



MAYA[®] COMPOSITE (TOXIK)

GRAPHICS HARDWARE QUALIFICATION

LINUX[®] PLATFORM

Last updated: September 9, 2009.

Readme First

The information contained in the [Readme First](#) document applies to all hardware qualifications executed on the Autodesk Media and Entertainment 2010 software product releases and should be acknowledged by all users prior to consulting the qualification charts.

What's New

Qualification of Quadro FX x800 completed on Red Hat 5.3 and Fedora Core 8.

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Linux Qualification Kernels

The following table lists the Linux qualified kernels for the Maya 2010 software product release.

Table Legend

✓	Qualified.
👉	Qualified with caveats. Refer to the Kernel Caveats & Limitations.
🕒	Qualification planned OR in progress. Results coming shortly.
👍	Supported although not officially qualified in our lab.
🔧	Hardware component falls below minimum system requirements to run this product.
✗	Qualification failed due to serious problems.
○	No qualification planned OR not applicable.
—	Not yet tested.

Linux Qualification Kernels for Maya Composite feature for Linux		
	Red Hat® Enterprise Linux®	Fedora®
	5.3 – 64-bit OS	8 – 64-bit OS
Kernel Version		
2.6.18.128.4.1.el5	✓	○
2.6.26.8-57.fc8	○	✓
Xorg Version		
6.8.2	✓	○
7.2-9	○	✓
Glibc Version		
2.3.4-2.41	✓	○
2.7-2	○	✓

Kernel Caveats & Limitations

There are currently no kernel caveats and limitations to report for the current release of this Autodesk product.

Graphics Cards

The following table provides the graphics card and driver version hardware qualifications for the Maya Composite feature for Linux software product release.

Important: Although Autodesk tested the NVIDIA GeForce® and ATI™ Radeon™ consumer graphics cards, it is Autodesk, NVIDIA, and AMD policy to only recommend and support the professional NVIDIA Quadro, ATI FirePro, and ATI FireGL graphics family cards. See the NVIDIA Quadro vs. GeForce GPUs White Paper [PDF].

If you have any questions, please contact:

NVIDIA: NVIDIAAutodeskhelp@nvidia.com

AMD/ATI: <http://emailcustomercare.amd.com>

Table Legend

✓	Qualified
👉	Qualified with caveats. Refer to the Graphics Cards Caveats & Limitations
🕒	Qualification planned OR in progress. Results coming shortly
👉	Supported although not officially qualified in our lab
👉	Hardware component falls below minimum system requirements to run this product
✗	Qualification failed due to serious problems
⦿	No qualification planned OR not applicable
☑	Testing is completed.
👁	Testing is completed. Some issues found. Refer to the Graphics Cards Caveats & Limitations.
△	Testing is ongoing OR planned.
⊖	No testing is planned.
☒	Hardware component falls below minimum system requirements to run the Autodesk product.
—	Not yet tested.

Graphics Card & Driver Qualifications for Maya Composite feature for Linux			
Graphics Card	Driver	Red Hat® Enterprise Linux®	Fedora®
Product	Version	5.3 – 64-bit OS	8 – 64-bit OS
NVIDIA®			
Quadro® FX 5800	185.18.31	✓	✓
Quadro FX 4800	185.18.31	✓	✓
Quadro FX 3800	185.18.31	✓	✓
Quadro FX 1800	185.18.31	✓	✓
Quadro FX 4700 X2	185.18.31	🕒	🕒

Graphics Card & Driver Qualifications for Maya Composite feature for Linux			
Graphics Card	Driver	Red Hat® Enterprise Linux®	Fedora®
Product	Version	5.3 – 64-bit OS	8 – 64-bit OS
Quadro FX 3700	185.18.31	⌚	⌚
Quadro FX 1700	185.18.31	⌚	⌚
Quadro FX 5600	185.18.31	⌚	⌚
Quadro FX 4600	185.18.31	⌚	⌚
Quadro FX 5500	185.18.31	⌚	⌚
Quadro FX 4500 X2	185.18.31	⌚	⌚
Quadro FX 4500	185.18.31	⌚	⌚
Quadro FX 3500	185.18.31	⌚	⌚
Quadro FX 1500	185.18.31	⌚	⌚
Quadro FX 580	185.18.31	👉	👉
Quadro FX 380	185.18.31	👉	👉
Quadro FX 570	185.18.31	👉	👉
Quadro FX 370	185.18.31	👉	👉
GeForce GTX 295	185.18.31	⊘	⊘
GeForce GTX 285	185.18.31	⊘	⊘
GeForce GTS 250	185.18.31	⊘	⊘
GeForce 9800 GT	185.18.31	⊘	⊘
GeForce 8800 GTS	185.18.31	⊘	⊘
GeForce 8800 GT	185.18.31	⊘	⊘
GeForce 9600 GT	185.18.31	⊘	⊘
GeForce 8600 GT	185.18.31	⊘	⊘
ATI™			
FirePro™ V8750	8.634	⌚	⌚
FirePro V8700	8.634	⌚	⌚
FirePro V7750	8.634	⌚	⌚
FirePro V7700	8.634	⌚	⌚
FirePro V5700	8.634	⌚	⌚
FirePro V3750	8.634	⌚	⌚
FirePro V3700	8.634	⌚	⌚
FireGL™ V7700	8.634	⌚	⌚

Graphics Card & Driver Qualifications for Maya Composite feature for Linux			
Graphics Card	Driver	Red Hat® Enterprise Linux®	Fedora®
Product	Version	5.3 – 64-bit OS	8 – 64-bit OS
FireGL V8650	8.634	⌘	⌘
FireGL V8600	8.634	⌘	⌘
FireGL V7600	8.634	⌘	⌘
FireGL V5600	8.634	⌘	⌘
FireGL V3600	8.634	⌘	⌘
Radeon HD 4870 X2	8.634	⊗	⊗
Radeon HD 4870	8.634	⊗	⊗
Radeon HD 3870	8.634	⊗	⊗
Radeon HD 3850	8.634	⊗	⊗
Radeon HD 4650	8.634	⊗	⊗
Radeon HD 3650	8.634	⊗	⊗
Radeon HD 3470	8.634	⊗	⊗
Radeon HD 2600 XT	8.634	⊗	⊗
Radeon HD 2600 Pro	8.634	⊗	⊗
Radeon HD 2400 Pro	8.634	⊗	⊗

Graphics Cards Caveats & Limitations

There are currently no NVIDIA graphics card caveats / limitations to report for the current release of this Autodesk product.

There are currently no ATI graphics card caveats / limitations to report for the current release of this Autodesk product.

Operating System Dependent & Miscellaneous Issues

There are currently no operating system dependant caveats / limitations to report for the current release of this Autodesk product.

Notes on Operating Systems

The following sections describe important notes related to the Linux operating systems for the Maya 2010 for Linux software product.

Python

Maya 2010 for Linux uses Python version 2.6.1 (r251:54863, Jun 5 2007 [GCC 4.1.2]).

Compiler Requirements

Maya 2010 was compiled using gcc 4.1.2, on a RHEL 5 system. gcc 4.1.2 source code is available from <http://gcc.gnu.org/gcc-4.0/>.

The options to build the gcc 4.1.2. compiler used for Maya are:

```
gcc412 -v
```

```
Using built-in specs.
```

```
Target: x86_64-unknown-linux-gnu
```

```
Configured with: ../gcc-4.1.2/configure --prefix=/opt/gcc412 --program-suffix=412 --enable-shared --enable-threads=posix --enable-checking=release --with-system-zlib --enable-__cxa_atexit --disable-libunwind-exceptions --enable-languages=c,c++ Thread model: posix gcc version 4.1.2
```

The plug-in developers should use the same configuration.

Hardware Overlays on NVIDIA Quadro FX Family

To use the color index overlay, you need to disable the "Composite" X extension, otherwise CIOVERLAY will not load properly.

On Quadro FX cards without SLI:

```
nvidia-xconfig --cioverlay --no-composite
```

On Quadro FX cards with SLI:

```
nvidia-xconfig --cioverlay --no-composite --sli True
```

Alternatively, you can configure these settings in the xorg.conf file:

```
Section "Screen"
```

```
    Option "CIOverlay" "on"
```

```
Section "Extensions"
```

```
    Option "Composite" "Disable"
```

```
EndSection
```

Operating Systems

The Linux operating system is extremely flexible with regards to precise versioning of different components, drivers and libraries. Maya may behave very differently on superficially similar systems and while Autodesk will do our best to help solve problems that are probably due to operating system configuration issues, we may be unable to explain or determine the cause of a problem.

Internally at Autodesk we have stabilized on the following configurations. We provide this list for the purpose of aiding our customers, but we can make no guarantees to the reliability, stability or availability of these components. This is not a complete list of Linux configurations choices. This list includes important components that significantly affect the Maya software.

Due to the many operating system and architecture differences between the supported platforms, the results of some operations will differ on different platforms. This is most noticeable with operations which iterate to reach their results -- leading to cumulatively large difference -- e.g., dynamics, some rendering. You may not be able to "mix and match" renderings on different platforms.

We do not recommend saving data directly from Maya to NFS or other remote mounted file systems. We strongly recommend that you save the files locally and then copy the data to the mounted storage system.

When texture images are stored on systems remote from the rendering process, depending on network speed, specifications and load, it is possible that the renderer may be unable to access a texture file on demand and may 'drop' individual textures on a frame by frame basis. To reduce this occurrence store textures on a system local to the rendering process.

Maya is not linked to be compatible with SELinux. If SELinux does not need to be enabled, don't enable it. The SELinux requirement may be addressed via two mechanisms after Maya has been installed.

If you do not wish to use SELinux enforcement, you can disable it by running the ``setenforce 0`` command before starting X, or by adding `selinux=0` to the end of the kernel line in `/etc/grub.conf` or change `/etc/selinux/config` and reboot.

b. It may be possible to change the security context of the Maya libraries, with the `chcon` command. This has not been tested.

KDE klipper is known to have focusing issues with Maya, which may contribute to application instability. We recommend removing the applet from the panel and editing the config file, (`~/.kde/share/config/klipperrcv`), to disable KDE klipper.

[`Version`]

```
update_info=klipperrc.upd:25082001,klipperrc.upd:kde3.1 ral]
```

```
AutoStart=false
```

The following table provides a description of caveats / limitations that are still being investigated. Autodesk has not identified the precise combination of factors involved.

Please refer to the *Release Notes* for further details on known issues with the Maya software product.

Operating System Caveats & Limitations		
Maya Composite feature for Linux		
Operating System	Caveat / Limitation	Workaround
Red Hat Enterprise Linux 5.3	While many NFS issues with Irix file servers were fixed in Redhat 7.2, issues are still occurring on Redhat 7.2 and 7.3 when exporting to 64-bit file systems (e.g. IRIX).	Exporting with the 32bitclients attribute sometimes helps. Check your /etc/exports file and append ,32bitclients on each line that exports to a 64-bit file system. E.g.;
Non Red Hat systems	Maya may not run on systems that do not have compatible runtime libraries, including glibc compiled with the __cxa_atexit option. Maya includes the C++ runtime libraries libstdc++.so.6, and libgcc_s.so.1 within the Maya "lib" directory, as well as the required Motif 2.2.3 runtime library libXm.so.3.	It is possible to copy selected .so files, however the precise files and locations vary on different versions of Linux and we are unable to provide replacement .so files, precise instructions nor provide Support on how to resolve this.

OpenMotif 2.2.3

Maya 2009 uses OpenMotif 2.2.3 as its GUI framework. The version used is OpenMotif 2.2.3 from ICS with additional updates from the OpenMotif CVS. Maya includes the library in its default lib directory. No action is required to use the proper library.

For more information, see <http://www.motifzone.com/>.

OpenGL Visuals

The Maya choice of OpenGL visuals is RGBA 8/8/8/8 double buffer with depth buffer of 24 where applicable. Visuals available from the XServer can be found using the command `glxinfo`.

If Maya cannot obtain its preferred visual, it will fall back as possible to lower values. A warning will be issued in this case.

Set up the XServer so it is using direct rendering to get as many visuals as possible. Use a depth setting of 24, to enable 8 bits per component.

Window Manager

Qualification tests listed in this document have been performed under KDE version 3.5.X. Other window managers are likely to work just fine although they have not been tested and therefore they cannot be listed as "Qualified".

Sound

Autodesk is aware that sound reproduction inside Maya (scrubbing and playback) doesn't work on many sound cards on Linux. At this time, sound reproduction may not be adequate for your purposes. Sound playback does behave correctly on some cards and some on-board/built-in sound devices.

SoundBlaster Live cards are currently known to provide inadequate performance for interactive sound playback, particularly scrubbing.

Autodesk is also aware that sound will not work on some sounds cards (e.g. SoundBlaster 16) when another application is already using the sound system.

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