



Blackmagicdesign

AUTHORISED RESELLERS ONLY

DaVinci Resolve 17.4

Feature Comparison

November 2021

Introduction

DaVinci Resolve has a huge amount of features that users can access free of charge, which will allow them to get their post production workflow up and running immediately. As the free version of the software covers so much, a common question that both Blackmagic Design and resellers get is what additional features do users get in DaVinci Resolve Studio?

This document shows the differences between the free and Studio versions of the software and also includes a brief description of each one to give you a little more insight as to what the Studio licence adds.

DaVinci Resolve 17

	DaVinci Resolve	DaVinci Resolve Studio	DaVinci Resolve App Store	DaVinci Resolve Studio App Store
AMD-accelerated Decoding of H.264 and H.265	✗	✓	✗	✓
Camera LUT in a Node	✗	✓	✗	✓
Camera Tracker	✗	✓	✗	✓
CDL Export	✗	✓	✗	✓
Control Scripts from Local or Remote Machines	✗	✓	✗	✗
Create Timeline Using an IMF or DCP Composition Playlist (CPL)*	✗	✓	✗	✓
Dropbox Replay Integration*	✗	✓	✗	✓
Export of a wide range of Gallery Still Formats	✓	✓	✗	✗
Fairlight B-Chain Support for Audio Monitoring	✗	✓	✗	✓
Fairlight Format Support for Auro-3D	✗	✓	✗	✓
Fairlight Format Support for Dolby Atmos, MPEG-H and SMPTE ST.2098	✗	✓	✗	✓
Frame.io Integration	✗	✓	✗	✓
FusionFX				
CCTV*	✗	✓	✗	✓
Drone Overlay*	✗	✓	✗	✓
Gamut Mapping (improved)	✗	✓	✗	✓
Hardware Accelerated Decoding of H.264 and H.265	✗	✓	✗	✗
HDR				
Dolby Vision Support	✗	✓	✗	✓
HDMI 2.0a Metadata	✗	✓	✗	✓
HDR10+ Support	✗	✓	✗	✓
HDR Metadata and Mastering	✗	✓	✗	✓
HDR Scopes for ST.2084 and HLG	✗	✓	✗	✓

DaVinci Resolve 17

	DaVinci Resolve	DaVinci Resolve Studio	DaVinci Resolve App Store	DaVinci Resolve Studio App Store
Node in HDR	✗	✓	✗	✓
Video Scopes	✗	✓	✗	✓
HEIF Decoding on Windows 10 and Linux OS	✗	✓	✗	✓
HEVC Decoding	✗**	✓	✗	✓
High 10 Profile H.264 Decoding	✗	✓	✗	✓
High 10 Profile H.264 Decoding	✗	✓	✗	✓
IMF based renders	✗	✓	✗	✓
Kakadu JPEG 2000 renders over 2Kx2K	✗	✓	✗	✓
Lens Distortion Correction	✗	✓	✗	✓
Motion Effects	✗	✓	✗	✓
Multiple Image Processing GPUs	✗	✓	✗	✓
Multiple Red Rockets	✗	✓	✗	✗
Network, Remote and Headless Rendering	✗	✓	✗	✓
Neural Engine				
Deinterlacing*	✗	✓	✗	✓
Face Detection	✗	✓	✗	✓
Magic Mask*	✗	✓	✗	✓
Object Removal	✗	✓	✗	✓
Scene Cut Detection*	✗	✓	✗	✓
Smart Reframe*	✗	✓	✗	✓
Retime - Speed Warp - Optical Flow	✗	✓	✗	✓
Noise Reduction (Temporal and Spatial)	✗	✓	✗	✓

DaVinci Resolve 17

	DaVinci Resolve	DaVinci Resolve Studio	DaVinci Resolve App Store	DaVinci Resolve Studio App Store
Power Mastering	✗	✓	✗	✓
Remote Grading and Rendering	✗	✓	✗	✓
ResolveFx	✗	✓	✗	✓
Abstraction	✗	✓	✗	✓
Alpha Matte Shrink and Grow	✗	✓	✗	✓
Analog Damage	✗	✓	✗	✓
Aperture Diffraction	✗	✓	✗	✓
Automatic Dirt Removal	✗	✓	✗	✓
Beauty	✗	✓	✗	✓
Camera Shake	✗	✓	✗	✓
Chromatic Aberration Removal*	✗	✓	✗	✓
Chromatic Adaptation	✗	✓	✗	✓
Color Compressor	✗	✓	✗	✓
Color Palette	✗	✓	✗	✓
Color Stabilizer	✗	✓	✗	✓
Contrast Pop	✗	✓	✗	✓
DCTL*	✗	✓	✗	✓
Dead Pixel Fixer (improved)	✗	✓	✗	✓
Deband	✗	✓	✗	✓
Deflicker	✗	✓	✗	✓
Dehaze	✗	✓	✗	✓
Detail Recovery*	✗	✓	✗	✓

DaVinci Resolve 17

	DaVinci Resolve	DaVinci Resolve Studio	DaVinci Resolve App Store	DaVinci Resolve Studio App Store
Dust Buster	✗	✓	✗	✓
Face Refinement	✗	✓	✗	✓
False Color*	✗	✓	✗	✓
Film Grain	✗	✓	✗	✓
Halation*	✗	✓	✗	✓
Lens Blur	✗	✓	✗	✓
Lens Distortion	✗	✓	✗	✓
Lens Flares	✗	✓	✗	✓
Lens Reflections	✗	✓	✗	✓
Match Move	✗	✓	✗	✓
Motion Trails*	✗	✓	✗	✓
Patch Replacer	✗	✓	✗	✓
Pencil Sketch in DaVinci	✗	✓	✗	✓
Sharpen	✗	✓	✗	✓
Sharpen Edges	✗	✓	✗	✓
Smear*	✗	✓	✗	✓
Soften and Sharpen	✗	✓	✗	✓
Stylize	✗	✓	✗	✓
Texture Pop*	✗	✓	✗	✓
Tilt-Shift Blur*	✗	✓	✗	✓
Warper	✗	✓	✗	✓
Watercolor	✗	✓	✗	✓

DaVinci Resolve 17

	DaVinci Resolve	DaVinci Resolve Studio	DaVinci Resolve App Store	DaVinci Resolve Studio App Store
Sony XAVC Renders	✗	✓	✗	✓
Stereoscopic 3D Tools	✗	✓	✗	✓
Supports AVCHD	✗	✓	✗	✓
Supports Clean Feed Viewer Mode on an Additional Display	✗	✓	✗	✓
Supports Encoding AVC Intra 50, 100 and 200	✗	✓	✗	✓
Supports External Scripting (Javascript, LUA and Python)	✗	✓	✗	✓
Supports 96 KHz and 192 KHz Sample Rates at a project level	✗	✓	✗	✓
Timeline and Render Resolution higher than UHD	✗	✓	✗	✓
Timeline Frame Rates greater than 60fps	✗	✓	✗	✓
VR Toolset	✗	✓	✗	✗

*New to DaVinci Resolve Studio 17

**HEVC Decoding is available in DaVinci Resolve on Mac.

Feature	Description
AMD-accelerated Decoding of H.264 and H.265	Improved performance when Decoding H.264 and H.265 clips using GPU acceleration on AMD graphics cards.
Camera LUT in a Node	This gives you the greatest amount of control over where the LUT is applied in your image processing pipeline, and it also gives you the opportunity to apply image adjustments prior to the LUT, and after the LUT, as you require.
Camera Tracker	Camera tracking is used for match moving, and is a vital link between 2D and 3D scenes, allowing compositors to integrate 3D CGI elements into live-action clips. The Camera Tracker node calculates the path of a live-action camera and generates a virtual camera in 3D space.
CDL Export	DaVinci Resolve supports the 1.2 CDL (Color Decision List) standard that defines the slope, offset and power for each of the red, green and blue channels, as well as the overall saturation of each clip in a program.
Control Scripts from Local or Remote Machines	External Scripting Options include None, Local and Network. When set to None, only scripting in the Console window is allowed. When set to Local, external scripts and applications on the same computer can control DaVinci Resolve. When set to Network, external scripts and applications from other computers on the network (or via the Internet) can control DaVinci Resolve.
Create Timeline Using an IMF or DCP Composition Playlist (CPL)*	Creates a timeline in DaVinci Resolve that exactly replicates the Composition Playlist (CPL) of a DCP or IMF package.
Export of a wide range of Gallery Still Formats	You can choose whether to import or export images with an accompanying LUT. Supports the following file formats:- DPX, CIN, TIFF, JEG, PNG, PPM, BMP and XPM
Fairlight B-Chain Support for Audio Monitoring	Fairlight B-Chain can be configured to support any custom monitoring set-up. It is the signal processing, amplification and speaker system that takes the sound from your workstation's output and gets it "into your ears".
Fairlight Format Support for Auro-3D	Auro-3D with support for 9.1, 10.1, 11.1 (7+4) and 13.1
Fairlight Format Support for Dolby Atmos, MPEG-H and SMPTE ST.2098	Dolby Atmos with support for 7.1.2 and 7.1.4 MPEG-H with support for 5.1.4, 7.1.4 and 7.2.3 SMPT ST.2098 with support for 9.1 OH, 9.1 HT, 11.1 HT, 13.1 HT and 15.1 HT
Frame.io Integration	This integration consists of the ability to render and upload directly to Frame.io, maintain sync between Frame.io comments and timeline markers, and import media from Frame.io directly into the Media Pool.

Feature	Description
FusionFX	
CCTV*	A CCTV effect that is fully adjustable in the Inspector.
Drone Overlay*	A drone effect that is fully adjustable in the Inspector.
Gamut Mapping (Improved)	Accommodates workflows where you need to transform one color space into another with a dramatically larger or smaller gamut by helping to automate an expansion or contraction of image saturation to give a pleasing and naturalistic result with no clipping.
Hardware Accelerated Decoding of H.264 and H.265.	Hardware accelerated decoding of H.264 and H.265 files is available for a variety of hardware manufacturers.
HDR	
Dolby Vision Support	Enables either unlicensed or licensed users to generate Dolby Vision analysis metadata which is used to deliver Dolby Vision content and to render either HDR and SDR deliverables from the HDR grade that you have made. This enables any DaVinci Studio user to create Dolby Vision deliverables with Level 1 metadata. (Note: manual trimming of the analysis metadata requires a license from Dolby).
HDMI 2.0a Metadata	Turning on this checkbox in project settings outputs the metadata necessary to send High Dynamic Range signals over HDMI 2.0a and have it be correctly decoded by an HDR-aware video display.
HDR10+ Support	When enabled, an HDR10+ palette shows the results of the trimming analysis that make an automated downconversion of HDR to SDR, creating metadata to control how HDR-strength highlights look on a variety of supported televisions and displays.
HDR Metadata and Mastering	DaVinci Resolve Studio can import and export a wide range of HDR Metadata including all eight levels of Metadata used in Dolby Vision with improved support for encoding HDR and mastering metadata for MXF and IMF formats.
HDR Scopes for ST.2084 and HLG	You can turn on the “Enable HDR Scopes for ST.2084” checkbox in the Color panel of the User Preferences, which will replace the 10-bit scale of the video scopes with a scale based on nit values (cd/m2) instead. It is useful for monitoring HLG (Hybrid Log-Gamma) as well.
Node in HDR	When using various grading controls in the Color page to grade HDR images, you may find it useful to enable the HDR Mode of the node you are working on by right-clicking that node in the Node Editor and choosing HDR Mode from the contextual menu. This setting adapts that node’s controls to work within an expanded HDR range.

Feature	Description
HDR Video Scopes	A Waveform Scale submenu in the Video Scopes option menu (the three dots menu) lets you choose how you want the numeric scale at the left of Waveform and Parade scopes to be represented. There are options for 10-bit display (the default), 12-bit display, Percentage (0 to100), millivolt (mV), and HDR (ST.2084/HLG).
HEIF Decoding on Windows 10 and Linux OS	Supports the use of stills in .HEIF format on Windows, Linux and Mac OS. Once edited into the Timeline, still image clips have the same Composite, Transform, Cropping, Retime and Scaling attributes as any other clip.
HEVC Decoding	Allows the use of hardware acceleration for H.264 or HEVC playback if available on the computer you are using (Selected in Decode Options).
High 10 Profile H.264 Decoding	Support for High 10 encoding profile for H.264, intended for Blu-Ray and HD transmission.
IMF Based Renders	Native IMF (Interoperable Master Format) render setting for tapeless deliverables to networks and distributors.
Kakadu JPEG 2000 renders over 2Kx2K	Native support for Kakadu based lossless JPEG2000 encoding for IMF and DCP workflows with improved decode performance on Linux and Windows.
Lens Distortion Correction	The Lens Correction group has two controls (Analyze and Distortion) that let you correct for Lens Distortion in the image, or add Lens Distortion of your own.
Motion Effects	The Motion Effects palette contains two sets of controls for applying optical-flow-calculated effects to clips in your program. These include enhanced Spatial and Temporal noise reduction, and motion-estimated artificial blur.
Multiple Image Processing GPUs	Support for multiple GPUs, including external GPU's, for faster image processing. GPU selection mode (in System Preferences) lets you choose which GPU to use for image processing for best performance.
Multiple Red Rocket Support	Supports the use of multiple Red Rocket video cards.
Network, Remote and Headless Rendering	Allows remote rendering clients to operate in a so-called "headless" mode, with no GUI. In this mode DaVinci Resolve silently and invisibly waits on that system for remote rendering jobs to be sent to that workstation.
Neural Engine	
Deinterlacing*	In addition to the existing Normal and High quality deinterlacing options, a new DaVinci Neural Engine option uses advanced machine learning algorithms to reconstruct the frame giving even better results.
Face Detection	Face Detection automatically analyzes all selected clips using the DaVinci Neural Engine, to detect faces. Faces can be named to help organize the media.

Feature	Description
Magic Mask*	The Magic Mask tool automatically generates mattes to isolate people, body parts or objects using a simple stroke based interface powered by the DaVinci Resolve Neural Engine.
Object Removal	Object Removal uses the DaVinci Neural Engine to attempt to remove an object in the frame as automatically as possible with support for scene mode and improved adaptive blending quality.
Scene Cut Detection*	If you have a program that as been delivered as a single media file, with no accompanying EDL with which to split it up, you can use DaVinci's Resolve's Scene Detect window to automatically find the cut points and split it into individual clips, ready for grading.
Smart Reframe*	Smart Reframe automatically tracks and reframes shots based on objects of interest or reference points - powered by the DaVinci Neural Engine.
Retime - Speed Warp - Optical Flow	The Speed Warp setting is available for higher-quality slow motion effects using DaVinci Neural Engine
Noise Reduction	GPU-accelerated temporal and spacial noise reduction. Both methods of noise reduction can be used separately or together, in varying amounts depending on the needs of the material you are working on.
Power Mastering	Power Mastering allows you to select either a range of clips, or an entire timeline, to be output to tape in real time, without rendering. This can save you from a time-consuming render, and also saves disk space. Power Mastering is a no-compromise procedure as your program is still output at full quality.
Remote Grading and Rendering	Allows multiple clients to connect to the same remote grading session from different locations simultaneously. The host machine will be prompted with a pop-up each time a client tries to initiate a remote grading connection.
ResolveFX	
Abstraction	This is a powerful filter that lets you create a wide range of cartoon-like renders by simplifying an image into adjustable pools of similar color with optional outlines.
Alpha Matte Shrink and Grow	This filter lets you refine the edges of alpha and key mattes in a variety of ways, shrinking and growing the edges, and opening and closing holes that appear within a matte.
Analog Damage	Analog Damage can be used to create "old TV" or "junky videotape" effects of various kinds. A Preset pop-up menu lets you choose different looks, while a Custom option lets you create your own.

Feature	Description
Aperture Diffraction	This effect models the starburst effect seen when shooting bright lights with small apertures, the physical cause of which is light-diffraction on the aperture blades of a lens. It is similar to the Highlight node in Fusion, but with much more control.
Automatic Dirt Removal	Uses optical flow technology to target and repair unstable bits of dust, dirt, hair and other unwanted artifacts that last for one or two frames and then disappear. All repairs are made while maintaining structurally consistent detail in the underlying frame, resulting in a high quality restoration of the image.
Beauty	Beauty is a plug-in that lets you control texture. In Advanced mode, you can selectively smooth image detail that falls above a particular threshold, while preserving detail falling below a specific threshold.
Camera Shake	This effect replicates random camera motion for Horizontal and Vertical position, Rotation and Zoom. A variety of parameters are provided to let you customize the quality of motion, from slow meandering drift to abrupt, jagged jerks and pops.
Chromatic Aberration	This plug-in lets you manually correct the slight color fringing that results from chromatic aberration in a lens.
Chromatic Aberration Removal*	Lets you manually correct color fringing, typically found in high contrast areas.
Color Compressor	This filter lets you compress a range of colors towards a single target color.
Color Palette	More of an analysis tool than a creative effect, this plug-in offers four Display Modes from a pop-up menu: Color Palette, Shadow Region, Midtown Region and Highlight Region.
Color Stabilizer	The Color Stabilizer plug-in analyzes a frame of the clip that represents the desired exposure and color, and then automatically adjusts every other frame of the current clip to match the analyzed levels.
Contrast Pop	Contrast Pop is designed to add either sharp high-contrast looks, or soft low-contrast looks to a selective portion of the tonal range of the image.
DCTL*	DCTL List: Pop-up that lets you choose from available DCTLs installed on your workstation. Reload DCTL: A button lets you refresh the DCTL list while DaVinci Resolve is running.
Dead Pixel Fixer (Improved)	The Dead Pixel Fixer can identify and eliminate not just dead pixels, but other larger blemishes in the frame of an image too. This filter lets you place crosshairs on each dead pixel, identifying them so you can use different methods to fix the problem.

Feature	Description
Deband	The Deband filter is designed to isolate the edges of color banding occurring in areas that have shallow gradients of color (such as a sky or wall) and minimize them by dithering pixels from either side to soften the transition.
Deflicker	The Deflicker plug-in removes a variety of flickering artifacts, including those caused by variable exposure in time-lapse clips, fluorescent lighting and archival film sources.
Dehaze	Designed to let you make fast, selective adjustments to color and contrast to reduce the visible effects of smog, airlight and haze in an image. Additional controls exist to let you make adjustments to achieve the best result.
Detail Recovery*	Detail Recovery lets you extract image detail from the second input, in order to re-add it to the image coming in the first input. In this way you can selectively add detail back to an image from which it has been removed.
Dust Buster	This plug-in is designed to elevate dust, dirt and other imperfections but only with user guidance for clips where the Automatic Dirt Removal plug-in yields unsatisfactory results. The Improved Dust Buster comes with an option to draw shapes and additional spatial and clone fix patch modes.
Face Refinement	Face Refinement is an incredibly sophisticated yet easy-to-use filter that lets you quickly make very targeted adjustments to people's complexions.
False Color*	False Color is a creative effect that can be used for replicating camera HUDs, infrared sensors and custom posterization looks by defining a set number of colors.
Film Grain	This improved Film Grain effect with new optimized mode applies a procedurally generated layer of 'film grain' over the image. Unlike Fusion's native node, the ResolveFX Film Grain includes presets based on film formats and speed.
Lens Blur	Lens Blur simulates high-quality optical lens blurring. Adjustable parameters let you achieve different kinds of "bokeh" effects.
Lens Distortion	Lens Distortion lets you add convex or concave lens distortion to an image to make it warp by bulging outward or bulging inward.
Lens Flare	Simulates different kinds of lens flares resulting from the interplay of light bouncing within layered optical elements in a lens. Lens Flares are procedurally generated, so their resolution will be as high as that required by your project.
Lens Reflections	Simulates intense highlights reflecting off the various optical elements within a lens to create flaring and scattering effects based on the shape and motion of highlights you isolate in the scene.

Feature	Description
Match Move	The Match Move filter is a patch-based tracker that follows a pattern region defined by a tracker control. You can place as many trackers as you like by applying this filter to a node and clicking on a feature you want to track in the Viewer.
Motion Trails*	The Motion Trails effect is used to create a ghost-like trail when applied to moving images. This effect can be used to simulate clips shot with long shutter speeds and analog video feedback effects. It also includes object trails, temporal motion blur and disco effects.
Patch Replacer	The Patch Replacer is a quick fix for when you need to ‘paint out’ an unwanted feature from an image. It offers an alternative to the Paint tool when cloning over an unwanted feature.
Pencil Sketch in DaVinci	A plug-in with highly customizable controls for making an image look like it was hand-drawn.
Sharpen	Sharpens an image with an enormous amount of control over the detail in the image, by applying different amounts of sharpening to the fine, medium and large scale structures.
Sharpen Edges	This is a variation of the Sharpen filter that is streamlined for detecting edges to create a key used to limit sharpening to the selected edge details of an image.
Smear*	The Smear effect simulates motion blur and other artistic effects in a clip by blending a user-definable number of frames.
Soften Sharpen	A variation of the Sharpen filter that is streamlined to let you smooth some details and add sharpness to other details of the image based small, medium and large structure sizes.
Stylize	Using Stylize you can apply one of a variety of painterly styles and artistic modifications to an image. A pop-up menu lets you choose an artistic style and a Style Scale slider lets you adjust the size of the art strokes to be applied.
Texture Pop*	Texture Pop is a frequency-based sharpening/softening effect that divides the image into tonal regions. You can determine how different details are softened or sharpened and then configure how much each tonal region is affected.
Tilt-Shift Blur*	Simulates the depth-of-field effects using a progressive blur that is applied with a generated Z-depth map. The default settings create a “miniaturization” illusion where the image appears to be tiny due to the top and bottom depth-of-field settings used.
Warper	The Warper is a free-form image warper that uses points, rather than a mesh or splines, to push and stretch features in an image as if they were on a sheet of rubber. Improved ResolveFX Warper comes with support for key framing.

Feature	Description
Watercolor	Watercolor is a variation of the Abstraction filter and reduces images into simplified washes of softly blended colors, in a very painterly fashion.
Sony XAVC Renders	The MainConcept Codec Plug-in allows you to render your timelines in a variety of new codecs including: MainConcept MXF and MP4, allowing encoding into the native camera formats used by Sony XAVC/XDCAM and Panasonic P2 AVC based cameras.
Stereoscopic 3D Tools	You can edit using stereoscopic clips, grade the resulting program, adjust each clip's stereo-specific properties such as convergence and floating windows and master stereoscopic output.
Supports AVCHD	DaVinci Resolve Studio supports AVCHD (Advanced Video Coding High Definition) file format, developed jointly by Sony and Panasonic. Used on Camcorders and for Blu-Ray Disc authoring.
Supports Clean Feed Viewer Mode on an additional display	Full screen Viewer for a secondary monitor connected directly to your computer.
Supports Encoding AVC Intra 50, 100 and 200	Supports Panasonic AVC Intra media files as used in the company's professional broadcast camcorders and standalone P2 recorders.
Supports External Scripting (Javascript, LUA and Python)	Allows third parties to create their own custom interface plug-ins using scripted languages. Users can write their Workflow Integration Plug-in (an Electron app), using Resolve Javascript's API, and Python or Lua scripts.
Supports 96 KHz & 192 KHz Sample Rates at a project level	DaVinci Resolve is compatible with audio at sample rates including 32, 44.1, 48, 88.2, 96 and 192 kHz.
Timeline and Render Resolution Higher than UHD	Up to 32K Resolution.
Timeline Frame Rates Greater than 60fps	Up to 120fps.
VR Toolset	You can create and fix spherical (360° video, or VR) using Fusion's set of VR nodes.

*New to DaVinci Resolve Studio 17

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