

Live Production Solutions



LIVE
PRODUCTION



EDITING



CONTENT
DELIVERY



NEWS
PRODUCTION



SPORTS
ANALYSIS



OEM
DEVELOPER



Images Courtesy of Access Hollywood



Leadership in Networked Live Production Workflow

Pinnacle created and has field-proven the concept of employing IT-based technologies for professional production. Today we offer the fullest expression of this approach put to practical use with live production systems tailored to meet today's changing workflow requirements.

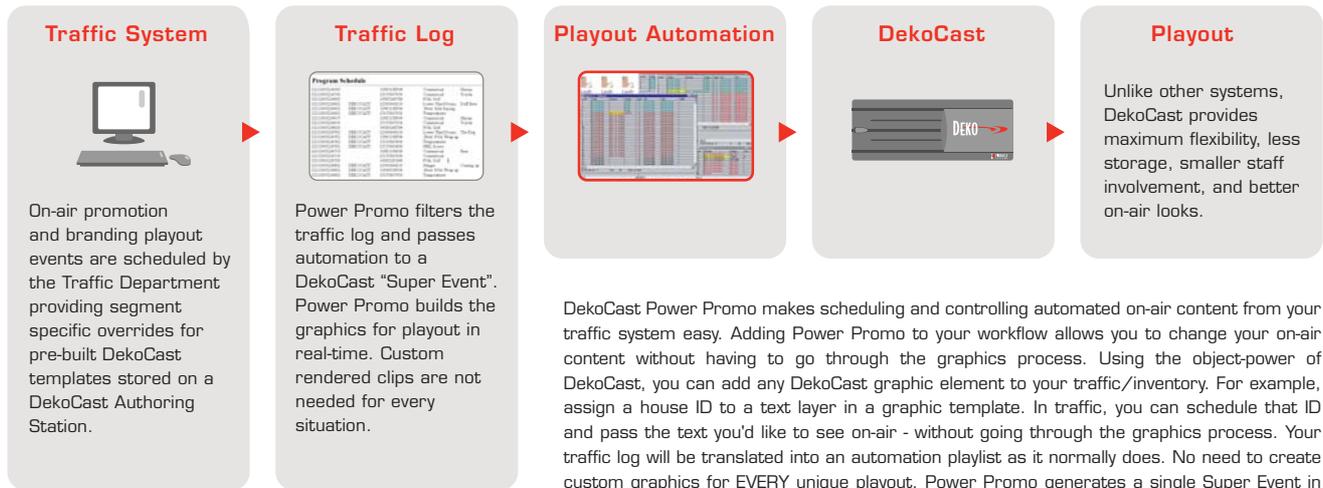
Deko™ graphics, Thunder® servers, DVEXCEL™ DVEs, DekoCast™ graphics control and PDS production switchers—the entire Pinnacle live production family works together elegantly. Common formats are all seamlessly connected via standard networking protocols. As powerful as our products are individually, together they offer flexibility and performance that set the standard for modern workflow and efficiency.

Leading the way with its software, Pinnacle has crafted a wide array of specialized tools that eliminate costly, redundant and unnecessary processes to provide you with a modern, competitive workflow in which to achieve your best work.

Only Pinnacle delivers Graphics Everywhere, putting the power to create air-ready graphics in the hands of journalists, editors, producers—anyone who has a story to tell—with DekoMOS and ThunderMOS. We tie graphics directly to station automation and traffic to enable your marketing department to select graphic templates, set schedules, play them to air and even find new revenue streams with DekoCast Power Promo. Pinnacle automatically syncs all of your networked graphics assets—templates, files, text, data—so updates are easy and consistency is ensured. In fact, with Deko on your network, you have the power of the world's leading graphics systems available in all of your key operational areas.

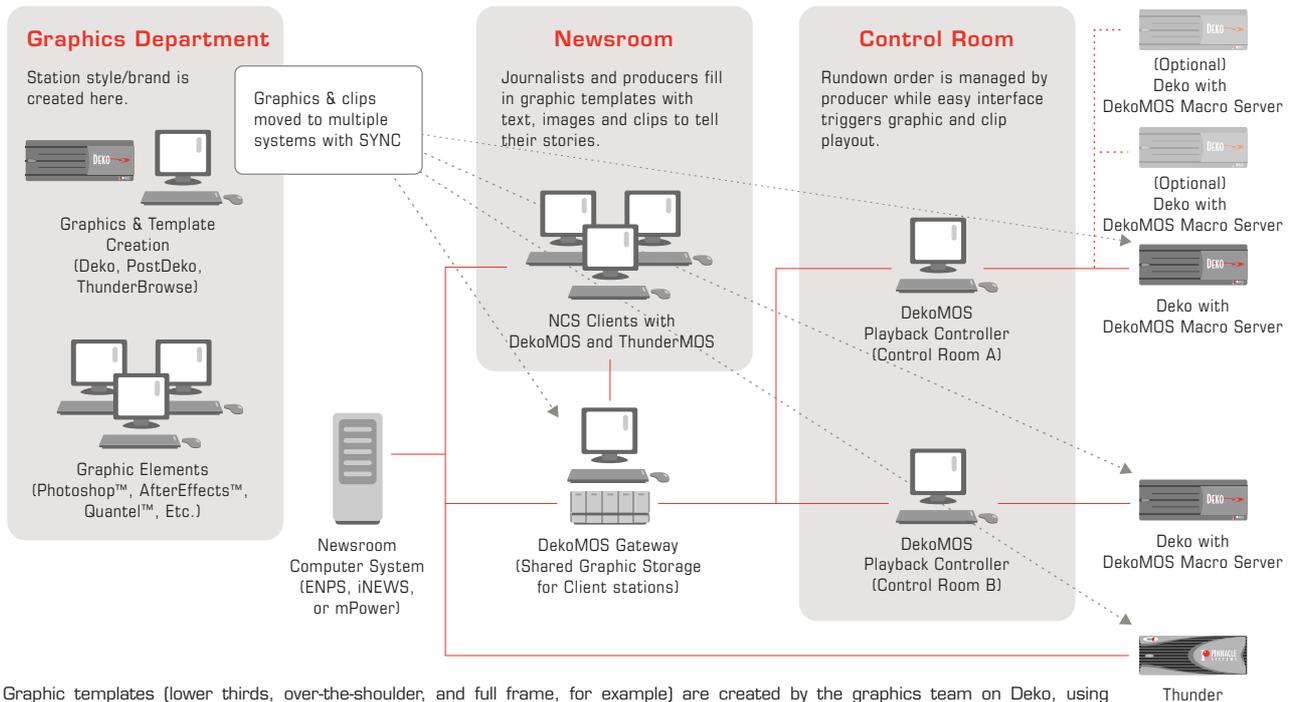
From concept to on-air, Pinnacle Systems provides feature-rich products with a system solution focus for all your graphics production needs.

Integrated Traffic and Automated Graphics Workflow



DekoCast Power Promo makes scheduling and controlling automated on-air content from your traffic system easy. Adding Power Promo to your workflow allows you to change your on-air content without having to go through the graphics process. Using the object-power of DekoCast, you can add any DekoCast graphic element to your traffic/inventory. For example, assign a house ID to a text layer in a graphic template. In traffic, you can schedule that ID and pass the text you'd like to see on-air - without going through the graphics process. Your traffic log will be translated into an automation playlist as it normally does. No need to create custom graphics for EVERY unique payout. Power Promo generates a single Super Event in your automation playlist which will contain multiple on-air effects. Power Promo manages the overrides and your automation system will simply trigger a secondary page recall event. It's that easy. From traffic to on-air, without the repetitive graphics process.

Newsroom Graphics Workflow



Graphic templates (lower thirds, over-the-shoulder, and full frame, for example) are created by the graphics team on Deko, using elements from commonly used creation tools like Adobe Photoshop®, After Effects®, Quantel Paintbox, Discreet 3ds max®. Additionally, clips and stills are created and stored for payout on Thunder.

Using the DekoMOS browser plug-in to popular newsroom computer systems, journalists and producers select a template, fill in the text, and get a full preview of how the graphic will air. With ThunderMOS, users can use metadata to search for clips or stills. Dragging and dropping into the script puts the graphics into the rundown. Rundown order is managed by the producer through the newsroom computer system, while the graphics are played out within an easy to understand interface.

This workflow can be easily expanded to accommodate a "hub and spokes" workflow with graphics being created at a central location and then deployed to local stations.



Image Courtesy of CNBC

CNBC

Networked Graphics for News

Deko, DekoCast, Thunder and DVEXCEL have been deployed throughout CNBC studio facilities as the backbone for an efficient end-to-end workflow that helps CNBC speed news to air.

DekoCast produces the signature CNBC stock crawl driven by an in-house-developed application. Additionally, with DekoMOS, CNBC newsroom systems communicate directly with Deko. Deko templates are browsed within iNEWS by journalists and producers. After selecting the graphic template, they enter data and use a traditional "Drag-and-Drop" to insert graphics at specific points in their news script. Deko automatically creates the graphic by inserting the data at airtime.

Steve Fastook, V.P. Technical and Commercial Operations at CNBC said, "...As networked tools, Dekos readily interoperate with CNBC's data resources to provide up-to-the minute on air graphics. By being readily available on journalists' desktops, complete stories move quickly and with a greater degree of accuracy than ever before possible."



Images Courtesy of CNBC



Most Actives In Europe

| | | | |
|---------------------|-------|------|------|
| 1. Intel | 29.16 | ▼ | 0.04 |
| 2. Lucent Tech | 4.19 | UNCH | |
| 3. Sun Microsystems | 5.38 | ▲ | 0.07 |
| 4. MedImmune | 22.35 | ▼ | 3.34 |
| 5. Pfizer | 36.87 | ▲ | 0.22 |

ILXO 25.00 ▲ 3.63 SSLI 4.75 ▲ .65 NIKU 13.75
GROCERY WORKERS HAVE THEIR OLD JOBS BACK



Deko3000

CHARACTER GENERATOR

Introducing the newest member of the Deko family—Deko3000, raises the bar for real-time graphics broadcasting. Deko3000 is built on top of Inflexion™, our new object-based video processing engine that is designed to support a wide range of broadcast functionality including clip record and playback, real-time effects generation, and graphics display.

Deko3000 provides a whole new category of design that is perfectly suited for live-to-air production (like world-class sports events) or automated environments (like MOS-enabled newsrooms) by combining the 3D modeling and animation strengths of the industry leader 3ds max®, with real-time data and image integration and playback.

Content independent motions are carried even further with the addition of sound effects. Now your channel brand can incorporate sounds along with embedded motions that can be tied to layers, rows, words, or characters and will automatically adjust based on the text.

Deko3000 combines the proven strengths of Deko with new innovative technology.

Key Features

- Integrates 3ds max Models and Animations with Real-time Data and Images
- ClipDeko Option is an Internal Clip Player that Plays Multiple Clips Per Output Channel - with Motion, Transitions, and Scaling - Each can Support Fill, Key, and Static Matte
- Built on Powerful New Inflexion Engine Designed for Video Broadcast Functionality
- Deko MacroServer Included to Access the System Remotely via Network Pipe Using Deko's Macro Language for Customized Interfaces or Interaction
- Easy to Learn and Use Interface Makes it Equally Suited for Live or Automated Playout
- Content Independent 3D Motion and Sound Effects by Page, Layer, Row, Word, or Character are Embedded to Guarantee the Channel Brand
- Persistent Objects with DekoObjex™ Option can be Combined with Page-based Graphics in the Same Channel or Played from a Separate Channel (in Multi-channel Systems)



Options

- Automation
- Cel Animation Player
- ClipDeko
- DekoMOS
- DekoObjex
- Effects Option Pack
- FastAction Keyboard
- Make DekoMovie
- StillDeko
- Timelines

Technical Specifications

Deko3000

Supported Standards

- (Software Configurable)
- NTSC, PAL (4 x 3 or 16 x 9)

Video I/O

- SDI Video and Key Input per Channel - SMPTE 259M Compliant
- Automatic Retiming of Synchronous Inputs
- SDI Video and Key Output per Channel - SMPTE 259M Compliant
- Horizontal Output Timing Adjustment (-300 µsec to 300 µsec, Half Pixel Increments)
- Preserves VBI Data in Lines 10-21

Audio I/O

- Eight Channels of Audio Input - Embedded in SDI Video Input
- Eight Channels of Audio Output - Embedded in SDI Video Output
- Standard 16-Bit, 48 KHz Sampling

Reference

- Analog Color Black - 75 ohm Terminated

Downstream Keyer

- 4 Frame Processing Delay Through Box

Automation Protocols

(optional)

- I.I.I.
- PEGS
- EMEM
- Single GPI Input - Configurable Through RS-232 port

Standard Specifications

- Platform: 2.8 GHz Intel Pentium IV (or faster)
- Operating System: Windows XP Professional
- RAM: 1 GB
- Internal Storage: 20 GB or Larger
- Storage: DVD+R/+RW Writer; Floppy Drive
- Keyboard: Standard Keyboard
- Mouse: Microsoft Compatible Mouse
- Ethernet: 100BaseT (RJ45)
- Ports: One Serial RS-232 (DB9), Four USB 2.0 (Two Front, Two Rear)

Physical Dimensions

- 4RU Rack Mount Chassis
- Height: 7" (17.78cm)
- Width: 19" (48.26 cm)
- Depth: 22" (55.88 cm)

Power Specifications

- Redundant Hot-Swappable Power Supplies
- 110/220 Volt 60/50 Hz (Auto-sensing)
- AC Line Current = 6A
- 350 Watt Maximum Output

ClipDeko Option

Audio I/O

- Eight Channels of Audio for Clip Capture - Embedded in SDI Video Inputs
- Eight Channels of Audio for Clip Playback - Embedded in SDI Video Outputs
- Standard 16-Bit, 48 KHz Sampling

Clip Capture Support

- MPEG-2 I-Frame 4:2:2 or 4:2:0 Sampling, Variable Bit Rate (20-50 Mb), .MXF File Format
- DV25 Standard Compression Format (.DV File Format)

Clip Playback Support

- MPEG-2 I-Frame 4:2:2 or 4:2:0 Sampling, Variable Bit Rate (20-50 Mb), .MXF File Format
- DV25 Standard Compression Format (.DV File Format)
- DV25 Standard Compression Format (.AVI File Format)

Clip Processing

- Independent Control of Clips on Each Program Channel
- Up to 100 Mb Total Clip Bandwidth
- 2D Size and Position of Clip Layer
- Looping Clip Playback Capability

DekoObjex Option

DekoObjex Processing

- 32-Bit 4:4:4:4 RGBA Processing
- Up to Five Screen Pixel Coverage Processing Power

Live Video Processing

- Independent 2D DVE for Two Video Inputs

Deko3000 HD

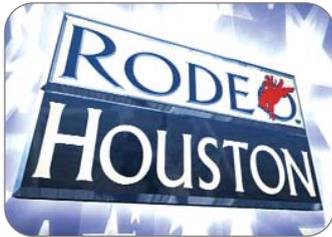


Image Courtesy of Houston Rodeo

Houston Rodeo

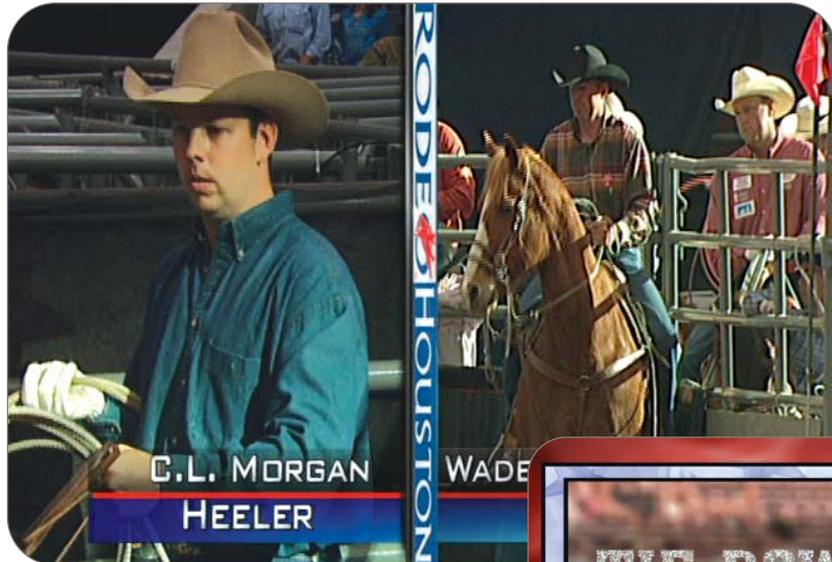
Live Venue Production

Houston Rodeo uses an extensive network of Pinnacle live production products to simplify venue and broadcast production at Houston's sprawling Reliant Park - home to the world's largest annual rodeo, the NFL's Texans and host to the most recent NFL Superbowl. Pinnacle enabled Rodeo Houston to solve unique needs brought about by the combination of new and legacy facilities while minimizing its infrastructure and personnel requirements.

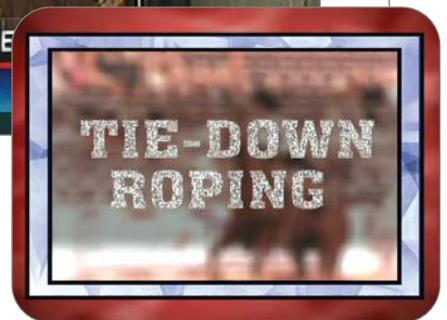
DekoCast's deep automation flexibility enables producers to supply everything from clocks and scoring through customized scrolling tickers with live news, sports, weather and other feeds for display throughout the complex.

Additional clip playback comes via a Thunder server, eliminating VTRs from playout and giving them tremendous flexibility to change things up to the last minute. Using ThunderBrowse, producers can quickly and easily package highlights for nightly update of web streams.

Ultimately, Houston Rodeo is using Pinnacle to achieve a thoroughly networked infrastructure in which all Dekos throughout its disparate operations are tied to a shared server so that images, templates and data can be shared and tape is completely eliminated from the process.



Images Courtesy of Houston Rodeo



Deko3000 HD

HIGH DEFINITION CHARACTER GENERATOR

No compromises... Now you can deliver beautiful High Definition graphics with all the quality and effects that you are accustomed to from FXDeko® II. Real-time motions that change properties like size, position, rotation, opacity, or even 3D DVEs are easy to create and automatically adjust to the length of the data with Deko's unique content independence.

The production value doesn't stop there. Internal clip playback with key matte is standard on Deko3000 HD providing full design motion without the expense of a separate video server.

Workflow functionality to easily use your 4:3 Standard Definition graphics in the 16:9 High Definition format are built-in to Deko3000 HD, making your transition to HD easier, without duplicating effort.

Designed for news, sports, and entertainment, Deko3000 HD steps you and your facility into HD with ease.



Key Features

- Stunning 3D Motions by Page, Layer, Row, Word, or Character
- Guaranteed Look with Content Independent Effects and Layout including Fit-to-Fill and Fancy Frames
- Internal Clip Playback with Associated Static Mattes Provide a Variety of Uses
- World-class Text Capabilities Including Typing on a Curve, Skew, TrueType Font Support
- Embedded Effects and Built-in Sequencer
- Macro Definition with "Auto-learn" to Customize Workflow or Remove Repetitive Tasks
- Functions to Move from 4:3 Graphics to 16:9 Graphics
- Support for Most Written Languages

Options

- Automation
- Cel Animation Player
- DekoMOS
- Effects Option Pack
- FastAction Keyboard
- Make DekoMovie
- Timelines

Technical Specifications

Deko3000 HD

Supported Video Standards (Software Configurable)

- 1080i/60, 1080i/59.94, 1080i/50, 720p/60, 720p/59.94

Video I/O

- SDI Video and Key Input - SMPTE 292M Compliant
- Automatic Retiming of Synchronous Inputs
- SDI Video and Key Output - SMPTE 292M Compliant
- Standard 10-Bit, 4:2:2:4 Sampling

Video Reference

- Analog Color Black or Tri-Level Sync
- NTSC Color Black Reference Supported with 1080i/59.94 and 720p/59.94 Formats
- PAL Color Black Reference Supported with 1080i/50 Format

Downstream Keyer

- 10-Bit Video and Key Resolution
- 1 Frame Processing Delay through Box

Automation Protocols

- L.I.I
- PEGS
- EMEM
- Single GPI Input - Configurable through RS-232 port

Standard Specifications

- Platform: 2.8 GHz Intel Pentium IV (or Faster)
- Operating System: Windows XP Professional
- RAM: 1 GB
- Internal Storage: 20 GB or Larger
- Storage: DVD+R/+RW Writer, Floppy Drive
- Keyboard: Standard Keyboard
- Mouse: Microsoft Compatible Mouse
- Ethernet: 100BaseT (RJ45)
- Ports: One Serial RS-232 (DB9), Four USB 2.0 (Two Front, Two Rear)

Physical Dimensions

- 4RU Rack Mount Chassis
- Height: 7" (17.78cm)
- Width: 19" (48.26 cm)
- Depth: 22" (55.88 cm)

Power Specifications

- Redundant Hot-Swappable Power Supplies
- 110/220 Volt 60/50 Hz (Auto-sensing)
- AC Line Current = 6A
- 350 Watt Maximum Output



Image Courtesy of TNT

TNT

Live Sports

When the basketball swishes through the net, Pinnacle's FXDeko II is there, giving TNT's NBA broadcasts their powerful graphic look.

FXDeko II character generators are being used to create and deliver all on-air graphics for TNT's NBA coverage, including Thursday night doubleheaders, NBA playoffs and the Western Conference Finals. FXDeko II systems are in TNT's mobile trucks, in the basketball studio and as part of master control.

Tom Sahara, TNT's Senior Director of IT and Remote Services, says, "FXDeko II enables TNT to deliver a complex look, with many moving parts, using far less equipment. In many cases one FXDeko II does what used to take five or six pieces of equipment to create."

TNT uses up to six FXDeko II systems on every game night. All the systems are connected using standard IT networking, enabling TNT staffers to easily share files between systems, and interact with other graphic resources.



Image Courtesy of TNT



Image Courtesy of TNT



Image Courtesy of SkyTV, England

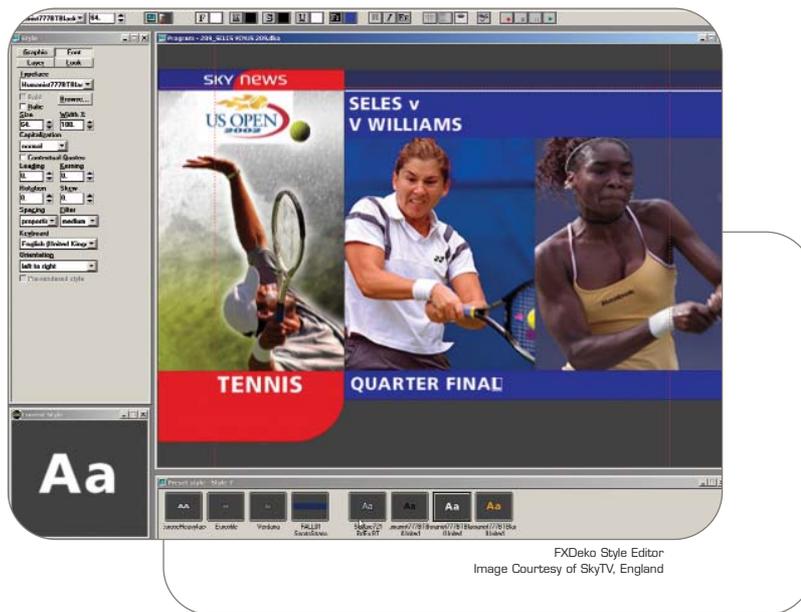


FXDeko II CHARACTER GENERATOR

Pinnacle Systems' flagship character generator, FXDeko II, delivers stunning multi-channel effects capability in a fully featured on-air graphics creation and playout workstation. The broad range of features makes it the CG choice for newsroom, sports events, and entertainment broadcasts.

FXDeko II enables you to independently move text, graphics, and textures through 3D space in real-time. With our unique content independent effects and file association abilities, you can change text or elements and still have the guarantee that your look will air as designed.

FXDeko II can be tailored to meet the needs of your environment with options like ClipDeko™ for clip and audio playback, DekoMOS™ for a powerful and efficient newsroom graphics workflow, and DekoObjex™ to add the flexibility of today's data-rich designs in an easy-to-use, familiar interface.



Key Features

- Guaranteed Look with Content Independent Effects and Layout including Fit-to-Fill and Fancy Frames
- World-class Text Capabilities Including Typing on a Curve, Skew, TrueType Font Support
- Stunning 3D Motions by Page, Layer, Row, Word, or Character
- Playback Clips with ClipDeko Option
- Embedded Effects and Built-in Sequencer
- Macro Definition with "auto-learn" to Customize Workflow or Remove Repetitive Tasks
- Integration to Automation Systems, Including MOS Support
- Combine Page-based Graphics with Persistent Objects with DekoObjex Option
- Support for Most Written Languages

Options

- Automation
- Aston File Import
- Cel Animation Player
- Chyron File Import
- ClipDeko
- DekoMOS
- DekoObjex
- Effects Option Pack
- FastAction Keyboard
- Make DekoMovie
- SportsWare
- StillDeko
- Timelines

Technical Specifications

FXDeko II

Supported Standards

- (Software Configurable)
- NTSC, PAL (4 x 3 or 16 x 9)

Video Inputs

- Digital: SDI - SMPTE 259M Video and Key
- Analog: (Optional) Composite, Component (RGB/YUV), S-Video, Key

Video Outputs

- Digital: SDI - SMPTE 259M Video and Key
- Analog: (Optional) Composite, Component (RGB/YUV), S-Video, Key

Video Reference

- Analog Color Black

Standard Specifications

- RAM: 512 MB
- Internal Storage: 20 GB or Larger
- Storage: Recordable CD-ROM, Floppy Drive
- Keyboard: Standard Keyboard, FastAction Keyboard (Optional)
- Mouse: Microsoft Compatible Mouse
- Ethernet: 10/100BaseT (RJ45)
- Ports: One Serial RS-232 (DB9), One IEEE-1394 (FireWire), Five USB 2.0 (One Front, Four Rear)

Physical Dimensions

- Height: 7" - 4RU
- Width: 19"
- Depth: 22"
- Weight: 55 lb (Approximate)

Power Requirements

- 110/220V 60/50 Hz (Autoswitch)

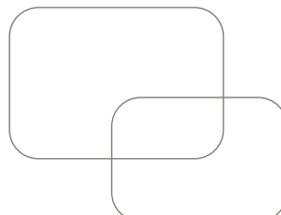




Image Courtesy of CNN Headline News

CNN Headline News

Live Information Graphics
 CNN effectively changed the way we watch television when it introduced the multiple information screen look that has become the new standard for information programming.

This information-rich style flows as smoothly as it does thanks to Pinnacle's Deko2200 and PostDeko™ character generator products.

One Deko2200 "owns" one particular section of the Headline News screen, with three screens on air at any given time.

Keith Chandler, VP Technology Development for CNN, says different people can work on different areas of the screen, allowing for updated information, late-breaking news, graphic images and text. Content creation for the three graphic areas is performed by people in editorial, not by technicians operating the character generators.

The Deko templates are pre-defined graphic elements, making them extremely easy to use, with all fonts and colors pre-determined.

CNN Headline News uses nine Deko2200s, three on-air, three redundant, and three for off-line development of new features and testing.



Image Courtesy of CNN Headline News



Image Courtesy of Danmarks Radio, Denmark

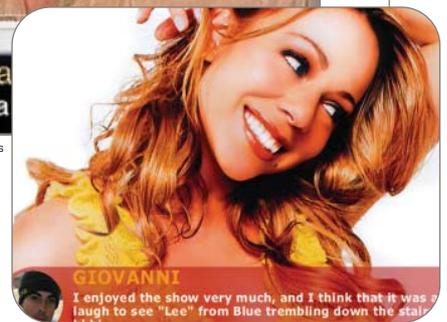


Image Courtesy of Danmarks Radio, Denmark



Deko2200

CHARACTER GENERATOR

Productivity. Deko2200 has the intuitive Deko user interface, combined with templates, built-in Spell Check, Macro Language, and optional automation and database connectivity, giving you the speed you need to get up-to-the-second information into your graphics and take them to air - instantly!

Deko2200 offers the tools to create dazzling looks, right at the your fingertips—interactively resize fonts, or add unlimited edges and drop or deep shadows to create stunning effects such as extruded characters, neon glows, and textured faces.

Deko2200 is the premier 2D character generator for environments where speed and sophisticated looks are critical.

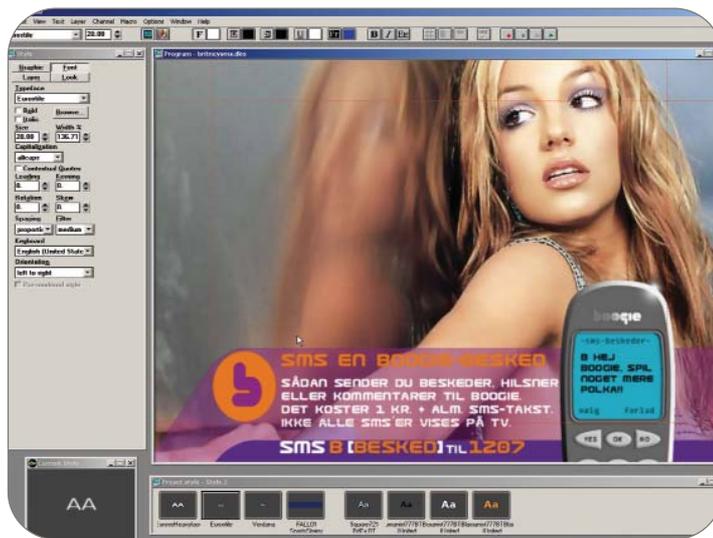


Image Courtesy of Danmarks Radio, Denmark

Key Features

- Real-time Motions to Change Size, Position, Opacity, and Kerning are Easy to Create
- Design Tools Including Type-on-a-Curve, Unlimited Details, Unlimited Number of TrueType Fonts
- Features such as Shrink-to-fit, Spell-check, Automation, Database Connectivity and Macros Help Minimize the Effort of Getting the Information On-Air
- Do More with Less - File Association Maximizes the Use of Your Graphic Assets and Minimizes the Repetition
- Clocks, Generated Internally or Externally

Options

- Automation
- Aston File Import
- Cel Animation Player
- Chyron File Import
- ClipDeko
- DekoMOS
- DekoObjex
- FastAction Keyboard
- Make DekoMovie
- SportsWare
- StillDeko
- Timelines

Technical Specifications

Deko2200

Supported Standards

- (Software Configurable)
- NTSC, PAL (4 x 3 or 16 x 9)

Video Inputs

- Digital: SDI - SMPTE 259M Video and Key
- Analog: (Optional) Composite, Component (RGB/YUV), S-Video, Key

Video Outputs

- Digital: SDI - SMPTE 259M Video and Key
- Analog: (Optional) Composite, Component (RGB/YUV), S-Video, Key

Video Reference

- Analog Color Black

Standard Specifications

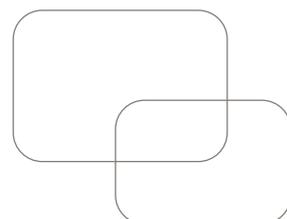
- RAM: 512 MB
- Internal Storage: 20 GB or Larger
- Storage: Recordable CD-ROM, Floppy Drive
- Keyboard: Standard Keyboard, FastAction Keyboard (Optional)
- Mouse: Microsoft Compatible Mouse
- Ethernet: 10/100BaseT (RJ45)
- Ports: One Serial RS-232 (DB9), One IEEE-1394 (FireWire), Five USB 2.0 (One Front, Four Rear)

Physical Dimensions

- Height: 7" - 4RU
- Width: 19"
- Depth: 22"
- Weight: 55 lb (Approximate)

Power Requirements

- 110/220V 60/50 Hz (Autoswitch)



Deko 1000



Deko1000 Custom Typeface Editor

Eurosport

Streamlined MultiNational Graphics

During 2003, Eurosport decided to redevelop its graphics broadcasting management systems into a truly centralized multi-country and multi-language platform. They selected Deko2200, Deko1000 and PostDeko as the new graphics production platform. NTL Broadcast, Eurosport's playout partner in the UK, also selected Deko2200 to localize all multi-region advertising and commercial content.

Marc Amiot, Eurosport's audio-visual IT manager: "Opening Pinnacle Systems' products to third-party applications has allowed Eurosport to develop a powerful, open-ended broadcasting application while taking full advantage of the wealth of features available in the latest generation of Deko character generators."

In Eurosport's system, graphics layout is prepared using Deko templates. This ensures consistency is maintained across all programming, in all country markets, for each of the languages. Furthermore, the solution has optimized the overall import and storage of clips and data throughout the company's broadcast network.



Image Courtesy of Eurosport



Image Courtesy of Eurosport



Image Courtesy of USA Networks



Deko 1000

CHARACTER GENERATOR

Deko1000 provides the quality that you know and expect from our award-winning character generators. Deko1000 is a digital character generator built on the same powerful core technologies as Pinnacle Systems flagship FXDeko II. Deko1000 delivers sophisticated layer-based motion controls for creating eye-catching on-air looks.

Deko1000 is also an extensible solution with support for many powerful Deko options including the ClipDeko™ internal clip player and the DekoObjex option for persistent object control. Deko1000 raises the standard of capabilities for low-cost character generators, providing a complete solution for local broadcasters, as well as larger facilities that want additional Deko sets for specific applications and workgroups.



Key Features

- Integration to Automation Systems, Including MOS Support
- Macros to Customize Productivity
- Unlimited Layers for Compositing
- Custom Typeface/Logo Compose
- Motions are Easy-to-Make for Individual Layers or Pages
- Direct Support of TrueType Fonts
- Robust Type Capabilities - On Curve, Shrink-to-fit, Automation, Spell Check, Unlimited Details
- Full Text Manipulation-Kern, Skew, Lead in any Direction
- Support for Most Written Languages

Options

- Automation
- Aston File Import
- Chyron File Import
- ClipDeko
- DekoMOS
- DekoObjex
- FastAction Keyboard
- SportsWare
- StillDeko

Technical Specifications

Deko1000

Supported Standards

- (Software Configurable)
- NTSC, PAL, (4 x 3 or 16 x 9)

Video Inputs

- SDI - SMPTE 259M Video and Key
- Embedded Audio - SMPTE 272M

Video Outputs

- SDI - SMPTE 259M Video and Key
- Embedded Audio - SMPTE 272M

Video Reference

- Analog Color Black
- Note: Optional Second Channel Requires Second Analog Color Black Input

Standard Specifications

- Windows 2000 Operating System
- RAM: 512 MB
- Internal Storage: 20 GB or Larger

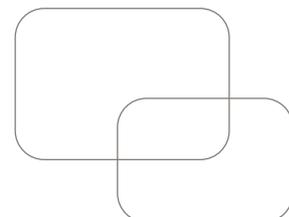
- Storage: Recordable CD-ROM, Floppy Drive
- Keyboard: Standard Keyboard, FastAction Keyboard (Optional)
- Mouse: Microsoft Compatible Mouse
- Ethernet: 10/100BaseT (RJ45)
- Ports: Two Serial RS-232 (DB9), One IEEE 1394 (FireWire), Five USB 2.0 (One Front, Four Rear)

Physical Dimensions

- Height: 7" - 4RU
- Width: 19"
- Depth: 22"

Power Requirements

- 110/220V 60/50 Hz (Auto-sensing)



Deko550 & HD Deko500



Image Courtesy of Azabu Plaza

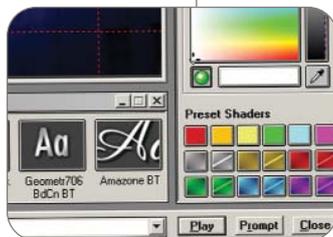
Azabu Plaza

HD Postproduction
Azabu Plaza, a major post-production house in Tokyo, has eight linear editing rooms, four NLE rooms and six audio sweetening rooms. For its first HD/SD editing room, Azabu Plaza recently purchased a HD Deko500. Azabu Plaza now has 10 Deko character generators for linear and non-linear editing rooms. Thanks to government regulations, the facility will likely rely more and more on Pinnacle Systems' character generators with HD capability.

"We plan to replace all standard definition equipment at our editing rooms with multi-format (HD/SD) gear over the next three years," says Mr. Susumu Tamura, Director, Technical Administration. "We expect a lot of HD business beginning this summer because major broadcasters in Japan will start digital terrestrial broadcasting in December 2003. Over 50% of digital terrestrial programming must be HD according to government regulations. Deko is cost-effective and very powerful. Our clients are very satisfied with Deko's multi-layer capabilities, unlimited graphic looks and high productivity with no rendering time."



Image Courtesy of Azabu Plaza



Deko550 Custom Preset Shaders



Deko550 CHARACTER GENERATOR

Deko550 is a complete turnkey Character Generator built on the same core set of powerful broadcast-oriented tools as our flagship CG, FXDeko II. With options including the ClipDeko™ internal clip player, Deko550 raises the standard of capabilities for low-cost CGs.

HD Deko500 HIGH DEFINITION CHARACTER GENERATOR

HD Deko500 is Pinnacle's on-air HDTV character generator, providing real-time, no-render effects including rolls, crawls, wipes, pushes and dissolves and permits live composition of CG pages directly onto the HDTV output. HD Deko500 includes such features as automation, type on a curve, texture on character faces and unlimited font details with shadows and blurs. The hardware for HD Deko500 includes a fully integrated internal downstream keyer, to reduce your system costs. With HD Deko500, you can key graphics such as clocks, logos and news alert crawls over a decoded HD video stream.

Deko550 & HD Deko500



Deko550 Style Edit Layout

Technical Specifications

Deko550

Supported Standards

(Software Configurable)

- NTSC, PAL, (4 x 3 or 16 x 9)

Video Inputs

- SDI - SMPTE 259M Video and Key
- Embedded Audio - SMPTE 272M

Video Outputs

- SDI - SMPTE 259M Video and Key
- Embedded Audio - SMPTE 272M

Video Reference

- Analog Color Black
Note: Optional Second Channel Requires Second Analog Color Black Input

Standard Specifications

- Windows 2000 Operating System
- RAM: 512 MB
- Internal Storage: 20 GB or Larger
- Storage: Recordable CD-ROM, Floppy Drive
- Keyboard: Standard Keyboard, FastAction Keyboard (Optional)
- Mouse: Microsoft Compatible Mouse
- Ethernet: 10/100BaseT (RJ45)
- Ports: Two Serial RS-232 (DB9), One IEEE 1394 (FireWire), Five USB 2.0 (One Front, Four Rear)

Physical Dimensions

- Height: 7" - 4RU
- Width: 19"
- Depth: 22"

Power Requirements

- 110/220V 60/50 Hz (Auto-sensing)

HD Deko500

Supported Standards

(Software Configurable)

- 1080i/60, 1080i/59.94, 1080i/50, 1080i/48, 1080i/47.95, 1080p/24, 1080p/24SF, 1080p/23.98, 1080p/23.98SF, 720p/60, 720p/59.94, 1035i/60, 1035i/59.94

Video Inputs

- SDI - SMPTE 292M Video and Key

Video Outputs

- SDI - SMPTE 292M Video and Key

Video Reference

(Loop Through)

- Analog Color Black
- Tri-Level Sync

Standard Specifications

- RAM: 1 GB
- Internal Storage: 20 GB or Larger
- Storage: CD-ROM, Floppy Drive
- Keyboard: FastAction Keyboard Standard
- Mouse: Microsoft Compatible Mouse
- Ethernet: 10/100BaseT (RJ45)
- Ports: One Serial RS-232 (DB9), One IEEE-1394 (FireWire), Five USB 2.0 (One Front, Four Rear)

Physical Dimensions

- Height: 7" - 4RU
- Width: 19"
- Depth: 22"
- Weight: 55 lb (Approximate)

Power Requirements

- 110/220V 60/50 Hz (Autoswitch)

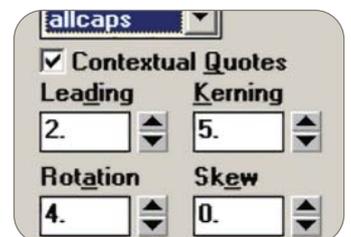




Image Courtesy of Starz Encore

Starz Encore Group

Fully Automated Graphics

Starz Encore Group broadcasts 13 channels, each with separate digital feeds for east and west coast time zones and a full backup playout. Five analog channel feeds are provided for the backyard C-band dish market.

When the company moved to transform its Denver facility to a fully automated, server-based playback and transmission center, Starz Encore turned to Pinnacle for servers and character generators, selecting MediaStream™ for playback and ingest/encoding and effects added by a Pinnacle DekoCast Systems, triggered by automation, with a signal that goes straight into the satellite encoder.

The backup path of each channel does not contain any graphics or voice-over capability, but goes straight to the transmission router to be switched to the encoder in case of a failure.



Images Courtesy of Starz Encore



DekoCast

AUTOMATED GRAPHICS

DekoCast is an advanced, cost-effective solution for a wide range of master control, channel branding and localization applications. From weather alerts to coming attractions, DekoCast handles video, audio, clips and graphics all in one box. DekoCast is a turnkey combination of real-time character generator, video and audio clip player, audio mixer and router, multi channel DVE and advanced keying engine. It is the complete solution for automated squeeze and crawl, squeeze and tease, credit sequences, and other broadcast combinations of re-scaled and positioned video with real-time playback of clips, graphics, and effects.



Image Courtesy of Starz Encore

Key Features

- Unlimited Multi-layer Keyer, with Independent Control of Each Layer
- True Object-based Timeline Control
- Capable of Playing 2 Clips with Key Simultaneously
- Multiple DVEs for Data and Graphic Transition Effects
- Powerful API for Robust Custom Applications
- Integrated Virtual Switcher
- Integrates with Industry Standard Automation Systems
- Full 16 Channel Digital Audio Mixing, Routing, Gain and Copy
- Easy Template Creation and Integrated CG
- VBI Pass Thru for Closed Caption and Other Data Sources
- Automatic Video Bypass

Options

- DekoCast Clip Server
- DekoCast Cel Animation Player
- DekoCast Power Promo

Technical Specifications

DekoCast

Supported Standards

(Software Configurable)

- NTSC, PAL (4 x 3 or 16 x 9)

Video Inputs

- SDI - SMPTE 259M Video x2
- Embedded Audio - SMPTE 272M (Four Channel Pairs)

Video Outputs

- SDI - SMPTE 259M Video
- Key Output
- Embedded Audio (Eight Channels)

Video Reference

- Analog Color Black

Standard Specifications

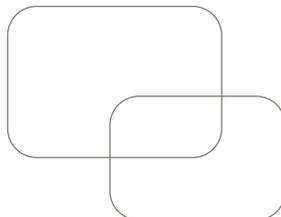
- RAM: 512 MB
- Internal Storage: 20 GB or Larger
- Storage: CD/RW, Floppy Drive
- Keyboard: Standard Keyboard
- Mouse: Microsoft Compatible Mouse
- Ethernet: 10/100BaseT (RJ45)
- Ports: One Serial RS-232 (DB9), One IEEE-1394 (FireWire), Five USB 2.0 (One Front, Four Rear)

Physical Dimensions

- Height: 7" - 4RU
- Width: 19"
- Depth: 22"
- Weight: 55 lb (Approximate)

Power Specifications

- Redundant Hot-Swappable Power Supplies
- 110/220V 60/50 Hz (Auto-sensing)
- AC line current = 6A
- 350 Watt Maximum Output



Thunder® XL/LT & Lightning® 1000



NBC Olympics

Thunder Speeds Live Production

There will be Thunder and Lightning over Athens for the 2004 summer Olympic games, as Pinnacle continues to build on its successful partnership with NBC.

Philip Paully, Director of Graphics Engineering and Operations for the NBC Olympics, says broadcast coverage of the Salt Lake City games achieved a new level of sophistication, speed and stability, thanks to Pinnacle graphics and character generator products.

Among those products was Thunder XL, a clip/still server from Pinnacle Systems, making its NBC debut and coming up gold. Says David Mazza, VP of Engineering for NBC's Olympic coverage, "In the Olympics we are always trying to debut something new that people haven't seen before. The effects power we have in both the Deko and the Thunder is a big boon to us in terms of being able to deliver the sophisticated new looks our designers cooked up for the games."



Image Courtesy of CNBC



Thunder XL/LT & Lightning 1000

CLIP AND STILL STORE

Thunder XL is the flagship of Pinnacle Systems' next generation integrated clip and still server platform. Combining the capabilities of a still store, clip store, mixer, and DVE with a powerful application environment, Thunder XL delivers an enormous range of live production capability.

Thunder LT combines a powerful application environment with the capabilities of a still store, clip store, mixer, and DVE, all combined in a single solution to streamline operations in your fast-paced live production workflow.

The Lightning 1000 Image Management System combines a powerful set of features with a simple user interface. In addition to the ability to store thousands of images and find them quickly, Lightning 1000 comes standard with an internal 3D DVE for layouts and transitions. Lightning 1000 can also control external video servers and integrate clips and stills into a single sequence.

Thunder® XL/LT & Lightning® 1000



Technical Specifications

Thunder XL/LT

System Configuration

- Four or Two (Two on Thunder LT Only) Symmetrical Digital Record/Playback Channels, Each with SDI Video and Key and Two Studio Stereo Pairs Both Embedded and AES/EBU, Plus 1x Analog Composite Output
- Automatically Generates MPEG-1 Proxy for Remote Browsing
- Redundant, Hot Swappable Power Supplies
- External Interfaces Include 100BaseT Ethernet Networking, Eight RS-422 Control Ports, Eight GPI Inputs, SCSI or USB 2.0, VGA, Keyboard, and Mouse
- Contains Internal Hard Disk, CD-ROM, and Floppy in a 4RU Chassis

Storage

- Thunder XL Storage: 3RU RAID 3 Expandable with Additional RAID Chassis
- Thunder LT Storage: Internal RAID 1+ 0 Storage

Video Formats and Compression

- PAL (625/50 Hz) or NTSC (525/60 Hz) - Software Configurable
- DV & MPEG-2, 4:2:2 MP @ ML
- 2-50 Mb/s (2-25 Mb/s with Key)
- Proxy Bandwidth: 1.128 Mb/s
- Proxy Format: MPEG-1 with Layer 3 Audio (Viewable with Standard Media Players)

Standard I/O Per Channel

- Video: SDI 270 Mb/s SMPTE 259M
- Key: SDI 270 Mb/s SMPTE 259M
- Audio: AES/EBU (BNC) x 2 or SMPTE 272 Embedded in Video Stream (Simultaneous AES/EBU and SMPTE 272 Embedded Audio Output)
- Analog Video Monitor Output

Control

- Eight RS-422, Eight GPI Inputs
- Eight GPI Outputs
- 100BaseT Ethernet

Protocols

- VDCP (Louth/Harris), Odetics, MOS, PbusII, ThunderNet, BVW-75

External Analog I/O Module (Optional)

- Video Inputs: NTSC/PAL, 1.0 V P-P Component RGB/YUV Inputs 75 Ohms Terminated
- Video Outputs: NTSC/PAL, S-Video, Key with Sync 1.0 V P-P RGB, Sync Green, 1.0 V P-P YUV, SMPTE/EBU Compliant Output Impedance 75 Ohms

Power Consumption

- Power: < 450 Watts; 115/230 VAC; Auto Sensing 50-60 Hz
- Storage System: < 430 Watts; 100-240 VAC; 50-60 Hz

Lightning 1000

System Configuration

- Up to Three Channels — Each has Digital SDI or Digital and Analog Input and Output. Each Channel has Video and Key with Independent Assignment of Program, Preview, and Compose Function. Digital Signal 4:2:2:4 Non-compressed.
- Contains Internal Hard Disk, CD-ROM, and Floppy, and 4RU Chassis

Video Formats and Compression

- PAL (625/50 Hz) or NTSC (525/60 Hz) - Software Configurable
- Images are Stored Uncompressed

Standard I/O Per Channel

- Video: SDI 270 Mb/s SMPTE 259M
- Key: SDI 270 Mb/s SMPTE 259M

Internal Analog I/O Module (Optional)

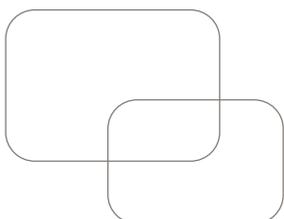
- Video Inputs: NTSC/PAL, 1.0 V P-P Component RGB/YUV Inputs 75 Ohms Terminated
- Video Outputs: NTSC/PAL, S-Video, Key with Sync 1.0 V P-P RGB, Sync Green, 1.0 V P-P YUV, SMPTE/EBU Compliant Output Impedance 75 Ohms

Protocols

- VDCP (Louth/Harris), Odetics, MOS, PbusII, ThunderNet, BVW-75

Power Consumption

- Main Chassis: < 500 Watts



DVEXCEL, PDS 9000i & PDS 6000i



Image Courtesy of XL Video

Tim McGraw Tour

Flexible Production for Events

One of the first things Bob Higgins did when he became manager of XL Video's Touring Division was to bid on the Tim McGraw summer 2001 tour. Tour organizers wanted to combine mixed playback footage with live media and digital effects on three large LED video screen arrays as well as a huge on-stage video wall.

To control the images, Higgins knew he needed a switcher with 3 M/E capabilities and built-in DVEs. With a fist-full of cash, Higgins went to NAB 2001, knowing he needed something powerful to do the job. He chose Pinnacle's PDS 9000i. "I went and showed everyone Pinnacle Systems' PDS 9000i and then took them to look at a less powerful switcher at another booth," says Higgins. "The difference was embarrassing."

Higgins later used the PDS 9000i to cover a United Nations' World Food Program benefit concert in Seattle - featuring Pearl Jam, Alanis Morissette and REM.



Images Courtesy of XL Video



DVEXCEL, PDS 9000i & PDS 6000i

DVE AND PRODUCTION SWITCHERS

DVEXCEL

Pinnacle Systems DVEXCEL, the world's first four-channel, 16-bit, 4:4:4:4 frame-based DVE has all the features and power you need to stand out in today's competitive market. DVEXCEL uses our award-winning user interface, providing up to 12 DVE layers in a 4-channel system. A separate timeline control for each DVE layer allows absolute control of your effect. Deep defocus (on both video and key), chroma keying, independent drop shadows, wipes, internal graphics and an enormous family of customizable warps and textures give you boundless creative control.

PDS 9000i & PDS 6000i

The PDS 9000i is a 36 input, 2.5 M/E Production Switcher aimed at live production in the broadcast market, specifically news and local interest programming. The product's flexibility, extensive feature set and familiar operating surface sets a new standard for this market segment. Any of the switcher's 19 multi-page framestores can be loaded from Pinnacle's Lightning, Deko, Thunder, and DVEXCEL products over a standard network.

With its incredible image processing and networking power, the PDS 6000i gives you a high-end look at a competitive price. Designed for live use, the PDS 6000i enables easy integration of your newscast with servers, stills and graphics.

DVEXCEL, PDS 9000i & PDS 6000i

Technical Specifications

DVEXCEL

System Formats

- NTSC 525/60 Hz or PAL 625/50 Hz, User Scalable

System Chassis Control Interface

- RS-422 Serial 9-pin Female D-type Connector (Connection to Editor/Switcher)
- RS-422 serial 9-pin Female D-type Connector (Switcher Auxiliary Bus Control Port)
- GPI 9-pin Male D-type Connector (Editor Trigger)
- GPI 15-pin Male D-type Connector (Tally Output)

Video and Key Inputs

(Per Channel)

- Three SMPTE Serial Digital Video Inputs Per Channel, Internally Routable

Video and Key Outputs

(Per Channel)

- One SMPTE Serial Digital Program Video
- One SMPTE Serial Digital Key
- One Composite Analog for Monitoring Purposes

External Reference Loop

- 1V P-P Analog Black Burst or Composite Video High Impedance Loop-through

Dimensions

- Main Chassis: 19" x 22" x 7" (48.26 cm x 58.88 cm x 17.18 cm)
- Control Panel: 18.75" x 7" x 1.5" (47.62 cm x 17.78 cm x 3.81 cm)

Power Consumption

- Main Chassis: < 250 watts
- Control Panel: 45 watts

External Analog I/O Module

(Optional)

- Video Inputs:
- NTSC/PAL, 1.0 V P-P
- Component RGB/YUV
- Inputs 75 Ohms Terminated

Video Outputs:

- NTSC/PAL, S-Video, Key with Sync 1.0 V P-P
- RGB, Sync Green, 1.0 V P-P
- YUV, SMPTE/EBU Compliant
- Output Impedance 75 Ohms



Image Courtesy of XL Video

PDS 9000i

Video Inputs

- 36 Non-looping Primary Inputs

Genlock Input

- 1 Looping Composite Analog Input
- Use of the Color Black as the Genlock Source is Encouraged

Video Outputs

- 24 CCIR-601 Outputs

Path Length (No DVEs in Circuit)

- 37.5 Microseconds Relative to Genlock Input

Control Panel Dimensions

- Length: 46.3" (117.6 cm)
- Width: 21.1" (53.6 cm)
- Height: (Above Desk) 7.63" (19.38 cm)
- Depth: (Below Desk) 7.43" (18.87 cm)
- Power Consumption: < 300 Watts

Video Processor Chassis Dimensions

- Width: 17" (43.18 cm)
- Height: 10.5" (26.67 cm) 6RU
- Depth: 24" (61 cm)
- Power Consumption: < 400 Watts

PDS 6000i

Video Inputs

- 15 Non-looping Primary Inputs, Expandable to 36

Genlock Input

- One Looping Composite Analog Input
- Use of the Color Black as the Genlock Source is Encouraged

Video Outputs

- Six CCIR-601 Outputs, Expandable to 22
- Path Length (No DVEs in Circuit)
- 37.5 Microseconds Relative to Genlock Input

Control Panel Dimensions

- Length: 38" (96.52 cm)
- Width: 15.7" (39.9 cm)
- Height: (above desk) 7.63" (19.38 cm)
- Depth: (below desk) 7.43" (18.87 cm)
- Power Consumption: < 300 Watts

Video Processor Chassis Dimensions

- Width: 17" (43.18 cm)
- Height: 10.5" (26.67 cm) 6RU
- Depth: 24" (61 cm)
- Power Consumption: < 400 Watts

Tools and Options

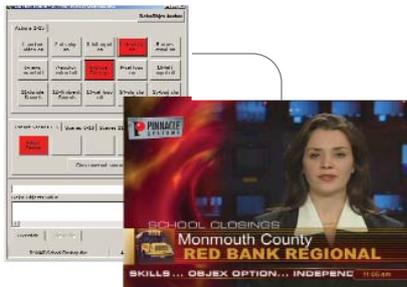


ClipDeko™

Enhance your Deko with an internal clip player, ClipDeko. ClipDeko's sophisticated, intuitive GUI allows users to browse, preview, trim and loop clips (video and key) from within your Deko system.

ClipDeko is so easy to use, too. Clips can be embedded into Deko graphics and combined with effects, for the fastest playout possible. Clip Layers enable two clips to play at once for moving banners and backgrounds at the same time. Clip Layers can also be scaled or cropped to auto-fit into a graphic template.

ClipDeko can record digital source or import as .avi or .dv formats created in numerous other applications. Additionally, clips can support up to eight channels of embedded audio.



DekoObjex™

The DekoObjex option adds flexibility to your Deko character generator unlike anything you've ever seen in a CG before. With DekoObjex, you can create a persistent plane on your graphic screen that can be combined with a more traditional page-based plane. DekoObjex can animate graphic objects to the screen using 2D DVE controls. Examples include video or clip squeezeback, continuous crawls or tickers, clocks—just to name a few. These actions can be controlled independently by a single user, making DekoObjex an ideal tool for both news and sports production/playout.



DekoMOS™

DekoMOS works in conjunction the Deko line of character generators to produce superior graphics for the newsroom.

During script creation, DekoMOS allows the journalist to add text, stills or clips to a graphic template from within their newsroom computer system. High-quality preview shows how the graphic will air. DekoMOS easily manages multiple graphic "looks" to support different shows or channel branding.

In the control room, DekoMOS controls up to nine channels of Deko. Effects and clips are embedded in Deko templates so that the graphic airs just as the art department defined the look. With DekoMOS, operational costs are reduced, time to air is decreased, giving more impact to your on-air look.

Tools and Options

PostDeko™

PostDeko is a software-only application that delivers a full range of tools for creating anything from simple lower thirds to an entire look. PostDeko is perfect for graphic design and production, and can be networked with any turnkey Deko to provide a cost-effective additional user station for creating motion graphics that are ready for use on air.



FXDeko Style Editor
Image Courtesy of SkyTV, England

DekoCast Power Promo™

DekoCast Power Promo makes scheduling and controlling automated on-air content from your traffic system easy.

Adding Power Promo to your workflow allows you to change your on-air content without having to go through the graphics process. Using the object-power of DekoCast, you can add any DekoCast graphic element to your traffic/inventory system. Assign a house ID to a text layer; schedule that ID and see it on-air—no graphics process involved! Any traffic system, any automation system—no customization needed.



ThunderBrowse™

ThunderBrowse software allows a remote user, at any PC, to connect to and have full control of Thunder databases. Browse allows the user to perform all Thunder tasks, including browsing, previewing clips and stills, trimming clips, deleting and copying items, creating sequences, and more. Additionally, full Thunder functionality is provided, including record and playback. This allows a single Thunder to be used in multiple control rooms by splitting the output and providing control to the operators in separate rooms.

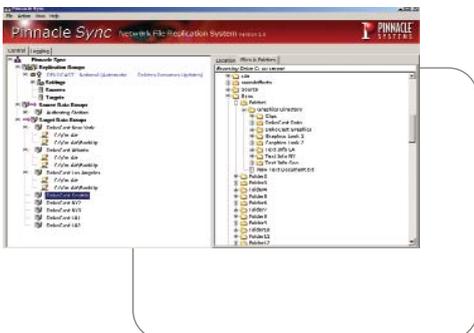
Remote management and control is made easy and convenient with ThunderBrowse.



Pinnacle SYNC™

Pinnacle SYNC allows you to manage files automatically from a variety of Windows®-based systems. It allows users to simply and efficiently move files from one or more source computers to one or more target computers, according to transfer rules you can set. SYNC is agnostic to the file types involved. It may be DekoCast files, Deko files or any file type.

When you have more than one system to manage, SYNC provides a convenient and reliable way to transfer content, saving time and effort.



Character Generator Product Comparison

| | PostDeko | Deko550 | Deko1000 | Deko2200 | FXDeko II | Deko3000 | HD Deko500 | Deko3000 HD | DekoCast |
|--|----------|----------------|----------------|----------------|----------------|----------------|---------------------|-------------|---------------------|
| 1 Channel | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Preview Channel | - | ○ | ○ | ○ | ○ | ○ | ○ | ○ | - |
| Dual Program Channels | - | - | - | ○ | ○ | ○ | ○ | - | - |
| Digital I/O (Video & Key) | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ or 2 Video Inputs |
| Analog I/O (Video & Key) | - | - | - | ○ | ○ | - | - | - | - |
| Video Format: NTSC (4:3, 16:9) Software Configurable | ■ | ■ | ■ | ■ | ■ | ■ | ▲ | □ | ■ |
| Video Format: PAL (4:3, 16:9) Software Configurable | ■ | ■ | ■ | ■ | ■ | ■ | ▲ | □ | ■ |
| Composite Over-Input | - | With Input Key | Without Input Key | - | With Input Key |
| Video Squeezeback | - | - | ○ | ○ | ○ | ○ | ○ | - | ■ |
| Frame Grab (With Input Key) | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | - |
| Audio Input (Embedded Channels per SDI Input) | - | 4 | 4 | 4 | 4 | 8 | - | - | 4 |
| Audio Output (Embedded Channels per SDI Output) | - | 4 | 4 | 4 | 4 | 8 | - | - | 8 |
| Network (10/100BaseT) | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Hardware - 4RU Turnkey System | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| FastAction Keyboard | ○ | ○ | ○ | ○ | ○ | ○ | ■ | ○ | - |
| Effects | | | | | | | | | |
| Roll, Crawl | ○ | ■ | ■ | ■ | ■ | ■ | Not Over Background | ■ | ■ |
| Multi-row Crawl | ○ | - | ○ | ■ | ■ | ■ | - | ■ | ■ |
| Continuous Crawl | ○ | - | ○ | ■ | ■ | ■ | - | ■ | ■ |
| Embedded Speed | ○ | - | - | ■ | ■ | ■ | - | ■ | ■ |
| Slow Reveal | ○ | ■ | ■ | ■ | ■ | ■ | Not Over Background | ■ | ■ |
| Dissolve | ○ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Dip | - | - | - | - | - | - | ■ | - | ■ |
| Push, Slide, Wipe | ○ | ■ | ■ | ■ | ■ | ■ | - | ■ | ■ |
| Motions | ○ | - | ■ | ■ | ■ | ■ | - | ■ | ■ |
| Motion Timelines | ○ | - | - | ○ | ○ | ○ | - | ○ | ○ |
| Cel Animations | - | - | - | ○ | ○ | ○ | - | ○ | ○ |
| Persistent Objects - Crawls, Cel Animations, Etc. | - | - | ○ | ○ | ○ | ○ | - | ○ | ■ |

| Motions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Layers | ○ | - | ■ | ■ | ■ | - | ■ | ■ | ■ | ■ |
| Row, Word, Char, Detail | ○ | - | ■ | ■ | ■ | - | ■ | ■ | ■ | ■ |
| 3D DVE Effects, Blur, Kerning, Z Rotation | ○ | - | - | - | ■ | - | - | - | - | - |
| Cel Animations | - | - | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| 3D model playback | - | - | - | - | - | - | - | - | - | - |
| Productivity | | | | | | | | | | |
| Macro Programming Language | ■ | ■ | ■ | ■ | ■ | - | ■ | ■ | ■ | ■ |
| Automation | ■ | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| iii Automation Control | ■ | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| EMEM Automation Control | - | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| PEGS Automation Control | - | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| XVML Automation Control | - | - | - | - | - | - | - | - | - | - |
| API Automation Control | - | - | - | - | - | - | - | - | - | - |
| DekoMDS | - | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| StillDeko | ○ | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| Make DekoMovie | ○ | - | - | - | ■ | - | - | - | - | - |
| Clips | | | | | | | | | | |
| Clip Playback (With Key & Audio) | - | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| Capture | - | ○ | ○ | ○ | ○ | - | ○ | ○ | ○ | ○ |
| Available Options | | | | | | | | | | |
| Aston File Import | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Automation | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Cel Animation Player | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Chyron File Import | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| ClipDeko | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Clip Option | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| DekoMDS | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| DekoObjex | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| 3D DVE Effects Pack | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| FastAction Keyboard | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Make DekoMovie | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Power Promo | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| SportsWare | ✓ | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| StillDeko | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Squeezeback | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |
| Timeline | | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ | ✓ |

Key ■ Included/Supported
○ Optional
▲ 1080i/60, 1080i/59.94, 1080i/50, 1080i/48, 1080i/47.95, 1080p/24, 1080p/24SF, 1080p/23.98, 1080p/23.98SF, 720p/60, 720p/59.94, 1035i/60, 1035i/59.94
□ 1080i/60, 1080i/59.94, 1080i/50, 720p/60, 720p/59.94



Clip and Still Server Product Comparison

| | Lightning 1000 | Thunder LT | Thunder XL |
|---|--|---|---|
| Overview | This Image Management System is the industry's most powerful and easiest to use still storage system which is also capable of controlling external clip servers. | The ultimate server for meeting the demands of news and other live control rooms, combining the capabilities of a still store, clip store, mixer and DVE in a compact and affordable package. | The clip and still server that meets the needs of broadcasters whose operations demand higher channel and storage capacity today and the flexibility of broad scalability for tomorrow. |
| Video Channels | Up to 3 Channels | 2 Record/Playback Channels | 4 or 2 Record/Playback Channels |
| Video Formats | - | DV and MPEG-2 | DV and MPEG-2 |
| Internal Storage | SCSI Internal | 4 IDE Drives in RAID 1 + 0 Configuration (Striped/Mirrored) | - |
| External Storage Option | - | - | Fibre to SCSI in RAID 3 Configuration with Redundant Power Supplies & Hot-swappable Drives with Pool Spare Option |
| Redundancy | - | Dual Hot-swappable Power Supplies in Thunder Chassis | Dual Hot-swappable Power Supplies in Thunder Chassis & Dual Hot-swappable Power Supplies in RAID |
| Downstream Keyer per Channel | ■ | | ■ |
| 3D DVE per Channel | ■ | | ■ |
| MDS Compliance | ■ | | ■ |
| ODBC | ■ | | ■ |
| Protocols (PbusII, ThunderNet, MDS, Louth, Odetics, BVW-75) | ■ | | ■ |
| Remote Control Panel Option | ■ | | ■ |
| Tiling Option | ■ | | ■ |

Key ■ = Included/Supported

DVEXCEL Features

| DVEXCEL | |
|-----------------------------|--------------------|
| Type of Inputs | 601 |
| Number of Channels | 1, 2, 3 or 4 |
| Number of DVEs per Channel | 3, Up to 12 Layers |
| I/O Resolution | 10 Bit |
| Internal Processing | 16 Bit 4:4:4:4 |
| Filtering | 31 x 31 |
| Interpolation | Frame-based |
| Interpolator Size | 16 x 8 |
| Motion Detection | ■ |
| Number of Inputs | 3, 6, 9 or 12 |
| Separate Channel Outputs | ■ |
| 16 x 9 Compatible | ■ |
| DVE Combiner | ■ |
| Colored Shading/HighLights | ■ |
| Customizable Warms | ■ |
| Matte Input Keying | ■ |
| Soft Inside Page Turn Edges | ■ |
| Defocus | ■ |
| Deep Defocus | ■ |
| 3D HighLights | ■ |
| Intersecting Planes | ■ |
| Wipes | ■ |

Key ■ = Included/Supported

Switcher Product Comparison

| | PDS 6000i | PDS 9000i |
|--------------------------------------|--|--|
| Standard Inputs | 15 | 36 |
| Maximum Inputs | 36 | 36 |
| Full Function PGM/PST/DSK | ■ | ■ |
| Number of Internal 3D DVEs | 6 - 3 per M/E | 9 - 3 per M/E |
| Number of Internal Framestores | 14 (6X+K, 2 Video Only) 4 Pages - 56 Frames Stored Online, 1000s on Disk | 19 (8X+K, 3 Video Only) 4 Pages - 76 Frames Stored Online, 1000s on Disk |
| Input Proc Amp Controls (All Inputs) | ■ | ■ |
| YUV Color Correction (All Keyers) | ■ | ■ |
| RGB Color Correction | Optional | Optional |
| Effects Send | 1 Standard Up to 3 | All M/Es (Including PGM/PST) |
| Number of Aux Busses | Up to 8, Optional | 8 |
| Switched Preview Bus | ■ | ■ |
| Preview Overlay | ■ | ■ |
| Clean Feed Output | ■ | ■ |
| GPI Control of Switcher | ■ | ■ |
| Editor Interface | ■ | ■ |
| Control Ext. Devices (GPI & BW75) | ■ | ■ |
| Control Ext. Servers (Thunder) | ■ | ■ |
| Redundant Power Supply Frame & Panel | ■ | ■ |
| Tally | ■ | ■ |
| Analog Genlock | ■ | ■ |
| Visual Browsing of Still/Clips | ■ | ■ |
| Import Watch Folders | ■ | ■ |
| Integrated Graphics | ■ | ■ |
| Database | ■ | ■ |
| Visual Clip Editing | ■ | ■ |
| Integrated Timeline | ■ | ■ |

Key ■ = Included/Supported

• connecting
• creativity

For More Information

Phone:

North America: 877-733-5846
Latin America & the Caribbean: 954-987-0475 (U.S.A.)
UK: + 44 1895 442003
South Europe: + 33 1 46 12 03 12
Middle East: + 961 1 751449
Central & Eastern Europe, Baltics: + 49 89 50 20 60
Asia, Pacific Rim: + 65 62 84 23 36 (Singapore)
China: + 86 10 6641 0053 (Beijing)
Korea: + 82-2 568 1644 (Seoul)
Japan: + 81-3-3518-8400

Email:

Americas: professionalmedia@pinnaclesys.com
Europe: pro@pinnaclesys.com
Middle East: infoME@pinnaclesys.com
Asia-Pac: asia-professional@pinnaclesys.com
China: china-professional@pinnaclesys.com
Korea: korea-professional@pinnaclesys.com
Japan: professional@pinnaclesys.co.jp