# HALCON Support for Photoneo 3D Sensors using GenICam

User guide on using the GenICam interface in HALCON

What is GenICam?

The Generic Interface for Cameras standard is the base for plug & play handling of cameras and devices. It was developed by European Machine Vision Association (EMVA) (https://www.emva.org/standards-technology/genicam/)

GenICam with Photoneo devices

GenICam support was introduced with PhoXi Control 1.8.2 GenICam functionality is provided via GenTL library that works as a wrapper around PhoXi Control C++ API. PhoXi Control has to be running in order to use the GenICam interface.
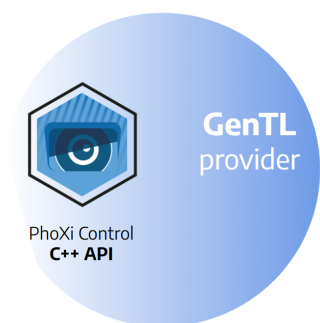
What is HALCON?

HALCON provides an Integrated Development Environment (IDE) for machine vision that enables users to build image-processing solutions. More information, guides, and a list of supported operating systems can be found at mvtec.com.

## GenICam support in HALCON

Running the example

- Install HALCON
- Install and launch the PhoXi Control 1.9 or higher
- Open one of the examples located at
  C:\Program Files\Photoneo\PhoXiControl-x.x.x\API\examples\GenTL\halcon

  Note: This folder contains more examples, however, the parts of the code this document refers to are similar. The *.py file will be referred to as example.*hdev*

- Make sure that the environment variable *GENICAM_GENTL64_PATH is configured as in the following figure*
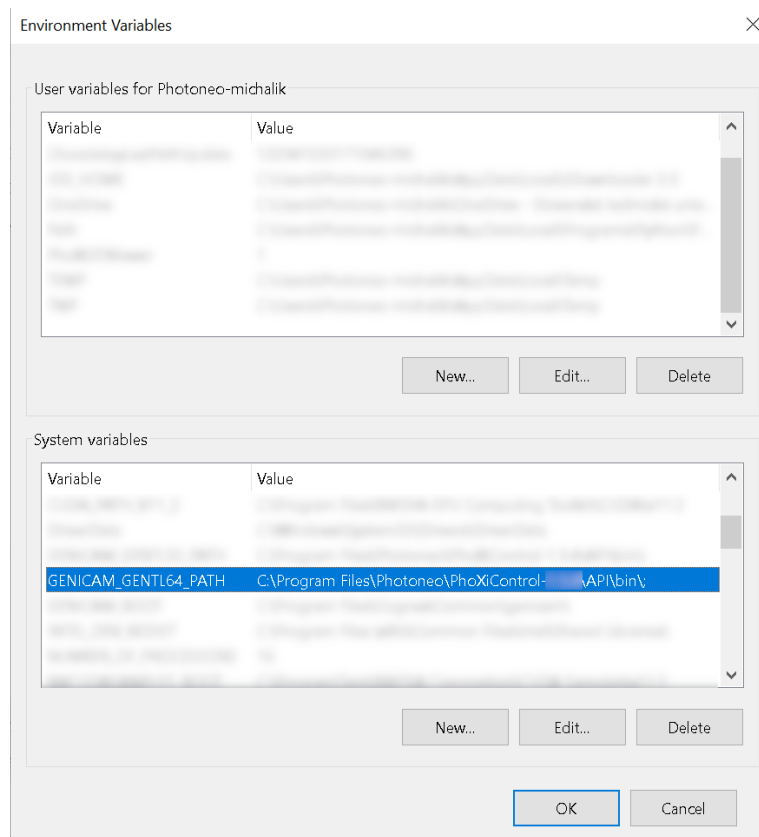
- Find and copy the **ID** of the device
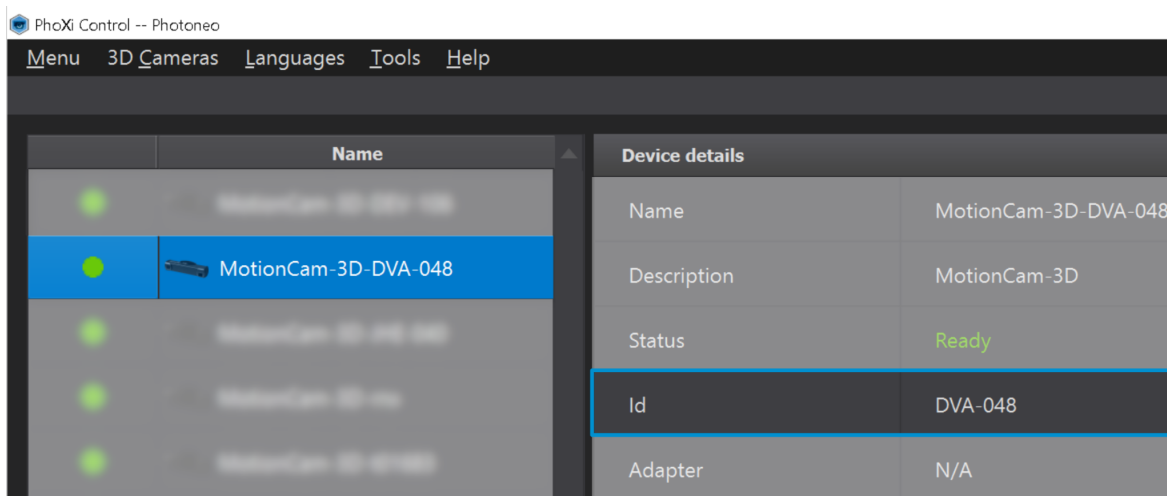
- Paste the ID into the *example.hdev*

```
1 *
2 * Example for the usage of the PhotoneoGenTLProducer (photoneo.cti)
3 * PhoXiControl must be running!
4 *
5 info_framegrabber ('GenICamTL', 'device', Information, DeviceList)
6 device_id := 'PhotoneoTL_DEV_DVD-048'
```

- Before running the script, PhoXi Control needs to be running and the device needs to be connected

- After running the example.hdev, the **Canvas,** and the **Iconic Variables** sections offer a look at different output structures such as *Texture, NormalMap, etc.*
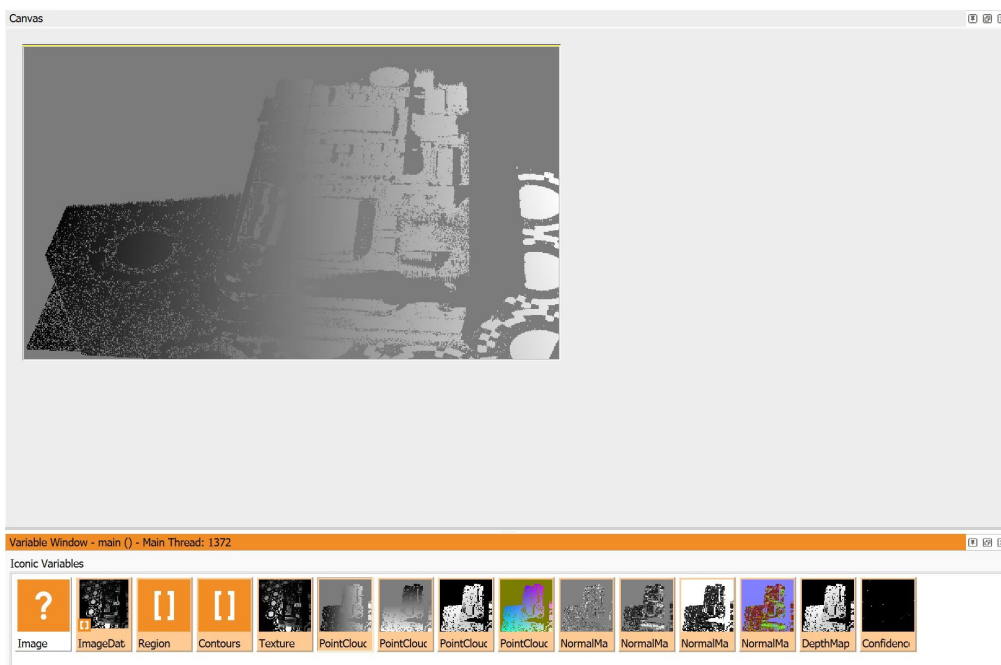
Note: *EventMap* is MotionCam-3D feature only.