

# Flux Series

Ingest & Streaming Video over the Internet

## Highlights

- Video and audio capture hardware optimized for real-time encoding and streaming
- Comprehensive input options including analog, SD-SDI, HD-SDI, dual-link HD-SDI and 3G-SDI (inputs vary by model)
- Advanced real-time video pre-processing for superior visual quality and bit rate efficiency
- PCI Express® interface for broad Windows workstation compatibility
- Hardware-based up and down-conversion



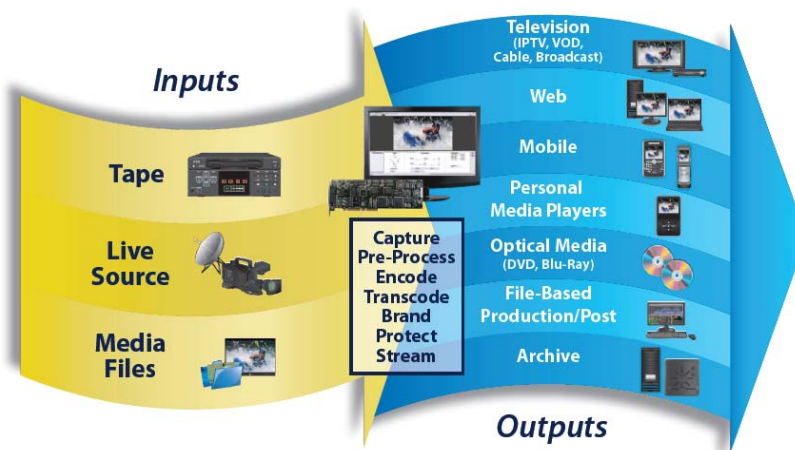
## Superior Hardware and Software for Encoding Excellence

Creating high-quality live and on-demand media for today's advanced viewing platforms, devices and workflows requires more than just a basic capture card. Optimal, efficient media encoding and streaming needs a solution designed specifically for the task. The Flux™ family of PCIe® video and audio capture cards combine with the powerful and feature-rich Stream software to deliver unrivaled encoding and streaming quality, performance, reliability and flexibility.

The Flux hardware builds on the advanced video processing technology that 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.

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



NOTES: Specifications subject to change without notice. Systems may vary from region to region.

## Features and Specification

### Inputs and Encoding Channels

Video encoding channels  
SDI inputs (3G/HD/SD; combine for dual-link HD-SDI)  
SDI Inputs (SD)  
Component analog video inputs (3 BNC)  
Y/C (S-Video) analog video inputs (Mini-Din)  
Composite analog video inputs (BNC)  
SDI embedded audio (8 stereo pairs)  
AES/EBU stereo audio inputs (BNC)  
Balanced analog audio inputs (XLR)  
Unbalanced analog audio inputs (RCA)  
LTC input (XLR)

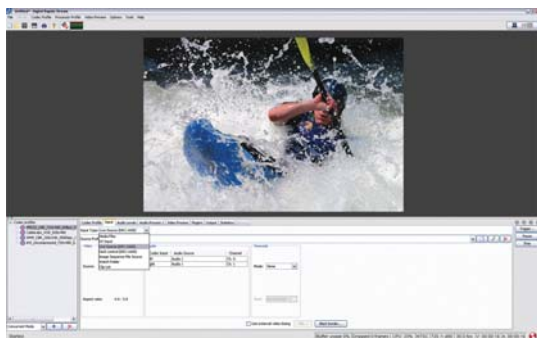
### Video/audio connectivity

	<b>Flux-2100</b>	<b>Flux-3550</b>	<b>Flux-6510</b>	<b>Flux-6550</b>
Video encoding channels	1	1	1	1
SDI inputs (3G/HD/SD; combine for dual-link HD-SDI)	1	1	2	2
SDI Inputs (SD)	1	1		
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)		1		1
Video/audio connectivity	Direct SDI connections to board	Breakout cable standard Rack-mountable breakout box	Direct SDI connections to board	Breakout cable standard Rack-mountable breakout box optional

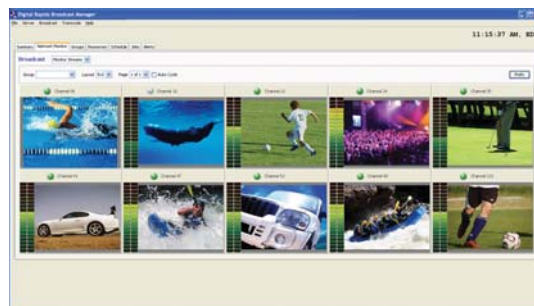
### Inputs Format Support

Supported input video resolutions and frame rates

	<b>Flux-2100</b>	<b>Flux-3550</b>	<b>Flux-6510</b>	<b>Flux-6550</b>
Supported input video resolutions and frame rates	486i @ 29.97 Fps (NTSC), 576i @ 25 Fps (PAL)		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 486i @ 29.97 Fps (NTSC), 576i @ 25 Fps (PAL) 1080p @ 60, 59.94, 50 Fps (upcoming software release)	
VBI capture with Closed Caption support	•	•	•	•
SDI ancillary data capture (608/708 Closed Captioning, time code)	•	•	•	•



Stream LE/FE Software Interface



Broadcast Manager Software Interface

The all-digital Flux-6510 features SDI, HD-SDI, dual-link HD-SDI and 3G-SDI (also known as 3Gb/s SDI) video input support with SDI embedded audio. Flux-6550 offers the same inputs plus analog video (composite, S-Video and HD/SD component), analog audio and AES digital audio. Real-time down-conversion of dual-link and 3G-SDI inputs leverages new facility infrastructures and allows easy repurposing of dual-link and 3G-SDI 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.

The SDI-only Flux-3510 and SDI-plus-analog Flux-3550 offer the power of the Flux hardware for applications requiring only standard-definition video input.

**GENERAL FEATURES**

- Capture/encode to files from live inputs
- Capture/encode to files from deck with RS-422 control
- Transcode from source media files
- Live streaming
- Archive to files during live streaming

**HARDWARE PROCESSING (SDI, AES AND ANALOG INPUTS)**

- Motion adaptive de-interlacing
- Noise reduction (2D)
- Noise reduction (motive adaptive 3D)
- Aspect ratio conversion, cropping, scaling, filtering
- Proc amp controls, gamma correction
- Graphic overlay
- Audio processing (7-band parametric EQ per channel, dynamic range compression/expansion, base/treble)
- Audio sample rate conversion, volume control

**STREAM FE SOFTWARE FEATURES**

- Easy-to-use interface with single-click encoding
- Simultaneous output to multiple codecs, resolutions and bitrates
- Interactive control of hardware preprocessing capabilities
- Programmable event triggers (GPI4, duration, custom keys)
- Batch Encoding (real-time capture with auto transcode)
- Video and audio processing plug-ins (graphic and video overlay, adaptive inverse telecine, color space conversion, audio track mix-down and more) with support for thrid-party DirectShow and DMO plug-ins
- E-mail notifications and automated FTP distribution
- Watch Folder support for media file transcoding
- Automated template-based publishing
- Integration with Digital Rapids Transcode Manager and Digital Rapids Broadcast Manager (each sold separately)
- Forensic watermarking for content protection (Civolution CompoTrack, Thomson Nexguard) and tracking/monitoring

**BROADCAST MANAGER FEATURE**

Supported encoders (sold separately)

- Automatic encoder discovery plus firewall and proxy support for easy deployment Failover and "self-healing" fault recovery modes
- "Control room" view with mosaic-style, multi-channel confidence monitoring
- Scheduling (online/offline, start/stop, encoding tasks/parameters, reboot, etc.) Alert notifications
- Simple Network Management Protocol (SNMP) support Individual and group-based encoder management
- Control of upstream third-party video routers for enhanced failover
- Event history tracking
- User authentication and authorization with local and LDAP access management Web Services (SOAP) API for custom integration



**Relate Products**

