





Picture - from left to right:
Tobias Stumpfl (Managing Director), Harry Gladow (Executive Director - PIXERA), Stefanie Niederwimmer (Executive Director - Screens)



AV Stumpfl HQ, Austria

THE AV STUMPFL PHILOSOPHY

Dear customers,
partners and friends,

large scale images that will, once projected onto a screen, create magnificent dreams in the minds of the audience, have always fascinated humans. These images captivate us even more, if we are allowed to experience them as part of a community that is magically connected to us at that moment in time.

We know that audio-visual presentations, immersive experiences and large shows may not be necessary for mere short time survival, but they make us come together. Sometimes they fill us with awe, gift us with inspiration and beautiful memories and allow us to discover new paths in life. It is the stories that touch us, the images that awaken emotions inside, and it is the shared moments that make us laugh.

We at AV Stumpfl want to become a part of our partners' and customers' stories, when they install dreamworlds, create audio-visual illusions and bring people together by telling extraordinary tales.

We aim for an open exchange among friends, because we develop and manufacture our products based on shared ideas and experiences, so that it can be a joy to use them!

Your PIXERA team
www.PIXERA.one/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 | Show Control



HARDWARE

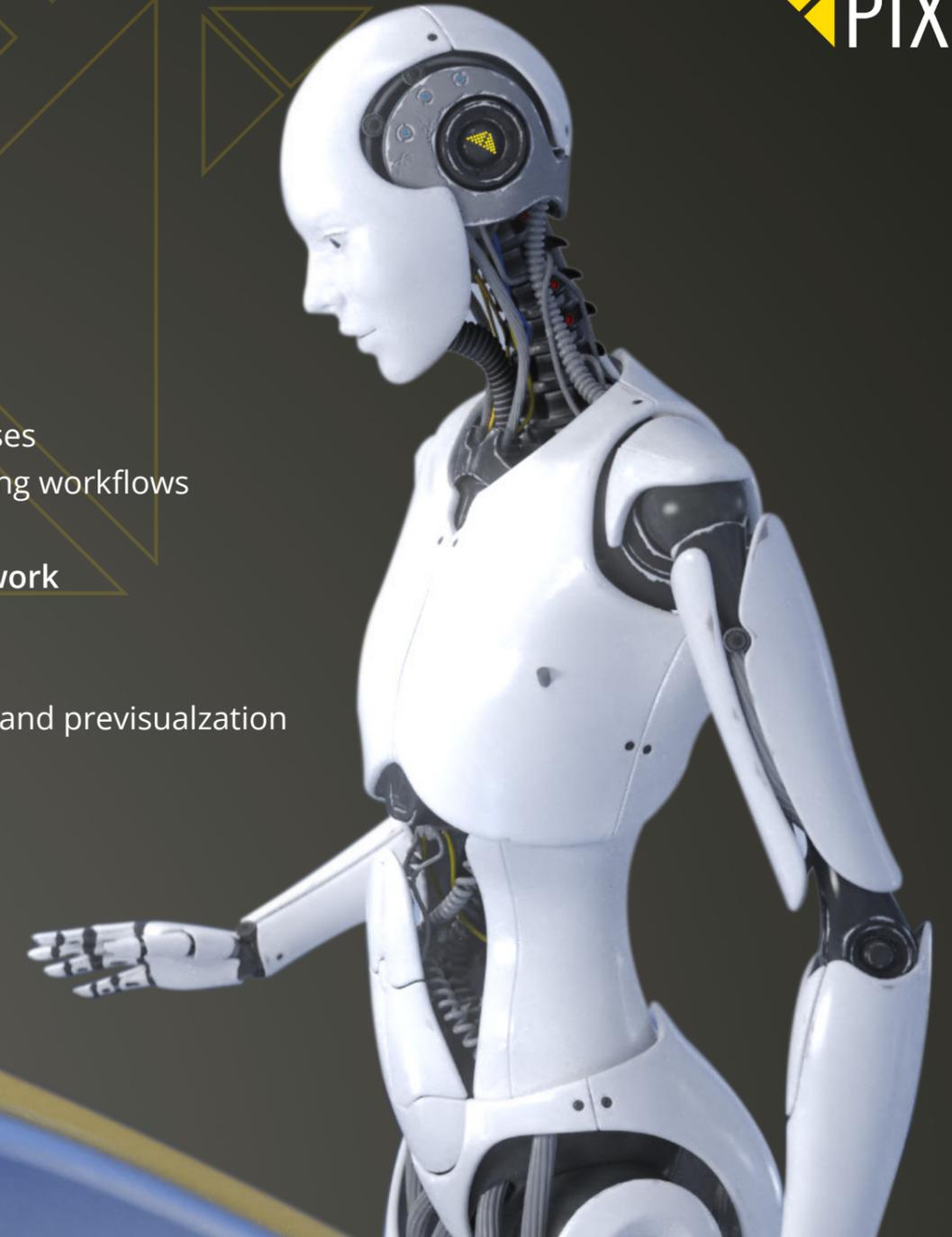
High-Performance servers | 24/7 | Uncompressed
playback | Scalability | Show Control | Audio

NEXT GENERATION MEDIA SERVER PLATFORM



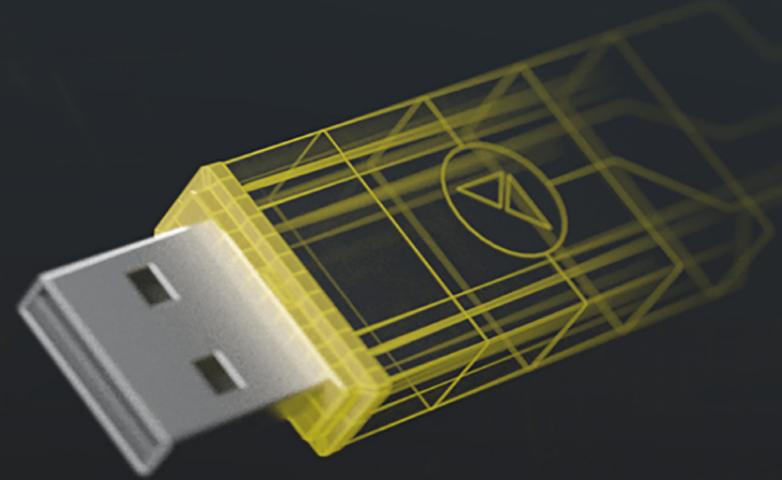
HIGHLIGHTS

- ▼ Revolutionary GUI/usability concept
- ▼ Integrated projector and LED databases
- ▼ Intuitive 2D and 3D projection mapping workflows
- ▼ Powerful 8K real-time render engine
- ▼ **PIXERA control show control framework**
- ▼ XR/VR/AR Virtual production features
- ▼ Multi-User workflow
- ▼ Creator version for preprogramming and previsualization



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.**

PIXERA SOFTWARE



PIXERA SOFTWARE LICENSE OVERVIEW

▼ PIXERA CREATOR

A powerful pre-programming tool, available for FREE.

▼ 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



MAIN FEATURE HIGHLIGHTS PIXERA 2.0

FREE UPDATES FOR OUR PIXERA SERVERS



MULTI-USER

Update entire projects, sync only certain aspects of a project, like e.g. projector warps or continuously update all systems with all changes.



DRY CLIENT PROGRAMMING

Create live system placeholders from templates, complete with all the properties of a specific hardware setup, but independent of the existence of real machines. Build your show configuration and then assign live system IPs as needed.



BACKUP

Use Control to detect Director failure and allow a different Director to take over. Multi-user functionality ensures that all Directors are up to date and ready to fully replace a downed system.



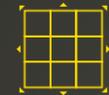
LAYER MAPPING EFFECTS

Go beyond screen group perspectives with layer mapping effects, which provide complete freedom to map content pixels to screens, based on the position of the screens in space.



DMX INPUT RECORDING

Efficiently record DMX data as it enters the system, filter it to remove noise and then create timeline clips that replicate the DMX input.



CONTROL PRESET GRIDS

This Control UI functionality offers you presets for a wide range of PIXERA content.



SMPTE HOT REGIONS

Define time code ranges in which a timeline reacts to SMPTE input.



PERSPECTIVES FOR SCREEN GROUPS

In PIXERA 2.0 each screen group can have an independent set of perspectives that determine how layers are seen through the screens they appear on.



UNREAL ENGINE 5.2

Support for the 5.2 release of Unreal Engine when hosting Unreal as a compositing resource.



STUDIO CAMERA POSITION-DEPENDENT WARPS

Fine-tune camera calibration by associating different positions with 2D corrective warps of the camera output.



AUTOMATED COLOR CALIBRATION

Automatically adapt LED output so that a studio camera sees the correct colors as given in a virtual studio environment.



TIMELINE SPEED

Smoothly adjust the speed for an entire timeline.



LTC AUDIO

Longitudinal Time Code (LTC) via Audio Input. Receive LTC directly from a server's audio input card.



FILE VERSIONING

Manage different versions of content assets via the PIXERA UI.



PREVIEW CAM

Different viewpoints can be saved in the 3D space, which can also be animated and played out via NDI.



CONTROL API BROWSER

A rich API exploration UI that allows users to quickly find and configure Control actions for use in UI Builder interfaces and Lua scripts.



CONTENT ENCRYPTION

PIXERA can encrypt content so that it can only be played out by the engine itself.



CONTROL TRACKING INTEGRATION

Native integration of tracking protocols such as SPNet, BlackTrax, TrackMen, Optitrack, Mo-Sys, FreeD, Stype, PSN.



HEAT MAPS

Based on the projector data and the position of the projector in the 3D space, LUX values for screens can now be calculated.



GUI LOCK

Create a code to lock and protect your general user interface from unwanted changes.



LAYER REFERENCE RESOURCE

Assign a resource to a single layer and use it as texture on multiple other layers in your project - with only minimal additional render processing.



MULTI RESOURCE

A split resource can now be handled like a clip.



POLYGONAL WARPING

Create different shapes on the outputs and apply additional warpings to them.



AUDIO OVER CLIENTS

Play out audio files on the soundcards of other clients. Each client can play 128 audio channels.



CUSTOM TEST PATTERNS

Users can individually adjust test patterns for warping and pixel mapping.



CONTENT REMAPPING

Makes it possible to define multiple areas within a content frame, and to position them separately in the compositing space. Users can directly deal with mappings at the content level.

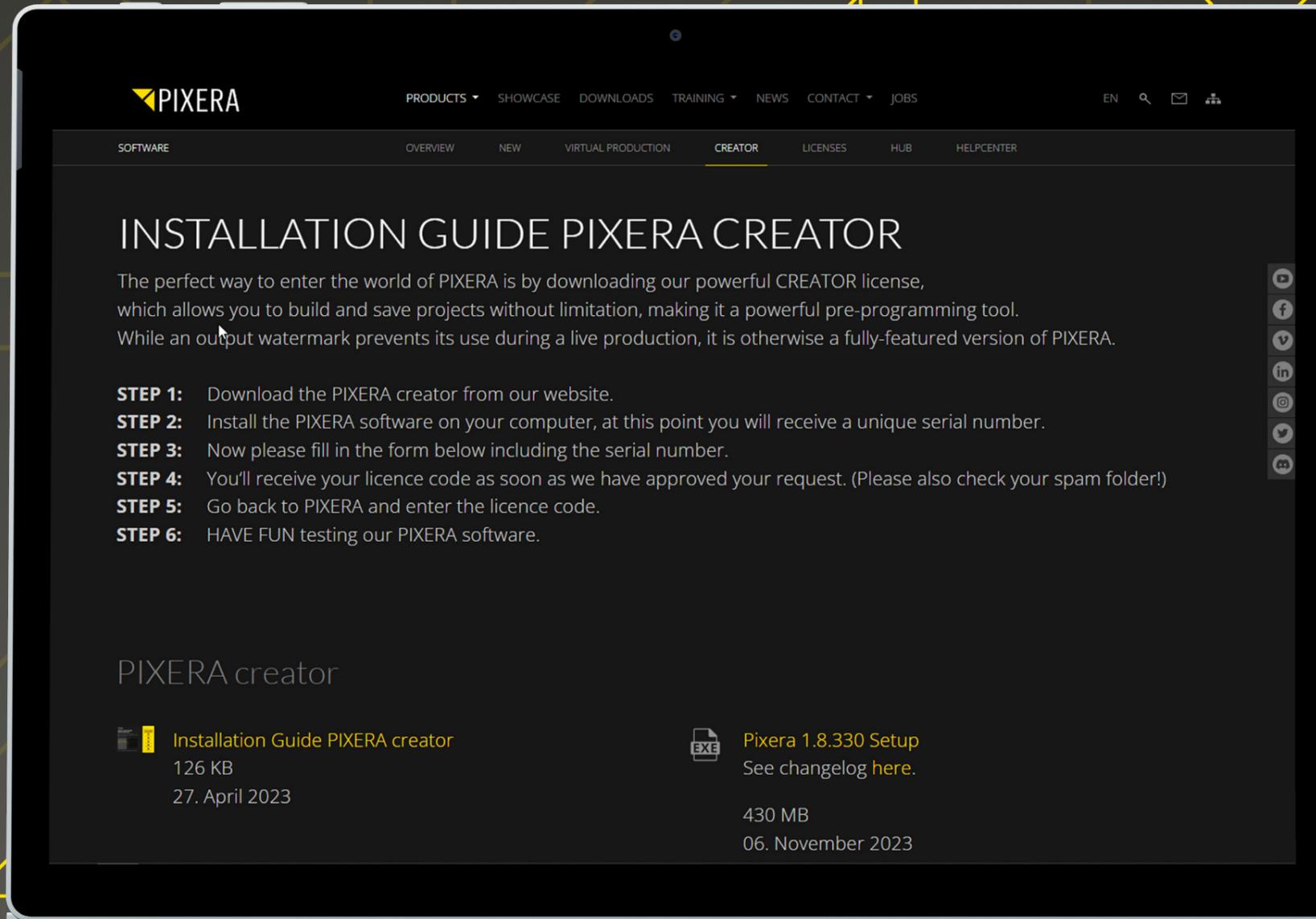


CREATOR

Our **FREE** CREATOR license allows you to build and save projects without limitation, making it a **powerful pre-programming tool**. While an output watermark prevents its use during a live production, it is otherwise a **fully-featured** version of PIXERA.



INSTALLER



YOUR PIXERA COMMUNITY



INSTAGRAM

<https://www.instagram.com/pixera.one>



TUTORIALS

www.PIXERA.one/pixera-tutorials



DISCORD

<https://discord.gg/3Bqubwa7N3>



FACEBOOK

www.PIXERA.one/usergroup



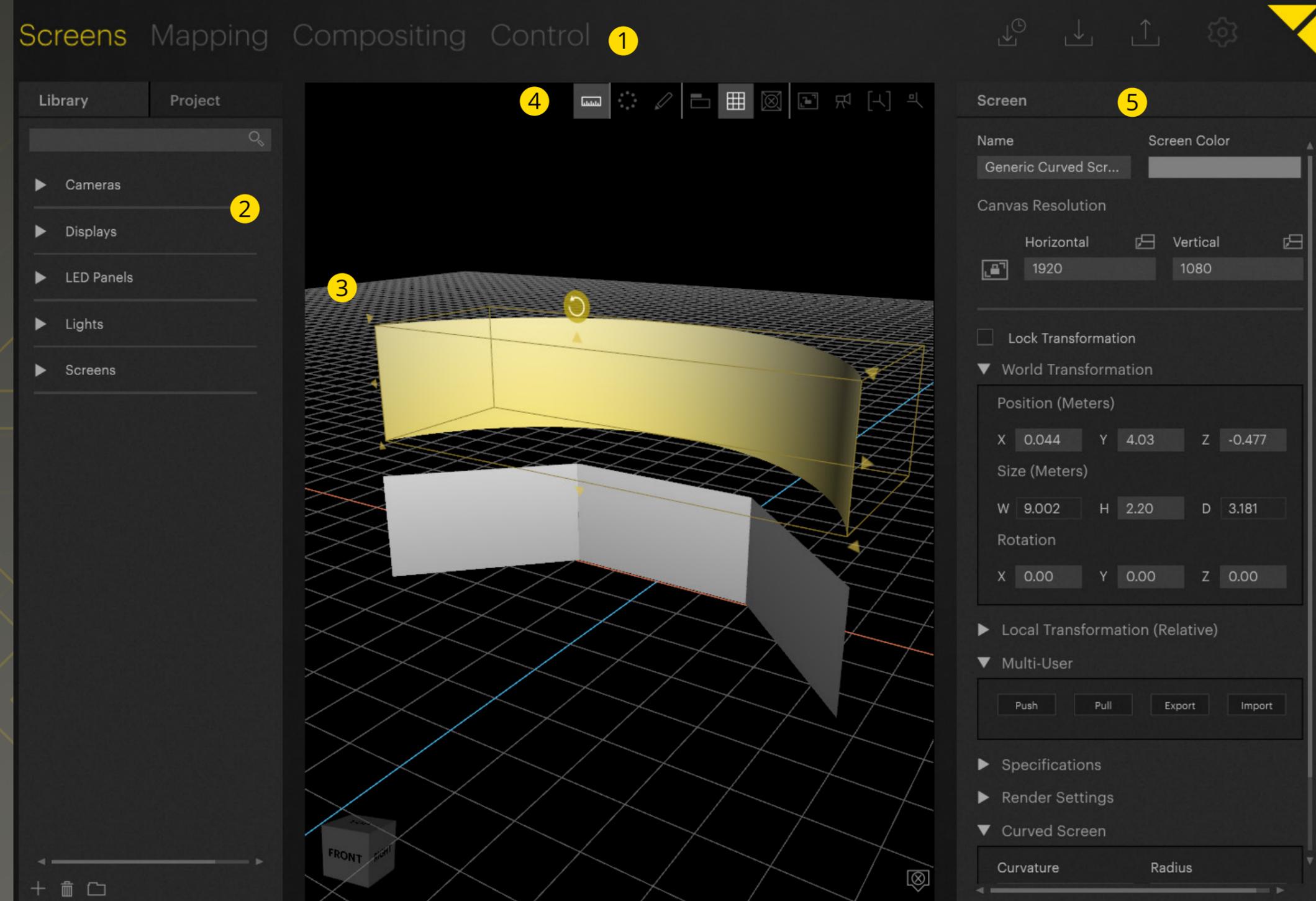
NEWSLETTER

www.PIXERA.one/newsletter

MAIN INTERFACE TAB - 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, Compositing and Control.
- 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.



Library Project Live

panasonic pt **1**

- PT DX610 L/S
- PT DX800L/S
- PT DX810 L/S
- PT DZ10 K/E/
- PT DZ110XE
- PT DZ12000E
- PT DZ13 K/E/
- PT DZ16K
- PT DZ16K2
- PT DZ21 K /E/
- PT DZ21 K /E/
- PT DZ21K2 / E
- PT DZ21K2 / E
- PT DZ570E/U
- PT DZ6700E/

Preview I/O Routing

Generic Flat Screen

2

Projector **3** **4** **5**

Setup Warp Softed Marker

None

Selected Screen Mapping

Generic Flat Screen

Screen Mappin... Bypass

Render Settings

Color Space

Modifier Stack

Display Control Points on Output

Add Modifier

Vertex FFD

FFD Modifier

Name

FFD Modifier

Segments

X 1 + - Y 1 + - Z

Interpolate Control Points betwee

MAIN INTERFACE TAB - MAPPING

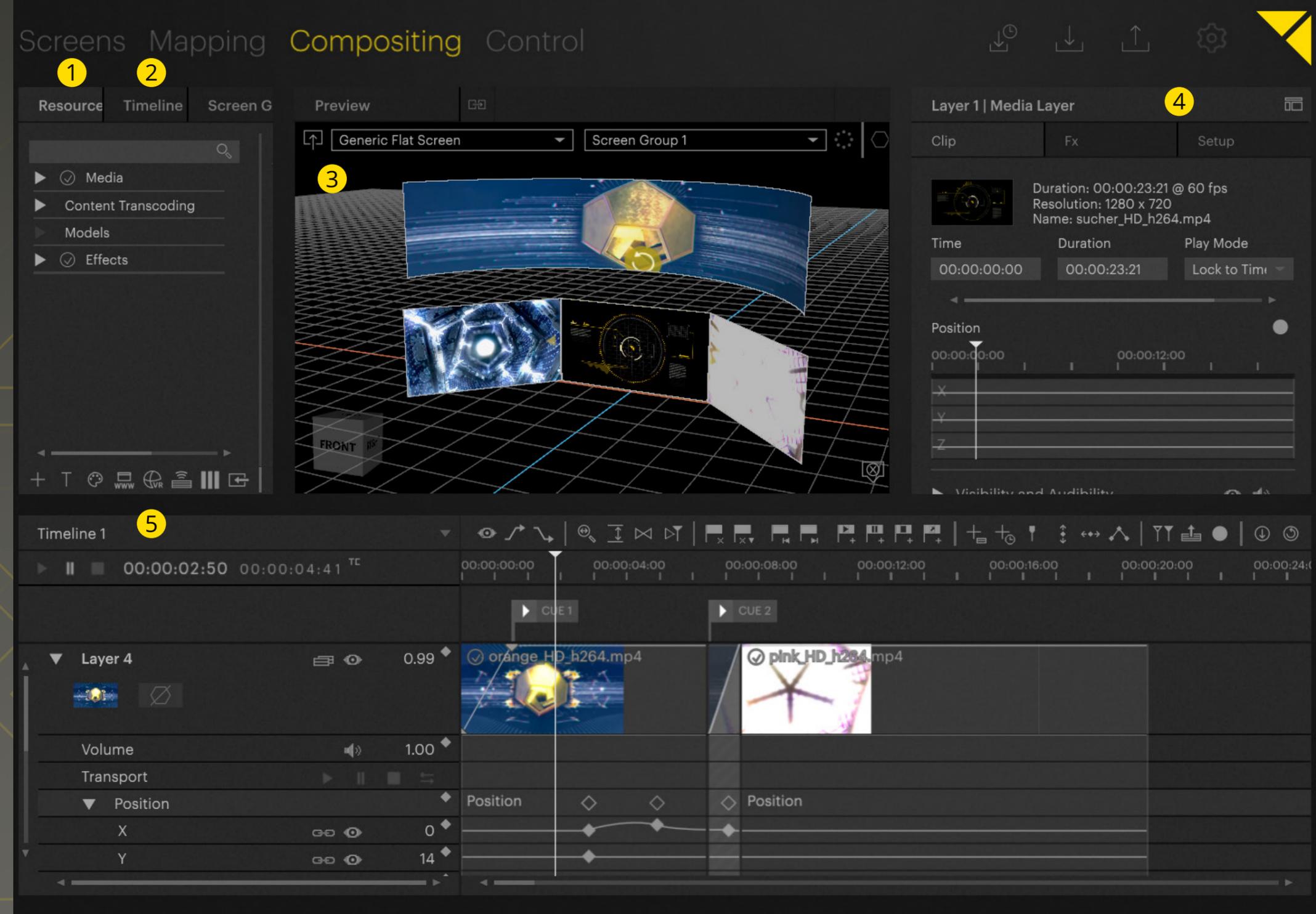
MAPPING is where warping, softedge adjustment and output routing happens.

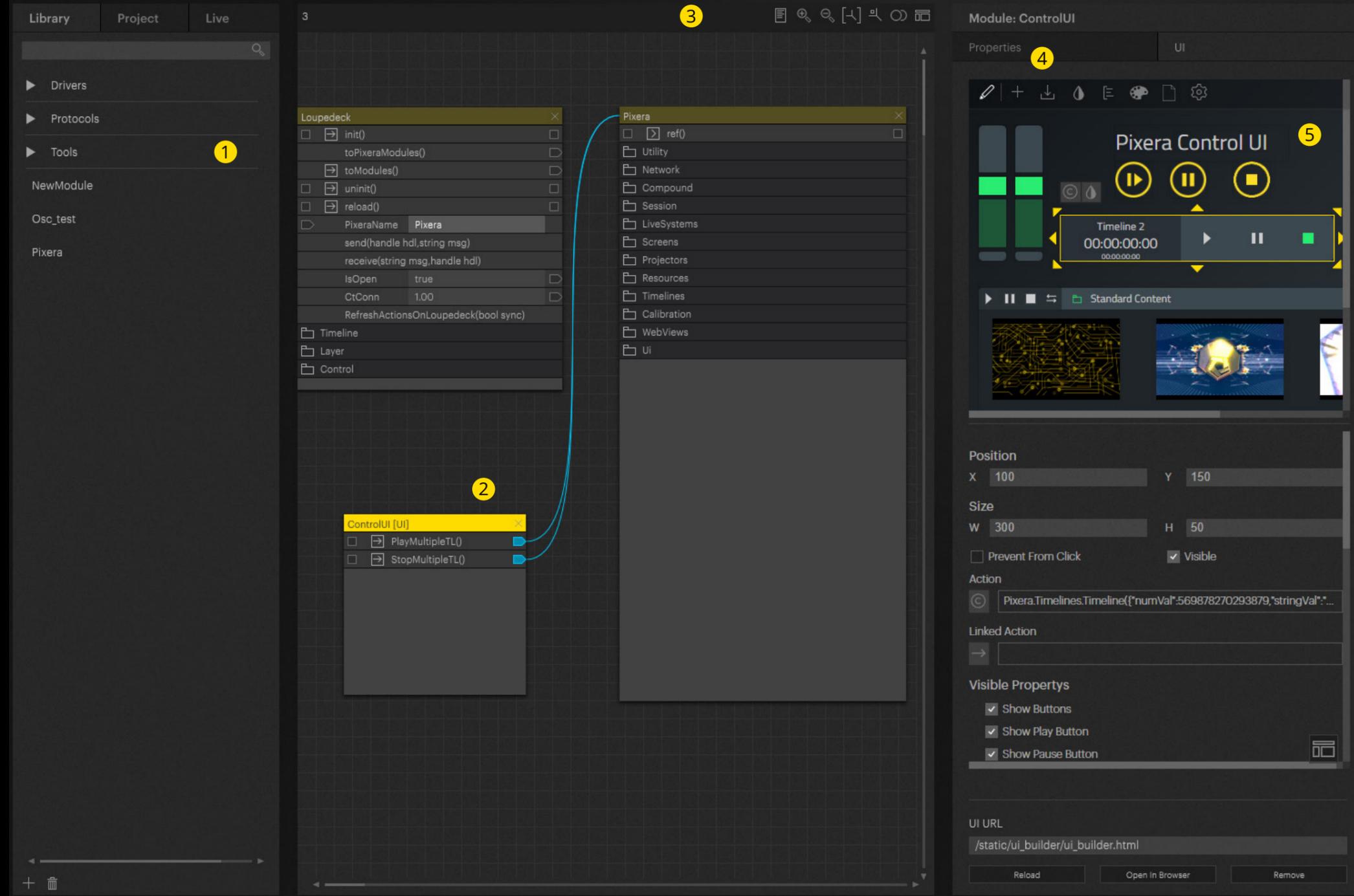
- 1** Projector database & Live Systems. All PIXERA systems are visible here. Their outputs can be allocated to the projectors in the workspace.
- 2** The Mapping workspace refers to the exact same workspace as the one already shown as part of the Screens tab. Viewed from the Mapping tab perspective, 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.

MAIN INTERFACE TAB - 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





1

2

3

4

5

Module: ControlUI

Properties

UI

Position

X 100 Y 150

Size

W 300 H 50

Prevent From Click Visible

Action

 Pixera.Timelines.Timeline({"numVal":569878270293879,"stringValue":...})

Linked Action

 []

Visible Propertys

Show Buttons

Show Play Button

Show Pause Button

UI URL

/static/ui_builder/ui_builder.html

Reload Open In Browser Remove

MAIN INTERFACE TAB - CONTROL

Take advantage of PIXERA Control's powerful features to create demanding show control and tracking solutions on the fly.

- 1 The library contains available device drivers, protocol modules as well as tools. User created modules can be imported as well as exported. The project tab provides an overview of the modules that have been used.
- 2 The workspace is home to the modules that are being used and to the PIXERA API browser. Simply add modules via drag and drop and connect available modules to transfer data.
- 3 Workspace navigation tools help with the general workspace overview. Reset the camera, show only in and/or out connections.
- 4 The inspector to the right contains information about the selected modules. Utilize the new property builder to customize the modules available to you.
- 5 Every module can be set up with its own User Interface. Utilize Control's powerful UI builder to create responsive interfaces. The interfaces can be accessed over the network from any computer on the network.

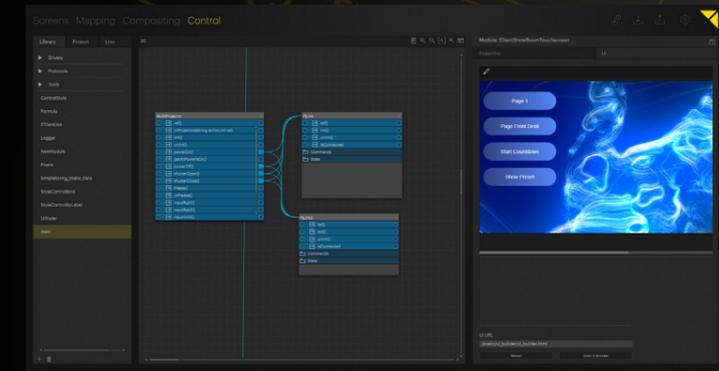


PIXERA CONTROL

PIXERA users will notice a new tab in the main PIXERA interface. This „control“ tab is your gateway to a user friendly and versatile platform that allows you to **interact more directly with the incredibly powerful PIXERA API**.

One could also call it a **distributed integration and control framework** that empowers users to seamlessly **host new functionalities** within PIXERA and to **control all aspects of an extended project environment**. Anything you create and integrate can be distributed across your connected systems and shares itself.

www.PIXERA.one/PIXERAcontrol



PIXERA CONTROL LICENSE OPTIONS

PIXERA CONTROL GATE

- ✔ included in every PIXERA Version
- ✔ Import of custom modules
- ✔ Restricted to 10 Modules used in a project
- ✔ Restricted to 1 master (local)
- ✔ Basic timeline remoting from PIXERA CORE/ENTERPRISE

PIXERA CONTROL CORE

- All the GATE functionality plus:**
- ✔ Unlimited amounts of modules in a project
 - ✔ Export and share custom created modules
 - ✔ Unlimited PIXERA module remoting on multiple masters
 - ✔ Standalone: Timeline for Data Layers

PIXERA CONTROL ENTERPRISE

- All the CORE functionality plus:**
- ✔ Advanced remoting access
 - ✔ Support Camera Tracking modules:
 - ✔ Optitrack
 - ✔ Stype
 - ✔ Mo-Sys
 - ✔ Trackman
 - ✔ Anti Latency
 - ✔ Portal/User Access Management
 - ✔ Unlimited remoting of all individual modules on multiple masters

NOTE: A PIXERA Control license has to run in Master mode and cannot run on a PIXERA client!

PIXERA CONTROL INTEGRATION



LOOPDECK



OptiTrack

ARRI



CHRISTIE

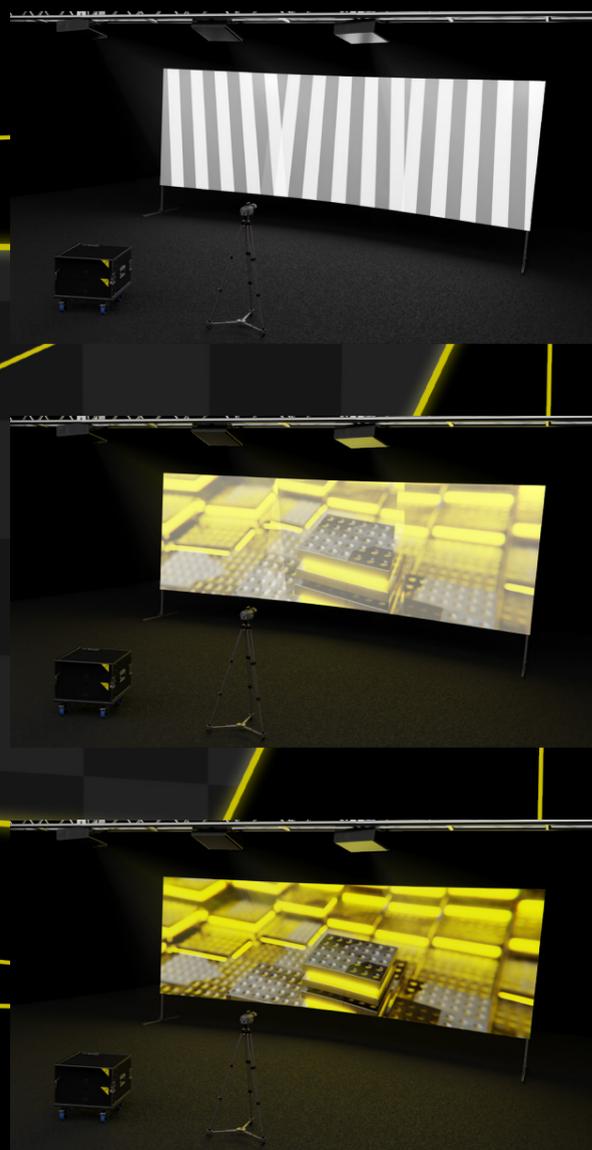
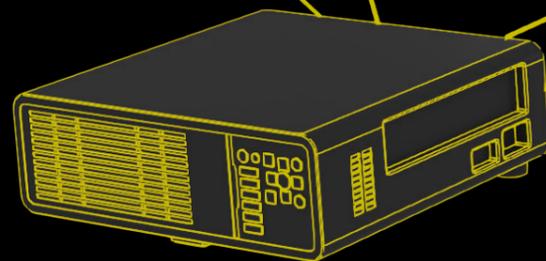
VIOSO



Please note, that this list is continually evolving.

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.



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 the powerful auto-calibration technology from VIOSO.



PIXERA

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VIRTUAL PRODUCTION

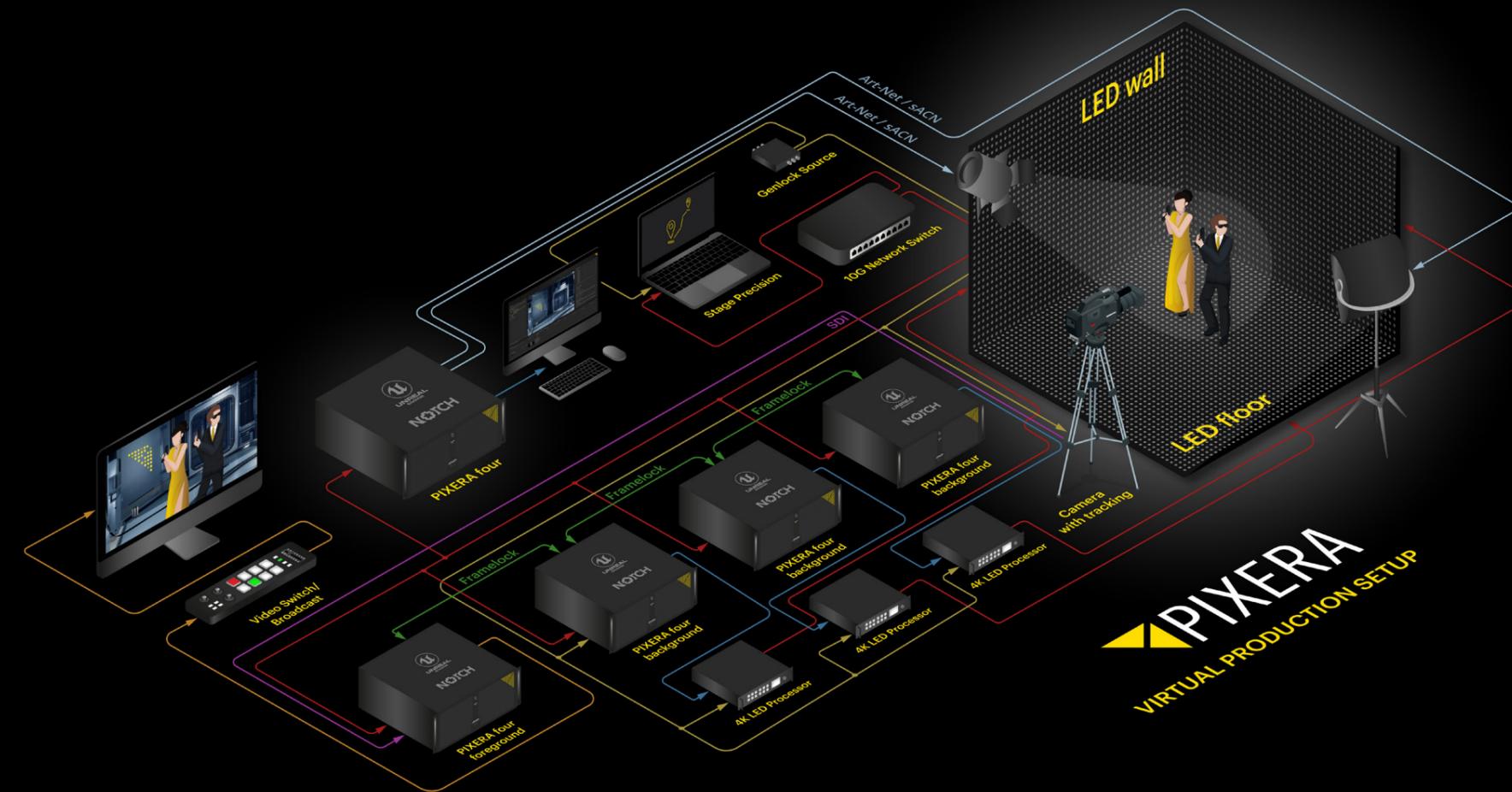
PIXERA is used in high-end **LED volumes** around the world as a powerful single solution; handling video playback, **real-time content**, and the combination of both.

Users can seamlessly switch between PIXERA and the natively integrated **Unreal Engine** without changing any network or graphics settings. The ability to **import custom 3D objects, LUTs, OCIO files, GLSL shaders**, etc. allows for extensive custom tailoring from project to project.

Crucially, for many studios and production companies who might already own heavy duty processing hardware, PIXERA is also available as a software only solution that can be installed on existing equipment.

With PIXERA Control users are empowered to create **simplified and mobile UIs**, that give clients and creatives the ability to intuitively interact with content in real-time, **live on set**.

PIXERA's highly flexible approach to **colour correction and management** is another key reason for its growing popularity in the virtual production community. Users can easily apply predetermined colour settings to achieve striking, realistic results that maintain consistency.



VIRTUAL PRODUCTION SETUP (UNREAL)

- ▶ One PIXERA four director is needed as a master for your preview.
- ▶ Each one of the LED walls needs its own PIXERA four for the background and back projected camera frustum.
- ▶ UNREAL (plug-in) renders on PIXERA four as a "resource-as-compositing" integration.
- ▶ For mixing the camera live signal and foreground, a dedicated PIXERA four server with a live capture card is necessary.
- ▶ The mixed output can then be fed to your video switcher.
- ▶ Stage Precision is used to feed tracking data (Mo-Sys, Stype, Optitrack,...) via direct API to PIXERA.
- ▶ Genlock has to be connected to your camera, tracking system, LED processors and one of the PIXERA clients.
- ▶ FrameLock has to be used to sync the client servers.



RESOURCE AS COMPOSITING

„Resource as Compositing“ is a workflow feature that empowers PIXERA users to employ and **interact with 3D worlds originating with other software environments (e.g. Unreal, Notch)** in a simple and extremely effective way. PIXERA users have had the opportunity to „dive into“ virtual screens since version 1.0, where they would find a full 3D compositing space, that does not only allow for the implementation of video content, but of textured 3D objects as well.

With version 1.8, **resources that contain their own 3D worlds have been integrated in a way so that their compositing is seamlessly combined with PIXERA.** Navigating inside the preview, editing perspectives inside the virtual world and a host of other functionalities all happen by using familiar PIXERA tools. It's even possible to **place 3D objects and videos from PIXERA inside a compositing** originating with one of the aforementioned resources. The ability to **handle 3D scenes from different engines** as compositing lays the foundation for using these resources as part of PIXERA based productions in a **user-friendly and truly effective** way.

UNREAL CONTENT PLUG-IN



UNREAL
ENGINE

By using the „Resource as Compositing“ feature, **Unreal scenes can be displayed within PIXERA.** In addition to this, AV Stumpf developed a **dedicated plug-in for the Unreal Engine** that makes it possible to **edit scene properties directly from PIXERA.** The plug-in can be used to e.g. move Unreal objects or adjust lighting settings.

The **scene properties appear in PIXERA as part of a layer** onto which the resource has been placed. This way, PIXERA users can use timeline tools to manipulate the virtual worlds before them. One could summarise the possibilities within PIXERA in this regard as creating a **powerful and integrated editing environment**, that allows for concentrating on the ultimate project/show experience to be created.

☰ PX4-24162
10.4.0.52

🔍 Search...

🖥️ PX4-14957
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🖥️ PX4-22391
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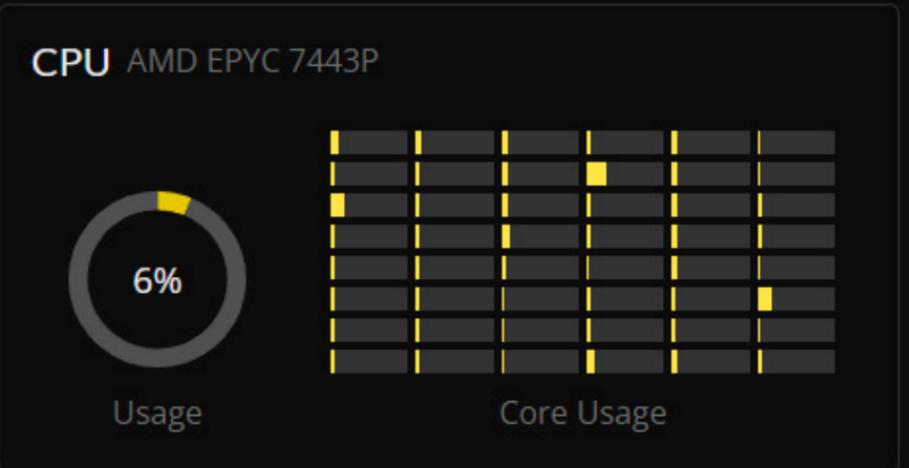
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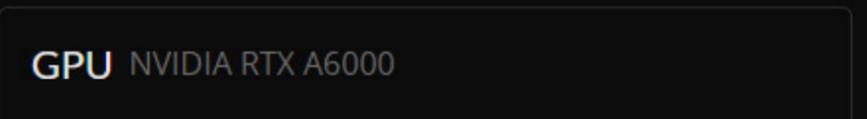
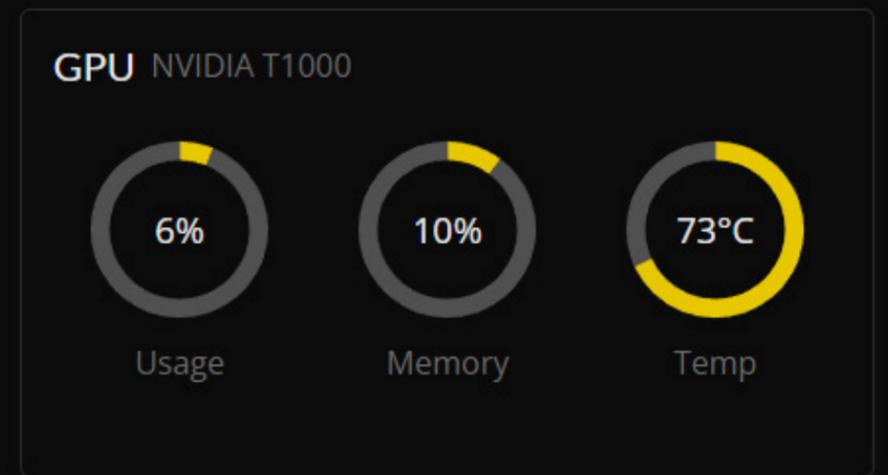
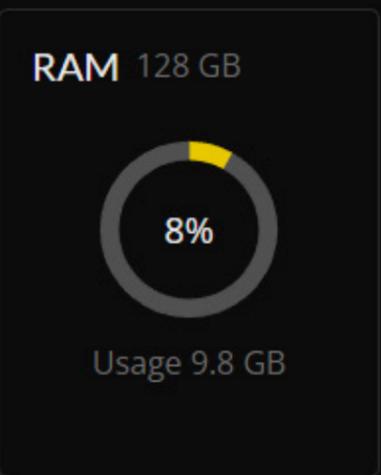
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PIXERA 1.9.201

1.9.201
Pixera is running



PIXERA HUB

The PIXERA hub is a powerful collection of utilities for PIXERA users, so that they can improve and streamline their workflows for greater productivity.

PIXERA users now have much more flexibility to remote control and manage setups involving multiple servers, since the Hub offers you the following:

- ▶ discover servers in your network
- ▶ remote server monitoring
- ▶ remote PIXERA version management
- ▶ license management
- ▶ VNC
- ▶ auto updates
- ▶ autostart/service management
- ▶ fan control

Of course, this is just a first step and the hub will continue to evolve!

PIXERA

campus

Take advantage of the experience of our trainers and let them show you what our real-time platform has got to offer.

Learn the necessary skills for your future projects and ideas. Find out how simple it is to meet you and your clients' demands for professional media integration

Individual trainings are available on request.

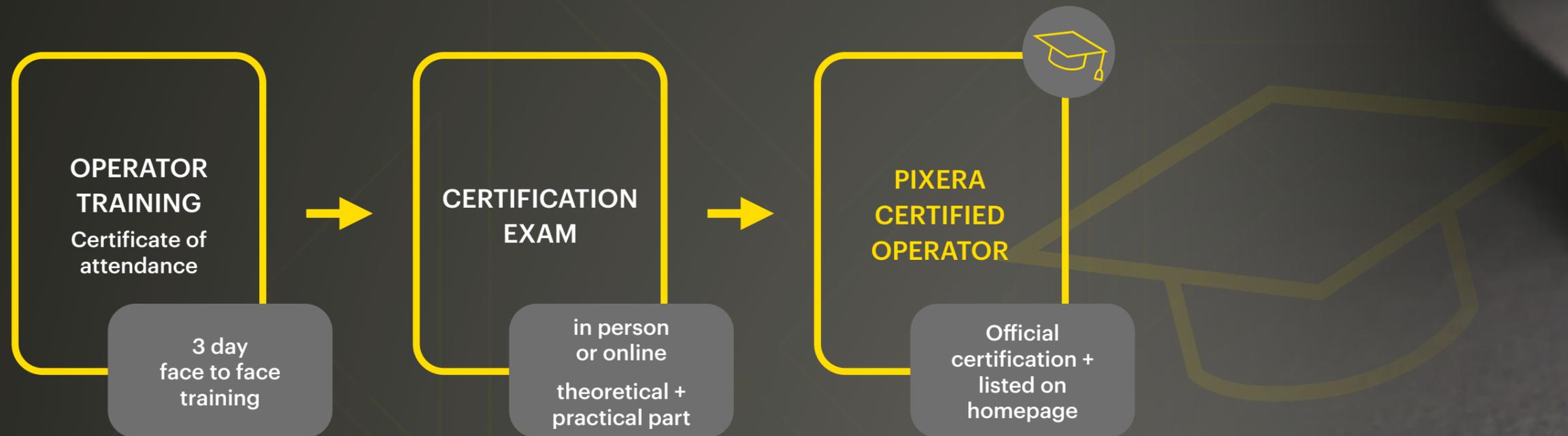
Key topics

- ▼ Software basics
- ▼ Projector & LED setups
- ▼ Timeline programming
- ▼ 3D workflows
- ▼ Multi Client setup
- ▼ Advanced PIXERA software features
- ▼ Show control



CHECK OUT OUR ONLINE CLASSES!

pixera.one/training



PIXERA HARDWARE

VERSATILE. MODULAR. POWERFUL.

The PIXERA hardware portfolio allows you to pick, mix and match exactly what you need to realise your projects.



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.

www.PIXERA.one/PIXERAmimi





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.
www.PIXERA.one/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
- 12G-SDI I/O support
- XEON CPU and 64GB RAM (up to 128GB RAM available)
- 5GB/s data read default rate

PIXERA two

Reliable and versatile

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.

www.PIXERA.one/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
- ▶ 12G-SDI I/O support
- ▶ XEON CPU and 128GB RAM
- ▶ 5GB/s data read default rate
- ▶ up to 30TB storage with 10GB/s available





PIXERA four

4K and 8K's new best friend

PIXERA four is an incredibly powerful media server hardware system, perfect for **highly demanding real-time graphics** applications and **XR/AR broadcast setups**.

This new media server can be used as a Director server or as a 2 or 4 licensed output server.

www.PIXERA.one/PIXERAFour



HIGHLIGHTS

- powerful, flexible and reliable 4K and 8K media server
- 12G-SDI I/O support
- 10GB/s data read default rate
- five PCI 4.0 slots offer great configuration flexibility
- compact with a depth of only 46cm, perfect for installations
- uncompressed 8K (4:4:4) 60fps content playback
- AMD Performance CPU and 128GB RAM
- great ROI for XR, rental/staging and installations
- available with 2 or 4 outputs
- redundant power supply
- up to 61TB storage with 20GB/s available
- dual 25Gbit/s network available

PIXERA four RS

A new standard

In order to be able to offer our customers a special **pre-configured** version of our powerful PIXERA four, **perfect for cross rental scenarios**, we created the PIXERA four RS.

The **RS** stands for **rental & staging** in this context.
www.PIXERA.one/PIXERAfourRS



HIGHLIGHTS

- ▶ PIXERA four QUAD
- ▶ PIXERA control CORE License
- ▶ 16TB NVMe-SSD Storage
- ▶ 1GbE Quad Network Card
- ▶ 25GbE Dual Network Card
- ▶ 12G-SDI Input/Output or 4x 3G-SDI
- ▶ 1x HDMI 2.0 Input
- ▶ Framelock and Genlock
- ▶ Dante Virtual Sound Card
- ▶ 4x mDP1.4 GUI Output



HARDWARE CONFIGURATOR

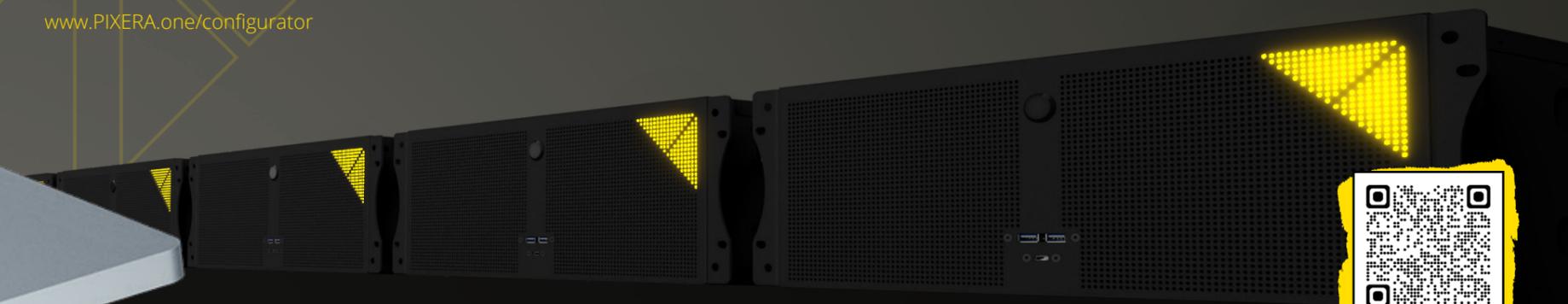
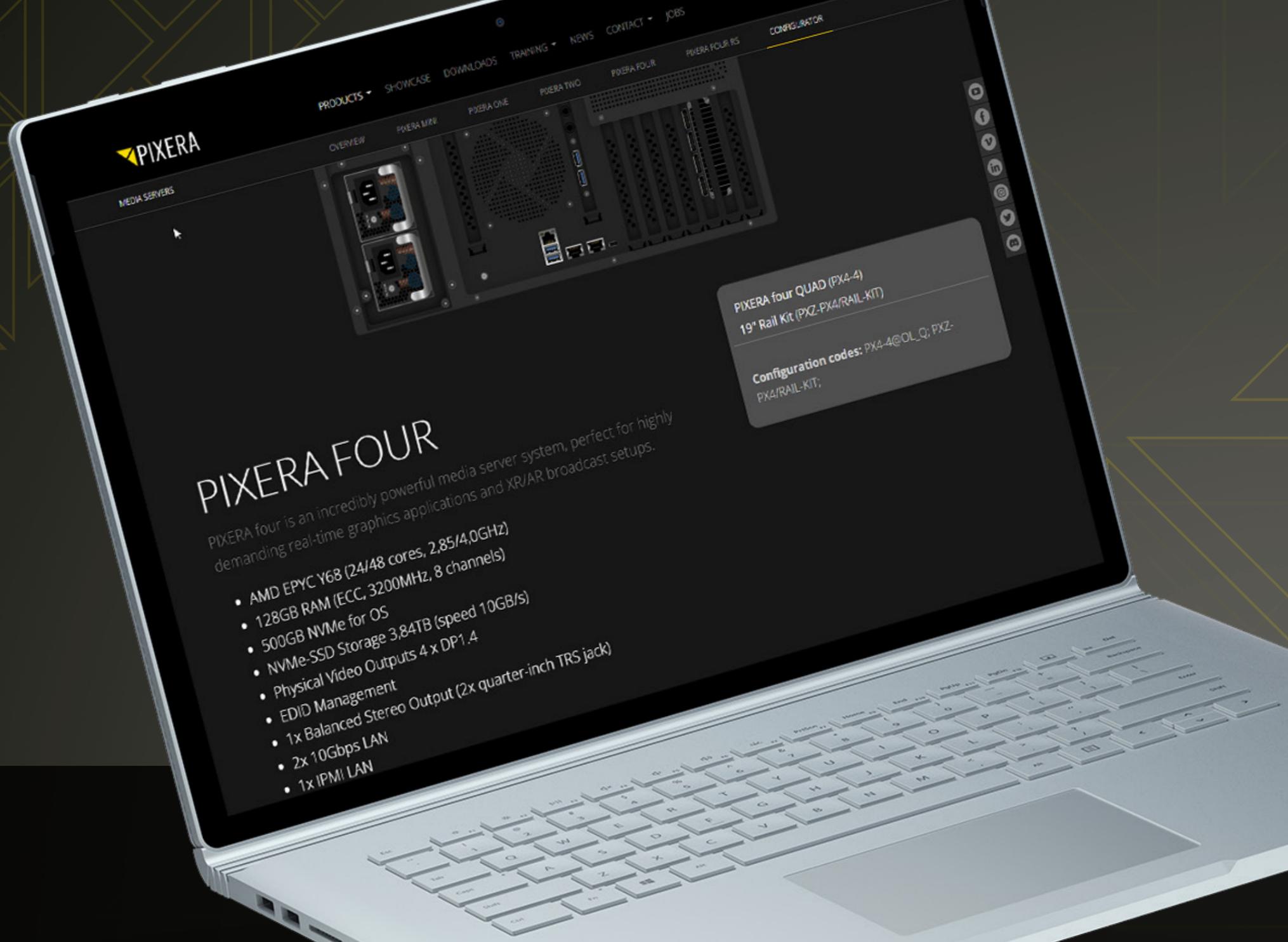
FIND THE PERFECT SERVER FOR YOUR PROJECTS

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.

www.PIXERA.one/configurator



INFO OVERVIEW
LINKTREE





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WEEE-Reg. NR.: DE 24145251

Edition 2024. We reserve the right to make modifications in the interest of technical progress.