Basler Components

WINDOWS® XP SP2 PARTIAL ROLLBACK

APPLICATION NOTES

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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**.
6. 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:

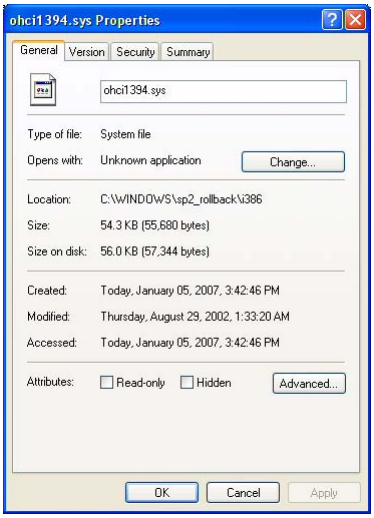
        expand sp1_files\1394bus.sy_ %windir%\sp2_rollback\i386\1394bus.sys and

        expand sp1_files\ohci1394.sy_ %windir%\sp2_rollback\i386\ohci1394.sys

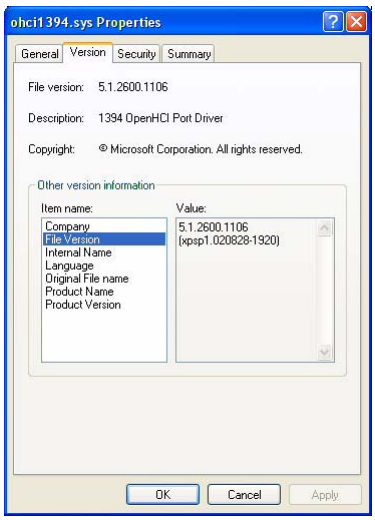
     f. Exit the command prompt.

   - 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.

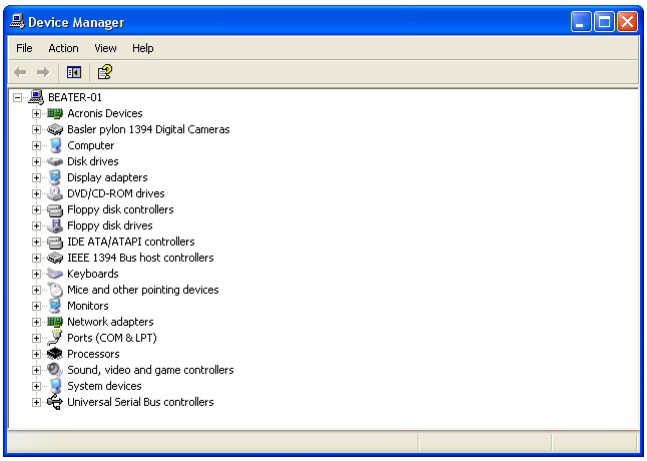


   b. Click the **Version** tab.
   c. In the **Item Name** box, click on the **File Version** item. Make note of the file version information that appears in the **Value** box as shown below. You will need this information later in the procedure.

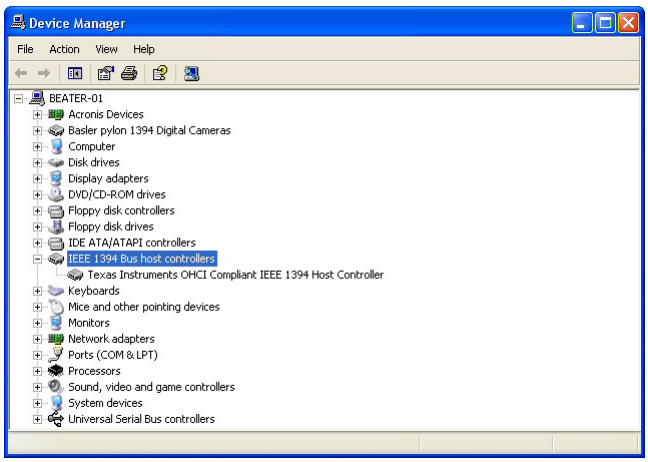


   d. Click the **OK** button.
   e. Right click on the **1394bus.sys** file and select **Properties** from the drop down menu. An **1394bus.sys Properties** window opens.
   f. Click the **Version** tab.
   g. In the **Item Name** box, click on the **File Version** item. Make note of the file version information 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.



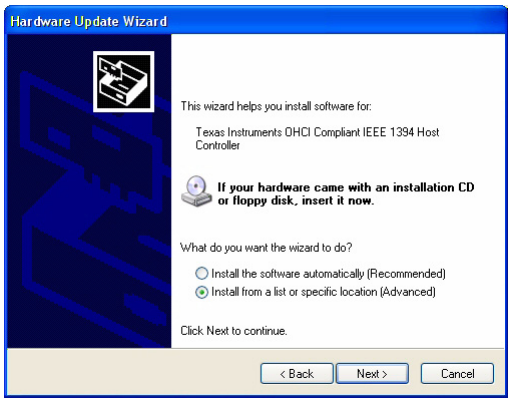
10. In the **Device Manager** window, double-click **IEEE 1394 Bus host controllers**.
    The **IEEE 1394 Bus host controllers** node will expand as shown below.
    a. Double-click the firewire controller (e.g. ***OHCI***) you want to use with the camera.



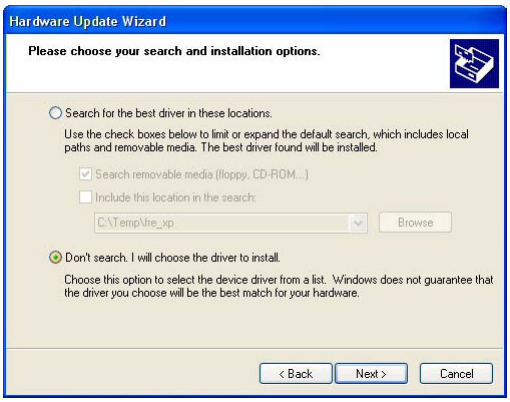
11. The **Host Controller** window for the selected firewire host controller will open as shown below.
    a. Click the **Driver** tab.
    b. Click the **Update Driver** button.

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

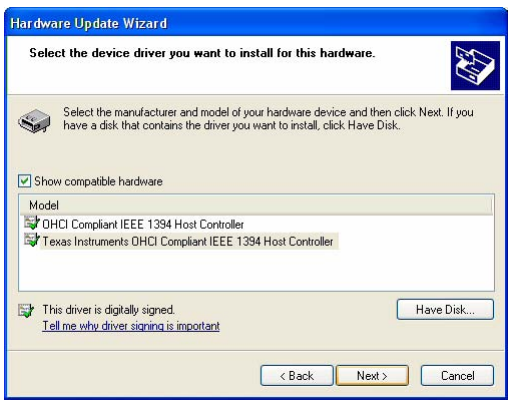
13. A new **Hardware Update Wizard** window will open.
    a. Select **Install from a list or specific location** as shown below.
    b. Click the Next button.



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.

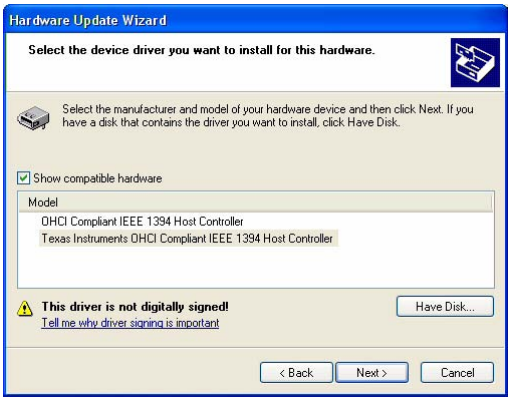


15. A new **Hardware Update Wizard** window will open as shown below.
    a. Make sure the check box beside **Show compatible hardware** is checked and click the **Have Disk** button.

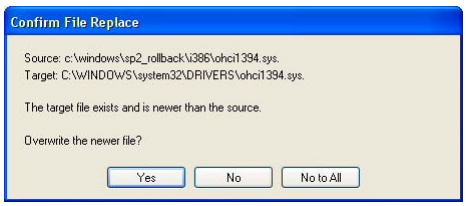


16. The **Install From Disk** window will open.
    a. Type in: C:\Windows\sp2_rollback as shown below.
    b. Click the **OK** button.

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.

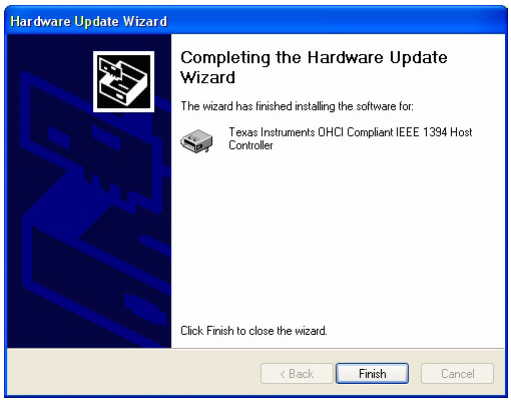


18. If a **Confirm File Replace** window similar to the one shown below opens:
    a. Ignore the message about the **ohci1394.sys** file and click the **Yes** button.
    (If a similar message appears for other files, click the **Yes** button each time.)



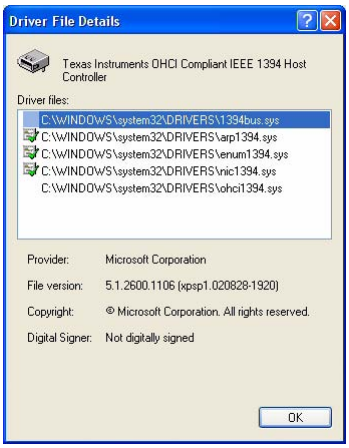
19. If a **Hardware Installation** window similar to the one shown below opens:
    a. Ignore the error message and click the **Continue anyway** button.
    Depending on the number of IEEE 1394 host controllers installed on your computer, you may have to repeat this step several times.

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



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.

    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.