

Installation Tutorial

The usage of Liggghts® requires the following software. On the right side all commands and steps are listed in detail. The basic steps are:

1. UBUNTU 20.04
2. FFMEPG
3. OpenMPI
4. LIGGGHTS® 3.8.0
5. PARAVIEW

On <https://engineerdo.com> you can find a video tutorial for the installation.

If you have problems during the installation or you wish to get the installation done by us, please get in touch with us:
info@engineerdo.com

Hint:
It can be useful to install VLC additionally to be able to play nearly every codec of videos.

```
sudo snap install vlc
```

UBUNTU

Download Ubuntu 20.04 and install on USB Stick
Go to Bios → boot from usb
Install Ubuntu from stick

FFMEPG

```
sudo apt-get install ffmpeg
```

OpenMPI

```
sudo apt install openmpi-bin
```

LIGGGHTS® with VTK

```
sudo apt install git
```

```
git clone https://github.com/CFDEMproject/LIGGGHTS-PUBLIC.git
```

```
sudo apt install cmake libavcodec-dev libavformat-dev libavutil-dev libboost-dev libdouble-conversion-dev libeigen3-dev libexpat1-dev libfontconfig-dev libfreetype6-dev libgdal-dev libglew-dev libhdf5-dev libjpeg-dev libjsoncpp-dev liblz4-dev liblzma-dev libnetcdf-dev libnetcdf-cxx-legacy-dev libogg-dev libpng-dev libpython3-dev libqt5opengl5-dev libqt5xmlextras5-dev libsqlite3-dev libswscale-dev libtheora-dev libtiff-dev libxml2-dev libxt-dev qtbase5-dev qttools5-dev zlib1g-dev
```

```
cd ~/LIGGGHTS-PUBLIC/src
```

```
make auto
```

```
gedit MAKE/Makefile.user
```

```
USE VTK is set to "ON"
```

```
AUTOINSTALL_VTK = "ON"
```

```
make auto
```

```
sudo ln -s ~/LIGGGHTS-PUBLIC/src/lmp_auto /bin/lmp380
```

```
lmp380
```

If LIGGGHTS® does not start

```
sudo gedit ~/.bashrc
```

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:~/LIGGGHTS-PUBLIC/lib/vtk/install/lib/
```

```
lmp380
```

Paraview

```
sudo apt-get install -y paraview
```