

Inscriber® RTX™

Custom On-Air Graphics



Think it. Design it. Then, with Inscriber® RTX™, command it. With innovative hardware advancements, dynamic real-time effects and an incredible multi-layer environment, RTX™ gives you the freedom to create your own custom broadcast solution.

Inscriber® RTX™ is an API (Application Programming Interface) that allows broadcasters to develop custom applications for use in live and post production environments such as sports scores, forecasts and warnings, elections results, stock tickers and game show voting and results. Using common development tools or environments such as Visual Basic, C++ and .NET, a customer can use RTX™ to create their own project or application. As a graphic engine, RTX™ handles the low-level hardware calls or tasks required for the generation of broadcast graphics, making it much easier to learn and use than a low-level SDK (Software Development Kit).

Features

Innovative Hardware

Inscriber® RTX™ supports fill and key input and output, and provides direct integration with other graphic systems in an upstream or downstream keyed environment. In addition to providing all the benefits of multichannel effects on a single channel, RTX™ supports optional dual-channel SDI output — two independent outputs at the same time.

Inscriber® RTX™ includes a bypass relay on the hardware that automatically reroutes the video feed during a power loss or system failure to ensure that the video feed is never disrupted. This feature can also be triggered manually to maintain the video feed during scheduled maintenance.

Rich Multilayer Environment

Inscriber® RTX™ boasts a rich multilayer environment for the simultaneous display of text, graphics, animations, video, DVE, rolls, crawls and

more. All screen elements can be displayed on an infinite number of overlapping layers, providing you with maximum flexibility and creative control over your screen output. Use Z-ordering to set the depth of each layer, determining whether a graphic or effect is displayed in the foreground or background of a layer.

Software Codec Support

Software codec support allows for the playout of various video formats including DVCPRO25, MPEG-1, MPEG-2, AVI, WMV and QuickTime®. For greater flexibility, supplement your designs with streaming media sources such as MMS feeds or Web cams.

Real-Time Element Transitions

Transition between screen elements such as clip-to-clip, clip-to-animations and animation-to-animation using fades, pushes, dissolves and wipes. Cascade multiple transitions together, and increase your creative options.

Real-Time Organic Dissolves

With this innovative feature, a matte file can be used to create patterned dissolves. Use it to produce dramatic, custom effects that set your programming apart.

2D and 3D Animations

Enhance your broadcasts by incorporating a variety of animation styles. You can import pre-rendered animations from Flash™, 3ds max™ or AfterEffects™, all with matte (key) for instant playout. Using Template Builder, included with RTX™, you can build your own animation layouts and dynamically update the text and logos for instant playout of your real-time content — no pre-rendering necessary.

RTXports™

Inscriber® RTX™ is the core technology found underneath the most popular Inscriber® software products. Via a powerful feature called RTXports™, the unique capabilities of RTX™ can be integrated with any Inscriber graphics software

product, allowing users to customize their Inscriber system with an RTX application. In other words, you can add functionality that is not directly offered in an Inscriber product by simply adding RTX™.

DVE

Save yourself the cost of separate DVE equipment. Inscriber® RTX™ allows you to "squeeze back" both key and fill incoming SDI signals. You can also DVE animations, video clips and more.

Template Builder

Save the time and effort involved in manually generating code to produce text and graphics. The Template Builder allows you to design layouts offline for use within RTX™. All elements in the layout can be tagged so that RTX™ can access and update them with real-time data for "just-in-time" playout.

Analog Preview Channel

Inscriber® RTX™ allows you to use some dual-head VGA cards to produce an analog preview output. This is a cost-effective way to generate a quality preview output for your operator or director. Preview output can be SD (NTSC/PAL) or in a VGA format. The VGA format is capable of a full preview (not just static thumbnails).

Audio

RTX™ supports embedded as well as discrete audio with the included hardware. Either a WAV file or audio encoded into a video clip is supported. Please consult the audio section of the hardware specification for more details.

Cascading Effects

With RTX™ you can add an effect or transition to another effect that is already running. For example, include an animation or video clip in your crawl. Dissolve a roll on and off the screen. There are no limits to the number of running effects, and each effect can be introduced or removed individually or as a group.

Options

Clip Option

Adds additional drives to media drive array, increasing drive performance and drive storage capacity.

Template Builder

Enables Template Builder for Inscriber RTX playback licenses. Template Builder is an offline creation tool for generating layouts that can be used with RTX. This is included with the developer license.

Second Channel

Add a second channel when ordering to provide two independent HD or SD outputs.

Specifications

HARDWARE

Chassis

- 3RU rackmount
- Front-mounted, hot-swappable drive bays (8)
- 2+1 redundant hot-swappable power supply - 760 W
- High CFM cooling for 24/7 operation
- HxWxD: 5.25"x19"x25.5" (13.35 cm x 48.26 cm x 59.69 cm)
- Weight: 45 lbs (20.41 kg)

CPU

- 2x AMD Opteron 270 for Inscriber RTX SD
- 2x AMD Opteron 280 for Inscriber RTX HD/SD

GPU

- Dual-Head PNY NVIDIA® FX1500/256 for Inscriber RTX SD
- Dual-Head NVIDIA® FX4600/512 for Inscriber RTX HD/SD

RAM

- 2 GB DDR400 RAM for Inscriber RTX SD
- 4 GB DDR400 RAM for Inscriber RTX HD/SD

Disk Sub System

- 1 x 160 GB SATA system drive
- 2 x 160 GB SATA media drives for Inscriber RTX SD
- 3 x 160 GB SATA media drives for Inscriber RTX HD/SD
- Add'l 2 x 160 GB SATA drives for Inscriber RTX SD clip option
- Add'l 4 x 160 GB SATA drives for Inscriber RTX HD/SD clip option (clip option includes SATA controller with eight SATA ports)

Removable Drives

- Recordable CD/DVD-RW drive for backup or system restore
- 1.44 MB floppy drive

External Ports

- Two Gigabit Ethernet ports via RJ45
- Two RS232 serial port via DB-9 connector
- Four USB 2.0 ports

VIDEO

Supported Video Resolutions

Serial digital component 4:2:2 video @

- 1920 x 1080: /60i/59.94i/50i (SMPTE 274M)
- 1920 x 1080: /30p/29.97p/25p/24p/23.98p (SMPTE 274M)
- 1920 x 1080: /30psf/29.97psf/25psf/24psf/23.98psf (SMPTE 274M, RP211)
- 1280 x 720: /60p/59.94p/50p (SMPTE 296M)
- 720 x 486 (525): /59.94i (ITU-R BT601)
- 720 x 576 (625): /50i (ITU-R BT601)

For more information please visit www.broadcast.harris.com

Video Inputs

- One serial digital (SD/HD) Program/Frame Grab input: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)
- One serial digital (SD/HD) Key Input: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)
- One analog reference input: Tri-level sync (HD) or blackburst (SD) (terminated/non-terminated under jumper control)

Genlock

- HD/SD input or blackburst (SD)/tri-level sync (HD) auto-timing of HD/SD inputs within +/- 1/2 line window

Input Levels SDI

- 800 mv P-P Analog Ref: 1V P-P blackburst or 0.6 V P-P for tri-level sync

Input Impedance

- 75 ohms

Video Output

- One serial digital (SD/HD) Program/Fill output: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)
- One serial digital (SD/HD) Key output: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)

DVI (Stills)

- Preview

Output Levels

- SDI: 800 mv P-P

Output Impedance

- 75 ohms

Audio Specifications

- Two input / two output discrete AES/EBU audio channels through the unbalanced BNC connectors on the separate PC I/O paddle board (upgradeable to four AES/EBU channels)
- 3.5 mm stereo jack on faceplate for analog audio monitoring

Additional Features

- All internal video processing at 12-bits component 4:2:2:4
- Video and audio bypass on HD/SDI program input-to-output in the event of a power fail or application reset
- Shaped or unshaped fill signal processing
- Internal watchdog timer to ensure hardware stability
- Monitoring and signal status LEDs

Timecode

- SMPTE timecode reader
- BNC connector on the audio paddle board

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