

Scion Series 7 TWAIN Module for PC

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Getting Started

Introduction

This manual describes the Scion Series 7 TWAIN acquisition module that can be used to import video images into third party applications. The Scion Series 7 TWAIN module currently supports the Scion FG-7 frame grabber board. This manual describes the installation and use of the Series 7 plug-in.

Please take a few moments to read through this manual before you begin using the Scion Series 7 TWAIN Module as it should answer some questions that you may have. Please contact Scion Corporation should you encounter difficulty at any time, or if you have any questions.

System Requirements

The Scion Series 7 TWAIN module will work with Windows 2000 and XP applications that comply with the TWAIN 1.6 specification. It may not operate with applications that were written to earlier TWAIN specifications.

Installation

Installing the Scion Series 7 TWAIN should only take a few minutes. Please follow the steps below:

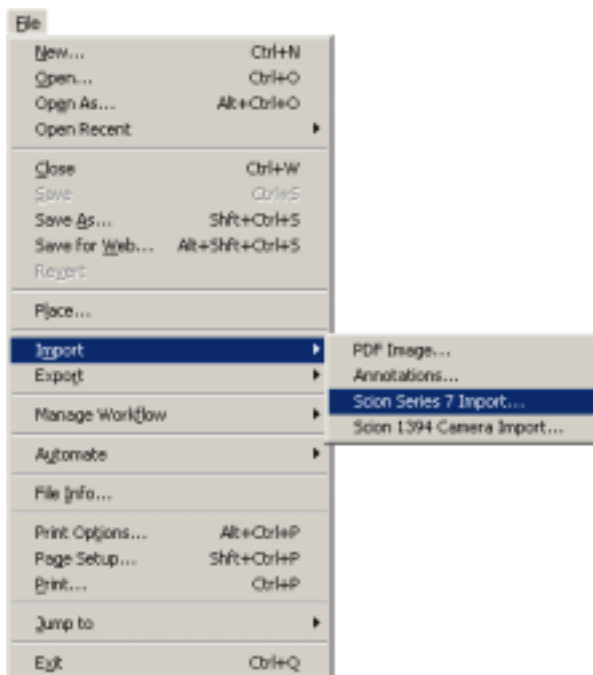
Windows PC Install

1. Insert the “FG-7 Application CD” into the CD-ROM drive. If you downloaded the module then skip to step 4.
2. A folder containing the CD-ROM should come up. If it does not then you will need to open Windows Explorer to your CD-ROM drive.
3. Double-click the “TWAIN” folder.
4. Double-click the “Setup.exe” program to start the install. If you downloaded the module then double-click the “SFGTWAIN.exe” to start the install.
5. Follow the on screen prompts and choose a destination for the software.
6. Once the install has completed the installer will ask to reboot the computer.

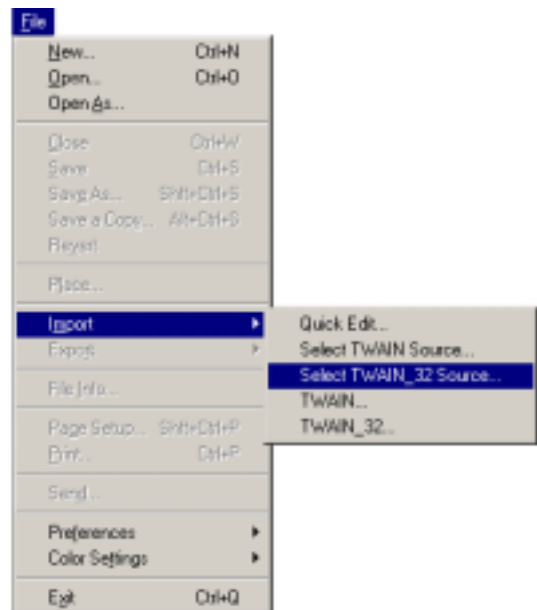
Starting Scion Series 7 Module

Open Adobe Photoshop and from the File menu choose Import. If this is the first time the module has been used then you need to choose Select TWAIN_32 Source, if using Photoshop 4.0 or 5.0. This will bring up a message box with all installed TWAIN modules. From the list choose Scion Series 7 Import. If you have already selected the source in the past then choose Scion Series 7..., this will open the module and start capturing.

Holding down the Shift key while invoking the Scion Series 7 Module will automatically capture an image based on the previous selection. If no selection was previously made, then the entire image will be captured. Holding down the Control key while invoking the Scion Series 7 Module will automatically capture an image based on the previous settings in “Frame Processing”. It will return the processed selection or the entire image if no selection was made.



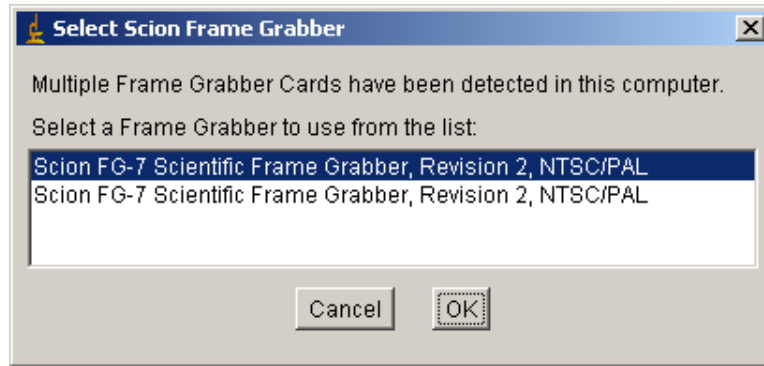
Adobe Photoshop 6.0 and Higher



Adobe Photoshop 4.0 & 5.0

Multiple Frame Grabber Boards

If multiple frame grabber boards are installed, a dialog box like the following will appear:



This will show a list of the currently installed Scion frame grabber boards. It gives the model number, revision number and video type setting.

Menus

File Menu

Acquire Full Image

This will acquire the full captured image and send it back to the parent application.

Acquire Window Image

This menu item will acquire the captured image that is contained in the capture window and send it back to the parent application. If the capture window is shrunk to a size smaller than the actual image, then this option will only capture the image within the window.

Acquire Selected Image

This option will only acquire a user selected region and send it back to the parent application.

Quit Without Acquisition

This menu item will quit the TWAIN module without acquiring an image.

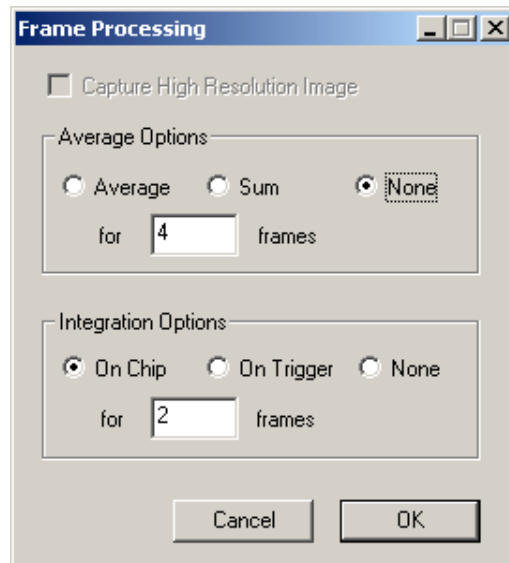
Image Menu

Start Live Capturing

Continuously displays live video using the Scion FG-7 PCI frame grabber board. Notice how, during continuous capture, the name of this command changes to “Stop Capturing” and “Live” appears in the title bar. To “freeze” the image, select “Stop Capturing”, Control + G, or click in the acquisition window. While capturing, you are allowed to change offset and gain in the “Show Color Balance” menu option.

Frame Processing...

Averages or integrates 2 to 127 video frames to reduce time-varying random noise and increase image brightness. Averaging and integration will be done on the entire image.



Averaging Options:

Average

This will average the number of frames specified. It is used to reduce random noise in the image. This option can be used in addition to the Integration Options.

Sum

Sum will add the number of frames specified. This is used to make the resultant image brighter. This option can be used in addition to the Integration Options.

None

This specifies that no accumulation operations will be done.

Integration Options:

On Chip

This will do on-chip integration for the number of frame periods specified, using certain models of Cohu series or Dage-MTI cameras, see Scion for details. The purpose is to brighten the image in a low light situation; this is better than summing because the camera is generating the integrated image. The camera will integrate on-chip for the specified number of frame periods and the frame grabber will capture the integrated frame. On-chip integration requires a special cable, available from Scion, for connecting the integration input of the camera to the frame grabber. This can be used in addition to the Averaging Options.

On Trigger

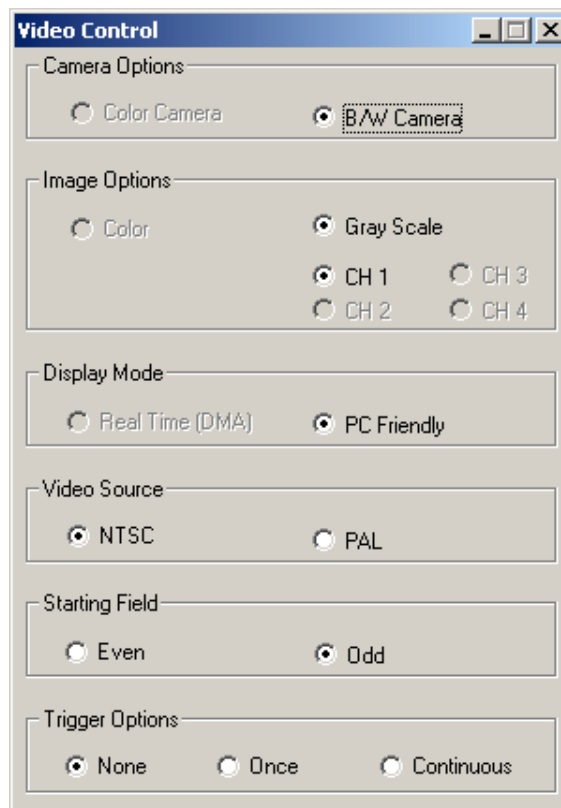
On Trigger will wait for an external trigger pulse before capturing the image. This can be used in addition to the Averaging Options.

None

Specifies that no integration operations will be done.

Show Video Control

Displays a dialog box that allows you to interactively control video capturing.



Camera Options

This specifies that the frame grabber is connected to a Grayscale camera. This setting cannot be changed with the FG-7 installed.

Image Option

Specifies that the image capturing will be done in *Grayscale*. This setting cannot be changed with the FG-7 installed.

Display Mode

This is always set to PC Friendly and cannot be changed.

Video Source

Selects if the video input is NTSC (640 x 480) or PAL (768 x 576). North America, South America and Japan usually have NTSC video source. While Europe and Asia mainly have PAL video input.

Starting Field

This can be *Odd* field first or *Even* field first. The default is *Even* field first.

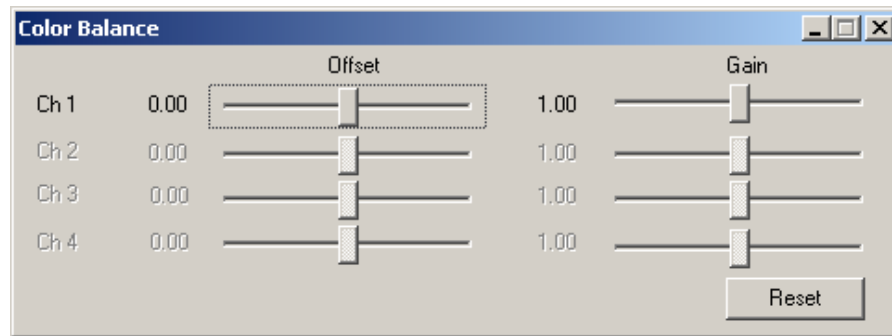
Trigger Options

This can be set to None, Once and Continuous. Setting Trigger Options to None will cause the board to ignore external trigger pulses. With Trigger Options set to Once the frame grabber board will wait for an external trigger pulse, then capture the image. Setting the Trigger Options to Continuous will cause the frame grabber board to wait for an external trigger pulse and capture an image repeatedly, until the image window is clicked or "Stop Capturing" is chosen.

Show Color Balance

This menu item allows you to adjust the A/D offset (brightness) and gain (contrast), for each channel or the average of all the channels, of the frame grabber card. Changes are interactively displayed in live video mode. The objective when using these controls is to optimize the image brightness and contrast. Offset has values from -1 to 1 with 0 as the default reset value. Gain has values from .5 to 2 with 1 as the default reset value.

Once an image has been captured and sent to Photoshop these settings are saved and will come up each time the Photoshop module is invoked, unless otherwise changed. All Offset and Gain settings will be set back to their default if the Reset button is clicked.



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