inca™ rtx
Real-time 2D/3D Graphics Platform
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Think it. Design it. Then with Inca RTX, command it. With innovative hardware advancements, dynamic real-time effects and an incredible multi-layer environment, Inca RTX gives you the freedom to create your own custom broadcast solution. Be ready for all the challenges of broadcasting with Inca RTX.

Innovative Hardware
Based on Inscriber’s groundbreaking Inca serial digital hardware, Inca RTX supports fill and key input and output, which provides direct integration with other graphic systems in an up or down-stream-keyed environment. In addition to providing all the benefits of multi-channel effects on a single channel, Inca RTX supports optional dual channel SDI output to playout two independent outputs at the same time.

Inca RTX also includes a by-pass relay feature. The by-pass relay automatically reroutes video feed during a power loss or system failure, so your video feed is never disrupted. The by-pass relay can also be triggered manually through Inca RTX to maintain the video feed during scheduled maintenance.

Rich Multi-Layer Environment
Inca RTX boasts a rich multi-layer 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: DV25, MPEG1, MPEG2, AVI, WMV and Quicktime. For greater flexibility supplement your designs with streaming media sources such as web cams.

Cascading Effects
For the first time you can now add an effect or transition to another effect which 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. Create amazingly rich visuals layered by your design.

Real-time Element Transitions
Amazing switcher style effects can now be executed through Inca RTX thus freeing switcher inputs. 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
In this innovative new effect, a matte file can be used to create patterned dissolves. Now you can create dramatic, custom effects unique to your organization.

2D and 3D Animations
Enhance your presentations 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 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.

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

Flexibility
Inca RTX allows you to create your own interface, giving you complete control over the functionality and commands for video.

Supported Programming Languages

Inca RTX is powered by a COM interface that is accessible through popular programming languages such as:
- Visual Basic
- Visual C++
- Borland Delphi
- Visual Studio .NET (VB.NET/C#/J#)
By integrating with streaming data or other data sources, Inca RTX makes it possible to broadcast live information:

- Sports Scores & Statistics
- Weather Temperatures
- Forecasts & Warnings
- Election Results
- Stock Tickers
- Game Show Voting & Results

graphics, effects and live data display. If English is not your or your customer’s first language, you can create your interface controls with labels in your native language. Inca RTX is separated from your program through the COM interface.

**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 for use within Inca RTX. "Tagged" layouts are then updated with real-time data within Inca RTX. Whether you are doing simple titling or intense animations, Inca RTX is real-time from start to finish.

**Analog Preview Channel**

Inca 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.

**Distribution**

Inca RTX is available as two basic licenses: Developer Studio and Playback. Create your broadcast application as an OEM or as part of an internal broadcast project using the Developer Studio which comes complete with SDI hardware, Desktop TV (output in a window on your VGA screen) and Template Builder (CG tool). Once created, use the Playback license to deploy or distribute your broadcast application. In addition to giving you full control over the distribution of your application, the Playback license protects your code or product by sharing Inscriber’s software protection.

**A Version for Your Broadcast Needs**

Inca RTX is available on a variety of platforms. You can chose from standard 2 and 4 unit rackmount systems or Inscriber’s toGO platform, which is the full functionality of Inca RTX on a laptop. Inca RTX HD is available on Inscriber’s latest video hardware which is HD/SD switchable.

* See Technical Specifications for supported dual head VGA cards

**Customer Focus - BSkyB**

"The recent purchase of 12 Inscriber Inca RTX systems positively supports our progressive plans for enhancing our capabilities," stated Mark Crawford, head of Broadcast Computing for BSkyB. "Inca RTX gives us the flexibility in developing specific applications for integrating and displaying station clocks, live sports scores and real-time election results. This builds on our confidence in Inscriber RTX, already deployed in such key roles as the main results system for our flagship Soccer Saturday programme."

*Mark Crawford, Head of Broadcast Computing for BSkyB*
Technical Specifications
- Chassis - 4U rackmount (2U for single channel)
- OS - MS Windows XP Operating System
- SCSI Port - SCSI U320 via HD68 port for external device expansion

Professional Features
- Power Supply - Dual redundant hot swappable (400W x 2)
- Cooling High - CFM Cooling for 24/7 Operation
- Optical Drive Recordable DVD-RW for backup or system restore
- CPU - Dual 2.8 GHz Pentium 4 XEON Intel CPU, 800MHz FSB
- RAM - 1 GB RAM PC3200 (DDR 400) RAM
- Boot Hard Drive - 360GB U320 SCSI Boot Drive
- Media Storage Disk-Subsystem - 2x36 GB additional drive space (SATA, OS Striped Media Drive)
- Framebuffer - Inca PCI DMA card - 5V/3.3V PCI V2.2 64-bit/66 MHz interface
- Preview Output - Dual-Head Radeon X800 with Composite Video-Out (Preview output not genlocked)

Video Specifications
Supported Video Resolutions
- 525 line/29.97fps Active Region 720 x 486
- 625 line/25fps Active Region 720 x 576

Video Inputs (Program Channel 1)
- One Serial Digital Program/Frame Grab input: 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)
- One Serial Digital Key: 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)

Video Inputs (Optional Program Channel 2 - 4U systems only)
- One Serial Digital Program/Frame Grab input: 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)
- One Serial Digital Key: 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)

Video Outputs (Program Channel 1)
- One Serial Digital Program Output (Fill): 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)
- One Serial Digital Program Output (Key): 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)
- One Composite Preview output - VGA card second head TV output (not genlocked - for monitoring purposes only)

Video Outputs (Optional Program Channel 2 - 4U systems only)
- One Serial Digital Program Output (Fill): 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)
- One Serial Digital Program Output (Key): 4:2:2 SMPTE 259M-C, 8/10 bit SDI (270 Mbps @ 525/625)

System Genlock
- One Analog Reference input (Signal type: blackburst or composite video)

Audio Specifications (Optional)
Analog I/O
- Four inputs/Four outputs (Two Inputs/two outputs for 2U)
- Type: Electronically balanced or unbalanced, XLR connectors

Digital I/O
- Number/Type: One input and one output
- AES/EBU transformer coupled, XLR connectors
- Sample Rate: 48 kHz

Timecode and GPIO Specifications (LiveLink option)
- SMPTE Time Code I/O
- Type: LTC receiver (in)
- Frame Rates: 25, 29.97, 30 Hz - drop and non-drop
- GPIO - Interface
  - Eight TTL inputs
  - Eight TTL outputs

Physical Dimensions
2U
- Height 3.5" (7.78 cm)
- Width 19" (48.26 cm)
- Depth 23.5" (60.96 cm)
- Weight 45 lbs (20.45 kg)

4U
- Height 7" (17.78 cm)
- Width 19" (48.26 cm)
- Depth 23.5" (60.96 cm)
- Weight 60 lbs (27.21 kg)

Inca RTX 2U

Inca RTX 2U Backpanel

3D Path Compositing