

CALIBRATOR

Camera Based Auto Alignment of Warping and Blending of Multi-Channel Projections

Calibrator addresses the challenges faced in projection systems with multiple projectors, particularly in achieving seamless image blending and warping. The software enables precise calibration and maintenance of projection systems, eliminating the need for manual adjustments and ensuring optimal image quality. Calibrator offers advanced features for black level compensation, mechanical and digital blending, and support for any screen shapes. By utilizing fixed installed digital photo cameras, Calibrator achieves pixel-perfect alignment and delivers outstanding visual results.

Key Features

- **Seamless Image Blending and Warping:** Overcome the complexities of manual adjustment by automating the warping and blending parameters for multiple projectors.
- **Maintenance-Free Operation:** Maintain image quality during operation. Reduce the dependency on well-trained technicians and eliminate the need for manual alignment, ensuring hassle-free operation.
- **Enable precise mapping and warping of content onto the screen surface** to accommodate complex projection environments.
- **High-Resolution Content Slicing:** Handle high-resolution content for server cluster by intelligently slicing it into pieces and correctly displaying it on each projector.
- **Camera-Based Calibration:** Utilize fixed installed digital photo cameras that „see“ the entire screen surface to capture test images for calibration. Locate the cameras anywhere, on top of the screen or integrated, without restrictions or limitations. F.e. dome-shaped screens typically require the use of 3 cameras.
- **Black Level Compensation:** Calibrator and Backstage compensate for different black levels caused by remaining light output from projectors when projecting black, especially noticeable in overlapping areas. Camera-based correction also works together with pure mechanical blending masks.
- **Mixed Mechanical and Digital Blending:** Create a mixed mechanical and digital blending approach using Calibrator and Backstage, reducing complexity in mechanical masks while maintaining excellent black and white levels on the screen.
- **Support for Any Screen Shape:** Construct the projection system in the software, including the screen (of any shape), projectors, and cameras. The 3D scene is exchanged with Backstage.
- **Auto alignment feature** analyzes projected images, identifies offset and warping, and adjusts warping and blending parameters to achieve a seamless image on the screen.
- **Easy Calibration Process:** Calibration can be performed at the touch of a button and allows for periodic adjustments to accommodate movement due to heat and humidity effects, or changes in the structure of the building or the screen.

Calibrator is optional and must be licensed separately.

