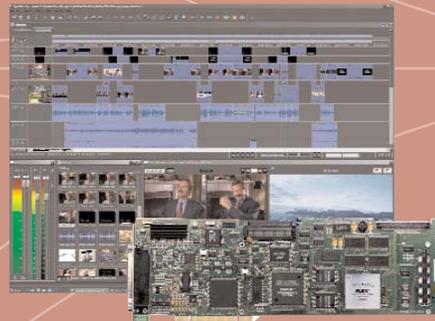


# *Velocity* ™

Multi-Stream  
Post Production  
Non-Linear Editing



Enabling Your  
Integrated Content Environment

[ **VELOCITYQ** ]  
MULTI-STREAM POST PRODUCTION  
NON-LINEAR EDITING

# [ Overview ]

## Integral Part of an Integrated Content Environment

The VelocityQ™ advanced multiple-stream non-linear editing system is the ultimate "no compromise" real-time solution for post production and content creation professionals. VelocityQ combines the latest advances in real-time hardware and powerful NLE software into an exceptional integrated solution with guaranteed real-time performance and an unparalleled level of efficiency, reliability and ease of use.

Today's demanding environments require your editing system to be able to keep up with your creativity, without slowing you down. With simultaneous playback of four video streams (compressed or uncompressed), six graphics streams and up to four channels of 3D DVE, VelocityQ offers true real-time power. Eight of these video and graphics streams, in any combination, can be transitioned, layered and composited in real-time, with additional streams usable as wipe borders and DVE masks. This is true, instant, full-quality real-time performance - not just real-time previews, and not just in basic effect combinations.

Whether you need VelocityQ's extensive real-time layering performance for intricate projects such as commercials, promos, intros, interstitials, or "near-to-air" applications, or you simply want the ultimate in editing performance, VelocityQ delivers. Whether your goal is increased ROI, more time to explore your creativity, or going home earlier, VelocityQ will give you the performance and productivity gains to help you get there faster.

VelocityQ harnesses this power into an intuitive, flexible and customizable interface that makes even the most complex editing tasks easy. VelocityQ uses the same acclaimed software interface as our award-winning Velocity dual-stream NLE. The comprehensive feature set includes powerful features such as 3 and 4-point editing, batch re-digitizing, mixable compressed and uncompressed video, the unique

EyeCon View timeline tool, and real time filters including color correction and variable speed changes. With user-definable hotkeys, selectable A/X/B and single-track timeline modes, and flexible window layouts, VelocityQ can easily adapt to the editing style you prefer. A choice between drag-and-drop, trim window, keyboard and optional external jog/shuttle control lets you choose your favorite editing control method. Whether you're new to non-linear editing, or upgrading to VelocityQ from a previous system, you'll find getting up to speed with VelocityQ an easy transition with a very short learning curve.

VelocityQ is equally adept whether used on its own, or as part of a complete Integrated

Content Environment. VelocityQ is ideal as a comprehensive, independent non-linear editing solution, while easy interoperability with other post production tools and Leitch's Nexio server family enables it to be an integral part of a streamlined workflow for producing, storing, processing, transmitting and managing content.

With VelocityQ, you'll get the ideal combination of real-time power, quality, productivity, flexibility, reliability, and ease of use, with the features and workflow you need to make the most of your editing sessions.



## Outstanding Hardware Technology

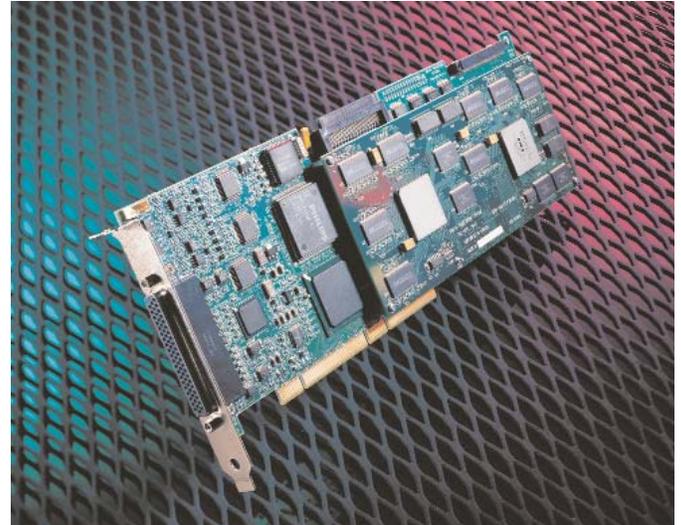
To build an exceptional NLE with guaranteed real-time performance, you have to start with a solid foundation. VelocityQ is powered by the Quattrus™ hardware platform, developed with the hardware expertise that won us an Emmy® Award in 2000 for Outstanding Achievement in Television Technology.

Building on the features of the acclaimed Reality® hardware, Quattrus features real-time playback of four video streams and six graphics streams. The optional Q3DX2™ dual-DVE and Q3DX4™ quad-DVE daughtercards add two and four channels, respectively, of simultaneous real-time 3D DVE effects. A live video stream (from a camera or deck) can also be combined with these disk-based streams, effectively forming a fifth real-time "motion video" stream!

Amazingly compact, the Quattrus hardware combines all of this real time power with mixable compressed and uncompressed video, flexible professional video I/O, keying, real-time effects processing, multi-channel audio mixing, video alpha channel support, and an integrated Ultra160 SCSI-3 disk controller, all on a single PCI card that requires just one IRQ.

VelocityQ provides comprehensive professional input and output choices for easy integration into any post production environment. Analog composite, Y/C, and component video are standard on the Quattrus hardware, as are balanced and unbalanced analog audio. SDI and digital audio I/O are available as an option, while DV ingest and print-to-tape are supported via your host computer's built-in IEEE-1394 port or OHCI-compliant IEEE-1394 interface card.

VelocityQ also gives you a choice of video storage architectures. The Quattrus hardware includes a dedicated integrated Ultra160 SCSI-3 disk controller supporting up to 15 drives, saving you the expense of purchasing a separate mass storage controller. For those wishing to use a different type of controller or networked storage, VelocityQ also provides the flexibility of using

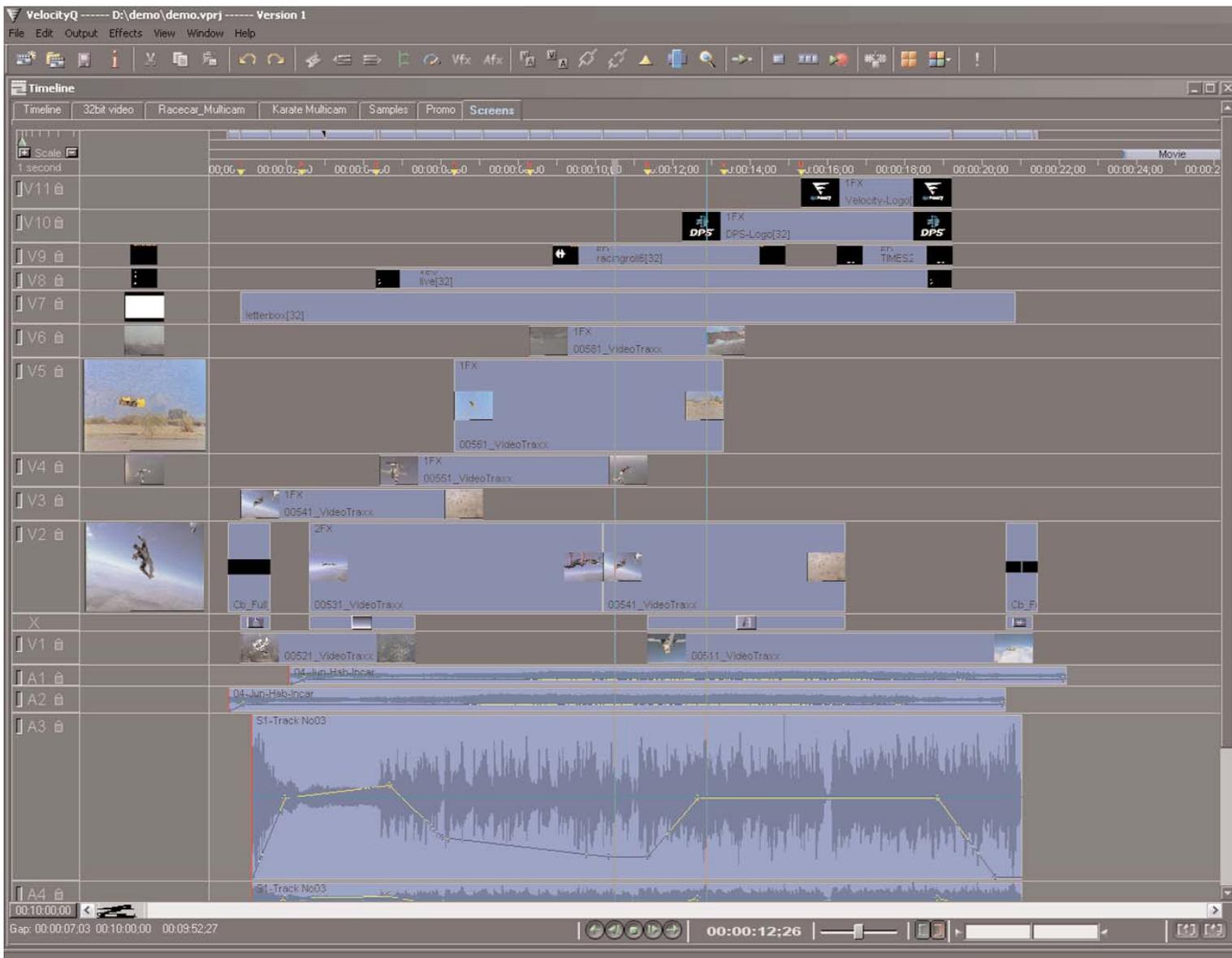


separate system storage controllers over the PCI bus, enabling the use of storage area networks. Multiple VelocityQ systems can be combined with a SAN to form a powerful collaborative editing environment with a common centralized storage pool. The shared storage serves as a central repository for media assets, providing easy access and availability, and enabling multiple editors to access the same raw footage simultaneously.

# [ Software ]

VelocityQ features the same intuitive and flexible software interface as our acclaimed dual-stream Velocity NLE. VelocityQ's customizable interface includes a wide range of features that increase productivity, enhance the editing interface and workflow, and make it easy for users to quickly become proficient with VelocityQ's extensive feature set.

VelocityQ's timeline interface is both powerful and flexible, with features including independent variable track scaling, mute and solo of video and audio tracks, real-time support for video files with alpha channel, multiple timeline support, and multi-clip editing, enabling edits and effects to be applied to multiple clips simultaneously. Captured clips and

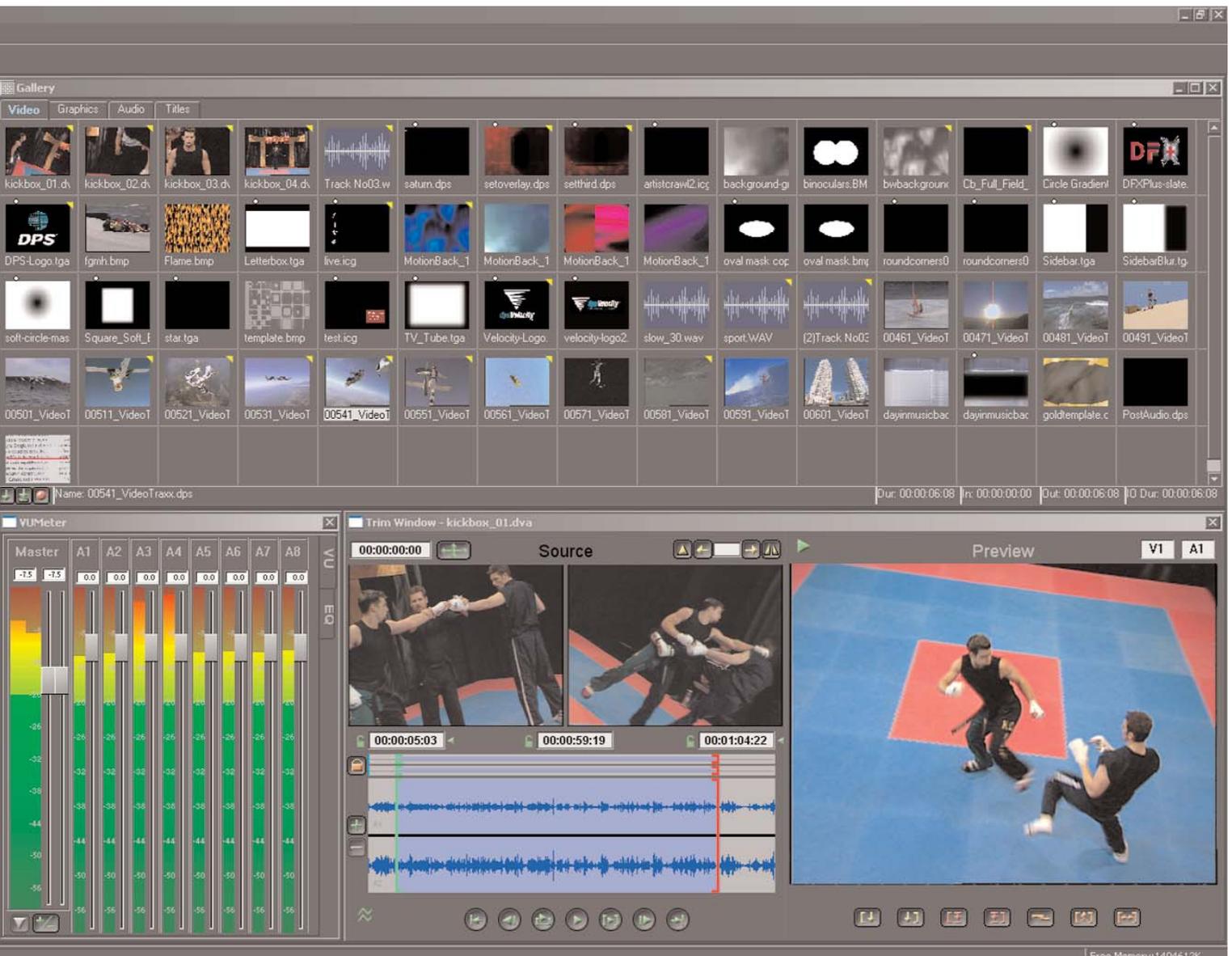


other media are easily organized into one or more tabbed customizable galleries. Media can be played, searched and managed right within the galleries.

VelocityQ lets you work the way you want to. With user-definable hotkeys, selectable A/X/B and single-track timeline modes (which can be viewed top-down or

bottom-up) and flexible window layouts, VelocityQ can easily adapt to the editing style you prefer. Editing can be done directly on the timeline or through the Advanced Trim Window, which provides easy 3- and 4-point edit modes including insert, overlay, slip, slide and fit-to-fill. Drag-and-drop-style mouse-based controls, fully configurable keyboard

controls and optional external hardware controllers let you choose your favorite control method and style of editing.



# [ Software Features ]

## EASY VISUAL REFERENCE WITH EYECON VIEW™

In addition to flexible picon viewing options on timeline clips, VelocityQ features the unique EyeCon View timeline reference. EyeCon View continuously displays the picons and clip timecode of all visible layers based on the current playhead position, providing constant visual reference for all layers on the timeline while scrubbing and aligning clips, and making it easy to precisely align specific frames across layers. It's like having a small preview monitor for each track in the timeline!



## MULTI-CAMERA EDITING MADE EASY

VelocityQ's integrated multi-cam editing mode makes editing a sequence shot using multiple camera angles easy and intuitive. Captured sequences from up to four cameras can be "sliced and diced" interactively as they are viewed simultaneously in real-time, directly from the timeline. Sequences can even be switched while playing faster than real-time, enabling multi-cam edits to be performed in a fraction of the time of the actual sequence. Multi-camera edits can be refined before applying them back to the timeline with cuts or transitions. Editing a multi-camera shoot has never been easier or faster!

## EFFECTS & TRANSITIONS - UP TO FOUR SIMULTANEOUS 3D EFFECTS IN REAL TIME!

Hundreds of predefined and customizable transitions and effects are included and fully keyframeable for precision control. The optional Q3DX2 and Q3DX4 modules add multiple channels of real-time 3D DVE, masks and "garbage mattes", keying, blur and more. 3D effects such as rotation, perspective and warp can be applied to graphics as well as video. The Q3DX2 adds two channels of DVE, while the quad-channel Q3DX4 enables four simultaneous real-time 3D effects! All of these effects, plus variable speed changes, reverse, color correction, pixel effects, transparency and more can be combined simultaneously in real-time with transitions and rolling and crawling titles, providing maximum creative flexibility. And VelocityQ's real-time power provides full-quality interactive feedback on the video monitor while setting up transitions and effects, allowing exceptional precision and easy experimentation. If you ever do need to render, Render Bank technology remembers previously rendered segments, eliminating re-rendering.



## FLEXIBLE CAPTURING WITH PRECISION QUALITY CONTROL

Capturing footage is accurate and flexible, with methods ranging from quick capture to frame-accurate batch capture. Uncompressed and variable compression playback and recording are supported for perfect quality every time, with the flexibility to mix compressed and uncompressed footage in the same timeline. Proc amp controls, color correction, and an integrated waveform monitor and vectorscope display help keep your video levels within spec and allow you to easily fine-tune both incoming and captured video. Batch recapture allows footage to be captured at offline compression rates, and later replaced with higher quality footage for output.



## FLEXIBLE OUTPUT FORMATS & WEB STREAMING

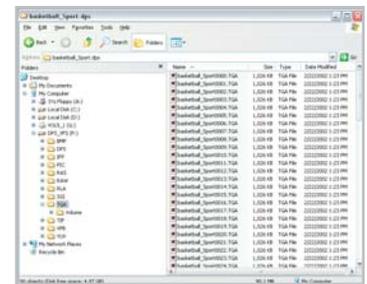
VelocityQ lets you easily create output directly from the timeline for any popular distribution format - video tape, CD-ROM, DVD or the web. Web formats including RealNetworks® RealVideo®, Microsoft® Windows Media™ 9 and QuickTime™, as well as Ligos™ GoMotion™-powered MPEG-1 and MPEG-2 formats for CD-ROM and DVD authoring, can be output directly from the timeline in real time. In addition to creating on-demand web files, VelocityQ can also stream to the web live from the timeline. Live video from a camera or deck can be combined in real time with titles, transitions, and previously captured clips, and streamed live for exceptional webcasting flexibility.

## ADVANCED AUDIO

Audio is an essential part of any production. VelocityQ features real-time 8-channel audio mixing and monitoring, with real time parametric EQ for audio sweetening. Tracks can be muted or soloed, and additional audio tracks can be automatically mixed-down for real-time playback if more audio channels are needed. Audio control nodes can be created on-the-fly during playback using on-screen sliders or the optional FAD-5000 hardware audio controller, while digital and analog audio scrub make working with audio easy and precise. Voice-overs can be added directly in the timeline while playing back existing audio and video for reference. For additional effects and filters, DirectShow-compatible audio plug-ins can be applied to clips directly in the timeline.

## EASY INTEROPERABILITY

Interoperability features such as EDL import and export, and optional OMF and AAF support make it easy to interchange projects and media files with other editing systems and post production tools for collaborative work. Plus, our uniquely flexible Virtual Tape File System™ (VTFS™) provides seamless and transparent integration and file interchange with graphics, animation, and compositing systems. Each frame of video on the dedicated media drive is simultaneously available in ten popular image file formats, including TGA, BMP, and TIF. Animation sequences can be rendered directly to the VTFS then easily accessed for playback and editing.



# [ Bundled Software ]

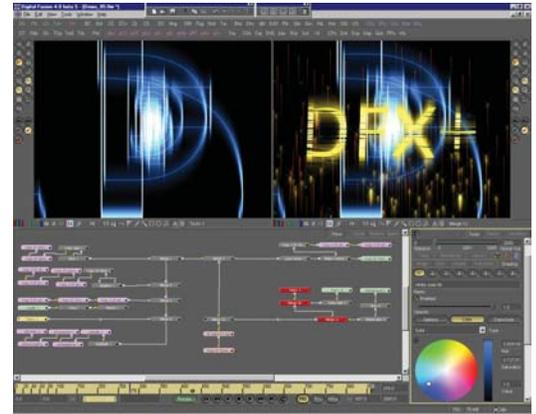
## Bundled Tools Enhance System Capabilities

VelocityQ is fully compatible with a wide range of third-party software, and applications for advanced compositing, DVD authoring, audio processing and titling are bundled. Plus, VelocityQ includes Q-Tools™, a suite of standalone utilities that let you customize your workflow for specific applications by allowing individual functions such as capture, playback, and logging to be used independently.

### DFX+™ – Advanced Compositing and Image Processing

Included with VelocityQ is DFX+, the advanced, modular compositing and effects software from eyeon. DFX+ lets you easily add a professional finish to your productions with the same speed, precision, and productivity as the award-winning Digital Fusion™. With a powerful flow-based process, comprehensive tools and many high-end plug-ins available, complex compositions and designs can be achieved with ease. Direct timeline integration with VelocityQ makes it easy for users to harness the power of DFX+. DFX+ effects such as glows, defocusing and warps can be applied to clips from the VelocityQ timeline, and entire timeline regions can be sent to DFX+ for processing.

DFX+ features broad format support of over 20 professional image and 3D file formats, with a groundbreaking multi-threaded design that gets the maximum performance out of multi-processor systems. Other features include the Text+ advanced character generator, format and aspect ratio conversion, powerful spline controls to animate any tool, and polygonal effects masks that can be animated to apply effects to user-definable regions. DFX+ can be expanded via optional modules to include advanced features such as tracking, advanced keying, film import, 3D depth tools, network rendering and more.



### SONIC REELDVD STUDIO™ – Advanced DVD Authoring

After creating DVD-compliant MPEG-2 files directly from the VelocityQ timeline, use the bundled Sonic ReelDVD Studio authoring software to author them into a DVD with menus, buttons, chapters and Dolby Digital audio, then output it directly to a broad range of DVD and CD recorders. MPEG-2 files created with VelocityQ are also compatible with a variety of other third-party DVD authoring packages.

### INSCRIBER TITLEMOTION™ – Powerful Titling And Character Generation

Both basic and advanced titling utilities are included. Simple rolls, crawls and still titles can be created quickly with the integrated QuickTitrer, while eyeon's bundled DFCG provides an easy interface to DFX+'s Text+ tool with advanced features such as text-on-paths. For more sophisticated tasks, the bundled Inscrubber TitleMotion adds a more powerful titling interface and enhanced CG options such as graphical backgrounds, logos and more.

### SOUND FORGE XP STUDIO™ – Audio Sweetening and Processing

For advanced precision audio processing, we include Sonic Foundry's Sound Forge XP Studio. This comprehensive digital audio editing package includes a wide range of tools, including normalization, pitch bending and shifting, smooth/enhance, noise gate, file format conversion and more.

# [ Industry Accolades ]

VelocityQ delivers the ideal combination of true real-time performance, quality, productivity, flexibility and ease-of-use. Don't just take our word for it - see what industry experts have had to say about VelocityQ:

## Customers

"The Leitch system is an incredibly well-integrated and powerful NLE. The realtime multiple graphics and video streams are essential in our line of work...The Wimbledon Lawn Tennis Championships are one of the premier events in the world's sporting calendar and we were delighted to have been able to demonstrate our creative and technical competence to the BBC. The Leitch NLE proved a valuable asset."

- Jeremy Tidy, Director, Wurmsers Television Graphics



Image courtesy of Wurmsers/BBC Sport

"The Velocity NLE hardware and software are an integral part of our post production pipeline. For Shania Twain's "I'm Gonna Getcha Good" video, we used it to edit our digital effects work -- 110 shots - into the master cut, and for layoffs too. Every project we do for a video format goes through some aspect of Velocity. It provides incredible power, quality and performance, while being affordable enough to put on all of our artists' desks."

- Tim Miller, Blur Studio



Image Courtesy Blur Studio

The incredible real-time hardware power of VelocityQ – four video layers, up to six graphics streams, and four channels of real-time 3D DVE – immediately sets it apart from its competitors... I'm truly amazed with this hardware, and the software has proven very stable and reliable. All of our six editors are certainly raving fans of VelocityQ.

- John David Hutton, PlattForm Advertising

## Magazine Reviews

"With all the hardware and software power offered by VelocityQ, this seems like one of the best 'bang-for-the-buck' NLEs - ideally suited for broadcasters, corporate video departments, and small- to mid-sized production companies."

- Oliver Peters, Videography Magazine, September 2003

Videography



"A powerful and flexible realtime editing system...If you're ready to graduate to a true real-time system, check out Leitch's VelocityQ...Five-Star Rating."

- David English, AV Video Multimedia Producer, "Test Patterns", July 2003

AV VIDEO MULTIMEDIA  
**Producer**

"...new ground has been broken here... [a] hardware fortress of glee "

- Tor Rolf Seemann, Post Magazine, March 2003

## Awards

"Best NLE of Show" - Broadcast India 2002

"Pick of the Show" - SATIS 2002



# [ Options ]



**Rackmountable breakout box** consolidates all video and audio connections for a clean installation, and includes a built-in RS-232 to RS-422 adapter for RS-422 device control. (Included with some models of VelocityQ.)



**JOG-5000** External hardware jog/shuttle controller provides tactile precision control for scrubbing, trimming, editing and deck control.



**FAD-5000** motorized external audio fader controller provides an easy, tactile interface to VelocityQ's audio mixing capabilities.



**Color-coded custom keyboard** makes it even easier to take advantage of VelocityQ's extensive array of hotkeys and keyboard shortcuts.



**OMF/AAF Interoperability Option** enables import and export of projects in either OMF (project metadata and audio essence) or AAF (Advanced Authoring Format) formats.



**VelocityQ Server Interchange Option** enables bi-directional push/pull interchange of media files with Leitch's NEXIO server system (export to Leitch servers in server-native file formats is an inherent feature of VelocityQ).



A variety of digital audio/video I/O cards make it easy to add SDI, DV and digital audio capabilities to your system.

## FLEXIBLE CONFIGURATIONS



VelocityQ is available from authorized resellers as fully integrated systems or as boardset and software bundles for installation into a Microsoft® Windows® 2000/XP Professional workstation.

Some configurations may not be available in all international markets. Please contact your authorized Leitch Post Production reseller for availability in your area.

# [ Features List ]



## Features

o = Optional  
y = Standard

Features	Model	
	2x4	4x4
Fully integrated hardware/software solution	y	y
Velocity real time NLE software	y	y
Quattrus hardware - single slot, single IRQ PCI card	y	y
Real-time simultaneous playback of 4 video streams & 6 graphics streams	y	y
Live video from a camera or deck can be combined with disk-based streams as a fifth "motion video" stream	y	y
On-board dedicated Ultra160 SCSI interface and network storage support	y	y
Compressed and uncompressed recording and playback	y	y
Mix compressed and uncompressed clips in the same project	y	y
Flexible analog video I/O: composite, component & Y/C	y	y
Balanced & unbalanced stereo analog audio I/O	y	y
Direct support for DV I/O through host computer's built-in IEEE-1394 port or OHCI-compliant IEEE-1394 interface card*	y	y
Accepts optional SDI, DV (IEEE-1394) and digital audio I/O cards	y	y
Dual-standard 720 x 486 (NTSC) and 720 x 576 (PAL)	y	y
Dedicated preview channel video output	y	y
Adjustable genlock timing referenced to video input	y	y
Rackmountable video/audio breakout box	o	y
Real time 2D and 3D DVE, including picture-in-picture, perspective, warp and rotation	y	y
Q3DX2 dual-channel 3D DVE allows two simultaneous real time 3D effects	y	n
Q3DX4 quad-channel 3D DVE allows four simultaneous real time 3D effects	n	y
Real time rolls and crawls	y	y
Real time variable speed changes and reverse playback	y	y
200+ customizable, keyframeable real time 2D transitions (12-bit ultra-smooth anti-aliased wipes with colored and soft-edge borders)	y	y
200+ customizable, keyframeable real time 3D transitions with sub-pixel movement for superb quality	y	y
Real time keyframeable proc amp controls and color correction (number simultaneously)	4	4
Real time keyframeable chroma/luma keyer (number simultaneously)	2	4
Real time masks and "garbage mattes" (number simultaneously)	2	4
Real time blur (number simultaneously)	1	2
Real time support for 32-bit video files with alpha channel	y	y
DFX+ compositing and advanced effects with direct timeline integration	y	y
Real time 8-channel hardware audio mixing	y	y
Real time parametric audio EQ	y	y
Direct timeline support for DirectShow-compatible audio plug-ins	y	y
Flexible timeline interface with independently variable track heights, mute/solo and show/hide of video and audio tracks	y	y
EyeCon View™ for constant display of picons and clip timecode of all visible layers at playhead while scrubbing and aligning clips	y	y
Selectable A/X/B or single-track editing modes (can be toggled while working)	y	y
Integrated four-camera real-time multi-cam editing	y	y
User definable hot keys	y	y
Trim window with advanced 3 and 4 point edits	y	y
Multiple timeline support (tabbed or free-floating)	y	y
Multiple tabbed galleries (bins) with search and database-style detail modes	y	y
Batch Capture, Recapture and Print-to-Tape support RS-422 and DV control	y	y
Integrated waveform/vectorscope display	y	y
Stand-alone logging tool for generating batch capture lists	y	y
EDL import and export	y	y
Optional Interoperability module featuring OMF and AAF import and export	y	y
Direct export to Leitch NEXIO™ servers, with optional bi-directional interchange	y	y
Render Bank™ technology remembers previously rendered segments	y	y
Virtual Tape File System™ provides seamless integration with third party graphics/animation applications	y	y
Live video processing including real time titling and transitions	y	y
Export RealNetworks® RealVideo®, Microsoft® Windows Media Format™, AVI, QuickTime™, MPEG-1 and DVD-compliant MPEG-2 files directly from the timeline	y	y
Live webcasting combining live video & audio with prerecorded footage, titles & transitions	y	y

\*Some features (such as OHCI-based DV I/O support) may require higher minimum system configurations than the core product.

Some configurations may not be available in all international markets. Please contact your authorized Leitch Post Production reseller for availability in your area.

# [ VELOCITYQ ] MULTI-STREAM POST PRODUCTION NON-LINEAR EDITING

Leitch Technology is a 32-year global leader in the design and distribution of high-performance video systems for the professional television industry. Leitch offers the most extensible products and interoperable systems, enabling operations of any size to achieve a truly Integrated Content Environment. Leitch is the most trusted name for increasing performance and productivity through solutions that streamline workflow of content production, processing, transmission and management. With a sole focus on and commitment to the television industry, Leitch provides unparalleled customer support.

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Please visit [www.leitch.com/velocityq](http://www.leitch.com/velocityq) for more information.



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