APPLICATION NOTE

Capturing Videos with the pylon DirectShow Filter and Virtual VCR

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1   Introduction

As part of the pylon Camera Software Suite, Basler provides a DirectShow filter. You can use this filter to capture videos with applications that support the Microsoft DirectShow/DirectX multimedia framework.

This application note describes how to use Basler cameras with the pylon DirectShow filter and the Virtual VCR freeware program. Virtual VCR is a DirectShow video capture application that lets you capture audio and video in the AVI file format.

ℹ	From pylon Camera Software Suite 5.1.x onwards, the pylon DirectShow filter allows you to use up to four Basler cameras simultaneously. Virtual VCR does not support multiple-camera operation. However, you can use other DirectShow video capture tools, or develop your own application using the pylon API, to work with multiple cameras.

2   Capturing Videos with Virtual VCR

2.1   Downloading Virtual VCR

Download Virtual VCR from http://virtualvcr.sourceforge.net/html/virtualvcr/download.php.

If you want to capture videos right away, download and run the .exe file. If you want to build Virtual VCR from source, download the source code.

2.2   Installing the pylon DirectShow Filter

To operate a Basler camera with the Virtual VCR software, make sure that the Basler DirectShow filter is installed.

The filter is part of the Basler pylon Camera Software Suite. You can download the Basler pylon Camera Software Suite from www.baslerweb.com.

 To install the DirectShow Filter:

1.   Choose the **Custom** profile during installation.
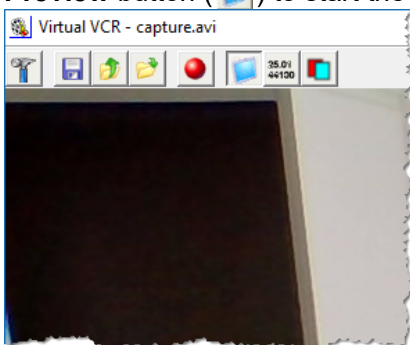2.   On the **Features** page, select **DirectShow Support**.

2.3   Connecting a Basler Camera and Capturing Videos

Installing the Camera

First, make sure that the camera is installed correctly. For information about installing a Basler camera, see the *Basler Product Documentation* at docs.baslerweb.com.
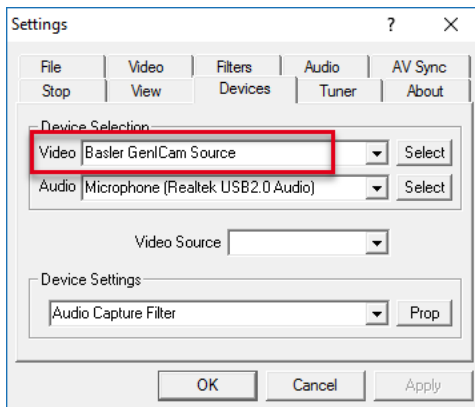
Opening the Camera Connection

Start Virtual VCR. A live view from the camera should open immediately. If not, click the **Toggle Preview** button (🖼) to start the live view.

If an error message is shown or images from a different camera are displayed, do the following:

1.   Click the **Settings** button (🖋).
2.   Click the **Devices** tab.
     Check whether **Basler GenICam Source** is selected as the video device.

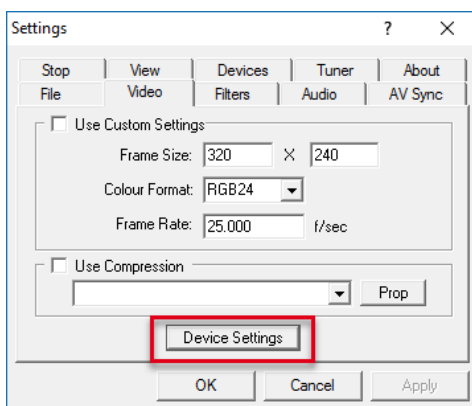If a different device is selected, do the following:

1. In the **Video** list, click **Basler GenICam Source**.
2. Click **Select**.

   If you do not click **Select**, the device will not be changed!
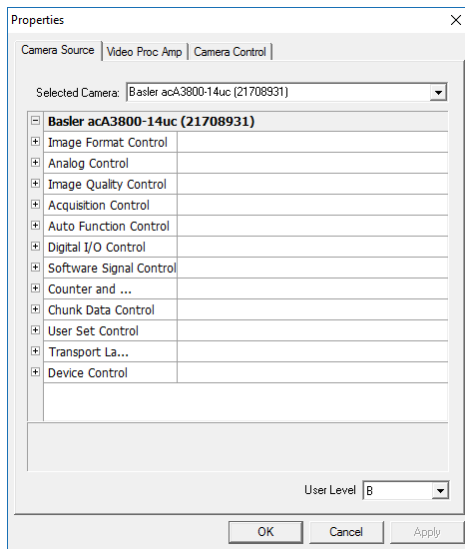
Changing Device Settings

 To change the camera settings:

1. Click the **Settings** button (![settings icon]).
2. Click the **Video** tab.
3. Click **Device Settings**.

The **Properties** dialog box opens as shown below.

Here, you can specify the desired camera parameter values.

If you can't find the parameter you're looking for, try this:
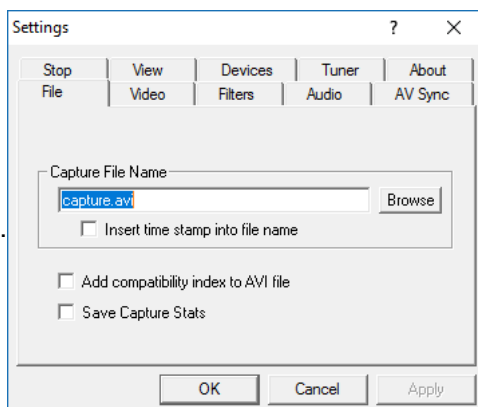1. In the **User Level** list, click **G** (Guru).

    More parameters should become visible.

Changing the Capture File Name

By default, captured images will be saved in Virtual VCR's home directory in a file named "Capture.avi".

 To change these settings:

1. Click the **Settings** button ( ).
2. Click the **File** tab.
3. Under **Capture File Name**, type the desired file name.
4. Click **Browse** to specify a different directory.

Starting the Video Capture

You can now start capturing a video by clicking the **Start Capture** button (🔴) in the Virtual VCR toolbar.

Using the Smart Tee Filter for Previewing

Some video capture cards cannot capture and preview videos with heights above 288 (PAL) or 240 (NTSC) lines. The Smart Tee filter can read the actual video stream and show a preview of it.

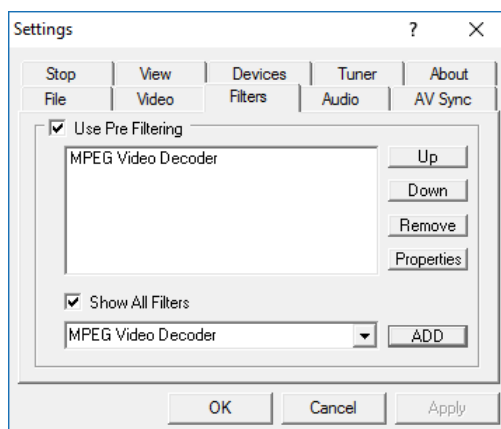 **To enable Smart Tee filtering:**

1. Click the **Settings** button (🖈) in Virtual VCR.
2. Click the **View** tab.
3. Select **Use Smart Tee Filter For Preview**.

2.4   Using Video Codecs

You can use a variety of video codecs to compress the captured video and save hard disk space. For more information, see http://virtualvcr.sourceforge.net/html/virtualvcr/filters.php.

 To use a video codec:

1. In Virtual VCR, click the **Settings** button (🖈).
2. Click the **Filters** tab.
3. Slect the **Use Pre Filtering** and the **Show All Filters** check boxes.
4. Select the desired codec in the drop-down list.
5. Click **ADD**.

Any video you capture will now be compressed using the selected codec.

Revision History

Doc. ID Number	Date	Changes
AW00071601000	24 Jul 2008	Initial release of this document.
AW00071602000	30 Jul 2008	Updated contact addresses and phone numbers.
AW00071603000	20 Mar 2009	▪ Replaced Basler pylon Runtime Package by Basler pylon Driver Package. ▪ Adapted Introduction section. ▪ Adapted note in step 3 concerning the configuration of the GigE cameras. ▪ Corrected minor spelling mistakes.
AW00071604000	13 Aug 2018	Minor modifications and corrections throughout the document. Renamed the document. Renamed Basler pylon Driver Package to Basler pylon Camera Software Suite. Added information about using multiple cameras in Chapter 1. Removed Chapter 3 ("Troubleshooting"). Troubleshooting information is now available in Chapter 2. Updated screenshots.
AW00071605000	27 Oct 2021	Added instructions how to install the DirectShow Filter in Section 2.2 on page 2.