23.976p, 25p, 29.97p, 50p, 59.94p</td>
<td>MPEG-4 AVC Long, Main Profile or High Profile</td>
<td>MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

### X-OCN

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Bits</th>
<th>Frame Rate</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-OCN 2048x1080</td>
<td>16</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 240)</td>
<td>LT, ST</td>
<td></td>
</tr>
<tr>
<td>X-OCN 4096x2160</td>
<td>16</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120p)</td>
<td>LT, ST</td>
<td></td>
</tr>
</tbody>
</table>

### RAW

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Bits</th>
<th>Frame Rate</th>
<th>Compression</th>
</tr>
</thead>
<tbody>
<tr>
<td>F5/F55RAW 2048x1080</td>
<td>16</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 240)</td>
<td>SQ</td>
<td></td>
</tr>
<tr>
<td>F5/F55RAW 4096x2160</td>
<td>16</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120p)</td>
<td>SQ</td>
<td></td>
</tr>
<tr>
<td>F65RAW 4096x2160</td>
<td>16</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120)</td>
<td>Lite, SQ</td>
<td></td>
</tr>
<tr>
<td>F5700RAW 2048x1080</td>
<td>16</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p, HFR (max. 240)</td>
<td>SQ</td>
<td></td>
</tr>
<tr>
<td>F5700RAW 4096x2160</td>
<td>16</td>
<td>23.976p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120)</td>
<td>SQ</td>
<td></td>
</tr>
</tbody>
</table>
### HDCAM SR (SStP)

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Bits</th>
<th>Color Space</th>
<th>Pixel Aspect Ratio</th>
<th>Frame Rate</th>
<th>Compression (Mbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSTP</td>
<td>1280x720</td>
<td>10</td>
<td>YUV 422</td>
<td>1.0</td>
<td>50p, 59.94p</td>
<td>Lite(220), SQ (440)</td>
</tr>
<tr>
<td>SSTP</td>
<td>1920x1080</td>
<td>10</td>
<td>YUV 422</td>
<td>1.0</td>
<td>50i, 59.94i, 23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>Lite(220), SQ (440)</td>
</tr>
<tr>
<td>SSTP</td>
<td>1920x1080</td>
<td>10</td>
<td>RGB 444</td>
<td>1.0</td>
<td>50i, 59.94i, 23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>SQ(440), HQ (880)</td>
</tr>
<tr>
<td>SSTP</td>
<td>1920x1080</td>
<td>12</td>
<td>RGB 444</td>
<td>1.0</td>
<td>50i, 59.94i, 23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>HQ(880)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1080</td>
<td>10</td>
<td>YUV 422</td>
<td>1.0</td>
<td>50p, 59.94p</td>
<td>Lite(220), SQ (440)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1080</td>
<td>10</td>
<td>RGB 444</td>
<td>1.0</td>
<td>50i, 59.94i, 23.976p, 24p, 25p, 29.97p</td>
<td>SQ(440)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1080</td>
<td>10</td>
<td>RGB 444</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p</td>
<td>HQ(880)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1080</td>
<td>10</td>
<td>RGB 444</td>
<td>1.0</td>
<td>50i, 59.94i, 23.976p, 24p, 25p, 29.97p</td>
<td>SQ(440)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1080</td>
<td>12</td>
<td>RGB 444</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>HQ(880)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1080</td>
<td>12</td>
<td>RGB 444</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>SQ(440)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1080</td>
<td>12</td>
<td>RGB 444</td>
<td>1.0</td>
<td>23.976p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>HQ(880)</td>
</tr>
<tr>
<td>SSTP</td>
<td>2048x1556</td>
<td>10</td>
<td>RGB 444</td>
<td>1.0</td>
<td>23.976p, 24p, 25p</td>
<td>HQ(880)</td>
</tr>
<tr>
<td>Format</td>
<td>Frame Size</td>
<td>Pixel Aspect Ratio</td>
<td>Frame Rate</td>
<td>Video Codec</td>
<td>Audio Codec</td>
<td>Bit Rate</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>--------------------</td>
<td>---------------------</td>
<td>------------------</td>
<td>----------------------</td>
<td>----------</td>
</tr>
<tr>
<td>AVCHD</td>
<td>1920x1080</td>
<td>1.0</td>
<td>59.94p, 50p</td>
<td>H.264/MPEG-4 AVC</td>
<td>Dolby AC-3 or PCM</td>
<td>28 Mbps</td>
</tr>
<tr>
<td></td>
<td>AVCHD</td>
<td>1920x1080</td>
<td>1.0</td>
<td></td>
<td>2 channels, 48 kHz, 16 bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1920x1080</td>
<td>1.0</td>
<td>59.94i, 50i, 29.97p, 25p, 23.976p</td>
<td>H.264/MPEG-4 AVC</td>
<td>Dolby AC-3 or PCM</td>
<td>24 or 17 Mbps</td>
</tr>
<tr>
<td></td>
<td>AVCHD</td>
<td>1920x1080</td>
<td>1.0</td>
<td></td>
<td>2 channels, 48 kHz, 16 bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1280x720</td>
<td>1.0</td>
<td>59.94p, 50p</td>
<td>H.264/MPEG-4 AVC</td>
<td>Dolby AC-3 or PCM</td>
<td>24 or 17 Mbps</td>
</tr>
<tr>
<td></td>
<td>AVCHD</td>
<td>1280x720</td>
<td>1.0</td>
<td></td>
<td>2 channels, 48 kHz, 16 bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1440x1080</td>
<td>1.333</td>
<td>59.94i, 50i</td>
<td>H.264/MPEG-4 AVC</td>
<td>Dolby AC-3 or PCM</td>
<td>9 or 5 Mbps</td>
</tr>
<tr>
<td></td>
<td>AVCHD</td>
<td>1440x1080</td>
<td>1.333</td>
<td></td>
<td>2 channels, 48 kHz, 16 bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MPEG-2 SD</td>
<td>720x480</td>
<td>0.9091 or 1.2121</td>
<td>MPEG-2</td>
<td>Dolby AC-3 or PCM</td>
<td>9 Mbps</td>
</tr>
<tr>
<td></td>
<td>MPEG-2 SD</td>
<td>720x480</td>
<td>0.9091 or 1.2121</td>
<td>MPEG-2</td>
<td>Dolby AC-3 or PCM</td>
<td>9 Mbps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23.976p, 29.97p, 59.94i</td>
<td>MPEG-2</td>
<td>Dolby AC-3 or PCM</td>
<td>9 Mbps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23.976p, 29.97p, 59.94i</td>
<td>MPEG-2</td>
<td>Dolby AC-3 or PCM</td>
<td>9 Mbps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23.976p, 29.97p, 59.94i</td>
<td>MPEG-2</td>
<td>Dolby AC-3 or PCM</td>
<td>9 Mbps</td>
</tr>
</tbody>
</table>
### AVC H.264/MPEG-4

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Screen Aspect Ratio</th>
<th>Frame Rate</th>
<th>Video Codec</th>
<th>Audio Codec</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.264/MPEG-4</td>
<td>1280x720</td>
<td>16:9</td>
<td>50p, 100p, 120p,</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>1920x1080</td>
<td>16:9</td>
<td>24p, 25p, 30p, 48p, 50p, 60p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>1920x1440</td>
<td>4:3</td>
<td>24p, 25p, 30p, 48p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>3840x2160</td>
<td>16:9</td>
<td>23.97p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>4096x2160</td>
<td>17:9</td>
<td>12p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>2704x1524</td>
<td>16:9</td>
<td>25p, 30p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>2704x1440</td>
<td>17:9</td>
<td>24p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>1280x960</td>
<td>4:3</td>
<td>48p, 100p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>848x480</td>
<td>16:9</td>
<td>240p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4</td>
<td>640x480</td>
<td>4:3</td>
<td>25p, 30p</td>
<td>AVC</td>
<td>Mono,</td>
<td>48kHz, AAC compression w/ AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48kHz,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAC</td>
<td></td>
</tr>
<tr>
<td>Format</td>
<td>Frame Size</td>
<td>Screen Aspect Ratio</td>
<td>Frame Rate</td>
<td>Video Codec</td>
<td>Audio Codec</td>
<td>Bit Rate</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
<td>---------------------</td>
<td>------------</td>
<td>-------------</td>
<td>-------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>240x180</td>
<td></td>
<td>25p, 29.97p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>320x180</td>
<td></td>
<td>25p, 29.97p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>320x240</td>
<td></td>
<td>25p, 29.97p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>480x270</td>
<td></td>
<td>25p, 29.97p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>640x480</td>
<td></td>
<td>25p, 29.97p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>1280x720</td>
<td></td>
<td>50p, 60p, 100p, 120p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>1280x960</td>
<td></td>
<td>48p, 100p, 120p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>1920x1080</td>
<td></td>
<td>24p, 25p, 29.97p, 48p, 50p, 60p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>1920x1440</td>
<td></td>
<td>24p, 25p, 29.97p, 48p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>2704x1524</td>
<td></td>
<td>24p, 25p, 29.97p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>3840x2160</td>
<td></td>
<td>23.97p, 24p, 25p, 29.97p, 50p, 59.94p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC</td>
<td></td>
</tr>
<tr>
<td>Format</td>
<td>Frame Size</td>
<td>Screen Aspect Ratio</td>
<td>Frame Rate</td>
<td>Video Codec</td>
<td>Audio Codec</td>
<td>Bit Rate</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------</td>
<td>---------------------</td>
<td>------------</td>
<td>-------------</td>
<td>-------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC</td>
<td>4096x2160</td>
<td></td>
<td>12p</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC (HVO)</td>
<td>720x480</td>
<td></td>
<td>59.94i</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
<tr>
<td>H.264/MPEG-4 AVC (HVO)</td>
<td>720x576</td>
<td></td>
<td>50i</td>
<td>AVC</td>
<td>2 channels, 16 bit, AAC compression w/ AGC</td>
<td></td>
</tr>
</tbody>
</table>

**AS-11 DPP MXF**

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Frame Rate</th>
<th>Video Codec</th>
<th>Audio Codec</th>
<th>Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMX-50</td>
<td>720x576</td>
<td>25</td>
<td>MPEG-2 Intra</td>
<td>PCM, 48 kHz, 24 bit</td>
<td></td>
</tr>
<tr>
<td>XAVC Intra</td>
<td>1920x1080</td>
<td>25</td>
<td>MPEG-4 AVC Intra</td>
<td>PCM, 48 kHz, 24 bit</td>
<td></td>
</tr>
</tbody>
</table>
## Avid DNxHD®

**Container:** MOV or MXF  
**Audio Codec:** PCM 44.1 kHz or 48 kHz, 16 bit or 24 bit

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>Family Name</th>
<th>Color Space/Bits</th>
<th>Frame Rate/Maximum Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920x1080</td>
<td>Avid DNxHD® 444</td>
<td>4:4:4 10 bit</td>
<td>29.97p @ 440 Mbps, 25p @ 365 Mbps, 24p @ 350 Mbps, 23.976p @ 350 Mbps</td>
</tr>
<tr>
<td>1920x1080</td>
<td>Avid DNxHD® 220x</td>
<td>4:2:2 10 bit</td>
<td>60p @ 440 Mbps, 59.94p @ 440 Mbps, 50p @ 365 Mbps, 59.94i @ 220 Mbps, 50i @ 185 Mbps, 29.97p @ 220 Mbps, 25p @ 185 Mbps, 24p @ 175 Mbps, 23.976p @ 175 Mbps</td>
</tr>
<tr>
<td>1920x1080</td>
<td>Avid DNxHD® 220</td>
<td>4:2:2 8 bit</td>
<td>60p @ 440 Mbps, 59.94p @ 440 Mbps, 50p @ 365 Mbps, 59.94i @ 220 Mbps, 50i @ 185 Mbps, 29.97p @ 220 Mbps, 25p @ 185 Mbps, 24p @ 175 Mbps, 23.976p @ 175 Mbps</td>
</tr>
<tr>
<td>1920x1080</td>
<td>Avid DNxHD® 145</td>
<td>4:2:2 8 bit</td>
<td>59.94i @ 145 Mbps, 50i @ 120 Mbps</td>
</tr>
<tr>
<td>1920x1080</td>
<td>Avid DNxHD® 145 (subsampled to 1440x1080)</td>
<td>4:2:2 8 bit</td>
<td>59.94i @ 100 Mbps, 50i @ 85 Mbps, 29.97p @ 100 Mbps, 25p @ 85 Mbps, 24p @ 80 Mbps, 23.976p @ 80 Mbps</td>
</tr>
<tr>
<td>1920x1080</td>
<td>Avid DNxHD® 100 (subsampled to 1440x1080)</td>
<td>4:2:2 8 bit</td>
<td>60p @ 90 Mbps, 59.94p @ 90 Mbps, 50p @ 75 Mbps, 29.97p @ 45 Mbps, 25p @ 36 Mbps, 24p @ 36 Mbps, 23.976p @ 36 Mbps</td>
</tr>
<tr>
<td>1280x720</td>
<td>Avid DNxHD® 220x</td>
<td>4:2:2 10 bit</td>
<td>59.94p @ 220 Mbps, 50p @ 175 Mbps, 29.97p @ 110 Mbps, 25p @ 90 Mbps, 23.976p @ 90 Mbps</td>
</tr>
<tr>
<td>1280x720</td>
<td>Avid DNxHD® 220</td>
<td>4:2:2 8 bit</td>
<td>59.94p @ 220 Mbps, 50p @ 175 Mbps, 29.97p @ 110 Mbps, 25p @ 90 Mbps, 23.976p @ 90 Mbps</td>
</tr>
<tr>
<td>1280x720</td>
<td>Avid DNxHD® 145</td>
<td>4:2:2 8 bit</td>
<td>59.94p @ 145 Mbps, 50p @ 115 Mbps, 29.97p @ 75 Mbps, 25p @ 60 Mbps, 23.976p @ 60 Mbps</td>
</tr>
<tr>
<td>1280x720</td>
<td>Avid DNxHD® 100 (subsampled to 960x720)</td>
<td>4:2:2 8 bit</td>
<td>59.94p @ 100 Mbps, 50p @ 85 Mbps, 29.97p @ 50 Mbps, 25p @ 45 Mbps, 23.976p @ 50 Mbps</td>
</tr>
</tbody>
</table>
### Apple ProRes

Container: MOV  
Audio Codec: PCM

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Frame Rate</th>
<th>Video Codec</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProRes</td>
<td>720x486</td>
<td>59.94i, 30p, 29.97p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>720x576</td>
<td>50i, 25p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>960x720</td>
<td>60p, 59.94p, 50p, 30p, 29.97p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>1280x720</td>
<td>60p, 59.94p, 50p, 30p, 29.97p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>1280x1080</td>
<td>59.94i, 30p, 29.97p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>1440x1080</td>
<td>59.94i, 50i, 30p, 29.97p, 25p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>1920x1080</td>
<td>60p, 59.94p, 50p, 59.94i, 50i, 30p, 29.97p, 25p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>2048x1080</td>
<td>60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>2048x1556</td>
<td>60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>3840x2160</td>
<td>60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>4096x2160</td>
<td>60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
<tr>
<td>ProRes</td>
<td>5120x2160</td>
<td>60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p</td>
<td>422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)</td>
</tr>
</tbody>
</table>

### HDV

Container: MPEG-2 Transport Stream (Windows), MOV (macOS)  
Audio Codec: MPEG-1 Audio Layer-2 (Windows). 2 channels, 48 kHz, 16 bit

<table>
<thead>
<tr>
<th>Format</th>
<th>Frame Size</th>
<th>Pixel Aspect Ratio</th>
<th>Frame Rate</th>
<th>Interlace</th>
<th>Video Codec</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDV</td>
<td>1440x1080</td>
<td>1.333</td>
<td>50i, 59.94i</td>
<td>Upper</td>
<td>MPEG-2 MP@H14</td>
</tr>
</tbody>
</table>
DV

Container: AVI (Windows), MOV (macOS)

Audio Codec: PCM, 2 channels, 32 kHz, 16 bit

<table>
<thead>
<tr>
<th>Format (SD)</th>
<th>Frame Size</th>
<th>Frame Rate</th>
<th>Field Order</th>
<th>Video Codec</th>
<th>Bit Rate</th>
<th>Audio Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>720x480</td>
<td>59.94i</td>
<td>Lower</td>
<td>DV</td>
<td>25 CBR</td>
<td>2 channels, 32 kHz, 16 bit</td>
</tr>
<tr>
<td>DV</td>
<td>720x576</td>
<td>50i</td>
<td>Lower</td>
<td>DV</td>
<td>25 CBR</td>
<td>2 channels, 32 kHz, 16 bit</td>
</tr>
</tbody>
</table>

Supported video devices

Catalyst Prepare supports the following video volumes and devices:

<table>
<thead>
<tr>
<th>Folder Structure</th>
<th>Storage Media</th>
<th>Root Folder</th>
<th>Supported Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>XAVC-XD-Style</td>
<td>SxS memory card (exFAT), XQD memory card</td>
<td>XDROOT</td>
<td>XDCAM HD/HD422/IMX/DVCAM, SSTP, XAVC Intra, XAVC Long</td>
</tr>
<tr>
<td>XAVC-M4-Style</td>
<td>SxS memory card (exFAT), XQD memory card</td>
<td>M4ROOT</td>
<td>XAVC S</td>
</tr>
<tr>
<td>XAVC-PX-Style</td>
<td>SD card</td>
<td>PXROOT</td>
<td>XAVC Proxy</td>
</tr>
<tr>
<td>AXS-Style</td>
<td>AXS memory card</td>
<td>CINEROOT</td>
<td>F55RAW, F5RAW, FS700RAW</td>
</tr>
<tr>
<td>SRM-Style</td>
<td>SR memory card</td>
<td>Media root</td>
<td>F65RAW, SSTP</td>
</tr>
<tr>
<td>XD-Style</td>
<td>Professional Disc, SxS memory card (UDF)</td>
<td>Media root</td>
<td>XDCAM HD/HD422/IMX/DVCAM, XAVC Intra</td>
</tr>
<tr>
<td>BPAV-Style</td>
<td>SxS memory card (FAT32), SD card</td>
<td>BPAV</td>
<td>XDCAM EX (MPEG HD, DVCAM)</td>
</tr>
<tr>
<td>AVCHD structure</td>
<td>SD card</td>
<td>AVCHD/BDMV</td>
<td>AVCHD</td>
</tr>
</tbody>
</table>
Playing media

When you double-click a file in Media Browser mode, the file is loaded in Edit mode, where you can preview the file, log mark in and mark out points, and apply color correction. For more information about using Media Browser mode, please see “Organizing media in a library” on page 16.

You can use the toolbar at the top of the pane to adjust and monitor audio levels, select audio channels for preview, scale the video preview, view metadata, and adjust clip settings.

You can use the transport toolbar below the video to choose the playback mode, scrub the video, and control playback.
Previewing video

When you double-click a file in Media Browser mode, the file is loaded in Edit mode, where you can preview the file, log mark in and mark out points, and apply color correction. For more information about using Media Browser mode, please see “Organizing media in a library” on page 16.

You can also choose to display the video preview in a secondary window that you can position anywhere on your screen or on a secondary display. For more information, see “Editing Catalyst Prepare options” on page 119.

If you have multiple clips selected in the Media Browser on the left side of the window, the selected clips will play sequentially in the order they are displayed. The file name of the current file will be displayed above the video preview, and a vertical line in the timeline indicates where each selected clip begins:

![Timeline with selected clips](image)

A ![Optical Disc Archive volume](image) indicates a clip from an Optical Disc Archive volume.

An ![Multiple discs](image) on a thumbnail indicates that a clip spans multiple discs on an Optical Disc Archive volume. When you play a clip that spans discs, an indicator is displayed in the timeline to identify the point where the clip switches discs:

![Timeline with clip spanning discs](image)

Enable the Preview using proxy clips switch in Options if you want to use proxy clips for playback if they are available. During playback, a Proxy indicator is displayed above the video preview. For more information, see “Editing Catalyst Prepare options” on page 119.

Click the Play button to start playing the current video. Playback will start from the playback position indicator and continue until the Mark Out position or the end of the file.

You can click the trackbar below the transport controls to set the play position indicator:

![Trackbar for play position](image)

💡 For information about flipping the video, enabling anamorphic desqueezing, and displaying safe zone and mask guides, please see “Editing clip settings” on page 80.

Scaling the video preview

Click the magnifying glass to adjust the size of the video preview.
- Click **Fit** to scale the video to fill the Video pane.
- Click a preset to scale the video to a predefined magnification level.
  
  When the level is below 100%, you can drag the blue rectangle to pan and adjust the visible portion of the frame.
  
- Drag the slider or click the **−** and **+** buttons to choose a custom zoom level.
- Click the thumbnail and roll your mouse wheel to zoom in or out.

**Toggling full-screen playback**

Click ⌘ ⌘ to display the Video pane in full-screen mode. Press Esc or click the **Close** button to exit full-screen mode.

**Adjusting playback settings**

Click the **Playback Settings** button to the left of the transport controls to display the Playback Settings controls.

**Speed/Quality**

Select **Speed** if you want decoding to be optimized to preserve the frame rate.

Select **Quality** if you want decoding to be optimized to preserve video quality.

💡 When using a device other than your CPU, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets.

- High-quality deinterlacing is applied to interlaced source media when playback is paused, during transcoding, and during playback when the **Playback Settings Speed/Quality** setting is set to **Quality**.

- Please note that some systems with limited GPU memory are not supported.
Real Time/All Frames

Select Real Time if you want to play the clip using its source frame rate. Audio is played at its recorded rate, and video frames are skipped if necessary to preserve the playback rate.

Select All Frames if you want to ensure that all video frames are played. The frame rate may be reduced if needed to ensure all frames are played. Audio is unavailable in this mode.

- Real Time/Speed:  
- Real Time/Quality:  
- All Frames/Speed:  
- All Frames/Quality:  

Using the transport controls

The transport controls below the video preview allow you to control playback:

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to Start</td>
<td>Moves the playback position indicator to the Mark In position. Click again to move to the beginning of the selected file.</td>
</tr>
<tr>
<td>Previous Frame</td>
<td>Moves the playback position indicator one frame or field to the left.</td>
</tr>
<tr>
<td>Play</td>
<td>Playback will start from the playback position indicator and continue until the Mark Out position or the end of the file.</td>
</tr>
<tr>
<td>Next Frame</td>
<td>Moves the playback position indicator one frame or field to the right.</td>
</tr>
<tr>
<td>Go to End</td>
<td>Moves the playback position indicator to the Mark Out position. Click again to move to the end of the selected file.</td>
</tr>
<tr>
<td>Loop Playback</td>
<td>Plays only the area between the Mark In and Mark Out points in a continuous mode.</td>
</tr>
</tbody>
</table>

For more information, see “Marking in and out points for playback” on page 76.
Navigating the timeline

After you open a file in View mode, drag the shuttle control to seek forward or backward from the play position indicator to find an edit point. As you drag toward the ends of the shuttle control, playback speed increases. Release the shuttle control to stop playback:

![Shuttle control](image)

You can also press the J, K, or L keys to use the keyboard as a shuttle control.

👉 Press and hold K while pressing J or L to emulate a shuttle knob mode. Press K+J to scrub left or K+L to scrub right.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>Scrub reverse mode. Press again to accelerate the playback rate.</td>
</tr>
<tr>
<td>K</td>
<td>Pause.</td>
</tr>
<tr>
<td>L</td>
<td>Scrub forward mode. Press again to accelerate the playback rate.</td>
</tr>
</tbody>
</table>
Marking in and out points for playback

If you want to play only a portion of a video, you can use the Mark In and Mark Out buttons to select the portion of the video you want to play.

💡 If mark in and out points have been set in an MXF clip, Catalyst Prepare will read the mark in/out points from metadata. After you add a clip to the library, you can choose whether to synchronize mark in/out points with the source clip:

- If you want to save mark in and mark out points with the library, clear the Synchronize mark points with file check box on the Summary tab in the Inspector. For more information, see "Viewing and editing metadata" on page 81.
- When the Synchronize mark points with file check box is cleared, mark in and mark out points for MXF clips are saved back to the source media when you edit them in Catalyst Prepare, and your library will be updated if the mark in and out points are edited on disk.

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a file in Media Browser mode to load it in Edit mode.
   🌟 You can also use the Preview pane in Media Browser mode to adjust mark points.
3. Click the Logging button at the bottom of the Catalyst Prepare window.
4. Click the trackbar below the transport controls to set the play position indicator:

If the current clip contains discontinuous timecode, an indicator is displayed in the timeline to identify the discontinuity:

5. Click the Mark In button.
   🌟 The Mark In and Mark Out buttons are displayed under a Log button when the Catalyst Prepare window is too narrow to display the full toolbar.
6. Click the trackbar below the transport controls to set the play position indicator.
7. Click the **Mark Out** button.

When you click the Play button, playback will start from the playback position indicator and continue until the Mark Out position or the end of the file.

If you want to play the Mark In/Mark Out region in a continuous loop, select the Loop Playback button.

💡 You can quickly log mark in/out points by clicking the In, Out, and Length boxes at the bottom of the Catalyst Prepare window and typing new timecode values. (Not available for MXF proxy-only clips with embedded timecode.)

Type new values in the Mark In and Mark Out boxes on the Summary tab in the Inspector to edit the clip’s mark in and mark out points. (Not available for MXF proxy-only clips with embedded timecode.) For more information, see “Viewing and editing metadata” on page 81.

You can adjust mark in/out points by dragging the indicators above the trackbar.

To reset mark in/out points, click the More button and choose Reset mark in/out points.

If the current file contains essence marks, they will be displayed on the timeline as diamonds 💡. Essence marks are displayed in the Mark Points tab in metadata mode. For more information, see “Viewing and editing metadata” on page 81.

When browsing your library, an indicator is displayed to represent a clip’s mark in/out points:

---

**Creating a snapshot of a frame**

If you want to create a snapshot of the current frame, click the More button and choose Copy snapshot to clipboard or Save snapshot.

**Copying a frame to the clipboard**

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a file in Media Browser mode to load it in Edit mode.

3. Click the Logging button at the bottom of the Catalyst Prepare window.
5. Click the More button and choose Copy snapshot to clipboard.

   Press Ctrl+C (Windows) or ⌘-C (macOS).

   The current frame is copied to the clipboard at its current resolution. For example, if you want to copy a full-resolution frame, set your zoom level to 100%. You can change the size of the image using the magnifying glass button above the video preview. For more information, see “Previewing video” on page 72.

Saving a frame to a file

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a file in Media Browser mode to load it in Edit mode.

3. Click the trackbar below the transport controls to set the play position indicator:

4. Click the More button and choose Save snapshot.

   Press Shift+S.

   The current frame is saved at its current resolution. For example, if you want to save a full-resolution frame, set your zoom level to 100%.

   You can change the size of the image using the magnifying glass button above the video preview. For more information, see “Previewing video” on page 72.

   You can save the location and format used for saving the file in Options. For more information, see “Editing Catalyst Prepare options” on page 119.
Adjusting and monitoring audio levels

Click the speaker in the activity pane at the top of the Catalyst Prepare window to display audio controls.

Drag the **Master Volume** fader to increase or decrease audio levels. During preview, the meters allow you to monitor the level of each audio channel.

If you want to choose which audio channels will be played, you can use the **Channel Routing** check boxes. In the example above, the 1st, 3rd, and 5th channels are played through the left speaker and the 2nd, 4th, and 6th channels are played through the right speaker.

* Catalyst Prepare supports only stereo output devices.
Editing clip settings

Click the button to edit clip playback settings.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flip horizontal</td>
<td>Click the Flip horizontal or Flip vertical switch to flip the left-to-right or top-to-bottom orientation of the video frame.</td>
</tr>
<tr>
<td>Flip vertical</td>
<td></td>
</tr>
<tr>
<td>Anamorphic desqueeze</td>
<td>Click the 1.3x or 2x button to apply anamorphic stretching to widescreen video, or click Off to turn off stretching.</td>
</tr>
<tr>
<td>Show safe areas</td>
<td>Click the switch to enable safe area guides and a center point in the video preview.</td>
</tr>
<tr>
<td></td>
<td>When Show safe areas is enabled, Catalyst Prepare displays rectangles marking 90% (action safe area) and 80% (title safe area) of the frame to serve as guidelines for framing.</td>
</tr>
<tr>
<td></td>
<td>💡 Overlays are not displayed when using full-screen preview.</td>
</tr>
<tr>
<td>Mask to 2.39:1</td>
<td>Click the switch to enable shading in the video preview to indicate how an anamorphic version of your content will appear.</td>
</tr>
<tr>
<td></td>
<td>💡 Overlays are not displayed when using full-screen preview.</td>
</tr>
</tbody>
</table>
Working with clips

Viewing and editing metadata

When you’re in Media Browser or Edit mode, click the Inspector button in the toolbar to display metadata for the currently selected file in the Inspector pane.

Click the Summary tab to view summary information associated with the file or configure audio channels.

Click the File tab to view details about the source media and its metadata, including GPS information (if present).

When a file contains GPS metadata, the you can click the Latitude and Longitude values to display a map using the map service selected in the Open GPS links with drop-down list in the Options menu. Links are not available when multiple clips are selected.

Click the Mark Points tab to view essence marks embedded in the file.

If the current file contains essence marks, they will be displayed on the timeline as a diamond 🛡.

If the current clip contains discontinuous timecode, an indicator is displayed in the timeline to identify the discontinuity:

Setting the frame rate for a DPX or OpenEXR image sequence

1. Select a DPX or OpenEXR image sequence in the Media Browser.
2. Click the Summary tab.
3. Choose a value from the Frame rate drop-down list boxes to set the frame rate for playing the selected image sequence.

Editing mark in/out points

Click the Summary tab.

Type new values in the Mark in and Mark out boxes to edit the clip’s mark in and mark out points. For more information, see “Marking in and out points for playback” on page 76.
If you want to save mark in and mark out points with the library, clear the **Synchronize mark points with file** check box.

When the **Synchronize mark points with file** check box is cleared, mark in and mark out points for MXF clips are saved back to the source media when you edit them in Catalyst Prepare, and your library will be updated if the mark in and out points are edited on disk.

**Editing summary metadata**

1. Click the Summary tab.
   - Click the **Unlock** button 🗝️ to enable editing summary information for the selected files.
2. Edit the **Status**, **Title**, **Creator**, and **Description** settings as needed.
   - When editing metadata for multiple selected files, *(multiple values)* is displayed if the files’ metadata does not match. Editing the value will replace the metadata for all selected files.
3. Click **Save** ✨ to save the edited metadata values, or click **Revert** ⬐ to discard your edits.
   - Not all media formats support summary metadata.

**Assigning audio channels**

Assigning audio channels allows you to set up your clips for use in Catalyst Edit.

⚠️ The Channel Assignment controls are not editable when multiple files with differing channel counts are selected.

Channel Assignment controls are not available when no library is opened. For more information, see “Closing the library” on page 12.

Channel Assignment controls are not available when a spanned clip 🗝️ is selected.

Channel Assignment controls are not available when editing a storyboard.

Click the speaker icon to turn a channel on 🎧 or off 🎧.

Click the **Mono/Stereo** button to indicate whether a channel is a mono channel or part of a stereo pair.

Enabling **Stereo** will pair the channel with the next channel in the list.

Type a name in the edit box to identify the channel. For example, you might type **Lav1** to identify audio from a lavalier microphone.
If you want to save the current channel configuration as a preset, click the Channel Tools icon and choose Save preset from the menu.

If you want to apply a preset channel configuration to the selected file, as a preset, click the Channel Tools icon and choose Load preset from the menu.

If you want to copy channel assignments between files, select the source file, click the Channel Tools icon, and choose Copy from the menu. Next, select the destination files, click the Channel Tools icon, and choose Paste from the menu.

If you want to set all of a clip’s channels at once, click the Channel Tools button and choose Set all to mono, Set all to stereo, or Reset.

**Editing essence marks**

1. Select a clip to display its metadata.
2. Click the Mark Points tab.
3. Click an essence mark’s label or timecode value to type a new value.

   **Warning:** Adding and editing essence marks is supported only for XDCAM MXF clips and requires write access to the volume.

**Adding a mark point**

1. Select a clip to display its metadata.
2. Click the Mark Points tab.
3. Click the trackbar below the video preview to set the cursor position where you want to add a mark point (or click the timecode display to move the cursor to a specific location).
4. Click the Add Point button or press E.

**Deleting a mark point**

1. Select a clip to display its metadata.
2. Click the Mark Points tab.
3. Click an essence mark’s label or timecode to select it.
4. Click the Delete button.

**Working with clip lists**

You can create and edit clip lists for the following media types:
- XDCAM media in an XD root folder.
- XAVC media in an XD root folder.
- RAW media in an AxS folder.

A clip list is a PD-EDL (.smi) file that allows you to create a video project that is comprised of multiple, shorter video clips.

Clip lists are a helpful part of a proxy workflow when working with limited bandwidth: copy the proxy clips to your computer, create a clip list using the proxy clips, and then copy the clip list back to the camera or deck. The deck will then play the clip list using your full-resolution source.

If you need to create a project for other media types and don’t need to write back to a camera or device, you can create a storyboard. For more information, see “Working with storyboards” on page 86.

💡 When viewing a clip list,  indicates spanned clips from the same volume, and  indicates spanned clips from different volumes.

⚠️ Clip lists and spanned clips are not supported in Catalyst Prepare libraries.

Creating a clip list

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.
2. Navigate to the root folder or that contains the clips you want to use.
3. Select the files you want to include in your clip list. You can hold Shift or Control (Windows) / (macOS) to select multiple files.
4. Click the Tools button at the bottom of the Catalyst Prepare window and choose New clip list from selection from the menu.
   
   🏷️ If you want create a clip list without choosing clips, click the Tools button at the bottom of the Catalyst Prepare window and choose New empty clip list from the menu.
5. Type a name for the new clip list and click OK.
6. Catalyst Prepare loads your new clip list in View mode.

Opening a clip list

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.
2. Navigate to the root folder or that contains the clip list you want to open.
3. Double-click the clip list (.smi file) to open it.
Rearranging clips

In Clip List mode, you can add, remove, and arrange clips in the clip list. Click the **Clip List** button at the bottom of the Catalyst Prepare window to switch to Clip List mode.

You can drag clips within the clip list to rearrange them. Drag a clip and drop it to a new position on the clip list to change its position.

Adding clips

In Clip List mode, you can add, remove, and arrange clips in the clip list. Click the **Clip List** button at the bottom of the Catalyst Prepare window to switch to Clip List mode.

You can only add clips from the folder where the clip list (.smi) file is saved.

Click the add button at the end of the clip list to display a media browser, where you can select additional clips for your clip list.

Removing clips

In Clip List mode, you can add, remove, and arrange clips in the clip list. Click the **Clip List** button at the bottom of the Catalyst Prepare window to switch to Clip List mode.

Select a clip and click the **Remove** button at the bottom of the Catalyst Prepare window.
Editing clips

In Clip mode, you can log mark in and out points for your clips.

⚠️ You cannot add, delete or rearrange clips in Clip mode. Use Clip List mode for clip list editing.

1. Open the clip list you want to edit.
2. Click the Clip button at the bottom of the Catalyst Prepare window to switch to Clip mode.
   ⚠️ You can also double-click a clip in Clip List mode to switch to Clip mode.
3. Select the clip you want to edit.
4. Use the Mark In and Mark Out buttons to adjust the mark in and out points for the selected clip.
   For more information, see "Marking in and out points for playback" on page 76.

Viewing metadata for clip lists

When you’re in Media Browser or Edit mode, click the Inspector button in the toolbar to display metadata in the Inspector pane.

In Browse mode, the Metadata pane displays additional information about the currently selected clip list.

In View (Clip List or Clip) mode, the Metadata pane displays information about the selected subclip.

For more information, see "Viewing and editing metadata" on page 81.

Writing a clip list back to a device

Select a clip list in Media Browser mode and click the Copy button at the top of the Catalyst Prepare window to write a clip list back to a device. For more information, see "Copying clips to a device" on page 29.

Working with storyboards

You can create and edit storyboards to create a video project that is comprised of multiple, shorter video clips.

⚠ Storyboards are saved with the current media library.

⚠️ When no library is opened, storyboard support is not available. For more information, see "Creating or opening a library" on page 11.

If you need to create a project that can be written back to a camera or device, you can create a PD-EDL clip list. For more information, see "Working with clip lists" on page 83.
Creating a storyboard

1. Click the Media Browser button at the top of the Catalyst Prepare window.
2. Navigate to the folder that contains the clips you want to use.
3. Select the files you want to include in your clip list. You can hold Shift or Control (Windows) / ⌘ (macOS) to select multiple files.
4. Click the Storyboard button at the bottom of the Catalyst Prepare window and choose Create from selection from the menu.
   - The Create from selection command is not available when a clip list or spanned clip (≠) is selected.
   - If you want to create a storyboard list without choosing clips, click the Storyboard button at the bottom of the Catalyst Prepare window and choose Create empty from the menu.
5. Type a name for the storyboard and click OK.

Opening a storyboard

1. Click the Media Browser button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.
3. Click the Edit button to load your storyboard in Edit mode.
   - When viewing a storyboard, ≠ indicates spanned clips from the same volume, and ≠ indicates spanned clips from different volumes.

Rearranging clips

In Edit mode, you can add, remove, and arrange clips.

You can drag clips within the storyboard to rearrange them. Drag a clip and drop it to a new position to move it.
Adding clips

1. Click the Media Browser button at the top of the Catalyst Prepare window.

2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.

   🍩 When the Add To button at the bottom of the Catalyst Prepare window is selected, you can quickly add a clip to the selected storyboard by selecting it and clicking the Add button (or pressing Enter). Use the Add clip to storyboard drop-down list to select a storyboard.

   When you add a clip, a vertical line is added to the timeline to indicate where each clip begins:

   ![Timeline with clips](image)

   You can also drag clips from the Organize pane to a bin or storyboard in the Places pane.

3. Click the Edit button to load your storyboard in Edit mode.

4. Click the add button at the end of the clip list or the Add button at the bottom of the Catalyst Prepare window to display a media browser, where you can select additional clips for your storyboard.

Removing clips

1. Click the Media Browser button at the top of the Catalyst Prepare window.

2. Click a storyboard in the Storyboards section of the left pane. The storyboard’s clips are displayed in the center pane.

3. Click the Edit button to load your storyboard in Edit mode.

   Select a clip and click the Remove button 🛠 at the bottom of the Catalyst Prepare window.

Editing clips

In Clip mode, you can log mark in and out points for your clips.

⚠️ You cannot add, delete, or rearrange clips in Clip or Adjust Color mode. Use Storyboard mode for clip list editing.
1. Click the **Media Browser** button at the top of the Catalyst Prepare window.

2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.

3. Click the Edit button to load your storyboard in Edit mode.

4. Click the **Clip** button at the bottom of the Catalyst Prepare window to switch to Clip mode.
   
   You can also double-click a clip in Storyboard mode to switch to Clip mode.

5. Select the clip you want to edit.

6. Use the **Mark In** and **Mark Out** buttons to adjust the mark in and out points for the selected clip.

   For more information, see “Marking in and out points for playback” on page 76.

   Editing a storyboard clip's mark in and out points does not affect other storyboards that use the same clip.

---

### Adjusting color correction for clips

In Adjust Color mode, you can adjust color correction settings for each clip in a storyboard.

You cannot add, delete, or rearrange clips in Clip or Adjust Color mode. Use Storyboard mode for clip list editing.

1. Click the **Media Browser** button at the top of the Catalyst Prepare window.

2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.

3. Click the Edit button to load your storyboard in Edit mode.

4. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window to switch to Adjust Color mode. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

5. Select the clip you want to edit.

6. Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see “Editing Color Adjustments controls” on page 95.
Previewing storyboards

When you double-click a storyboard in Media Browser mode, the storyboard is loaded in Edit mode, where you can preview the file in the same way you preview other clips. For more information, see “Previewing video” on page 72.

You can select a clip to set the starting point for playback, and the clip selection will follow the cursor during playback.

Exporting storyboards

When you select a storyboard in Media Browser mode, you can export the storyboard in one of three ways:

- You can render each of the storyboard’s clips to a new format.
- You can render the storyboard as a single media file.
- You can export the storyboard as a project for use in another video editor.

For more information, see “Rendering a storyboard as separate files” on page 32, “Rendering a storyboard as a single clip” on page 37, or “Exporting a storyboard to another editor” on page 41.

Using Catalyst Prepare storyboards in Catalyst Edit

Catalyst Edit provides native support for Catalyst Prepare storyboards:

1. In the Catalyst Edit Media Browser, double-click a .cpreplib file. When you open a Catalyst Prepare library, the Media Browser displays all the media contained in that library sorted in bins.

   The default location for .cpreplib files is C:\Users\<username>\Videos\ on Windows and /Users/<username>/Movies/ on macOS.

2. Drag a storyboard bin to the Catalyst Edit timeline to add it.

Viewing metadata for storyboards

Click the Inspector button in the toolbar to display metadata in the Inspector pane. The Inspector pane displays information about the selected subclip.

For more information, see “Viewing and editing metadata” on page 81.

Renaming a storyboard

1. Click the Media Browser button at the top of the Catalyst Prepare window.

2. Click a storyboard in the Storyboards section of the left pane. The storyboard’s clips are displayed in the center pane.
3. Click the **Storyboard** button at the bottom of the Catalyst Prepare window and choose **Rename** from the menu.

4. Type a name for the storyboard and click **OK**.

**Deleting a storyboard**

1. Click the **Media Browser** button at the top of the Catalyst Prepare window.

2. Click a storyboard in the Storyboards section of the left pane. The storyboard’s clips are displayed in the center pane.

3. Click the **Storyboard** button at the bottom of the Catalyst Prepare window and choose **Delete** from the menu.
Working with EDLs

You can use Catalyst Browse to import an EDL.

Importing an EDL

1. Click the Tools button at the bottom of the Catalyst Prepare window and choose Import EDL. The Import EDL dialog is displayed.
2. Select the EDL you want to import.
3. Choose a setting from the Frames per second drop-down list to set the frame rate of the EDL.
4. Click Import. The EDL Import workspace is displayed with the contents of the EDL.

Linking and unlinking clips

After you import an EDL, you can use the EDL Import workspace to link and unlink clips.

To link your clips, select a clip, click the Link button (or double-click an unlinked clip’s thumbnail) and browse for the source media.

💡 If other unlinked clips exist in the folder, they will be linked automatically. If you want to link only the selected clip, clear the Automatically link clips check box.

To unlink a clip, select it and click the Unlink button . If you want to unlink all clips, click the More button and choose Unlink all from the menu.

Replacing clips

You can use the Replace media command to replace a clip in an EDL with a different media file.

1. Select a clip in the EDL.
2. Click the More button and choose Replace media from the menu.
3. Browse to the new clip and click OK.
Combining relay clips
You can use Catalyst Prepare to combine AVCHD relay-recorded clips into a single clip.

Before combining relay clips, copy them to a single folder. For more information, see “Finding media” on page 53.

1. Select the clips you want to combine.
   - Clips must be of the same operating point and the timecode must be sequential.

2. Click the Tools button at the bottom of the Catalyst Prepare window and choose Combine relay clips. The Combine Relay Clips dialog is displayed.

3. In the Combined file name box, type the name you want to use for the new clip.

4. Click OK.

Synchronizing multicamera clips
You can use Catalyst Prepare to synchronize audio in clips from a multicamera shoot.

When you synchronize clips, the mark-in points of the selected clips are adjusted as needed to allow the clips to play in synchronization. Synchronizing your clips in Catalyst Prepare streamlines the process of editing multicamera video in a nonlinear editor.

1. Select the clips you want to synchronize.

2. Click the Tools button at the bottom of the Catalyst Prepare window and choose Synchronize multicam clips.
   - Progress is displayed while the clips are analyzed and synchronized.

Repairing flash bands
When a camera flash is fired, it can create a band of light in your video.

Catalyst Prepare can detect and remove flash bands.

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Select the clip you want to repair.

3. Click the Tools button at the bottom of the Catalyst Prepare window and choose Repair flash bands. The Flash Band workspace is displayed.
4. Use the Flash Band workspace to identify the flash bands you want to repair:
   
a. Set the Mark In/Out points to indicate the portion of the clip you want to scan. For more information, see “Marking in and out points for playback” on page 76.
   
b. Click the Detect button 🌡 to scan the clip and mark flash bands automatically. A marker 🟣 is added to the timeline, and an entry is created in the Inspector.

   Automatic flash band detection is available only for MXF clips. To mark a flash band manually, click the trackbar below the transport controls to set the play position indicator and click the Add button 🔄 in the Inspector.

   Please note that automatic and manual flash-band repair can yield different results.

   To remove a flash band marker, select it in the Inspector and click the Delete button 🚫.

   Click the Before/After button in the top-right corner of the video preview to choose a preview mode so you can compare your original and repaired video before applying the changes.

   - 📸 Before: full-frame video is displayed in its original state.
   - 📸 After: full-frame video is displayed in its repaired state.

5. Click Repair. The transcode dialog is displayed to allow you to choose settings for the repaired file.
Applying color correction

If you’ve used multiple cameras within a project or if the lighting varies between shots, the resulting clips can look noticeably different. You can use color correction to minimize the differences or to apply an artistic look to your clips.

Color-correction settings are stored with each clip in the library and do not affect your source media.

When no library is opened, color adjustments are applied globally to all clips for previewing. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "Transcoding clips" on page 24.

Color adjustments to clip lists or spanned clips are not available when a library is open. For more information, see "Closing the library" on page 12.

Editing Color Adjustments controls

You can use the Color Adjustments controls in the Inspector to perform color grading for individual clips in your library.

After you edit a clip’s color adjustments, those settings will be loaded each time you load the clip.

Loading a clip/clip list for color adjustments and configuring the waveform, histogram, and vectorscope monitors

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color adjustments saved with the clip are loaded.

   Color adjustments are available only in Edit mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In the Adjust Color workspace, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values.

The **Preview color space** setting in Options is also applied to the waveform, histogram, and vectorscope so you can check your video using scopes. For more information, see “Choosing a color space for the video preview and external monitor” on page 121.

- Click the **Waveform** button at the bottom of the window to toggle the waveform monitor.

The waveform monitor displays the luminance values (brightness or Y component) of your video signal. The monitor plots luminance values on the vertical axis and the width of the current frame on the horizontal axis.

You can use the buttons at the top of the waveform monitor to display overlaid (\(\infty\)) or separate (\(\infty\)) RGB waveforms and isolate colors \(\infty\) \(\infty\) \(\infty\).

**Waveform settings**

Click the **Settings** button \(\infty\) to open the Waveform Settings menu. You can use the Waveform Settings menu to change the scale of the waveform monitor and enable AIR matching when grading HDR clips.

The **Settings** button \(\infty\) is available only when the **Working color space** drop-down is set to **Rec.2020/S-Log3 (HDR)** and the **Preview color space** drop-down is set to **Rec.2020/S-Log3, Rec.2020/HLG, Rec.2020/HLG AIR Matching, Rec.2020/HLG (bypass OOTF), Rec.2020/PQ, Rec.2020/PQ AIR Matching, or Rec.2020/PQ (bypass OOTF)**.

For more information, see “Choose a setting from the Working color space drop-down list to choose the color space that will be used for color grading.” on page 120 or “Choosing a color space for the video preview and external monitor” on page 121.

You can click the % or **Nits** button to change the units displayed in the waveform.

When the **Preview color space** is set to **Rec.2020/HLG, Rec.2020/HLG AIR Matching, or Rec.2020/HLG (bypass OOTF)**, the **Nits** value is calculated for a peak luminance of 1000 cd/m\(^2\).

When the **Preview color space** drop-down is set to **Rec.2020/S-Log3**, you can use the **AIR Matching** switch to toggle AIR (Artistic Intent Rendering) matching to achieve a consistent look between **Rec.2020/S-Log3-based grading and a configured HLG (hybrid log-gamma) or PQ (perceptual quantizer) monitor**.

The **AIR Matching** switch is automatically turned on when the **Preview color space** drop-down is set to **Rec.2020/HLG AIR Matching or Rec.2020/PQ AIR Matching**.
- Click the **Histogram** button at the bottom of the window to toggle the histogram monitor.

The histogram monitor displays the number of pixels that exist for each color intensity. The vertical axis represents the number of pixels, and the horizontal axis represents the RGB color range from 0,0,0 to 0,0,255.

You can use the buttons at the top of the histogram monitor to display overlaid ( ) or separate ( ) RGB histograms and isolate colors .

- Click the **Vectorscope** button at the bottom of the window to toggle the vectorscope monitor.

The vectorscope monitor allows you to monitor the chroma values (color content) of your video signal. The monitor plots hue and saturation on a color wheel.

The vectorscope displays targets for broadcast-legal saturations of red (R), magenta (Mg), blue (B), cyan (Cy), green (G), and yellow (Yl). Individual colors in your video signal are displayed as dots in the vectorscope. A dot's distance from the center of the scope represents its saturation, and the angle of the line from the dot to the center of the scope represents its hue.

For example, if an image has a blue cast, the distribution of dots in the vectorscope will be concentrated toward the blue portion of the color wheel. If the image includes out-of-range blue values, the vectorscope display will extend beyond the blue target.

You can use the vectorscope to calibrate color between scenes. Without calibration, you may see noticeable color differences between scenes from multicamera shoots.

Click the **Settings** button to open the Vectorscope Settings menu.

The Vectorscope Settings menu allows you to toggle a monochrome view of the scope, change the scale of the scope, adjust the brightness of the colors displayed in the scope, and adjust the brightness of the scope's guide (graticule).

💡 Use the 75% **Scale** setting when performing color correction for broadcast, or use the 100% setting when performing color correction for film or Web distribution with a wider color gamut.

- The video preview window displays the current frame at the playback position indicator.

Click the **Preview** button in the top-right corner of the video preview to choose a preview mode. Split-screen previews allow you to split the video preview and waveform/histogram/vectorscope monitor so you can see your affected and unaffected video at the same time.

- **Before**: full-frame video is displayed in its original state.

- **After**: full-frame video is displayed in its color-corrected state.
- **Split**: a single frame is displayed in a split-screen view with the original video on the left and the color-corrected video on the right.

  If you want to move the split location, hover over the preview frame. When the split point is displayed, you can drag the handles at the top or bottom of the screen to adjust where the preview is split:

  ![Split Screen](image)

- **2 Up**: two full frames are displayed in a split-screen view with the original video on the left and the color-corrected video on the right.

### Adjusting the color wheels

In the Adjust Color workspace, the bottom of the Catalyst Prepare window provides color wheels for Lift, Gamma, and Gain. The wheels provide a visual representation of the current levels and allow you to adjust color quickly. As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress.

The color wheels are used to edit ASC-CDL (American Society of Cinematographers Color Decision List) parameters.

Click the **Wheels** button to show or hide the color wheels.

Drag the point in the center of the color wheel to pick the hue and saturation you want to add to the video, or drag the slider on the side of the color wheel to increase luminance for all RGB components simultaneously. You can double-click the point to reset the color wheel or double-click the slider handle to reset the luminance.

💡 When you drag the color correction controls, they move in fine increments. To move controls in larger increments, hold Shift while dragging.
Choosing a color space

Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Color Space section in the Inspector pane provides color space controls that you can use to choose the source and conversion color spaces.

💡 If the selected color space is not compatible with the source color space and cannot be exported, a warning is displayed to notify you.

Choosing a source color space

Click the Unlock button and choose a setting from the Source drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated. The source color space should be detected automatically and does not need to be changed in most cases.

💡 The Unlock button is not used when editing RAW or X-OCN video.

Converting between HDR/wide color gamut color spaces

When an HDR or wide color gamut color space is selected is selected in the Source drop-down list, you can choose a different HDR/WCG color space from the Convert to drop-down list to apply grading in the selected color space or apply a look profile that is available in the selected color space.

You can also convert HDR/WCG clips to Rec.709 by choosing Convert to > 709(800). The 709 (800) setting applies a 1D curve. If you want to use a 3D LUT to convert HDR/WCG clips, you will need to apply a look profile.

💡 The Convert to drop-down is available only when the Working color space setting is Rec.709, Log, or ACES and you’re working with S-Gamut, RAW, and X-OCN source media.

For more information, see “Applying a look profile” on page 100, “Grading with hypergamma conversion” on page 107, or “High Dynamic Range (HDR) color grading” on page 111.

Viewing the working color space

The Working box displays the color space that will be used for color grading. Click the Options button and choose a setting from the Working color space drop-down list to change the setting.

💡 Click the Reset button at the bottom of the Inspector pane to reset the Source and Convert to color space based on the clip’s metadata.

Viewing the color space for the video preview

The Preview box displays the color space that will be used for the Catalyst Prepare video preview window. Click the Options button and choose a setting from the Preview color space drop-
down list to change the setting.

Viewing the color space for the external monitor

If an external monitor is enabled, the External monitor box displays the color space that will be used for the external monitor. Click the Options button and choose a setting from the External monitor color space drop-down list to change the setting.

Adjusting exposure, temperature, and tint

Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Source Settings section in the Inspector pane provides the Exposure, Temperature, and Tint sliders to adjust the color content of your clip.

💡 Exposure, temperature, and tint are not available for all color spaces.

- Drag the Exposure slider to adjust the overall brightness of your video.
- Drag the Temperature slider to adjust the color temperature (in Kelvin) of your video. Adjusting the temperature modifies the red and blue gain by adding an offset to the temperature setting saved in a clip’s metadata.
- Drag the Tint slider to adjust color balance of your video. Adjusting the tint allows you to modify the magenta and green gain to supplement the color temperature setting by adding an offset to the tint setting saved in a clip’s metadata.

💡 Double-click a control to reset its value.

Applying a look profile

You can use the Look profile drop-down list to apply a look profile/LUT to a clip.

Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Look section in the Inspector pane contains the Look profile drop-down list.

The Look profile drop-down is available only when the Source Color Space Convert to drop-down list is set to S-Gamut/S-Log2 or S-Gamut3.Cine/S-Log3 and the Working color space drop-down list set to Rec.709.

💡 If you want to set a default look profile to be applied when no look profile is specified in a clip’s metadata, choose a setting from the Look profile drop-down list, click the Look Tools button, and choose Make default.

To replace the clip’s current look profile with the default, click the Look Tools button, and choose Reset to default.

Click the Reset button at the bottom of the Inspector pane to reset the Look profile based on the clip’s metadata.
To add look profiles (including .cube files) to Catalyst Prepare, save them in the following folder and then close and restart the application:

Windows: C:_USERS\<user>\Documents\Sony\Catalyst\Color\Looks\n
macOS: /Users/<user>/Documents/Sony/Catalyst/Color/Looks/

- The sgamut-slog2 subfolder is used for S-Gamut/S-Log2 sources.
- The sgamut3cine-slog3 subfolder is used for S-Gamut3.Cine/S-Log3 sources or Convert to choices.
- The sgamut3-slog3 subfolder is used for S-Gamut3/S-Log3 sources or Convert to choices.

Adjusting the tone curve

Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Tone Curve section in the Inspector pane contains a color curve you can use to adjust the red, green, and blue channels graphically. As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress.

The tone curve controls are used to edit look-up tables (LUTs).

- Select the channel you want to adjust by clicking the Red, Green, or Blue button below the color curve, or click the White button to adjust all RGB components simultaneously.
- Click the curve to add a control point.
- Select a control point and drag it to adjust it.
- As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress. Click Delete Point to remove the selected control point.
- Click the Reset button at the bottom of the Inspector pane to remove all control points.

Adjusting the color correction sliders

Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Color Correction section in the Inspector pane provides Brightness, Contrast, Saturation, Lift, Gamma, and Gain sliders you can use to adjust the values of the red, green, and blue channels. As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress.

The sliders are used to edit ASC-CDL (American Society of Cinematographers Color Decision List) parameters.

For precise control, you can hold Ctrl (Windows) or (macOS) or click the numeric value to type a new value.
Drag the Brightness slider to adjust the overall lightness of your video.

Drag the Contrast slider to adjust the overall contrast of your video.

⚠️ Brightness and contrast are not saved explicitly with ASC-CDL files. When exporting an ASC-CDL file, the Brightness and Contrast settings are incorporated with the other color-correction values. When you reload an exported ASC-CDL file, the Brightness and Contrast settings will be set to 0.

When exchanging color settings with Catalyst Browse and Catalyst Prepare, click the Tools button at the bottom of the Catalyst Prepare window and choose Save preset from the menu to preserve Brightness and Contrast settings.

For more information, see "Exporting color-correction settings" on page 113 and "Applying color-correction settings" on page 103.

Drag the Saturation slider to adjust the overall intensity of the color in your video.

To adjust lift, gamma, and gain, drag the R, G, B sliders to adjust the red, green, and blue components of the each parameter, or drag the Y slider to adjust luminance for all RGB components simultaneously.

💡 Double-click a control to reset its value.

Click the Undo ⬅️ and Redo ⬅️ buttons to step forward or backward through your recent edits.

Click the Reset button ⬅️ at the bottom of the Inspector pane to reset all color correction.
Applying color-correction settings

You can use the Tools button at the bottom of the Catalyst Prepare window to load color presets or ASC-CDL (American Society of Cinematographers Color Decision List) files to exchange color-grading information.

Applying a color preset

Color presets include the source settings (exposure, temperature, and tint), look profile, tone curve, and ASC-CDL settings. For more information, see “Editing Color Adjustments controls” on page 95.

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   ![Tip](If you want to apply color correction to multiple clips, select the clips, click the Tools button at the bottom-left of the Catalyst Prepare window, and choose Apply color preset from the menu.)

   *The Apply color preset command is not available when a clip list or spanned clip ( ) is selected.*

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window.

4. Click the Inspector button in the toolbar to display the Inspector pane.

5. Click the Tools button at the bottom of the Catalyst Prepare window and choose Load preset from the menu.

6. In the Load Preset dialog, choose a Catalyst color (.ccolor) file.

   ![Tip](Presets are saved in the following folders by default:
   - Windows: C: \Users\<user>\Documents\Sony\Catalyst\Color\
   - macOS: /Users/<user>/Documents/Sony/Catalyst/Color)

7. Click Load.

   The selected color settings are loaded and applied to the current clip.
Applying an ASC-CDL file

1. Click the **Media Browser** button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   ![Icon](image)

   If you want to apply color correction to multiple clips, select the clips, click the **Tools** button at the bottom-left of the Catalyst Prepare window, and choose **Apply ASC-CDL** from the menu.

   ![Warning](image)

   The **Apply ASC-CDL** command is not available when a clip list or spanned clip ( lửa ) is selected.

3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window.

4. Click the **Inspector** button in the toolbar to display the Inspector pane.

5. Click the **Tools** button at the bottom of the Catalyst Prepare window and choose **Load ASC-CDL** from the menu.


7. Click **Load**.

   The selected color settings are loaded and applied to the current clip.

Using a Tangent control

You can use Tangent Element Tk, Kb, Bt, Mf, Vs, or Tangent Wave control panels to adjust color circles and other parameters.

![Icon](image)

Tangent Element panels must be connected to your computer via USB. When using Tangent Element-Vs on a tablet, your tablet and the computer running Catalyst Prepare must be connected to the same network.

To enable control, Tangent Hub must be installed on the computer.

For more information about using and configuring Tangent hardware and software, please refer to the Tangent documentation.

For information about control mappings, please see the control’s display or use the Tangent Mapper application.
Video-style (Rec.709) color grading

Use the following workflow when adjusting color grading for video sources.

Grading with Rec.709 gamma

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   Color correction is available only in Edit mode.

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see “Editing Color Adjustments controls” on page 95.

4. Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

5. The Source drop-down list displays the color space that is applied to your source media. Click the Unlock button and choose a setting from the Source drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.

   The source color space should be detected automatically and does not need to be changed in most cases.

   - Choose S-Gamut/S-Log2 for S-Log2, RAW, or X-OCN sources.

6. The Working box displays the color space that should be applied to color grading adjustments. Click the Options button and choose Rec. 709 from the Working color space drop-down list to change the setting if necessary.

8. If your source video is set to S-Gamut/S-Log2, S-Gamut3.Cine/S-Log3, or S-Gamut3/S-Log3, choose a setting from the Look profile drop-down list to choose the profile that is applied to convert your video to Rec.709 (full).

To add look profiles (including .cube files) to Catalyst Prepare, save them in the following folder and then close and restart the application:

Windows: C:\Users\<user>\Documents\Sony\Catalyst\Color\Looks\macOS: /Users/<user>/Documents/Sony/Catalyst/Color/Looks/

- The sgamut-slog2 subfolder is used for S-Gamut/S-Log2 sources.
- The sgamut3cine-slog3 subfolder is used for S-Gamut3.Cine/S-Log3 sources or Convert to choices.
- The sgamut3-slog3 subfolder is used for S-Gamut3/S-Log3 sources or Convert to choices.

9. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "Editing Color Adjustments controls" on page 95.

10. Click the Tools button at the bottom of the Catalyst Prepare window and choose Export color settings from the menu if you want to export your settings as a 3D LUT file.

3D LUT export is available only when the Source drop-down list is set to an S-Log, RAW, or X-OCN format.
Grading with hypergamma conversion

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   Color correction is available only in Edit mode.

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see “Editing Color Adjustments controls” on page 95.

4. Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

5. The Source drop-down list displays the color space that is applied to your source media. Click the Unlock button and choose a setting from the Source drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.

   The source color space should be detected automatically and does not need to be changed in most cases.

   - Choose S-Gamut/S-Log2 for S-Log2, RAW, or X-OCN sources.

6. The Working box displays the color space that should be applied to color grading adjustments. Click the Options button and choose Rec. 709 from the Working color space drop-down list to change the setting if necessary.

7. From the Convert to drop-down list, choose 709(800), HG8009G33, or HG8009G40.

   When you select None, output will be S-Log. When you select HG8009G33, or HG8009G40, output will be Rec.709 full.

   The Convert to drop-down is available only when the Working color space setting is Rec.709, Log, or ACES and you’re working with S-Gamut, RAW, and X-OCN source media.

9. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see “Editing Color Adjustments controls” on page 95.

10. Click the Tools button at the bottom of the Catalyst Prepare window and choose Export color settings from the menu if you want to export your settings as a 3D LUT file.

   3D LUT export is available only when the Source drop-down list is set to an S-Log, RAW, or X-OCN format.

Log (cinematic) color grading

Use the following workflow when adjusting color grading for Log sources.

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   Color correction is available only in Edit mode.

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see “Editing Color Adjustments controls” on page 95.

4. Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

5. The Source drop-down list displays the color space that is applied to your source media. Click the Unlock button and choose a setting from the Source drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.

   - Choose S-Gamut/S-Log2 for S-Log2, RAW, or X-OCN sources.

6. The Working box displays the color space that should be applied to color grading adjustments. Click the Options button and choose Log from the Working color space drop-down list to change the setting if necessary.

7. If your source video is set to S-Gamut/S-Log2, S-Gamut3.Cine/S-Log3, or S-Gamut3/S-Log3, you can use the Source Settings controls to adjust the Exposure, Temperature, and Tint of your clip. For more information, see “Editing Color Adjustments controls” on page 95.
8. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see “Editing Color Adjustments controls” on page 95.

9. Choose a setting from the Look profile drop-down list to choose the profile that is applied to convert your video to Rec. 709 (full).

   When you choose None from the Look profile drop-down list, the output will be S-Log.

   To add look profiles (including .cube files) to Catalyst Prepare, save them in the following folder and then close and restart the application:

   Windows: C:\Users\<user>\Documents\Sony\Catalyst\Color\Looks\n
   macOS: /Users/<user>/Documents/Sony/Catalyst/Color/Looks/

   - The sgamut-slog2 subfolder is used for S-Gamut/S-Log2 sources.
   - The sgamut3cine-slog3 subfolder is used for S-Gamut3.Cine/S-Log3 sources or Convert to choices.
   - The sgamut3-slog3 subfolder is used for S-Gamut3/S-Log3 sources or Convert to choices.

10. Click the Tools button at the bottom of the Catalyst Prepare window and choose Export color settings from the menu if you want to export your settings as a 3D LUT file.

   3D LUT export is available only when the Source drop-down list is set to an S-Log, RAW, or X-OCN format.

Advanced cinematic (ACES) color grading

Use the following workflow when adjusting color grading in the Academy Color Encoding System (ACES) color space.

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   Color correction is available only in Edit mode.

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see “Editing Color Adjustments controls” on page 95.

4. Click the Inspector button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.
5. The **Source** drop-down list displays the color space that is applied to your source media. Click the **Unlock** button and choose a setting from the **Source** drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.

- Choose **S-Gamut/S-Log2** for S-Log2, RAW, or X-OCN sources.

6. The **Working** box displays the color space that should be applied to color grading adjustments. Click the **Options** button and choose **ACES** from the **Working color space** drop-down list to change the setting if necessary.

7. If your source video is set to **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, or **S-Gamut3/S-Log3**, you can use the Source Settings controls to adjust the **Exposure**, **Temperature**, and **Tint** of your clip. For more information, see “Editing Color Adjustments controls” on page 95.

8. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see “Editing Color Adjustments controls” on page 95.

9. Click the **Tools** button at the bottom of the Catalyst Prepare window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file.

   Output will be Rec.709 (full).

   3D LUT export is available only when the **Source** drop-down list is set to an S-Log, RAW, or X-OCN format.
High Dynamic Range (HDR) color grading

Use the following workflow to adjust color grading in the Rec.2020/S-Log3 color space and then convert to high dynamic range (Rec.2020/S-Log3, Rec.2020/HLG, or Rec.2020/PQ) or standard dynamic range (Rec.2020 or Rec.709) color spaces for distribution.

1. Adjust Catalyst Prepare options for HDR color grading:
   a. Click the Options button.
   b. From the Working color space drop-down list, choose Rec.2020/S-Log3 (HDR).
      When you choose Rec.2020/S-Log3 from the Working color space drop-down list, you can enable the SDR gain switch to convert between standard- and high-dynamic-range content.
      When the switch is enabled, you can drag the Gain slider to choose the gain that is applied when reading SDR content or when exporting to an SDR format or displaying on an SDR display.
      For example, if you set the slider to 6 dB, a linear gain of +6 dB (2.0x) is applied when reading SDR content, and a linear gain of -6 dB (0.5x) is applied when exporting to an SDR format or displaying on an SDR display.
   c. From the Preview color space drop-down list, choose the color space for the Catalyst Prepare video preview window.
      In most cases, choose Rec.709 for your computer monitor, or you can choose other settings to check your video using scopes. For more information, see “Loading a clip/clip list for color adjustments and configuring the waveform, histogram, and vectorscope monitors” on page 95.
   d. From the External monitor color space drop-down list, choose the setting that matches the EOTF (electro-optical transfer function) setting on your external monitor.
You can use the AIR Matching (Artistic Intent Rendering) or bypass OOTF settings to achieve a consistent look between external-monitor previews and rendered clips.

**Using AIR Matching to monitor using the S-Log3 (Live HDR) EOTF**

Sony BVM-X300 version 2.0 monitor settings:
- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (Live HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor color space** drop-down list.

Content mastered using these settings and rendered to HLG or PQ with AIR Matching should have the same look on HLG or PQ monitors or televisions.

**Using bypass OOTF to monitor using the S-Log3 (HDR) EOTF**

Sony BVM-X300 version 2.0 monitor settings:
- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor color space** drop-down list.

Content mastered using these settings and rendered to HLG or PQ with bypass OOTF should have the same look on HLG or PQ monitors or televisions.

**Converting HDR media to SDR color spaces**

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve your **Rec.2020/S-Log3** grading (the dynamic range of the HDR color space will be clamped to the BT.709 gamma curve):
- In Options, set the **Working color space** to **Rec.2020/S-Log3 (HDR)**.
- In Options, enable the **SDR gain** switch and adjust the **Gain** slider to choose the gain that will be applied when exporting to an SDR format or displaying on an SDR display.
- In Options, set the **Preview color space** for the video preview to **Rec.709** or **Rec.2020**.

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve more of the dynamic range of the original HDR media:
○ In Options, set the Working color space to Rec.709.
○ In the Inspector, set the Convert to color space to 709(800), HG8009G33, or HG8009G40.

e. From the External monitor device drop-down list, choose the device where you’ve connected a monitor that supports the Rec.2020 color gamut and an HDR luminance curve, such as the Sony BVM-X300.

f. From the Monitor resolution drop-down list, choose the appropriate resolution for your external monitor.

2. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

3. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   Color correction is available only in Edit mode.

4. Click the Adjust Color button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see “Editing Color Adjustments controls” on page 95.

5. Click the Inspector button information in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

6. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see “Editing Color Adjustments controls” on page 95.

7. Click the Tools button wrench at the bottom of the Catalyst Prepare window and choose Export color settings from the menu if you want to export your settings as a 3D LUT file.

   Output will use the External monitor color space drop-down list in the External Monitor section of the Options menu (selected in step 1d above).

   3D LUT export is available only when the Source drop-down list is set to an S-Log, RAW, or X-OCN format.

Exporting color-correction settings

You can use the Tools button wrench at the bottom of the Catalyst Prepare window to export color-correction settings to cameras for on-set monitoring or to a nonlinear editor (NLE) for color grading.

Saving a color preset

Color presets include the source settings (exposure, temperature, and tint), look profile, tone curve, and
ASC-CDL settings. For more information, see "Editing Color Adjustments controls" on page 95.

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.
   - Color correction is available only in Edit mode.

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window.

4. Click the Inspector button in the toolbar to display the Inspector pane.

5. Click the Tools button at the bottom of the Catalyst Prepare window and choose Save preset from the menu.

6. In the Save Preset dialog, type a file name to identify your Catalyst color (.ccolor) file.
   - Presets are saved in the following folders by default:
     Windows: C:\Users\<user>\Documents\Sony\Catalyst\Color\macOS: /Users/<user>/Documents/Sony/Catalyst/Color

7. Click OK.

Exporting an ASC-CDL file

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.
   - Color correction is available only in Edit mode.

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.
4. Click the **Inspector** button in the toolbar to display the Inspector pane and adjust your color settings as needed. For more information, see “Editing Color Adjustments controls” on page 95.

Saturation and color wheel/slider settings are saved with ASC-CDL files. Tone curve settings are not saved.

Brightness and contrast are not saved explicitly with ASC-CDL files. When exporting an ASC-CDL file, the **Brightness** and **Contrast** settings are incorporated with the other color-correction values. When you reload an exported ASC-CDL file, the **Brightness** and **Contrast** settings will be set to 0.

When exchanging color settings with Catalyst Browse and Catalyst Prepare, click the **Tools** button at the bottom of the Catalyst Prepare window and choose **Save preset** from the menu to preserve **Brightness** and **Contrast** settings.

For more information, see “Exporting color-correction settings” on page 113 and “Applying color-correction settings” on page 103.

5. Click the **Tools** button at the bottom of the Catalyst Prepare window and choose **Export color settings** from the menu.

6. Use the Export As dialog box to specify the folder, file name, and settings you want to export:
   a. Use the browser to select the folder where you want to save your file.
   b. In the **File name** box, type the path and file name you want to save your color-correction settings.
   c. Choose **ASC-CDL** from the **Format** drop-down list.

7. Click **Export**.
Exporting a 3D LUT for Resolve or HDLink

When the source is Sony RAW, X-OCN, S-Gamut/S-Log2, S-Gamut3.Cine/S-Log3, or S-Gamut3/S-Log3, you can export a 3D LUT in Resolve or HDLink format.

1. Click the Media Browser button at the top of the Catalyst Prepare window to view the Media Browser.

2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

   🌟 Color correction is available only in Edit mode.

3. Click the Adjust Color button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

4. Click the Inspector button in the toolbar to display the Inspector pane and adjust your color settings as needed. For more information, see “Editing Color Adjustments controls” on page 95.

5. Click the Tools button at the bottom of the Catalyst Prepare window and choose Export color settings from the menu.
6. Use the Export As dialog box to specify the folder, file name, and settings you want to export:
   a. Use the browser to select the folder where you want to save your file.
   b. In the File name box, type the file name you want to save your color-correction settings.
   c. Choose 3D LUT Resolve or 3D LUT HDLink from the Format drop-down list.
   d. Choose a setting from the Input color space drop-down list to specify the color space of your source media.
   e. Choose a setting from the Output color space drop-down list to specify the color space that will be used as the output of the LUT.
      Output color space is available only when the Working color space color space to Rec.2020/S-Log3 (HDR). For more information, see “High Dynamic Range (HDR) color grading” on page 111.
   f. Select the Source settings check box if you want to include exposure, temperature, and tint settings with your LUT.
   g. Select the Convert to setting check box if you want to export your LUT using the color space selected in the Convert to drop-down list in the Inspector.
      The Tone curve and Color correction check boxes are available only when Convert to setting is selected.
   h. Select the Tone curve check box if you want to include the tone curve from the Inspector in your LUT.
   i. Select the Color correction check box if you want to include the color correction adjustments curve from the Inspector in your LUT.
   j. Select the Look profile check box if you want to include the selected look profile from the Inspector in your LUT. The LUT file will be saved in the folder you selected in step 6a.
      The Look profile check box is available only when the grading color space is Rec.709.
7. Click Export.
Editing Catalyst Prepare options

Click the Options button to edit your application options.

If you need to reset all Catalyst Prepare options to their default values, hold Control + Shift when starting the application.

Choosing a video processing device

Choose a setting from the Video processing device drop-down list to enable or bypass GPU-accelerated video playback and transcoding.

Choose CPU if you want to turn off GPU acceleration, or choose a device from the list to enable GPU-accelerated playback.

The optimal GPU device is automatically selected. Changing this value is intended for advanced users and may be useful for troubleshooting technical problems.

Computers equipped with CPUs that utilize Intel’s Quick Sync Video (QSV) technology see improved processing performance for decoding H.264/AVC/MPEG-4 video files.

When using a device other than your CPU, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets. Please note that some systems with limited GPU memory are not supported.

- High-quality deinterlacing is applied to interlaced source media when playback is paused, during transcoding, and during playback when the Playback Settings Speed/Quality setting is set to Quality.

- High-quality upscaling is applied during transcoding when you choose an HD or UHD render preset.

Choosing a default transcoding format

Choose a setting from the Default transcoded format drop-down list to choose the format that will be used when copying partial clips that cannot be copied in their source format or when uploading to Ci.

For more information, see “Exporting media from a library” on page 24 or “Organizing media in a library” on page 16.

Choosing a map service for GPS links

Choose a setting from the Open GPS links with drop-down list to choose the map service that will be used to display maps when you click GPS links in a clip’s metadata.

For more information, see “Viewing and editing metadata” on page 81.
Enabling the secondary window

Enable the Secondary preview window switch if you want to show the video preview in a secondary window that you can position anywhere on your screen or on a secondary monitor.

Enable proxy clip playback

Enable the Preview using proxy clips switch if you want to use proxy clips for playback if they are available.

If you're working on a system with limited processing power, creating a proxy file will allow you to preview your media more efficiently.

Video proxy files are used for playback only.

Enable half-step timecode for 50p/60p sources

Enable the 50p/60p half-step timecode display switch if you want to display half-step timecode for each field in 50p/60p sources. The timecode for field two will be displayed with an asterisk appended:

Field 1: 01:00:17:17
Field 2: 01:00:17:17*

Show or hide thumbnail frames

Enable the Show thumbnails switch if you want to display thumbnail images in the Media Browser. Turning off the switch can improve performance on some slower storage devices.

Choosing snapshot settings

The Save snapshots to box displays the path to the folder where the files will be saved when you save a snapshot of the current frame. You can type a path in the box or click the Browse button to choose a folder.

Choose a setting from the Snapshot image format drop-down list to choose the file format that will be used for snapshots.

For more information, see “Creating a snapshot of a frame” on page 77.

Choosing color management settings

Choose a setting from the Working color space drop-down list to choose the color space that will be used for color grading.

For more information, see “Applying color correction” on page 95.

When you choose Rec.2020/S-Log3 from the Working color space drop-down list, you can enable the SDR gain switch to convert between standard- and high-dynamic-range content.
When the switch is enabled, you can drag the Gain slider to choose the gain that is applied when reading SDR content or when exporting to an SDR format or displaying on an SDR display.

For example, if you set the slider to 6 dB, a linear gain of +6 dB (2.0x) is applied when reading SDR content, and a linear gain of -6 dB (0.5x) is applied when exporting to an SDR format or displaying on an SDR display.

Choosing a color space for the video preview and external monitor

Video preview

From the Preview color space drop-down list, choose the color space for the Catalyst Prepare video preview window.

In most cases, choose Rec. 709 for your computer monitor, or you can choose other settings to check your video using scopes. For more information, see “Loading a clip/clip list for color adjustments and configuring the waveform, histogram, and vectorscope monitors” on page 95.

For more information, see “Applying color correction” on page 95.

External monitor

Choose a setting from the External monitor color space drop-down list to choose the color space that matches the EOTF (electro-optical transfer function) setting on your external monitor.

When using the Sony BVM-X300 version 2.0, please use the following monitor settings:

<table>
<thead>
<tr>
<th>External monitor color space in Catalyst Prepare</th>
<th>Color Space</th>
<th>EOTF</th>
<th>Transfer Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rec. 709</td>
<td>ITU-R BT.709</td>
<td>i.e. 2.4</td>
<td>ITU-R BT.709</td>
</tr>
<tr>
<td>Rec. 2020</td>
<td>ITU-R BT.2020</td>
<td>i.e. 2.4</td>
<td>ITU-R BT.2020</td>
</tr>
</tbody>
</table>
When **Rec.2020/S-Log (HDR)** is selected from the **Working color space** drop-down list, you can use the AIR Matching (Artistic Intent Rendering) or bypass OOTF settings to achieve a consistent look between external-monitor previews and rendered clips.

**Using AIR Matching to monitor using the S-Log3 (Live HDR) EOTF**

Sony BVM-X300 version 2.0 monitor settings:

- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (Live HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor color space** drop-down list.

Content mastered using these settings and rendered to HLG or PQ with AIR Matching should have the same look on HLG or PQ monitors or televisions.

**Using bypass OOTF to monitor using the S-Log3 (HDR) EOTF**

Sony BVM-X300 version 2.0 monitor settings:

- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor color space** drop-down list.

Content mastered using these settings and rendered to HLG or PQ with bypass OOTF should have the same look on HLG or PQ monitors or televisions.

**Converting HDR media to SDR color spaces**

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve your **Rec.2020/S-Log3 grading** (the dynamic range of the HDR color space will be clamped to the BT.709 gamma curve):

- In Options, set the **Working color space** to **Rec.2020/S-Log3 (HDR)**.
- In Options, enable the **SDR gain** switch and adjust the **Gain** slider to choose the gain that will be applied when exporting to an SDR format or displaying on an SDR display.
- In Options, set the **Preview color space** to **Rec.709** or **Rec.2020**.

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve more of the dynamic range of the original HDR media:
In Options, set the Working color space to Rec.709.

In the Inspector, set the Convert to color space to 709(800), HG8009G33, or HG8009G40.

For more information, see “High Dynamic Range (HDR) color grading” on page 111.

Choosing an external video monitor device and resolution

Choose a setting from the External monitor device drop-down list to display your video preview on an external monitor via a Blackmagic Design device:

- Intensity Shuttle, Pro 4K, and Pro.
- UltraStudio 4K Extreme, 4K, Pro, SDI, Express, and Mini Monitor.

Choose a setting from the Monitor resolution drop-down list to choose the display resolution for your monitor.
Keyboard shortcuts

Shortcut keys can help streamline your work with Catalyst Prepare software. The available shortcut keys are arranged in tables according to function.

Global shortcuts

The following keyboard shortcuts are available when the Video or Media Browser pane has focus.

<table>
<thead>
<tr>
<th>Command</th>
<th>Windows Shortcut</th>
<th>macOS Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter full-screen preview/playback</td>
<td>F11 or Ctrl+F</td>
<td>⌘-F or Control-⌘-F</td>
</tr>
<tr>
<td>Exit full-screen preview/playback</td>
<td>Esc, F11, or Ctrl+F</td>
<td>Esc, ⌘-F, or Control-⌘-F</td>
</tr>
<tr>
<td>Switch between Media Browser/Edit workspaces</td>
<td>Alt+W</td>
<td>Option-W</td>
</tr>
<tr>
<td>Show/hide the Inspector/Copy/Export/Share pane</td>
<td>Ctrl+I</td>
<td>⌘-I</td>
</tr>
<tr>
<td>Show/hide the Inspector pane</td>
<td>Alt+1</td>
<td>Option-1</td>
</tr>
<tr>
<td>Show/hide the Copy pane</td>
<td>Alt+2</td>
<td>Option-2</td>
</tr>
<tr>
<td>Show/hide the Export pane</td>
<td>Alt+3</td>
<td>Option-3</td>
</tr>
<tr>
<td>Show/hide the Share pane</td>
<td>Alt+4</td>
<td>Option-4</td>
</tr>
<tr>
<td>Show/hide the secondary window</td>
<td>Alt+V</td>
<td>Option-V</td>
</tr>
<tr>
<td>Open application help</td>
<td>F1</td>
<td>Fn-F1 (F1 if the Use all F1, F2, etc. keys as standard function keys setting is selected)</td>
</tr>
</tbody>
</table>
### Media Browser

The following keyboard shortcuts are available when the Media Browser pane has focus.

<table>
<thead>
<tr>
<th>Command</th>
<th>Windows Shortcut</th>
<th>macOS Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigate files/folders</td>
<td>Up, Down, Left, or Right Arrow</td>
<td>Up, Down, Left, or Right Arrow</td>
</tr>
<tr>
<td>Open/close folder in tree view</td>
<td>Right/Left Arrow</td>
<td>Right/Left Arrow</td>
</tr>
<tr>
<td>Select all files</td>
<td>Ctrl+A</td>
<td>⌘-A</td>
</tr>
<tr>
<td>Deselect all files</td>
<td>Ctrl+D</td>
<td>⌘-D</td>
</tr>
<tr>
<td>Delete selected files</td>
<td>Delete</td>
<td>Delete or fn+Delete</td>
</tr>
<tr>
<td>Load file and start/pause playback</td>
<td>Spacebar</td>
<td>Spacebar</td>
</tr>
<tr>
<td>Open selected folder</td>
<td>Enter or Ctrl+Down Arrow</td>
<td>Return or ⌘- Down Arrow</td>
</tr>
<tr>
<td>Navigate up one level</td>
<td>Backspace</td>
<td>⌘-Up Arrow</td>
</tr>
<tr>
<td>Go to start/end of list</td>
<td>Home</td>
<td>Home</td>
</tr>
<tr>
<td></td>
<td>End</td>
<td>End</td>
</tr>
<tr>
<td>Move selection up/down one page</td>
<td>Page Up</td>
<td>Page Up</td>
</tr>
<tr>
<td></td>
<td>Page Down</td>
<td>Page Down</td>
</tr>
<tr>
<td>Rename</td>
<td>F2</td>
<td>Fn-F2 (F2 if the Use all F1, F2, etc. keys as standard function keys setting is selected)</td>
</tr>
<tr>
<td>Open library</td>
<td>Ctrl+O</td>
<td>⌘-O</td>
</tr>
<tr>
<td>New library</td>
<td>Ctrl+N</td>
<td>⌘-N</td>
</tr>
</tbody>
</table>

### Editing

The following keyboard shortcuts are available when the Edit pane has focus.

<table>
<thead>
<tr>
<th>Command</th>
<th>Windows Shortcut</th>
<th>macOS Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Logging/Storyboard/Clip/Adjust Colors</td>
<td><code> </code> <code> </code></td>
<td><code> </code> <code> </code></td>
</tr>
<tr>
<td>Load previous/next file in Edit mode.</td>
<td>[] []</td>
<td>[] []</td>
</tr>
<tr>
<td>Go to previous/next clip in Storyboard mode.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Command</td>
<td>Windows Shortcut</td>
<td>macOS Shortcut</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Save a snapshot of the current frame to a file.</td>
<td>Shift+S</td>
<td>Shift+S</td>
</tr>
<tr>
<td>Reset mark in and mark out points to the beginning and end of the clip.</td>
<td>Shift+R</td>
<td>Shift+R</td>
</tr>
<tr>
<td><strong>Switch between Before/After/Split/2 Up video preview in Adjust Color mode.</strong></td>
<td>1/2/3/4</td>
<td>1/2/3/4</td>
</tr>
<tr>
<td>Show/hide the Media Browser in View mode</td>
<td>Ctrl+B</td>
<td>⌘-B</td>
</tr>
<tr>
<td>Create subclip from selection in Logging mode.</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Add clip to selected storyboard (when the Add To bar is visible).</td>
<td>Enter</td>
<td>Return</td>
</tr>
<tr>
<td>Undo color correction</td>
<td>Ctrl+Z</td>
<td>⌘-Z</td>
</tr>
<tr>
<td>Redo color correction</td>
<td>Ctrl+Shift+Z</td>
<td>⌘+Z</td>
</tr>
<tr>
<td></td>
<td>Ctrl+Y</td>
<td></td>
</tr>
</tbody>
</table>
## Playback and preview

The following keyboard shortcuts are available when the Video pane has focus.

<table>
<thead>
<tr>
<th>Command</th>
<th>Windows Shortcut</th>
<th>macOS Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to start</td>
<td>Ctrl+Home</td>
<td>⌘-Home</td>
</tr>
<tr>
<td></td>
<td>Ctrl+Up Arrow</td>
<td>⌘-Up Arrow</td>
</tr>
<tr>
<td></td>
<td>Fn- Left Arrow</td>
<td></td>
</tr>
<tr>
<td>Go to end</td>
<td>Ctrl+End</td>
<td>⌘-End</td>
</tr>
<tr>
<td></td>
<td>Ctrl+Down Arrow</td>
<td>⌘-Down Arrow</td>
</tr>
<tr>
<td></td>
<td>End</td>
<td>Fn- Right Arrow</td>
</tr>
<tr>
<td>Go to previous frame</td>
<td>Left Arrow</td>
<td>Left Arrow</td>
</tr>
<tr>
<td>Go to next frame</td>
<td>Right Arrow</td>
<td>Right Arrow</td>
</tr>
<tr>
<td>Go to previous clip</td>
<td>[</td>
<td>]</td>
</tr>
<tr>
<td>Go to next clip</td>
<td>]</td>
<td>]</td>
</tr>
<tr>
<td>Start/pause playback</td>
<td>Spacebar</td>
<td>Spacebar</td>
</tr>
<tr>
<td>Start/stop playback</td>
<td>Enter</td>
<td>Return</td>
</tr>
<tr>
<td>Shuttle playback</td>
<td>J/K/L</td>
<td>Press J or L once for 1x playback.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Press J or L twice for 1.5x playback.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Press J or L three times for 2x playback.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Press J or L four times for 4x playback.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Press K to pause playback.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Press and hold K while pressing J or L to emulate a shuttle knob mode: press K+J to turn the knob to the left or K+L to turn the knob to the right.</td>
</tr>
<tr>
<td>Toggle looped playback</td>
<td>Q</td>
<td>Q</td>
</tr>
<tr>
<td></td>
<td>Ctrl+L</td>
<td>⌘-L</td>
</tr>
<tr>
<td>Set Mark In point</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Set Mark Out point</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Add mark point</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>Go to Mark In point</td>
<td>Shift+I</td>
<td>Shift+I</td>
</tr>
<tr>
<td></td>
<td>Home</td>
<td>Home</td>
</tr>
<tr>
<td>Go to Mark Out point</td>
<td>Shift+O</td>
<td>Shift+O</td>
</tr>
<tr>
<td>Command</td>
<td>Windows Shortcut</td>
<td>macOS Shortcut</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Save a snapshot of the current frame to a file.</td>
<td>Shift+S</td>
<td>Shift+S</td>
</tr>
<tr>
<td>Reset Mark In/Out points</td>
<td>Shift+R</td>
<td>Shift+R</td>
</tr>
<tr>
<td>Go to previous marker (including Mark In/Out)</td>
<td>Ctrl+Left Arrow</td>
<td>⌘-Left Arrow</td>
</tr>
<tr>
<td>Go to next marker (including Mark In/Out)</td>
<td>Ctrl+Right Arrow</td>
<td>⌘-Right Arrow</td>
</tr>
<tr>
<td>Copy current frame to clipboard</td>
<td>Ctrl+C</td>
<td>⌘-C</td>
</tr>
<tr>
<td>Enter full-screen playback</td>
<td>F11</td>
<td>⌘-F</td>
</tr>
<tr>
<td>Show/hide the secondary window</td>
<td>Alt+V</td>
<td>Option-V</td>
</tr>
<tr>
<td>Zoom to fit</td>
<td>Ctrl+0</td>
<td>⌘-0</td>
</tr>
<tr>
<td>Zoom to 100%</td>
<td>Ctrl+1</td>
<td>⌘-1</td>
</tr>
<tr>
<td>Zoom in</td>
<td>Ctrl++</td>
<td>⌘-+</td>
</tr>
<tr>
<td>Zoom out</td>
<td>Ctrl+`</td>
<td>⌘-`</td>
</tr>
</tbody>
</table>
# Gestures

## Media Browser pane

<table>
<thead>
<tr>
<th>Gesture</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tap</td>
<td>Selects and loads a file.</td>
</tr>
<tr>
<td>Double-tap</td>
<td>Opens a file in the Video pane.</td>
</tr>
<tr>
<td>One-finger drag (touchscreen)</td>
<td>Scrolls the list vertically.</td>
</tr>
<tr>
<td>Two-finger drag (trackpad)</td>
<td></td>
</tr>
<tr>
<td>One-finger flick (touchscreen)</td>
<td>Scrolls the list with inertia.</td>
</tr>
<tr>
<td>Two-finger flick (trackpad)</td>
<td></td>
</tr>
</tbody>
</table>

## Video pane

<table>
<thead>
<tr>
<th>Gesture</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double-tap</td>
<td>Toggles the zoom level between 100% and Fit.</td>
</tr>
<tr>
<td>One-finger drag (touchscreen)</td>
<td>Pans the image.</td>
</tr>
<tr>
<td>Two-finger drag (trackpad)</td>
<td></td>
</tr>
<tr>
<td>One-finger flick (touchscreen)</td>
<td>Pans the image with inertia.</td>
</tr>
<tr>
<td>Two-finger flick (trackpad)</td>
<td></td>
</tr>
<tr>
<td>Pinch</td>
<td>Zooms the image in and out.</td>
</tr>
</tbody>
</table>
.color files 103, 113
.cube files 101, 106, 109
.smi files 83, 86

1
1D LUT export 113

3
3D LUT export 113

5
50p half-step timecode 120

6
60p half-step timecode 120

A
add existing folder 12, 17
add padding to clips 29
Add to bin 14
Add to Favorites 16
add watermark 28, 36, 41, 46, 49
adding clips 85, 88
adding clips to bins 17
adding media to library 12
adding shot marks 83
Adobe Premiere 42
AIR matching 112, 122
all frames playback 74
anamorphic stretch 80
apply ASC-CDL 104
apply color preset 103
ASC-CDL export 113
ASC-CDL files 101, 104
assigning audio channels 82
audio channel assignment 82
audio channels 82
Audio channels 27, 35, 40, 45, 48
audio meters 79

B
backing up volumes 51
best match 39
bin export 18
bin location 12
bins 17
browse remote server 53
burn in clip name 28, 36, 40
burn in timecode 28, 36, 40
BVM-X300 113
bypass OOT 112, 122

C
card backup 51
channel assignment 82
channel routing 79
Ci Workspace 42
CinemaScope overlay 80
cleaning bins 18
clip settings 80
clip list from selection 84
clip lists 83
clip name 28, 36, 40
closing the library 12
color adjustments 95
color correction 95
editing 95
exporting 113
loading 103
color curves 101
color presets 103, 113
color sliders 101
color space 99
color temperature slider 100
color wheels 98
combining relay clips 93
consolidating library media 22
continuous playback 72, 77
Converting HDR to SDR color spaces 112, 122
Copy all related media 31
Copy channel assignments 83
Copy clips only 14, 31

Automatically Added bin 12
AVCHD relay clips 93
Avid Media Composer 42
copy clips to a device 29
Copy only between mark points 32
copy snapshot to clipboard 78
copy to FTP 32
Copy with verification 14-15, 32
Create subfolder 14, 31
creating a library 11, 13, 15-16
creating clip lists 84
creating storyboards 87
creating subclips 23
curves 101

D
default look profile 100
default transcode format 119
deinterlacing 25, 33, 38, 43, 73, 119
delete files 21
delete items older than X days 18
delete items that can no longer be found 18
delete transcoding preset 50
deleting shot marks 83
deleting subclips 23
desqueeze 80
device copy 32
disc backup 51
discontinuous timecode 76, 81
display CinemaScope overlay 80
Display color space (external monitor) 121
Display color space (video preview) 121
display mode 54-55
display secondary window 120
DPX frame rate 81

E
editing clips 22
editing essence marks 83
editing summary metadata 82
EDL
  importing 92
  linking clips 92
  replacing clips 92
  unlinking clips 92
essence marks 77, 81
export bins as folders 18
export bins tp Final Cut Pro X 20
export bins tp Premiere 19
exporting clips 24
exporting storyboards 37, 41, 90
exposure slider 100

external monitor color space 121
external monitor device 123
external monitor resolution 123

F
fast copy 32
Favorite Folders 16
file formats 56, 69
file information 81
Final Cut Pro X 42
finalizing Professional Disc volumes 55
finding media 53
fit 72
flash bands 28, 36, 41, 93
flip horizontal 80
flip vertical 80
formatting Professional Disc volumes 55
formatting SxS 55
frame rate 81
FTP 53
FTP copy 32
full-frame-rate playback 73
full-screen preview 73

G
gestures 131
Go to End 74
Go to Start 74
GPS information 81
GPS links 81, 119
GPU acceleration 119
grade in 120
grading color space 99, 120
graticule 97

H
half-step timecode display 120
histogram monitor 97

I
Import only between in/out points 15
import transcode preset 49
importing a LUT 100
importing an EDL 92
J
JKL shuttle 75

K
Kelvin temperature 100
keyboard shortcuts 125

L
library
  add existing folder 12, 17
  adding clips to bins 17
  adding folders 17
  adding media 12
  cleaning bins 18
  closing 12
  consolidating 22
  creating 11
  creating subclips 23
  deleting subclips 23
  new folder 17
  opening 11
  organizing 16
  removing clips 21
  removing folders 17
  renaming bins 18
  renaming clips 21
  save as 22
library indicator 12
linking clips in an EDL 92
list view 54
load transcode preset 49
loading a library 11
logging 76-77
look profile 100-101, 106, 109
look up table 101
look, default 100
loop playback 77
Loop Playback 74
LTC 76, 81
LUT 101
LUT export 113
LUT import 100

M
magnifying glass 72
Make default look profile 100
map metadata 81, 119
mark in 76, 81
mark out 77, 81
Mask to 2.39 80
master volume 79
match source 39
Media Browser pane 53
metadata 81
metadata for proxy clips 31
meters 79
missing media 51
monitor color space 121
monitor resolution 123
mono channel 82
move clip to bin 17, 21
moving clips between library folders 20
multicam, synchronizing audio 93
multicamera clips, synchronizing 93

N
navigating the timeline 75
new clip list from selection 84
new empty clip list 84
new empty storyboard 87
New Folder 17
new library 13, 15-16, 18-20
Next Frame 74
numbering 14, 25, 31, 33, 47

O
offline media 51
open clip list 84
open GPS links with 81, 119
open storyboard 87
OpenEXR frame rate 81
opening a library 11
options 119
ordering clips 85, 87
Organize 16
override source timecode 29, 32, 37

P
partial copy 15, 19-20, 32
paste channel assignment 83
PD-EDL clip lists 83, 86, 92
Play 74
play all frames 74
play in real time 74
playing media 71
prefix 14, 25, 31, 33, 47
Premiere Pro CS6 42
Preview color space 121
preview proxy clips 120
previewing storyboards 90
Previous Frame 74
Professional Disc format 55
proxy editing 51
proxy metadata 31
proxy preview 120

R
real time playback 74
Rec.2020 121
Rec.709 121
relay clips, combining 93
relinking library media 51
remote server 53
remove clips 21
removing clips 85, 88
Rename files 14, 25, 31, 33, 47
renaming clips 21
renaming folders 18
rendering storyboards 32
reordering clips 85, 87
repairing flash bands 28, 36, 41, 93
replace source media 92
Reset mark in/out points 77
reset options 119
Reset to default look profile 100
reset transcoding settings 29

S
safe areas 80
saturation slider 101
save settings, transcoding 29
save snapshot 78
save snapshots to 120
save transcoding preset 50
save transcoding settings 29
scrub control 75
SDR gain 111, 120
searching for clips 55
secondary window 120
sequential playback 72
sharing files with Ci Workspace 42
sharing files with YouTube 46
shortcuts 125
shot mark 83
Show in Explorer 22, 55
Show in Finder 22, 55
show safe areas 80
show secondary window 120
shuttle control 75
sliders 100
snapshot image format 120
Sony BVM-X300 113
source color space 99
split-screen preview 97
starting frame index 26, 34, 39, 44
stereo pair 82
storyboards 86
creating empty 87
creating from selection 87
deleting 91
editing clips 88
editing color correction 89
exporting 37, 41, 90
previewing 90
renaming 91
rendering 32
subclips 23
suffix 14, 25, 31, 33, 47
supported formats 56, 69
SxS format 55
synchronizing multicamera clips 93

T
Tangent element 104
temperature slider 100
thumbnail frames 120
thumbnail view 54
timecode 28, 36, 40
timecode break 76, 81
tint slider 100
tone curve 101
touchscreen navigation 131
trackpad navigation 131
transcode clips before upload 43
Transcode preset 25, 33, 38, 43
transcode presets 49
transcode using proxy source clip 29, 37, 41
transcoding clips 24
transcoding settings, saving 29
transport controls 74

U
unlinking clips in an EDL 92
upload original clips 43
uploading to Ci 22, 55
uploading to Ci Workspace 42
uploading to YouTube 46
upsampling 25, 33, 38, 43, 73, 119
use anamorphic setting 28, 36, 41
Use fast device-to-device copy 32
use mark in/out points 29, 37, 41

V
vectorscope monitor 97
Vegas Pro EDL 42
Video pane 71
video preview 97
video processing device 119
VTR-style playback 72

W
watermark 28, 36, 41, 46, 49
waveform monitor 96
wheels 98
working color space 120

X
XDCAM EDL 83
XDCAM Professional Disc format 55

Y
YouTube 46