

## HALCON Frame Grabber Interface for PHYTEC pciGrabber-4plus – Series

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### System Requirements

- Intel compatible PC with Windows 2000 or Windows XP
- Successfully installed pciGrabber-4plus driver. (Test the function with PHYTEC demoprogram)
- HALCON frame grabber interface HFGpciGrabber-4plus.dll. The DLL must be copied to the directory %HALCONROOT%\bin\i586-nt4
- If you want to use the HALCON frame grabber interface with Acitivision Tools Viewer you will have to insert the following line into the file “ActivVisionTools\nlsAVTView.nls” :

```
AVTView.FGSelection      A pciGrabber-4plus
```

Then copy the file “pciGrabber-4plus.par” to “ActivVisionTools\fg”. If you start the Acitivision Tools Viewer you can click on “More Parameters” and choose another port (see parameters for `open_framegrabber()` ).

### Features

- Multiple cameras on multiple framegrabber boards.

### Limitations

- No asynchronous grabbing and no LUT
- `grab_region` is not supported

### Description

#### Parameters for [open\\_framegrabber\(\)](#):

|                             |                        |  |
|-----------------------------|------------------------|--|
| <b>Name</b>                 | 'pciGrabber-4<br>plus' | The name of the HALCON frame grabber interface.  |
| <b>HorizontalResolution</b> | 1, 2, 4                | The desired image resolution. Use '1' for full resolution, '2' for subsampling by factor 2, '4' for subsampling by factor 4, or the corresponding absolute values 640, 320, 160 (NTSC) or 768, 384, 192 (PAL). Default: 1. |

|                           |  |  |
|---------------------------|--|--|
| <b>VerticalResolution</b> | 1, 2, 4                                    | The desired image resolution. Use '1' for full resolution, '2' for subsampling by factor 2, '4' for subsampling by factor 4, or the corresponding absolute values 480, 240, 120 (NTSC) or 576, 288, 144 (PAL). Default: 1. |
| <b>ImageWidth</b>         | 0, <i>width</i>                            | The width of the desired image part (use '0' for the complete image). Only even values are allowed.<br>Default: 0 (maximum width)  |
| <b>ImageHeight</b>        | 0, <i>height</i>                           | The height of the desired image part (use '0' for the complete image). Only even values are allowed.<br>Default: 0 (maximum height)  |
| <b>StartRow</b>           | 0, <i>row</i>                              | The row coordinate of the upper left pixel within the desired image part (use '0' for the complete image). Default: 0.   |
| <b>StartColumn</b>        | 0, <i>column</i>                           | The column coordinate of the upper left pixel within the desired image part (use '0' for the complete image). Default: 0.  |
| <b>Field</b>              | 'first', 'second',<br>'interlaced', 'next' | first: odd fields, second: even fields,<br>interlaced: fullframe, next: filed aligned  |
| <b>BitsPerChannel</b>     | 5,8  | Number of bits per channel: 8 bit greyscale, 5 and 8 bit color<br>5 bits per channel could only be used with color space 'rgb'.  |
| <b>ColorSpace</b>         | 'gray', 'rgb', 'xrgb'                      | Desired color space<br>gray: 8 bit (8 Bit per channel)<br>rgb: 16 / 24 bit (5 / 8 bit per channel)<br>rgbx: 32 bit (8 bit per channel)   |
| <b>Gain</b>               | ---  | Ignored.   |
| <b>ExternalTrigger</b>    | ---  | Ignored.   |
| <b>CameraType</b>         | 'ntsc', 'pal', 'auto'                      | Type of used camera  |
| <b>Device</b>             | '0', '1', '2', '3'                         | Device the framegrabber is linked to<br>Device '0': first framegrabber, '1':second framegrabber,...  |
| <b>Port</b>               | 1-4 (1-9), 10,11                           | 1-4 (VD-009) / VD-009-X1 (1-9) composite<br>10: S-VHS (Minidin), 11:Combi  |
| <b>LineIn</b>             | ---  | Ignored.   |

## Parameters for [set\\_framegrabber\\_param\(\)](#):

|                |                  |   |
|----------------|------------------|---|
| 'brightness'   | -55..49          | [-55..49] % , default: 0                                      |
| 'contrast'     | 0..236           | [0..236] % , default: 100                                     |
| 'saturation U' | 0..200           | [0..200] % , default: 100                                     |
| 'saturation V' | 0..238           | [0..238] % , default: 100                                     |
| 'hue'          | -90..90          | [-90..90] , default: 0  |
| 'luma'         | 0,1              | Luma low pass filter, 0: off, 1: on                           |
| 'port'         | 1-4 (1-9), 10,11 | 1-4 (1-9) composite, 10: S-VHS<br>(Minidin), 11:S-VHS (Combi) |
| 'io_pin'       | 0,1              | 0: close, 1:HI-Z  |

## Parameters for [get\\_framegrabber\\_param\(\)](#):

All parameters supported by `set_framegrabber_param` also be accessed by `get_framegrabber_param`.

## Parameters for [info\\_framegrabber\(\)](#):

|       |               |  |
|-------|---------------|--|
| Query | 'info boards' | The first entry in the value list consists the information with the number of installed devices. The following entries consist information about the device name, the device number and the available ports. |
|-------|---------------|--|

## Example: 768x576 24-Bit RGB image, full resolution, no offset, S-VHS port

```
info_framegrabber(pciGrabber-4plus,"info_boards",&Information,&Val) ;

open_framegrabber("pciGrabber-4plus",// name of the frame grabber interface
                  1,1,                // HorizontalResolution, VerticalResolution
                  768,576,            // ImageWidth, ImageHeight
                  0,0,                // StartRow, StartColumn
                  "interlaced",       // Field
                  8, "rgb",           // BitsPerChannel, ColorSpace
                  0,                  // Gain (ignored)
                  "0",                // ExternalTrigger (ignored)
                  "pal",              // CameraType
                  "0",                // Device (first framegrabber)
                  10,                 // Port (S-VHS Mini-DIN)
                  0,                  // LineIn (ignored)
                  &FgHandle) ;

grab_image(&Img,FgHandle) ;
close_framegrabber(FgHandle) ;
```