

Self-Installing IonOptix Hardware/Software

IonWizard 6x, Mutech, RTD2710 on Windows XP

November 27, 2007

The following instructions explain the procedure required to install hardware and software required to run IonWizard 6x using the Mutech MV510 framegrabber with a RTD2710-based Fluorescence System Interface or Data System Interface. These procedures are for first time installations only. If you are upgrading or running system please refer to other documents.

1. Verify computer and Windows version

To run IonWizard 6x you will need:

- One free full-height half-length PCI slot.
- One free full-height half-length ISA slot
- Windows XP. Windows 2000 – may work but is not well tested. Windows Vista support is not completed. All other versions of windows are not supported for new installations

2. Obtain files

The software is currently distributed as two self-extracting zip files. Please contact IonOptix for instructions on receiving the latest versions. The two files will be

- 1) mutech212.exe
- 2) iwiz6-03jul07.exe ("03jul07" will change for each release)

If you download these files from a separate computer you will have to copy them to your acquisition computer using a CD or USB flash drive. If you have an Internet connection on your acquisition computer simply download files to a temporary directory (say c:\temp)

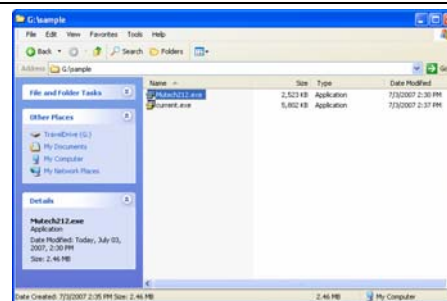
3. Create program directory

Create a directory on your C drive of your acquisition computer called c:\ionoptix.

4. Unpack files

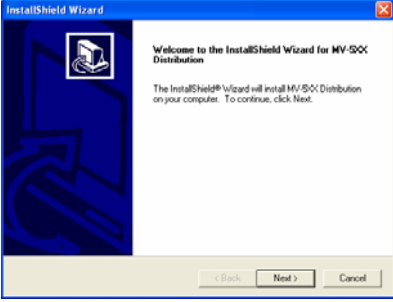


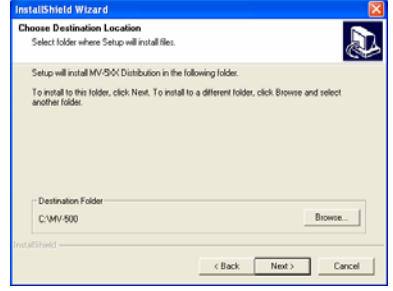
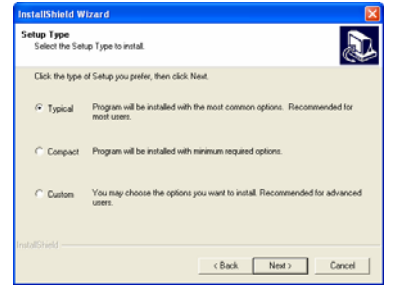
To unpack the files open my computer and locate the drive/folder that contains the files from step #2. The first step is to install the frame grabber support files....

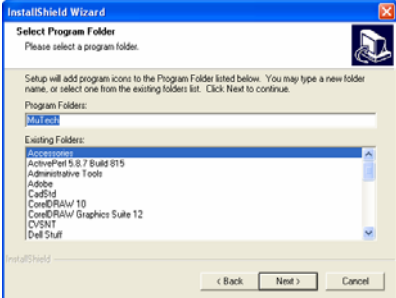
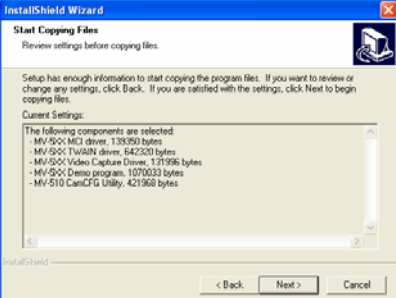
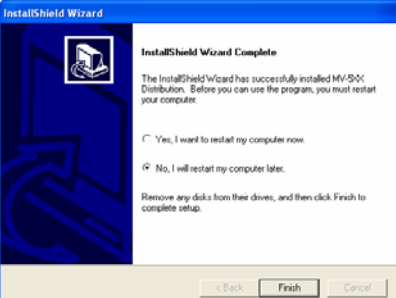
1. Open the drive/folder containing the files from step #2 and double-click on mutech212.exe



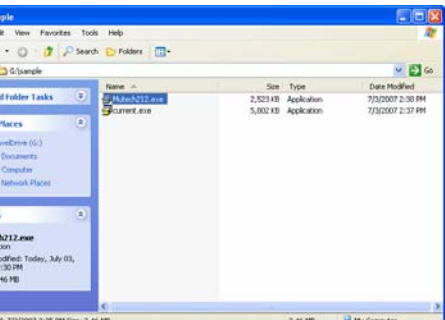
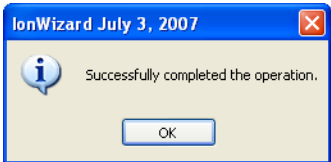
2. After unpacking you will see this message, click ok and the Mutech setup program will start



<p>3. Click next</p>	
<p>4. Click yes to accept the license</p>	
<p>5. Click next to confirm</p>	
<p>6. Click next to accept default installation directory of c:\mv-500</p>	
<p>7. Click next to do a typical installation</p>	

<p>8. Click next to accept program folder name “mutech”</p>	
<p>9. Press next to start</p>	
<p>10. Once completed you will be asked to reboot your computer select “no” then click “finish”</p>	

Next you will install the IonWizard files....

<p>1. Open the drive/folder containing the files from step #2 and double-click on iwiz-03jul07.exe</p> <p><i>Note the actual name of the file will vary based on the date it was released</i></p>	
<p>2. After unpacking you will see this message, click ok</p>	

5. Insert the Cards

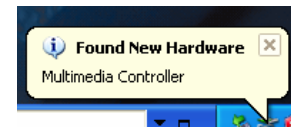
Be sure to power down the computer be inserting any cards!

Install the Mutech and RTD cards in any available slots. Be sure to screw in (or clip for some cases) the card supporting bracket to the back of the case so the cards do not work free.

6. Load the drivers

The first time that you boot the computer after inserting new hardware Windows will automatically start the process for selecting and loading the driver. Windows will automatically recognize the PCI Mutch frame grabber. You will see a “ballon” in the lower right-corner of the screen.

To install driver for the “Mutimedia Controller” (Mutech) driver....



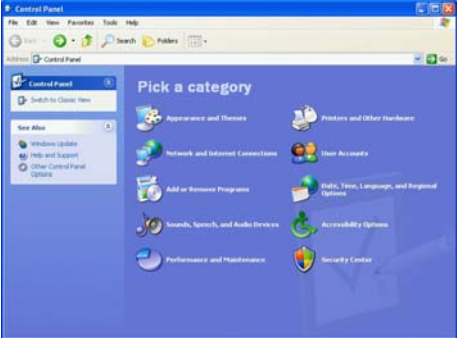


<p>1. Select “no” you don’t want to search windows update and click next.</p>	
<p>2. Select “Install from a list or specific location (Adanced)” the click next.</p>	
<p>3. - Select “search for the best...”, - uncheck “search removable media...”, - check “include this location...” - enter or browse to c:\ionoptix\mutech 2.1.2 then click next</p>	
<p>4. Windows will start to install the driver then display this warning. Click “Continue Anyway”</p>	

5. When completed you will see this message

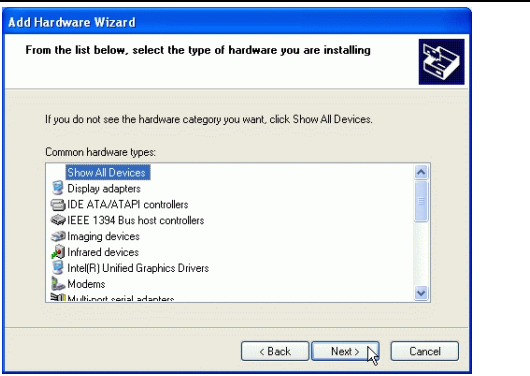

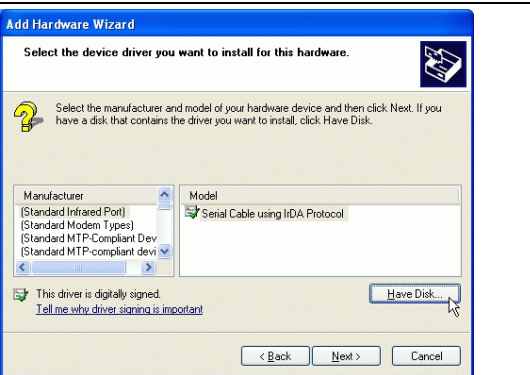
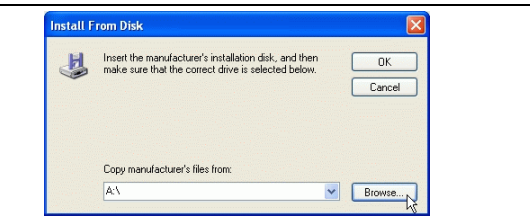
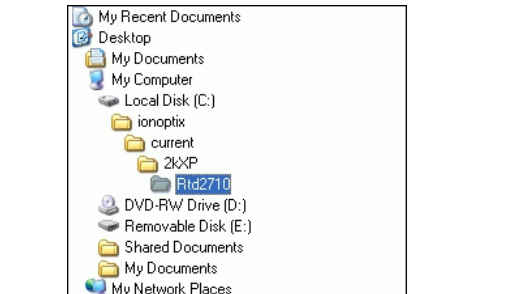


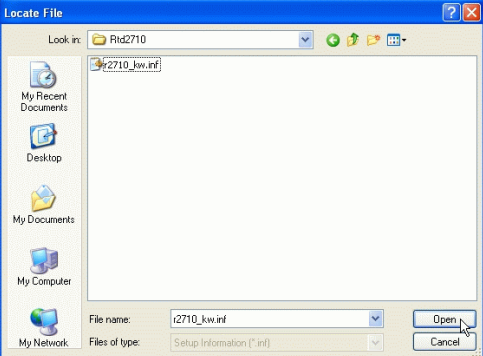
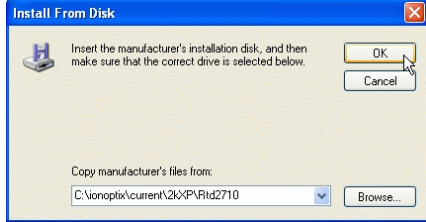
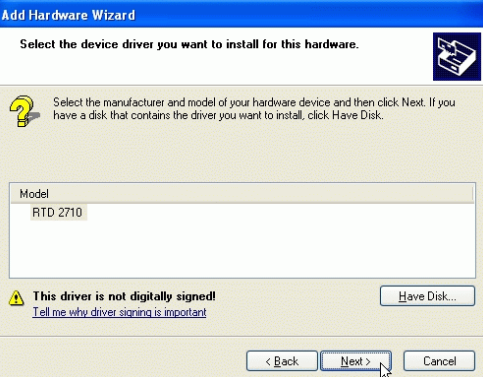
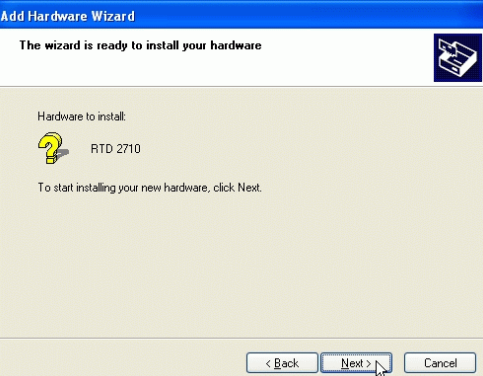

The RTD2710 ISA card is not a plug-an-play devices so Windows will not automatically recognize the new card. You will have to “manually” install the card

To install driver for the “RTD2710”

<p>1. Open the Windows control panel. If you see the category view click on “Switch to classic View”</p>	
<p>2. From the classic view, select “Add new hardware”</p>	
<p>3. Click next.</p>	

<p>4. Wait will Windows attempts to find non-plug-and-play hardware it knows about. It will not find the RTD</p>	A screenshot of the 'Add Hardware Wizard' window. The title bar says 'Add Hardware Wizard'. The main text reads 'Please wait while the wizard searches...'. Below this, it says 'This wizard is searching for hardware that has been connected to your computer recently but has not yet been installed.' There is a small magnifying glass icon in the center. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.
<p>5. Select yes, then click next.</p>	A screenshot of the 'Add Hardware Wizard' window. The title bar says 'Add Hardware Wizard'. The main text reads 'Is the hardware connected?'. Below this, it asks 'Have you already connected this hardware to your computer?'. There are two radio button options: 'Yes, I have already connected the hardware' (which is selected) and 'No, I have not added the hardware yet'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.
<p>6. Scroll down to the bottom of the list and select "Add a new hardware device" then click next.</p>	A screenshot of the 'Add Hardware Wizard' window. The title bar says 'Add Hardware Wizard'. The main text reads 'The following hardware is already installed on your computer'. Below this, it says 'From the list below, select an installed hardware device, then click Next to check properties or troubleshoot a problem you might be having. To add hardware not shown in the list, click: "Add a new hardware device."'. There is a list box titled 'Installed hardware:' containing 'USB Root Hub', 'USB Root Hub', 'USB Root Hub', 'USB Mass Storage Device', and 'Generic volume'. At the bottom of the list box is a link that says 'Add a new hardware device'. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'.
<p>7. Select "Install the hardware that I manually select from a list (Advanced)" then click next.</p>	A screenshot of the 'Add Hardware Wizard' window. The title bar says 'Add Hardware Wizard'. The main text reads 'The wizard can help you install other hardware'. Below this, it says 'The wizard can search for other hardware and automatically install it for you. Or, if you know exactly which hardware model you want to install, you can select it from a list.' There are two radio button options: 'Search for and install the hardware automatically (Recommended)' and 'Install the hardware that I manually select from a list (Advanced)' (which is selected). At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

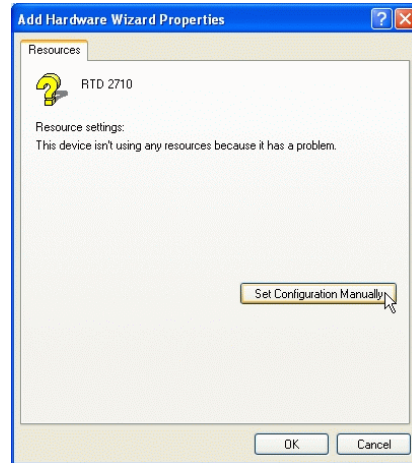
<p>8. Select “Show All Devices” then click next.</p>	
<p>9. The computer will think for a LONG time (1-3 minutes) do NOT reboot the computer or you'll have to wait again.</p>	
<p>10. Click the “Have Disk...”</p>	
<p>11. Click the “Browse...” button.</p>	
<p>12. From the “Look in:” drop down list select c:\ionoptix\current\2kXP\rt2710</p>	

<p>13. Select r2710_kw.inf, then click “Open”</p>	
<p>14. Click “Ok”</p>	
<p>15. Click next to accept that the driver is not digitally signed</p>	
<p>16. Click next to install the hardware</p>	
<p>17. Click “Continue Anyway” to accept that the driver has not Windows Logo testing</p>	

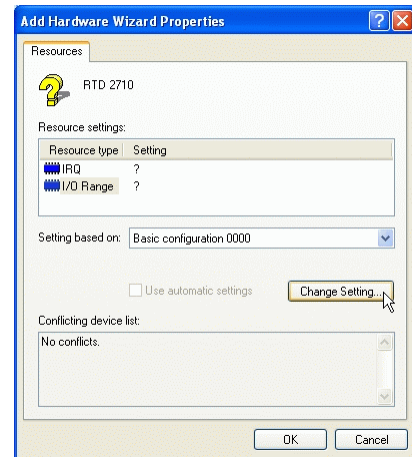
18. Click “View or change resource for this hardware (Advanced)” link



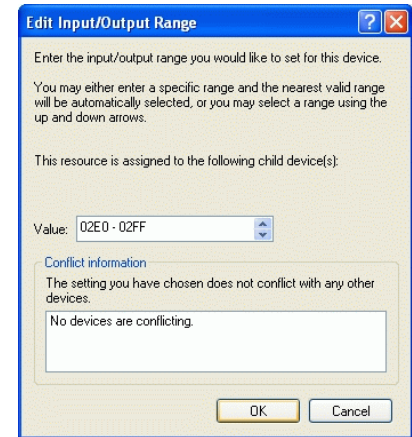
19. Click “Set Configuration Manually” button



20. Highlight the “I/O Range” resource type then click the “Change Setting...” button

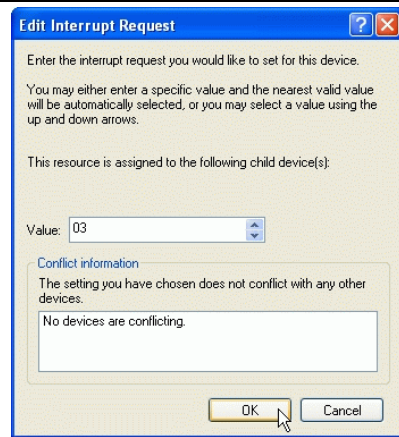


21. Pick the value “02E0 – 02FF” then click OK.

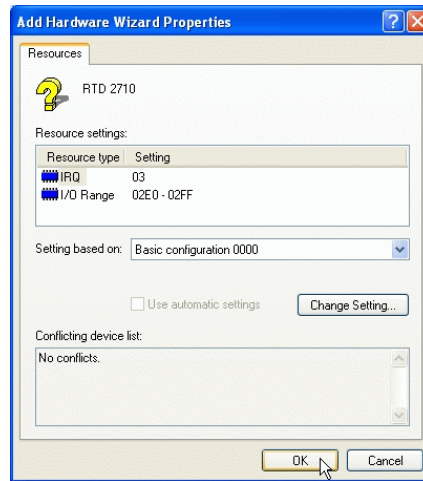


22. Pick the “IRQ” resource type then click the “Change Setting...” button.

Select the value “03” from the list then click OK.



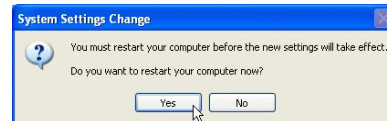
23. When you are done the Resources should look like this. Click “OK” to save the settings



24. Click the “Finish” button.



25. Say “Yes” you want to restart your computer.



7. Test the frame grabber

To test that the frame grabber driver and support software are functioning

1. Attach a video camera to the RCA input on the back of the frame grabber card
2. Run "Start->Programs->Mutech->MV5XX Demo".
3. Click "ok" to dismiss any "No Input" messages
4. Select "Video Adjustment" from the "Adjust" menu, select "Channel 2" then click "Ok"
5. If you have a non-interlaced camera (all IonOptix cameras are non-interlaced) Select "Grab Next Field" from the "Grab" menu. If you have an interlaced camera select "Grab Frame"
6. Select "Start Grab" from the "Grab" menu. Live video should now be displayed

8. IonWizard

The IonWizard program (IONWIZRD.EXE) has been installed in c:\ionoptix\current. Please refer to separate documents for configuration and operation instructions.