CHRISTIE®

Christie
Pandoras Box

CHRISTIE
PANDORAS BOX
SOFTWARE LICENSE

Simpler, more powerful
real-time show control

ONE IDEA.
ONE SYSTEM.
ONE SUCCESSFUL
PRODUCTION.

Christie® Pandoras Box® is our award winning real-time video processing and show control system that gives users complete control over the entire workflow – from project conception to final realization.

Pandoras Box helps maximize efficiency and lets you combine unlimited creative possibilities with great usability and reliability. It's a powerful set of tools you can use to create amazing visual experiences.

**Pandoras Box, Widget Designer and Christie laser projection at
IVEX Studio, Seoul, South Korea**

Located at U-Planet, a cultural complex and shopping facility
located in Gwangmyeong City, IVEX Studio deploys an array of
state-of-the-art audiovisual technologies that can be used for a
wide range of events, including K-Pop, e-sports, live performances,
broadcast production, conferences, and corporate functions.

Partner: Star Networks

ONE LICENSE TO DO IT ALL

Pandoras Box Software is ideal for professionals with multimedia requirements within fixed-install applications, live events, and architectural and artistic installations such as museums and theaters.

Pandoras Box Software combines professional features in a high-performance and budget-friendly platform under one license so that you can turn any hardware system into a powerful media server.
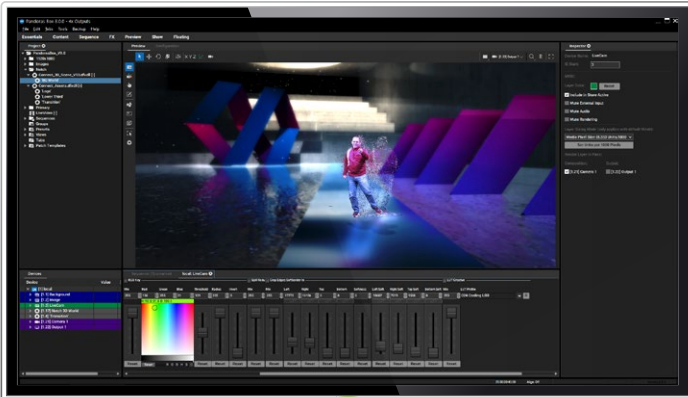
Pandoras Box, Widget Designer and Christie laser projection immerses guests in the solar system at Shanghai Astronomy Museum, the largest planetarium in the world

Partner: Wincomn Technology, Shanghai Qingying Digital Technology, Marvel Vision

Software features

Unlimited video layers and effects

The unlimited video layers let you structure your programming to meet your needs. Virtual 3D lights apply realistic reflections and shadows to objects and plane elements. The unlimited number of effects per layer or outputs underlines the flexible advantage of a real-time compositing system.

Multi-user control

Benefit from the efficiency of multi-user control that allows you to split workloads for multiple operators into different tasks like warping, content encoding, and timeline programming, or work simultaneously on the same sequence.

With multi-user control, the blind programming feature lets you edit timelines and change sequences with a full local preview without affecting the current video outputs or the risk of interfering with a live show.

True 3D environment

Pandoras Box offers a true 3D compositing space that allows you to align both objects and plane elements for projection mapping or real-time 3D stereo playback scenarios at high frame rates.

Advanced features and control

Notch integration

Stunning visual experiences are possible with the integrated Notch® rendering system. You can create interactive and video content in one unified real-time environment. When paired with Widget Designer and sensors like Christie® AirScan, you can achieve never-before-seen visuals and interactive solutions.

Native Notch® integration in Pandoras Box

Advanced import

Say goodbye to the time-consuming and repetitive actions needed to ingest content with the advanced import feature. The simplified content batch handling is a true time-saver that includes bulk actions to change settings and import stills, videos, and image sequences.

ASIO multi-channel audio

Pandoras Box® Software supports ASIO audio interfaces and offers synchronized multi-channel audio playback. You can delay audio inputs and outputs and freely route them to distinct or common channels. Whether you like to plan ahead or work spontaneously, you can realize multi-language setups or playback multi-track audio right away within a show.

Native Dante audio

With 32 input and output channels of Dante audio natively embedded into every Pandoras Box, you can access networked audio setups of Dante-enabled devices on the fly. Easily turn any network connection into a professional audio device that receives and sends multiple channels of perfectly synchronized high-quality audio. Building on proven ASIO channels in Pandoras Box, you can use Dante seamlessly within any project or show.

AV-over-IP

Video over IP solutions reduce system complexity and increase the value of your system. Uncompressed SDVoE video inputs can be used with the optional Christie Terra® input card for Pandoras Box hardware to access a virtually unlimited number of sources in the network.

You can use any regular LAN adapter to natively receive compressed NDI®* video streams inside Pandoras Box Software. You can also directly connect to remote cameras and share content from smartphones, Adobe After Effects, Notch, Unreal, Unity, and many other sources.
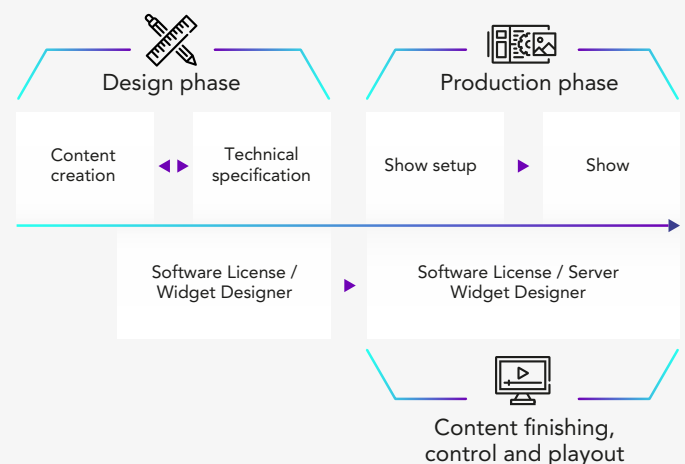
Real-time effects and blend modes

Pandoras Box Software features several visual effects, including various keying filters accessible to every layer and output, bringing video composition to new levels of creative possibilities. With blend modes, you can use a complex combination of blended layers to form perfect renderings.

The Aeon FX engine lets you create and combine an almost unlimited number of dynamic effects. Create Aeon chains with drag and drop that can be individually controlled using any combination of timeline programming or interactive trigger inputs.

FireFly allows you to create elaborate real-time particle effects in a true interactive 3D compositing space. Set up and apply various emitters with forces such as wind and gravity, synchronized across any number of outputs on multiple render systems.

Project workflow end-to-end

POWERFUL. VISIONARY. FLEXIBLE.

Synchronized playback

Network-based adaptive frame synchronization allows multiple systems to run in sync. Use an optional SMPTE Link interface to sync to external sources or act as the master control for other show elements such as audio, lighting, or even special FX.

8K+ playback support

With high-resolution formats now standard for large-scale projection or massive LED walls, Pandoras Box Server supports 8K video playback and beyond. You can configure 4K resolution and above for each individual physical output.

Uncompressed quality

Maintain the integrity and quality of your content. With zero compression and no artifacts, the ability to deliver stunning visuals is taken to new levels. Pandoras Box® Server supports up to 8K and above uncompressed video playback at 60 fps for high resolution at its best quality. For high frame rate applications, uncompressed content can also be used with up to 240 fps.

10-bit color depth

Combine the power of artifact-free uncompressed content with the enlarged color space of 10-bit content and overcome color banding issues for a truly stunning and flawless color reproduction and overall image quality. As the traditional 16.7M colors are boosted to over 1 billion, precise and perfect colors are displayed. HDR becomes possible with Pandoras Box Server's 10-bit render engine and is designed to work seamlessly with other Christie® technology.

Projections, water screens, spotlights, LED and audio create an immersive digital experience – City Walk Dubai is held together by Christie Pandoras Box

Images courtesy of Float4

Video formats

As various video codecs have different advantages, depending on the exact nature of the content you're using, Pandoras Box supports a variety of codecs to fit your needs perfectly.

Whether you're using a heavily compressing codec to save storage capacity or uncompressed formats to provide the highest image quality in up to 12-bit, Pandoras Box Server flawlessly handles them all. This includes DPX and TIF image sequences in the same way as different flavors of HAP and HEVC codecs.

FluidFrame technology

FluidFrame is a groundbreaking signal processing algorithm that offers a smooth cross-conversion that can take any input and output framerate, supporting both interlaced and progressive sources and clips.

Powerful projection mapping

Softedge blending & warping

Using multiple Software licenses, you can set up flat or arbitrarily shaped projections and independently warp, blend, or keystone each output to match any number of geometrical shapes.

No matter what your project specifications, Pandoras Box Software will perfectly fit your requirements, allowing you to accurately correct for off-angle distortions or complex warps on-the-fly.
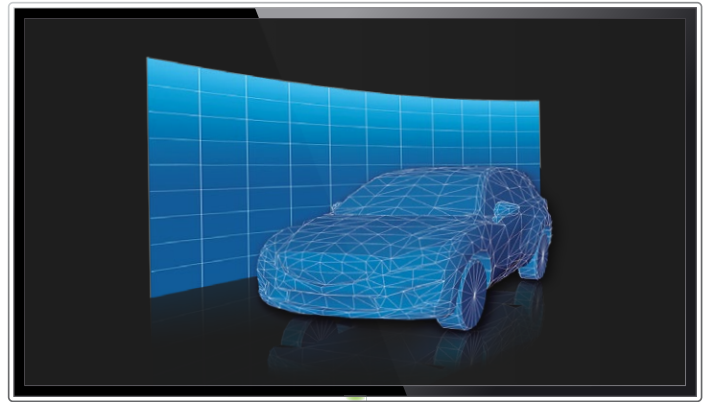
An example of softedge blending

3D projection mapping

Enjoy the ease of setting up 3D projection mapping within the flexible and cascaded 3D environment. Import and manipulate 3D objects to arrange virtual cameras to quickly match projector positions and orientation.

Instant warping and UV mapping

The warping process and its features are directly integrated into the Pandoras Box Server render engine. The preview gives you direct access to manipulate FFDs and vertices in a 3D space to match the projected image with the physical screen setup. You can instantly edit UV maps in real-time to arrange content and use the preview and its interaction modes to realize perspective UV mapping.

Integrated warping tools within the Pandoras Box Preview

Autocalibration

You can apply several automated calibration systems to set up or recalibrate projected images for even faster setup times and to maintain perfect alignment over time.

Christie Mystique™ automated camera-based alignment software, or third-party applications, allows you to set up and blend projection mapping of complex shapes. Widget Designer's integrated recalibration method uses optical fiber receivers for camera-free recalibration.

The Pandoras Box Software 3D projection mapping tools feature independent content composition and warping calibration. With this arsenal of groundbreaking creative tools, you can efficiently organize your production workflow for faster setup times.

DIRECT. INTUITIVE. FAST.

Venue Sites

With Venue Sites, you can navigate through 3D scenes and previsualize the final look of your design before any hardware is installed. You can review designs, apply different options immediately, and minimize any discrepancies between your vision and reality. Venue Sites facilitates efficient and productive collaboration and saves time and costs by allowing you to pre-program complete shows before any physical setup begins.

Venue Site previsualization with UV-mapped 3D objects

Console mode & advanced patching

With the dynamic layer structures, you can easily add parameters and effects to any layer. To facilitate the control, you can start Pandoras Box® Software in a dedicated console mode or simply create and extend the DMX library from within the interface so you can individually patch any parameter or the timeline.

Software development kit

Pandoras Box Software includes a software development kit (SDK) that opens the world of any customized or tailored third-party application programmed into an existing or specifically designed software system.The SDK gives you direct access to all sequence controls, device parameters, effects, and presets. You can quickly and easily realize custom integration with third-party software with common programming languages such as Visual Basic, C#, C++, Python, or JavaScript.

Direct control

Pandoras Box Software lets you choose from several available protocols to control the system. You can use a lighting console for instant control or use the built-in timeline to unlock the full features of Pandoras Box Software and get access to all parameters. Choose from standard industry protocols like TCP/IP, SMPTE, MSC, Art-Net, SACN, MA-NET, DMX-512, and many more to achieve your goals.

Widget Designer integration

Pandoras Widget Designer is a control surface creation framework for customized show control, letting you build technical dashboards or entire show solutions — even ones that visitors can securely access in public spaces.

Widget Designer perfectly integrates with Pandoras Box Software and can set or read values from the active system, monitor its state, trigger actions, and provide feedback to the user. Widget Designer is the solution for any kind of automation or customized interface.

Multi-license option and multiple dongle support

The multi-license option lets you unlock more render outputs with multiple Software licenses on a single dongle. For increased flexibility, you can combine individual dongles. For example, two dongles with two licenses in a single PC system can sum up the output count and achieve a quad-output system.

Language settings

Pandoras Box Software is available in nine languages:

- English
- French
- Japanese
- German
- Italian
- Korean
- Spanish
- Simplified Chinese
- Russian

User-friendly features

Comprehensive timeline programming

With the extensive built-in timeline, you can synchronize unlimited outputs and video layers across multiple servers with ease. You can even program and synchronize external devices such as lighting fixtures or TCP triggers. The frame-based sequence can send and receive SMPTE timecodes to be in sync with other devices, while free-running elements can still be achieved. Multiple timelines can run simultaneously and independently to organize various rooms, effects, or single components of your show.

Multi-View

Previewing multiple outputs next to each other in Multi-View lets you keep track of several important displays during a show. Displaying the fully editable preview in full-screen mode gives you a better overview and helps with warping.

Combining the tracking multi-user functionality with the Multi-View feature lets you create a remote, full-screen preview display to offload the rendering task from the local master.

Interactive content and control

The preview window is the centralized control area for compositing, warping, and any kind of content interaction. Applying textures to objects, dragging elements to their desired location on screen, interacting with web browser assets, or setting virtual camera positions are all handled through the preview.

Any connected output devices, such as touch screens or AirScans, can directly interact with or trigger actions within the content when used on render clients in the network.

Offline version

Many Pandoras Box® Software feature sets are available as an offline version. While offline, you can pre-program and visualize, organize content, and start programming your timeline before you arrive on site, so it's ready when you get there. You can even build Venue Sites and verify Widget Designer automations without access to the full Pandoras Box Software license.
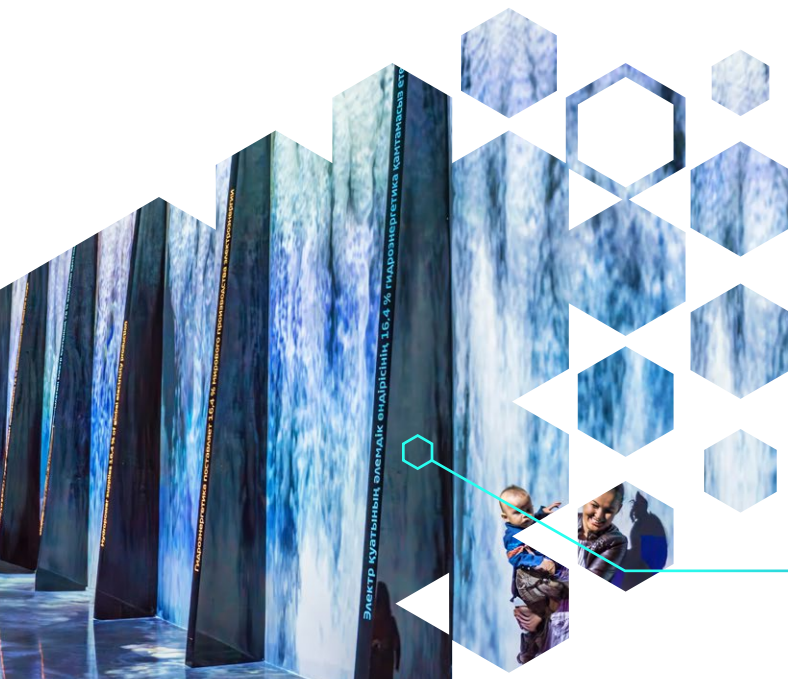
90-day free trial

Did you know you can download a free 90-day trial of the demo version of Pandoras Box Software? It includes the offline version and runs without a dongle.

DOWNLOAD YOUR TRIAL

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VERSION 8
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CHRISTIE®

Pandoras Box synchronises the world's largest spherical building at at Expo Astana, Kazakhstan

Partners: Astel

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