

NEW!

LiveSet™  
Virtual Sets  
SDI Switching Option  
HD/SD Editing



VT[5]™

Integrated Production Suite



**VT[5]™ provides the tools you need for live and post-production: live video switching with completely integrated virtual sets, real-time keying, titling and audio mixing, plus HD/SD editing, DVD authoring, 2D video paint and animation.**

With VT[5] your investment is 100% productive, when it's not in use for live production the VT[5] is equally at home for post production. VT[5] switcher offers up to 32 external inputs, virtual LiveSet™ technology, multiple DDRs, CG Designer™ for titling, video paint for animation and comes standard with SpeedEDIT™, an ultra-fast non-linear multi-format HD/SD editor.

VT[5] is designed to deliver amazing video production at an unprecedented price.



**N E W T E K V T [ 5 ] F E A T U R E S**

■ Indicates features new to VT[5]

**Live Switching**

- Add up to 32 external inputs using SX-84 and SX-SDI expansion modules
- 16:9 wide-screen and 4:3 support
- Advanced matte capabilities for luminance and chroma keying with adjustable controls for spill removal, tolerance, smoothness and garbage matte removal
- Key settings are stored for each camera input
- Key preview is visible before you take it live
- LiveSet™ real-time virtual studio environments with multiple camera angles and focal lengths, real-time shadows, reflections, lighting and more
- Support for transitions between virtual sets
- LiveSet Constructor™ utility to create up-stream key graphics, virtual sets, fixed background keys and more
- Upstream effects bus for double-box interviews and picture-in-picture effects
- Hundreds of reversible DVEs (Fades, Wipes, Curls, Trajectories, Rotation, Compression, Borders, Chroma FX, Overlays and much more...)
- 2D and 3D DVE Transitions
- iVGA™ adds external computer displays (Mac & PC) as a switcher channel with multiple input selection
- Integrated DSK with both take and fade in/out
- Titling, graphics, videos and animations directly assigned to switcher buses
- Dynamic switcher buses allow reconfiguration (no need to re-cable the video inputs)
- Save/load switcher configuration

**Internet streaming**

- One button internet streaming
- Push and pull streaming
- Windows Media encoder

**Titling or Character Generator CG Designer™**

- Save As Title Template feature to create Live Title Templates for VT[5] and TriCaster™
- WYSIWYG editing
- Interactive template based CG module
- Display Program output within CG interface
- Use any installed TrueType font
- Powerful drawing tools
- Create and insert graphic objects (boxes, circles, splines, images)
- Save pages as 32-bit images or animations
- Save or recall text styles

**Digital Disk Recorder (VT-DDR™)**

- Multi-format, multi-standard on-screen video player
- Play back a single clip or list of clips
- Cue clips to roll instantly when triggered by Switcher
- Use multiple DDRs simultaneously
- DDR can be assigned to the Downstream Keyer (DSK) providing live animated overlays
- Count up or count down in either project time or clip time
- Record program out to hard drive either as a DV file or uncompressed

**External Controller**

- Control external RS-422 and DV decks from your VT[5] desktop
- Batch capture deck lists and configurations
- Record allows user to enter time code settings

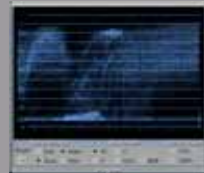
**Audio Mixer (using SX-84 expansion box)**

- Mix 8 live sources (stereo) and 8 online sources (4-channel)
- 4 adjustable XLR balanced mic/line inputs with Phantom power
- 6 stereo unbalanced audio inputs from live sources
- 8 inputs from computer sources
- DV and SDI audio inputs
- EQ, balance, mute and mono for all inputs
- Audio-follows-video capability
- Talk over (reduces mix levels for mic inputs)
- Automated mixing to transition between audio presets
- 4-channel audio (4 discrete channels) in and out
- PA Mix Output: for live PA or control room feed

**Signal correction Proc Amp**

- Brightness, contrast, hue, saturation
- U offset, V offset, U gain, V gain
- Calibrate computer sources as well as analog sources
- Advanced panel with 70+ adjustable parameters
- Auto calibration for 75 IRE bars, 100 IRE bars and video pass-through mode (requires SX-84™)

**N E W T E K V T [ 5 ] F E A T U R E S**



**Video Scope Waveform Monitor**

- Waveform of YV, Y, C, YUV or RGB
- Vectorscope at either 75% or 100% chroma
- Monitor program or preview feeds
- Adjustable display brightness and tint

**Video Monitors**

- Full-field on-screen playback on computer monitor
- Monitor program, preview, key or DSK buses
- Display supports 4:3 and 16:9 widescreen
- Underscan mode
- Zebra stripes for both 75 IRE and over-legal video
- YUV video display
- Adjustments to match computer display to reference video monitors

**Non-linear video editing SpeedEDIT™**

- Resolution independent: output any frame-rate, any resolution, any aspect ratio
- Multi-format, mix AVI, QuickTime, MPEG1, MPEG2
- Combine HD and SD clips on timeline
- Native editing of HDV and DVCPRO HD
- Internally processes all clips in HD with full-res, real-time HD previews
- MXF Support (depends on codecs)
- WMV HD and VC-1 output
- White Balance correction and real-time 3-wheel color correction
- 4-band color selection
- CG Post™ animated titling
- VST™ Audio plug-in support
- Optimized for Dual-core and Quad-core systems
- Linked timeline and storyboard editing
- Edits in native formats
- Hundreds of real-time transitions

■ Indicates features new to VT[5]

- Real-time slow motion and reverse
- Real-time video and audio filters
- Real-time 3D position, size and rotation
- Real-time TGA sequence playback
- Real-time chroma and luma keying with spill suppression
- Real-time mixing of unlimited audio layers
- Spline-based control of all clip properties
- 3D audio positioning
- EDL import/export (Grass Valley, CMX, Sony, Excel)
- Unlimited Undo/Redo saved with project
- Project backup tool
- Intelligent background rendering
- Real time FireWire in/out and SD video in/out up to uncompressed signal

**2D Video painting and animation Aura Video Paint™**

- Amazingly fast 2D paint and animation engine
- Paint over live video
- Four-point pixel tracking
- 3D compositing
- Stroke recorder
- Instantly use a graphic alpha channel
- Animate text along path

**DVD Authoring U-Lead DVD Workshop**

- Complete DVD authoring
- Direct encoding from a VT-Edit projects.
- Instant DVD Project playback
- MPEG-2 encoding
- MPEG-2 decoding

**INPUT/OUTPUT**

**VT Card**

- 1 in & out Component YUV or Y/C and composite
- 1 in & out unbalanced stereo audio
- DV inputs and real time DV output (requires IEEE1394 OHCI compliant I/O)
- Native program output to projector up to QSXGA (2560x2048)
- Genlock input
- Alpha out / preview out

**SX-84™ Expansion Box (included with VT[5] Live!™)**

- 8 component inputs
- 8 Y/C inputs
- Up to 24 composite inputs
- 4 component or 4 Y/C outputs

- 4 composite outputs
- 1 composite preview/alpha-channel output
- 4 XLR balanced audio inputs (trim control between mic and line levels)
- 6 stereo unbalanced line inputs
- 4 balanced line outputs
- 2 control room/PA outputs
- 3 RS-422 machine control ports
- Genlock with loop-thru
- Tally light and GPI support

**SX-SDI™ Expansion Box (optional)**

- 8 SDI video inputs
- 1 SDI program output, 1 SDI preview and 5 SDI routed outputs
- Audio AES EBU or Embedded 1 input/1 output

**VT[5] Supported File Formats**

**Video Formats:**

- AVI, DV, RTV, MPEG1, MPEG2 Program Stream, MPEG2 Transport Stream, HDV, QuickTime® (with alpha support), MPEG4 (including PSP and iPod), Image sequences, Flash, WMV HD (Render only) and VC-1.

**Graphic formats:**

- JPG, JPEG, PNG, Targa (TGA), Tiff, BMP, WBMP, PCX (alpha-channel support for Targa and PNG)

**Audio Formats:**

- WAV, MP3, AU, SND, AIFF, WAV, DIF

VT[5]™	
Type	3.3V / 5V half-length 32-bit PCI, 66 MHz
Video In/Out	PAL composite, Component, S-Video, SDI (optional board) alpha channel out
Digital format	8bit ITU-R BT.601
Analogue video connectors	15 pin high density (adapter cable with BNC connectors included)
Time base corrector	Internal. External unit not required
Analogue audio connectors	3.5 mm stereo
Digital video/Audio connector	90-pin digital video/audio bus Firmware Field Upgradable
Genlock	Syncs VT[5] to external sync. Genlock loop-through available on SX-84 subcarrier phase controls: vertical, horizontal
Comb filter	2-line luma and chroma comb filters

Processor:	Dual Intel or AMD processor that supports SSE2 Front-side Bus speed of 800MHz or higher
Interface:	A free 66MHz PCI slot for the VT[5] card is recommended for best performance. (Additional slot needed for breakout cable)
Graphics Card:	PCI Express-based graphics card Nvidia or ATI graphics chipset Minimum 64MB per-display onboard graphics RAM Full Open OpenGL and DirectX 9.0 support Minimum screen resolution of 1280x1024 required Latest drivers from chipset manufacturer
System RAM:	2 Gigabytes of System RAM
Hard Drives:	Software-stripped SATA drives for video storage/playback 8 GB space for DVEs and content IDE or SATA system drive with 2GB of free disk space DVD Drive
DV Capture and Switching:	Any IEEE1394 Firewire card
Operating System:	Windows® XP Professional (SP2) or Windows® Vista 32-bit
Software:	Windows® Media Player 9 or higher Windows® Media Encoder 9 for streaming
Drivers:	Direct X 9.0c or higher Latest graphics card drivers

For Hi Definition editing, Maximum usage of VT[5] LiveSet™ technology requires a VT PRO card, which shipped with VT[5], dual CPUs or dual core CPUs are suggested for the smoothest and fastest operation.

\*NewTek recommends the optimal system configuration. Systems of lesser processor and drive speed will work with VT[5] but some complex functions may not perform in real-time. To review the minimum specifications suitable to your production requirements visit [www.newtek.com](http://www.newtek.com). Additionally, as new technology becomes available, system recommendations will be updated.

SX-84™ SWITCHER EXPANSION MODULE (6U Breakout Box)	
Video inputs	8 component or Y/C or 24 composite Proc Amp control for each input (You may have inputs of differing formats on differing rows, so you can have all three formats feeding to the VT[5] at any time.) (Multiple inputs internally synchronized; camera do not require genlock capability.)
Video outputs	4 Component or 4 Y/C program outputs 4 Composite program outputs 1 Alpha out (can also display preview output)
Genlock	1 Genlock in - 1 Genlock loop-through
Audio in	4-Channel XLR balanced (switchable mic or line level, phantom power) - 12 RCA unbalanced (6 stereo pairs) 1 stereo AUX return
Audio out	4 XLR balanced - 8 RCA unbalanced (6 stereo pairs) - 1 stereo AUX send - 2 stereo PA/Control Room Mix
Remote control	3 RS-422 Tally light and GPI support

SX-SDI™ SWITCHER EXPANSION MODULE (2U Breakout Box)	
Video inputs	8 Serial Digital inputs
Video outputs	1 Serial Digital Program output 1 Serial Digital Preview output 5 Serial Digital outputs (routed from the 8 SDI inputs)
Audio inputs	1 Embedded Serial Digital audio input 1 AES-EBU Serial Digital audio input
Audio outputs	1 Embedded Serial Digital output 1 AES-EBU Serial Digital output
SDI Video in / out conforms to SMPTE 259M; Embedded Audio conforms to SMPTE 272M; Digital Audio in / out conforms to AES/EBU standards; 20-bit 48khz (2 channels)	

Note: The SX-SDI requires the SX-84 to operate. Both SX-84 analog and Serial Digital inputs/outputs are simultaneously active.

SDI I/O EXPANSION CARD	
Type	3/4-length PCI card (requires free PCI slot)
Video input	1 SMPTE 259M Serial Digital
Video output	1 SMPTE 259M Serial Digital 1 SMPTE 259M Serial Digital Preview or Alpha Channel out
Audio input	1 AES/EB Serial Digital
Audio output	1 AES/EB Serial Digital

Note: The SDI I/O EXPANSION CARD is not compatible for use with the SX-SDI



Comparison chart of VT[5]™, VT[5] LIVE!™ and a VT[5] LIVE! plus SX-SDI Expansion Box

	VT[5]	VT[5] LIVE!	+ SX-SDI
Video Switcher	▲	▲	▲
LiveSet Technology	▲	▲	▲
LiveSet Constructor	▲	▲	▲
SpeedEDIT™ HD/SD resolution-independent, multi-format editing	▲	▲	▲
Audio Mixing	▲	▲	▲
CG Designer (Character Generator)	▲	▲	▲
DDR (Digital Disk Recorder)	▲	▲	▲
RS-422 Remote control	▲	▲	▲
DV-Support (Requires IEEE-1394 interface)	▲	▲	▲
DSK (Downstream Key)	▲	▲	▲
Capture, Batch Capture	▲	▲	▲
Proc Amp ( colour & signal calibration)	▲	▲	▲
VT-Scope (Waveform & Vectorscope)	▲	▲	▲
On-screen Video Monitors	▲	▲	▲
Video Paint (2D Paint, animation & compositing)	▲	▲	▲
24-month manufacturer hardware warranty	▲	▲	▲
Technical Support	▲	▲	▲
VT[5] 32-Bit PCI 66 MHz card	▲	▲	▲
1 in/out Component YUV or Y/C or composite	▲	▲	▲
1 in/out Unbalanced stereo audio	▲	▲	▲
1 genlock input	▲	▲	▲
1 Alpha out / preview out	▲	▲	▲
SX-84 switcher expansion module (6U breakout box)	●	▲	▲
8 component or 8 Y/C or 24 composite inputs	▲	▲	▲
4 component or Y/C outputs	▲	▲	▲
4 composite program outputs	▲	▲	▲
4-Channels XLR balanced audio in/out	▲	▲	▲
12/8 RCA unbalanced audio in/out	▲	▲	▲
1 Tally / GPI connector	▲	▲	▲
SX-SDI switcher expansion module (2U breakout box)	●	●	▲
8 Serial Digital inputs	▲	▲	▲
1 Serial Digital Preview + 1 Program outputs	▲	▲	▲
5 Serial Digital routeable outputs	▲	▲	▲
Embedded Serial Digital audio: 1 input /1 output	▲	▲	▲
AES-EBU Serial Digital audio: 1 input /1 output	▲	▲	▲
SDI I/O Expansion Card	●	●	▲

Note: The SX-SDI requires the SX-84 to operate. The SX-SDI and the SDI I/O Expansion Card options cannot be installed simultaneously.

▲ Included ● Available option

\*Please refer to [www.newtek.com](http://www.newtek.com) for the latest information. Specifications are subject to change without notice.

OUR CUSTOMERS SAY :

*«A revolutionary product, a summary of technology and genius in a single solution. The best that a digital television would want for the production of its content.»*

**Massimo Mazzanti**  
Sailing Channel

*«... a unique product that combines the functions of a live switcher with those of an edit suite. All designed to work the way production professionals really need.»*

**Paulo de Andrade,**  
Digital Post Production

*«It does the same work as other non-linear products, faster, cheaper, better and with no fat!»*

**Rich Helvey**  
NBC's Access Hollywood

*«Thanks to the power and technology engineered in NewTek's VT, Mania TV! is delivering the next revolution in television!»*

**Drew Massey**  
CEO - Mania TV!

Visit <http://www.maniatv.com> to check out the world's first Internet Television Network! It's got tons of new music videos and short films!

*«...perhaps the best tool on VT is its image quality. Along with my co-workers on Soeur Emmanuelle, I was suprised by the superb quality of the images I achieved. The color correction... is particularly powerful and gives excellent quality...»*

**François Boulene**  
Visual Effects Artist, Editor, Producer

*«You have exceptional hardware and software working in concert to give you maximum creative freedom. No one does this better than NewTek...»*

**Robert Levine**  
Florida State University Media Production Program

Live Switching - Titling - Internet Streaming - Broadcast - Post Production - DVD Authoring - Real Time - Multiformat



Authorized Dealer



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