Basler Components



WINDOWS[®] XP SP2 PARTIAL ROLLBACK APPLICATION NOTES

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Contacting Basler Support Worldwide

Europe:

Basler AG An der Strusbek 60 - 62 22926 Ahrensburg Germany

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

bc.support.europe@baslerweb.com

Americas:

Basler, Inc. 855 Springdale Drive, Suite 160 Exton, PA 19341 U.S.A. Tel.: +1-877-934-8472

Fax.: +1-610-280-7608

bc.support.usa@baslerweb.com

Asia:

Basler Asia Pte. Ltd 8 Boon Lay Way # 03 - 03 Tradehub 21 Singapore 609964

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

bc.support.asia@baslerweb.com

www.baslerweb.com

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1 Introduction

Assuming you have Windows[®] XP with Service Pack 2 (SP2) installed on your PC, this document describes how to carry out the SP2 partial rollback when you want to operate a Basler scout-f camera.

SP2 Partial Rollback When Using Basler pylon Software Version 1.0 or Lower or the BCAM Software

We strongly recommend that you carry out the SP2 partial rollback by replacing certain drivers in SP2 with drivers from SP1 as described below. This enables the full 800 Mbit/s transmission speed of the camera. Otherwise, the camera will only operate at 100 Mbit/s.

SP2 Partial Rollback When Using Basler pylon Software Version 2.0 or Higher

Basler pylon software version 2.0 or higer includes the Basler pylon IEEE 1394 Bus Driver, which replaces the Windows IEEE 1394 bus driver, if present. Your camera will operate at an 800 Mbit/s transmission speed and you need not carry out the SP2 partial rollback. We strongly recommend using the Basler pylon IEEE 1394 Bus Driver for optimum performance of the camera and not using the Windows IEEE 1394 bus driver.

If, for some reason, you want to use the Windows IEEE 1394 bus driver instead and have chosen not to use the Basler pylon IEEE 1394 Bus Driver (see the Installation and Setup Guide for Cameras Used with Basler's pylon API; AW000611xx000), you must carry out the SP2 partial rollback to obtain 800 Mbit/s transmission speed.

Additional Considerations

To carry out the SP2 partial rollback, you need administrator rights on your computer and Windows Explorer must be configured to show hidden files and folders (see below).

Note

Hot plug capability normally is available when SP 2 is installed. But after carrying out the SP2 partial rollback, hot plug capability will no longer be available.

If you don't have hot plug capability (i.e., if you have SP2 installed and you have done the rollback), you should not plug or unplug a camera from the PC while the camera is capturing images. Plugging or unplugging a camera while it is capturing images might result in a blue screen error on the PC. Plugging or unplugging a camera while it is idle is OK, even without hot plug capabilities.

You can resolve the hot plug problem by installing a hot fix. See the following URL for further information and for obtaining the hot fix: http://support.microsoft.com/kb/811789



Note

After you carry out the SP2 partial rollback, the result of the rollback will be lost if you:

- Install a new IEEE 1394 host controller
- Change the existing host controller to a different slot in the PC

In either case, you should carry out the SP2 partial rollback again.

2 SP2 Partial Rollback

To Configure Windows Explorer to Show Hidden Files and Folders

- 1. If you have not already done so, open Windows Explorer in your computer.
- 2. Click the Tools menu.
- 3. Click Folder Options... in the drop down menu.
- 4. Click the View tab.
- 5. Select the option button beside Show hidden files and folders.
- Click OK.
 Windows Explorer is configured to show hidden files and folders.

To Carry Out the SP2 Partial Rollback

- 1. Disconnect **all** IEEE 1394 devices from the connectors on the computer.
- 2. Open Windows Explorer and navigate to the Windows directory and create an sp2_rollback directory.
- 3. Navigate to the Windows\sp2_rollback directory and create an i386 directory.
- 4. Navigate to the Windows\inf directory and copy the 1394.inf file into the sp2_rollback directory.
- 5. What you do in this step depends on which Windows XP service packs are already installed on your computer:
 - If SP2 is installed on your host PC but not SP1, you must download the complete SP1 package in order to obtain the drivers from SP1 that will replace the drivers in SP2:
 - a. Download the "Windows XP Service Pack 1a Network Installation" from the following URL:

http://www.microsoft.com/windowsxp/downloads/updates/sp1/network.mspx

- b. Open the command prompt.
- c. Navigate to the downloaded SP1.
- d. Execute the following command to create an sp1_files subdirectory and extract files from SP1 into the subdirectory: xpsp1a_en_x86.exe /U /X:sp1_files
- e. Execute the following commands to decompress the required drivers and copy them into the Windows\sp2_rollback directory:

 $expand \ sp1_files \ 1394 bus.sy_ \ \% windir\% \ sp2_roll back \ 1394 bus.sys \ and \ sp1_roll back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ and \ sp1_roll \ back \ 1394 bus.sys \ sp1_roll \ back \ 1394 bus.sys \ sp1_roll \ back \ 1394 bus.sys \ sp1_roll \ sp1$

 $expand sp1_files \verb|ohci1394.sy_ \%windir\%|sp2_rollback|i386 \verb|ohci1394.sys|| \\$

- f. Exit the command prompt.
- If SP1 and SP2 are both installed on your Host PC:
 - a. Navigate to the Windows\Driver Cache\i386 directory.
 - b. Double-click on sp1.cab.
 - c. Copy the ohci1394.sys and 1394bus.sys files into the Windows\sp2_rollback\i386 directory.

- 6. Navigate to the Windows\sp2_rollback\i386 directory:
 - a. Right click on the **ohci1394.sys** file and select **Properties** from the drop down menu. An **ohci1394.sys Properties** window opens as shown below.



- b. Click the Version tab.
- c. In the Item Name box, click on the File Version item. Make note of the file version information that appears in the Value box as shown below. You will need this information later in the procedure.

aeneral Version	Security S	ummary	
File version: 5.1 Description: 13	.2600.1106 94 OpenHCI F	Port Driver	
Copyright: ®	Microsoft Corp	poration. All rights rese	erved.
Item name:	Ionnation	Value:	
Company File Version Internal Name Language Original File name Product Name Product Version		5.1.2600.1106 (xpsp1.020828-1920)
			~

- d. Click the OK button.
- e. Right click on the **1394bus.sys** file and select **Properties** from the drop down menu. An **1394bus.sys Properties** window opens.
- f. Click the Version tab.
- g. In the Item Name box, click on the File Version item. Make note of the file version information that appears in the Value box. You will need this information later in the procedure.
- h. Click the **OK** button.

- 7. Navigate to the Windows\system32\drivers directory and copy the arp1394.sys, enum1394.sys, and nic1394.sys files into the Windows\sp2_rollback\i386 directory.
- 8. Navigate to the Windows\Driver Cache\i386 directory and rename sp2.cab to sp2_inactive.cab. This will disable the Windows File Protection feature that allows the installation of only the latest versions of drivers.
- 9. Open the Device Manager window by doing the following:
 - a. Click Start and click Run.
 - b. When the Run window opens, type in: devmgmt.msc
 - c. Click the **OK** button.
 - d. The Device Manager window will open as shown below.

📙 Device Manager				
File Action View Help				
$\leftarrow \rightarrow \mathbf{w} \mathbf{g}$				
E-B BEATER-01				
🕀 🎬 Acronis Devices				
🗄 🦏 Basler pylon 1394 Digital Cameras				
🗄 😼 Computer				
🖭 🥌 Disk drives				
😟 😼 Display adapters				
🗈 🥝 DVD/CD-ROM drives				
🗉 🚍 Floppy disk controllers				
🗈 🍓 Floppy disk drives				
🗈 📹 IDE ATA/ATAPI controllers				
庄 🐗 IEEE 1394 Bus host controllers				
庄 🦢 Keyboards				
🕀 🐚 Mice and other pointing devices				
🖅 😼 Monitors				
🖅 🎟 Network adapters				
😟 💆 Ports (COM & LPT)				
🗈 🐲 Processors				
🗉 🕘 Sound, video and game controllers				
🗈 🤘 System devices				
🗄 🥰 Universal Serial Bus controllers				

10. In the Device Manager window, double-click IEEE 1394 Bus host controllers.

The IEEE 1394 Bus host controllers node will expand as shown below.

a. Double-click the firewire controller (e.g. *OHCI*) you want to use with the camera.



- 11. The Host Controller window for the selected firewire host controller will open as shown below.
 - a. Click the Driver tab.
 - b. Click the Update Driver button.



- 12. A Hardware Update Wizard window will open.
 - a. Select No, not this time as shown below
 - b. Click the Next button.



- 13. A new Hardware Update Wizard window will open.
 - a. Select Install from a list or specific location as shown below.
 - b. Click the Next button.



- 14. A new Hardware Update Wizard window will open.
 - a. Select the Don't search, I will choose the driver to install as shown below.
 - b. Click the Next button.

Please cho	oose your search and installation options.
⊖ Sean	ch for the best driver in these locations.
Use t paths	he check boxes below to limit or expand the default search, which includes local and removable media. The best driver found will be installed.
	Search removable media (floppy, CD-ROM)
	Include this location in the search:
	C:\Temp\fre_xp Browse
📀 Don'i	search. I will choose the driver to install.
Choo the d	se this option to select the device driver from a list. Windows does not guarantee river you choose will be the best match for your hardware.

- 15. A new Hardware Update Wizard window will open as shown below.
 - a. Make sure the check box beside Show compatible hardware is checked and click the Have Disk button.



- 16. The Install From Disk window will open.
 - a. Type in: C:\Windows\sp2_rollback as shown below.
 - b. Click the OK button.



- 17. A Hardware Update Wizard window will open.
 - a. Make sure the check box in front of Show compatible hardware is checked as shown below.
 - b. Click the Next button.

Select the device driver you want to	Install for this hardware.
Select the manufacturer and model o	of your hardware device and then click Next. If you
and a disk disk contains the diricity	
Show compatible hardware	
Model	
OHCI Compliant IEEE 1394 Host Controlle	er
Model OHCI Compliant IEEE 1394 Host Controlle Texas Instruments OHCI Compliant IEEE	er 1394 Host Controller
Model OHCI Compliant IEEE 1394 Host Controlle Texas Instruments OHCI Compliant IEEE	er 1394 Host Controller
Model DHCI Compliant IEEE 1394 Host Controlle Texas Instruments OHCI Compliant IEEE	er 1394 Host Controller
Model OHCI Compliant IEEE 1394 Host Controlle Texas Instruments OHCI Compliant IEEE	er 1394 Host Controller Have Disk

- 18. If a Confirm File Replace window similar to the one shown below opens:
 - a. Ignore the message about the ohci1394.sys file and click the Yes button.
 (If a similar message appears for other files, click the Yes button each time.)

Confirm File Replace			
Source: c:\windows\sp2_rollback\i386\ohci1394.sys.			
Target: C:\WINDOWS\system32\DRIVERS\ohci1394.sys.			
The target file exists and is newer than the source.			
Overwrite the newer file?			
Yes No No to All			

- 19. If a Hardware Installation window similar to the one shown below opens:
 - a. Ignore the error message and click the Continue anyway button.

Depending on the number of IEEE 1394 host controllers installed on your computer, you may have to repeat this step several times.



- 20. A new Hardware Update Wizard window opens.
 - a. Click the Finish button.

Hardware Update Wizard		
	Completing the Hardware Update Wizard	
	The wizard has finished installing the software for:	
	Controller	
	Click Finish to close the wizard.	
	K Back Finish Cancel	

- 21. Verify the SP2 partial rollback:
 - a. The Host Controller window should still be open. If it is not, navigate to the Host Controller window of the firewire host controller as described in steps 9 to 11.

	Driver Details	Resources
	Texas Instrumer Controller	nts OHCI Compliant IEEE 1394 Host
	Device type:	IEEE 1394 Bus host controllers
	Manufacturer:	Texas Instruments
	Location:	PCI Slot 3 (PCI bus 0, device 15, function 0)
If yo	u are having proble	ams with this device, click Troubleshoot to
start	the troubleshooter	
start	the troubleshooter	Troubleshoot
Device	the troubleshooter	Troubleshoot

b. Click the **Driver** tab and click the **Driver Details** button. The **Driver File Details** window opens as shown below.



c. Updated **ohci1394.sys** and **1394bus.sys** files were installed during SP2 partial rollback. Click the **ohci1394.sys** and **1394bus.sys** files to display the versions of the files.

The SP2 partial rollback was successful if the displayed version numbers are identical to the version numbers for the **ohci1394.sys** and **1394bus.sys** files that you noted in step 6.

- d. Click the OK button.
- e. Close the Host Controller window.
- 22. If you have more than one firewire controller on your computer (e.g., the **Device Manager** window in step 10 shows two or more firewire controllers), repeat step 21 to check whether the SP2 partial rollback was also carried out for the additional controllers.

If you find that the SP2 partial rollback was not carried out for a firewire controller, repeat steps 11 to 21 for that firewire controller.

- 23. Do the following to undo step 8 and to enable the Windows File Protection feature:
 - a. Navigate to the Windows\Driver Cache\i386 directory.
 - b. Rename sp2_inactive.cab to sp2.cab.
- 24. Close all open windows.

The SP2 partial rollback is complete. You can now reconnect your IEEE 1394 devices to the computer.

Revision History

Doc. ID Number	Date	Changes
AW00061501000	14 Feb 2008	Initial version: Windows SP2 partial rollback description, transferred from the Basler scout-f (pylon) User's Manual (AW00012505000).
AW00061502000	30 Jul 2008	Updated contact addresses and phone numbers.