XPression

3D HD Character Generator and Motion Graphics System



ROSS

Live Production Technology

Release Your Creativity



Image courtesy dutchView

XPression [iksprshunn]

1 the act or an instance of transforming ideas into words. 2 a manifestation of an emotion, feeling, etc., without words. 3 (Fine Arts & Visual Arts / Art Terms) communication of emotion through music, painting, design, etc. 4 *Real-Time 3D graphics made easy.*

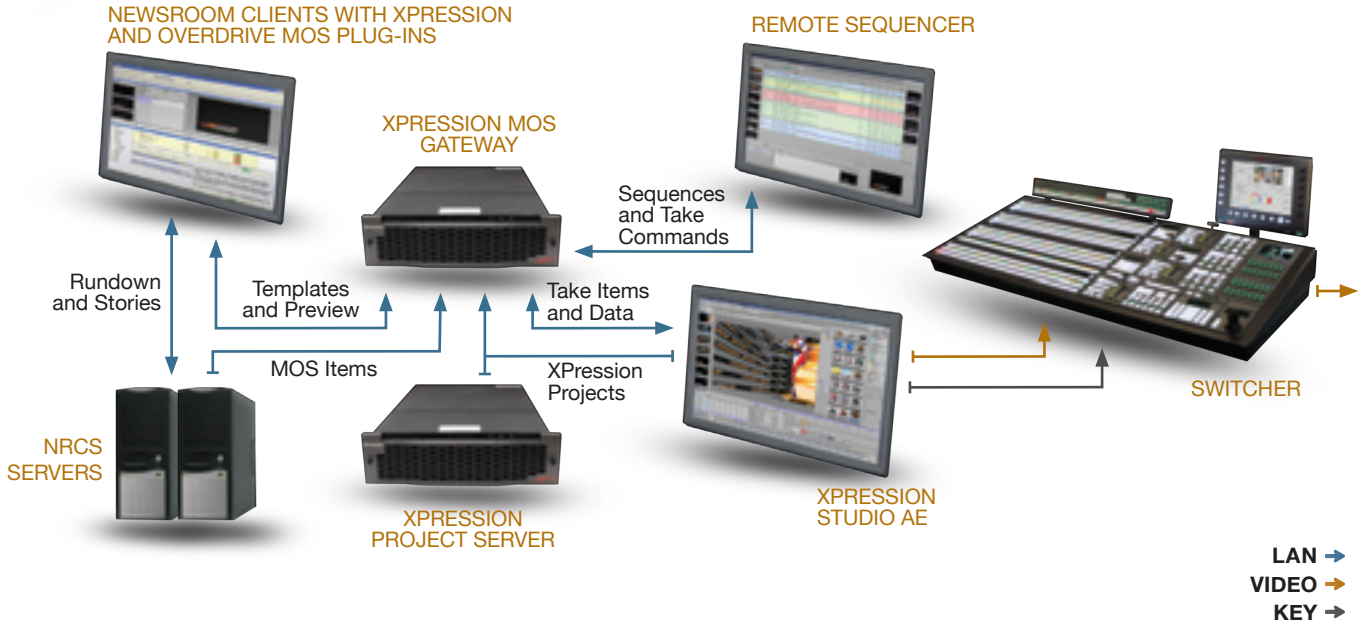
XPression is a high quality 3D character generator and broadcast production graphics platform incorporating over 20 years of live broadcast graphics experience. It offers a very powerful tool set - yet with an intuitive user interface. XPression was born from a realization of the possibilities presented by combining modern PC technologies, advancements in 3D rendering and a clear understanding of the broadcast and production workflow environments. The result is a powerful tool for design and playout of sophisticated motion graphics that will unleash the creativity of your graphics designer to create compelling graphics that will make your productions shine.

NEWS

Collaborative Workflow Driven Fluid

News production is a highly collaborative operation in which a team of people deliver a variety of elements to bring the show together. XPression's newsroom system MOS interface, NLE plug-in and template based workflow provide the key system components to integrate within a news environment. The entire graphics workflow from the edit suite to the journalist workstation to air is seamless and consistent. Fully animated previews mean there is no guesswork as to what the final graphic result will be.





Images courtesy of Rogers TV, KWWL, dutchView, Quest Research, Jeff Dobrow

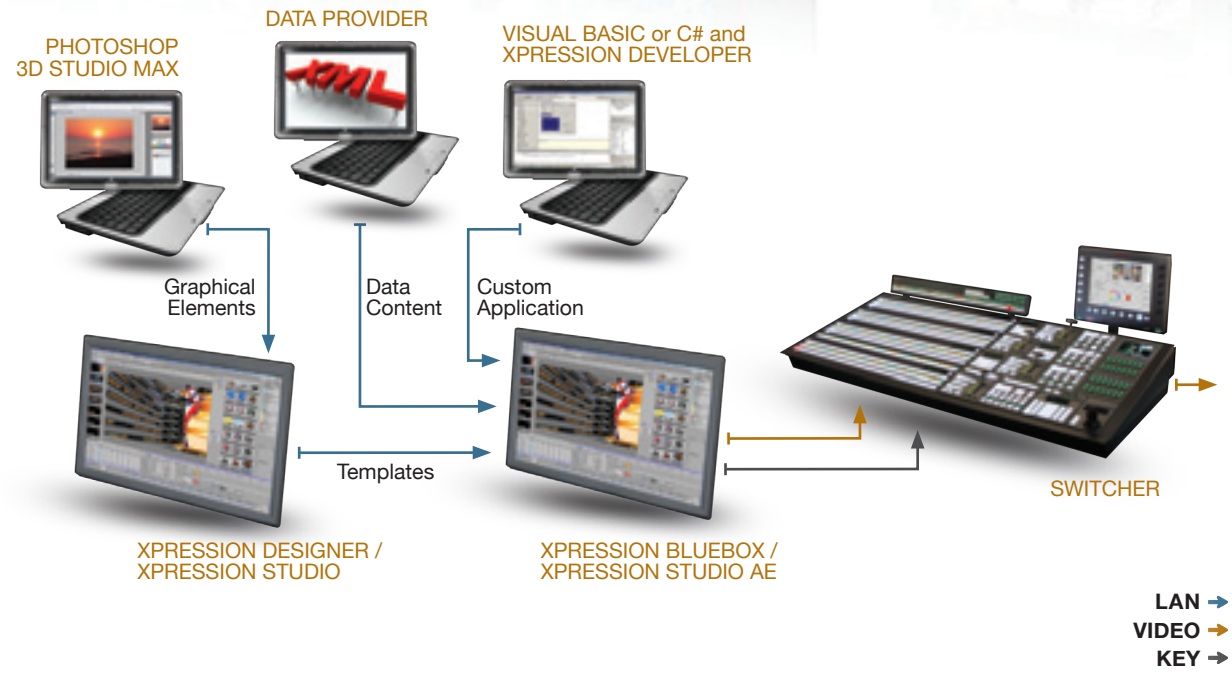




SPORTS

Fast
Dynamic
Data Intense

Sports graphics are all about getting correct, up-to-the-second information displayed in a visually appealing way to enrich the viewing experience. XPression responds to the challenge with a comprehensive sports oriented feature set that provides easy creation of compelling graphic looks, unparalleled animation capabilities and tight live data integration. XPression's API makes it possible to create specific, dedicated user interfaces tailored to sports applications.

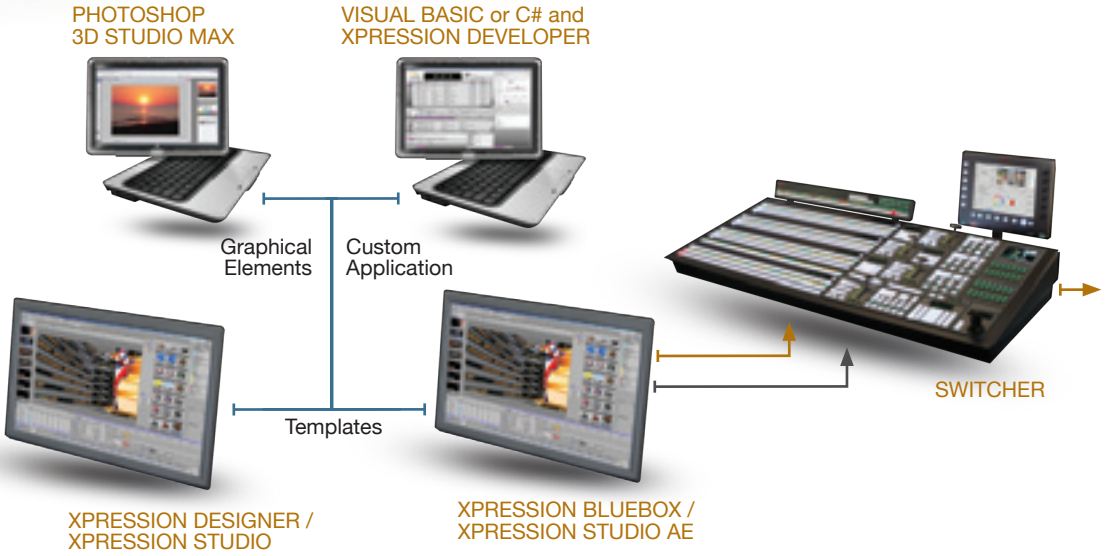


GAME SHOWS

Flashy
Dramatic
Unique

Appearance and agility are essential in game show graphics production. XPression's 3D engine offers an extraordinarily powerful yet user friendly set of tools, making the creation of even the most complex design easy. The segmented sequencer, allows the operator to play templates both sequentially and randomly to air. This can be used in conjunction with a production specific, custom built user interface. The custom UI approach is often ideal in game show applications by making it easy for the operator to drive very complex data intensive graphics. XPression's DataLinq makes setting up constantly updating quiz shows a dream.





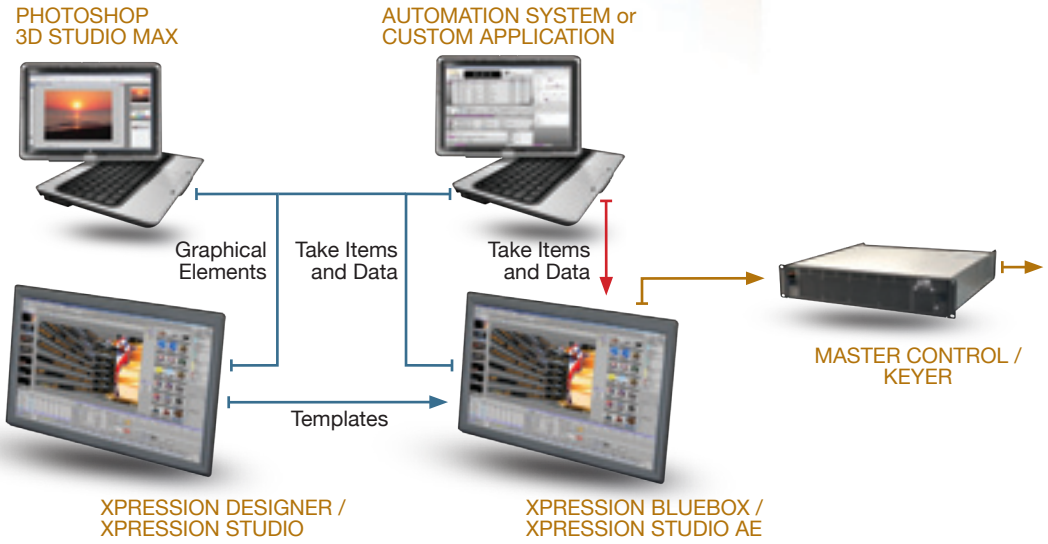
Images courtesy of Rogers TV, KWWL, dutchView, Quest Research, Jeff Dobrow



BRANDING & ALERTS

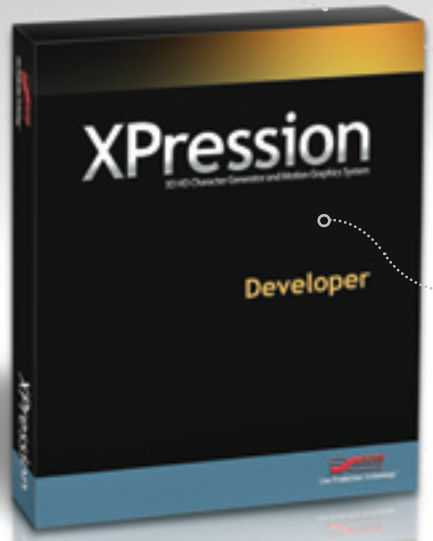
Automated Multi-Layered Updated Live

XPression excels at master control branding, alerts and coming up next graphics. The XPression BlueBox is designed to work in these types of automated environments and handle logo display, school closings, weather warnings and the like. XPression's multi-layer system will combine all elements onto a single channel, saving on cost and complexity. Whatever the challenge - XPression delivers.



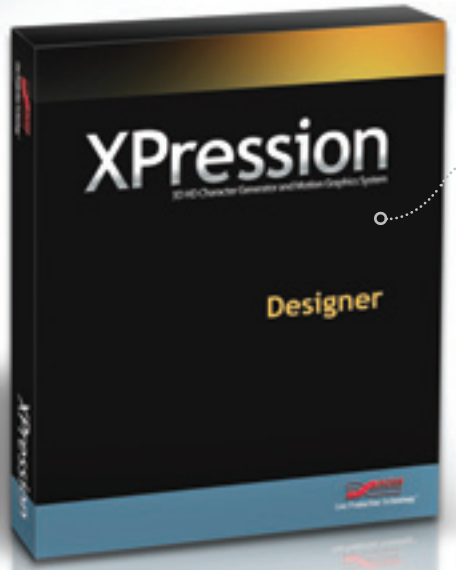
LAN →
VIDEO →
KEY →
SERIAL →

XPRESSION PRODUCT SUITE



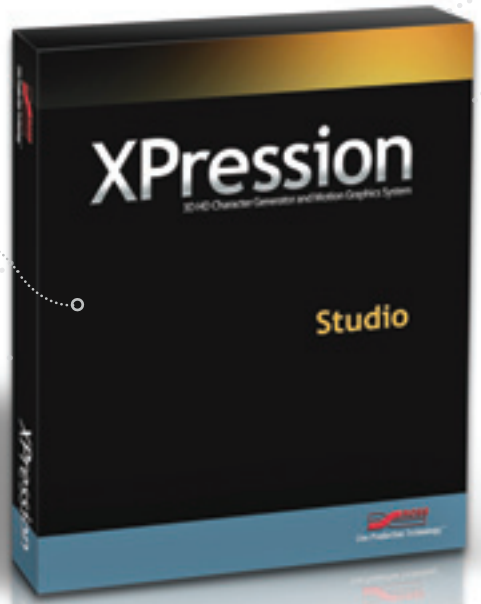
DEVELOPER
The package with all the tools required to design templates as well as develop and test custom applications.

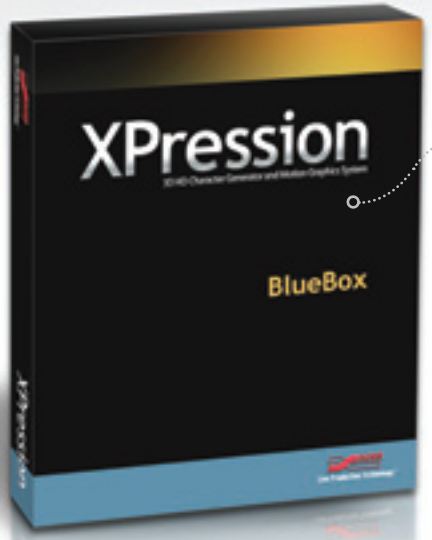
CREATE & DEVELOP



DESIGNER
The offline design tool for the graphic artist. Design and sequence your templates in the most cost-effective way.

STUDIO
Provides all the functionality needed to design and play-out eye-catching templates for a great looking production. XPression Studio is ideal as a single, do everything system in a manually controlled environment.





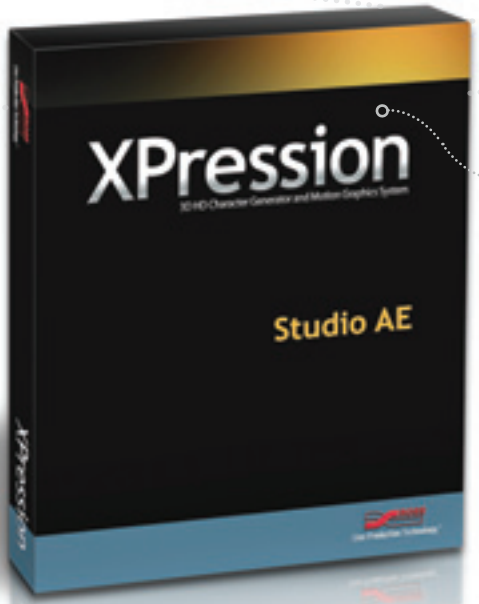
BLUEBOX
The powerful XPression graphics engine in a standalone package. The perfect solution for automated environments in which XPression is driven from an automation or newsroom system, or user-built application.

PLAYER
The cost-effective solution for playback in a manually operated environment. XPression Player provides the ability to put templates into a sequence, populate their content and then take them to air.

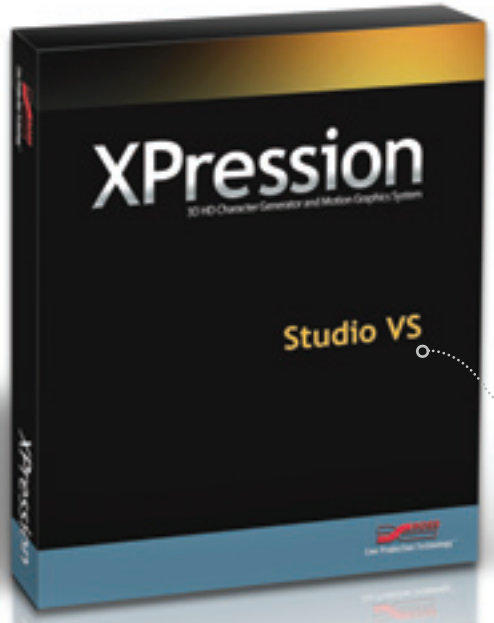


PLAYOUT

FULL FUNCTION



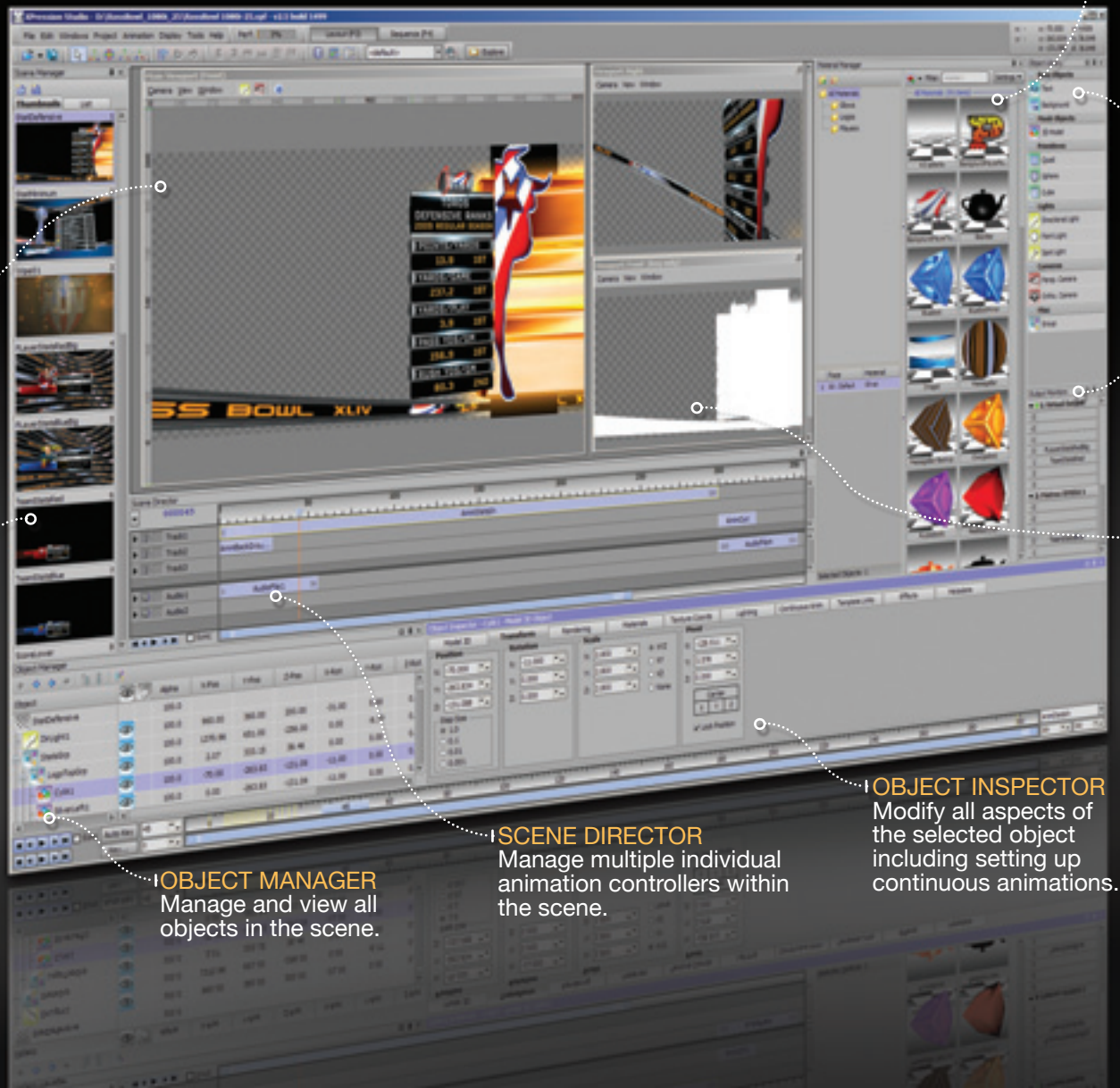
STUDIO AE
The Automation Edition. XPression Studio AE is tailored to accommodate demanding automated and manual productions in a single box. The solution includes DataLinq™ and the XPression programming API. XPression Studio AE provides design as well as playback tools right at your fingertips.



STUDIO VS
The fully loaded flagship, including design and playback features, as well as support for automation and chroma key features for use in virtual set applications. XPression VS works very well with locked off cameras. With XPression's virtual cameras, you are able to create stunning camera motion through the built-in DVE. This solution is perfect for small, green screen studios with ambitious productions.

DESIGN

XPression Layout View, a powerful suite of easy-to-use design tools.



MATERIAL MANAGER
Preview and categorize all project material.

OBJECT LIBRARY
Create and modify a variety of objects in scenes.

VIEWPORTS
View and work with templates in multiple user-definable viewports.

OUTPUT MONITOR
Infinite layers per framebuffer.

ALPHA PREVIEW

SCENE MANAGER
Thumbnail view of all available templates.

OBJECT INSPECTOR
Modify all aspects of the selected object including setting up continuous animations.

SCENE DIRECTOR
Manage multiple individual animation controllers within the scene.

OBJECT MANAGER
Manage and view all objects in the scene.

Power

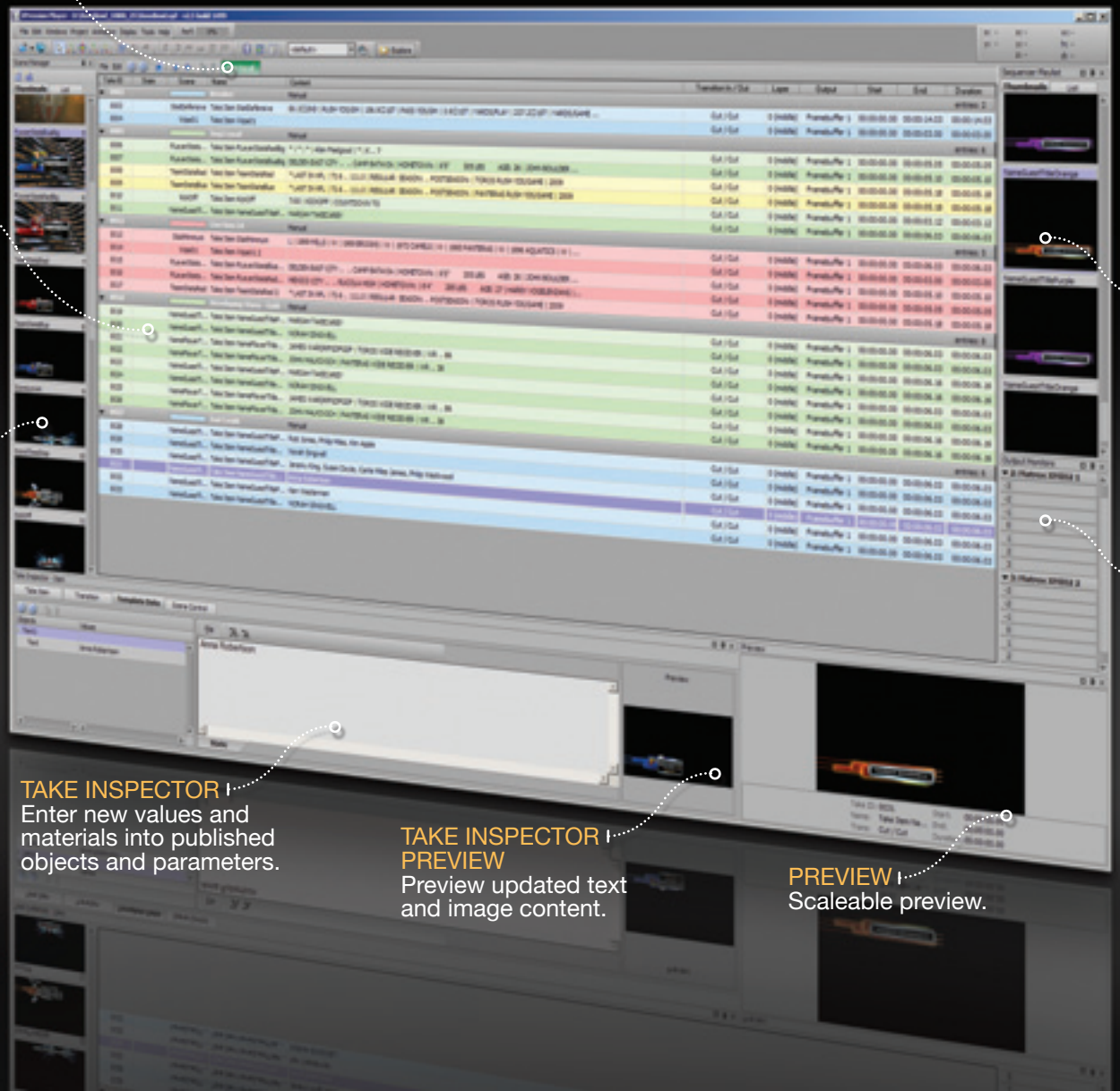
PLAYBACK

XPression Sequence View, where flexibility meets straightforward operation.

FAST RECALL
Recall any take item using the numeric keypad.

SEQUENCER
Segmented and color coded for ease of operation. Support for simultaneous manual and automated playback.

SCENE MANAGER
Thumbnail view of all available templates. Simply drag the template into the sequencer to insert.



SEQUENCER PLAYLIST
Thumbnail preview of all upcoming templates.

OUTPUT MONITOR
Infinite layers per output.

TAKE INSPECTOR
Enter new values and materials into published objects and parameters.

TAKE INSPECTOR PREVIEW
Preview updated text and image content.

PREVIEW
Scaleable preview.



Image courtesy dutchView

HIGH-END GRAPHICS IN 2D AND 3D







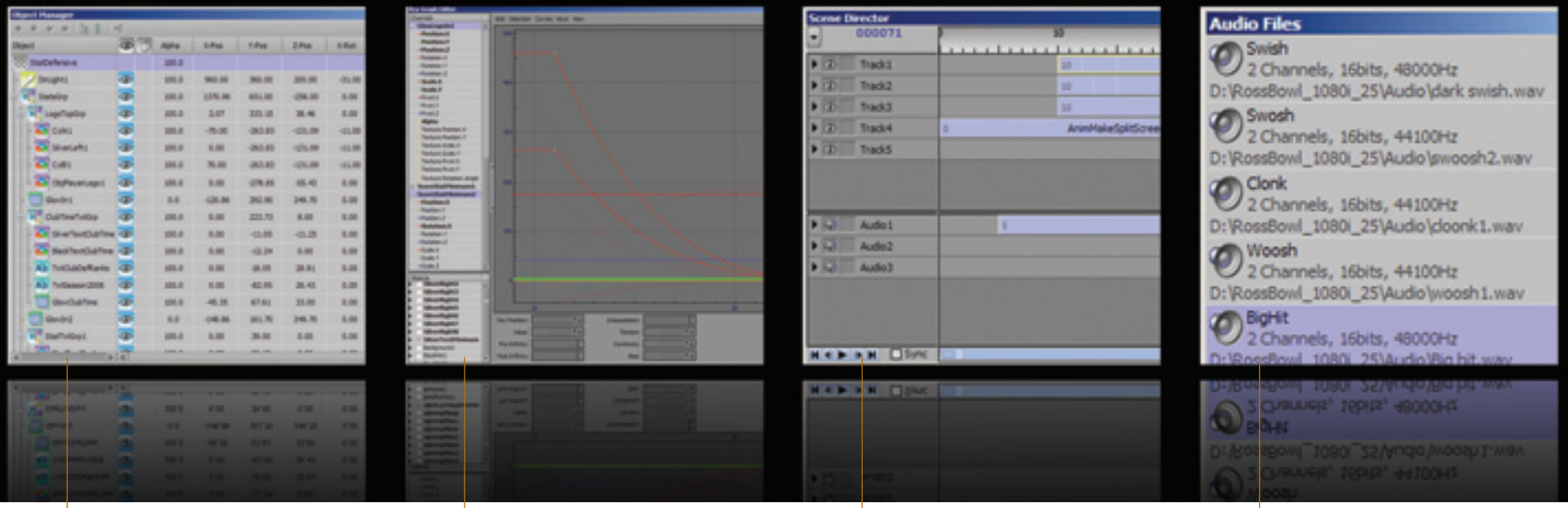
2D AND 3D TEXT
Electronic character generation is both an art form and science that has been advanced and refined over several decades. XPression takes full advantage of this development and delivers superb text quality in 2D and 3D in almost any written language. Thanks to XPression's support for TrueType, OpenType and Type 1 fonts, font choices are limitless.

MATERIALS AND TEXTURES
Delivering a great looking design requires the combination of a variety of elements into XPression templates. The Material Editor allows textures, images, and reflection maps to be layered and combined in a highly flexible fashion. It is easy to blend multiple textures such as video clips, images or live inputs which can then be applied to any object such as text, quads, 3D primitives and meshes from imported 3D models to achieve complex, sophisticated looks.

XPression's powerful Materials Manager supports the import of a variety of industry standard file types such as Adobe Photoshop files. Materials can be organized in a variety of ways giving the user easy access to any material.

3D MODELS
XPression provides the user with a set of 3D primitives that can be used in building cool 3D designs. XPression excels in its ability to import 3D models from popular design tools like 3D Studio Max. These models are imported intact, with groups, pivots and materials from the original model. XPression allows the user to animate, resize and re-skin all of these elements.

HIGH-END GRAPHICS IN 2D AND 3D



OBJECT BASED
Each element in XPression, graphical or not, is an object with certain properties and features. This design makes it easy to efficiently reuse assets like materials and fonts by assigning them to different objects. Objects can be organized in groups. Properties can be animated and each object can be automatically named. The scene's Object Manager makes keeping track of objects very easy.

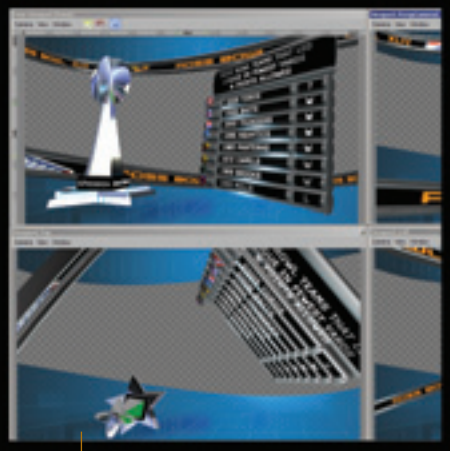
ANIMATION CONTROLLER
What could be easier than creating animations by dragging and dropping the objects? XPression's keyframed animations are created exactly that way. Create elegant looking animations using one or multiple individually timed animation segments, which we call AnimContoller.

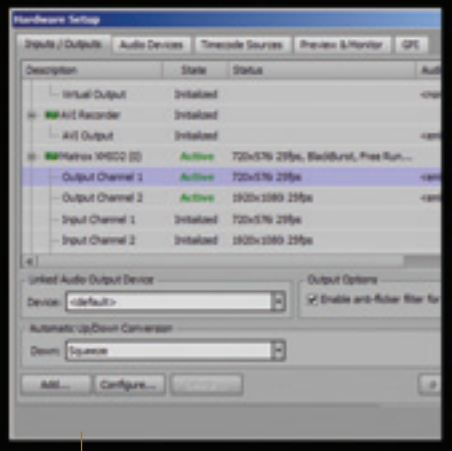
SCENE DIRECTOR
Each scene in a project comes with its own track-based timeline, called the Scene Director. Using the Scene Director, one can visually schedule, composite and reuse animation, video, audio, effects, materials and clips.

The Scene Director makes it a breeze to crossfade any clip in your scene by simply dragging and dropping the clip items onto the desired position in the director's timeline controllers.

SOUND EFFECTS & VOICE-OVERS
Timing is essential when working with sound effects. XPression's Scene Director provides multiple audio tracks and allows frame accurate control over your sound effects and voice-overs. XPression is able to output sound effects embedded with the SDI video stream as well as on discrete AES digital outputs. Creating teasers could not be easier.









CONTINUOUS ANIMATIONS
Continuous animations can be used to move elements or entire groups within a scene without keyframing. Multiple tracks can be combined to create complex motion paths. This easy-to-use animation technique is additive to the traditional keyframing method and is often used to create more dynamic scenes or to draw attention to certain details in the design.

VIRTUAL CAMERAS
XPression's virtual perspective and orthogonal cameras provide a powerful yet easy method to view and animate templates in a variety of ways not possible with a static front-view camera. You can set up as many different virtual cameras as your design requires and animate them using XPression's powerful keyframe animations.

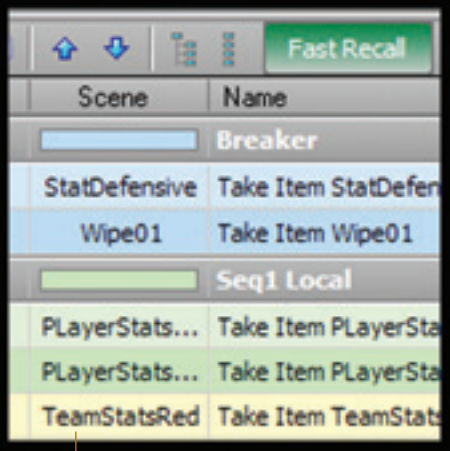
STANDARD & HIGH DEFINITION
Out of the box XPression software is SD and HD enabled. XPression comes with presets for the most commonly used video formats including SD and HD formats, PAL, NTSC, interlaced or progressive. Additional presets can be added and configured for custom video formats and resolutions. Switching formats is instant. XPression even allows outputting SD and HD in parallel using the same templates.

CHROMA KEYER
The integrated real-time vector based chroma keyer completes a very cost-effective set of tools for creating eye-catching virtual studio productions. Using the color-picker, you can simply select the color to be keyed before fine-tuning its parameters. Multiple chroma keyers can be used within a single scene. Thanks to the algorithm used, keying of transparent objects is no problem.

HIGH-END GRAPHICS IN 2D AND 3D







LIVE INPUTS & SCREEN CAPTURES
Using live inputs as part of a design is an everyday task. XPression lets you apply live input sources to any object and animate the result in real-time. Without the use of external scaler equipment you can even output live websites to any 2D or 3D object's surface thanks to window capture functionality.

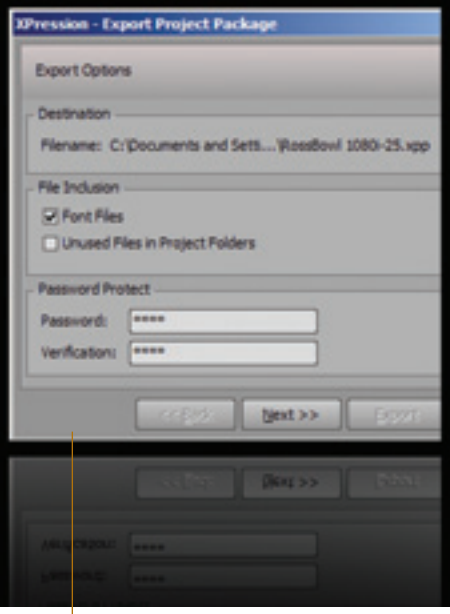
SMART GPI
In addition to the traditional GPI functionality, XPression can be configured to use Smart GPIs. Smart GPIs enable the execution of more advanced actions like clearing framebuffers or taking specific sequencer items online or offline. This is done using simple commands via either RS-232 or TCP/IP.

FAST SEQUENCER RECALL
Traditional character generator operation has not been forgotten. XPression supports the "page number" recall method. Operators can quickly recall sequencer Take Items by entering the Take Item's numeric ID on the keyboard's number keypad. Take Items can be auto-renumbered and grouped according to the show's workflow or script.

Images courtesy of Rogers TV, KWWL, dutchView, Quest Research, Jeff Dobrow







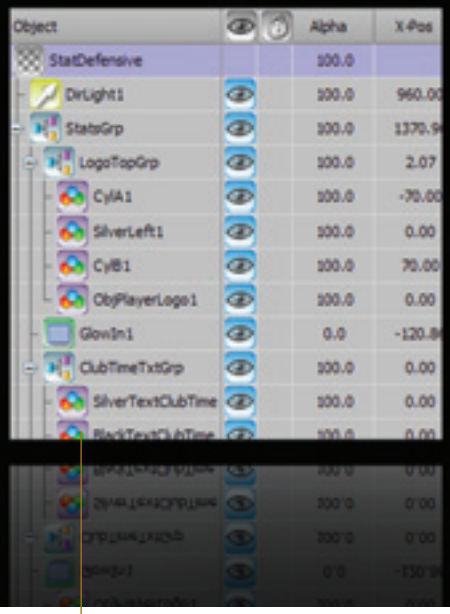
SEQUENCER
XPression's segmented sequencer delivers a clear overview of your playlist. Flexibility is an essential part of every live production and the sequencer allows you to add and remove Take Items freely by dragging and dropping them into the sequencer, while continuing the playback of other Take Items. XPression's template based workflow enables you, during airtime, to replace content and modify parameters that have been published. The rest of the template remains locked, ensuring look and brand consistency.

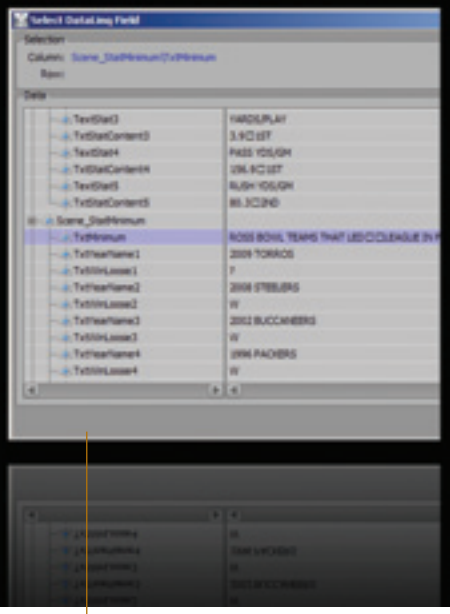
A unique feature of XPression is the ability to run segments via automation while manually controlling other segments of the same sequence. This offers the benefit of flexibility in getting what you want on the air.

TrueD! STEREOSCOPIC OUTPUT
Providing the audience with a 3D experience is a powerful way to stay in the lead. XPression is equipped with all the necessary tools to give your graphics a spectacular 3D look. XPression can provide line-by-line, side-by-side multi-channel and anaglyphic based 3D output – *in other words* ***TrueD!***.

PACKAGE & DEPLOY
In addition to the traditional file based project hierarchy, XPression supports single file packages. These packages can be created from any project and are an easy and reliable way to archive or move projects. Packages provide an efficient method to deploy a project to a different workstation or location and will ensure all necessary files are available to successfully load the project.

DATA DRIVEN







OBJECT ORIENTED AUTOMATION API

Your programmers will love XPression's powerful and easy-to-use API. The COM based API allows a choice of programming in C++, C#, Visual Basic, VB.net, Delphi or other COM or .NET programming language. Through XPression's API, it is easy to create a powerful application to dynamically load projects, recall templates, build scoreboards, start and update rolls and crawls and more.

XPression's API environment incorporates a non-breaking debug monitor. This is a real time saver. It automatically informs users of common mistakes like "index out of range" and "resource X not found" errors. This provides direct feedback without disrupting or crashing your application and means less searching for bugs and more productive coding.

From simple logo triggering to complex touch screen monitor control, the XPression API provides a powerful tool set to get the job done. XPression's unique SimulDrive™ feature enables automation to be used simultaneously while modifying the automated scenes in the scene designer, providing instant feedback. In XPression, automation and manual, last minute changes work together, hand in hand.

DATALINQ™ DATA INTEGRATION

XPression's DataLinq feature makes template data integration very easy. DataLinq provides a simple way to connect to multiple data sources such as: XML, ODBC databases, RSS feeds, Excel spreadsheets, the NFL GSIS system and more. Once the data source is connected, text fields, images and video clips can be automatically driven by changes in the data source. Stock market data, weather information, sports statistics, news headlines and other types of data and graphics can update on air directly via DataLinq.

.NET BASED SCRIPTING

XPression comes equipped with a .NET based scripting system. This system can be used to create dynamic templates that conditionally handle data or animation based on conditions within a template. There are a wide variety of applications for this such as moving a branding logo when a lower third is brought on-screen. It is also useful in making customized data driven behaviors like triggering an animation when a piece of data hits a certain threshold, changing a color or animating a bar chart.

INTEGRATION



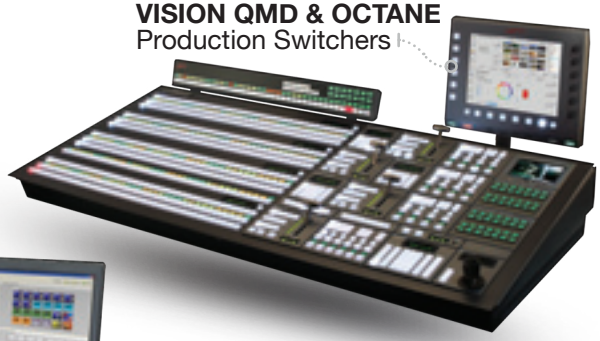
XPression integrates with a wide range of 3rd party, as well as Ross equipment, to provide our customers with complete solutions to meet their unique needs. The following are a few ways XPression integrates nicely with other Ross products. Please do not hesitate to contact your local Ross sales representative to engage in a detailed discussion of your particular requirement.

XPression + Vision
Ross' flagship Vision Series switchers offer comprehensive control over XPression. Vision can recall templates, change content and bring new graphics to air, in addition to simply advancing through a prepared playlist.

XPression + OverDrive
OverDrive is Ross' industry leading automated production control system. XPression works very well in an OverDrive workflow to provide a tightly integrated production graphics solution that flows from newsroom editorial through to air.

XPression + CrossOver
XPression Designer is equipped with RossLinq™ which provides a direct connection from Designer into the Media Stores of the Ross CrossOver Series of compact and cost-effective production switchers. XPression Designer can build and sequence graphics and render them directly in to the Media Store - live. Static pages load in only a couple of seconds. This provides a capable and cost effective graphics solution in a CrossOver environment.

XPression + openGear
The Ross openGear modular platform provides an array of distribution, conversion and keying equipment that completes a system installation. Especially relevant in an XPression installation is the MDK, Multi-Definition Keyer. The MDK is a dedicated video + embedded audio mixer/keyer and can be used to key XPression graphics over a program stream. Although XPression offers a pass-through keyer internal to the system, in a 24 hour, mission critical environment often external keying is required to permit working on the XPression platform while minimizing system disruption.



VISION QMD & OCTANE
Production Switchers



OVERDRIVE
Automated Production Control System



CROSSOVER
Compact Production Switchers

SOFTMETAL
Video Servers





OPENGEAR
Terminal Equipment

HARDWARE AND TECHNICAL SPECIFICATIONS

XPression's hardware is designed to guaranty the highest level of resilience and stability using the best available components.







Dimensions

Height	Width	Depth
5.195” (13.19 cm)	16.929” (43 cm)	28.588” (72.61 cm)

Video Formats

480i (525), 59.94
576 (625), 50
720p50
720p59.94
720p60
1080i50
1080i59.94
1080i60
1080p50
1080p60
1080psf23.976
1080psf24
1080psf25
1080psf29.970
1080psf30
Custom Formats

Image File Formats

*.tga
*.tif
*.psd
*.bmp
*.jpg
*.gif
*.png

3D Model Formats

*.3ds

Clip File Formats

AVI
MPEG
QuickTime
Sequential Images

Hardware

Chassis	3RU rack frame, includes rack mounting slide rails.
Power Supply	Hot-swappable 2+1 redundant power supplies. Power: 380 watts
System Drives	Dual RAID-1 (mirrored) SATA II drives
Media Drives	3 SATA II drives in RAID-5, hot-swappable.
Mainboard	Server-class motherboard with Quad-Core Intel CPU
Memory	3GB RAM
Renderboard	NVidia Geforce GTX 285 GPU
Output Board	Matrox X.mio2 I/0
Cooling	3 hot-swappable mid-chassis cartridge fans



Inputs, Outputs, and Control

Video	2 Out (1x video+key), 1 In SD/HD SDI, or 4 Out (2x video+key), 2 In (2x video) SD/HD SDI
Audio	2 channels of embedded audio per video input and output
Reference	SDI Bi- or Tri-Level Sync input, Analog Black Burst
Ethernet	Dual Gigabit Ethernet Ports
USB	4 USB 2.0 ports: 2 front, 2 rear
GPI	Serial GPI, Smart GPI through TCP/IP

Included Software

- Windows XP Pro Operating System
- XPression software package

Warranty

- 12 Month System Warranty (parts/labor and software updates)



XPression

XPRESSION SERIES PRODUCT COMPARISON

Features	Studio VS	Studio VS SCE(1)	Studio AE	Studio AE SCE(1)	Studio	Studio SCE(1)	Studio SCE(1) - SD	Player	Player SCE(1)	BlueBox	BlueBox SCE(1)	Developer	Designer
Real-time 2D / 3D Graphics Engine	•	•	•	•	•	•	•	•	•	•	•	•	•
Template Designer	•	•	•	•	•	•	•	-	-	-	-	•	•
Template Playout Sequencer	•	•	•	•	•	•	•	•	•	-	-	•	•
.NET / COM Automation API	•	•	•	•	-	-	-	-	-	•	•	•	-
.NET Based Scripting	•	•	•	•	•	•	•	•	•	•	•	•	•
DataLinq Server	•	•	•	•	optional	optional	optional	optional	optional	optional	optional	•	•
High Definition Formats (HD)	•	•	•	•	•	•	-	•	•	•	•	•	•
Standard Definition Formats (SD)	•	•	•	•	•	•	•	•	•	•	•	•	•
Simultaneous Multi-Format Output	•	-	•	-	•	-	-	•	-	•	-	•	•
Real-Time Up, Down and Aspect Conversion	•	•	•	•	•	•	•	•	•	•	•	•	•
TrueD! Anaglyphic Preview	•	•	•	•	•	•	•	•	•	•	•	•	•
TrueD! Stereoscopic Output	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	•	•
Output Channels for Turn-Key Systems (Fill + Key)	2	1	2	1	2	1	1	2	1	2	1	virtual	virtual
Output Channels for Custom Built Systems (Fill + Key)(2)	unlimited	1	unlimited	1	unlimited	1	1	unlimited	1	unlimited	1	virtual	virtual
Video Input Channels	2	1	2	1	2	1	1	2	1	2	1	-	-
Still Video Input Grabber	2	1	2	1	2	1	1	2	1	2	1	-	-
Virtual Preview Channels	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited
Custom Resolution Video Formats	•	•	•	•	•	•	•	•	•	•	•	•	•
Video Clips and Dynamic Textures	•	•	•	•	•	•	•	•	•	•	•	•	•
XPression Video Codec License	•	•	•	•	•	•	•	•	•	•	•	•	•
Graphical Keyframe Editor	•	•	•	•	•	•	•	-	-	-	-	•	•
Framebuffer Layers	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited
Audio Channels	stereo	stereo	stereo	stereo	stereo	stereo	stereo	stereo	stereo	stereo	stereo	stereo	stereo
Scene Director	•	•	•	•	•	•	•	-	-	-	-	•	•
Continuous Animations	•	•	•	•	•	•	•	•	•	•	•	•	•
Seamless Continuous Tickers	•	•	•	•	•	•	•	•	•	•	•	•	•
Render to Disk	•	•	•	•	•	•	•	•	•	-	-	•	•
XPression Video Coder Application	•	•	•	•	•	•	•	•	•	-	-	•	•
Project Video Format Conversion	•	•	•	•	•	•	•	•	•	-	-	•	•
GPI (serial)	•	•	•	•	•	•	•	•	•	•	•	•	-
Smart GPI (tcp/ip)	•	•	•	•	•	•	•	•	•	•	•	•	-
3D Models Support	•	•	•	•	•	•	•	•	•	•	•	•	•
Live Input Shader (DVE/Keying)	•	•	•	•	•	•	-	-	-	•	•	•	•
Webcam Input (DirectShow) Support	•	•	•	•	•	•	-	-	-	•	•	•	•
PowerPoint Shader	•	•	•	•	•	•	•	•	•	•	•	•	•
Window Capture Shader	•	•	•	•	•	•	•	•	•	-	-	•	•
2D / 3D Font Engine	•	•	•	•	•	•	•	•	•	•	•	•	•
Arabic, Asian and Scripted Language Support	•	•	•	•	•	•	•	•	•	•	•	•	•
Hardware Preview Channels	SW Switchable	1 virtual	SW Switchable	1 virtual	SW Switchable	1 virtual	1 virtual	SW Switchable	1 virtual	SW switchable	1 virtual	virtual	virtual
Chroma Keyer	•	•	optional	optional	optional	optional	optional	-	-	-	-	•	•
MOS Gateway	optional	optional	optional	optional	-	-	-	-	-	optional	optional	-	-
XML Gateway	optional	optional	optional	optional	-	-	-	-	-	optional	optional	-	-
CII Gateway	optional	optional	optional	optional	-	-	-	-	-	optional	optional	-	-
Active X Plug-in for iNews	optional	optional	optional	optional	-	-	-	-	-	optional	optional	-	-
Active X Plug-in for ENPS	optional	optional	optional	optional	-	-	-	-	-	optional	optional	-	-
Active X Plug-in for Octopus	optional	optional	optional	optional	-	-	-	-	-	optional	optional	-	-



Software Only and Turnkey Systems Available

• Included - Not Available 1 Single Channel Edition 2 Limited only by system resources

XPression

XPression Care

Ross Video has a complete range of technical services available to ensure that your XPression system installation is a success.

Operational Training is available either at Ross headquarters or on-site at your location. Experienced Ross operators will teach your staff to get the most out of your new system, and enhance your productions.

Commisioning is a service to help get your XPression system properly configured and installed. This service is performed by factory trained Ross technical staff.

Technical Training can be provided at Ross Video or on-site at your location. Technical training will teach your engineering staff the technical details of the system you have purchased. Signal flow, system configuration and routine maintenance procedures are some of the topics covered.

XPression comes standard with a 1 year comprehensive warranty. **Extended Warranties** on XPression are available for an annual fee.

Technical advice is available simply by telephone, fax or email to Ross Video **- free for the life of your system.**

Ross Video Limited
8 John Street
Iroquois, ON, Canada K0E 1K0

Telephone: +1 613 652-4886
Fax: +1 613 652-4425
Email: solutions@rossvideo.com
Website: www.rossvideo.com

Technical Support
Emergency: +1 613-349-0006
Email: techsupport@rossvideo.com

Ross Video Incorporated
P.O. Box 880
Ogdensburg, NY, USA 13669 0880

Ross Europe BV.
Media Park, Gateway D
Sumatralaan 45,
Hilversum, 1217GP
Netherlands

© 2010 Ross Video Limited

Released in Canada.

No part of this brochure may be reproduced in any form without prior written permission from Ross Video Limited.

This brochure is furnished for informational use only. It is subject to change without notice and should not be construed as commitment by Ross Video Limited. Ross Video Limited assumes no responsibility or liability for errors or inaccuracies that may appear in this brochure.

Trademarks
Ross, Ross Video, Vision, Vision QMD, Vision Octane, CrossOver, Synergy, SoftMetal, OverDrive, XPression, RossGear, openGear, and GearLite are trademarks of Ross Video Limited.

ROSS

Live Production Technology

Visit www.rossvideo.com for the latest information on the complete line of Ross products and services



CrossOver
Compact
Production Switchers

Vision QMD & Octane
Production Switchers

XPression
3D HD CG &
Motion Graphics

openGear
Terminal Equipment

SoftMetal
Video Servers

OverDrive
Automated Production
Control System