

# Vivante

Video player on Vivante GPU

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## Prerequisite

1. 필요 패키지 설치

```
sudo apt-get install build-essential git unzip wget cmake libgtk2.0-dev pkg-config yasm
sudo apt-get install libjpeg-dev libtiff5-dev libpng-dev
sudo apt-get install libgtk-3-dev
sudo apt-get install mesa-utils libgl1-mesa-dri libgtkgl2.0-dev libgtkglext1-dev
sudo apt-get install libatlas-base-dev gfortran libeigen3-dev
```

2. OpenCL 헤더 설치

```
sudo apt-get install opencl-headers
```

3. FFMPEG 설치

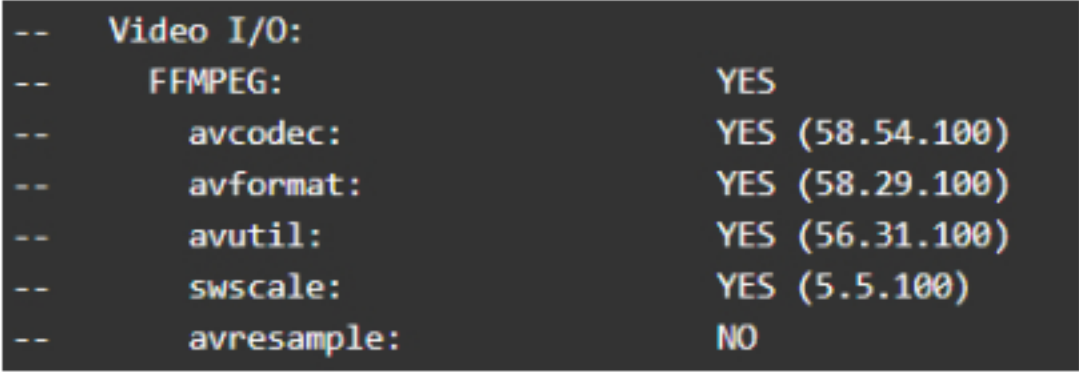
```
wget https://ffmpeg.org/releases/ffmpeg-snapshot.tar.bz2 -O ffmpeg-snapshot.tar.bz2
mkdir libffmpeg
tar -xvf ffmpeg-snapshot.tar.bz2 -C libffmpeg --strip-components=1
rm ffmpeg-snapshot.tar.bz2
cd libffmpeg
./configure --enable-shared --disable-doc
sudo make
sudo make install
```

4. OpenCV 4.4 설치

```
sudo apt-get install ffmpeg libavcodec-dev libavformat-dev libswscale-dev libxvidcore-dev libx264-dev libxine2-dev
mkdir opencv
cd opencv
wget -O opencv.zip https://github.com/opencv/opencv/archive/4.4.0.zip
unzip opencv.zip
wget -O opencv_contrib.zip https://github.com/opencv/opencv_contrib/archive/4.4.0.zip
unzip opencv_contrib.zip
```

```
cd opencv-4.4.0
mkdir build
cd build
cmake -D CMAKE_BUILD_TYPE=RELEASE \
-D CMAKE_C_COMPILER=/usr/bin/gcc \
-D CMAKE_INSTALL_PREFIX=/usr/local \
-D INSTALL_PYTHON_EXAMPLES=OFF \
-D INSTALL_C_EXAMPLES=OFF \
-D BUILD_DOCS=OFF \
-D BUILD_PERF_TESTS=OFF \
-D BUILD_TESTS=OFF \
-D BUILD_PACKAGE=OFF \
-D BUILD_EXAMPLES=OFF \
-D WITH_TBB=ON \
-D ENABLE_FAST_MATH=1 \
-D CUDA_FAST_MATH=1 \
-D WITH_IPP=OFF \
-D WITH_V4L=OFF \
-D WITH_1394=OFF \
-D WITH_GTK=ON \
-D WITH_QT=OFF \
-D WITH_OPENGL=ON \
-D WITH_EIGEN=ON \
-D WITH_FFMPEG=ON \
-D BUILD_JAVA=OFF \
-D OPENCV_GENERATE_PKGCONFIG=ON \
-D OPENCV_ENABLE_NONFREE=ON \
-D OPENCV_EXTRA_MODULES_PATH=../../opencv_contrib-4.4.0/modules ..
```

주의: 결과에서 아래 그림과 같이 FFMPEG 지원을 반드시 확인하고 다음 단계로 넘어가야한다.



```
time make -j$(nproc)
sudo make install
```

cat /etc/ld.so.conf.d/\*  
결과에 /usr/local/lib가 있는지 확인하고, 없다면 추가한다.

```
sudo ldconfig
```

## Build project

```
git clone https://github.com/EThe0n/Vivante.git
cd Vivante/player
make
```

## Run project

```
./player <video_file_path>
```