

Capture, Encoding & Streaming Cards & Software

Flux™



Creating high-quality live and file-based media for today's advanced viewing platforms, devices and production workflows requires more than just a basic capture card. Optimal, efficient media encoding and streaming need a solution designed specifically for the task. The **Flux™** family of PCIe® video capture and pre-processing cards combine with the tightly integrated, feature-rich **Digital Rapids Stream™** software to add unrivaled encoding, transcoding and streaming quality, performance, reliability and flexibility to an existing Windows-based workstation.



Connecting Content to Opportunity

www.digitalrapids.com



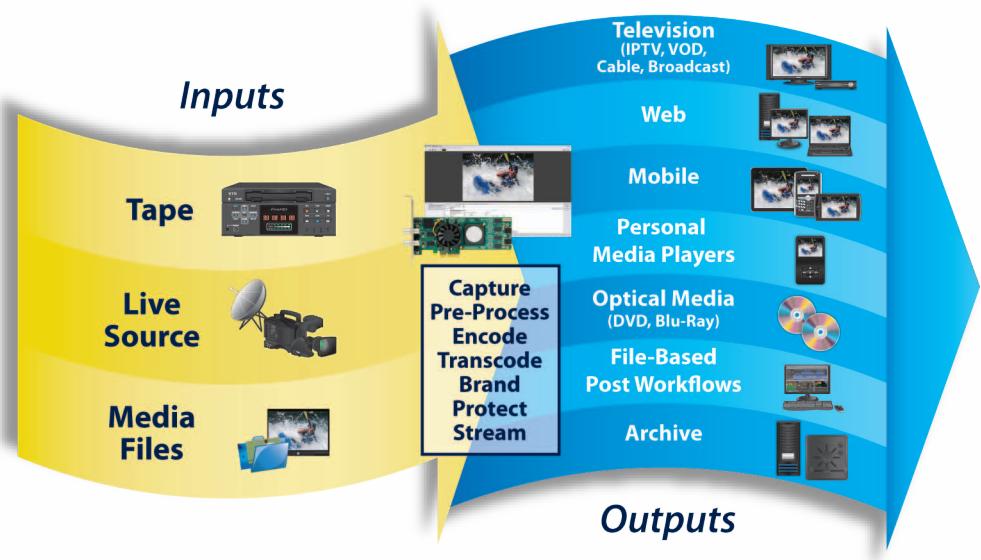
Highlights

- Video and audio capture hardware optimized for real-time encoding and streaming
 - Tightly integrated, easy-to-use software for multi-format encoding, transcoding and streaming
 - Simultaneous output to multiple formats, resolutions and bit rates
 - Advanced real-time video pre-processing for superior visual quality and bit rate efficiency
 - Comprehensive input options including analog, SD-SDI, HD-SDI, dual-link HD-SDI and 3G-SDI (inputs vary by model)
 - Dual-channel models encode two distinct sources simultaneously
 - PCI Express® interface for broad Windows workstation compatibility

Superior Hardware and Software for Encoding Excellence

Today's ever-expanding multi-screen content distribution opportunities and file-based media production workflows enhance video communications, streamline operations and let you reach wider audiences with your content than ever before. Creating and transforming live and file-based media at superior quality for the latest viewing platforms, devices and applications requires a flexible, tightly-integrated solution designed specifically to meet the challenges of efficient multi-format encoding.

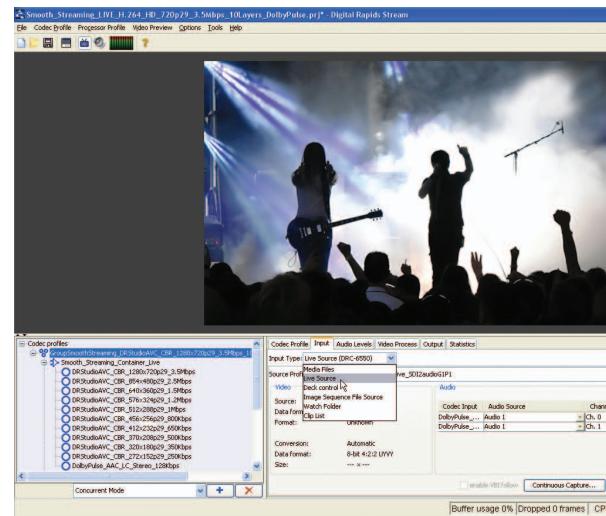
Digital Rapids' Flux encoding bundles add real-time, multi-format video and audio encoding, transcoding and streaming capabilities to your existing PC workstation, letting you transform your media at higher quality, faster and more easily than ever before. Featuring the same powerful Flux hardware used in our **StreamZ™**, **StreamZHD™** and **StreamZ Live™** studio encoding systems, Flux card-and-software bundles combine the quality and performance advantages of hardware-based preprocessing with the format flexibility of software codecs, all controlled by an intuitive, streamlined user interface.



Multiple Formats, One Easy Workflow

No single encoding format is perfect for all viewing devices, audiences or applications. The tightly integrated **Stream LE™** software lets you encode from live input sources or transcode from existing media files to over two dozen standard or optional codec and container formats, all from a single interface for easy operation. Standard and optional output formats supported include VC-1 (Microsoft® Silverlight®, Windows Media, IIS Smooth Streaming), AVC (also known as H.264 or MPEG-4 Part 10), MPEG-2, QuickTime®, Adobe® Flash® (H.264 or On2 VP6), MXF, GXF, JPEG2000, XDCAM HD, Avid DNxHD®, DVCPro, AVI and many more, with a flexible architecture for easy future format expansion. Additional formats such as QuickTime-wrapped Apple® ProRes can be used as input sources for transcoding.

Video and audio can be encoded to files or live streams in multiple formats, resolutions and bit rates simultaneously in real time, giving you exceptional productivity while targeting multiple distribution channels or workflows with media optimized for each application. You can perform as many simultaneous real-time encodes as your system's CPU horsepower will allow. Whatever your application, Flux-powered encoding solutions can output to the formats and specifications you need with the highest video and audio quality possible.



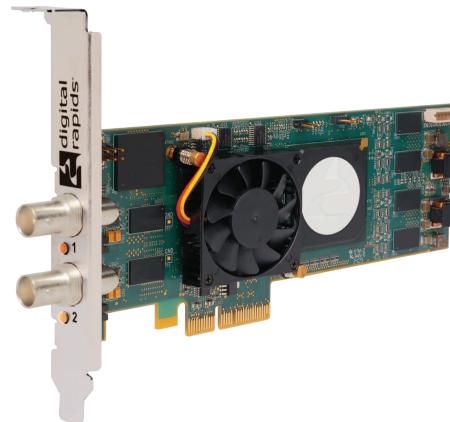
Capture, Encoding and Streaming Cards and Software

Hardware-Powered Quality and Performance

Optimized for encoding and streaming, the Flux hardware builds on the advanced video processing technology that has earned Digital Rapids' solutions their reputation for the industry's highest encoding quality. Hardware-based, real-time video pre-processing features including motion adaptive de-interlacing with pixel-level analysis 'groom' the input signal to be more 'compression-friendly'. The result is superior visual quality and the most efficient use of bandwidth in the compressed output, while leaving the host system's CPU free to encode more simultaneous multi-format outputs.

Additional hardware features including video adjustments, scaling, color space conversion and graphic overlay enable refinement of incoming sources and the addition of branding such as logos. Ensuring superior reliability, the Flux hardware features robust handling of irregularities or disruptions in incoming digital or analog source signals. On HD-capable Flux models, an incoming SDI signal can even be switched between HD and SD sources without interrupting in-progress encoding and streaming.

Flux capture and pre-processing cards are available in multiple models offering a comprehensive choice of input connectivity and source format support.



Standard-definition Flux hardware is available in digital-only (SDI) and digital-plus-analog models. High-definition models of Flux are available in all-digital (SDI, HD-SDI, dual-link HD-SDI and 3G-SDI video input support with SDI embedded audio) and digital-plus-analog (adding composite, S-video and SD/HD component analog video; balanced/unbalanced analog audio; and AES digital audio) configurations. Real-time down-conversion of dual-link and 3G-SDI inputs leverages new facility infrastructures and allows easy repurposing of such sources without the workflow inconvenience and expense of external format converters. Flux HD boards also provide a future-proof upgrade path to emerging applications empowered by 3G-SDI, such as 1080p/60 and 1080p/50 distribution, advanced JPEG2000 mastering and 3D production. Dual-channel, all-digital models support capture and encoding from two distinct input sources simultaneously.

Streamlined, Versatile Software

The included Stream LE software leads you step-by-step through the process of creating multiple encoded outputs. The Stream LE interface is easy enough for novices, yet fully configurable for expert users. Simply choose your video and audio inputs (encoding from a live input source, or transcoding from existing digital media files), select the formats you wish to encode to, and

choose your destination (media files, live streams or both). Stream LE lets you adjust compression settings as precisely as you want, from production-tested presets to in-depth manual controls. For even more software power, you can add the optional **Stream FE™** software upgrade, with expanded workflow automation and integration capabilities.



The parameters associated with each encoding session can be saved in whole or in part in XML-based project files for easy reuse. Whenever you want to perform similar tasks, simply load your project file and hit the start button; Stream LE will encode and deliver your content with as little as one mouse click. The Stream LE software – one interface that controls all encoding parameters and manages the transforming, streaming and archiving of your media. One click to reach a whole world of new audiences and applications.

Flux capture and pre-processing cards with the Stream LE software – the ideal hardware and software combination for today's demanding multi-format media encoding needs.

Want the full power of the Flux hardware and Stream software in a fully-integrated, turnkey configuration?

StreamZ and **StreamZHD** studio media encoding systems combine the same powerful hardware with the advanced **Stream FE** software in ready-to-run rack-mount systems.

Want a portable live streaming solution?

TouchStream® appliances feature our acclaimed streaming quality in a fully self-contained form factor with an intuitive touch-screen interface.

Features and Specifications

• standard ◊ optional

Inputs and Encoding Channels	DRC-2100	DRC-2200	DRC-3550	DRC-4100	DRC-4200	DRC-6550
Video encoding channels	1	2	1	1	2	1
SDI inputs (3G/HD/SD; combine for dual-link HD-SDI)				2	2	2
SDI Inputs (SD)	2	2	2			
Component analog video inputs (3 BNC)			1 (SD)			1 (HD/SD)
Y/C (S-Video) analog video inputs (Mini-Din)			1			1
Composite analog video inputs (BNC)			1			1
SDI embedded audio (8 stereo pairs)	•	•	•	•	•	•
AES/EBU stereo audio inputs (BNC)			4			4
Balanced analog audio inputs (XLR)			2			2
Unbalanced analog audio inputs (RCA)			2			2
LTC input (XLR)			•			•
DV via host system IEEE-1394 port ¹	•	•	•	•	•	•
Video/audio connectivity						

DRC-2100/2200/4100/4200: Direct SDI connections to board
DRC-3550/6550: Breakout cable standard; rack-mountable breakout box optional

Inputs Format Support	DRC-2100	DRC-2200	DRC-3550	DRC-4100	DRC-4200	DRC-6550
Supported input video resolutions and frame rates			480i (NTSC, 512-line capture) @ 29.97 Fps, 576i (PAL, 608-line capture) @ 25 Fps		1080i @ 25, 29.97, 30 Fps 1080p/1080PsF @ 23.98, 24, 25, 29.97, 30 Fps 720p @ 23.98, 24, 25, 30, 50, 59.94, 60 Fps 480i (NTSC, 512-line capture) @ 29.97 Fps, 576i (PAL, 608-line capture) @ 25 Fps	
Supported SDI video input standards			SMPTE-259M (SD)		SMPTE-259M (SD), SMPTE-292M (HD), SMPTE-372M (dual-link) ² , SMPTE-425M-A/B (3G) ²	
VBI capture with Closed Caption support	•	•	•	•	•	•
SDI ancillary data capture (608/708 Closed Captioning, time code)	•	•	•	•	•	•

Hardware Specifications	DRC-2100	DRC-2200	DRC-3550	DRC-4100	DRC-4200	DRC-6550
PCIe form factor (height/length)	Half/Half	Half/Half	Full/Full	Half/Half	Half/Half	Full/Full
System interface	PCIe x4					

Hardware Video Processing (SDI and analog inputs)



Flux DRC-6550 with optional breakout box

Stream LE Software Features

Capture/encode to files from live inputs or decks (manual deck control)	•
Capture/encode to files from deck with RS-422 control	◊
Transcode from existing media files	•
Live streaming	•
Archive to files during live streaming	•
Easy-to-use interface with unlimited customizable, reusable encoding profiles	•
Simultaneous output to multiple codecs, resolutions and bitrates	•
Encoding formats (codecs and containers)	Standard: VC-1 (Microsoft® Silverlight® incl. IIS Smooth Streaming; Windows Media WMV), QuickTime®, AVI, RealVideo and more. (Apple® ProRes import available with third-party QuickTime filters). Optional: AVC (H.264, MPEG-4 Part 10), MPEG-2, MPEG-1, H.264 for Web (Adobe® Flash® incl. Dynamic Streaming; Microsoft IIS Smooth Streaming), On2 VP6, Dolby® Digital and Digital Plus, Dolby Pulse (AAC), JPEG2000, iPhone® H.264 with integrated segmenting, Avid DNxHD®, 3GPP, MXF, GXF, LXF, DVCPRO, XDCAM HD, RED (import) and more.

Codec support is evolving constantly. Please see our web site for the latest format support information.

Standard: VC-1 (Microsoft® Silverlight® incl. IIS Smooth Streaming; Windows Media WMV), QuickTime®, AVI, RealVideo and more. (Apple® ProRes import available with third-party QuickTime filters).

Optional: AVC (H.264, MPEG-4 Part 10), MPEG-2, MPEG-1, H.264 for Web (Adobe® Flash® incl. Dynamic Streaming; Microsoft IIS Smooth Streaming), On2 VP6, Dolby® Digital and Digital Plus, Dolby Pulse (AAC), JPEG2000, iPhone® H.264 with integrated segmenting, Avid DNxHD®, 3GPP, MXF, GXF, LXF, DVCPRO, XDCAM HD, RED (import) and more.

Optional Stream FE Software Upgrade

RS-422 deck control for batch capture and logging	◊
Batch Encoding (real-time capture with auto transcode)	◊
Video and audio processing plug-ins (adaptive Inverse Telecine, Closed-to-Open Captions, audio mix-down and many more)	◊
E-mail notifications and automated FTP distribution	◊
Watch Folder support and Batch Transcoding (clip lists) for media file transcoding	◊
Automated template-based publishing	◊
Integration with Digital Rapids Broadcast Manager® (sold separately)	◊

1. Hardware-based pre-processing not available on host-based inputs

2. Upcoming software release

One year Software Maintenance and Standard Support included. Additional years (annual renewal) and premium service plans available for purchase.

Please see our website for additional details. For more LE and FE software features, please see the separate Stream Software Comparison.



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