



## GenICam VsxProtocolDriverGenTL Package

Supported devices:

- SmartRunner 3-D (TOF & STEREO)
- SmartRunner (2-D)

## Overview

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SmartRunner Explorer 3-D Time-of-Flight und Stereo

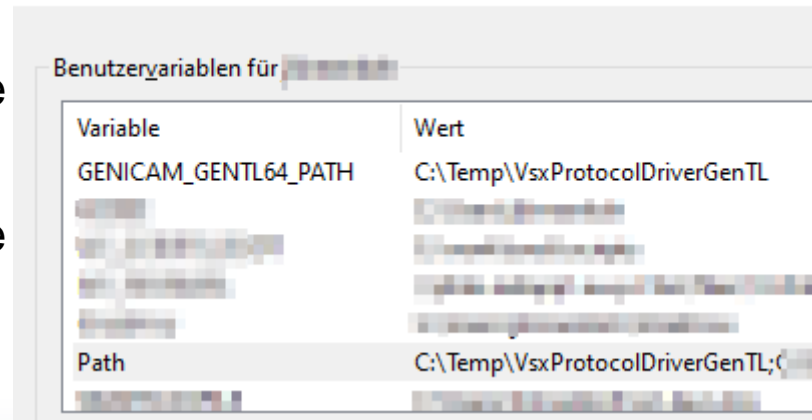


SmartRunner Explorer

## Installation

1. **Unzip the VsxProtocolDriverGenTL-<version>.zip to a convenient path**
  - E.g.: C:\Temp\VsxProtocolDriverGenTL
2. **Install the package „2015-2022 Redistributable“**
  - <https://learn.microsoft.com/en-us/cpp/windows/latest-supported-vc-redist?view=msvc-170>
3. **Install the package „.NET Runtime >=6.0.26“ (Windows x64)**
  - <https://dotnet.microsoft.com/en-us/download/dotnet/6.0>
4. **Adjust Windows environment variables:**
  - Append your path (e.g. C:\Temp\VsxProtocolDriverGenTL) to user variable „Path“ (so that the P+F driver is found)
  - Append your path (e.g. C:\Temp\VsxProtocolDriverGenTL) to user variable „GENICAM\_GENTL64\_PATH“ (so that HALCON finds the driver)



Umgebungsvariablen



The screenshot shows the 'Environment Variables' window in Windows. The 'User variables for [User]' tab is selected. A table lists the user variables. The 'Path' variable is highlighted, showing its value as 'C:\Temp\VsxProtocolDriverGenTL;C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Common\...'. The 'GENICAM\_GENTL64\_PATH' variable is also visible in the list.

Variable	Wert
GENICAM_GENTL64_PATH	C:\Temp\VsxProtocolDriverGenTL
Path	C:\Temp\VsxProtocolDriverGenTL;C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Common\...

## Content of the driver package

- BouncyCastle.Crypto.dll
-  GENICAM\_BETA\_HALCON\_EXAMPLE.hdev
- K4os.Compression.LZ4.dll
- K4os.Compression.LZ4.Streams.dll
- K4os.Hash.xxHash.dll
- Microsoft.Win32.SystemEvents.dll
- Newtonsoft.Json.dll
- PF.VsxProtocolDriver.Communication.Vsx.dll
- PF.VsxProtocolDriver.dll
- PF.VsxProtocolDriver.Internal.Types.dll
- PF.VsxProtocolDriver.PxxPlugin.dll
- PF.VsxProtocolDriver.Types.dll
- PF.VsxProtocolDriver.VsxFactory.dll
- PF.VsxProtocolDriver.Wrapper.deps.json
- PF.VsxProtocolDriver.Wrapper.dll
- PF.VsxProtocolDriver.Wrapper.pdb
- PF.VsxProtocolDriver.Wrapper.runtimeconfig.json
-  PF.VsxProtocolDriver.Wrapper.xml
- PF.VsxProtocolDriver.WrapperNE.dll
- PF.VsxProtocolDriver.WrapperNE.lib
- RJCP.SerialPortStream.dll
- System.Drawing.Common.dll
- System.IO.Packaging.dll
- System.IO.Pipelines.dll
- System.IO.Ports.dll
- VsxProtocolDriverGenTL.cti
- VsxProtocolDriverGenTL.exp
- VsxProtocolDriverGenTL.lib

HALCON example program

GenICam - Driver

## HALCON

1. Use HALCON example
2. Or use HALCON image acquisition assistant

The screenshot displays the HALCON software interface. On the left, a window titled 'Grafikfenster: [H2F9FC697440]' shows a blue background with a white wireframe cube. In the center, a 'Programmfenster - main () - Hauptthread: 14820' window shows the following code:

```

1 * GENICAM BETA HALCON EXAMPLE
2 * This example shows the usage of the GenTL Producer.
3 *
4 WinWidth := 800
5 WinHeight := 600
6 dev_open_window (0, 0, WinWidth, WinHeight, 'blue', Window3D)
7 * Pose to display point cloud data
8 create_pose (0, 0, 10, 0, 0, 0, 'Rp+', 'gba', 'point', Pose)
9
10 list_available_GenICam_devices
11 o_framegrabber ('GenICamTL', 'device', Information, ValueList)
12
13 open P+F Smartrunner 3D sensor using default device name for VSE with default IP address
14 n_framegrabber ('GenICamTL', 0, 0, 0, 0, 0, 'progressive', -1, 'default', -1, 'false', 'default', 'Sm
15
16 set_framegrabber_param (AcqHandle, 'create_objectmodel3d', 'enable')
17 set_framegrabber_param (AcqHandle, 'add_objectmodel3d_overlay_attr', 'enable')
18
19 grab_image_start (AcqHandle, -1)
20
21 dev_update_off ()
22 while (1)
23   grab_data_async (Image, Region, Contours, AcqHandle, -1, Data)
24
25   ObjMod3D := Data[0]
26
27   disp_object_model_3d_safe (Window3D, ObjMod3D, [], Pose, [], [])
28
29   clear_object_model_3d (ObjMod3D)
30 endwhile
31 dev_update_on ()
32
33 dev_set_window (Window3D)
34 dev_close_window ()
35
36 close_framegrabber (AcqHandle)
    
```

On the right, the 'Datei Bildeinzug Codegenerierung Hilfe' window is open, showing the 'Verbindung' tab. The 'Schnittstellenbibliothek' is set to 'hAcqGenICamTL.dll (Rev. 20.11.17)'. The 'Gerät' dropdown is set to 'SmartRunner 3-D Stereo\_192.168.2.11'. The 'Kameradatei' dropdown is set to 'SmartRunner 3-D Stereo\_192.168.2.4'. The 'Auflösung' is set to 'StandardEinstellung'. The 'Halbbild' is set to 'progressive'. The 'Generisch' dropdown is set to 'default'. The 'Anschluss' is set to '0'. The 'Auswählen ...' button is highlighted.



## Verification information

1. This BETA driver package has been tested with following sensors:
  1. SmartRunner Explorer 3-D TOF (VTE)
  2. SmartRunner Explorer 3-D Stereo (VSE)
  3. SmartRunner Explorer (VLE)
2. The HALCON-HDevelop 22.11 Steady and 20.11 Steady was used as a test environment.



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