Viz Engine Release Notes

Version 5.5

Viz Engine

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  - C:\ProgramData\[Product Name]
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Technical Support

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Contents

1 Viz Engine 5.5.0

Release Date: 2026-02-12

These are the release notes for Viz Engine version 5.5.0. This document describes the user-visible changes that have been made to the software since release 5.4.1.

Note: Viz Artist maintains its release notes in a separate document starting from version 3.12.0.

1.1 Installer Notes

1.1.1 General

The Software ships with a bundle installer containing all necessary components. It is recommended to use the bundle installer when setup needs to be done manually.

- The Setup application (both MSI and Bundle installer) must be run in Administrator mode.
- Visual C++ Redistributable files are no longer part of the *.msi* setup file. These files are now installed with the bundle setup application (VIZENG-13210, VIZENG-12629, VIZENG-12701).
- The bundle setup application installs or upgrades Viz Artist together with its required Visual C++ Redistributable files (VIZENG-12936, VIZENG-13804).
- All files contained in the bundle setup application can be extracted using the `/dump` command line option. This creates a sub-folder where the files are extracted (VIZENG-13020).
- Multiple installations of Viz Engine are not supported.
- The installer automatically upgrades (replaces) any existing Viz Artist/Viz Engine 3.x installation. However, downgrading is currently not supported (VIZENG-7098).
- If Adobe After Effects is installed after Viz Engine, the Viz installer needs to be executed again to install the AE plug-in (VIZENG-7876).
- The user account must have *SeCreateGlobalPrivilege* (SE_CREATE_GLOBAL_NAME) enabled.
- The configuration profiles shipped with Viz Engine guarantee a correct Audio/Video delay, to have a proper lip-sync setup or a correct video wall installation. A manual configuration (for example, number of inputs, clips, etc.) is still required, after applying these profiles (VIZENG-18861).
- To use Global Illumination in Viz Artist/Viz Engine, at least Direct X version 9 is required. (VIZENG-19983).
- **Download the DirectX End-User Runtimes (June 2010)**:
  - Microsoft Download Link: Download DirectX End-User Runtimes (June 2010) from Official Microsoft Download Center
- **Extract the files**:
  - Run the downloaded *.exe* and select a folder for extraction.
  - After extraction, navigate to that folder and run *DXSETUP.exe*.
- **Complete the installation**:
  - This installs all missing legacy DLLs, including *d3dx9_43.dll*.
- The Basic, Viz DataPool, Viz PixelFX, Viz Maps, Viz Extension and Viz Socialize plug-ins are released together with Viz Engine, starting with version 4.0.0, and are included in the bundle installer. The basic plug-ins are installed by default.

Note: In case of installing Viz Engine with the individual MSI installer and not the Viz Artist Bundle installer, ensure all runtime dependencies are up-to-date (for example, Viz Engine does not start with an outdated Microsoft Visual C++ 2015-2022 Redistributable (x64) version). The minimum required version is 14.40.33810 (https://aka.ms/vs/17/release/vc_redist.x64.exe).
If Microsoft Visual C++ 2015-2022 Redistributable (x64) - 14.40.33810 is already installed and Viz Engine is not starting, the runtime installation could be damaged. Reinstall the runtime redistributable in this case. The related installer is part of the Bundle installer.

Information: In case of upgrading from previously installed versions, and the upgraded version comes with a new CodeMeter version, make sure that all the applications installed using CodeMeter on the same host, are still running.

1.1.2 Windows

- This software was tested to run on Windows 11 (LTSC 24H2), Windows 10 (LTSC 1809, 21H2) and Server 2019 and Server 2022.
- Windows transparency effects should be turned off (former known as Aero). In Windows 10 set **Show transparency in Windows** to `Off` in **Settings > Display** and **Transparency effects** to `Off` in **Settings > Personalization > Colors > More options**.
- Power management and hibernation mode must be turned off under Windows. You can execute `powercfg -h off` to remove *hiberfil.sys* from the hard disk.
- It is recommended to install the latest Windows Security Updates and Patches, except NVIDIA updates.
- Installations on Windows 10 are only supported on their respective supported hardware (see Supported Systems).
- .NET framework 4.5 or higher is required (VIZENG-6036).
- The minimum Windows Installer version is now 5.0.0 (VIZENG-10146).

To run Viz Engine without Administrator privileges, you need to grant the following permissions:

- *SeIncreaseBasePriorityPrivilege*
- *SeCreateGlobalPrivilege*
- *SeCreatePagefilePrivilege*
- *SeIncreaseWorkingSetPrivilege*

1.1.3 UAC

- Viz Engine is UAC aware. Configuration files, profiles, log files, and additional files are stored in %VIZ_PROGRAMDATA%, which defaults to %ProgramData%\Vizrt\VizEngine. Temporary data is stored in *%VIZ_TEMPDATA%* which defaults to *%TMP%\Vizrt\VizEngine*. The default value can be changed in the command line of *viz.exe*.
- Existing Lens files are copied from *%ProgramFiles%* install folder to the new UAC aware *%ProgramData%* folder during installation (VIZENG-8757).
- Existing Viz configuration files are copied from *%ProgramFiles%* install folder to the new UAC aware *%ProgramData%* folder during installation (VIZENG-7472).

1.1.4 Cinema 4D

- Cinema 4D LiveLink Installation: The installer searches the following location first: *%ProgramFiles%\MAXON\CINEMA 4D R16\plugins* (VIZENG-7965).
- Cinema 4D LiveLink package can be installed any time later by using Viz Artist Installer in Repair mode. Its installation folder is not selectable anymore (VIZENG-8996).
- Cinema 4D R23 or newer: LiveLink plug-in is available at *%ProgramFiles%\Vizrt\VizEngine\CINEMA 4D LiveLink\R23* (VIZENG-25344).

1.2 Driver Versions

These are the recommended driver versions for various hardware components:

Vendor	Driver Version
NVIDIA Blackwell, Ada Lovelace, Ampere, Turing, Volta, Pascal and Maxwell GPUs	573.76
NVIDIA Kepler GPUs	473.47 (419.17 for older boards)
Matrox Topology based boards	11.2.101.2608 (LTS)
Bluefish	6.6.1.4
Bluefish Supernova Firmware	162
AJA	16.1.0.3 (Firmware 2021/06/23)
Codemeter Runtime Kit	8.40a
AV PCL/PCI Plura Timecode Reader	5.34

1.2.1 NVIDIA Drivers

Information: Please refer to https://nvidia.custhelp.com/app/answers/detail/a_id/4777/~/nvidia-dch/standard-display-drivers-for-windows-10-faq for information about the DCH and Standard driver versions and how to install a missing NVIDIA control panel.

NVIDIA driver 573.76 is recommended for GPUs with Blackwell, Ada Lovelace Technology. Ampere, Turing, Volta, Pascal or Maxwell Technology cards have been tested with 573.76 only. A driver upgrade is not recommended in general. Kepler GPUs are not recommended anymore, however they might still work using older driver version 473.47. Boards that do not support this version of the driver should use rev. 419.17.

NVIDIA Driver Configuration (Manage 3D Settings):

Setting	
Vertical sync	Force Off (except Videowall and systems without video hardware).
Unified Back Buffer	Off
Power management mode	Prefer maximum performance
Antialiasing mode	Enhance the application setting
Antialiasing setting	4x (4xMS)
Profile	Workstation App - Dynamic Streaming profile (for systems with video hardware) 3D App - Video Editing (for systems without video hardware)

Important: Viz Engine will not start if an outdated driver is used.

1.2.2 Matrox Drivers

- For Matrox video cards, driver version 11.2.101.2608 (LTS) is required. This version is mandatory. Pre-release versions are not supported.
- Uninstall previous versions of Matrox DSXUtils prior to installing this driver.
- Install drivers (*DSX-TopologyUtils.exe)* only from a local drive.
- Reboot between uninstall and install of drivers, and another time after the installation has finished.
- The VfW codecs are included in this driver, so uninstall previous versions of the Matrox VfW codecs and do not install any Matrox VfW codecs over the regular driver installation.

1.2.3 Other Drivers

- The latest firmware for Supernova and Supernova S+ is 162.
- The latest firmware for Neutron is 1i2o 35. There is no longer 1in1out firmware.
- The recommended firmware for AJA IO4K+ devices is 2021/06/23.
- The recommended driver version for Plura AV timecode reader cards is 5.34.

Please refer to the Viz Engine Administrator Guide for which drivers and driver settings to use.

Given that a supported Matrox device is installed, the following codecs are supported for post-rendering with MatroxFileWriter and the ClipOut channels:

- RLE (animation), playback only
- H.264
- Apple ProRes
- HDV
- XDCam

- DVCPro
- DNxHD (4849)
- XAVC (UHD requires M264 board)

1.3 Upgrade Notes

- All plug-in installers are installed per-machine starting with 5.2.0. Uninstalling all previous per-user plug-in installations before upgrading is recommended to avoid duplicated installer entries.
- Existing Viz 3 configuration files, Genlock and IP configuration settings are migrated automatically by Viz Engine.
- The old Shared Memory output is not supported on the Viz Engine Pipeline.
- Due to changes in the video IO part, ring buffer size for interlaced virtual studio setups might require a higher ring buffer setting. Existing configuration file(s) might need to be adapted.
- The command interface is not locale-aware. Special regional settings like a semicolon within float numbers do not work. You need to use a regular "."

Information: Viz Engine is not forward-compatible. Opening scenes created in this version of Viz Engine might drop warnings when opening in previous versions. A scene saved with this version might look different if you open it in a previous version. This affects scenes containing more than four streaming channels.

1.3.1 Licensing Model

- The CodeMeter Runtime (installed with the bundle installer) is required to use the WIBU license system. Details can be found in the manual in section "WIBU-based Licensing System". Please refer to the Vizrt Licensing documentation on how to apply a license container.
- Cloud-based installations require a license server; standalone cloud installations are not supported.

1.3.2 Other Upgrade Notes

- NVIDIA Tesla Grid K2 Support was removed because no up-to-date drivers are available anymore.
- Lens distortion uses a slightly different norm since revision 54263. If you need older lens files, please use `use_lens_compatibility_mode = 1` in the config file.
- Viz Artist is now being started by the Viz Engine process and not by command file anymore. If you start *viz.exe* and *VizGui.exe* independently, the **Restart Current** option fails.

A 64-bit version of each codec must be installed to work with Softclip64. Most codecs come with an installation manual on how to install them correctly.

Softclip64 has been tested to work with the following 64-bit codecs:

- HuvYuff Version 2.1.1
- Lagarith Version 1.3.27
- Newtek SpeedHQ

1.4 Virtual Environments

The following GPUs have been tested in virtualized environments, the listed driver version is the one being used.
The following GPUs are currently supported (Kepler are only supported in the Classic Render Pipeline):

Model	Driver	Platform
NVIDIA L4	573.07	AWS (g6 instances, gr6 instances)
NVIDIA A10G	573.07	AWS (g5 instances)
NVIDIA T4 Tensor Core	573.07	AWS (g4dn instances)
NVIDIA Tesla V100	*431.79 GRID9.1*	*AWS (p3 instances)* [1]
NVIDIA A40 [2]	572.60	vSphere 7.0 and 8.0
NVIDIA RTX6000	572.60	vSphere 7.0 and 8.0

[1] Instance not supported on Windows Server 2025 or higher (legacy uefi boot).

Viz Engine has been tested to run in the following virtual environments:

	Viz Engine Render Pipeline	Classic Render Pipeline
Amazon Cloud (AWS)		
• Amazon EC2 G5 Instances • Amazon EC2 G4dn Instances • Amazon EC2 G3 Instances	✓ ✓ ✓	✓
Microsoft Azure [1]		
• Standard_NCv3 Series • Standard NV Series	✓ ✓	✓
fra.me/nutanix [1]	not tested	✓
VMWare ESXi (6.0[1], 6.50[1], 7.02, 8.0.2)	✓	✓
Alibaba Cloud [1]	not tested	✓

	Viz Engine Render Pipeline	Classic Render Pipeline
(1) Tested with Engine 5.0.0 only		

Note: Backup and Restore on Azure systems are currently not supported.

1.5 New Features

1.5.1 Key Features

Key	Summary
VIZENG-34281	VizEngine-5.5.0 - Renderer Improvements
VIZENG-33974	Viz Engine 5.5.0 - HDR Improvements

2 issues

1.5.2 New Features: General

Key	Summary
VIZENG-34169	Add command to simulate picking and retrieve container id(s) at specific position
VIZENG-34518	Applying trash matte to Live/clip texture before sharing over SMURF
VIZENG-32284	Custom icons for script plugins
VIZENG-34254	HDR: support automatic colorspace conversion in shader plugins
VIZENG-31955	Improve messages when reading/writing the config file in the console
VIZENG-34631	Interactivity support for web channels in texture mode
VIZENG-34250	Introduce commands to get the process id, instance and gpu
VIZENG-33618	LayerPlugin: add and remove by name commands
VIZENG-30048	Make Tracking Hub adapter active by default
VIZENG-34354	Move control channels of a subscene in a specific location of the main scene

Key	Summary
VIZENG-33571	Reintegrate Shared Texture feature for Webchannels and Browser Plugin
VIZENG-34268	Renderer: texture color read script api
VIZENG-34553	Renderer: texture readback should honor automatic color conversion (HDR)
VIZENG-33620	Web Channel / Browser Plugin to embed audio

14 issues

1.5.3 New Features: Renderer

Key	Summary
VIZENG-33779	Add tessellation to the Extrusion Modifier
VIZENG-34120	Add Volumetric-Light as feature to the renderer
VIZENG-34033	Allow disabling Ligatures from Text in VER
VIZENG-34143	Built-in text drop shadow effect
VIZENG-31745	Consider Gamma Correction in Material Definition Icon Generation
VIZENG-34426	Create snapshot in the configured color space
VIZENG-32261	Extend information in clog
VIZENG-33712	GFX channel should behave as Clip/Live for colorimetry conversions
VIZENG-34245	HDR: support automatic colorspace conversion in runtime shader
VIZENG-34254	HDR: support automatic colorspace conversion in shader plugins
VIZENG-33807	Improve Text behavior when there is no content entered
VIZENG-30048	Make Tracking Hub adapter active by default
VIZENG-34246	Renderer: add textureslot support to runtime shaders
VIZENG-34268	Renderer: texture color read script api
VIZENG-34553	Renderer: texture readback should honor automatic color conversion (HDR)

Key	Summary
VIZENG-34427	Screenspace UVs for textureslot
VIZENG-34119	UE Integration: Disable subsystems when not in use
VIZENG-34416	Update Web Channel Texture via Pixel Buffer
VIZENG-34128	Viz Engine Renderer Image Background Loading Suport
VIZENG-34385	VSL color structs should support values > 1.0 for HDR (Phong Materials)
VIZENG-33620	Web Channel / Browser Plugin to embed audio

21 issues

1.5.4 New Features: Video IO

Key	Summary
VIZENG-34633	Page Navigation for Webchannels
VIZENG-34573	Allow Fill+Key output in large canvas mode
VIZENG-34438	Allow 0.0.0.0 as source address in source specific multicasting
VIZENG-34304	Add flood protection to NDI input performance warnings
VIZENG-34272	Parallel output: allow more than 2 program outputs
VIZENG-34258	Parallel output: common StillPreview interface
VIZENG-34062	Colorimetry handling in VML and Matrox Clip Player
VIZENG-34032	Support HDR in SMURF inputs and outputs
VIZENG-33622	Upgrade Bluefish driver to latest version (6.6.1.4)
VIZENG-33200	Config flag to supress NDI messages
VIZENG-32269	VML Player in VizOne workflow

11 issues

1.6 Fixed Issues

1.6.1 Fixed Issues: General

Key	Summary
VIZENG-34519	Update compute shader sample plugin for instancing
VIZENG-34504	TextBG does not work if geometry is replaced
VIZENG-34487	Audio Clips looped in the stage are played only once
VIZENG-34462	Artist does not display the tree of specific scene (empty names on cnt)
VIZENG-34412	PreProcessingTextureRenderer: Can not handle images from Filesystem
VIZENG-34386	Containers/Values clear out if scripts are not compiled
VIZENG-34350	Significant increase in scene loading time
VIZENG-34294	VSL: Possible memory corruption in URLDecode()
VIZENG-34221	Wall engine running with FULLSCREEN 59.94Hz runs at 50Hz in Software I/O mode
VIZENG-34209	Scene with ezJavascript plugin crashes when used inside a GFX channel
VIZENG-34123	Specific GLB file fails to import
VIZENG-34094	Subscene director cannot be moved
VIZENG-34093	IMAGE SET fails for some textures
VIZENG-33625	3 x Cefwebchannelprocess.exe processes start when starting viz.exe with "-C"
VIZENG-33470	V-Sync is broken inside Browser and WebChannel
VIZENG-33414	Renderer: DVE placeholder not visible in Front or Back layer
VIZENG-32808	Precision Keyer Aux output not working without Matrox board
VIZENG-32630	Super Channels Output Resolution is not saved and always use Engine output Resolutio
VIZENG-32623	Assets flicker on video wall system
VIZENG-31959	Events don't work in WebRTC when in no-UI mode

20 issues

1.6.2 Fixed Issues: Renderer

Key	Summary
VIZENG-34559	Shadow Rendering causes differences in VER after upgrade
VIZENG-34478	Superchannel has wrong transition shader on save/reload under specific circumstances
VIZENG-34424	Bits per channel has affect on Classic scenes inside VER preset scene
VIZENG-34402	DynamicGeometry: node animation channels appear twice in director
VIZENG-34367	Renderer: disabling color limits breaks colors
VIZENG-34308	Frame glitches occur when switching cameras in an XR application using Unreal and -RenderOffscreen
VIZENG-34277	[MIGRATION] Text fgColor keyframes not preserved when 3.14.5 scene is opened in 5.4
VIZENG-34261	TextFX get cropped out when used with Razor draw as texture option
VIZENG-34230	TextBG plugin does not work on DynamicGeometry
VIZENG-34200	Various text color update issues
VIZENG-34122	Non-vizrt project settings not saving with UEMedia plugin active
VIZENG-34091	Text underline not getting blurred along with Razor text
VIZENG-33846	Videowall shows flipped image when panned 180 degrees
VIZENG-33684	Trio Cursor is 1 character off
VIZENG-33212	Unreal: Control plugins have wrong VDF structure / types
VIZENG-31946	Renderer: opaque materials affects key in overlay sequence

16 issues

1.6.3 Fixed Issues: Video IO

Key	Summary
VIZENG-34632	ST 2110 audio and ancillary data connectors are allocated even when not configured (5.5)
VIZENG-34525	UHD output with x.mio3 in 4in/8out configuration
VIZENG-34520	Bad audio quality in 2110 setups when Live channel aux audio is passed to SMURF channel
VIZENG-34295	No audio output when using clip channel with Bluefish
VIZENG-34035	When using IGMPv3 audio and ancillary data flows don't store the source IP address
VIZENG-31669	Errors printed while playing HEVC clip

6 issues

1.7 Security Updates

Key	Summary
VIZENG-34334	Update Browser CEF plug-in due to zero-day exploit (CVE-2025-13223)

1 issue

1.8 Changes

1.8.1 Upcoming Changes

- NVIDIA has announced that drivers 580.xx are the latest ones to support Maxwell and Pascal architectures.
- Support for Windows 10 LTSC 1809 will be dropped.

1.8.2 Changes: General

- NVIDIA Tesla M60 VGPU support has been removed.
- Windows Server 2019 VGPU support has been removed.
- *ChromaFX* license has been renamed to *Precision Keyer*.

1.8.3 Changes: Renderer

- Using Tracking Hub is now enabled by default in Configuration.
- NVIDIA Kepler GPUs were set as deprecated (NVIDIA isn't supporting Kepler boards in newer driver versions anymore).

1.8.4 Changes: VideoIO

> **Note:** The Matrox channel mapping format has been updated in the configuration file. Old config files are migrated automatically during startup.

1.9 Known Issues

1.9.1 General

- The final position and size of scaled image channels in DVE mode might change by 1 pixel after fixing rounding issues.
- Saving a new scene with references that do not exist anymore fails. Those references need to be removed manually to save the scene.
- Importing HDR images with special characters in its file name from a drive with 8dot3 disabled fails.
- Transition Logic scenes require to have GeomAutoFree = 1 set in the Viz Config file. With inactive GeomAutoFree, system stability is not guaranteed.
- Interactive Applications within a GFX channel only work in DVE mode in Fullscreen or if the GFX channel has an offset in Fullscreen. Scaled GFX channels or plug-ins that rely on screen coordinates (Graffiti) are not supported.
- Bones and Skin live motion data tracking requires Tracking Hub 1.1.2 (released together with Viz Engine 3.11).
- Viz Engine REST interface does not start if a user is Non-Admin (VIZENG-23386).
- On Air output shows wrong field-of-view if AuxRenderer is enabled, PP in scene editor is disabled and Viz Engine is not in On Air mode.
- The Toggle plug-in can not handle the background loading of objects or scenes.
- Oversized snapshot requests (bigger than the configured output resolution) in the Classic Render Pipeline aren't supported. Use the Viz Engine Render Pipeline instead.
- The `clog` command now includes all child processes. Upon abnormal end, all child processes are terminated before a restart is attempted (VIZENG-11361).
- Scaling directors down can cause keyframes to be scaled down to 0.0. These values do not recover when scaling directors up again afterwards (VIZENG-31610).

Key	Summary
VIZENG-34063	Add new deformation mode for handling more correct center shift in "Internal Tracking Mode"

Key	Summary
VIZENG-27515	AJA IO: Embedded Audio only available if SDI Input enabled
VIZENG-33562	Allow round-trip conversion between dynamic and static geometries
VIZENG-29680	Change Audio Backend on EAS
VIZENG-32400	Changing Spline types is not considered in Undo/Redo
VIZENG-34652	CLONE - Interactivity support for web channels in texture mode
VIZENG-34651	CLONE - Update compute shader sample plugin for instancing
VIZENG-28452	Consolidation of logging settings and configuration
VIZENG-27866	Enable individual volume control for tracks
VIZENG-31127	Experimental: Reduce overall in-to-out delay in Fast Texture Mode
VIZENG-28344	GH Sync: support main/replication setup
VIZENG-34640	Hindi text looks different in VER pipeline
VIZENG-30569	Improve Undo/Redo performance on larger GI scenes
VIZENG-24017	Improve VizEngine startup time
VIZENG-29589	Maya 2024 doesn't support Viz Maya plugin
VIZENG-31624	Optimize transform update
VIZENG-32399	Stop/Pause/Tags are not considered in Undo/Redo
VIZENG-29623	Text: global config for default font style
VIZENG-26964	Used lens distortion parameters not in sync with main scene
VIZENG-33601	VizEngine does not always switch back to GH main after main shutdown and startup

20 issues

1.9.2 Installation

- Do not use the C4D Version 15R2 patch file(s) unless you are using this version. Otherwise, it prevents Cinema 4D R16 from starting up.

- When uninstalling Viz Engine, the installer might report that links could not be removed. Please check that none of the *desktop.ini* files of Windows have write protection. For example, Skype seems to change the permissions of some *desktop.ini* files with every update.

1.9.3 Windows 10

- Right-clicking on the Taskbar icon of Viz Engine starts a new instance. Starting an additional VizGui process is prevented on Windows 10.
- Error message "Windows Media Player Rich Preview Handler has stopped working while opening specific clips with Softclip x64". To fix open **Windows Explorer > Tools > Folder options > View tab**, and deselect *Show preview handlers* in the preview pane.

1.9.4 Videowall

- It might happen that Viz Engine is running at half speed on videowall, but goes back to full speed if another window comes into focus. If so, start `viz.exe -y -w`, instead of the regular videowall mode `viz.exe -n -w`.
- GFX channels with Alpha != 100% decrease render performance. On video wall setup, `gfx_channels_antialiased = 0` should be turned off in the Viz Configuration section **RENDER_OPTIONS**.
- Windows scaling can lead to unwanted side effects.
- The maximum resolution on videowall setups is limited to 16392px by 16392px.
- Enabling video output for audio setups is not recommended for performance reasons. It is recommended to grab the audio from one of the HDMI/DP outputs of the NVIDIA GPU and use an Audio embedder instead.

1.9.5 Configuration

- Specifying a path in the configuration file including the # character is not supported. Such paths are cut before the # character.

1.9.6 Viz Engine Render Pipeline

- Existing Scenes using Global Illumination might need a precompute again to enable debug views.
- Background loading of external images (filesystem, network locations, etc.) is not supported. Images from Graphic Hub should be used.
- Flexbox labels in Scene Editor do not support Unicode characters.

1.9.7 Classic Render Pipeline

- Scene Transitions within GFX channels or Superchannels are not supported.
- Soft Shadow intensity is currently not working together with Global Illumination.
- We recommend using a warmup scene showing all needed assets once. Under certain circumstances, video and clip surfaces can show up red the first time being used.

- Playing Audio clips on systems with no physical audio hardware available stops the renderer. You need to turn off audio in the configuration file.
- On some systems with hybrid graphics, like laptops, the dynamic swapping must be disabled in the BIOS and the stronger GPU must be assigned as default.
- Stencil-based shadows (Caster/Receiver) do not work on rotated geometry.
- When changing `CurlAuthUnsafe = 1`, Viz One Browser does not work anymore.
- VGA Fullscreen Output is only active if offscreen rendering is turned off. Setting `offscreen=0` in section RENDER_OPTIONS enables fullscreen output.
- Blending cubemapped images are not supported.
- Cubemapping with Browser plug-in is not supported.
- Fonts need to be re-imported to use new Pathrendering or Razor fonts technology.
- Masks are not supported on Path rendered Fonts (VIZENG-13737).
- Do not send other commands than `IS_RENDERER_READY` and database connection commands before this command returns `1`, otherwise the renderer and video output might not be initialized.
- If you encounter stability issues with an NVIDIA driver or issues during driver installation, uninstall the old NVIDIA driver completely, delete the folder *C:\Program Files\NVIDIA Corporation\Installer2*, install the new driver and select **Custom installation**, then check-mark the perform clean installation option and finish the installation.
- Enabling background loading might decrease the render performance by up to 15 frames per second. This is due to OpenGL requirements.
- M-Zone keyer only works with HD when rendering with full frames.
- Decreased render performance in HD since Viz Engine 3.5.0 when the ringing filter is activated. Before Viz Engine version 3.5.1 there was no ringing filter for HD. Turn off the ringing filter via configuration or scene-setting to get the same performance.
- Sporadic NVIDIA driver error The NVIDIA OpenGL driver lost connection with the display driver and is unable to continue. which in turn causes Viz Engine to freeze. Make sure that the driver profile **Workstation App > Dynamic Streaming** is selected. Always use the recommended NVIDIA driver for your GPU.
- Possible performance problems with scenes imported from Viz Engine 2.x. Check the following settings (applies to old 2.x scenes only):
    - Image Combining should be set to Multi Texturing in the Render options in the configuration (or flag `combine_with_multitex = 1` in the configuration file) to avoid inefficient image combining.
    - Set Key Render Mode to Single Pass in the rendering options in the configuration. The Key Render Mode can also be set on scene level. Available options are:
        - Config (inherit the setting from the configuration).
        - Single Pass (fill and key are rendered in a single pass).
        - Double Pass (fill and key are rendered in separate rendering passes).
          Key rendering results differ between these options for compatibility reasons.
- Use Single Pass scenes imported from Viz Engine 2.x and Double Pass for Viz Engine 3.x scenes.
- The configuration flag `exec_all_animations` in the section RENDER_OPTIONS should be set to `0` if it is not necessary to execute hidden animations.
- Turn off the VGA preview in On Air mode to avoid performance drops due to multiple rendering of the scene (applies only to video version of Viz Engine).
- Hide containers that are not required for the current animation.

- Re-import fonts directly with the Viz Engine.
- Grid picking currently only works for Cube and Cylinder geometry.
- The behavior of scripts with cyclic dependencies to other scripts is undefined. Avoid cyclic dependencies.
- Bad performance when using multiple dynamic scenes, even if they are set inactive. To avoid unnecessary updates, change the **Update mode** in **Dynamic Scenes** to *Auto* instead of *Always*.
- `CLR LOAD` command can crash Viz if not used correctly. Required function signature: static int pwzMethodName(String pwzArgument).
- Alpha setting for DVEs is not correctly supported when a scene is used nested using a GFX channel (VIZENG-10212).
- Glow plug-in drops performance when used on multiple containers and rendered within a GFX channel or viewport tile (Classic pipeline) (VIZENG-11342).
- Scene transitions do not work when dynamic images from different folders are involved. Dynamic images always need to be stored directly in the root folder *dynamic* and references must point there. Dynamic images in a subfolder of the dynamic folder or any other folder are not found.
- Font option "lighted" has no effect on fonts rendered with type "vector" (VIZENG-18941)
- 16-bit PNG images are not rendered properly when imported with compression.

1.9.8 Unreal Integration

Note: It is not advisable to utilize the Unreal integration in production environments outside of Game Mode. For instructions on how to initiate Unreal in Game Mode, please consult the Viz Artist User Guide Chapter **Third Party Integrations**.

- Unreal Engine 5.x with Temporal Super Resolution (TSR) enabled can lead to flicker issues when used in combination with NVIDIA Driver 528.89. Changing to FXAA solves the issue.
- Unreal Engine 5.5 with DLSS enabled can lead to memory issues.

1.9.9 Post Renderer

- Because of performance issues rendering fullscreen sequences in UHD is not supported.
- Ghosting effect in post-rendered interlaced video: Make sure that the Flicker Filter is set to `0` in the post-rendering options of the Video Render plug-in.
- Post-rendering does not work properly if `onair_no_videoout flag = 1` (Videowall mode).
- Post-rendering does not work properly if TriCaster integration is active and the output format is set to User Defined or Fullscreen.
- DVCPRO expects 720x480 in NTSC resolution. Please set the correct output width in AVIRenderer.
- The alpha channel cannot be rendered with Intel Indeo 5.10 codec. This codec is not supported.
- Viz Engine might crash if certain VfW codecs are used on non-Matrox installations in Post Render Mode.

1.9.10 Matrox

Important: When upgrading from 10.4 to 11.x Matrox driver, follow these mandatory steps:

- Uninstall old Matrox driver

- Cold Boot (Turn off computer for at least 20 seconds)
- Switch Computer on
- Continue installation of new driver

- Enable Hardware DVE/(Fast Texture Mode) is only available for two instances.
- The configuration ClipIn[n].UseV210 and ClipIn1. ContainsAlpha are mutually exclusive and should not be enabled at the same time.
- The overall delay is one field higher than in previous versions using IO3 This is caused by the required A/B buffer of IO 4.
- A program output channel needs to be defined. Pure preview or Cleanfeed is not supported.
- HDR output on UHD 2SI requires at least a Quadro P6000 GPU.
- Large Canvas setups require a RTX5000 Ada or higher.
- Mixing different frame rates with clips processed by a M.264 board is not supported and causes jittering.
- Upgrading the FPGA can cause a PCI error during the boot process on certain systems. Unattended upgrading of the FPGA is not recommended.
- Watchdog is only supported in 50/60M and 60Hz frequencies.
- When using 3G formats (1080p/UHD) or the Zero-Frame-Delay Mixer, auto-sensing of the sync signal is not supported due to incompatible H-/V-phases, that are set in the process.
- Instead, either Tri-Level or Blackburst must be used together with correct H-/V-Phase. This might result in a missing key signal (VIZENG-11708).
- For dual channel systems, please perform the following steps after enabling the watchdog to ensure the correct state is written to the Matrox Board:
  a. Start Channel 1.
  b. Wait until channel has started up and topology has been written.
  c. Start Channel 2.
  d. Wait until channel has started up and topology has been written.
  e. Exit channel 2.
  f. Exit channel 1.
  g. Start channel 1.
  h. Wait until channel has started up and topology has been written.
  i. Start channel 2.
- ClipOut channel does not work when Matrox0.VideoOut1.FrameBufferDelay is set to zero (VIZENG-16373).
- UHD Clip Playback with M264 S1/S2/S3 *alone* requires color conversion on the shader level. (VIZENG-20700).
- Two Sample Interleave (2SI) clips played as DVE are not supported.
- Cutting of Audio tracks should not be done at all, as this results in a crackling noise. Always use a cross-fade to change audio sources.
- Certain M4V clips may cause Viz Engine to lock and flood the console with errors when being played in a loop.
- Running interlaced AVC-Intra 100 clips on M.264 boards may lead to instabilities when played non-stop over several hours.
- Always verify the Destination Connector when changing/adding configurations of output channels.

1.9.11 X.mio3 Boards

- If the Viz instance is closed unexpectedly, the X.mio3 topology might become unusable. To reset the topology, enable ResetTopology in the config file, restart Viz, close it and start Viz again.

- Turning on the Cleanfeed Feature increases the delay by one frame.
- It is not recommended to change the frame group of any input signal while Viz Engine is running.
- Only two DVE UHD inputs are supported at 50Hz. For 60M formats, only two texture inputs are supported.
- Animating UHD DVE scaling might result in jittering. You need to increase the VideoDelayDVE setting to `2`.
- Texture delay with PAL/NTSC, and Enable Hardware DVE is five fields instead of four fields. (VIZENG-16955).
- When using watchdog together with a clean feed, the watchdog triggers on the clean feed connector rather than the program output (VIZENG-16589).

1.9.12 X.mio5 Boards

- Standard Definition (PAL and NTSC) resolutions are not supported by X.mio5 IP boards according to the SMPTE ST 2110 standard.
- Streampunk ledger RDS does not list the Matrox X.mio5 nodes. This is due to some old NMOS APIs that are partially deprecated.
- Riedel Explorer fails listing the X.mio5 nodes. Riedel Explorer automatically selects NMOS API Version 1.3 instead of 1.2. It is possible to select the used API version manually if you switch to static mode and/or enable version downgrade in the Riedel Explorer.

The X.mio5 board has been tested to support up to 12 Inputs (1080i 50 and 60M) on a 10GbE network.

1.9.13 DSX.core

After the installation of the DSX-core client version of the driver perform the following steps:

1. Unregister *mvfDsxCore.dll*.
    a. Click **Start > Run** (or use the Windows command line: **Search > CMD >** (Right click) **Run as Administrator**)
    b. Type `REGSVR32 /U "C:\Program Files\Matrox DSX-TopologyUtils\System64\mvfDsxCore.dll"` and press **ENTER**.
2. Shut down http://X.info in the task manager (mveXinfo.exe).
3. Delete *mvfDsxCore.dll* from the folder *C:\Program Files\Matrox DSX-TopologyUtils\System64*.
4. Start http://X.info *(mveXinfo.exe).*

1.9.14 Other Video Boards

- When Viz Engine is in On Air mode, there might be audio distortions using Bluefish cards (VIZENG-8853).
- Bluefish Supernova S+ cards can only be used in a Virtual Set Environment if the board is synced to Blackburst/Trilevel.

1.9.15 NDI

Security Updates **Windows 11 – KB5063878** and **Windows 10 – KB5063709** can lead to traffic drops in NDI output.

1.9.16 NVIDIA

- When the computer is running out of virtual page size and the user keeps ignoring the low memory warnings in the console, the NVIDIA driver may cause Viz Engine to crash.
- The NVIDIA driver doesn't recognize other GPUs under certain circumstances in combination with video wall mosaic installations. Remove and reinstall the driver.

1.9.17 Graphic Hub

- Communication with the Graphic Hub Server might fail if virtual network adapters are active. Please disable all virtual adapters or increase the timeout.
- If the connection to the naming server fails, please verify the communication port in the config file (Port `19396`).

1.9.18 Adaptive Scene Design

- WindowMask plug-in prevents Flexbox labels from being picked.

1.9.19 Audio

- Unplugging a USB microphone from the machine while EAS is enabled freezes Viz Engine without the possibility to recover (VIZENG-29571).

1.10 Supported Hardware and Software

This software has been tested to run on:

- Windows 11 (LTSC 2402)
- Windows 10 (LTSC 21H2) & (LTSC 1809)[1][2]
- Windows Server 2025, Windows Server 2022

[1] Future Versions of Viz Engine will no longer provide support for Windows 10 LTSC 1809.

[2] Unreal Engine requires a newer Windows 10 version than 1809. UE Integration was successfully tested with 21H2

> ⚠ **Note:** Only English language Operating System(s) are supported.

1.10.1 Supported Systems

System
Lenovo P3 Ultra / Lenovo P3 Ultra Gen2

System
Lenovo P620
Lenovo SR655 V3
DELL R7920
HP Z8 G5 Fury
HP Z8 G4
HP Z4 G5 (Rack and Tower)
HP Z4 G4
HP ZCentral 4R

1.10.2 Supported GPUs

Blackwell GPUs	Ada Lovelace GPUs	Ampere GPUs	Turing GPUs	Volta GPUs	Pascal GPUs	Maxwell GPUs
Blackwell 6000 Max Q Blackwell 5000	RTX 6000 Ada	RTX A6000	RTX 6000	GV100	Quadro P6000	Quadro M6000
	RTX 5000 Ada	RTX A5500	RTX 5000		Quadro P5200	Quadro M4000
	RTX 4500 Ada	RTX A5000	RTX 4000		Quadro P4200	Quadro M2000
	RTX 4000 Ada SFF	RTX A4500	RTX 3000		Quadro P4000	
	RTX 2000 Ada	RTX A4000	T1000		Quadro P3200	
		RTX A2000			Quadro P2200	

Blackwell GPUs	Ada Lovelace GPUs	Ampere GPUs	Turing GPUs	Volta GPUs	Pascal GPUs	Maxwell GPUs
		RTX A3000 (mobile)			Quadro P2000	
		RTX A2000 (mobile)			Quadro P1000	
		RTX A1000 (mobile)				

1.10.3 Supported Video Boards

Video Board	Configuration
Matrox Electronic Systems Ltd	
Matrox X.mio5/X2 SDI	Up to four 12G SDI input with up to four SDI 12G SDI outputs variable configuration from 12in0out to 0in12out
Matrox X.mio5/8 SDI	Up to four 12G SDI input with up to four SDI 12G SDI outputs variable configuration from 8in0out to 0in8out
Matrox X.mio5 IP	Up to 32 ST 2110 inputs and 32 ST 2110 outputs depending on used SFPs and resolution
Matrox X.mio3 Full Height	Various input/output configurations from 48 to 84
Matrox X.mio3 12G	Two 12G inputs, two 12G outputs
Matrox M.264 S1/S2/S3/ S4	H.264 Encoder/Decoder board
Matrox DSX LE 5L /4	Various input/output configurations from 04 to 40, all in 12G
Matrox DSX LE 4 /8	Various input/output configurations from 08 to 80
Matrox DSX LE 4 /4	Various input/output configurations from 04 to 40
Matrox DSX LE 4 IP	Various input/output configurations from 04 to 40
BlueFish Technologies	

Video Board	Configuration
Bluefish Epoch Neutron	Two video inputs, two video outputs (fill & key)
Bluefish Epoch 4K Supernova	Two video inputs, two video outputs (fill & key)
Bluefish Epoch Supernova S+	Two video inputs, two video outputs (fill & key)
Bluefish Kronos K8	Four video inputs, two video outputs (fill & key)
AJA Video Systems, Inc.	
AJA IO4K Plus	Two video inputs, two video outputs (fill & key)
AJA Kona 4	Two video inputs, two video outputs (fill & key)

Please refer to the Viz Engine Administrator Guide for which drivers and driver settings to use.

1.11 Build Information

Platform Toolset: Visual Studio 2022 (v143)
Windows SDK Version: 10.0.22621

2 Documentation

Info: Starting with Viz Artist/Viz Engine 5.4.0, the installer no longer installs the Viz Artist User Guide, Viz Engine Administrator Guide or Viz Plugins User Guide as offline documentation.

Documentation for Viz Engine, Viz Artist and Viz Plugins is available online on the Vizrt Documentation Center:

- Viz Artist User Guide
- Viz Engine Administrator Guide
- Viz Plugins User Guide

3 Installation and Support

3.1 Installation

The installation wizard guides you through the installation process. Make sure to close any running Viz application prior to the installation. In order to run Viz Artist or Viz Engine independent of a database server, you need to install the Viz Graphic Hub database software locally.

3.2 Support

Support is available at the Vizrt Support Portal.