



## CHIMERA an Extensible Molecular Modeling System

### Chimera on 64-bit Microsoft Windows Platforms

The AMD64/EMT64 64-bit Microsoft Windows version is compiled with Microsoft Visual Studio 2010 on Windows 7. It should run Windows 7, 8, 8.1, and 10, but we only test on Windows 7 and 10.

#### Downloading and Installation

Here's what you need to do to get chimera working on your Windows system:

(1) If you want Chimera to be used by multiple users:

Install Chimera as an administrator.

(2) Download [Chimera release](#).

We recommend that you use the latest production release. However, you may wish to try out daily releases which have the newest features but are less well tested than production releases.

A small minority of browsers may download the file as `chimera-get.py`. If yours does, rename the file to `chimera-installer.exe` and then run the downloaded executable file. It should install everything you need. You should also read the [release notes](#).

If you experience difficulty downloading the distribution, try this [link](#) as a simple test to see if the size of the Chimera distribution is causing problems. The link should download a small Python program to your computer. The only difference between this and the Chimera distribution download is the size of the file, so if the link works then something in your environment is blocking the downloading of very large files. If this test download does not work, then something in your environment is blocking the download of any binary file (the download is sent using the http content type of "application/octet-stream"). You should next try downloading the Chimera distribution to a different computer or from a different network that you are sure does not make use of a proxy web server.

(3) Run the chimera installer:

If you choose to save the chimera installer, rather than run it immediately, run it now.

(4) Double check that shortcuts were created:

If requested, after the installation there should be an additional shortcut for chimera on the desktop. There should also be a **UCSF Chimera** menu in the **Start\Programs** menu with various shortcuts.

## Choosing a graphics card

Since the images displayed by Chimera are designed to be manipulated interactively, **hardware three-dimensional graphics acceleration is extremely desirable, especially when visualizing and manipulating large protein structures.** Chimera will not perform well on computers lacking a fast processor or a good-performing OpenGL graphics card. (And just because your computer works fine with the game Quake doesn't necessarily mean it will perform well with a scientific application such as Chimera.) Choosing a graphics card is difficult, it depends on the size of the structures you wish to visualize as well any other features you need (*e.g.*, low cost, large display support, hardware stereo in a window). To help you choose a graphics card, look at the [chimera benchmarks](#). Also look at our information on [hardware stereo](#).

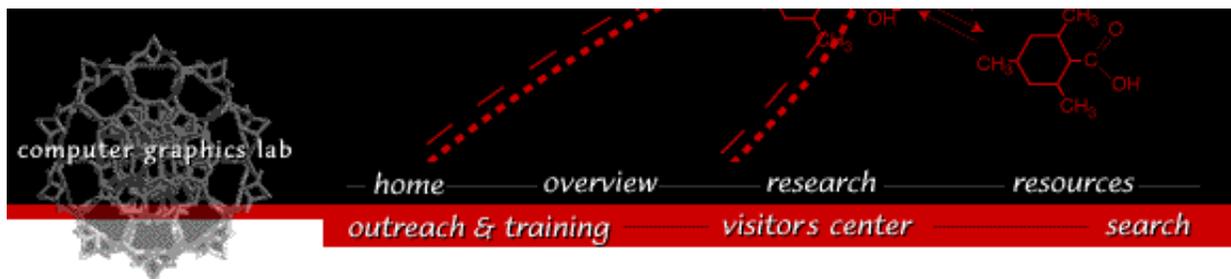
## Graphics Drivers

Often what appears to be a chimera bug, is actually a bug in the graphics driver. Therefore, we strongly recommend that you **update your graphics driver** to the latest available. In general, we recommend getting the driver from the graphics chip supplier, *e.g.*, [AMD](#), [NVIDIA](#), or [Intel](#). But in some cases, usually for laptop computers, you'll need to get a new driver your computer maker's web site (and discover there are none — the only solution is to ask the computer maker for a new one).

## Removal

To remove chimera, do one of:

1. Go to the **Control Panel** and find the **Programs** or **Programs and Features** or **Add or Remove Programs** tool (the tool name changes with the version of Windows), and uninstall chimera. Or,
2. Run the uninstaller from the menu **Start\All Programs\UCSF Chimera\Uninstall Chimera**



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## Chimera on Mac OS X

### Installation

To install Chimera, open the disk image file you downloaded. Drag the Chimera application from the opened disk image to where you want it installed.

If more than one person will be using Chimera, the system Applications folder is a good place to put it. Moving it to that folder requires administrator privileges. If it is only for your use, putting it in your home Applications folder or leaving it on the desktop are reasonable choices.

Chimera is normally started by double clicking on its icon. If you want to start it from the command-line (*e.g.*, you want to run more than one chimera at a time), use the following executable:

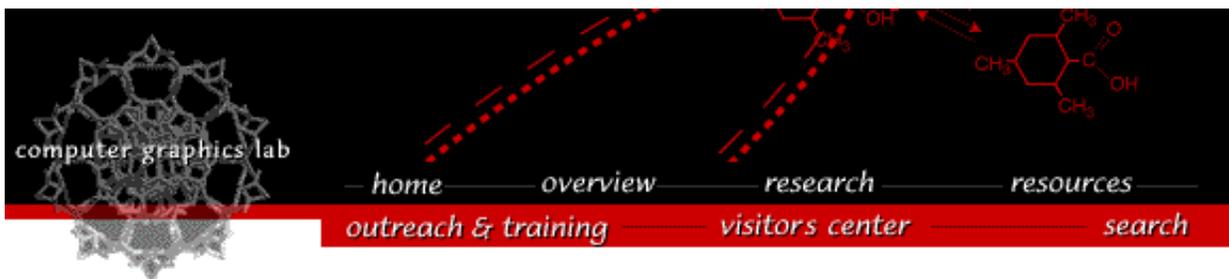
```
Chimera.app/Contents/MacOS/chimera
```

### Removal

To remove Chimera, just drag it to the trash.

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# CHIMERA

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## Chimera on amd64/x86\_64 64-bit Linux Platforms

The 64-bit Linux version of chimera was compiled on Red Hat Enterprise Linux Server release 5.11.

### Downloading and Installation

Here's what you need to do to get chimera working on your Linux system:

(1) Download [Chimera release](#):

We recommend that you use the latest production release. However, you may wish to try out snapshot releases or a daily build (listed lower down on the download page), which have the newest features but are less well tested than production releases.

Some browsers may download the file as `chimera-get.py`. If yours does, rename the file to `chimera-installer.bin`.

If you experience difficulty downloading the distribution, try this [link](#) as a simple test to see if the size of the Chimera distribution is causing problems. The link should download a small Python program to your computer. The only difference between this and the Chimera distribution download is the size of the file, so if the link works then something in your environment is blocking the downloading of very large files. If this test download does not work, then something in your environment is blocking the download of any binary file (the download is sent using the http content type of "application/octet-stream"). You should next try downloading the Chimera distribution to a different computer or from a different network that you are sure does not make use of a proxy web server.

(2) Run the downloaded executable file within a terminal window:

Most browsers do not make the downloaded file executable. (In the following instructions, replace `CHIMERA-INSTALLER.bin` with the name of the downloaded installer.) So in the terminal window, use the Linux command `chmod +x CHIMERA-INSTALLER.bin` to make it executable. Then run the `CHIMERA-INSTALLER.bin` in a terminal window to install Chimera. The default answers are supplied, but may be altered with your terminal shell's editing keys. You may also want to read the [release notes](#).

If the installer is run with `sudo` (*i.e.*, as root), then it will add chimera to the system's

desktop applications menu (otherwise it is added to the user's desktop applications menu). The chimera desktop icon is only installable per-user, so after a `sudo install`, each user would need to run `CHIMERA/bin/xdg-setup install` (where CHIMERA is the top-level directory of the chimera installation) to get the icon on their desktop.

### (3) Update your runtime environment:

The chimera installer will optionally put a symbolic link to the chimera application on your path. If you don't do that as part of the installation process, you may do so later by hand:

If CHIMERA is the top-level directory of the chimera installation, then you should add a symbolic link to CHIMERA/bin/chimera somewhere on your command path (e.g., `ln -s CHIMERA/bin/chimera /usr/local/bin/chimera`). An alternative would be to add CHIMERA/bin to your command path. The symbolic link is preferable because, that way, the programs in chimera's bin directory can not take precedence over other programs with the same names on your system.

## Choosing a graphics card

Choosing a graphics card is difficult, it depends on the size of the structures you wish to visualize as well as any other features you need (e.g., low cost, large display support, hardware stereo in a window). To help you choose a graphics card, look at the [chimera benchmarks](#). Also look at our information on [hardware stereo](#).

## Help file issues

Chimera uses a web browser to display help files. If chimera is unable to display help files, you can fix it by setting your BROWSER environment variable to "firefox" or "kfm" before running Chimera (i.e., type `export BROWSER=firefox` at the unix command line).

## Startup issues

If Chimera terminates with a Python traceback that ends with **ImportError: libXss.so.1: cannot open shared object file: No such file or directory**, then the X11 Screen Saver extension library needs to be installed on your system. The name of that package depends on what version of Linux you have. For Red Hat-derived systems, it is **libXScrnSaver**. For Debian-derived systems, it is **libxss1**.

If Chimera terminates with an error that ends in **TclError: Togl: couldn't get visual**, this typically means that your graphics card isn't configured to support any TrueColor visuals with stencil buffer support. If you run `glxinfo -t` at the command line, the tail end of the output lists the currently available visuals. If none of the visuals listed have a "Visual Type" of TrueColor, or if all of the TrueColor visuals have zero in their "stencil" field, then you need to reconfigure your graphics card. Usually that reconfiguration involves increasing the number of colors displayed by the graphics card to 24 or 32 bits. In particular, NVIDIA cards typically start offering stencil buffer support at visual depths of 24 bits and higher.

If Chimera terminates with the error **OpenGL misconfiguration detected**, that means that you

have two different versions of `libGL.so` installed — one in `/usr/lib` (installed by your graphics card driver) and one in `/usr/X11R6/lib` (the Mesa, OpenGL-compatible, software-only version). Reinstalling your graphics card driver should remove the `/usr/X11R6/lib` version. This error is usually the result of upgrading your operating system — you can prevent it from reoccurring by uninstalling the `libGL` package (e.g., `xorg-X11-Mesa-libGL` package) so it doesn't get updated *and* reinstalling your graphics card driver (because uninstalling your `libGL` package probably removed the version installed by your graphics driver). With the NVIDIA drivers, reinstalling, using the SUSE `yast` tool or the Red Hat `yum` (or `dnf`) tool, is known *not* to work; instead, use the NVIDIA driver installer from the [NVIDIA driver download page](#).

On startup, you may see the warning `xlib: extension "XFree86-DRI" missing on display "0.0"`. That means that there was no graphics driver found for your card that uses the DRI, direct rendering interface, technology for fast 3D graphics. The solution is to either ignore the warning or to upgrade your hardware and software (see Mesa/OpenGL issues below).

## Graphics (Mesa/OpenGL) issues

Historically, many versions of the open source [Mesa](#) (the Linux OpenGL plugin driver architecture) have had bugs that affected Chimera. But Mesa has dramatically improved recently (17.0), so you no longer need to install a vendor-supplied graphics driver. However, the default, open source, NVIDIA graphics driver is slow, so with NVIDIA hardware, we recommend that you install [NVIDIA's](#) graphics driver. For AMD hardware, you should only need to install the [AMD](#) driver if have a workstation graphics card (FireGL/FirePro/Radeon Pro).

## Removal

To remove chimera, first remove its icon, then (recursively) delete its directory. So in a terminal window:

```
`chimera --root`/bin/xdg-setup uninstall  
rm -rf `chimera --root`
```

That is, find out where chimera was installed by running `chimera --root`. Then uninstall the icon and delete the directory and everything in it.

If the chimera you wish to remove is not on your path, then replace ``chimera --root`/bin` with the command path found in the icon's Properties.