BASLER SFF SOFTWARE

GETTING STARTED GUIDE

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BASLER
VISION TECHNOLOGIES

For customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC Rules.

For customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

Pour utilisateurs au Canada

Cet appareil est conforme aux normes Classe A pour bruits radioélectriques, spécifiées dans le Règlement sur le brouillage radioélectrique.

Life Support Applications

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Basler customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Basler for any damages resulting from such improper use or sale.

Warranty Note

Do not open the housing of the camera. The warranty becomes void if the housing is opened.

Contacting Basler Support Worldwide

Europe:

Basler AG
Ander Strusbek 60 - 62
22926 Ahrensburg
Germany

Tel.: +49-4102-463-500
Fax.: +49-4102-463-599

vc.support.europe@baslerweb.com

Americas:

Basler, Inc.
740 Springdale Drive, Suite 100
Exton, PA 19341
U.S.A.

Tel.: +1-877-934-8472
Fax.: +1-877-934-7608

vc.support.usa@baslerweb.com

Asia:

Basler Asia PTe. Ltd
25 Internat. Business Park
#04-15/17 German Centre
Singapore 609916

Tel.: +65-6425-0472
Fax.: +65-6425-0473

vc.support.asia@baslerweb.com

www.basler-vc.com

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1 Installation

1.1 Installing the SFF Software (New Installation)

> ⓘ Use this procedure only for a new installation of the Smart Features Framework Software. If your computer already has an earlier version of the SFF software and you are upgrading, go to Section 1.2.
>
> The procedure assumes that you have already installed the Basler BCAM 1394 Driver v1.7 or higher. The SFF Viewer will only work if the BCAM driver is installed.

1. If you have not already done so, download the Basler SFF installation software from the Basler web site. To download the software, go to:

   http://www.baslerweb.com/popups/popup_en_1825.php

2. Make sure that all programs on your computer are closed.

3. Click **Start** and click **Run**. Navigate to the location where you downloaded the *Setup_SFF_xxxxxxxx.exe* file. Click on the Setup file, click the **Open** button, click the **OK** button.

4. The installation will begin. When you see the Welcome window, click the **Next** button.

5. A License Agreement window will open. Accept the agreement and click the **Next** button.

6. A Release Notes window will open. Read the contents of the window and click the **Next** button.

7. A Choose Destination Location window will open. Do one of the following:

   a) Click the **Next** button to accept the default installation location.

   b) Use the **Browse** button to select a different location and then click the **Next** button.

8. A Setup Status window appears and shows the progress of the installation.

9. When the installation process is complete, an Install Shield Wizard Complete window will open. Click the **Finish** button.

10. Restart your computer.

11. Go on to page 2-1 for an introduction to the software.

1.2   Upgrading From a Previous version

> (i) Use this procedure only if your computer already has an earlier version of the Smart Features Framework Software installed on it and you are upgrading to a newer version. If you are doing a new installation of the software, go to Section 1.1.

1. Click the **Start** button. Click **Control Panel**. Double-click **Add or Remove Programs**.

2. When the Add or Remove Program window appears, look through the list of programs and find the entry for the Basler Smart Features Framework. Highlight the Smart Features Framework entry in the list and click the **Remove** button.

3. When a window appears asking if you are sure, click the **Yes** button.

4. When the computer finishes removing the program, close the Add or Remove window and the Control Panel window.

5. If you have not already done so, download the Basler SFF installation software from the Basler web site. To download the software, go to:

   http://www.baslerweb.com/popups/popup_en_1825.php

6. Make sure that all programs on your computer are closed.

7. Click **Start** and click **Run**. Navigate to the location where you downloaded the *Setup_SFF_xxxxxxxx.exe* file. Click on the Setup file, click the **Open** button, click the **OK** button.

8. The installation will begin. When you see the Welcome window, click the **Next** button.

9. A License Agreement window will open. Accept the agreement and click the **Next** button.

10. A Release Notes window will open. Read the contents of the window and click the **Next** button.

11. A Choose Destination Location window will open. Do one of the following:

    a) Click the **Next** button to accept the default installation location.

    b) Use the **Browse** button to select a different location and then click the **Next** button.

12. A Setup Status window appears and shows the progress of the installation.

13. When the installation process is complete, an Install Shield Wizard Complete window will open. Click the **Finish** button.

14. Restart your computer.

15. Go on to page 2-1 for an introduction to the software.

2 Introduction to the SFF Software

The SFF software has two major components:

- An SFF Viewer. The viewer is a Windows® based tool that allows you to easily enable and disable smart features, parameterize the camera, capture and view images, and view smart features results. Section 2.1 introduces you to the SFF Viewer.
- An SFF Tutorial. The tutorial explains how to access the camera's smart features from within your own applications. The tutorial is based on the assumption that you are using the Basler BCAM 1394 driver with your camera. Section 2.2 introduces you to the SFF Tutorial.

> (i) We strongly recommend that you use the Basler BCAM 1394 driver. However, any driver that can get images in format 7 and that provides access to the DCAM registers can be used to work with smart features. If you do use a different driver, you must adapt the techniques described in the SFF Tutorial to the driver you are using.
>
> You should be aware that drivers other than the Basler BCAM driver have not been tested with smart features. You should also know that the SFF Viewer will only work on PCs that have the BCAM driver v1.7 or higher installed.

2.1 The SFF Viewer

The Smart Features Framework Viewer includes:

- The **Launcher** window - lets you select and connect to a camera attached to the 1394 bus. It also lets you open the other windows included in the viewer.
- The **Configurator** window - lets you set the parameters on the connected camera and lets you start or stop image capture.
- The **Image Viewer** window - lets you view and save captured images.
- The **FPS Viewer** window - lets you view the current frame rate.

To start the viewer, double click the SFF Launcher icon on your desktop or click Start ⇒ All Programs ⇒ Basler Vision Technologies ⇒ SFF ⇒ SFF Viewer.

2.1.1 The Launcher Window

When you start the viewer, the Launcher window will open and it will look similar to the window shown below. To connect to a camera attached to the 1394 bus, select the camera from the Launcher window's drop down list and then click the **Connect** button.

To see on-line instructions for how to use the Launcher window, click the Help button in the Launcher window and select the section of the help file that describes using the Launcher window.
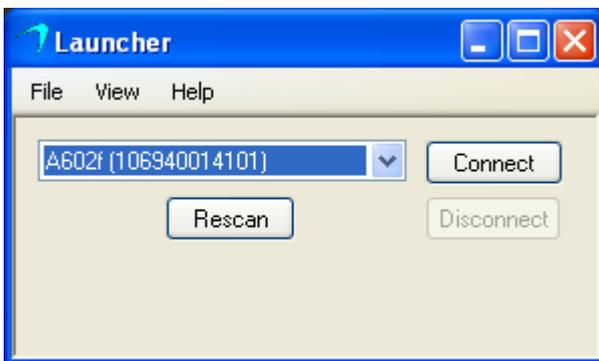
Figure 2-1: The Launcher Window

2.1.2 The Configurator Window

To open the Configurator window, click the View menu in the Launcher window and select Configurator. The Configurator window will open and it will display the settings for the connected camera.

You can use the Configurator window to set the parameters on the connected camera and to start or stop image capture. To see on-line instructions for how to use the Configurator window, click the Help button in the Configurator window.
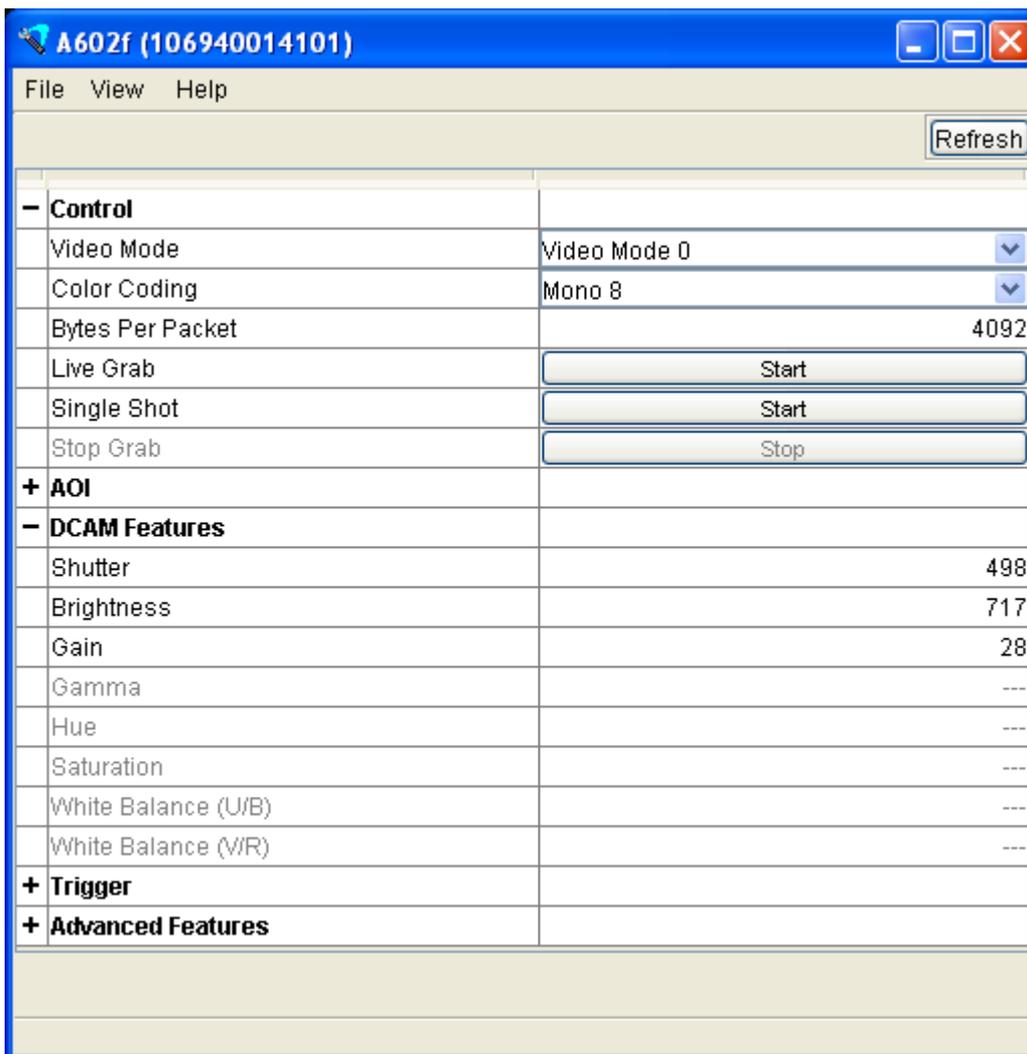
Figure 2-2: The Configurator Window

2.1.3 The Image Viewer Window

To open the Image Viewer window, click the View menu in the Launcher window and select Image Viewer. The Image Viewer window will open.

You can use the Configurator window to start and to stop image capture. When you start image capture, the captured images will be displayed in the Viewer window as shown below.

To see on-line instructions for how to use the Image Viewer window, click the Help button in the Launcher window and select the section of the help file that describes using the Image Viewer window.
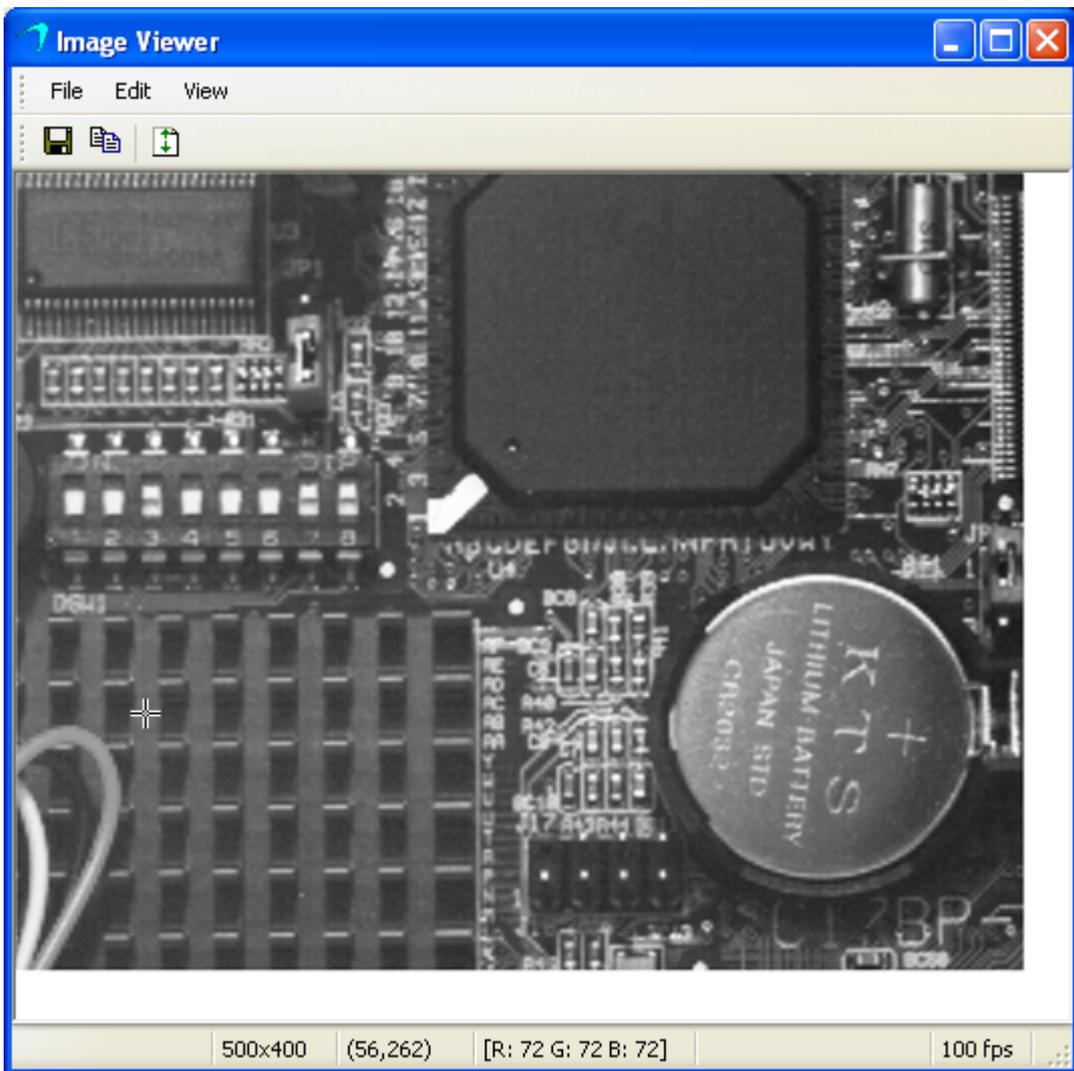

Figure 2-3: The Image Viewer Window

2.1.4 The FPS Viewer Window

To open the FPS Viewer window, click the View menu in the Launcher window and select FPS Viewer. The FPS Viewer window will open.

When you are capturing images continuously or if you capture a series of single images, the FPS Viewer window will display the camera's frame rate in frames per second.

To see on-line instructions for how to use the FPS Viewer window, click the Help button in the Launcher window and select the section of the help file that describes using the FPS Viewer window.
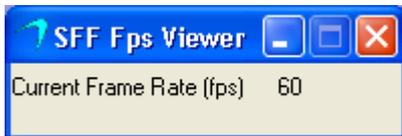
Figure 2-4: The FPS Viewer Window

2.2   The SFF Tutorial

The SFF software includes a tutorial which explains how to access the camera's smart features from within your own applications. The tutorial is based on the assumption that you are using the Basler BCAM 1394 driver with your camera. The tutorial is in the form of a CHM file. (CHM files are a standard type of Windows help file.)

To start the tutorial, click Start $\Rightarrow$ All Programs $\Rightarrow$ Basler Vision Technologies $\Rightarrow$ SFF $\Rightarrow$ Tutorial Basics.

If you did a normal installation, you can also find the tutorial at:

C:\ Program Files \ Basler \ SFF \ Samples \ Tutorial Basics.CHM

When you double-click on the file, the file will open and will display the tutorial contents.

(i)	We strongly recommend that you use the Basler BCAM 1394 driver. However, any driver that can get images in format 7 and that provides access to the DCAM registers can be used to work with smart features. If you do use a different driver, you must adapt the techniques described in the SFF Tutorial to the driver you are using.
	You should be aware that drivers other than the Basler BCAM driver have not been tested with smart features. You should also know that the SFF Viewer will only work on PCs that have the BCAM driver v1.7 or higher installed.

Revision History

Doc. ID Number	Date	Changes
DA00065001	4 February 2004	Initial release of this document.