

## List of Known Dependencies

In this document we list all the pieces of code included by ORB-SLAM Monocular and linked libraries which are not property of the authors of ORB-SLAM Monocular.

### Code in **src** and **include** folders

- *ORBextractor.cc*  
This is a modified version of *orb.cpp* of OpenCV library. The original code is BSD licensed.
- *PnPsolver.h*, *PnPsolver.cc*  
This is a modified version of the *epnp.h* and *epnp.cc* of Vincent Lepetit. This code can be found in popular BSD licensed computer vision libraries as OpenCV and OpenGV. The original code is FreeBSD.
- Function `ORBmatcher::DescriptorDistance` in *ORBmatcher.cc*  
The code is from: <http://graphics.stanford.edu/~seander/bithacks.html#CountBitsSetParallel>  
The code is in the public domain.

### Code in **Thirdparty** folder

- All code in **DBoW2** folder  
This is a modified version of DBoW2 and DLib library. All files included are BSD licensed.
- All code in **g2o** folder  
This is a modified version of g2o. All files included are BSD licensed.

### Library dependencies

- **OpenCV**  
BSD licensed.
- **Eigen3**  
For versions greater than 3.1.1 is MPL2, earlier versions are LGPLv3.
- **BLAS** (required by g2o)  
Freely-available software. See [http://www.netlib.org/blas/#\\_licensing](http://www.netlib.org/blas/#_licensing)
- **LAPACK** (required by g2o)  
BSD licensed. See [http://www.netlib.org/lapack/#\\_licensing](http://www.netlib.org/lapack/#_licensing)
- **ROS**  
BSD licensed. In the manifest.xml the only declared package dependencies are roscpp, tf, sensor\_msgs, opencv2, image\_transport, cv\_bridge, which are all BSD licensed.