

# ARRI Relativity Software Package

ARRI Relativity™ is a powerful suite of software tools that offers fast, efficient and interactive control of texture and time using sophisticated motion estimation techniques. ARRI Relativity™ software is powered by Pixel Strings™, the first engine to harness the potential of GPU-based parallel processing for motion estimation and spatial-temporal image filtering. In its most

comprehensive version, the entire Relativity software bundle is currently comprised of three different applications: Texture Control, Film Simulation and SpaceTime Converter, with more coming soon. The software suite is modular and easily configured to meet the needs of each customer. All tools have a simple interface with interactive visualization of the manipulated image.

### **Texture Control**

Control the level of film grain and digital noise, mix and match the textures of 16mm, 35mm and digital images, for a particular effect or visual continuity. Reduce grain or noise prior to compression for Blu-Ray and DVD authoring or any cable/satellite/IPTV distribution while retaining picture detail. Produce impressive theatrical quality images from Super 16mm or 2-perf 35mm. With the optional Film Simulation module, make grain an aesthetic choice by adding a pleasing texture to the finished product.





### **Film Simulation**

Add natural looking film grain to digitally captured images or CGI. Or add the subtle grain of 35mm film to 16mm origination that has been de-grained via Texture Control.

### SpaceTime Converter

Convert any TV or motion picture format into another, with crop/zoom, spatial resampling, frame rate conversion, de-interlacing and addition or removal of 3:2 pulldown through an easy-to-use interface. Supports real-time processing of HD or SD images. Includes audio format conversion and resampling (with or without pitch correction). Resample time for creative tempo changes, slow motion and speed ramp effects.



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## **Coming Soon**

#### Retimer

Provides artifact-free, single pass retiming of video and audio (up to plus or minus 10%), allowing broadcasters, content providers and post production facilities to customize program times to fit into new time slots.

### Clean

Enables automated removal of dirt and scratches from film imagery with impressive speed, leaving time for the experts to work on any remaining artifacts.

### **Technical Specifications**

- Procedural graphic user interface with interactive display
- Timeline with scene detection
- Key-framed or global operations

- Watchdog "set and forget" file valet
- Scriptable command line interface

File Formats	DPX, Cineon (10 bit RGB)
Streaming Formats	Uncompressed QuickTime. Compressed QT and AVI formats available with user-installed
	codecs, quality and performance may vary.
Video I/O	Dual HD-SDI 4:4:4 or 4:2:2 via Blackmagic DeckLink Studio capture cards
Audio	Audio format conversion and resampling (with pitch correction)
Workstation	Core <sup>™</sup> i7-920 Quad-Core 2.66GHz, GeForce <sup>®</sup> GTX 285, 2 TB RAID 5 Storage
Video Display	Dual DVI or HDMI connector
Network Connections	2 Gb Ethernet ports
External Storage	eSATA, USB 2.0 connector
Additional Options	4 GB Fibre Channel, 10 GB Ethernet, Infiniband, HD-SDI (BlackMagic)
Power Requirements	120 V, 1000 W
Internal Storage	2 TB RAID 5 Storage, upgradable to 3.6 TB
Operating System	Windows XP

#### For more information about the ARRI Relativity™ suite of software, contact:

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