

# Velocity ESX™

On-SAN Editor

EDITING // VELOCITY ESX™



Velocity ESX™ is a full-featured, HD/SD, high-resolution news, sports and production editing solution for the NEXIO® shared storage system. The editor operates directly on shared storage, utilizing the robust NEXIO architecture and a powerful user interface.

Velocity ESX can start editing HD and SD media the moment ingest begins, while the Harris Edit and Media ID technology delivers the industry's quickest way to minimize time and re-rendering between content access and air.

Format flexibility allows the use of all common file types in their native form, as well as intelligent import to the NEXIO SAN environment. Output to the web and mobile devices in a variety of formats is intuitively integrated as part of the high-resolution output. The system also integrates fully with newsroom computer systems such as AP ENPS® and Avid iNEWS®, enabling a truly collaborative newsroom environment.

## FEATURES

- Access to all shared storage material on the SAN via the NEXIO MediaBase content management system
- Ability to create and modify MediaBase metadata; filter, search and sort by metadata
- Software-only or hardware-based turnkey options
- NRCS integration with AP ENPS®, Avid iNEWS®, Octopus®, OpenMedia® and QNews®
- Hardware ingest and in-server editing
- Support for Blackmagic DeckLink Studio and SDI hardware I/O
- Integrated codecs and viewers for Panasonic®P2, DVCPRO HD and AVC-Intra, Sony® XDCAM, XDCAM HD, XDCAM HD422 and XDCAM EX formats
- Import and export of EDL, AAF, OMF, BXF and Apple® Final Cut Pro® XML files
- Import and export of common audio, video and graphic file formats
- Shared projects, settings and user profiles
- Ability to manage and protect media, projects, render files, settings and presets
- User profile-based, customizable window layout, hotkeys and settings
- Optional integration with NEXIO® InstantOnline™ auto-conform engine
- Global Proxy encoder and Global Proxy MediaBase viewer
- Optional integration with Invenio® search and Invenio® Motion workflow engine

## Editing Toolset

- Editing of ingesting clips
- Multi-function trim window, including 4:3 and 16:9 safe area markers
- Precise insert-and-overwrite three-point editing; intuitive drag-and-drop-style editing
- NRCS script-based editing with audio voiceover and read rate-based prompter
- Media ID technology for immediate playback and Edit ID for faster than real-time output
- Interactive editing and effects creation without stopping playback
- Mixed HD and SD on the same timeline with global and clip-based up/down/cross conversion and aspect ratio conversion
- Selectable preview quality playback for increased frame rate during playback of complex formats, effects and layers
- Multiple galleries and timelines with configurable video and audio tracks
- Track-based Eyecon view and advanced multi-camera editing
- Render bank technology with smart and batch rendering capability
- Create index marks and sub-clips
- Optional jog/shuttle and audio fader controllers
- Audio VU levels, mixing, fades, rubber banding, stereo panning, track patching, output routing, mute and solo
- Import graphics, animations, video and audio directly to the SAN
- Passthrough handling of closed-caption, Dolby®-encoded audio and other metadata
- Support for compressed audio types including MPEG-1 layer 2, AAC and AC-3
- Closed-caption display in Timeline Monitor window
- Integrated waveform and vectorscope window
- Sophisticated multilayer editing and effects

## Video Transitions and Effects

- More than 375 customizable 2D and 3D transitions
- Dozens of keyframeable video effects, including PIP, mask and 3-way color correction
- Support for third-party audio VST filters, video effects and transitions
- Direct integration with Adobe® After Effects
- Slow/fast-motion speed change, reverse playback, strobe/stutter
- Freeze frame/stills
- Title rolls, crawls and animations using bundled Inscribe® TitleMotion GS and third-party CG plug-ins

# Velocity ESX™

## On-SAN Editor

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### PRODUCT DETAILS

The Velocity ESX user interface provides access to a comprehensive editing and effects tool set. Real-time keyframeable effects such as PIP and color correction, the ability to employ mixed resolutions and aspect ratios on the same timeline, and essential audio controls are all included.

The interface is completely customizable, with a broad range of user options for increasing productivity, including user-definable hot keys, flexible window layouts and an optional external jog/shuttle controller.

This flexibility makes Velocity ESX an ideal choice for news operations that require newsroom computer system (NRCS) integration and the fastest time to air; sports applications that need highlight editing and slow-motion server output; and production environments that demand advanced editing tools along with true shared storage.

Using sophisticated software codecs with CPU and GPU processing, Velocity ESX integrates seamlessly with NEXIO AMP® and NEXIO Volt™ servers via gigabit Ethernet or Fibre Channel. Multiple Velocity ESX editors can reside on the SAN, creating a completely interactive, shared storage environment.

Velocity ESX is part of the comprehensive NewsForce™ HD/SD news platform, as well as the NEXIO Global Proxy low-resolution system. The editor is available either as a hardware-based turnkey system or software only.

#### Acquisition Formats

Velocity ESX offers the foremost support of file-based acquisition formats including AVCHD, JVC ProHD 35Mb/s and Ikegami GFCAM. Purpose-built P2, XDCAM and XDCAM EX viewers allow browsing of native media and metadata directly off of the recording medium. Edit-in-place with high-resolution or proxy editors can be performed immediately with no file conversion or localization. Edited clips can then be imported for inclusion as shared media on the NEXIO SAN.. Select MXF metadata can be mapped upon import, allowing this important information to be retained for searching. Archiving content from cell phones and PDAs, as well as other flash-based recording devices, is also supported.

#### Format Flexibility

The Velocity ESX editing system's use of software codecs allows common file formats to be edited natively in place or imported to the NEXIO SAN. Supported file types include AVI, MOV, MXF, MPG, MP4, MTS, MT2S, 3GP, SWF, FLV, F4V, WMV, LXF, MP3, WAV, BMP, JPEG, TIF, TGA, PNG and PSD. Additional support for Avid®

DNxHD can be enabled as a software option. This flexibility also includes the ability to mix and match any HD, SD or other content in both 4:3 and 16:9 aspect ratios with complete control over the aspect ratio conversion used. Selectable quality previews can be performed without the need for rendering.

#### Multiformat Output

Velocity ESX simplifies and accelerates the output of multiformat material such as Quicktime®, Windows Media®, RealMedia, AVI, MPEG-2, MPEG-4, H.264, Flash, 3GP/3G2, and Apple® iPod®/iPhone®. Configured presets allow creation of multiple formats upon output of the ID with a single button click.

Optionally, outputs can be performed through InstantOnline, eliminating any processing from the editor. Writeback to XDCAM®, XDCAM EX and P2® formats is also available.

#### NEXIO Global Proxy Integration

When used in conjunction with a NEXIO Global Proxy system and the Velocity™ Global Proxy encoder option, Velocity ESX creates a proxy file simultaneous with the output an edit. This allows instant access to the proxy file without burdening the separate NEXIO® PRX Transcoder hardware.

Also, with this option, the Global Proxy MediaBase can be accessed and configured to view proxy media from multiple locations and storage devices. Using further integration with Invenio® Motion and InstantOnline, this content can be retrieved and transferred to the local NEXIO SAN for conforming and output.

#### Native 64-Bit Application

Velocity ESX uses hardware profile calibration to optimize the software based on the current system configuration. Internally, the software is a native 64-bit application, which gives optimized performance, faster renders, improved real-time capabilities and additional stability.

#### Bundled Inscrber TitleMotion GS

Velocity ESX includes the latest Inscrber TitleMotion GS character generator, with support for the SCRIBE file format, as well as for the reading of the legacy ICG file format powered by Inscrber G-Scribe™ titling software. TitleMotion GS includes built-in integration with the Connectus® graphics management system, allowing templates, styles, and elements to be shared with the other G-Scribe-based systems.

### SPECIFICATIONS

Specifications are subject to change without notice.

#### NX1011VESX (-FC /-SDI) Hardware Specifications

Mainframe. . . . . Dual AMD multi-core 64-bit processors  
PCIe platform  
16 GB ECC RAM  
Solid-state 2.5" boot drive  
Dual-port 8 Gb/s Fibre Channel host bus adapter (optional)  
PCIe SDI Video I/O card (optional)  
Two 10/100/1000Base-T Ethernet ports  
Single VGA, Dual DVI/Display Port monitor interface  
6 USB 2.0 ports (2 front, 4 rear)  
PS/2 keyboard and mouse ports  
Gigabit Ethernet to USB adaptor  
1/8" audio I/O to USB adaptor  
USB custom keyboard  
Windows® 7 Professional x64  
Velocity ESX software

#### Inputs

SD Mode . . . . . 1 SDI BNC 525/625 4:2:2 @ 270 Mb/s (SMPTE 259M)  
HD Mode . . . . . 1 HD-SDI BNC 1080i/720p 4:2:2 @ 1.48 Gb/s (SMPTE 292M)

#### Outputs

SD Mode . . . . . 1 SDI BNC 525/625 4:2:2 @ 270 Mb/s (SMPTE 259M)  
HD Mode . . . . . 1 HD-SDI BNC 1080i/720p 4:2:2 @ 1.48 Gb/s (SMPTE 292M)  
1 SDI BNC SDI BNC 525/625 4:2:2 @ 270 Mb/s (SMPTE 259M)

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### Genlock Reference

SD Mode	Bi-level sync support
HD Mode	Bi-level or tri-level sync support

### Video Formats

SD Mode	525 @ 29.97 f/s, 625 @ 25 f/s
HD Mode	1080i @ 29.97 f/s and 25 f/s 720p @ 59.94 f/s and 50 f/s

### Audio

Channels and Formats	4 pairs embedded per SDI I/O
Inputs	1 BNC (SDI embedded) 1 pair ¼" unbalanced (AES/EBU)
Outputs	2 BNC (SDI embedded) 3 pair ¼" unbalanced (AES/EBU)
Processing and Storage	16-, 20- or 24-bit PCM, 48 kHz
Compressed Audio	Dolby® Digital (AC-3) and Dolby® E pass-through

### Storage

Options	Fibre Channel storage with 8 or 16 drives per chassis; up to 192 drives (300 GB or 600 GB) per NEXIO shared storage system Fibre Channel storage with up to 384 drives (300 GB or 600 GB) per NEXIO shared storage system using Intrinsic Mirroring™
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### NEXIO Farad storage

Interface	Dual-port, redundant Ethernet via NEXIO Media Host system architecture Dual-port, redundant 8 Gb/s Fibre Channel optical connectivity (optional)
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### SD Encoding/Decoding

MPEG-2 I-Frame	4:2:0 (4 to 15 Mb/s) 4:2:2 (10 to 50 Mb/s)
MPEG-2 Long-GOP	4:2:0 (4 to 15 Mb/s) 4:2:2 (10 to 50 Mb/s)
IMX	30, 40 and 50 Mb/s
DV	DVCPRO25, DVCPRO50, DVCAM (625 only)
H.264*	4:2:0 (.5-5 Mb/s) 4:2:2 (1-8 Mb/s) *Not available through baseband encoding

### HD Encoding/Decoding

MPEG-2 I-Frame	4:2:0 (50, 80 and 100 Mb/s) 4:2:2 (50, 70, 80, 100, 120 and 150 Mb/s)
MPEG-2 Long-GOP	4:2:0 (50, 60, 70 and 80 Mb/s) 4:2:2 (50, 70 and 80 Mb/s)
XDCAM HD	35 and 50 Mb/s
XDCAM EX 3	5 Mb/s
DVCPRO HD	100 Mb/s
AVC-Intra*	50 and 100 Mb/s
H.264*	4:2:0 (2-26 Mb/s) 4:2:2 (16-26 Mb/s)
DNxHD* (optional)	120, 145 Mb/s (NTSC) 180 and 220 Mb/s (PAL) 8 and 10-bit (decode only) *Not available through baseband encoding

### Remote Serial Interface

Input/Output	1 RS-422 port, 9-pin
Protocol	Sony 9-pin

### Physical Characteristics

Dimensions (H x W x D)	1.7 x 17.2 x 23.5 in (4.3 x 43.7 x 59.7 cm)
Weight	30 lbs (14 kg)

### Power

Power Supply	Dual redundant, hot-swappable
Voltage	100 to 240 VAC
Current	8 to 4 A
Frequency	60 to 50 Hz
Total DC Output	650 W
Idle Consumption	144 W @ 240 V, 156 W @ 120 V
Peak Consumption	264 W @ 240 V, 296 W @ 120 V

### Environmental

Operating Temperature	50° to 95° F (10° to 35° C)
Non-operating Temperature	-40° to 158° F (-40° to 70° C)
Operating Relative Humidity	8% to 90% RH and non-condensing
Non-operating Relative Humidity	5% to 95% RH and non-condensing
Operating Altitude	10,000 ft (3,048 m) @ 77° F (25° C)

### Software only (NXA1000VESX)

Minimum System Specifications	Intel™ XEON Quad Core Processor (2.4GHz, 12MB L3 Cache) or, Intel™ Core® i7 Quad Core Processor (2.8GHz, 8MB L2 Cache) or, AMD Quad Core Processor (2.6GHz, 8MB L2 Cache) 16GB ECC RAM NVIDIA Quadro 2000 1GB Graphics Card @ 1440x900 (WSXGA or WXGA+) 200GB 7200RPM Ultra ATA, SATA, SAS, or SSD Hard Drive Dual Gigabit Ethernet Ports (Intel NIC) 2x USB 2.0 Ports (IEEE1394 optional) 48 K 16 bit soundcard Microsoft Windows XP Professional x64 Edition or Windows 7 Professional x64
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### ORDERING INFORMATION

NX1011VESX	Velocity ESX hardware-based turnkey editing system
NX1011VESX-FC	Velocity ESX hardware-based turnkey editing system with Fibre Channel
NX1011VESX-SDI	Velocity ESX hardware-based turnkey editing system with I/O
NXA1000VESX	Velocity ESX software-only editor
NXA-VEL-UPG2	Velocity version 2.X upgrade

### Software Options

NXA-VEL-GPRXE	Velocity Global Proxy encoder option
NXA-VEL-BMIO	Velocity Blackmagic ingest software option
NX-VEL-DNxHD	Velocity DNxHD software codec option
NX-VEL-3D	Velocity stereoscopic 3D software option

### Hardware Options

NXEC400	External edit controller
NXFAD	External fader controller