

DVStorm2

Realtime Production Studio



canopus



Canopus Proprietary Technology

DVStorm2 is the world's most capable realtime multi-track editing system. Combining Canopus proprietary technologies, DVStorm2 delivers the industry's highest-quality DV and MPEG, breakthrough realtime performance and a professional, stable studio environment.

Unlike any other realtime editing system, DVStorm2 is capable of performing unlimited simultaneous realtime video filters, titles and graphics layers. This power and expandability is made possible by Canopus's proprietary scalable video architecture. Pioneered by Canopus in 1998, Scalable Video Technology ensures that DVStorm2's realtime editing capabilities expand as CPU power increases. Scalability ensures a greater return on investment and a long product life.

To date, no other editing system offers such scalability.

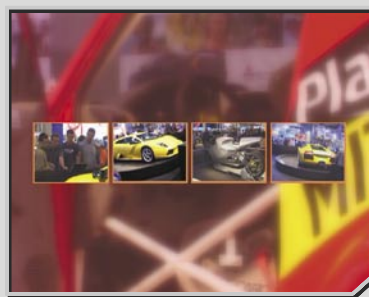


No Limits Realtime Editing

- > 5 simultaneous realtime video tracks.
- > Unlimited simultaneous realtime title and graphic layers.
- > 30 realtime video filters.
- > 7 realtime audio filters.
- > Perspective / 3D picture-in-picture.
- > Simultaneous unrestricted combinations for all of the above.
- > 28 realtime 2D and 3D transition groups with hundreds of presets.
- > Realtime DV and analog output.
- > Full YUV editing and processing.



- > 30 Realtime titles and graphic layers with motion and opacity effects



- > 5 Realtime video tracks
- > 4 Picture-in-picture tracks with zoom
- > Realtime blur on the background

Powerful New DVStorm2 Capabilities

Comprehensive new MPEG capabilities and advanced DVD authoring

- > DVStorm2 incorporates a state-of-the-art hardware MPEG-1/MPEG-2 encoder for high-quality archiving of video assets and professional DVD publishing.
- > Realtime MPEG-1/MPEG-2 capture from an analog or DV source.
- > Timeline export to MPEG-1/MPEG-2 with user-definable presets for DVD, SVCD & VCD.
- > Encode to CBR, VBR, program stream, elementary stream, MP@ML DVD-compatible encoding
- > **MpegCutter** – Cut, trim and re-export MPEG clips.
- > **AV Splitter** – Create elementary stream from program stream files by splitting audio and video.
- > **MpegRe-encoder** – Reconvert High bitrate MPEG files to lower bitrates at high speed using hardware MPEG encoding.
- > **MpegExplorer** – Allows a detailed view of all MPEG files within a particular folder.
- > **Ulead DVD Workshop SE** – Professional DVD-authoring software.

New Realtime Video Filters

- > Mirror
- > Raster Scroll
- > Tunnel Vision
- > Loop Slide
- > Strobe
- > White Balance / Black Balance filter

Xplode for DVStorm and RT3D-II – Realtime 3D transition software

- > Create unique, stunning and professional video effects.
- > 3D Perspective picture-in-picture / Pan & Zoom

Video-out Plug-ins

- > Adobe® After Effects® 5.x
- > Adobe® Photoshop® 7.x
- > NewTek LightWave 3D® 7.0

Canopus DV Capture

- > Single-pass scene detection and capture / batch capture utility
- > Simultaneous 3-stream capture from multiple DV sources. (Requires IEEE 1394 Card)



> Simultaneous 3-stream capture

AVI2 Support

- > Accelerated timeline output (5x speed)
- > Import AVI2 files into Storm Edit or Premiere timeline.



Advanced Realtime Video Filters

DVStorm2 features powerful realtime video filters unique to Canopus. All realtime filters are customizable and can be combined to provide endless special effects.

30 Realtime Video Filters

- > Anti-flicker
- > Blend Effects
- > Blur
- > Chroma Key
- > Chrominance
- > Color Correction
- > Combine Effects
- > Emboss
- > High Quality Blur
- > Loop Slide
- > Luminance Key
- > Matrix
- > Mirror
- > Monochromatic
- > Mosaic
- > Motion Blur
- > Noise
- > Old Movie
- > Pencil Sketch
- > Picture-in-Picture
- > Raster Scroll
- > Region
- > Sharp
- > Soft Focus
- > Solid Color
- > Speed Control (-10,000% to +10,000%)
- > Strobe
- > Tunnel Vision
- > Variable Speed Control
- > White / Black balance



> Original Video



> Chrominance Filter



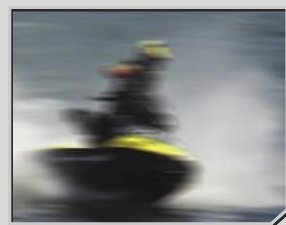
> Original Video



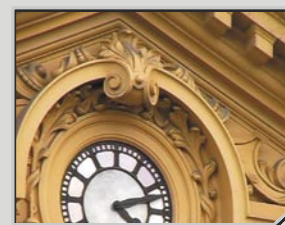
> Region Filter
> Blur
> Color Correction



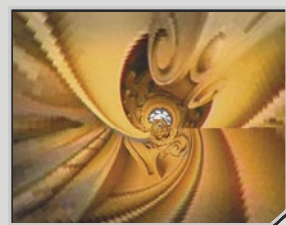
> Original Video



> Motion Blur



> Original Video



> Tunnel Vision

Combine and Blend Realtime Filters

There are no limits to the number of Video Filters that can be combined and blended. Canopus Scalable Technology allows stacking of video filters on up to 5 Video Tracks all in realtime.

Combine Realtime Filters



> Original Video



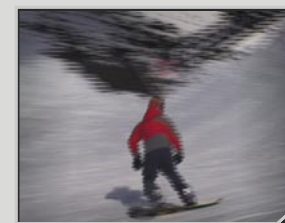
> Old Movie



> Old Movie & Color Correction



> Old Movie, Color Correction & Region to achieve a 16:9 look



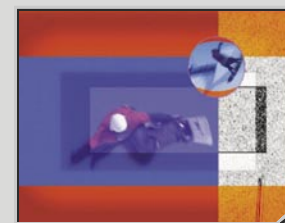
> Original Video



> Combine Effects
> Region
> Color Correction
> Emboss

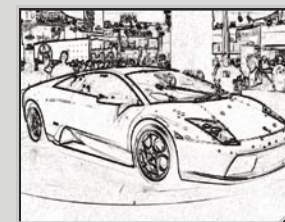


> Combine Effects
> Region
> Color Correction
> Soft Focus
> Emboss
> Pencil Sketch



> Combine Effects
> Region
> Color Correction
> Soft Focus
> Emboss
> Pencil Sketch
> Circular Picture-in-Picture
> Chroma Key

Blend Filters



> Pencil Sketch



> Blur



> Monochrome



> Chrominance to change the color of the car

Realtime Title Motion Filter

Canopus DVStorm2 is capable of unlimited simultaneous realtime title and graphic layers. Create realtime multi-layered composites with dozens of title and graphic layers. Motion and opacity control allow each layer to behave differently. Title Motion Filter effects include Blur, Dissolve, Slide, Wipe and Laser.

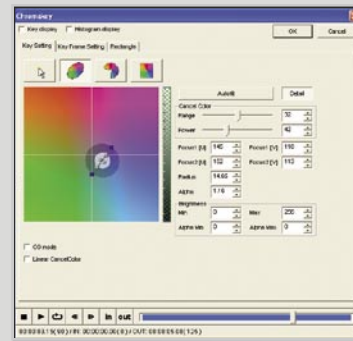


> 15 Realtime title and graphics layers



Realtime Chroma and Luma Keying

Chroma and luma keying allows editors to make part of their video transparent. Keyed clips can be placed over other clips to achieve effects, such as placing a person in front of any background video. Canopus processes realtime effects in the YUV color space with 4:2:2 sampling. The result is a much cleaner Chroma and Luma Key without the compression artifacting around the edges normally associated with a Key that works in the RGB color space.



> Chroma Key oval selection mode

Chroma Key



> Video to Key



> Background Video



> Chroma Key Result 1



> Chroma Key Result 2

Luma Key (2 realtime luma keys with 3 realtime video tracks)



> Video A to Key



> Video B to Key



> Background



> Luma Key Result

Inverted Luma Key (2 realtime luma keys)



> Video to Key



> Background Video



> Luma Key Result



> Luma Key Result with the checkerboard rekeyed

Realtime 3D Picture-in-Picture / Pan and Zoom

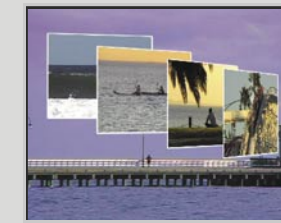
DVStorm2 now features the industries most flexible 3D Picture-in-Picture handling.

Powerful 3D Picture-in-Picture transition controls include

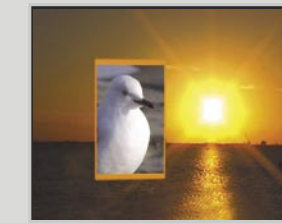
- > Interactive preview tools for position, orientation, scale and shadow configuration.
- > Full key frame timeline control for position, orientation, perspective, scale and transparency.
- > Crop and Border controls allow separate crop control for each border as well as color and soft edge controls.
- > Three interpolation modes: All key frame groups can be interpolated by: Constant, Linear or Spline.
- > User friendly configuration controls allow quick configuration of complex transitions without worrying about start and end points.
- > Extremely high quality anti-aliasing for smooth edges and clear representation of 3D manipulated image borders.
- > Easy to use presets provide perfect results without time consuming adjustment.



> Realtime 3D Perspective Picture-in-Picture with Shine and Border effects



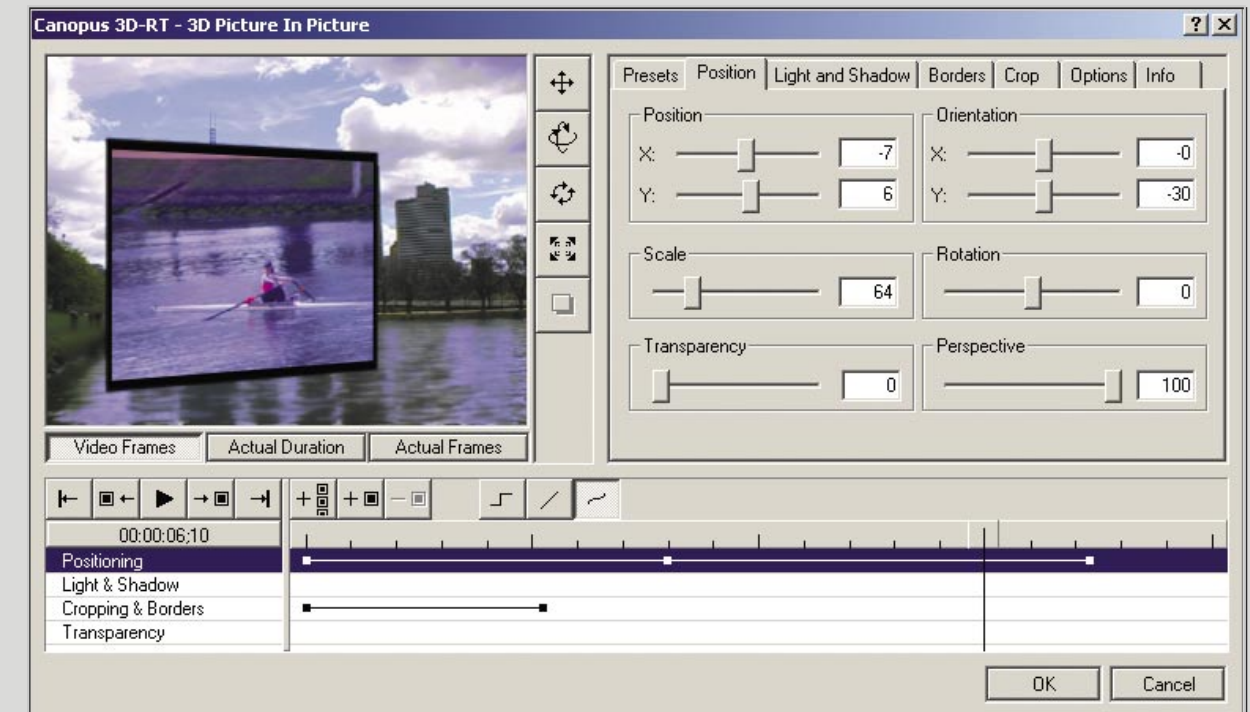
> 4 3D Picture-in-picture with Highlight and Soft Borders



> with Soft Border and with Image Cropping



> with Soft Border

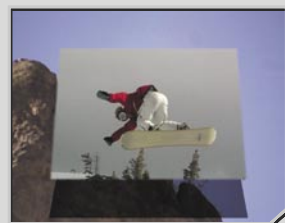


> 3D Perspective Picture-in-Picture set-up



Xplode for DVStorm and 3DRT-II Realtime 2D and 3D Transitions

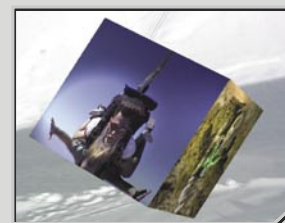
Canopus DVStorm2 includes Xplode for DVStorm and 3DRT-II, advanced 3D video effect engines. Xplode for DVStorm/3DRT-II feature proprietary Canopus Effects Technology and provide the power to create stunning and professional quality video transitions. With 28 transition groups, hundreds of presets and endless customizable options Xplode for Storm/3DRT-II provide sophisticated power for the demanding video editor.



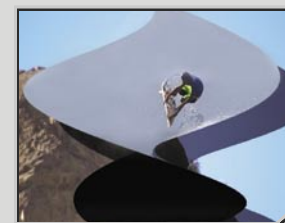
> Fly Away



> Alpha Wipes - Heart



> Cube Spin



> Twist

Performance at its finest

Xplode for DVStorm plugs-in to Adobe Premiere and Canopus Edit applications to execute multiple complex transitions and effects in realtime.

Create completely original effects

- > The Canopus state-of-the-art MPEG Encoder provides output from the timeline
- > Adjust the rate of motion at any point of a transition.
- > Save keyframed effects into a preset list.
- > Configurable lighting allows editors to adjust where a light source is positioned, what color the light is, and the degree of light intensity.
- > Within selected transitions, Xplode for DVStorm breaks the barrier of static shadows by providing a very natural, realistic and smooth look to projected shadows as they are cast in reference to the direction of the incoming light source.
- > Import 3D objects from Lightwave and 3D Studio Max. Xplode DVStorm lets users create their own customized 3D effects. Further customization is possible through the support of AVI, BMP, GIF, Windows Media and JPG formats.

Choose from the following Transition Categories which all have numerous Presets

- > **Xplode 3D Standard** – Ball Bounce, Billboard, Confetti, Conveyer, Cube Tube, Double Door, Fly Away, Page Peel, Ripple, Twist, Wave, Zoom
- > **Alpha Vapor Dissolves** – Clouds, Smoke and Water

- > **3D Object Wipes** – Use 3D objects to wipe Video B onto Video A. These include Airliner, Boom Box, Butterflies, Camera, Card, Cell Phone, Dice, F16, Golf Ball, Heart, Helicopter, Semi Truck, Sword
- > **Alpha Wipes** – More than 60 different wipes including: Beam Me Up, Breaking Wave, Checker, Circles, Curtains, Diamonds, Gravel Ring, Hearts Galore, Jaws, Layered Roll On, Mosaic Ripple, Muffins, Oil Slick, Quad Spots, Radar, Sandblast, Spiral Burst, Wash Away



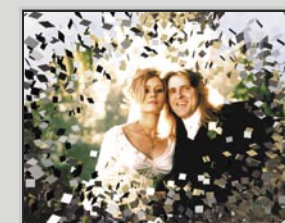
> Wash Away



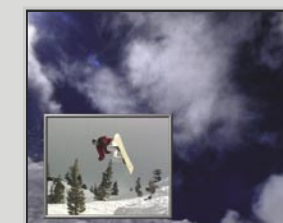
> Ball Bounce



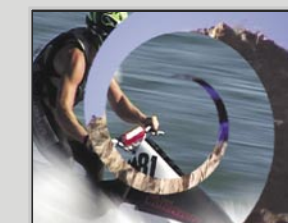
> Alpha Vapor - Changing Wind



> Confetti



> Zoom



> Alpha Wipes - Spiral in & out

3DRT-II Highly optimized 3D DVE's
Blinds, Cube Spin, 3D Dissolve, Flip Over, Four Pages, Peel Away, Sphere, Single Door, Two Pages

Canopus Intuitive Interface

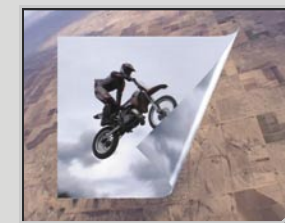
Xplode for DVStorm "SmartConfig" intuitive interface dramatically reduces the learning curve by allowing users to easily and quickly adjust transitions to their specific needs



> Blinds



> Four Pages



> Peel Away



> Sphere



> Xplode transition setup



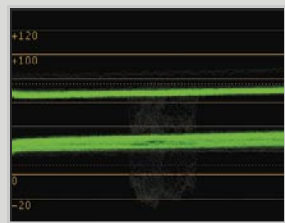
Canopus Realtime Tools

DVStorm2 incorporates an impressive array of professional tools to assist editors in making the best creative decisions with their projects. These include a Waveform & Vectorscope monitor, Realtime Audio Filters and Realtime video out plug-ins for Adobe After Effects, Adobe Photoshop, and NewTek LightWave 3D.

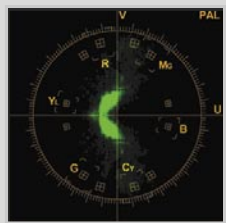
Video Tools

Waveform & Vectorscope

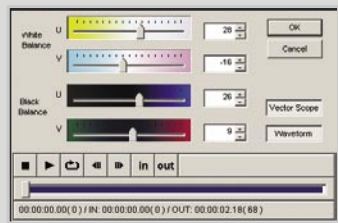
Process and maintain the video signal quality necessary for broadcast using Canopus's Waveform and Vectorscope for accurate color information. The Waveform and Vectorscope monitors are available for the Color Correction and White Balance Filters. The White Balance Filter alters the balance of color using the white or black ends of the color spectrum.



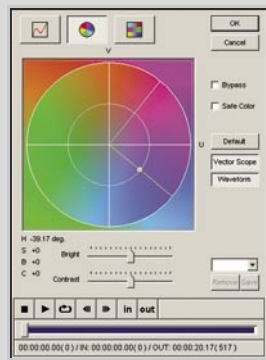
> Waveform



> Vector Scope



> White Balance



> Color Correction

Realtime Video Out Plug-ins

Canopus provides Realtime Video Out in Adobe After Effects / Adobe Photoshop / NewTek LightWave 3D.

Audio Tools

Realtime Audio Tools

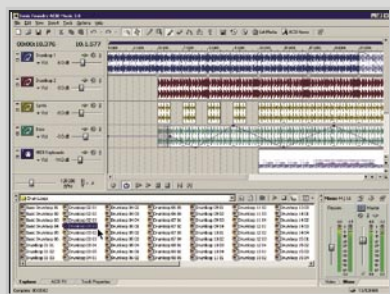
Canopus Realtime Audio Filters provide tools such as Graphic Equalizer, Delay, High Pass Filter, Tone Controller and more in StormEdit and Adobe Premiere.

Powerful royalty-free music creation

Sonic Foundry ACID Style

ACID Style is a powerful software and loops package that gives you everything you need to begin producing royalty-free music.

- > Choose from over 600 music loops
- > Create tracks using an easy-to-use "pick, paint, and play" style interface
- > Use unlimited tracks of audio
- > Fly in sound effects, samples, and rhythmic effects
- > Save your mix in many popular formats, including MP3, RealAudio®, Windows Media™, and WAV



> Sonic Foundry ACID Style

MPEG Tools

Canopus DVStorm2 incorporates proprietary **Canopus Media Technologies** for the highest-quality MPEG encoding at the fastest speed. DVStorm2 includes MPEG cutting and recompressing utilities for editing files that have already been encoded to MPEG.

- > **MpegCutter** – Cut, trim and re-export MPEG clips.
- > **AV Splitter** – Create elementary stream from program stream files by splitting audio and video.
- > **MpegRe-encoder** – Reconvert High bitrate MPEG files to lower bitrates at high speed using hardware MPEG encoding.
- > **MpegExplorer** – Allows a detailed view of all MPEG files within a particular folder.



> Canopus MpegCutter

MPEG Encoding and Web Streaming

- > The Canopus state-of-the-art MPEG Encoder provides output from the timeline to MPEG-1, MPEG-2 (DVD-Compatible), VCD and SVCD with user definable and customizable presets.
- > Encode using Constant Bit Rate (CBR) or Variable Bit Rate (VBR) to a program stream (audio and video together) or elementary stream (separate audio and video).
- > Web-streaming export to Real Video, Netshow ASF or QuickTime formats using Storm Edit or Adobe Premiere.
- > Capture directly to MPEG-1, MPEG-2 and VCD from either Analog or DV with included **MediaCruise** application Software.



> MediaCruise



> Canopus MPEG Encoder options

DVD Authoring

DVD production has traditionally been an expensive process requiring specialized and dedicated authoring systems

DVStorm2 integrates the power of Realtime DV editing with DVD-authoring in a single system solution. Bundled software includes Ulead DVD Workshop for outputting sophisticated DVDs, VCDs and SVCDs with features such as motion menus, special text effects, highlight color customization and photo slide shows with still images and audio.

Creating DVDs with DVStorm2 is a snap. Simply encode to MPEG-2 from the timeline and import the MPEG-2 files into Ulead DVD Workshop for easy and powerful DVD authoring. With affordable DVD recorders now available for your desktop PC, DVD is the best distribution format available for video.



> Ulead DVD Workshop



DVStorm2

Realtime Production Studio

Specifications

Package Contents

Hardware

- > DVStorm PCI bus card
- > Installation CD-ROM
- > User's Manual
- > IEEE 1394 DV Cable (4pin - 4pin, 2m)
- > Stereo pinjack to RCA audio cable
- > Composite to S-Video conversion cable

Software

- > StormEdit
- > Canopus DV Capture
- > Canopus Xplode for DVStorm
- > Canopus 3DRT-II
- > Adobe Premiere Plug-in
- > Video out plug-in for Adobe After Effects
- > Video out plug-in for Adobe Photoshop
- > Video out plug-in for Newtek lightwave 3D
- > Canopus MPEG Tools
- > Canopus MediaCruise
- > Sonic Foundry ACID Style
- > Ulead DVD Workshop SE

Minimum System Requirements

(For 1 sec realtime 2D transition + moving title)

- > Windows XP Home / XP Professional / 2000
- > Intel Pentium III or AMD Athlon processor 700MHz or higher*
- > 1 free PCI slot
- > 256MB RAM
- > AV-Rated video storage (10MB/sec minimum sustained transfer)
- > 24bit or 32bit graphics card with hardware DirectDraw overlay at 1024x768 resolution

*See our website for system performance matrix

Service and Support

- > Three-year limited warranty



Some realtime features require Adobe Premiere 6.5

Product Specifications

PCI interface > DVStorm PCI bus card

Hardware MPEG Encoding

- > Direct realtime capture to MPEG-1 and MPEG-2
- > MPEG-2 D1, Half-D1 and MPEG-1 encoding
- > Encodes I,P,B frames (MP@ML DVD-compatible encoding)
- > Bitrate 1-15Mb/s user adjustable (CBR/VBR)
- > PAL (720x576)/NTSC (720x480), CCIR-601
- > Prefiltering 4:2:2 to 4:2:0
- > Output from StormEdit or Adobe Premiere 5.1 timelines.
- > Capture with MeidaCruise.
- > Specify MPEG output size without re-rendering
- > MPEG-1: Elementary and System streams
- > MPEG-2: Elementary and Program streams
- > Audio: PCM WAV or MPEG Layer II

Video Features

- #### Inputs
- > IEEE 1394 (4-pin)
 - > Composite video (CVBS), RCA jack
 - > S-Video (Y/C), mini-DIN
 - > NTSC and PAL

- #### Outputs
- > IEEE 1394 (4-pin)
 - > Composite video (CVBS), RCA jack
 - > S-Video (Y/C), mini-DIN
 - > NTSC and PAL

- #### Video Format
- > CCIR-601
 - > NTSC: 720x480 @ 29.97 fps
 - > PAL: 720x576 @ 25 fps
 - > 16:9 support
 - > DV/DVCAM support
- Full-motion video via hardware overlay supported at standard NTSC and PAL frame rates.

Audio Features

- #### Native DV
- > 2-channel 48 kHz 16-bit
- #### Audio I/O
- > 2-channel 44.1 kHz 16-bit
 - > 2-channel 32 kHz 16-bit

- #### Stereo Audio I/O
- > Standard RCA pair

DVStormSE customers can upgrade to the full DVStorm2 feature set.

For full details visit www.canopus.com

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