

XPression

Real-Time Graphics. Virtual. Clip Servers.

XPression

XPression is Ross Video's premier line of real-time graphics systems, virtual reality rendering engines, production servers, and comprehensive workflow tools.

Handle Any Task

- Leverage the latest advances in IT technologies for your productions with DirectX™ rendering, fast processors, and cutting-edge GPU technology.
- Enjoy nearly instant recall times with predictable latency and frame-accurate video / graphic switching from intelligent caching and memory management for your graphics.
- Take advantage of the highly-efficient XPression video codec with full support for alpha channel and 16 channels of audio that provides you a new standard for quality versus file size.
- The flexibility of NAS and SAN configurations are supported for your high-volume graphics and video clips.
- Effortlessly perform your most challenging 4K and multi-channel 1080p productions with no problem.

Enable the Creative

- Designed with you in mind, XPression offers short learning curves that minimize your training costs and provides easy transitions from older systems.
- Gain the benefits of familiar UI experiences and a more integrated workflow for your organization, rather than distributed architectures requiring separate programs for almost every step in the graphics production process.
- Empower your operators and designers to achieve complex graphics functionality without a line of scripting, and reduce your need for outside services using Visual Logic scene automation.

Stay Ahead

- Maximize your efficiency with a graphics platform that uses the very latest in software technology advances.
- Enhance your productivity with a graphics engine that is fully hardware-independent to enable accurate offline rendering and easy platform upgrades for on-air systems.
- Seamlessly incorporate 3D into any of your productions as the XPression engine operates entirely in 3D space, while presenting 2D graphics to users in a familiar way.
- Continue to benefit from a strong and accelerating development curve that promises to bring you many new features and functionality in the coming years.

Imagination Realized.

XPression

There is virtually no graphics task that XPression solutions cannot handle for you. With multiple hardware platforms, software applications, and workflow tools, along with connectivity to many other products, XPression fits into almost any environment you can imagine.

Solutions

XPression delivers complete solutions that are comprised of multiple components for many of your applications including: news, elections, sports, entertainment, branding, touchscreen, social media, virtual sets, and augmented reality.

Graphics Systems and Virtual Renderers

XPression graphics systems are available in multiple editions, depending on who uses them, or the requirements of your productions. These include: XPression Studio, XPression Studio 4K, XPression Prime, XPression GO!, XPression Designer, XPression Developer, XPression BlueBox, and XPression BlueBox 4K. The Studio and BlueBox editions may also be used as rendering engines for virtual sets and augmented reality.

Clip Servers

XPression Clips is a high performance media production server built on the XPression graphics platform. The system is also upgradeable to full CG functionality for hybrid graphics/clip server functionality.

Workflow Tools

XPression workflow tools provide the necessary connectivity for local and enterprise-level systems. They handle graphics creation, content editing, media management, publishing, control, data handling, automation, and more...

Integration

XPression is seamlessly integrated with other Ross Video products including: Streamline production asset management, Acuity and Carbonite production switchers, OverDrive automated production control, Robotics, openGear signal processing, Dashboard Control and Monitoring, and Inception media workflow applications. In addition, XPression interfaces with a wide range of third party automation, editorial, and live data applications already installed in facilities and venues around the world.

XPnews

XPsports

XPentertain

XPbranding

XPelections

XPtouch

XPsocial

XPvirtual

XPportable

XP4K

XPservers

Solutions.

XPression solutions take advantage of a comprehensive and cohesive software suite, along with an open architecture for connectivity to the outside world. These powerful offerings are backed up with highly-ranked support and creative services.



News

XPression supports a full MOS newsroom workflow, perfect for your operations from basic to enterprise level. All template assets are managed and distributed by the XPression Project Server, so there is no chance that your graphics won't make it to air. The Project Server also enables "re-skinning" of graphics, permitting a different look to be applied to existing MOS objects. XPression Maps empowers artists and journalists to better inform your viewers of the latest breaking news. To manage replaceable graphics, XPression's openMAM asset management architecture enables you to leverage a variety of media, content, and production asset management systems such as Ross Streamline. XPression also supports Ross Inception News and other popular newsroom computer systems. The news workflow is extended into the editing room with NLE tools that permit editors to share graphics with producers and reporters.



Live Sports

XPression's lightning fast recalls, ability to interface with live data, and to be controlled both manually and from custom applications at the same time, make it an ideal solution for your live sports productions. Both XML data for stats and "clock and score" from major scoreboard manufacturers can be processed simultaneously in XPression. Frame-accurate switcher integration for cost-effective single channel workflows without compromising graphic quality is also possible. Cost-effective telestration is available with XPression Telestrate. XPression Project Server can be used to send updates into the field on game day with appropriate IT connectivity.

Stadiums and Arenas

XPression is ideal for the large scoreboards that populate stadiums and arenas around the world. The layered playout capabilities of XPression, along with the amazing data handling capabilities, delivers you dynamic attention-grabbing graphics and statistical displays. Used in combination with Ross production switchers, Dashboard control panels, and other Ross products, XPression provides a complete single-vendor solution for sports venues.



XPentertain

Entertainment

XPression is the graphics system of choice for today's entertainment television. Major award shows, red carpet shows, beauty pageants, entertainment news, and the most popular reality competition shows, all use XPression. Unlike competing systems, XPression handles your last-minute changes with ease, including making global changes to hundreds of pages instantaneously! Switching standards on the fly, conforming to 4:3 safe areas, or timing credit rolls down to the frame are no problem for XPression. To quote an industry veteran, XPression has brought fun back to being a graphics operator!



XPentertain



Branding

There is no one-size-fits-all solution for channel branding. Your implementations are all different with varying automation and traffic systems, along with highly customized workflows. This is why Ross takes a multi-pronged approach to branding with 3 different XPression products that suit your various approaches to branding. XPression Tick-it is perfect for data-intensive displays like tickers and L-bars, while XPression Brand-it is designed for specialty channel branding. The XPression Automation Gateway is a solution for direct control by existing automation systems.

XPbranding

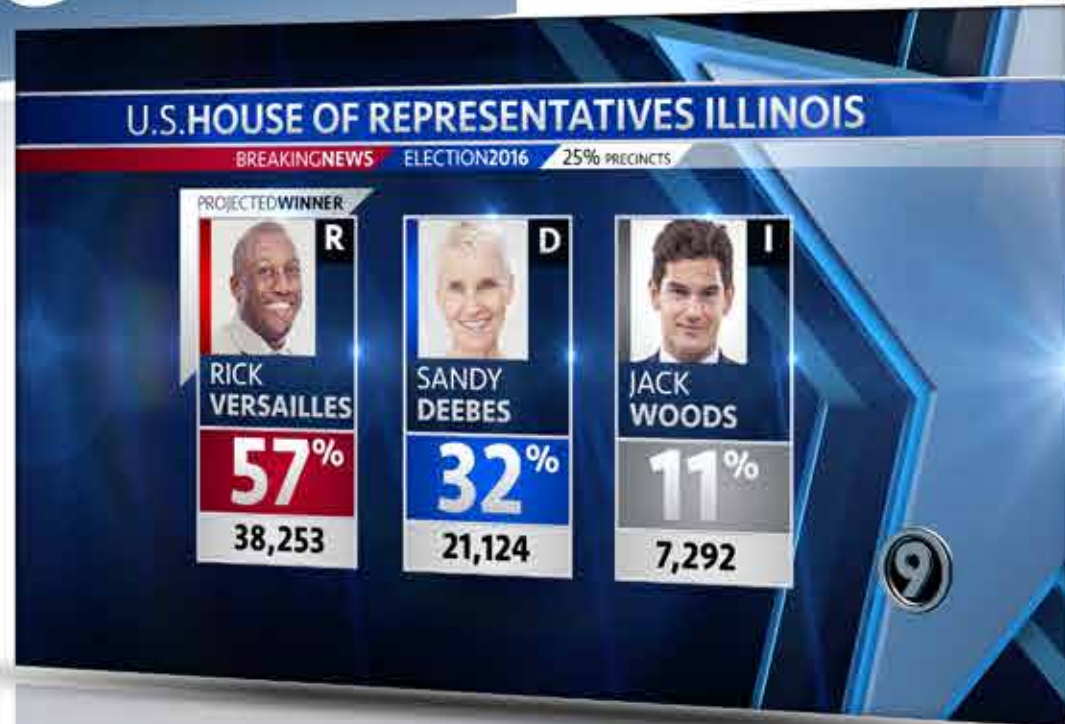


XPbranding

XP elections

Elections

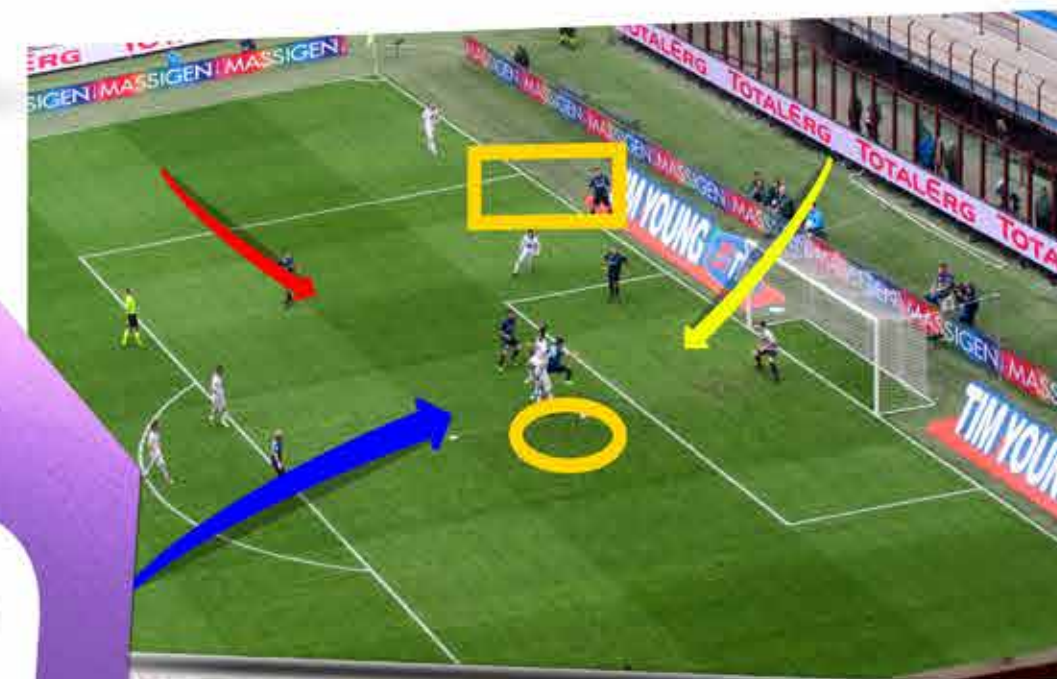
XPression is an ideal platform for all sorts of elections, with the ability to provide complex 3D visualizations of results on-screen or as virtual elements on-set. Simple data aggregation is possible using the XPression Datalinq Server, or the XPression Tick-it Server provides you full manual and automated election data gathering for tickers, L-bars, and full-screen graphics.

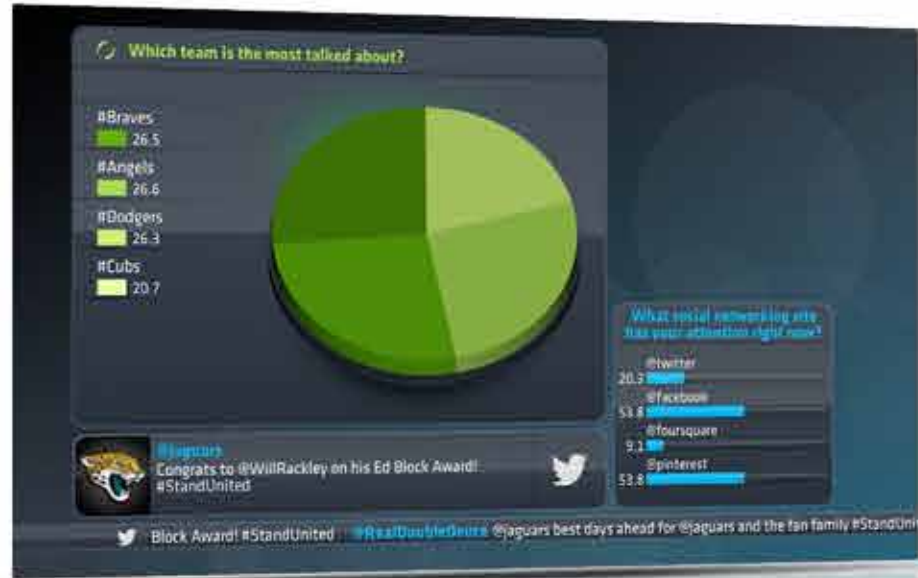


Touchscreen

The ability for your presenters to work interactively with 3D scenes and to draw on the video screen itself are core capabilities in real-time graphics ecosystems. XPression provides systems that empower you with touchscreen presentation tools and full telestration functionality. XPression Touch Factory is an intuitive application that permits you to build day-of-air presentations without hiring a programmer. XPression Telestrate is an economical and feature-rich tool for sports analysis and other types of on-screen illustration.

XPtouch





Social Media

XPression Connect provides you with a powerful live-to-air social media playlist tool. In fast-paced live programming, it's critical when messages go on and off screen. With XPression Connect, your operators can make a playlist from any feed, or drag and drop messages from multiple feeds into a custom playlist. Graphics can crawl, tick, or animate on- with or without avatar images. With the XPression Datalog Server, additional functionality like viewer polling is possible. XPression integrates with Ross Inception Social, as well as other social media systems.

XP social

XP social



Virtual Sets and Augmented Reality

XPression includes the latest generation graphics engine which is also suitable for your virtual sets and augmented reality. Built-in virtual tools like depth-of-field, lens distortion, image centering and sizing, native support for Trackmen and Ncam protocols, and a global camera make XPression ideal for your toughest virtual applications. Support for Ross Robotics, Egriment Cranes, as well as tracking and calibration interfaces for third party camera systems via Ross UX software means that XPression will work in nearly any virtual or augmented reality environment. For more cost-effective virtual sets, XPression works with Ross Trackless Studio when tracking data is not present.

XP virtual



XP virtual

XP portable

Portable Systems

When mobility and graphics performance are key, **XPression GO!** is the answer. The industry's most powerful real-time graphics laptop solution processes on-the-**GO!** applications for you with ease. Available in Studio, BlueBox, or Prime varieties, XPression **GO!** provides a single channel of video/key out, plus embedded audio, using an ASUS Thunderbolt™ laptop and AJA io XT** Thunderbolt™-to-HDSI interface.



The **Studio** and **BlueBox** versions also offer you video input for video squeezes and internal keying. There is no compression used when connecting to your production switchers, so graphics are full-resolution, real-time, and frame-accurate, permitting score clock integration with Datalinq Server for sports production (also available with just the AJA io XT or as software-only).

XP portable

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**The AJA io XT and ASUS laptop are products of AJA Video Systems and ASUSTeK Computer, Inc., respectively.

For hardware platform detailed information, please refer to the XPression System Reference documents which can be found on the Ross Video web site.

4K

The unique requirements of your 4K productions demand a special niche in the current video production landscape. The types of events and programming are typically high-profile and require high performance equipment. XPression Studio 4K and BlueBox 4K are up to the challenge. Already used on some of the most watched programs in the world, XPression systems are the right answer at the right time .



XP 4K

XP 4k

XP servers



Production Servers & Transcoding

Streamline your production clips workflow with Ross Video's next-generation production clip servers and transcoding applications. Available in multiple configurations, XPression Clips and the Clip Server Option for XPression Studio bring lightning-fast recall speeds, baseband video ingest, and multi-layer clip playback to the control room. Stop worrying about video codec compatibility with XPression INcoder, a file-based ingest, transcoding, and publishing tool that works transparently in the background.

XPression

Graphics Systems and Virtual Renderers.



Multiple versions of XPression are available for you to suit any budget or level of production you may have. All editions are available as turnkey systems for full hardware/software support by Ross, or as software-only if you want to build your own systems.

XPression Studio

Your Canvas.



XPression Studio
XPression Studio's intuitive user interface and operator-friendly features like Visual Logic will get you on the air faster with less training and fewer outside services, providing an overall lower cost of ownership.



Key Features.



2D & 3D TEXT

XPression's font engine gives you the tools to type in any language in any orientation, while toggling between 2D and 3D text for ultimate flexibility. Both TrueType and OpenType fonts are supported with Unicode compliance, making XPression ideal for any kind of text - even supporting Arabic and the many languages of Asia. XPression Private Fonts do not need to be installed in Windows and travel with the project, so you'll never have to worry about recalling graphics with the wrong fonts when moving from system to system.



3D MODELS

Build graphics from XPression 3D primitives or import your own models from today's most popular 3D design programs. Along with the geometry, baked textures are imported as XPression materials. Animate, resize, and re-skin elements for final output.



CLIPS

Mix and match real-time and rendered animation by using graphic clips rendered with the XPression Video Codec. Layer multiple clips in the same scene for dynamic compositions. With Crash Record you can grab baseband video on the fly for quick turnaround in live productions. For more complete clip server functionality XPression Clips or the Clip Server Option for XPression Studio gives you a full database to browse, catalog, and output clips directly to air on any channel or layer.



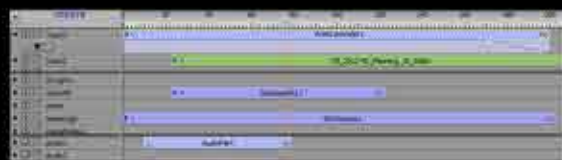
MATERIALS

Use still images, video clips, reflection maps, bump maps, refraction maps, gradients, and live inputs to create multi-layered materials with blending modes in the Materials Editor. Then apply them to text, quads, 3D primitives, and meshes to achieve sophisticated looks. Render views of other scenes can also be applied to objects, along with Window Captures of web browsers, YouTube videos, and Skype.



OBJECTS

Keep track of individual objects, create object groups, assign child objects, and track positional or transparency information for every item in the Object Manager.



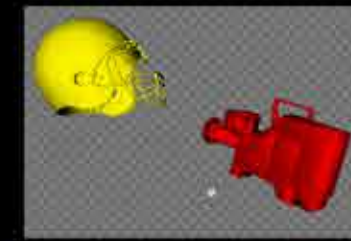
ANIMATION

Create Animation Controllers with object keyframes, organize them on a Scene Director timeline, and trigger them at different times, manually or automatically. Multiple Scene Directors are supported for flexibility when creating complex scenes. Continuous Animations also allow you to create additional animation without keyframing and Stagger Animations make character-by-character animation a breeze.



EFFECTS

Add more energy to your graphics with dynamic post-effects, including - blur, distortion, color correction, chroma keying, drop shadows, and wipes. Drag and drop effects from the Effects palette right onto object tracks in the Scene Director and retain complete control of parameters. Lens distortion and depth-of-field make virtual sets and augmented reality even more believable.



CAMERAS

Achieve even more complex 3D animations by animating Virtual Cameras along with objects in XPression. These virtual cameras also enable virtual set and augmented reality functionality when they are combined with external tracking data. Both perspective and orthogonal cameras are available. Easy manipulation in the Viewport is possible with mouse camera control that allows you to zoom and orbit objects on a grid that toggles on and off.



VISUAL LOGIC

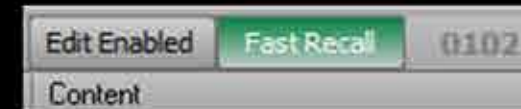
Automate and add intelligence to your XPression scenes with Visual Logic. It's no longer necessary to use complex scripting to create "smart templates." With visual logic you simply drag parameters to the workspace and connect them with functions and other parameters by drawing lines from output to input. You can also apply live data to change the outcome of the logic.

Transition Logic



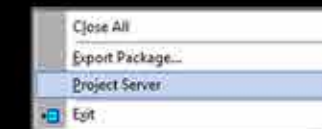
TRANSITION LOGIC

Choreograph how XPression templates transition from one to the other or update on air with Transition Logic. It's no longer necessary to use complicated scripting, just set rules and conditions for different scenarios using convenient check boxes and pull-down menus. Graphics will always enter and exit the screen elegantly, regardless of which graphic is coming up next.



SEQUENCER

Add Scenes as Take Items by dragging them directly into the Sequencer. XPression's template-based workflow lets you replace text, stills, clips, and modify data hooks, while playing out to air. Only published parameters are exposed to the operator, ensuring brand consistency. In fast-paced productions, Fast Recall mode lets you recall Take Items by "page number."



MEDIA MOVING

Making sure that your XPression assets show up on the proper playout engine is seamless and automatic with the XPression Project Server, which manages all of your projects, templates and bound assets. XPression's openMAM™ architecture also enables you to use your existing media asset manager or Ross Streamline to keep track of all of your replaceable assets.



DATA INTEGRATION

Binding data to your XPression scenes is easy with the Datalinq Server - a powerful, yet easy-to-use data management tool. Presets for the most commonly used data sources, along with support for major scoreboard manufacturers are available in Datalinq.



CUSTOM KEYBOARD

When speed is paramount, XPression's optional custom keyboard provides dedicated function keys and user-definable keys for fast operation in live production environments. You can program multiple functions as macros and assign them to a single key. In addition, you can assign GPI triggers and RossTalk commands to specific keyboard functions for an even more automated workflow.

XPression Series Software & Turnkey Systems.

XPression Series Product Comparison

FEATURES	STUDIO	STUDIO - SINGLE	STUDIO - GO!	STUDIO - 4K	BLUEBOX	BLUEBOX - SINGLE	BLUEBOX - GO!	BLUEBOX - 4K	PRIME	PRIME - GO!	DEVELOPER	DESIGNER
Template Designer	●	●	●	●	■	■	■	■	●	●	●	●
Playout Sequencer	●	●	●	●	■	■	■	■	●	●	●	●
2D / 3D Fonts	●	●	●	●	●	●	●	●	●	●	●	●
Arabic, Asian & Scripted Language Support	●	●	●	●	●	●	●	●	●	●	●	●
3D Model Support	●	●	●	●	●	●	●	●	■	■	●	●
3D Primitives	●	●	●	●	●	●	●	●	●	●	●	●
Video Clip Support (Within A Template)	●	●	●	■	●	●	●	■	●	●	●	●
XPression Video Codec License	●	●	●	■	■	■	■	■	●	●	●	●
XPression Video Coder Application	●	●	●	■	■	■	■	■	●	●	●	●
Full Clip Server Functionality	optional	optional	optional	■	■	■	■	■	■	■	■	■
Automated File-based Ingest, Transcoding & Publishing	optional	optional	optional	■	optional	optional	optional	■	optional	optional	optional	optional
Crash Record (Baseband Video Ingest)	●	●	●	■	■	■	■	■	■	■	■	■
Trimming & Subclipping	optional	optional	■	■	■	■	■	■	■	■	■	■
Animation Timeline	●	●	●	●	■	■	■	■	●	●	●	●
Graphical Keyframe Editor	●	●	●	●	■	■	■	■	●	●	●	●
Continuous Animations	●	●	●	●	●	●	●	●	●	●	●	●
Stagger Animations	●	●	●	●	●	●	●	●	●	●	●	●
Transition Logic	●	●	●	●	●	●	●	●	■	■	●	●
Visual Logic	●	●	●	●	●	●	●	●	●	●	●	●
.NET-Based Scripting	●	●	●	●	●	●	●	●	■	■	●	■
Virtual Cameras	●	●	●	●	●	●	●	●	●	●	●	●
Seamless Continuous Tickers	●	●	●	●	●	●	●	●	●	●	●	●
Dynamic Post-Effects	●	●	●	●	●	●	●	●	■	■	●	●
Chroma Keyer & VS-AR Tools	optional	optional	optional	■	optional	optional	optional	■	■	■	■	■
Live Input Shader (Apply Live Video To Surfaces)	●	●	●	■	●	●	●	■	■	■	■	■
Webcam Input (DirectShow) Support	●	●	●	●	■	■	■	■	■	●	●	●
Window Capture Shader (Web To Video)	●	●	●	●	■	■	■	■	■	■	■	■
TrueD! Anaglyphic Stereoscopic Preview	●	●	●	●	■	■	■	■	●	●	●	●
TrueD! Stereoscopic Output	optional	optional	optional	■	■	■	■	■	■	■	■	■
Render To Disk	●	●	●	●	■	■	■	■	■	■	■	■
Output Framebuffer Layers	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited	unlimited
Still Video Input Grabber	●	●	●	■	■	■	■	■	■	■	■	■
Hardware Preview Channels (lose 1 channel of PGM out)	1	■	■	■	■	■	■	■	■	■	■	■
Virtual Preview Channels (up next & look-ahead)	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel	2 per channel
High Definition Formats (HD)	●	●	●	■	●	●	●	■	●	●	●	●
Standard Definition Formats (SD)	●	●	●	■	●	●	●	■	●	●	●	●
Simultaneous Multi-Format Output	●	■	■	■	●	■	■	■	■	■	virtual	virtual
Real-Time Up, Down And Aspect Conversion	●	●	■	■	●	●	■	■	■	■	■	■
Project Video Format Conversion	●	●	●	●	■	■	■	■	●	●	●	●
Custom Resolution Video Formats (DVI Out)	●	●	●	●	■	■	■	■	●	●	●	●
Output Channels For Ross Turnkey Systems (Fill + Key)	2	1	1	1	2	1	1	1	1	1	virtual	virtual
Output Channels For Custom-Built Systems (Fill + Key)	multiple	1	1	1	multiple	1	1	1	1	1	virtual	virtual
Video Input Channels For Pass-Through Keying	1 or 2	1	1	■	1 or 2	1	1	■	1	1	■	■
Video Input Channels For Manipulation (DVE)	1 or 2	1	1	■	1 or 2	1	1	■	■	■	webcam	webcam
Video Bypass (Hardware Failure & Software Watchdog)	●	●	■	■	●	●	■	■	■	■	■	■
Audio Channels For XPression Content	16	16	16	16	16	16	16	16	16	16	16	16
Audio Channels For Embedded Pass-Through	16	16	16	16	16	16	16	16	16	16	16	16
GPI Card (10 Closures)	●	●	■	■	●	●	■	■	-	-	■	■
Serial GPI (1 Closure)	●	●	●	●	●	●	●	●	●	●	●	●
RossTalk (TCP/IP Strings)	●	●	●	●	●	●	●	●	●	●	●	●
P-bus	●	●	●	●	●	●	●	●	●	●	●	●
.NET / COM Automation API	●	●	●	●	●	●	●	●	■	■	optional	optional
Custom Keyboard	optional	optional	optional	optional	■	■	■	■	optional	optional	optional	optional

● Included ■ Not Available

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Workflow Tools and Application Support

FEATURES	STUDIO	STUDIO - SINGLE	STUDIO - GO!	STUDIO - 4K	BLUEBOX	BLUEBOX - SINGLE	BLUEBOX - GO!	BLUEBOX - 4K	PRIME	PRIME - GO!	DEVELOPER	DESIGNER
Project Server	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
openMAM™ Connectivity	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Ross Streamline Asset/Order Management	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
DataLinq Server	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	■	■
Remote Sequencer	optional	optional	optional	optional	optional	optional	optional	optional	■	■	optional	optional
XPression Gateway	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
MOS Plug-in	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
NLE Plug-in	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Template Builder	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Touch Factory	optional	optional	optional	optional	■	■	optional	optional	■	■	optional	■
Telestrate	optional	optional	optional	optional	■	■	optional	optional	■	■	optional	■
Tick-it	optional	optional	optional	optional	optional	optional	optional	optional	■	■	optional	■
Brand-it	optional	optional	optional	optional	optional	optional	optional	optional	■	■	optional	■
Automation Gateway	optional	optional	optional	optional	optional	optional	optional	optional	■	■	optional	■
CII Gateway	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
AMP/VDCP Gateway	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Desktop Preview Server	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
Ross UX (VS/AR Tracking)	optional	optional	optional	■	optional	optional	optional	■	■	■	optional	■
Ross Trackless Studio (VS)	optional	optional	optional	■	optional	optional	optional	■	■	■	optional	■

● Included ■ Not Available

Studio

LIVE PRODUCTION GRAPHICS

XPression Studio is an all-in-one creation and playout tool for the most demanding of your live applications. Build scenes & templates in Layout Mode, then switch to Sequence Mode to play them out. There is no need for you to change programs or move to another workstation. This powerful, operator-driven solution is perfect for studio or mobile productions. XPression Studio also supports workflow for virtual sets and augmented reality.

is hard to beat. You can upgrade Prime to full Studio software functionality with an affordable upgrade option. In addition, a single channel of MOS workflow for basic news is supported with Prime.

GO!

PORTABLE LAPTOP SYSTEM

XPression GO! is a portable graphics solution available as a turnkey ASUS laptop with an AJA io XT** Thunderbolt™* to HDMI interface. There is also built-in support for HD clips and audio. XPression GO! is perfect for your mobile / OB productions or other applications where space and budgets are tight.

Studio 4K

UHD GRAPHICS WITH UI

All the capabilities of XPression Studio with a single 4K quad-link output.

Designer

AFFORDABLE OFFLINE CREATION

XPression Designer permits your artists and operators to build graphics offline with pixel-accurate previews on the computer desktop. Create animations, use clips, and add sound files without compromises. The full software capability of XPression Studio is at your fingertips without an expensive on-air platform.

BlueBox

HEADLESS GRAPHICS ENGINE WITH MOS AND API INTERFACES

XPression BlueBox is a cost-effective graphics engine without the Studio user interface. Fully compatible with MOS workflow and controllable via the XPression Remote Sequencer, BlueBoxes can be used in your control room to provide as many channels of graphic output as required. Graphics creation can be performed on an offline workstation or an XPression Studio system also located in the same facility. BlueBox also supports the XPression API for control by third party applications and acts as a headless rendering engine for VS/AR.

Developer

EFFICIENT API PROGRAMMING TOOL

XPression Developer provides an offline creation environment with full support for the XPression Application Programming Interface. The API provides the means for custom software developers and IT-savvy end-users to test custom software and third party automation on the desktop without the need for “authoring stations” or tying up on-air systems. A non-breaking debugger alerts programmers to errors in their code without crashing the application for faster coding.

BlueBox 4K

UHD GRAPHICS WITHOUT UI

All the capabilities of XPression BlueBox with a single 4K quad-link output.

Prime

COST-EFFECTIVE SINGLE CHANNEL SYSTEM

XPression Prime is a single channel entry-level XPression edition without 3D model support, but still makes 3D primitives and text available. Hardware systems utilize the most cost-effective components for a powerful turnkey package that

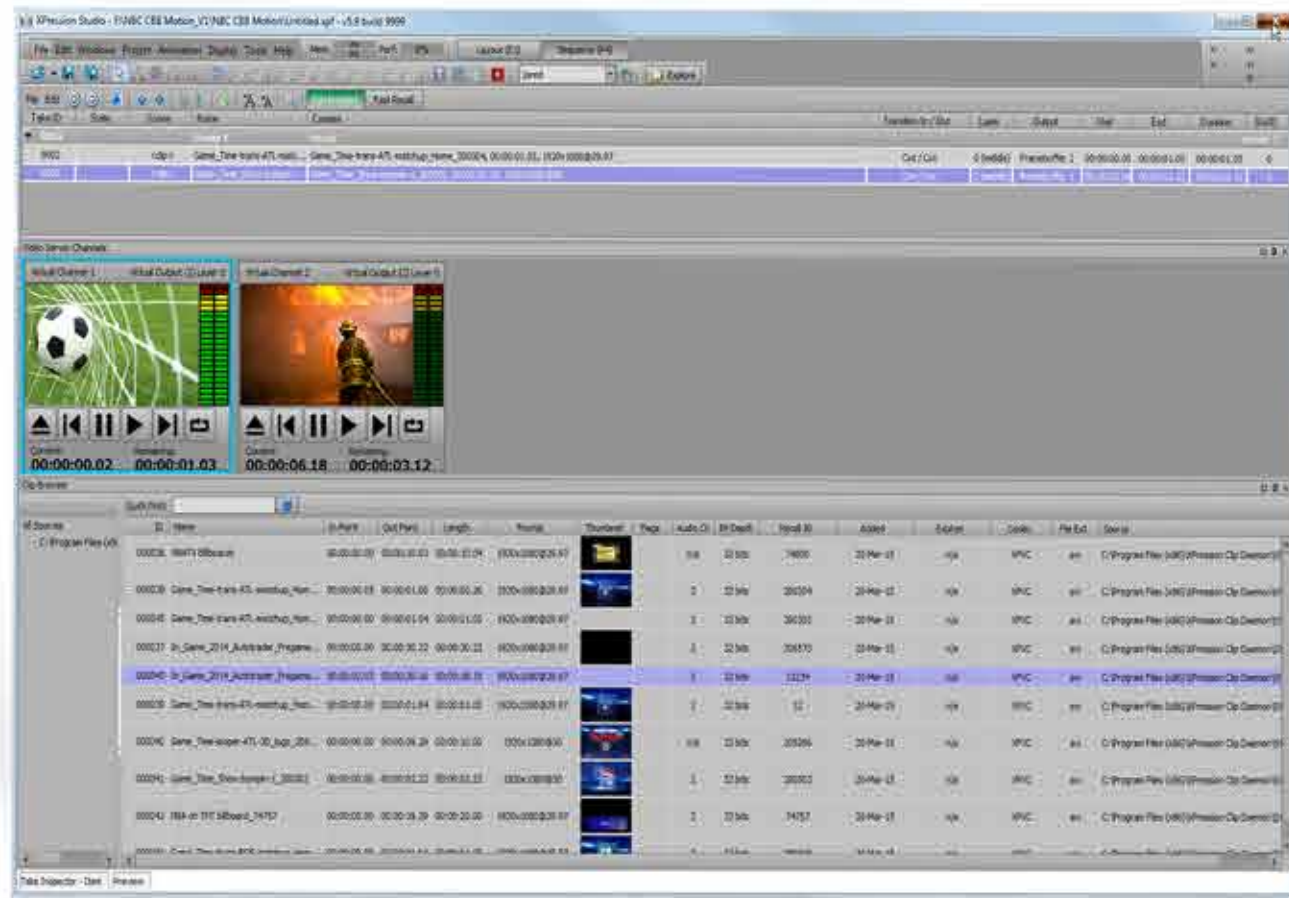
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**The AJA Io XT and ASUS laptop are products of AJA Video Systems and ASUSTeK Computer, Inc., respectively.



XPression

Clip Servers.



Clips

PRODUCTION SERVER

Pre-rolls are a thing of the past with XPression Clips, a production clip server for live production that incorporates the latest advances in IT technologies. Built on the industry-leading XPression real-time graphics platform, XPression Clips offers you instant recall times and back-to-back clip transitions from an intuitive user interface or via automation triggers from other devices like Ross Video productions switchers.

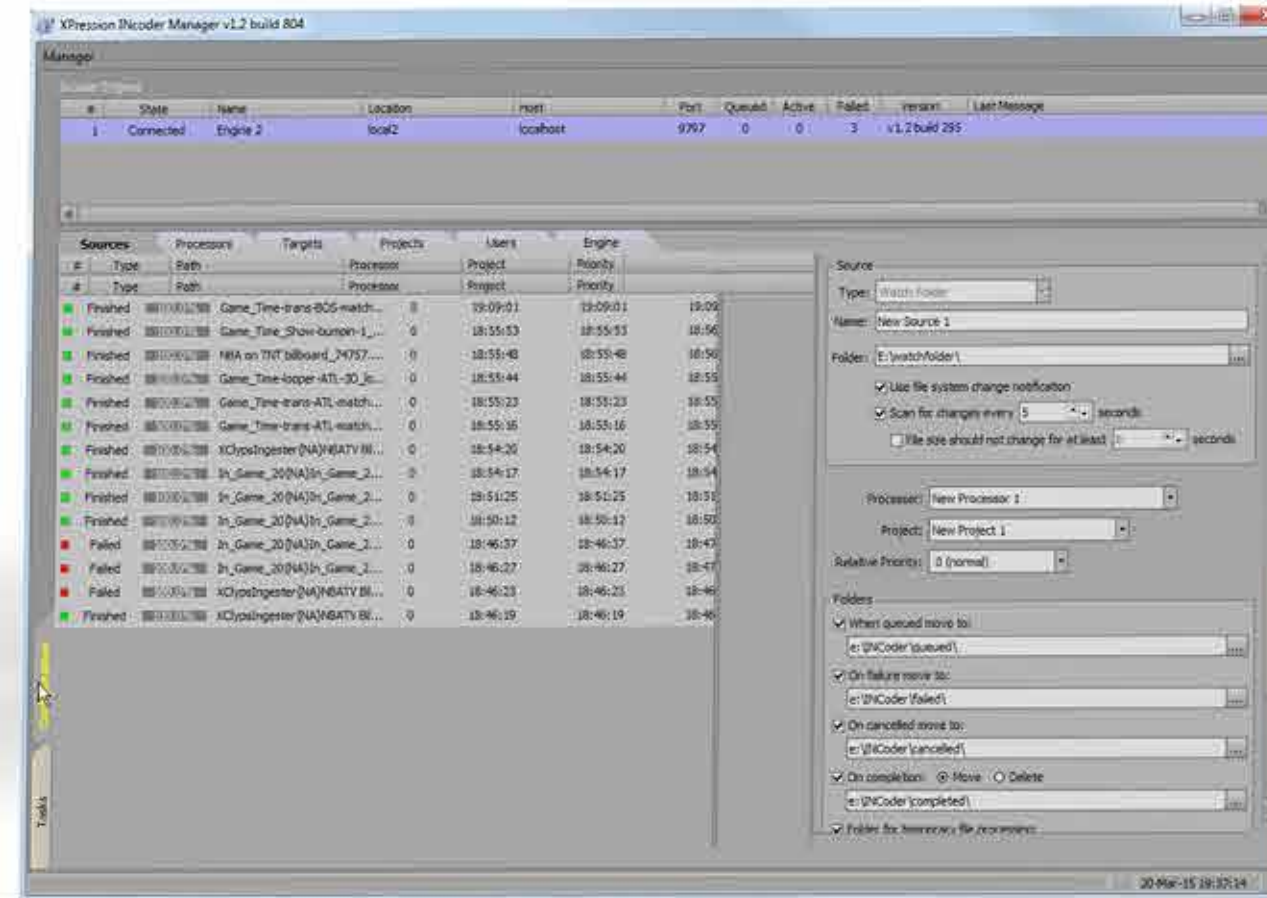
You can simultaneously ingest multiple channels of baseband video and output multiple channels of clips to air. Both NAS and SAN configurations are available for attached storage, in addition to ample local hard drive space. Database management and synchronization are possible with the Clip Manager that supports user rights and roles.

You may also add XPression Clips functionality to XPression Studio's basic clip handling capabilities by adding the Clip Server Option.



Key Features:

- Multi-channel ingest and playout
- 1, 2, or 4 channels of baseband video ingest
- 2 or 4 channels of playout (user-definable fill / fill or fill / key configuration)
- No pre-roll
- Back-to-back transitions
- Multiple clips on the same output
- Clip Browser with searching
- Clip trimming and looping
- VDCP, AMP, P-bus, and RossTalk automation protocols
- P-bus Manager for intelligent clip assignment
- Clip Manager application with user rights for database management and synchronization setup
- NAS or SAN attached storage with SNS storage (Studio Network Solutions)



INcoder

INGEST AND TRANSCODING WITH MULTI-TARGET PUBLISHING

XPression INcoder is a high-powered file-based ingest and transcoder application that sorts out your difficulties when confronted with multiple codecs. Simply drop or render a file into one of XPression INcoder's intelligent watch folders and you're done! INcoder works in the background to quickly transcode the clip into the highly-efficient XPression Video Codec - which supports video, key, and up to 16 channels of audio - and then delivers it for playout using its multi-target publishing capability. Destinations can include: the XPression Clip Database where it's automatically registered into the file list and metadata recorded, a NAS or SAN storage system, FTP, or any file location across a network.



A 3D rendered logo for 'XPpression' is shown on a dark, reflective surface. The logo consists of a large, stylized 'X' followed by the word 'Ppression' in a sans-serif font. The entire logo is rendered in a light gray color with a slight glow. The surface it sits on is dark and highly reflective, creating a clear mirror image of the logo below it. The background is a dark, gradient-like space that fades into a lighter area on the right side.

XPpression

Workflow Tools.



MOS Plug-In

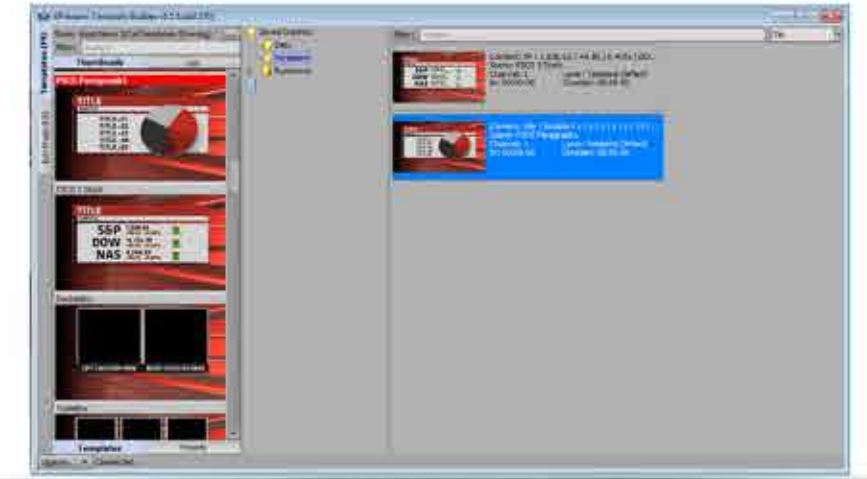
NRCS GRAPHICS FULFILLMENT

The XPression MOS Plug-in permits your journalists to access all of the XPression templates used in the control room from inside the newsroom computer system. You can replace text, stills, or clips, and make changes to any published item in the scene, while preserving the rest of the design elements. Users see real-time updates in a preview window, which can be resized up to full-screen. For final proofing of the graphic, hitting the play button triggers the industry's best full-motion preview. The XPression MOS Plug-in is supported by Ross Inception News and most other major NRCS systems. See your Ross Video representative for details.

Template Builder

STAND-ALONE GRAPHICS FULFILLMENT

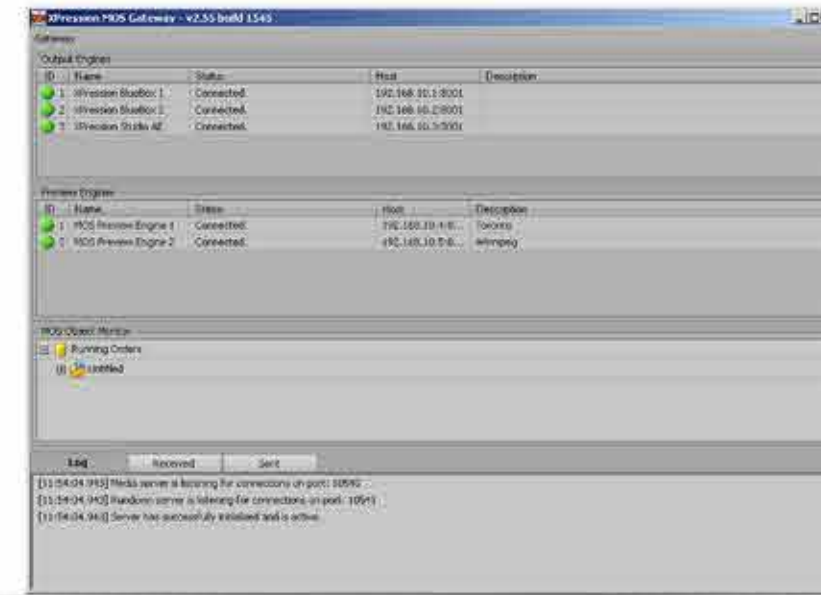
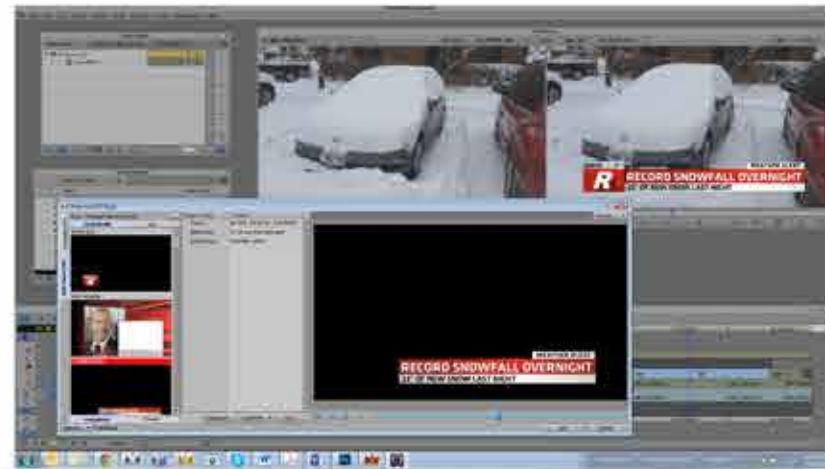
The XPression Template Builder permits your producers to create new graphics from XPression templates outside of NRCS and NLE environments. With this stand-alone application, users can replace text, still images, and clips, then see full-motion previews right on the desktop. The finished graphic can be saved to a folder for later recall in your newsroom systems or non-linear editors. Template Builder utilizes the XPression Gateway for connectivity and management of the saved graphics in a preferred folder structure.



NLE Plug-In

NLE GRAPHICS FULFILLMENT

The XPression NLE Plug-in gives your editors access to all of the on-air graphics library from within their non-linear editors. Template browsing, graphics replacement, and full-motion previews are all possible in the edit suite. Using the centralized rendering of the XPression Gateway, all your edit workstations can see fast previews and rendered final graphics without taxing the CPU's on their editing systems. See your Ross representative for a list of supported platforms.



Gateway and Offline Engine

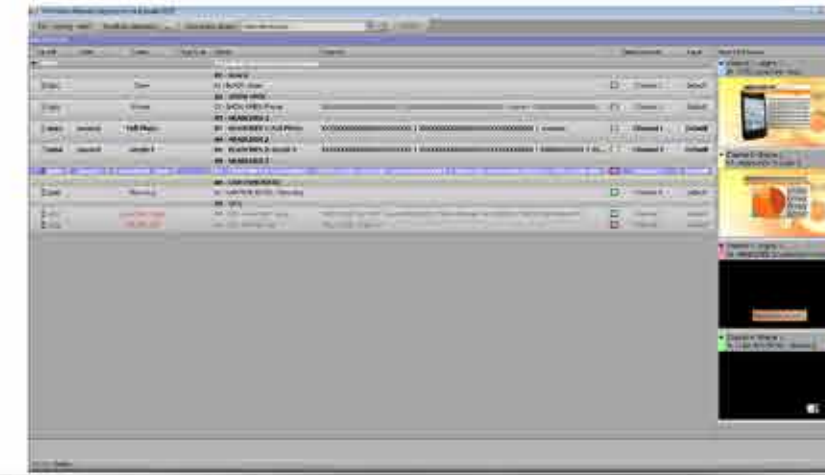
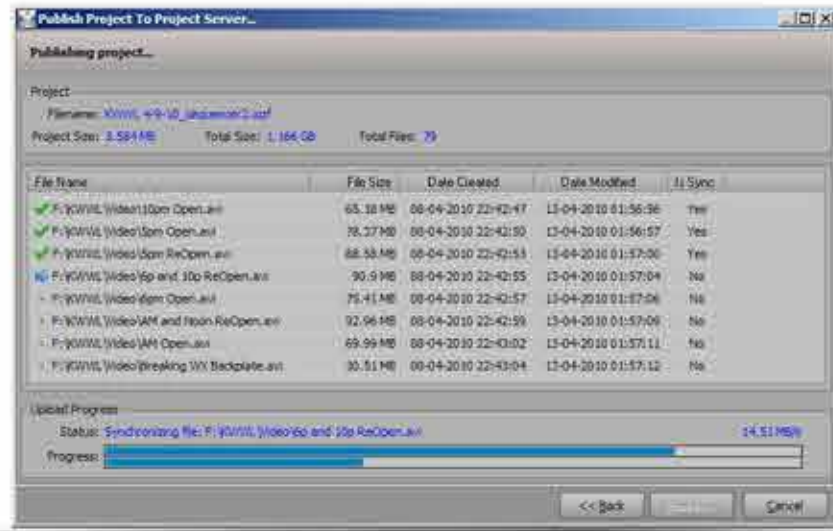
CENTRALIZED COMMUNICATION AND RENDERING

The XPression Gateway and Offline Engine provides connectivity and preview rendering for XPression in your content creation environments. Users are able to view full-motion previews on their workstations without bogging down the system by utilizing the centralized rendering of the XPression Offline Engine. The XPression Gateway supports the XPression MOS Plug-in, NLE Plug-in, and Template Builder applications for a seamless workflow throughout your entire facility.

Project Server

CENTRALIZED TEMPLATE COLLABORATION AND PUBLISHING

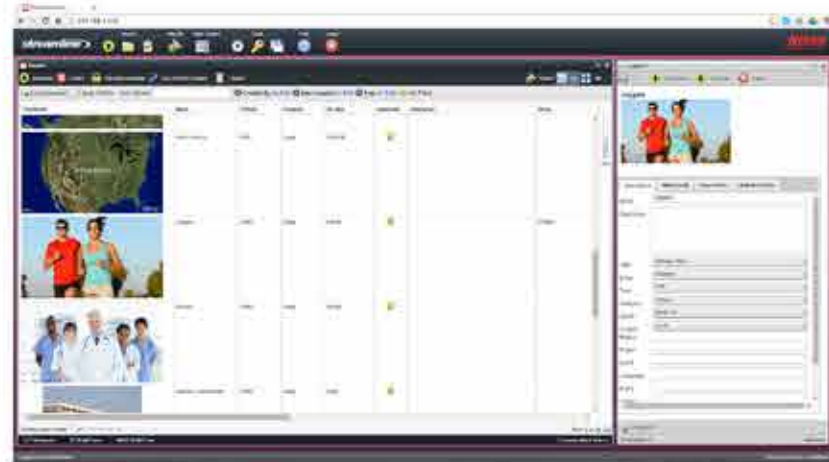
The XPression Project Server offers centralized storage and creative collaboration within your facility or across your enterprise. Designers and operators can access any XPression project from any XPression workstation, share projects while working locally, then re-publish to the server. The Project Server supports versioning, so you can always return to a previous version. Projects are pulled by the rendering engines for playout. The Project Server compares media between the two machines, so only new or changed assets are moved. It's also possible to do selective syncing and backup between multiple Project Servers



Remote Sequencer

MULTI-CHANNEL PLYOUT CONTROL

The XPression Remote Sequencer provides a central control point for graphics recall in a MOS environment. Your operators can control an unlimited number of XPression systems and channels with individual channel previews. The Remote Sequencer also permits you to select a look or style for the graphics using the re-skinning functionality of the Project Server. The Remote Sequencer can run on one of the XPression systems or on a separate PC on the network.



openMAM™ with Ross Streamline

ASSET / ORDER MANAGEMENT

XPression's openMAM™ asset management architecture allows users to choose from multiple types of asset management systems, including Ross Streamline to keep track of the vast library of graphics and clips that grows over time in any facility. Order management is also critical to traffic graphics requests from your journalists and producers to artists in the graphics department. Streamline's native order management system works seamlessly as part of an XPression MOS workflow.

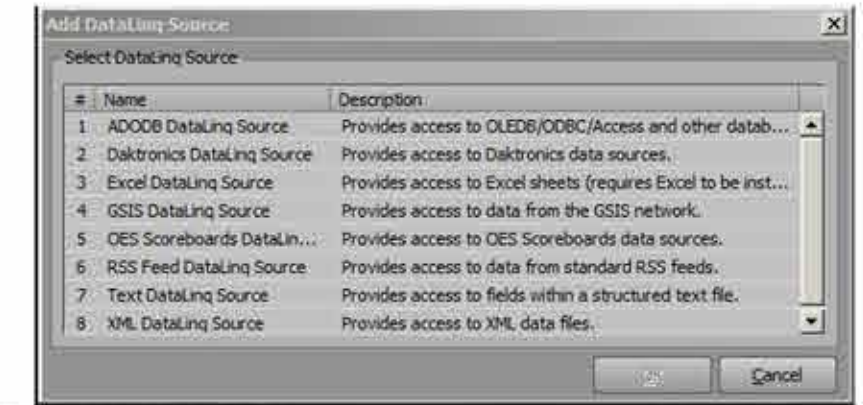
You may already have some form of asset management system in place with no desire to change. That's the beauty of openMAM™. Support for current browsers is no problem. Adding new asset management systems is a simple process, based on your requirements. The XPression workflow tracks assets all the way to air.

DataLinq Server

PLUG AND PLAY DATA CONNECTIVITY

XPression DataLinq Server makes template data integration easy. DataLinq provides a simple way for you to connect to multiple data sources, such as: XML, ADODB databases, RSS feeds, Excel spreadsheets, text files, sports scoreboards, and other custom feeds. Once the data source is connected, text fields, images, and video clips can be automatically driven by changes to data.

Using Datalinq keys, you can build a single XPression template and dynamically populate it with data from any spreadsheet or database (i.e. - player stats in sports)





Desktop Application or Plug-in

XPression Maps can be used as a stand-alone application on the desktop. In this configuration your designer or operator builds any type of map using the full toolset in XPression Maps. If self-serve maps are the goal, XPression Maps can also be set up in a client-server configuration, acting as a central engine for client plug-ins. Clients build maps from templates created in the XPression Maps application and are given a limited set of tools to create basic maps along with simple Point A to Point B animations. If multiple XPression Maps systems are installed in your facility, you can operate off of a common database, so all content can be shared.

XPression Maps



Design and Fulfillment

XPression Maps is a high-quality map creation tool with an optional NRCS client that works with the XPression MOS Plug-in. Covering the full spectrum of mapping needs for media, XPression Maps is used by your artists to do multi-point animations for complex storytelling and also by your journalists using pre-defined templates to do basic maps, like the location of a traffic accident or a house fire.

Global Coverage

XPression Maps uses the vast library of Microsoft© Bing Maps™ to access the array of satellite images, road maps, and aerial photographs from any part of the world. There are no licensing fees associated with using Bing Maps™, as long as the Bing watermark or credit text are used. This functionality is built right into XPression Maps and is configurable, so you never have to worry about proper attribution.

Street Level and Bird's Eye

Bing Maps™ are available in super high-resolution, down to 0.3 meters per pixel, showing roads and buildings from street level. If you feel like flying with the birds, impressive 45° aerial photographs are available for most major cities and can be viewed from any perspective. These libraries are also constantly being updated to provide the most current views.

Integrated Search Function

Type in any address and XPression Maps will take you right there. Or, if you prefer, you can enter the latitude and longitude of the desired location.

Smooth Flights

Virtual camera moves or flights across maps are easy in XPression Maps, just a few mouse clicks and you're done! Start from space and go all the way down to just above the earth's surface. Map tiles are downloaded dynamically and rendered into a smooth animation without any delays caused by poor Internet connectivity.

Animate Text and Objects

Add more animation with text, icons, lines, areas, locators, and a customizable library of objects to add further impact to a map. You can also easily animate parade routes or flight paths in a variety of line styles with a reference object, like a car or plane, drawing the pathway dynamically on the screen.

Customize... Customize... Customize

No one wants their maps to look just like the competition. XPression Maps is highly customizable, empowering you to create map templates with the look and feel of the show or channel. Color schemes, font styles, library objects, and more can be pre-determined and locked down. It is also possible to add roads, boundaries, and places of interest dynamically as part of an animation.

XPression

Touch Factory

INTUITIVE TOUCHSCREEN CREATION & CONTROL

XPression Touch Factory is touchscreen control software for live presentations using scenes from the XPression Real-Time Motion Graphics System. Your talent who are on-camera or in front of an audience can interactively navigate graphical content, videos, and animations through the use of any touchscreen-enabled monitor. Touch Factory is also designed to be simple for your artists and operators to program without needing dedicated IT resources or expensive outside services.

Touch Factory supports live data through the XPression Datalinq Server. Dynamic content graphics with continuous data feeds, like elections, weather, and finance are all possible with Touch Factory.

Touch Factory operates in a client-server mode. If it is not possible for you to run Touch Factory directly on an XPression system, another client PC may be used to intercept the touch data for relaying back to the XPression engine.

Options

If you use multiple touchscreens, Touch Factory Player is available as a cost-effective “read-only” playback tool for presentations created from the full version of Touch Factory. There is also a Remote Control Option for you to use tablets to drive presentations where the presenter doesn't want to turn their back to the audience but still needs to advance the content. And, for dual-channel XPression systems there is an option to use the second channel as an additional screen for multi-monitor productions.



Step 1

BUILD YOUR SCENES IN XPRESSION

Your artists and operators create scenes in XPression Studio or XPression Designer just as if they are building normal graphics. If animations are required for transitions, or to highlight specific content, those are done at the same time and saved into the scenes. “Hot spots” or transparent areas that will trigger actions are embedded into the graphics in the proper locations, as well. These are what your presenter will touch to drive content during the presentation.

Step 2

LOAD YOUR SCENES INTO TOUCH FACTORY

Through the use of object name tagging, Touch Factory will parse the XPression scenes and show a list of available objects that you can use. These objects and hot spots can then be associated with specific animations and transitions that lead to the next part of the content to be delivered.

Step 3

CREATE YOUR PRESENTATION TREE

Much like the built-in hierarchy in DVDs, you can associate specific graphics with different levels of the presentation. For example one graphic may be a title screen that leads you to a table of contents with various menu selections for the presenter. From there you just keep adding additional levels until you have it all built.

Step 4

SET TOUCH FACTORY TO PLAY MODE AND GO ON-AIR!

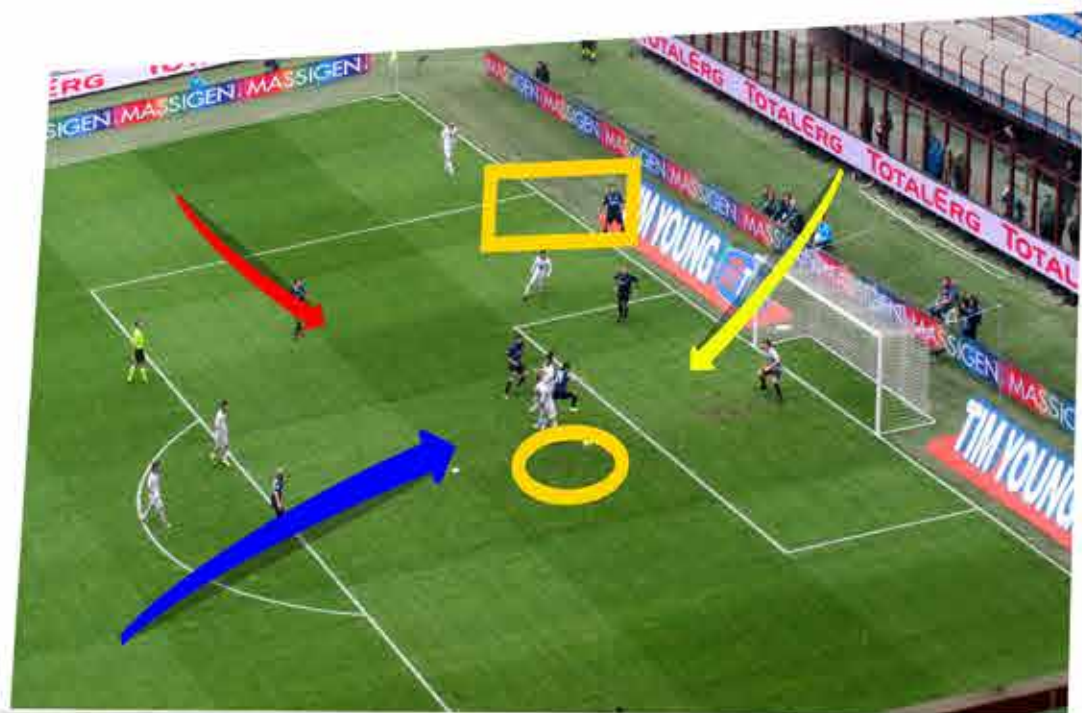
Touch Factory has two modes – one to allow programming of the presentation, and one for control and playback of the touchscreen graphics. You can switch between these modes as needed. In Play mode the output of an XPression channel becomes the background on a touchscreen monitor with complete interactivity using the hottest real-time and 3D graphics available.

XPression
Touch Factory

Telestrate

INTUITIVE TELESTRATION WITH REPLAY SERVER CONTROL

XPression Telestrate is an easy-to-use electronic drawing tool for sports analysis and other types of on-screen storytelling. Telestrate permits your commentators to draw directly on a video output and optionally control a replay server. Unlike other systems, Telestrate has no expensive dedicated hardware and can output through a single layer or channel of an existing XPression Real-Time Motion Graphics system for ultimate affordability. It also works with XPression GO! laptops for easier connectivity to remote talent.



XPression

Telestrate

Tools

Telestrate offers you a variety of tools to illustrate and highlight on-screen elements:

- Lines, Curves and Arrows
- Pen Styles
- Line Style, Weight & Color
- Circles, Squares & Rectangles
- Stored Custom Shapes (set by tracing a finger on the screen)

Replay Control

Optionally, Telestrate will control a replay server, making it easy for your talent to move the video backwards or forwards and freeze on the right frame. See your Ross representative for the latest supported server platforms and protocols.

Control Panels

Telestrate also uses optional X-Keys control panels for you to easily select drawing tools and also to control replay servers. Two versions of the control panel are available directly from Ross – one with a jog/shuttle knob and one without. Traditional PC keyboard shortcuts may be used instead of an X-Keys panel.

Typical Configurations

Telestrate has two software components – a client application that runs on any PC or laptop, along with a gateway application that runs on the XPression system. A customer-supplied touchscreen of some type is also required.



XPression
Telestrate

AUTOMATED CHANNEL BRANDING
 XPression Brand-it is an automated, multi-channel, collaborative branding workflow server, designed to simplify your complex channel branding requirements. Brand-it takes a different approach to facility integration by eliminating complicated automation protocols and instead leverages traffic system connectivity with browser-based client entry to create a plug and play system that fits almost any situation.

XPression Brand-it

Applications
 Brand-it is perfect for a wide variety of your applications, including:

- Logo Bugs
- Promotional Snipes
- Next On's
- Program Line-ups
- Sponsorships
- Advertisements
- Interstitials
- Voice-overs



Browser-based with Access Control
 All access to Brand-it is browser-based, meaning that anyone connected to the local or wide-area network can enter or schedule content from any location. Robust user-rights management with audit trail ensures that only the people you have granted proper privileges to are allowed to access any part of the Brand-it system.

Multi-Channel Scalability
 Brand-it is available as a single channel system (Brand-it Solo) or supports multiple channels from a single Brand-it Server. A Brand-it Backup Server is also available as an option for mission-critical environments

Traffic Integration
 Brand-it provides support for traffic log ingestion from most modern traffic systems, and support for other systems will be added as needed.

Unlimited Advance Scheduling
 Schedule recurrent content months in advance with an unlimited number of your schedulers accessing the Brand-it server from their web browsers.

Create Once...Use Many
 Instead of rendering every iteration of a branding event as a separate animation clip, Brand-it's template-based workflow permits you to design a format and dynamically change text, images, and clips from data in the traffic log or the Brand-it UI. This implementation exponentially saves you time.

Automation Simplified
 With all of the branding content scheduled via traffic log import or events entered via the Brand-it browser interface, automation simply needs to trigger the next event in a segment. If there are more events scheduled in a segment than time allows, Brand-it just moves on to the next segment, so you are never out of sync with programming. Supported methods include – GPI, serial, or IP.

Manual Control
 In the event of any unplanned event, you always want to be able to take operator control of an automated environment. To manage these situations, the Brand-it Player Monitoring and Control application permits your master control operators to take graphics on/off air, run crawls, and perform other tasks across multiple streams.



Revenue Generation
 When properly implemented, Brand-it will actually pay for itself in a short period of time through the scheduling of sponsor logos and advertisements to generate new revenue. "As-run" logging guarantees that all advertisements will be properly billed.

Cross-Channel Promotion
 In multi-channel playout environments, Brand-it permits you to cross-promote programming on different streams. Enter the data once, and it will be presented in the correct graphic style for each channel.

Powered by XPression
 Brand-it uses the Ross XPression Real-Time Motion Graphics System to generate spectacular 3D animations that interact with program video in ways that no DVE can, and leaves your viewers with a whole new branding experience. XPression's ease-of-use and support for industry-standard graphics workflow tools makes creating customized content simple. Changes can be made by you without having to go back to a branding vendor.

Project Server Support
 In multi-channel facilities, Brand-it uses the XPression Project Server to seamlessly distribute content to each XPression playout engine without having to access each unit individually. You can easily update sponsorships and advertisements without having to generate new scenes.



Applications

Tick-it is perfect for a wide variety of your applications including:

- Local TV Tickers
- Network Tickers
- Sports Tickers
- Logo Bugs w/ Time & Temp
- L-Bars
- Information Channels
- Digital Signage

Data Types

The types of data that you can display with Tick-it are virtually endless:

- News Headlines
- Weather Stats
- Sports Scores
- Stocks
- Traffic Data
- School Closings
- EAS, Amber & Weather Alerts
- Election Results
- Community Events
- and more...

AUTOMATED TICKERS AND INFO CHANNELS

XPression Tick-it is an automated, multi-channel, multi-zone, multi-function, collaborative workflow server for tickers and informational channels. Designed to take the complexity out of data-rich graphics, Tick-it combines live data sources with manually entered content for a unified presentation that you can schedule to appear as a video overlay or as a stand-alone information channel.

Revenue Generation

When properly implemented, Tick-it will actually pay for itself in a short period of time through the scheduling of sponsor logos and animations to generate advertising revenue. Tick-it also supports "as-run" logging for proper traffic reconciliation and billing.

Powered by XPression

Tick-it uses the Ross XPression Real-Time Motion Graphics System for viewer-grabbing 2D/3D scenes and animations. XPression's ease-of-use and support for industry-standard graphics workflow tools makes creating customized content simple. You can make changes without having to go back to a branding vendor. In addition, a number of pre-defined templates are included with each Tick-it system.



Dedicated Engine or Production CG

A dedicated XPression BlueBox engine may be used for playout, or you have the option to leverage an existing channel or layer from an XPression production graphics system to bring content to air.

MOS Interactivity

When you use an XPression production graphics system, it is easy to have interactivity between Tick-it elements and MOS news graphics. For example, a two-line lower third ticker with a logo bug can make room for a graphic triggered from the MOS playlist and then return to its normal size when the MOS graphic is removed. Because of XPression's multi-layered playback capability, this can all happen on a single channel!



Browser-based with Access Control

All access to Tick-it is browser-based, meaning that anyone you have connected to the local or wide-area network can retrieve, enter, schedule, or control playback of content from any location. Robust user-rights management with audit trail ensures that only your staff with proper privileges are allowed to access any part of the Tick-it system.

Multi-Channel Scalability

Tick-it is available as a single channel system, (Tick-it Solo) or supports multiple channels from a single Tick-it Server, enabling you to easily rebrand the same data for regional feeds, duopolies, master control hubs, or broadcast operation centers. An optional backup server is available for mission-critical applications.

Zone Control

With complex tickers, L-bars, and information channels, Tick-it enables you to schedule separate content for each zone or portion of the screen. This means that it is possible to be running multiple playlists for different types of content on the screen at the same time. Scene changes triggered by your operators or automation permit zones to enter and leave the screen without interrupting the playlists in the other zones.

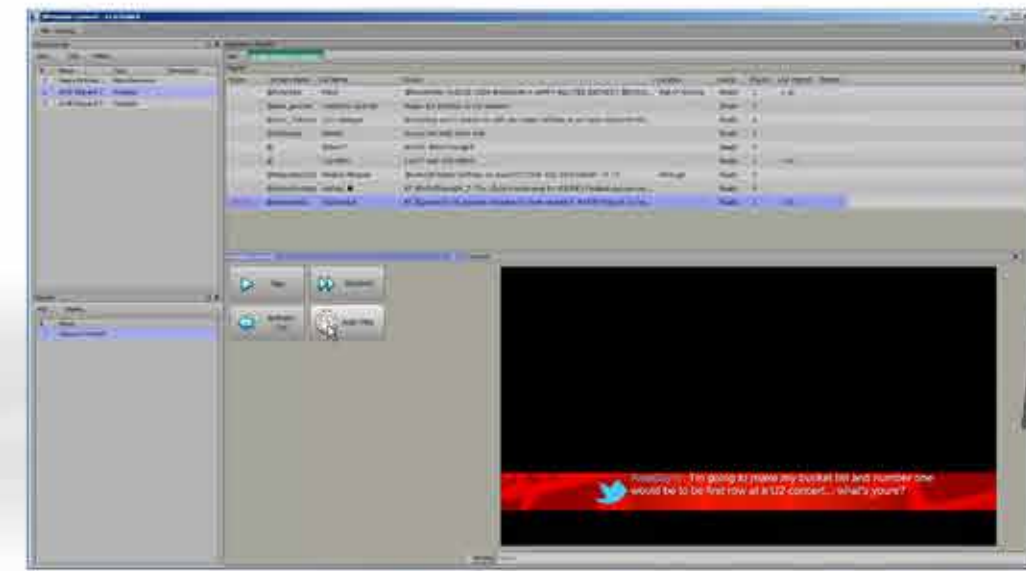
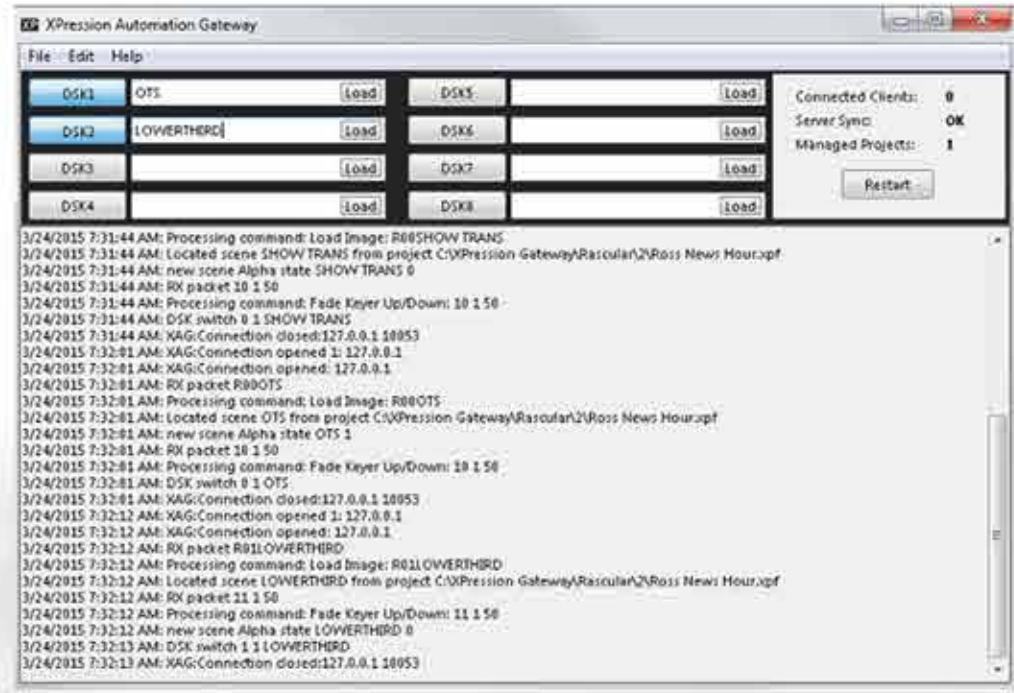
Project Server Support

In multi-channel facilities, Tick-it uses the XPression Project Server to seamlessly distribute content to each XPression playout engine without having to access each unit individually.

Automation

In the case of L-bars or where video squeezes are required for ticker placement, Tick-it receives triggers to initiate those moves. Supported methods include – GPI, serial, or IP.





Automation Gateway BASIC AUTOMATION CONTROL

The XPression Automation Gateway used in combination with XPression BlueBox, XPression Datalinq Server, and XPression Project Server provides you with an easy-to-configure system that is not dependent on complex automation and traffic system workflows. The Automation Gateway uses the Miranda / Oxtel Imagestore protocol, one of the most universally supported automation drivers in the world, for recall of branding scenes. The rest of the workflow is done entirely with XPression products, including media moving and data integration.

Simplified Automation

Unlike CII or other generic protocols, the Miranda / Oxtel Imagestore protocol is standardized, meaning your automation control of XPression should work out-of-the-box, if the driver is currently loaded on the targeted automation system. Should there be any issues, Ross will assist to ensure seamless integration. Once connected, all that is needed is a recall ID to be scheduled in the automation system, either manually or via the traffic system. This recall ID will play an XPression scene of the corresponding name/number.



Media Moving

Using the XPression Project Server, a central repository for XPression scenes and projects, the XPression Automation Gateway automatically watches for updates in content and dynamically loads new media on the XPression BlueBox engine for playback. Specific projects are associated with each channel in the Gateway configuration, so graphics are always sent to the correct machines. As an added safety feature the XPression Automation Gateway automatically checks to see if the previous version of the XPression project is on-air before uploading the revision.

Dynamic Text And Image Replacement

Using the XPression Datalinq Server and proper naming schemas for recall IDs, it is possible for you to take a handful of graphic templates and populate them with data on-the-fly. This creates an infinite number of branding events from a single graphic and saves you hours of labor spent rendering out each iteration of a Coming Up Next or You're Watching graphic. The information for the branding event (text and image/clip replacement) can come from any data source- text file, XML file, Excel spreadsheet, or database.

One Per Channel

The XPression Automation Gateway runs directly on the XPression BlueBox engine reducing the number of system components, and one instance per channel is required. The Datalinq Server and Project Server are optional, if data integration and media moving are not needed.

Connect

SOCIAL MEDIA PLAYBACK CONTROLLER

XPression Connect is the missing link between moderated social media feeds and dynamic viewer-engaging graphics for television. Working with XPression, Connect enables you to "connect" to data feeds from Ross Inception, and other social media systems to bring your viewer messages to air in a live production environment.

Features

- Use multiple feeds from different sources simultaneously
- Turn a feed into a playlist
- Drag and drop messages from any feed into a custom playlist
- Reorder messages
- Float messages
- Export any feed or playlist as a text file for content review
- See on-screen previews of messages in the actual template
- Use avatar images
- Crawl or tick messages on screen
- Animate in and out
- Loop, play once, or play messages randomly
- Play manually or automatically at user-defined speeds





Integration.

The XPpression graphics platform integrates tightly with other Ross products to provide you more production power, flexibility, and a better user experience. In addition, the open architecture of XPpression and trusted partnerships with third party partners opens up even more possibilities.



Ross Mobile Productions / openTruck

XPression

The Full Solution.



Ross Robotic Camera Systems

StreamLine Media Asset Management



MC1 Master Control System



NK Series Routers



openGear Signal Processing



XPression 3D Motion Graphics



Ross Production Switchers



BlackStorm Video Playback Server



Inception Media Management Tools for News, Sports, and Social



OverDrive Production Control System

XPression + Streamline

Ross Streamline production asset and order management system is designed to work seamlessly with XPression graphics systems and workflow tools. Your XPression newsroom and NLE users can search for graphics, fulfill templates, or generate work orders for new content from Streamline's modern browser-based interface.

XPression + Ross Virtual Solutions

XPression delivers spectacular rendering for tracked and trackless virtual set and augmented reality systems from Ross Virtual Solutions. Ross UX manages configuration, calibration, and control for tracked solutions, while Ross Trackless Studio is a purpose-built user interface for trackless virtual implementations.

XPression + Inception News / Inception Social

XPression MOS workflows are tightly integrated with Inception media workflow applications. The multi-platform newsroom computer system and social media tools including filtering and moderation for social media that you can translate to on-air graphics.

XPression + DashBoard

Ross Dashboard is a facility control system with intuitive panel building capabilities for you to build highly-customized UIs for XPression, other Ross Video products, and third party systems. These purpose-built panels bring a new level of cohesiveness to your ecosystems including those using XPression graphics.



streamline

ROSS virtual solutions

Inception

DashBoard

ROSS
Production Technology Experts

XPression + OverDrive

OverDrive is the industry's leading automated production control solution. XPression works with the OverDrive workflow to provide you a tightly integrated production graphics solution, including automated insertion and playout of graphics.

XPression + Acuity

The large, high-powered Acuity production switchers offer comprehensive control over XPression graphics. Acuity can recall specific templates as part of complex switcher macros, or simply advance through a prepared playlist.

XPression + Carbonite

Using XPression Designer's built-in RossLinq functionality, a direct connection is made to the media stores in the Ross Carbonite series of performance production switchers. Individual still graphics are transferred in a few seconds and displayed live, providing a cost-effective graphics solution. It's also possible to use switcher media stores as a preview channel for single channel XPression systems.

XPression + Ross Robotics

XPression can receive tracking data from Ross Furio and CamBot camera heads, lifts, and dollies for compelling virtual sets and augmented reality in complex productions.



OverDrive

A · C · U · I · T · Y

CARBONITE

ROSS Robotics

ROSS
Production Technology Experts

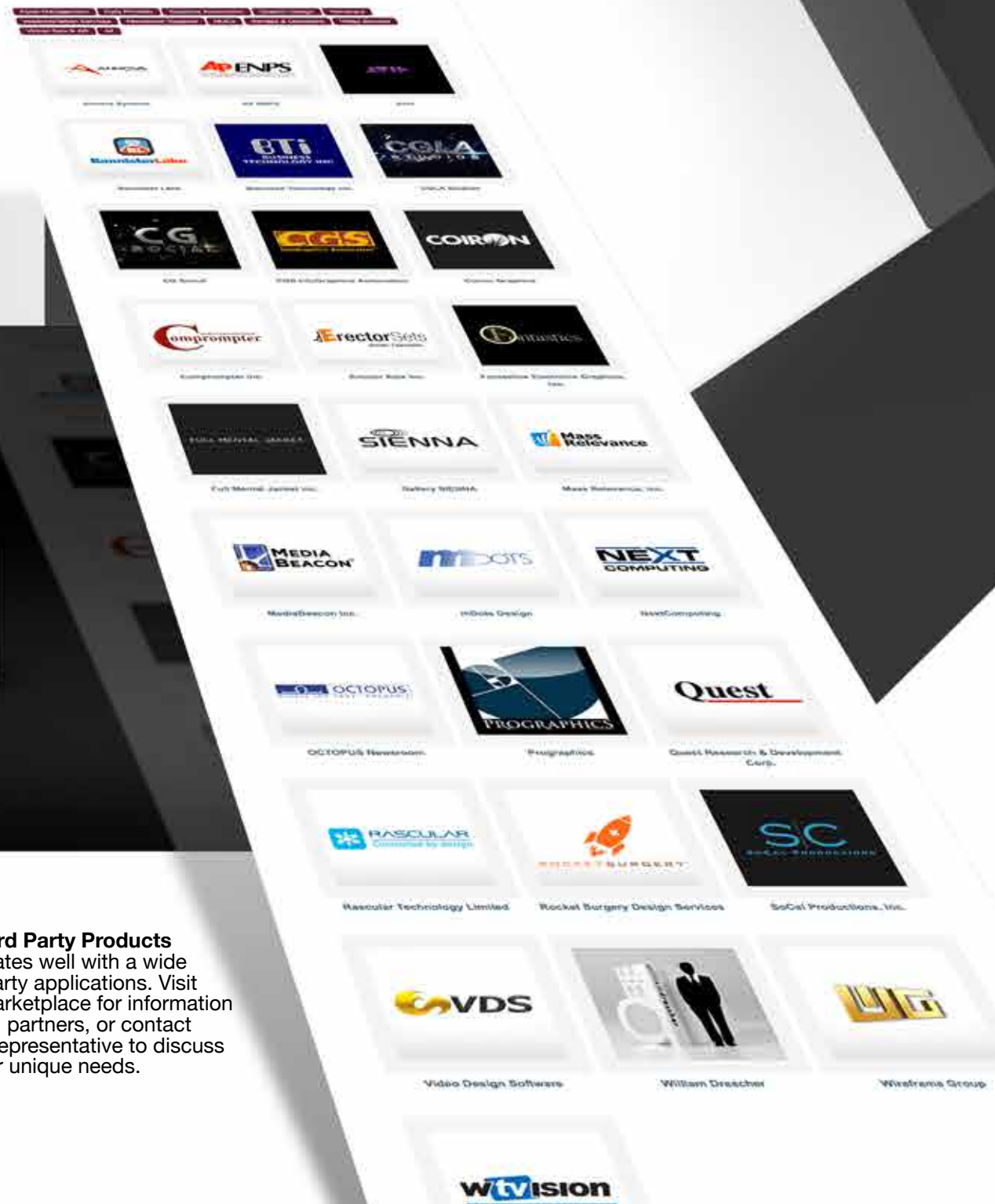
XPression + openGear®
openGear® signal processing includes the MDK, multi-definition keyer, which provides video and embedded audio mixing with linear keying for XPression in mission-critical environments.

openGear® video delay cards are also used with XPression in virtual set and augmented reality applications.



openGear

XPression + Third Party Products
XPression integrates well with a wide variety of third party applications. Visit the XPression Marketplace for information regarding trusted partners, or contact your local Ross representative to discuss solutions for your unique needs.



XPression

ROSS
Production Technology Experts

XPression

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

Operational Training can be provided at Ross Video, on-site or on the web. Experienced Ross operators will teach your staff to get the most out of your new system, and enhance your productions.

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

Technical Training can be provided at Ross Video, on-site or over the web. 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 systems come standard with a 1 year comprehensive warranty. **Extended Warranties** on XPression are available for an annual fee.

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

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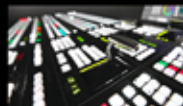


Visit:

www.xpression.com to go directly to the latest XPression information or
www.rossvideo.com for the latest information on the complete line of Ross products and services.



Furio and CamBot
Robotic Camera
Systems



**Acuity, Carbonite,
and CrossOver**
Production Switchers



XPression
Motion Graphics



openGear®
Terminal Equipment



BlackStorm
Video Servers



**OverDrive and
DashBoard**
Control Systems



NK Series
Routing Systems



Inception
News and
Social Media



**Ross Virtual
Solutions**
Virtual Sets and
Augmented Reality



**Ross Mobile
Productions**
Mobile Productions

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