

VT[5] Feature Details

Live

- Advanced NewTek LiveSet™ effects engine.
 - **Complete, integrated virtual set system.**
 - Multiple angle support.
 - Multiple focal-length support for each angle
 - Support for 2D and 3D transitions between virtual sets.
 - Virtual sets can be seen on Preview bus before taking them live.
 - Advanced (real-time) support for
 - Reflections.
 - Refractions.
 - Soft Shadows.
 - Over-the-shoulder shots.
 - Up to 24 simultaneous effects can be enabled (one for every switcher input) and transitions can be applied between them.
 - LiveSet Constructor, a simple LiveSet creation tool is bundled with VT[5] that allows you to create your own simple effects. This can create up-stream key graphics, virtual sets, fixed background keys and more.
 - Live effects can be applied to any switcher input.
 - Effects with up to 4 video sources are possible (some restrictions apply.)
- VT[5] Switcher now has a third bus for upstream effects that allow you select what video sources are being mapped onto the secondary video sources in input effects.
- **Advanced new keying capabilities.**
 - Completely re-written, real-time matte generation.
 - Edge manipulations (smoothness, contraction, expansion, etc...)
 - Full spill removal with adjustable tolerance and smoothness.
 - Luminance and Chroma keying.
 - Keys can be previewed before taken live.
 - Garbage mattes.
 - All elements of the keyer support the ability to preview their operation to help locate any errors in the keying for perfect calibration. This isolates the color channel, edge and spill controls for discrete adjustment
 - All key settings are stored per camera input so that different cameras can be set up with different settings (just like procamp settings.)
- Video transitions support aspect ratio where appropriate.

- Switcher has 5 banks of DVEs, with a fade and 9 user-selectable DVEs per bank
- Real-time DV input has been rewritten to provide lower latency and better guarantee of audio/video sync, even when the switcher time-base and the DV time-base do not match.

Non Linear Editing

- Includes full integrated copy of SpeedEDIT.
- Improved file format support.
 - RAW DV
 - **DVCPro**
 - **DVCPro 50**
 - **DVCPro HD**
 - **MXF support (there are some codec limitations)**
 - MPEG1
 - MPEG2 Program Stream
 - MPEG2 Transport Stream
 - **HDV**
 - MPEG4
 - QuickTime
 - HDR and floating point still image support
- Support for all audio channels from files. (such as 4-channel DV files.)
- Audio is significantly improved and has been changed to make it far more predictable as to audio levels written into video files.
- Voice-over support.
 - Support for insertion into project at start point.
 - Support for automatic playback when recording starts.
- Capture from FireWire sources
 - DV camera capture.
 - HDV camera capture.
- Full support for project settings.
 - Selectable resolutions from icons size up to higher than HD resolution.
 - Project resolution settings can be created and recalled
 - All frame-rates are supported.
 - All aspect-ratios can be created.
 - Progressive or interlaced projects can be created.
- Improved background rendering

- Progress display shows background rendering status.
- Aspect ratio is read from source video files and video is automatically matched to the project's aspect.
- Integrated animatable Character Generator. (CG Post)
 - Significant performance improvements.
 - Resolution independent rendering.
 - Sub-pixel scrolls and crawls.
- Real-time output as frame-buffer
 - On VT card.
 - On DV card.
 - On a HDV compatible camera providing real-time full HD output.
- Real-time print to DV tape
 - Includes support for dropped frame notification.
- Integrated output monitor
 - Support for resolution, aspect ratio and field-rate independent previews, including HD support and higher.
 - Selectable fielding options
 - Defielded at field rate.
 - Full field rate display.
 - Single field display.
 - Adjustable zoom factors and fit-to-window support.
 - Optional selection for pixel-to-pixel display on the output or aspect-corrected display.
 - High-quality color correction and calibration.
 - Visual markings can be overlaid on output
 - Action safe
 - Title Safe
 - Screen Center
 - Uses GPU for advanced processing without imposing an additional CPU performance drain.
- Audio plugin support
 - Full support for VST audio filter plugins.
 - All audio parameters can be animated on a curve
 - Plugin bundle included from Voxengo
- Fully rewritten file rendering
 - Render still frame option on Capture module
 - Significantly improved file format support

- MPEG1
- MPEG2 Program Stream
- MPEG2 Transport Stream
- HDV
- MPEG4 (including PSP and iPod support)
- Raw DV
- DVC Pro
- DVC Pro 50
- Image Sequences
- Output to Flash
- MP3
- QuickTime
- WMV-11 Support, including VC-1.
- More.
- Two pass encoding.
- Full aspect-ratio support, with the ability to render to aspect ratios and resolutions that differ from the project settings using customizable boxing options.
- Full support over I,B and P-Frame creation
 - Ability to force I-Frames at project markers.
- Export a text file with marker time-codes for use with DVD authoring applications.
- Creation of render format presets.
- Performance
 - Dramatically improved real-time rendering performance.
 - New optimized code path for all common real-time operations.
- Improved Control Tree Options
 - All spline nodes support ease-in and ease-out.
 - Ability to change fielding order of input clips.
- Improved color correction
 - 3 band color corrector
 - 3 color wheel support.
 - Direct manipulations of waveform monitors and vector-scopes
 - The luminance ranges of all bands can be selected.
 - All parameters can be animated.
 - Selective color correction

- Up to 4 channels can be applied at once.
- Color ranges of interest can be selected either by luminance or chroma on a waveform vector-scope.
- Direct manipulations of waveform monitors and vector-scopes and color-wheel.
- All parameters can be animated.
- Basic Color correction
 - Direct manipulations of waveform monitors and vector-scopes and color-wheel.
 - All parameters can be animated.
- Project Backup Tool
- Time-code burn-in tool to overlay project time on playback.
- Advanced new cross-fades
 - Dip-to-color, with selectable colors.
 - Additive crossfades
- Additional filters
 - Black and white
 - Sepia tone

Miscellaneous

- On-screen Video Monitors
 - fully support aspect ratio.
- DDRs
 - Fully support aspect ratio.
 - Read all new file formats supported by SpeedEDIT, including **M2T, MPEG, QuickTime, etc...**
 - Real-time scaling and aspect ratio conversion is included for all file types.
- VGA Output to projector
 - Supports high quality scaling, with aspect ratio of source video and destination monitor taken into account.
 - Includes “enhancement” to help compensate for the artifacts caused by the dramatic up-scaling from SD to VGA resolution.
- Significantly improved OS support.
 - **Windows XP 64bit** and 32bit.
 - **Windows Vista 64bit and 32bit.**
- New Audio and Video drivers
 - There are completely re-written audio and video capture drivers for use with encoding applications (e.g. Windows Media Encoder, Flash Encoder, etc...) that are far more reliable

and significantly improve VT[5] stability when these are running.

- AVI Wrapper
 - The AVI wrapper has been re-written and supports a far wider variety of project features.
- **SpeedHQ codec**
 - Significantly improved video performance over NT25.
 - Supports 4:2:2 video with and without alpha channel.
 - Supports 4:4:4 video with and without alpha channel.
 - Natively supports multi-core and multi-CPU decoding.
 - Resolution and frame-rate independent.
- User interface
 - Global UI color is customizable in Preferences
 - Significantly improved readability across all modules.
 - Significantly improved icon generation quality with very high-quality scaling.
 - Clock on main user interface.
- Capture Panel
 - Capture panel supports SpeedEDIT file format presets
- CG Designer
 - Can create and export title templates for use with VT [5] or TriCaster.
 - Render animated scrolls and crawls to any SpeedEDIT file formats (e.g. HDV, etc...)
 - Significant performance and stability improvements.
 - CG Designer can export pages to effects bus.
- CG Templates
 - CG Templates can export pages to effects bus.
- Streaming Module
 - Added push streaming support.
 - Support for VC1 streaming.
 - Support for compressor side de-interlacing.
 - Support for aspect ratio.
- SX-SDI Support
 - **Integrated support for SX-SDI switching.**
 - Integrated support for SX-SDI routing
- Reliability
 - All third party application plugins include “proxy” plugins that allow you to run with multiple versions of VT or NewTek software installed without path clashes.

- Drivers no longer take any system resources when VT is not actually running. (WinRTME automatically exits when it is not needed.)
- Entirely re-written installer process that should be far more reliable, and does not need any system path settings, reducing the chances of conflicts between VT and other applications.
- Internal native support for MPEG-1, MPEG-2, MPEG-4, QuickTime, DV, MJPEG decoding and encoding which reduces the reliance on external codecs.
- Performance
 - Almost all areas that use significant CPU resources are multi-threaded, taking advantage of multi-core and multi-CPU machines.
 - Reduced memory usage for many core operations.
 - All key areas of the product are aggressively optimized for SSE2 instructions.
- Desktop
 - Improved desktop visuals.
 - File assets always exist for resolution, frame-rate, audio sample rate, etc...
 - All modules fully support aspect ratio.