





## THE GENERATIONS CHANGE, OUR PASSION FOR QUALITY REMAINS

Since our company was founded by Reinhold and Ulrike Stumpfl in the 1970s, they have always been passionate about developing, manufacturing and servicing the best possible products for the AV market.

Together with a constantly growing team of enthusiastic and motivated individuals on one side, and an international partner network in over 60 countries on the other side, we have been collectively pushing the limits of what is technically possible for over 40 years now.

Our company is a true family business, because we believe that the ability to independently make decisions is one of the key success factors in our industry.

Most of our childhood was spent in the various departments of our company. This meant, that when the time came, we did not take over a business from a third party, but were able to conduct a smooth transition, which started many years ago and will continue for some time.

It is wonderful to be able to grow our business with our parents' original values in mind.

In this catalogue, we proudly present our latest media server product line up, which contains truly groundbreaking products, like the new PIXERA software and hardware, our powerful PIXERA two RT server for demanding realtime-graphics scenarios, as well as our award winning RAW servers for uncompressed 8K playback.

Our thanks go out to our partners and friends for their great support.

Our growing team and ourselves are looking forward to exciting new projects, combining your professionalism and creativity with our products and service.

Let's get started!

Tobias & Fabian Stumpfl

[AVstumpfl.com/team](http://AVstumpfl.com/team)

## MEDIA SERVER SOFTWARE & HARDWARE

Live | Event | Theater | Installation | 3D Projection Mapping

Our media server hard- and software is used in a great variety of different applications and markets. Whatever your media production, installation or event production requirements are, our systems have been developed to combine premium quality with great usability.



### SOFTWARE

Professional media playback | Media compositing.  
3D Projection Mapping



### HARDWARE

High-Performance servers | 24/7 | Uncompressed playback | Scalability | Show Control | Audio

# NEXT GENERATION MEDIA SERVER SOFTWARE

**PIXERA** is a 64-bit system for real-time media processing, compositing and management. It is built around the **key theme of usability**. Users can gradually discover the options and features and can smoothly transition from being a beginner to becoming a true specialist. **Actions in the 2D and 3D space follow the same basic mechanisms.** The system was designed so that users can **execute the most important basic actions in record time** and with only a minimum of effort. A radical new interface logic enables even first time users to **intuitively understand the main software mechanics.**

## HIGHLIGHTS

- Revolutionary GUI/usability concept
- Integrated projector and LED databases
- Intuitive 2D and 3D projection mapping workflows
- Powerful 8K Real-Time Render Engine
- Flexible and powerful API that allows external applications to build on PIXERA features
- NDI-Streaming
- Previsualization Video Export
- VIOSO camera calibration



### ▶ SUPERIOR USABILITY

Whether you are working in a 2D or 3D world, understanding this software's main functions is very easy. The GUI design allows for an ultra fast learning process based on a very smooth learning curve. This superior usability is the result of a holistic interface design approach that lets users focus on their actual work instead of forcing them to understand complicated menu structures. Many important basic actions can be performed following a drag & drop functionality.

### ▶ PROJECTOR & LED DATABASES

PIXERA includes projector and LED databases, so that you can easily simulate the real-life environments and technology components you will be working with. Just choose the appropriate projector or LED display model and drag&drop them into your project. Detailed information like „field of view“ etc. will make your life even easier when preparing softedge panoramas or multi-display installations.

### ▶ 3D PROJECTION MAPPING

In addition to offering a great 2D workflow, PIXERA users can also enjoy a state of the art environment for realising advanced 3D projection mapping setups. FBX import, marker calibration and the use of u/v perspective effects are just some of the features that will help users realise breathtaking projection mapping projects.



### ▶ THREE MAIN INTERFACE TABS

PIXERA's three main interface tabs are called SCREENS, MAPPING and COMPOSITING. Every single tab allows for a different point of view and point of access to the overall creative setup.

### ▶ POWERFUL REAL-TIME RENDER ENGINE

The render engine inside PIXERA is based on a 64-bit system architecture and is so powerful that it allows users to play out up to 4x uncompressed 4K (4:4:4) content streams @60 fps when using AV Stumpfl 8K RAW media servers. The engine includes several base level algorithms, replacing standard operating system and driver functions. Power and reliability make PIXERA a great choice when playing out and synchronising content for multi projector and multi display setups.

### ▶ PREVISUALIZATION

Using a geometrically correct 3D space and having the ability to import high resolution 3D objects becomes even more exciting as a way to previsualize projects with the option of exporting your design as a video file. With PIXERA, you can present your project vision and inspire your customer even before your show has started.

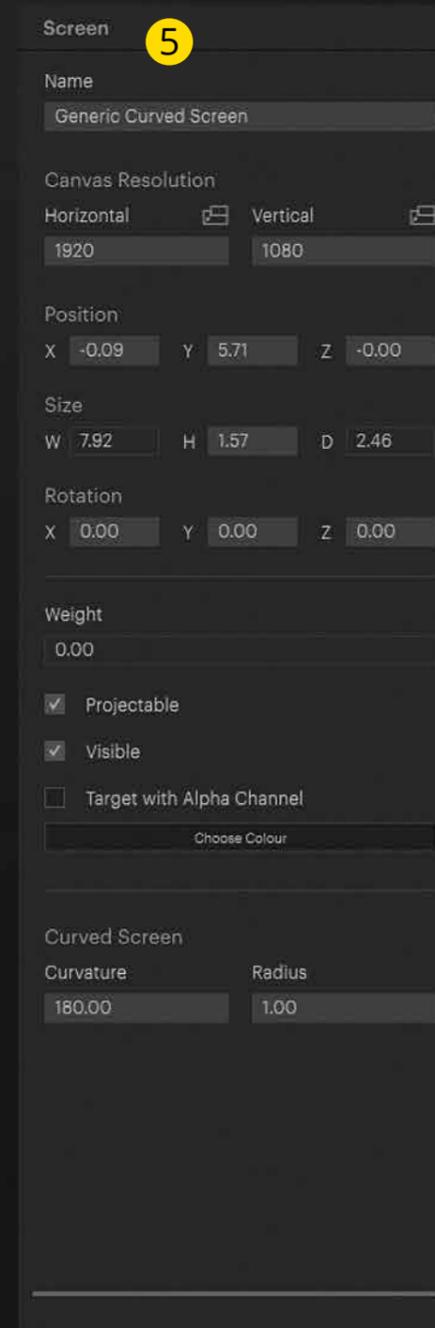
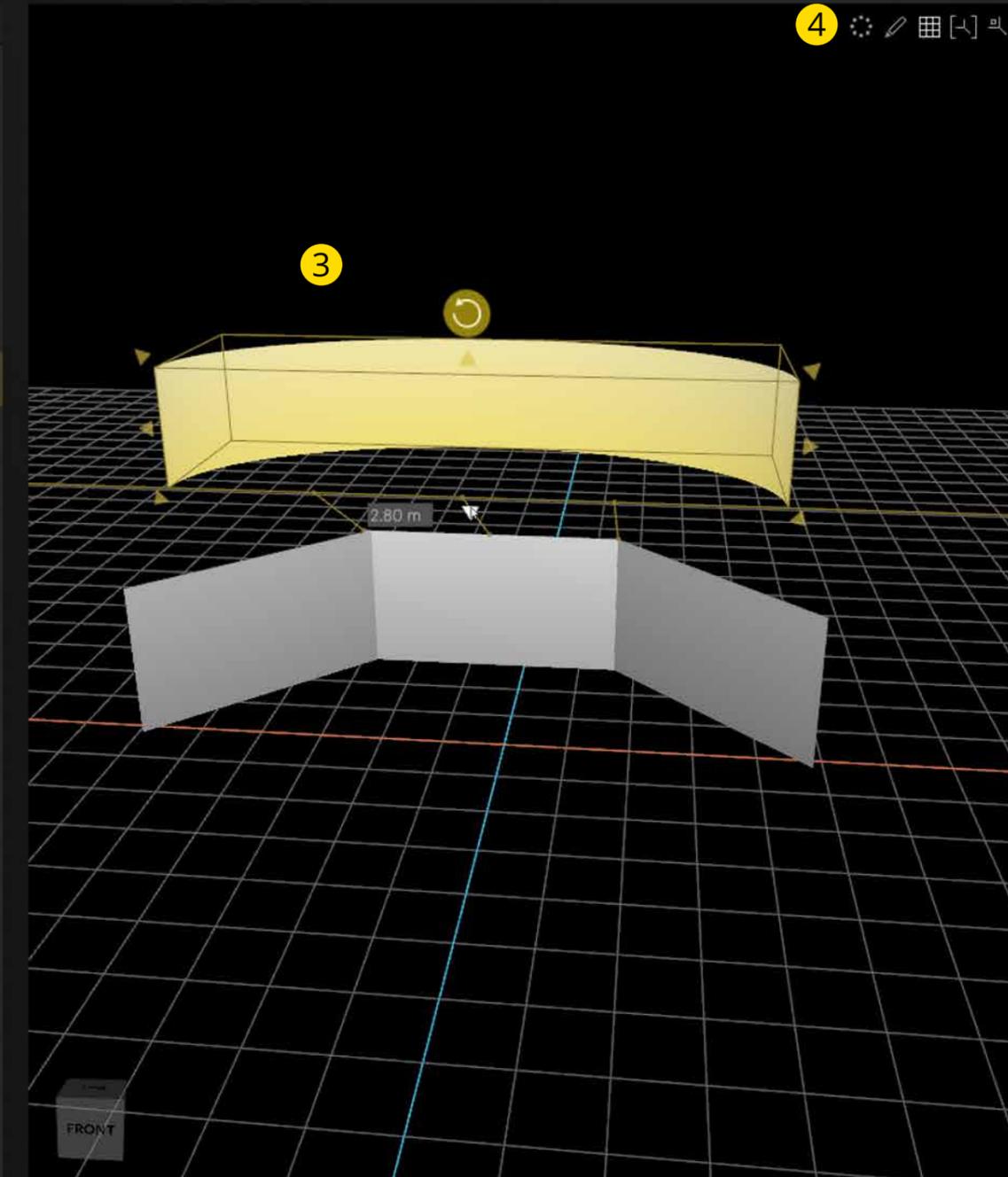
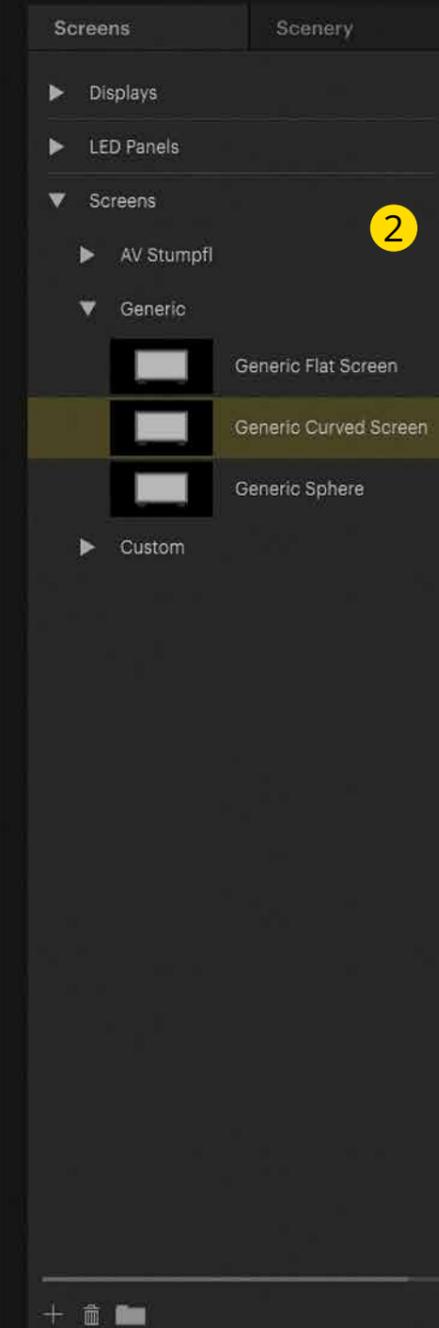


## THREE MAIN INTERFACE TABS - SCREENS

PIXERA's three main interface tabs are called SCREENS, MAPPING and COMPOSITING. Every single tab allows for a different point of view and point of access to the overall creative setup. SCREENS offers you an overview of your project space where you can arrange your screens, LED walls, objects etc.

- 1 The sections and preference pane consists of PIXERA's main programming tabs: Screens, Mapping and Compositing.
- 2 Screens database, LED database and Scenery. Scenery shows all objects placed within the 3D space.
- 3 Geometrically correct 2D+3D Workspace including the navigation cube tool.
- 4 Workspace controls. From left to right: Auto Transform, Edit Mesh, Grid activation, Show all objects, reset camera.
- 5 Inspector: Screens, LED, and display properties as well as additional information can be found here.

Screens Mapping Compositing 1





Projectors Live Systems

1 Favorites

- ▶ Panasonic
- ▶ Barco
- ▶ Epson
- ▶ Sony
- ▶ Optoma
- ▶ Philips
- ▶ Canon
- ▶ JVC
- ▶ LG
- ▶ Casio
- ▶ Norxe
- ▶ Benq
- ▶ Christie
- ▶ Hitachi
- ▶ NEC
- ▶ Pearl
- ▶ Vivitek
- ▶ Acer
- ▶ Generic
- ▶ Digital Projection
- ▶ Coolux

2

Projector

3 Warp 4 Softedge 5 Marker

Resolution

Horizontal	Vertical
1920	1080

Brightness Contrast

6000

Position

X	Y	Z
-0.19	3.09	5.19

Rotation

X	Y	Z
-6.37	-0.24	0.03

Case Dimensions

W	H	D
0.00	0.00	0.00

Output

None

Lens

Generic Lens

Fov  Ratio

## THREE MAIN INTERFACE TABS - MAPPING

MAPPING is where warping, softedge adjustment and output routing happens.

- 1 Projector database & Live Systems. All PIXERA systems are visible here. Their outputs can be allocated to the projectors in the workspace.
- 2 The Mapping workspace refers to the exact same workspace as the one already shown as part of the Screens tab. Viewed from the Mapping tab perspective, this is where the pixel mapping, warping and projector set up happens as part of the same unified workflow.
- 3 Warping → Warping & Projector properties: e.g. position, lens, throw ratio and lens shift.
- 4 Softedge and masking for multiple projector setups.
- 5 Marker: The marker calibration can be used for calibrating projector positions within the 3D space.

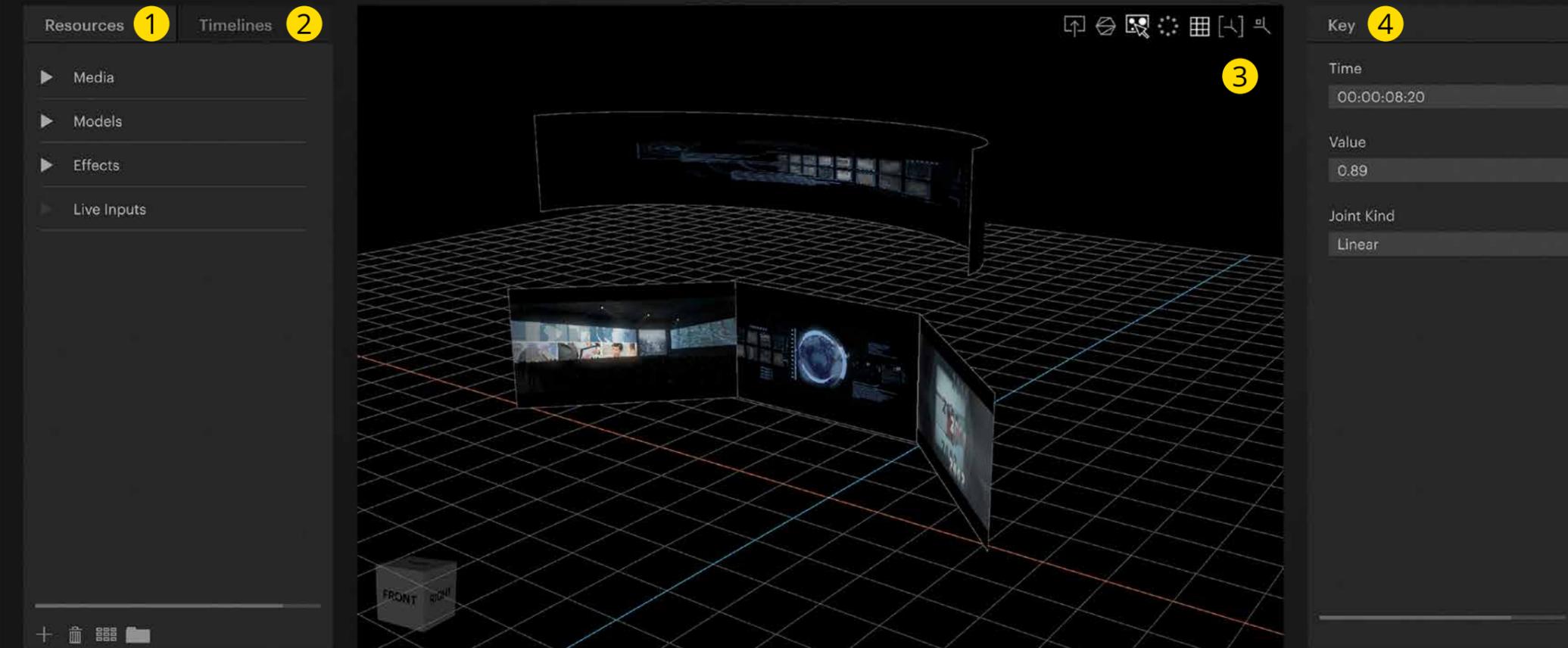


## THREE MAIN INTERFACE TABS - COMPOSITING

Within the COMPOSITING tab you can be creative and use content to create and program your shows.

- 1 Resources: Users can manage and import resources -> content, effects, live inputs, 3D models, Notch Blocks etc.
- 2 Timelines: Here you can create multiple timelines and modify their settings for multi-timeline setups.
- 3 Workspace with the Compositing workspace controls
- 4 The Inspector shows information, settings and controls of the selected sub-structure, e.g. content settings, timeline settings or keyframe settings.
- 5 Timeline: A layer based timeline

Screens Mapping Compositing



## PROJECTOR & LED DATABASES

PIXERA includes projector and LED databases, so that you can easily simulate the real-life environments and technology components you will be working with. Just choose the appropriate projector or LED display model and drag&drop them into your project. Detailed information like „field of view“ etc. will make your life even easier when preparing softedge panoramas or multi-display installations.

## 3D PROJECTION MAPPING

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Screens Mapping Compositing

Screens Scenery

- ▶ Displays
- ▼ LED Panels
  - ▶ Absen
  - ▶ Alabama
  - ▶ AOTO
  - ▶ Barco
  - ▶ Big-Bear
  - ▶ Christie
  - ▶ Clay-Paky
  - ▶ Daktronics
  - ▶ DigiLed
  - ▶ Ekta
  - ▶ Esdlumen
  - ▶ F.P
  - ▶ G-Lec
  - ▶ Galaxia
  - ▶ Hibino
  - ▶ Inarex
  - ▶ Infiled
  - ▶ Innlights
  - ▶ Kindwin
  - ▶ KINESIK
  - ▶ Led-Project
  - ▶ PRG
  - ▶ ROE

LED Panel

Name: C7

Size: W 0.40 H 0.40 D 0.07

Specifications

Display Values per Square Meter

Panel Resolution

Horizontal	Vertical
52	52

Physical Resolution

Horizontal	Vertical
52	52

Pixelcount: 2704 Pixel Pitch: 7

Viewing Angles

Horizontal	Vertical
120.00	120.00

Brightness (nits): 2000 Weight: 5.00

Power Average: 40 Power Max: 120

Projectors Live Systems

- ▶ Barco
- ▶ Canon
- ▶ Casio
- ▶ Christie
- ▶ Digital Projection
- ▶ Epson
- ▶ Hitachi
- ▶ JVC
- ▶ LG
- ▶ NEC
- ▶ Norxe
- ▶ Optoma
- ▶ Sony
- ▶ Philips
- ▶ Benq
- ▶ Pearl
- ▶ Vivitek
- ▶ Acer
- ▶ Generic
- ▶ Panasonic
- ▶ Coolux
- ▶ Everest
- ▶ Favl
- ▶ Wolf Cinema

Projector

Warp Softedge Marker

▼ Warp Settings

Screens Visible to Projector: car\_export1

Screen Mapping is Active

FFD Modifier

Segments: X 1 Y 1 Z 1

Name: PT RZ21K #1

Feed Mode: As Projected

Resolution: Horizontal 1920 Vertical 1200

Brightness Contrast

# NEW PIXERA FEATURES



## LIVE PREVIEW EDITING

This powerful feature lets you edit timelines in the preview window while the output shows content from a different section of the timeline. This allows changes to running shows to be previewed by the operator and then blended into the output on the fly.

## DYNAMIC SOFTEDGE\*

A softedge blend can be calculated automatically per frame, using the projector and screen information. This leads to a very quick setup time for static surfaces as well as giving users the ability to use blends on moving surfaces.



## GAME ENGINE INTEGRATION\*

Pixera will be able to natively host both Unity and Unreal game engines. This gives users the ability to use projects they have created with these powerful authoring and rendering environments.

## DIRECT-API TRACKING SUPPORT\*

A new area of the Pixera API gives more direct access to objects as they are rendered by the engine. It is now possible to realise advanced tracking scenarios. The acclaimed Stage Precision tracking system has been directly integrated into PIXERA.



## BLEND TO TIME / BLEND TO CUE

Click anywhere in the timeline while the show is running and perform a smooth blend to the new position. Perfect for changes on the fly during live shows!

## NDI STREAMING

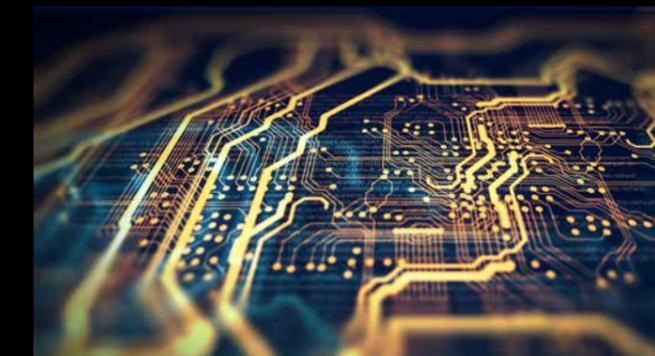
Networked live inputs. Integration of NDI streaming for distributed live applications. The PIXERA outputs can also be sent via NDI.

## VIDEO EXPORT

With the video export feature, you can render and export either the complete 3D venue to impress your customer with a vision of the programmed show, or you could render the content of specific screens to reduce the number of necessary layers as part of a complex composition.

## ART-NET PIXEL PATCHING

Pixel patching tools are seamlessly integrated into the UI. They allow users to reposition content pixels on the output as needed and to patch the result to Art-Net channels.



## SELECTIVE TARGET RENDERING

To optimize your playback performance for large and complex projects, rendering targets can be assigned to screens, servers, or outputs. Additionally layer content playback can be limited to specific servers.



## HIGH QUALITY TEXT

Texts in PIXERA are rendered on the GPU - extremely fast and in an unlimited resolution, no matter how large the individual letters are.

## UNIVERSE SHOW CONTROL

PIXERA integrates the UNIVERSE software solution for realising show control scenarios as part of shows, events and fixed installations.



## BITFOCUS COMPANION

The Bitfocus Companion integration allows PIXERA users to use the Elgato Streamdeck as a professional shotbox surface for switchers and broadcast equipment.

## NOTCH

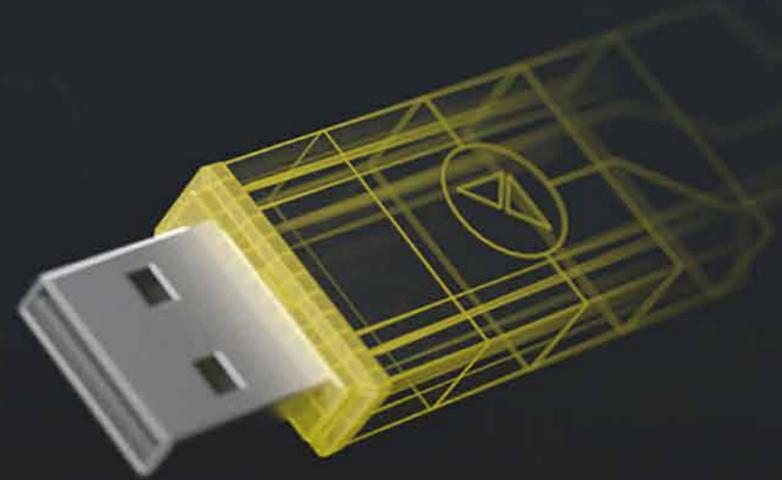
PIXERA users can use exciting Notch projects as part of their PIXERA project workflow.



**\*IN DEVELOPMENT**

for more details contact the AV Stumpfl team: [pro-sales@avstumpfl.com](mailto:pro-sales@avstumpfl.com)

# PIXERA SOFTWARE



## PIXERA SOFTWARE LICENSE OVERVIEW

### ▼ PIXERA DIRECTOR

The PIXERA Director license can be used for pre-visualizing projects and for offline programming, in order to prepare and pre-program shows and content playout scenarios. It also features Master functionality, so that it can be used for controlling multiple PIXERA clients.

### ▼ PIXERA PLAYER

The PIXERA PLAYER license is a versatile and powerful option for a great variety of applications. Please note that image sequences cannot be imported with this license option and that users can use a maximum of two timelines.

### ▼ PIXERA SERVER

The PIXERA SERVER license offers users all features of a standard PLAYER license without timelines being limited and with the ability to import image sequences. This license option is installed on all AV Stumpfl hardware products and is perfectly suited for using uncompressed content (Full HD, 4K, 8K depending on hardware).

Should you have any more questions regarding license options or related topics, please contact us directly: [pro-sales@avstumpfl.com](mailto:pro-sales@avstumpfl.com)



# DEMO VERSION

## INSTALLATION GUIDE PIXERA DEMO VERSION:

**STEP 1:** Download the PIXERA Demo Version.  
([www.AVstumpfl.com/PIXERADEMO](http://www.AVstumpfl.com/PIXERADEMO))

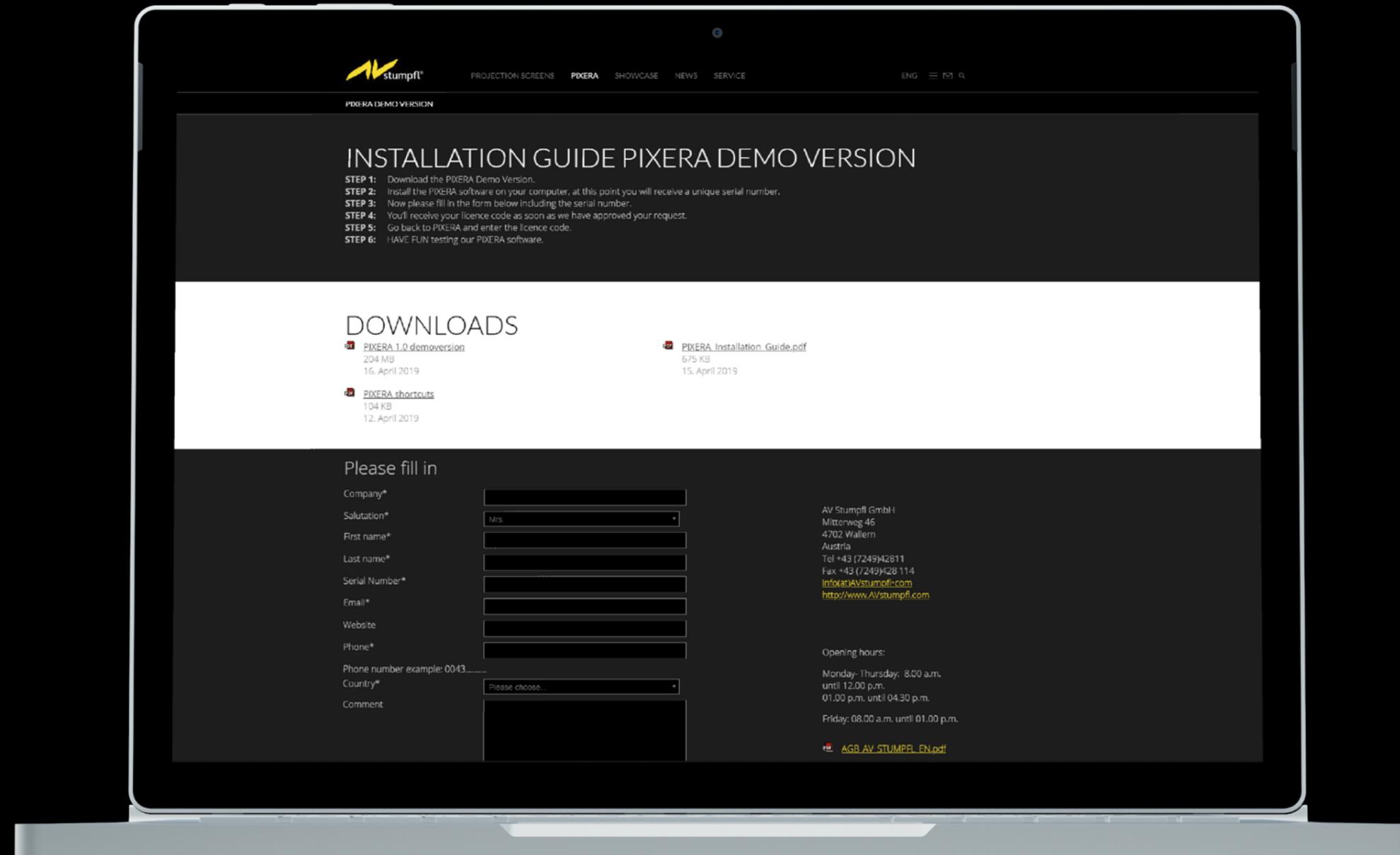
**STEP 2:** Install the PIXERA software on your computer, at this point you will receive a unique serial number.

**STEP 3:** Now please fill in the form below including the serial number.

**STEP 4:** You'll receive your licence code as soon as we have approved your request.

**STEP 5:** Go back to PIXERA and enter the licence code.

**STEP 6:** HAVE FUN testing our PIXERA software.



## YOUR PIXERA COMMUNITY



**QUICK START GUIDE**  
[AVstumpfl.com/quickstartguide](http://AVstumpfl.com/quickstartguide)



**TUTORIALS**  
[AVstumpfl.com/tutorials](http://AVstumpfl.com/tutorials)



**USER FORUM**  
[Technicalforum.AVstumpfl.com](http://Technicalforum.AVstumpfl.com)



**FACEBOOK**  
[bit.ly/PIXERA\\_user\\_group](http://bit.ly/PIXERA_user_group)

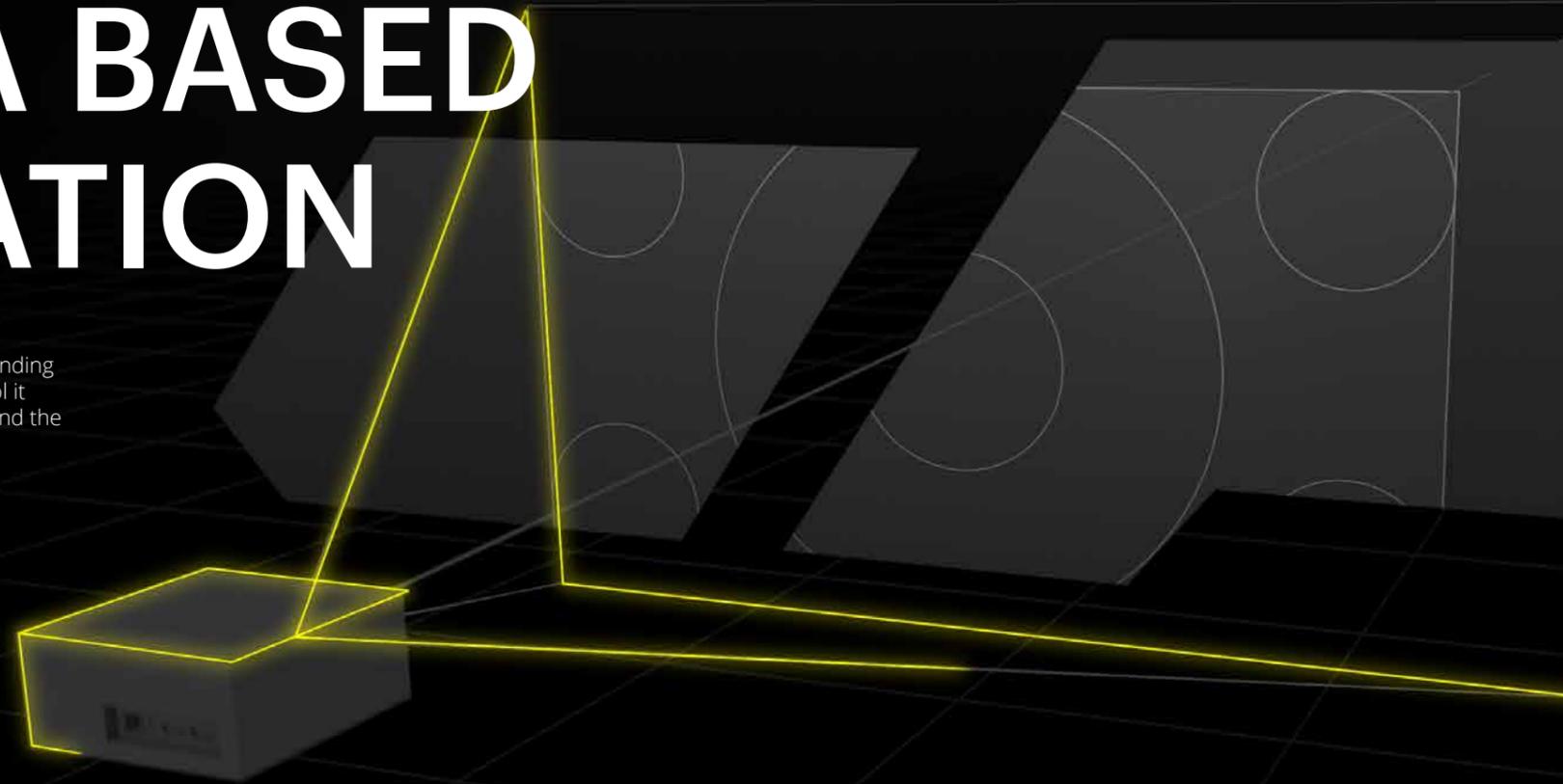


**NEWSLETTER**  
[AVstumpfl.com/newsletter](http://AVstumpfl.com/newsletter)

VIOSO®

# AUTOMATIC CAMERA BASED CALIBRATION

Have you ever aligned multiple projectors with softedge blending and geometry correction? Have you thought about how cool it would be if media servers could automatically warp and blend the projectors using a camera? This has become reality already.



PIXERA



## INITIAL SETUP

All projectors are set up and mechanically roughly aligned. Better mechanical alignment leads to more resolution being available for the final content. The cameras are positioned so that they can "see" the entire projection surface.



## AUTOMATIC CALIBRATION

The software will now project different calibration patterns which are analyzed by the system. Based on that information the software calculates the geometry correction and the softedge blending of the overlapping areas. There are different calibration modes available depending on the intended projection surface: Flat or curved screens, 3D models and irregular surfaces such as building facades or rocks.



## FINAL RESULT

Once the calibration is finished the resulting total output is mapped onto the projection surface. The calibration is stored and can be recalled anytime.

**PIXERA integrates this fascinating auto-calibration technology from VIOSO.**

# PIXERA mini

compact and powerful

PIXERA mini is an ultra-compact media server perfect for digital signage and multi-display applications. The PIXERA mini is a 1U and ½ 19" product. Two PIXERA mini servers can be installed in a 1U 19" rack.

**PIXERA mini is available with 2 or 4 outputs.**

[AVstumpfl.com/PIXERAmulti](http://AVstumpfl.com/PIXERAmulti)





GLOW Eindhoven, OCUBO, 2019

## PIXERA one

Compact, Flexible and User-Friendly

PIXERA one is a compact 1U server model, that can play back **uncompressed 4K at 60fps**.  
With a depth of only 45cm, the PIXERA one is perfect for installation environments.

**PIXERA one is available with 2 or 4 outputs.**  
[AVstumpfl.com/PIXERAone](http://AVstumpfl.com/PIXERAone)



### HIGHLIGHTS

- super compact with a depth of only 45cm, perfect for installations.
- can be upgraded for Uncompressed 4K (4:4:4) 60fps content playback.
- many à la carte options for specifying hardware components
- available with 2 or 4 outputs
- supports Flex technology

**INAVATION AWARDS**  
**TECHNOLOGY WINNER 2019**

## PIXERA two

Compact, Flexible and User-Friendly

PIXERA two is a compact 2U media server system, that can play back **uncompressed 4K at 60fps**. It offers even more customization options than PIXERA one and comes with a redundant power supply.

**This new media server model is available with 2, 4 or 8 outputs.**

[AVstumpfl.com/PIXERAtwo](http://AVstumpfl.com/PIXERAtwo)



### HIGHLIGHTS

- super compact with a depth of only 46cm, perfect for installations.
- can be upgraded for Uncompressed 4K (4:4:4) 60fps content playback.
- many à la carte options for specifying hardware components
- available with 2, 4 or 8 outputs
- redundant power supply
- supports Flex technology



## PIXERA two RT

Fast and Powerful

The PIXERA two RT server offers **unprecedented data read speed and processing power** for extremely demanding **realtime graphics projects**.

**This new media server model is available with 4 outputs.**  
[AVstumpfl.com/PIXERAtwoRT](http://AVstumpfl.com/PIXERAtwoRT)



### HIGHLIGHTS

- extreme processing power for ultra-demanding realtime graphics project
- fastest comparable media server on the market
- ultra fast **NVMe read speed of up to 10GB/s**
- playout of up to **six simultaneous uncompressed 4k60 8-bit** content streams or **four uncompressed 4k60 10-bit** content streams\*
- compact chassis

\*requires PIXERA version 1.6

# RAW SERVER

Uncompromising playback quality

Tired of limited color subsampling, banding effects and jitter when presenting videos on large format displays and screens?  
We are pushing the limits of current video playback solutions with our top level media server platform RAW,  
delivering up to 4 times **uncompressed 4K60 playback (4:4:4)**, or **uncompressed 8K** 8192 x 4320.

[AVstumpfl.com/raw](http://AVstumpfl.com/raw)



## HIGHLIGHTS

- uncompressed video playback
- ultra high resolution up to 8K
- maximum color depth (12 bit)
- realtime color space transformation
- realtime frame blending
- ultra high data rate
- 120 fps playback
- advanced hardware platform



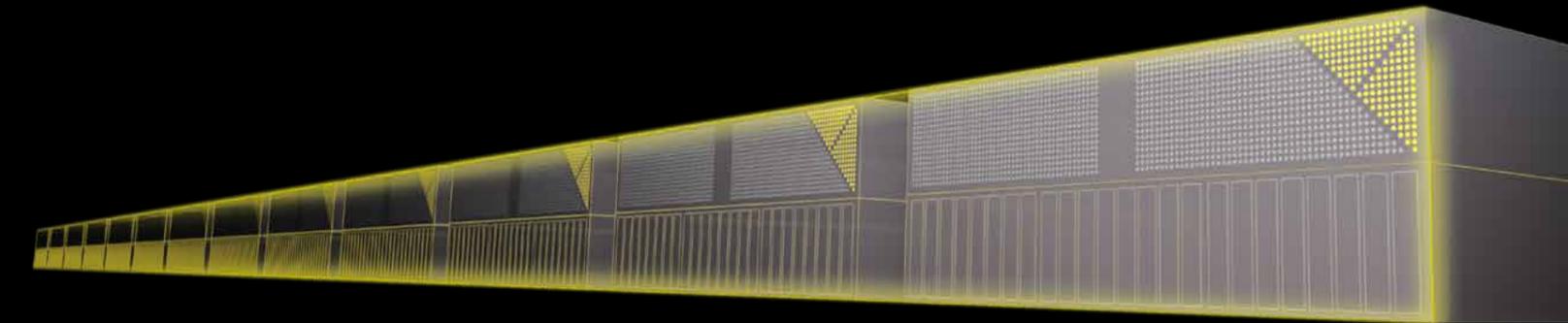
Audi Booth IAA 2015, Frankfurt, DE

# HARDWARE CONFIGURATOR

FIND THE PERFECT SERVER FOR YOUR PROJECTS

PIXERA server hardware offers you a lot of choices when it comes to the specific configuration of the server models that fit your project requirements. In order to make finding the perfect configuration easy and fun, we created a versatile hardware configurator tool, which you can access on our website.

[AVstumpfl.com/PIXERA/configurator](https://AVstumpfl.com/PIXERA/configurator)





AV Stumpfl GmbH | Mitterweg 46 | 4702 Wallern | Austria  
AVstumpfl@AVstumpfl.com | [www.AVstumpfl.com](http://www.AVstumpfl.com)  
tel.: +43 (0) 7249 / 42811 | fax: +43 (0) 7249 / 42811-4

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