Christie
Pandoras Box

CHKISTIE®

Christie Pandoras Box Software License

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.

One idea. One system. One successful production.

Product highlights

Christie Pandoras Box Software License is the ideal software solution for professionals with multi-media requirements within fixed-install applications, corporate live events as well as various architectural and artistic installations such as museums and theaters. Pandoras Box combines professional features in a high-performance and budget-friendly platform.

One license to do it all

Pandoras Box Software License turns any hardware system into a powerful media server. Offered as only one license, Pandoras Box V8 always includes the entire feature-set.

Unlimited video layers & effects

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

Multi-User Control

Benefit from the combined efficiency of multiple operators. Split workloads into different tasks like warping, content encoding and timeline programming or simply work simultaneously on the same sequence.

Using the multi-user feature, blind programming lets you edit timelines without affecting the current video outputs. This means you can change sequences with a full local preview without the risk of interfering with the live show.

True 3D environment

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

Photo courtesy of Dacoms Technology
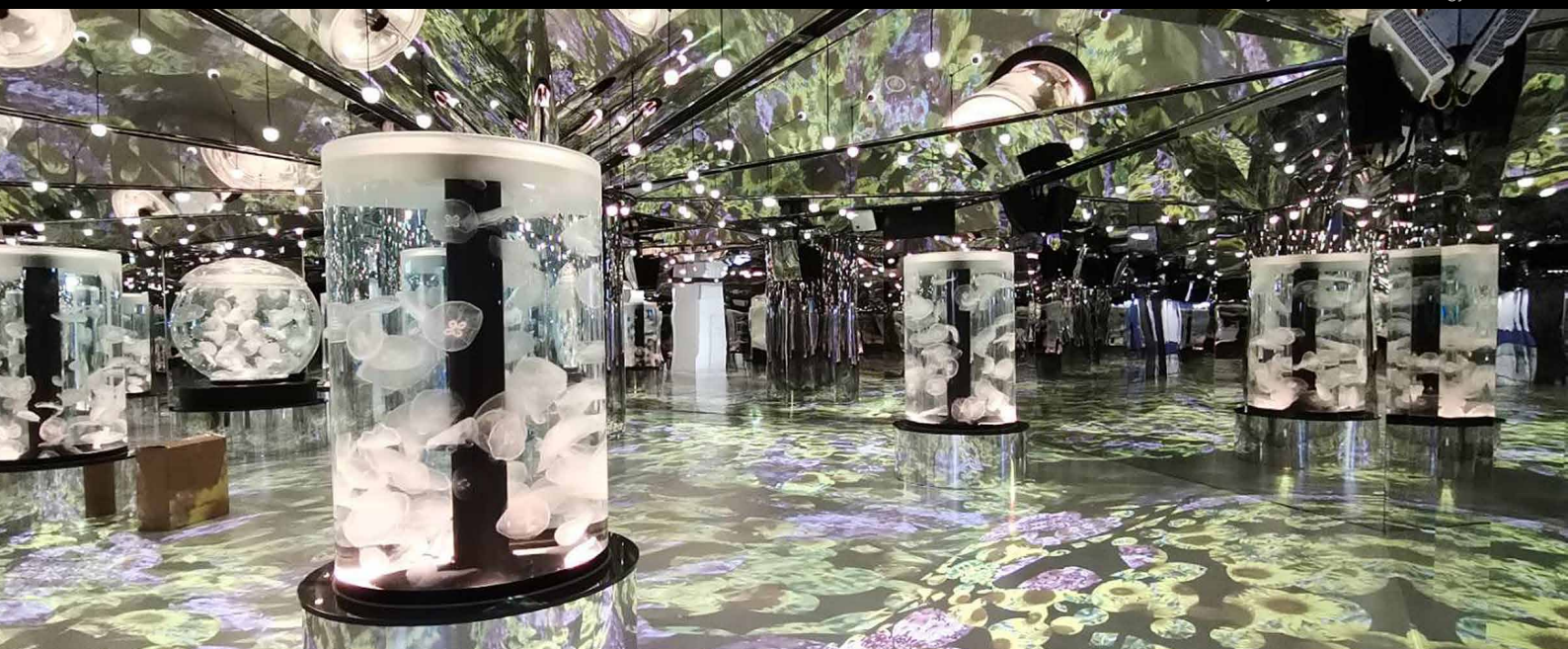
Notch integration

Stunning visual experiences are now possible with the integrated Notch® rendering system. You can create interactive and video content in one unified real-time environment. Couple with Widget Designer and sensors like Christie AirScan, and you can achieve never-before-seen visually exciting and interactive solutions.
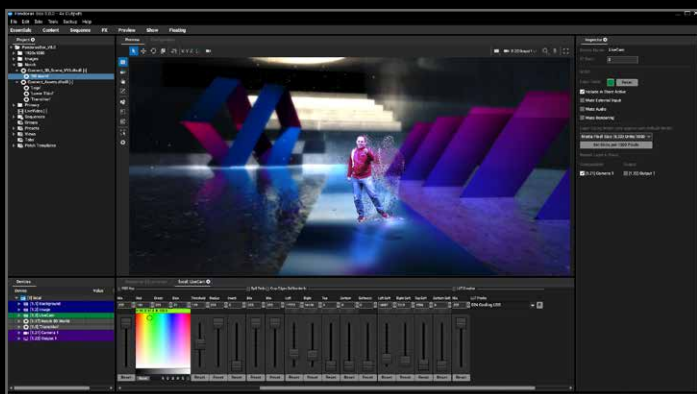
Native Notch® integration in Pandoras Box

Advanced import

Typically time-consuming and repeating actions needed to ingest content are now overcome with the compelling advanced import feature. Allowing for simplified content batch handling, it's a true time-saver as it proposes import methods and offers bulk actions to change settings and import stills, videos and image sequences with limited clicks.

ASIO multi-channel audio

Pandoras Box Software License 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 plan ahead or use spontaneously, you can realize multi-language setups or playback multi-track audio within a concert show right away.

Native Dante audio

With 32 in- 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 Christie Terra® / SDVoE video inputs can be used with the optional Terra input card for Pandoras Box hardware to access a virtually unlimited number of sources in the network.
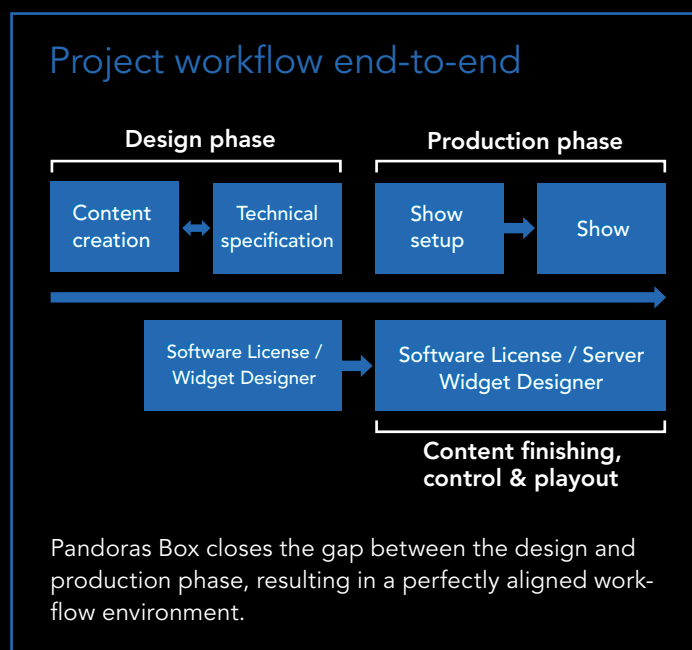
You can use any regular LAN adapter to natively receive compressed NDI® video streams inside Pandoras Box software. Directly connect to remote cameras, and share content from smartphones, Adobe After Effects, Notch, Unreal, Unity, and many other sources.

Real-time effects & blend modes

Pandoras Box features a large number of visual effects including various keying filters accessible to every layer and output, bringing video composition to a new level 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 via 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

Design phase

Production phase

Content creation ↔ Technical specification

Show setup → Show

Software License / Widget Designer → Software License / Server Widget Designer

Content finishing, control & playout

Pandoras Box closes the gap between the design and production phase, resulting in a perfectly aligned workflow environment.

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 FXs.

8K+ playback support

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

Uncompressed quality

Maintain the integrity and quality of your content. With zero compression and no artifacts, delivering stunning visuals is lifted to another quality level. Pandoras Box 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 up to over 1 billion, precise and perfect colors can be displayed. HDR becomes possible with Pandoras Box's 10 bit render engine and is available throughout Christie's entire product offering.

Façade projection mapping - Image courtesy of d'strict

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 perfectly fit your needs.

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 flawlessly handles them all. This includes DPX and TIF image sequences the same way as different flavors of HAP and HEVC codecs.
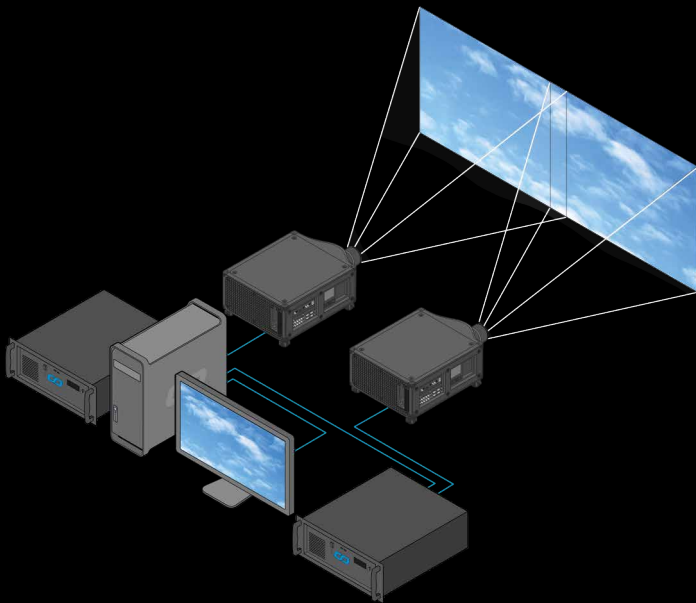
FluidFrame technology

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.

Images courtesy of Float4

Softedge blending & warping

You can set up flat or arbitrarily shaped projections with multiple Software Licenses. You can independently warp, blend, or keystone each output to match any number of geometrical shapes.

No matter what your project specifications might be, Pandoras Box will perfectly fit your individual requirements, and allow you to accurately correct for off-angle distortions or complex warps on-the-fly.

Projection mapping with Pandoras Box

Autocalibration systems

For even faster setup times and to maintain perfect alignment over time, you can apply several automated calibration systems to initially set up or recalibrate the projected images.

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

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

An example of softedge blending

3D projection mapping / object import

Enjoy the ease of setting up 3D projection mappings by taking advantage of the flexible and cascaded 3D environment. Import and manipulate 3D objects to quickly arrange virtual cameras to match projector positions and orientations.

Instant warping / UV mapping

The warping process and its features are directly integrated into the Pandoras Box 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 mappings.
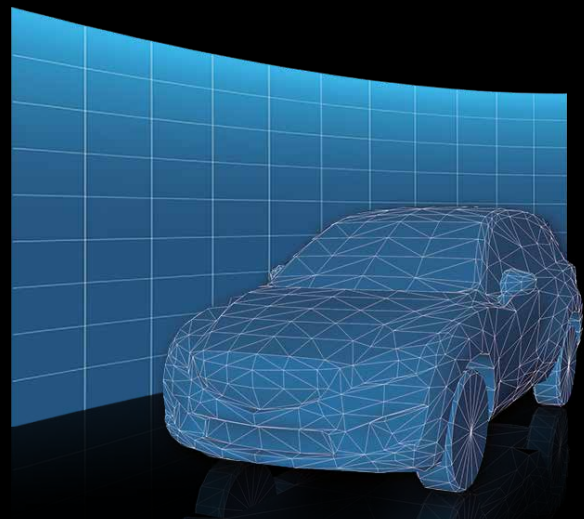

Integrated warping tools within the Pandoras Box Preview.

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, consider and 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.
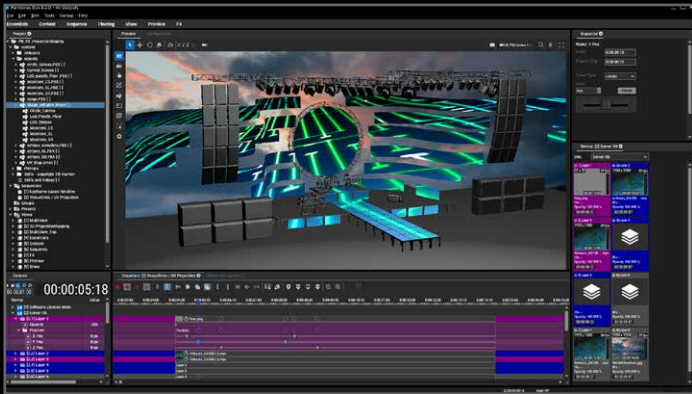
Venue Site previsualization with UV-mapped 3D objects.

Direct control

Pandoras Box lets you choose from a large number of 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 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

Widget Designer is a control surface creation framework for customized show control. You can build technical dashboards or entire show solutions—even ones that can be securely accessed by visitors in public spaces.

Widget Designer perfectly integrates with Pandoras Box, 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.

Optional accessories

- Fader Board and Jog/Shuttle Controller
- DMX Link In USB interface
- DMX Link Out USB interface
- SMPTE Link I/O USB timecode interface

Console mode & advanced patching

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

Software development kit

Pandoras Box includes a software development kit (SDK) that opens the world of any customized or tailored third-party application that's 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.

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, use 2 dongles with 2 licenses each in a single PC system to sum-up the output count and achieve a quad-output system.

Language settings

Pandoras Box is available in 9 different languages:

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

Editable Multi-View with layer parameters

Comprehensive timeline programming

Synchronize unlimited outputs and video layers across multiple servers with ease, with the extensive built-in timeline. You can even program and synchronize external devices such as lighting fixtures or TCP triggers. The frame-based sequence can send and receive SMPTE timecode 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 at a glance. Displaying the fully editable preview in fullscreen helps while warping and for a better overview.

Combining the tracking Multi-User functionality with Multi-View lets you create a remote, fullscreen preview display in order to offload the rendering task from the local master.

Interactive content & 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 by navigating the preview.

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

Pandoras Box Offline Version

The feature-set of the Pandoras Box Software License is available as an offline version. The Offline Version can't connect to servers in the network but can be used for pre-programming and visualization. You can 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 Software License.

Pandoras Box Demo Version

Did you know you can download a free 90-day trial version of Pandoras Box from our website? It includes the Offline Version, running without a dongle.

www.christiepandorasbox.com/support/demo-version

Photo courtesy of the National Museum of Korea

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