



## How Archion and Blackmagic Resolve Create the Ultimate DPX Workflows

The high processing and storage demands of 4K video require higher-than-ever speed and storage capacity. When it comes to collaborative editing and finishing, the manipulation and playback of uncompressed DPX and EXR files – the base frames that were shot in camera – often place especially high demands on storage hardware, on network connections, and on the processing software. A single DPX sequence can require as much as 3 gigabytes of bandwidth.

Archion Technologies, a world leader in intelligent, high performance [shared storage solutions](#) for media workflows, has long been known for the quality and dependability of its Omni, Omni Hybrid and Velo media storage systems. These powerful devices are all designed for storage and playback of 4K workflows in post-production, finishing, graphics, visual effects, and other types of video media.

And now, Archion's devices have been certified for use with Blackmagic's DaVinci Resolve, version 12 – 12.5.3. The cutting-edge Resolve system combines professional non-linear video editing with the world's most advanced color corrector, enabling post production professionals to edit, color correct, finish and deliver all from one system. Resolve is also completely scalable and resolution independent, so it can be used on set, in a small studio, or integrated into the largest Hollywood production pipeline.

The speed of the Omni combined with the flexibility and compatibility of Resolve provides the ultimate DPX workflow machine, ensuring that even the largest DPX and EXR files are easily handled all the way from ingest to play out. The Omni provides

speed and versatility with the ability to expand shares and handle multiple protocols. Each one of your systems has the right protocol for maximum performance.

We recently had the pleasure of putting Resolve through its paces, from editing to delivery – and Resolve came through with flying colors in every category.

## **DPX throughput test**

With 4K DPX, each frame is a 48 megabyte file, and real-time playback takes place at speeds of 24fps to 120 fps and beyond, which requires a great deal of bandwidth. As confirmed in the Resolve tests, Archion's Omni supports Resolve's playback of DPX and EXR files, with its high bandwidth and IOPS performance tuned for sequential files.

During an extensive series of tests with Archion's benchmarks tests, as well as with Blackmagic's own tests, the Omni performed well over 8000 MB/sec. The Resolve client system was a standard Linux based system and connected to Omni over 40GigE.

The results of the Archion-conducted DPX throughput test were outstanding: When reading DPX Files, Archion achieved 6100 MB/sec with 4K DPX Files, enough to support 120 frames per second. Read reverse was even faster, with 9000 MB/sec supports 200 frames a second – and the same results were achieved with Random read 9000 MB/sec super performance.

## **Archion: a world leader in high-performance shared media storage**

Archion Technologies, a Los-Angeles based technology company, provides a wide range of innovative solutions for the broadcast, production, corporate, education, government, house of worship, and sports industries; from large production houses to the smallest media agencies; from film studios to universities to sports venues. For nearly 15 years, Archion has defined a new standard of performance, protection and affordability for shared media storage solutions. Since its founding, the company's storage technologies have been critical to the success of thousands of TV, film, commercial, documentary, and other content creation projects, and have supported thousands of clients' media workflows with high performance, reliable, functional shared storage solutions.

From Final Cut Pro to Adobe Creative Suite to Avid MediaComposer and Pro Tools (as well as the leading finishing creative tools from such vendors as Autodesk and Blackmagic Davinci), Archion has delivered the power for just about all video and audio codecs and formats, including HD, 2K, 4K and higher.



Archion's storage systems are most often used by professionals integrating Avid, Apple, Adobe, Autodesk, Blackmagic Resolve, NewTek and other creative workflow tools. For more information, please visit: <http://www.Archion.com>

Collaborate



Archion™



EditStor Omni



EditStor EO

## The speed and simplicity of Archion's EditStor media storage systems

Archion's EditStor products provide the world's simplest and most affordable networked attached storage solutions for professional editorial teams. These products empower digital video professionals to meet the demands of today's post-production and finishing workflows, with a flexible, scalable, full-featured and fast shared storage infrastructure.

The **EditStor Velo** system supports industry standard IT file transfer protocols simultaneously – enabling maximum connectivity to servers and workstations, and seamless integration among online and offline workflows. The system also delivers a powerful range of media management features, such as the ability to create shared volumes of any size, while simultaneously expanding volumes on the fly without any downtime or performance degradation; as well as a comprehensive set of tools for user and group management and overall security.

**EditStor's Omni** provides a single media storage system for high-performance collaboration on all types of files, including raw 4K files and streams. This system replaces the complexity and expense of SAN network storage with a single high-density server storage system that imposes no limitations on high-definition digital video workflows. This 4K storage system supports all popular post-production and finishing tools, without requiring any drivers or client licenses – making it an ideal plug-and-play solution.

Designed for facilities with high demands for both video streaming and graphic rendering, the **EditStor Omni Hybrid** storage system uses dedicated high speed SSDs for caching IOP data, eliminating the need to move or copy rendered media, and unifying all video storage on a single centralized platform. The Omni's patented optimizing intelligence detects the difference between high throughput streams and small IOPS requests, and adjusts its processing on the fly for maximum performance – delivering the speed and processing power necessary for the most demanding 4K workflows

All EditStor storage devices are fully compatible with top brands of camera hardware, including 4K cameras from AJA, ARRI, Blackmagic, RED, Sony and more – as well as editorial and finishing applications such as Adobe Premiere, Avid Media Composer and ProTools, Apple Final Cut Studio, Autodesk Smoke and Flame, and Blackmagic Resolve; and animation/visual effects tools like Adobe After Effects, Autodesk Maya, Foundry Nuke and others.

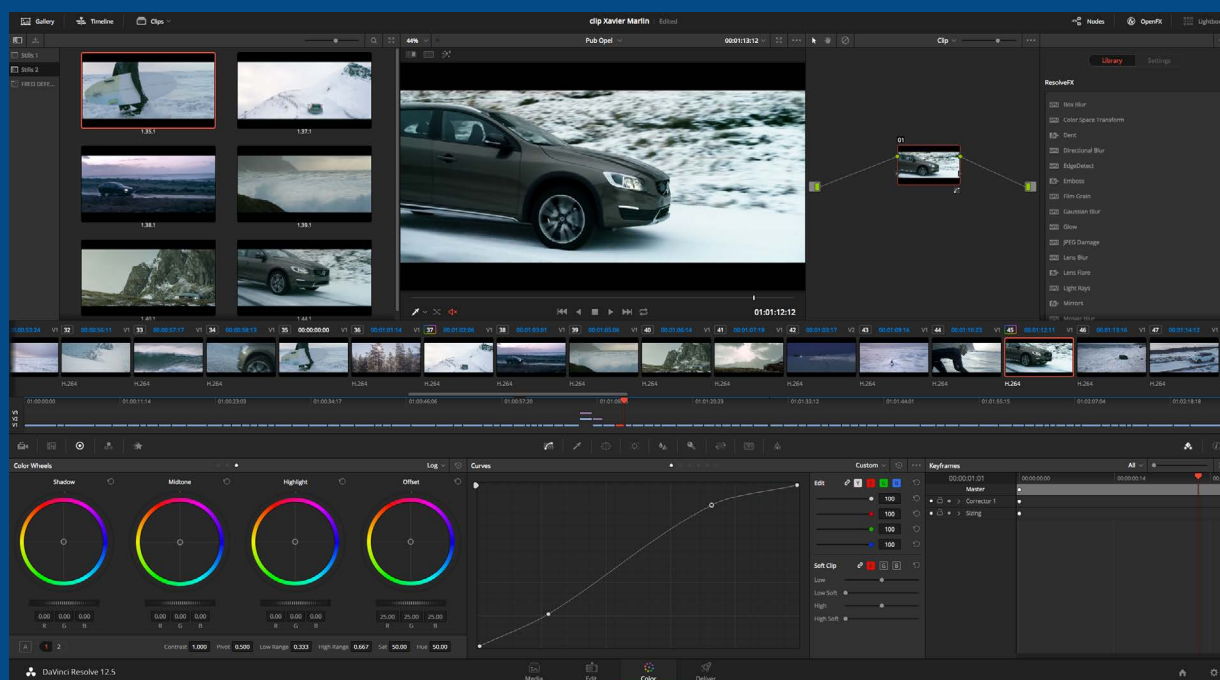
What's more, EditStor devices offer all the automation tools of an enterprise storage server, including storage pools, volume replication and snapshot, data replication, volume manager, virtual tape volumes (created in the system), as well as direct and fast tape backup (LTO/LTFS) for long term archive.

All of Archion's RAID controllers use fully upgradeable flash firmware. Updates can be performed without restriping the drives, and can be reactivated with a simple restart of the controller.

These high-performance, feature rich media storage systems offer much more than just storing, creating, and sharing abilities. They integrate the flow, conversion, and management of media into a single seamless production, post production and finishing workflow, for teams using traditional HD video as well as 4K.

## Blackmagic: experts in professional video editing

Blackmagic Design creates the world's highest quality video editing products, digital film cameras, color correctors, video converters, video monitoring, routers, live production switchers, disk recorders, waveform monitors and real time film scanners for the feature film, post production and television broadcast industries. Blackmagic Design's DeckLink capture cards launched a revolution in quality and affordability in post production, while the company's Emmy™ award winning DaVinci color correction products have dominated the television and film industry since 1984. Blackmagic Design continues ground breaking innovations including 6G-SDI and 12G-SDI products and stereoscopic 3D and Ultra HD workflows. Founded by world leading post production editors and engineers, Blackmagic Design has offices in the USA, UK, Japan, Singapore and Australia. For more information, please go to: <https://www.blackmagicdesign.com/>





## The power and flexibility of Blackmagic's DaVinci Resolve

DaVinci Resolve's powerful professional non-linear editing and world class color correction tools, along with advanced media management and live on set tools, make it perfect to use as the hub of an entire creative workflow. Each page in Resolve is logically organized into work areas for each stage in the post production process.

This powerful platform enables post production to begin during production, since cinematographers and colorists on set can use Resolve Live to grade real time video direct from the camera. Professionals get the full creative power of primaries, secondaries, power windows and more, while confirming lighting and camera angles on set, and saving looks that can be applied to camera RAW files during grading.

With Resolve, editing professionals can work with the image quality, scalable power and performance necessary to handle 4K video in real time. The software's award-winning control panel can handle more native camera files and video formats than any other real time system, making it possible to edit and grade virtually any type of footage in real time.

The software also enables an editor and multiple colorists to work on the same timeline simultaneously. Resolve lets an editor and multiple colorists on different workstations share the same timeline and work in tandem as they complete shots. For example, one colorist could be pulling a key or tracking windows, while another colorist fine-tunes grades that are immediately updated as the editor edits.

DaVinci Resolve also offers RAW image and color grading controls that will be familiar to many photographers. Editors can adjust images quickly and precisely, or even use a color chart to automatically balance their footage – all while getting the highest possible quality editing and grading, since they're working from your camera original files without conversion. Resolve solves the single-frame limitations of photo enhancement systems, giving photographers advanced real time editing and color correction features that are quick to learn and easy to use.

The unique remote grading features of DaVinci Resolve mean that clients can choose their favorite colorist for the job, no matter where in the world that person works. Using a regular internet connection, a colorist on one side of the world can remotely control and grade on another system containing the same media.

Resolve simplifies the process of managing multi-camera productions like situation comedies, reality TV and soap operas, which have a unique and fast pace workflow that require multiple source cameras to playback simultaneously, so the editor can cut on the fly. With Resolve, editors can sync multiple cameras manually using marked points, or automatically using timecode or audio waveforms – then switch cameras just as if the show is being cut live, with the added benefit of being able to go back and refine the cut with b-roll, alternate takes from a dress rehearsal or intercut with other multi-cam timelines.

Using Resolve, colorists can start grading before the final edit is complete. Every time changes are made in editorial, those changes can be sent to DaVinci Resolve, and the timeline will update automatically. Colorists don't have to rebuild the project every time the edit changes, and can work right up to the on air deadline and deliver the final master as soon as they have completed the grade.

And Resolve makes creating files and round tripping projects with editorial faster and easier than ever. Professionals can manage media, sync audio and convert high resolution RAW footage into ProRes or DNxHD proxy files for use in Final Cut Pro X, Media Composer or Premiere Pro CC. The advanced media management tools in Resolve can track the relationship between proxies and original footage for finishing – and after editing, the software will automatically reconnect the edited sequence to the original camera RAW files, enabling editors and colorists to finish projects at the highest possible quality, all while using an extended dynamic range and advanced controls.

