

The Visual Processing library contains source and windows binaries of the following application:

- [Curvace Simulator](#)
- [Curvace Viewer](#)
- [CDS-Viewer](#)
- [CDS-Filter](#)

The core application within this package is the Curvace Simulator which allows to simulate the output of sensors within a virtual environment. The Simulator can be extended with plugins to support additional sensor shapes or other functionality.

The Curvace Viewer can be used to read data from a cylindrical Curvace sensor in conjunction with an intermediate microcontroller board.

Curvace Viewer and Simulator can both store their image sequences in a common data format. The CDS-Viewer can be used to view and analyze these stored sequences.

Finally CDS-Filter incorporates several visual filter algorithms as well as other utility functions that are performed on CDS files. The flow option for example allows to load a CDS file, compute optic flow from the data and store the data together with the optic flow in a new CDS file which can then be analyzed with the CDS-Viewer.

### Installation

The [Visual Processing Library Package](#) includes the windows binaries of all applications. These are located in the /bin subdirectory of the archive. No installation is required, simply extract the binary directory to your preferred location. Alternatively you can download the binary only package:

[download](#) [PC Application binaries for windows \(.zip\)](#)

[download](#) [Application and algorithm source \(.zip\)](#)

### Compiling

The project uses CMake as cross-platform make tool which has been tested with Microsoft Visual Studio 2008 and with GCC under linux. The following dependencies are required to compile the applications:

- [CMAKE](#)
- [QT4](#)
- [OpenSceneGraph](#) (for Curvace Simulator)
- [Boost](#) (for Curvace Viewer)

If you encounter problems with the dependencies you should refer to [Help on Installing Dependencies](#)

### Using Visual Studio

- Run the CMake GUI
- Set 'Where is the source code' to the /src directory of the Visual Processing Library Package
- Set 'Where to build the binaries' to a new build directory (e.g. /build) - do not put the build within the /src directory
- Press Configure and select your Compiler (Visual Studio ...)
- You can change the CMAKE\_INSTALL\_PREFIX to your preferred install location. All other options can be left unchanged.
- Press Generate (you can close CMake when finished)
- Open the generated solution CurvaceVisualProcessing.sln within the /build directory
- Select 'Release' build.
- Build BUILD\_ALL
- Build Install

If everything worked fine you now have a working set of applications in the selected install

directory /bin

Using g++ and make under linux

- create a /build directory and change to this directory (mkdir build; cd build)
- run 'cmake src' where src is the source directory of the VPL package
- press 'c' to configure, then 'g' to generate the makefile
- quit cmake and run 'make'
- You can install the applications by running 'make install'