

# CeX3D Inverse: Installation Guide 32-Bit Linux Command Line Version

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The following are online links for manuals and tutorials for CeX3D Inverse:

- <http://www.cex3d.net/inverse/documentation/manuals/installation.html>  
- Installation Guides
- <http://www.cex3d.net/inverse/documentation/manuals/usergui.html>  
- User's Manual GUI Version
- <http://www.cex3d.net/inverse/documentation/manuals/usercmd.html>  
- User's Manual Command Line Version
- <http://www.cex3d.net/inverse/documentation/dosanddnts/index.html>  
- DOs and DONTs Tutorial

This document is also available in PDF format:

- <http://www.cex3d.net/inverse/documentation/manuals/installationcmd32bitlinux.pdf>

The following sections constitute the installation guide for the 32-bit Linux command line version of CeX3D Inverse. This guide covers both CeX3D Inverse NCU and CeX3D Inverse Pro.

### 1.1 Requirements for Linux 32-Bit

CeX3D Inverse for 32-bit Linux requires the following libraries:

- The GMP (GNU Multiple Precision Arithmetic) library
- The SDL (Simple Directmedia Layer) library
- The SDL\_image library
- The image libraries that SDL\_image depend on

The installation section explains how they are commonly installed.

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### 1.1.1 Installation for Linux 32-Bit

To install CeX3D Inverse for 32-bit Linux, do the following:

1. Install the necessary libraries: GMP (version 3), SDL (version 1.2), SDL\_image (version 1.2) and the image libraries that SDL\_image depend on. On a Ubuntu Linux system, this corresponds to the packages `libgmp3-dev`, `libsdl1.2-dev` and `libsdl-image1.2-dev` (and its dependencies). Normally, they can be installed by executing the following command in a shell:

```
apt-get install libgmp3-dev libsdl1.2-dev libsdl-image1.2-dev
```

This command requires that you have administrator rights. You can add the command `sudo` in front, to get these rights (password required), i.e.:

```
sudo apt-get install libgmp3-dev libsdl1.2-dev libsdl-image1.2-dev
```

2. Download CeX3D Inverse (which is actually its installer) if you have not already done so
3. Execute the installer in a shell from the directory where it was downloaded: On Linux you first need to set the downloaded installer's permissions to executable before you can run it, e.g. by this command:

```
chmod 777 ./installcex3dinverse_cmd_ncu_alpha_0.7.0.0_x86linux32bit
```

Now run it:

```
./installcex3dinverse_cmd_ncu_alpha_0.7.0.0_x86linux32bit
```

The installer requires that you have administrator rights. You can add the command `sudo` in front to get these rights (password required), i.e.:

```
sudo ./installcex3dinverse_cmd_ncu_alpha_0.7.0.0_x86linux32bit
```

4. Follow the installation instructions, which includes accepting the End-User License Agreement and specifying where the program should be installed, e.g. `/usr/local/bin/` by default. We recommend that you install it in a place that your `PATH` environment variable points to, since otherwise you will need to prefix the `c3di` command with where it is installed every time you run it
5. If you do not wish to or do not have administrator rights to install CeX3D Inverse system-wide under e.g. `/usr/local/`, it is possible to install it for a single user in that user's home directory, e.g. under `/home/myuser/CeX3DInverse/` for the user `myuser`. If you are installing anywhere else than under `/usr/local/` or a user's home directory, make sure that you know what you are doing
6. If you have installed CeX3D Inverse in a place that the `PATH` environment variable does not point to, you can normally edit your `PATH` environment variable, typically in the hidden file `.profile` in your user home directory, but this depends on your Linux system. Refer to your Linux system documentation if in doubt

In case you are trying to run the 32-bit version of CeX3D Inverse on a 64-bit Linux system, you would also need to install the following:

- Linux libraries: `libc6-i386` (this is for executing 32-bit applications on 64-bit Linux), `ia32-libs` (contains the most commonly used 32-bit libraries for 64-bit Linux, including SDL 1.2 and SDL\_image 1.2) and `lib32gmp3`. Normally, they can be installed by executing the following command in a shell:

```
apt-get install libc6-i386 ia32-libs lib32gmp3
```

This command requires that you have administrator rights. You can add the command `sudo` in front, to get these rights (password required), i.e.:

```
sudo apt-get install libc6-i386 ia32-libs lib32gmp3
```