This section gives an introduction on a specific hard- and software setup that is used in conjunction with the Curvave Viewer for interfacing the cylindrical CURVACE sensor. In this setup we use an intermediate   readout board which connects to the cylindrical CURVACE and a PC.

This setup consists of three hardware components each running a specific software:

- A **PC** running the Curvace Viewer
- The readout board running a **processing software**
- The **cylindrical CURVACE** sensor, consisting of a top and bottom controller, each running a   **readout software**

The readout software on both controllers of the cylindrical CURVACE sensor together read the columns of ommatidia and transfer the data over an SPI connection. *Details and source of this controller code is currently not available.*

We present to processing software implementations for this readout board.

The Visualisation software performs the configuration and readout of sensor data from both CURVACE controllers,
 fuses the data
in a single frame, performs
 bias removal
and
 transfers the visual data
with a robust transmission protocol to the PC

The Optic Flow software performs the same intitial operations (configuration , readout, fusion
and
 bias removal
). The visual data itself is not transferred to the PC. Instead the software
 computes optic flow
information and transmits this data to the PC.

VPL Microcontroller code

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The Universal software features capabilities for visualisation as well as optic flow with configurable optic flow parameters.

All readout board software implementations are available withing the Visual Processing Library .

 download microcontroller code samples (.zip)