



KeyShot 5

What's New Guide



Welcome to KeyShot 5

Highlights

Rich features and amazing speed in a streamlined user interface.

KeyShot 5 introduces enhanced usability and pro level features to speed up your rendering and animation workflow. In KeyShot 5 we made the interface that revolutionized 3D rendering and animation even more simple to use with new ways to share resources, faster ways to work with materials, more powerful animation features and advanced capabilities that allow professionals to make their workflow more efficient and take their visuals to the next level. With KeyShot 5, we focused on these four main areas:

- **Streamlined Interface** - KeyShot 5 features a fresh, streamlined interface that provides faster ways to access your projects, adjust your settings and share KeyShot resources.
- **Rendering Speed** - A new set of tools that allows you to work more efficiently with geometry and materials, with updates to features that bring more options and deliver new functionality.
- **Powerful Animation** - New abilities within KeyShot Animation that extend how objects are able to be moved and represented for more options in creating powerful 3d visual compositions.
- **Advanced Features** - Pro level features that allow more options to import and export 3D data, speed workflow and bring more functionality to existing Pro features

Top Features

The top features for KeyShot 5 incorporate new capabilities across every area of the KeyShot experience, from import and applying materials to model updates and file output.

New features in **KeyShot 5.0**:

Streamlined Interface	Rendering Speed	Powerful Animation	Advanced Features
KeyShot Cloud Welcome Screen Ribbon Favorites Tab Material Display	Instancing Retain Textures Procedurals Image Editor Performance	Fade Animation Motion blur Properties Events	NURBS Ray-tracing Sun & Sky System Perspective Matching Scene Sets ZPR/STL Output HDRI Editor Updates

[Additional 5.0 features](#)

KeyShot Cloud

Share and download your most loved KeyShot resources. KeyShot Cloud is an online library where you can download new resources, and share your own custom assets. Opening the KeyShot Cloud enables easy drag-and-drop downloading of new resources into your local KeyShot Library, and quick search features and filters to find the perfect resources for your scene.

How it works

The KeyShot Cloud is accessible directly from inside KeyShot. When a user is logged into the KeyShot Cloud, they may browse, download, and upload KeyShot resources. Currently supported KeyShot resources are Materials, Backplates, Textures and Environments.

Please note: KeyShot does not move any of your KeyShot resources or scenes outside of your local folder locations. When a resource is uploaded, it is copied to Luxion's secure server. No unrelated data or personal information is collected. A user's uploads, downloads and likes are tracked in the KeyShot Cloud, so they are able to access them from any location.

Activation

Downloading and sharing resources on the KeyShot Cloud requires sign-up and activation. Register for free inside KeyShot after clicking the KeyShot Cloud icon from the KeyShot toolbar. A valid email address is required.

Browsing

Activating the KeyShot Cloud inside KeyShot displays the KeyShot Cloud window or inline browser. Like the other windows, the KeyShot Cloud can be docked and undocked. Resources are searchable using the search bar and filters. The tabs will display the most recent resources available or your search/filtered results. Thumbnail view or list view can be toggled from the icons in the upper right corner. Browse through the resources with the scroll bar and display additional details by selecting a resource.

Download Resources

To download a resource, select an item and press *Add to Library* from the detail pane. Resources can also be added by selecting *Add* from the thumbnail view or multi-selecting and selecting *Add selected to KeyShot* from the right-click menu. Downloading a resource will add it to the corresponding *Downloads* folder in the KeyShot Library window. From the *Downloads* folder, users may drag-and-drop resources to move them to other folders.

Upload Resources

Resources can be uploaded by selecting *Upload* in the Library window when one or more resources are selected in your KeyShot library. A resource can also be uploaded by right-clicking the resource and selecting *Upload to KeyShot Cloud*. Before an item is uploaded, the user will be prompted for the Name, Description and Tags of the resource. The thumbnail image is rendered automatically in the Cloud. Currently, upload supports KeyShot Materials, Backplates, Textures and Environments.

KeyShot Cloud Settings

The Gear icon located in the upper right corner of the KeyShot Cloud window allows user to *Logout* or change their *Account Settings*. Through the *Account Settings*, users have the option to update their password, name, display name and email.

Password Recovery

Users may recover lost or forgotten passwords inside KeyShot after clicking the KeyShot Cloud icon from the KeyShot toolbar. Select the Recover button and follow the on-screen prompts to have a recovery email sent.

Welcome Screen

Faster access to your most recent work and latest KeyShot news. When you start KeyShot a new menu appears providing access to your recently opened scenes. Quick access to the latest KeyShot information, news and featured assets from the KeyShot Cloud is shown on the left side of the window.

How it works

The menu will show automatically when KeyShot is first installed. To turn off the menu, go to *File, Preferences...* and, in the *General* settings, uncheck *Show news window at application startup*.

Ribbon

A new dockable tools menu for quick access to the most common tools and preferences. From the Ribbon, CPU core usage can be set and paused, Scene Sets can be switched, and cameras can be controlled. Additionally, one-click access to Material Templates, HDRI Editor, NURBS mode, Performance mode and the KeyShotVR wizard is available.

How it works

The Ribbon is located beneath the Main menu by default when KeyShot is installed. The Ribbon can be toggled on/off by selecting *Window, Show Ribbon* or pressing the R-key. By selecting the grips on the top/left of the Ribbon, it can be undocked and left floating or docked along the sides, bottom or top of the KeyShot workspace.

Favorites Tab

The new Favorites tab allows users to create collections of and gain quicker access to your favorite resources. Located in the KeyShot Library window, users can create collections of resources for specific scenes they create.

How it works

Favorites are collections of Backplates, Colors, Environments, Materials and Textures. Favorite collections are created by right-clicking on a resource and selecting *Add to Favorite*, *Add to new Favorite* or clicking the Favorites tab, right-clicking on *Favorites* and selecting *Add new Favorite*. Any KeyShot resource in the Library can be added to a collection in the Favorites tab, including resources downloaded from the KeyShot Cloud.

Example: A new Favorite is created named Automotive. In this Favorite, all the resources (Materials, Backplates, Environments, etc.) that are used for particular automotive scenes are added providing faster access to those resources.

Material Display

See materials more accurately before applying them to your model. The display of all materials has been updated to more accurately show texture, opacity, shadows, refraction and reflection. The resource thumbnails on the KeyShot Cloud are also dynamically generated with all uploaded materials rendered online at time of upload.

How it works

The KeyShot Materials Library and KeyShot Cloud both show thumbnails with the new material display scene while the In-project library is differentiated by the classic material sphere for faster updating. Display options for KeyShot resources now includes thumbnail or list view with an exposed slider to adjust thumbnail size. To re-render/refresh the resources in any area, right-click and select Render Thumbnails or Reload on the KeyShot Cloud inline browser.

Instancing

Duplicate models in KeyShot without increasing file size. Instancing of top level groups or models is available within KeyShot as a Pattern tool. All instances can be treated separately for quick appearance studies or linked to apply materials quickly, but will all update when LiveLinking or update geometry is used.

How it works

Patterns of models or groups of models are created through the Project window *Scene* tab. Right-click on a top level model or group and select *Pattern* from the menu. The *Pattern Tool* dialogue window appears with options for *Linear* or *Circular* pattern and corresponding settings for each. Additional options to *Center* and *Resize Environment* are available below the pattern settings.

KeyShot will display a preview of the pattern in the real-time window, updating as settings are adjusted. The model instances will also be visible in the *Project, Scene* tree. While the *Pattern Tool* is active, other KeyShot settings can be adjusted, animations assigned and materials applied to the instanced models. Once the desired pattern is achieved, selecting *Ok* will accept the instanced models and any settings applied to them.

Retain Textures and Labels

Change materials while retaining all textures and labels. When assigning materials from the library to parts in the real-time window, simple options allow you to keep textures and/or labels applied to the part.

How it works

When a material is dragged from the Library to a part in the real-time window, *Alt* is held down to retain textures and/or *Ctrl* is held down to retain labels. Each key should be held down prior to releasing the mouse button in order to apply the material and retain the textures/labels.

Procedurals

More procedurals to perfect the appearance of your parts. Seven new procedural textures have been added to KeyShot, including Brushed, Cellular, Cloth Weave, Color Gradient, Fiber Weave, and Scratches.

How it works

Procedural textures are accessible on the *Project, Materials* tab under *Textures*. The procedural is chosen from the *Texture Type* pull down menu with settings specific for each procedural texture appearing below. The procedural textures work as any other texture, applied completely independent of Material type or Library material preset. Procedural textures can be turned off by selecting *None* from the *Texture Type* pull down menu or toggled off/on by selecting the checkbox for each texture swatch.

Image Editor

Adjust the look of your image as it renders. New image editing options allow you to edit the Exposure, Color and add Effects while your image renders. Save and continue to make adjustments to create other versions of your image.

How it works

From the render options screen, set the Image Output options and press *Render*. In the *Render Output* window you will see a new toolbar with image editing and view options. Select the pencil icon to *Show effects panel*.

From the *Adjustments* pane, adjust *Exposure*, *Color* and *Effects* independent of each other. Through *Exposure*, control *Gamma* and *Brightness*. Through *Color*, control *Hue*, *Saturation* and *White point*. Through *Effects*, control *Bloom* and *Vignette*. All changes can be seen in real-time as the image renders. Once the image is fully rendered, a green check will appear in the toolbar, allowing you to save the image with changes applied.

Performance

Render, animate and work with large scenes faster than ever before. Significant performance improvements for large scenes of up to 125% are now possible with optimizations to the KeyShot render engine. File size decreases while viewing and render speeds increase with [Instancing](#).

How it works

The core of the KeyShot render engine is optimized to work with certain materials faster showing up to a 125% faster frame per second (fps) response time.

Fade Animation

Quickly apply an animation that fades parts from one opacity level to another. Adjust opacity of parts and groups on-the-fly and see it update in real-time as animations are built.

How it works

The fade effect on a part or group of parts is created just like any other part animation. Right-click on the part or group of parts in the *Project, Scene* tree and select *Animation, Fade*. Adjust the *Fade From/Fade To* values to the desired setting along with easing and duration of fade through the properties to the right of the Animation Timeline. Using the *Animation Wizard*, select the *Fade* option as the *Animation Type*, then continue through the wizard selecting parts and adjusting fade settings.

Motion Blur

Your models in motion. KeyShot Motion blur provides a real-time preview of motion applied to models where movement is blurred. Capture the motion of objects as they rotate or move across the screen before you even play an animation or render an image.

How it works

To apply Motion Blur to objects in motion, check Motion Blur in the *Project, Settings, Advanced* options. If you already have objects with animations applied which move the object, the real-time view will update to show the object in motion.

Motion Blur can be seen quickly after turning the option on, by adding a *Translation* animation to an object or an *Orbit* animation to a Camera. The amount of motion blur is controlled through the Animation settings by adjusting how fast and how far an object or camera is moving. When Motion Blur is enabled, the real-time preview of the motion is dependant on the FPS setting.

Animation Properties

Adjust your animations faster. A new Animation Properties pane is located in the animation timeline when an animation is selected. The Animation Properties show all the settings available for each Animation type.

How it works

Previously, animation properties were shown in the *Project* window when an animation was selected. These are now in the *Animation* window with additional options and settings. To show the properties of any animation, select an animation from the list located to the left of the Timeline. Animation properties will appear to the right of the Timeline. They will also be displayed when selecting an animation in the *Project, Scene* tree or when selecting Properties from the *Project, Scene, Animation* tab.

Events

Switch cameras in your animation with the click of a button. KeyShot Animation users can now add camera switch events to change cameras on the animation timeline to easily incorporate other view angles without having to stitch together separate animations afterwards.

How it works

With two camera animations set up, right-click on the camera you will start with and select *Camera Switch Event* to select the camera you want to switch to. This will add the event to the timeline, shown as an orange marker on a separate line. Select and drag the marker to the point where you want to switch to the other camera. Hit play, and watch as the animation switches cameras automatically.

NURBS Ray-tracing (Pro)

NURBS data import from your favorite modeling system delivers accurate geometry with smoother edges. NURBS ray-tracing allows the rendering of imported NURBS data within KeyShot. The advantage is crisper visuals and smaller file sizes over data imported as triangle that can display edges and gaps on close detail shots. NURBS import is currently available for all geometry formats, including Creo, CATIA, Inventor, NX, Rhino, SolidWorks, Solid Edge, STEP, IGES, Parasolid and ALIAS.

How it works

Non-uniform rational basis spline (NURBS) is a mathematical model used in 3D graphic software that provides a more accurate, more flexible representation of 3D shapes and surfaces. The advantage NURBS ray-tracing provides over traditional polygonal/mesh ray tracing is a higher-quality images with smoother lines, especially on edges and curves where approximations with the polygons can cause the surface to break apart or show the tessellation.

When importing a model into KeyShot, files that contain NURBS geometry will trigger the option to 'Import NURBS data' from the Geometry section of the Import dialogue window. Selecting this option and clicking 'Import' immediately loads the model in the KeyShot viewport. If you have a .bip file with both triangle and NURBS data, you can go to Settings > NURBS Rendering or click the icon on the Ribbon to enable.

Sun & Sky System (Pro)

A new Sun & Sky system for automatic creation of physically accurate geographic lighting. Preset resolutions and locations together with day selection, time and turbidity sliders allow the creation of unlimited daylight scenarios.

How it works

KeyShot Sun & Sky is accessed through the HDRI Editor that comes with all licenses of KeyShot Pro. Selecting the Sun & Sky tab displays the settings to create custom sunlit environments with the option to keep your current lighting, adjustments and environment settings.

To create a Sun & Sky HDRI, first select the preferred resolution. Preset locations from around the World can be selected and time adjusted to position the sun in your environment. For a custom location, choose *Custom* from the *Location* pulldown or simply change coordinates. Turbidity controls the haziness or cloudiness of the environment. Select Generate HDRI to create the Sun & Sky environment. Pins and further adjustments can be added to any Sun & Sky environment. Sun & Sky HDRI's can be saved just like other HDRI's by selecting *File, Save*.

Perspective Matching (Pro)

Real-time perspective matching that takes all the guesswork out of matching models to a backplate. With simple guides KeyShot allows two-point or three-point perspective matching directly within the real-time window.

How it works

When a backplate is applied to the scene, press the *Match Perspective* button in the *Environment, Backplate Image* settings. Guides for X (red), Y (green) and Z (blue) directions will appear on the screen. The Perspective Matching options allow a choice between Two-Point and Three-Point Perspective and a toggle to Lock Rotation. Match the X, Y, Z guides to the corresponding perspective lines in the image. Once all adjustments are made, press the green checkmark to accept the changes and create a new camera view. Edit the guides by pressing the *Match Perspective* button again.

Scene Sets (Pro)

All your scenes in one, with multiple cameras or Viewsets. Scene Sets give you the ability to have access to all design iterations and camera views in a single file. Toggle parts on and off, switch cameras with ease and flow through the sets with a single hotkey.

How it works

Now called Scene Sets, Model Sets have been updated to include assigned Cameras and Viewsets. Import your models, duplicate or [pattern](#) a model within KeyShot. Create Camera Views or Viewsets from the *Projects, Camera* tab. Viewsets can each have different Environments or Backplates applied to them. Scene Sets are available in all licenses of KeyShot Pro.

To create a Scene Set, right-click *Scene Sets* in the *Projects, Scene* tab and select *Add Scene Set*. Name your Scene Set and select a specific Camera or Viewset to use. These can be changed after saving a Scene Set, by selecting a Scene Set in the Scene tree and changing the Name or Camera in the Scene Set properties. To switch between Scene Sets, double-click the Scene Set to switch to it the Scene tree or use *Shift-M* to toggle through Scene Sets.

ZPR/STL Output (Pro)

Support for the most common 3D printer input files. With the ability to output both STL and ZPR from KeyShot, you are one step closer to a physical model. Support for 3D Systems ProJet (formerly ZCorp ZPrinter) and support for Stereolithography files (.STL), a common output format for any 3D printer, allows export of files that can be opened in slicing software and 3D applications that support the import STL and ZPR files. Both export options are available in all licenses of KeyShot Pro.

How it works

To export a ZPR file from KeyShot, select *Export, Export to ZPR...* from the *File* menu. Options for ZPR export include Subdivision type, model scale and export units.

To export an STL file from KeyShot, select *Export, Export to STL...* to save out an STL file. Options for STL export include Subdivision type, model scale and export units.

HDRI Editor Updates (Pro)

The real-time HDRI Editor now features more ways to adjust the HDRI and lighting options including a new Sun & Sky system to create physically accurate geographical lighting. The HDRI Editor is available with all licenses of KeyShot Pro.

How it works

Open the HDRI Editor by selecting the *Project, Environment* tab and clicking on the HDRI preview. The HDRI Editor will open with three tabs: *Adjustments, Pins* and *Sun & Sky*. From the *Pins* tab, the new *Blend Mode* features color blending options including *Add, Blend, Alpha* and *Screen*. The new *Falloff Mode* allows falloff to be set *From Edge, Linear, Quadratic, Rectangular* or *Circular*. The new *Image Pin* type allows for images of up to 32-bit to be placed on your HDRI and adjusted to achieve a desired reflection or effect. Pins can also be moved up (above) or down (below) from each other.

The *Sun & Sky* tab allows the creation of an HDRI using coordinates and date with options for Resolution and Turbidity. See the [Sun & Sky section](#) for more information about how this works.

Additional updates and features

Additional KeyShot 5.0 features

User interface - The KeyShot interface has been completely streamlined to provide a cleaner look and faster access to areas within the Project, Library, Animation and KeyShot Cloud windows. The new accordion style groupings make for a more efficient use of space with the state of each remembered for the next time the application is launched

Stacked windows - The Project and Library windows can now be stacked on top of each other and side-by-side along with the previous option to have a tabbed layout and dock/undock by double-clicking the window titlebar.

One-click Geometry - New *Edit* menu item with, *Ground*, *Backdrop Ramp* and *Backdrop Round* geometry presets along with new preset and quick-key options for primitives. Place your own models in the KeyShot 5 Resources, *Models* folder for them to appear in the *Add Geometry* menu.

Set Scene Units - When the Scene Units are set through *Edit*, *Set Scene Units*, a dialogue box appears to confirm the change and select if the users want to convert or correlate the scene units.

Pantone colors - Pantone color swatches are updated with the latest color options from Pantone.

Mold-tech Textures - Mold-Tech textures are updated with the latest textures and now available on the KeyShot Cloud.

Sørensen Leathers - KeyShot is the exclusive software for representation of all Sorenson Leathers with the full line of leathers available on the KeyShot Cloud.

Project and Library tabs - Right-click on the tabs to toggle off/on the text or icons. Tabs are also responsive depending on width of the windows.