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1. Introduction

The purpose of this document is to provide users of the Phocos MXI with a simple procedure for installing the driver for their Phocos MXI on USB-capable Windows based PC systems. Please note that Windows NT is not a USB-capable operating system, thus, Windows NT installation is not covered in this document.

In order for Windows 98 Gold Edition to be USB-capable, all relevant patches must be obtained and installed from the Microsoft website.

Download the latest available Phocos MXI driver from the Phocos web site or from your Phocos MXI driver USB stick and unzip them to a location on your PC.

Use the Subdirectory "Windows_98" if your PC is based on Windows 98

Use the Subdirectory "Windows Me" if your PC is based on Windows Me

Use the Subdirectory "Windows 2000" if your PC is based on Windows 2000

Use the Subdirectory "Windows XP" if your PC is based on Windows XP

Please be sure that older installations of the drivers have been removed from the PC before the new drivers are installed. If older driver installations are not removed, the new drivers will be corrupted.

2. Installing the Phocos MXI

The driver type is the virtual COM port (VCP) driver. The VCP drivers emulate a standard PC COM port. These can be communicated in the same manner as any other COM port on the PC.

2.1. Windows 98 and Windows ME

Under Windows 98, the 'Found New Hardware Wizard' should be used to install the device when it is connected to the PC for the first time. Attempting other methods may corrupt the driver installation and result in the device becoming unusable with the installation PC. Please note that if Windows 98 Gold Edition is being used, you must have all the latest patches from the Microsoft website installed for the system to be USB compatible.

- If a device of the same type has been previously installed on your machine and the drivers that are about to be installed are different from those already installed, the original drivers need to be uninstalled. Please refer to the Uninstalling Phocos MXI section of this document for further details of this procedure.
- Download the latest available "Windows 98" / "Windows ME" Phocos MXI driver from the Phocos web site or from your Phocos MXI driver USB stick and unzip them to a location on your PC. (e.g. C:/Phocos MXI)

• Connect the device to any open USB port on your PC. This will launch the Windows Add New Hardware Wizard. Windows may display a message reading "Building driver database" at this point. This message may take a few minutes to pass. Click "Next" to proceed with the installation.





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Select "Search for the best driver for your device. (Recommended)." as shown below and then click "Next".



Check the box next to "Specify a location" and uncheck all others as shown below. Click "Browse" and locate the driver files. Once the files have been located, click "Next" to proceed with the installation.





Windows may display a message reading "Building driver database" at this point. This
message may take a few minutes to pass. Once Windows has found the required files,
click "Next" to install the device.



 If the driver being installed does not have Microsoft WHQL signature files (.CAT files), the wizard will request a driver disk to attempt to find them. Click "OK" on the "Insert Disk" message box.





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The following window will appear to assist in locating the file. To proceed with the installation without the .CAT file, click "Skip File".



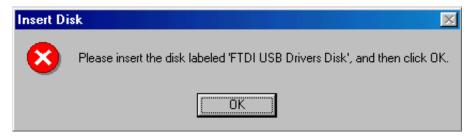
- If the driver being installed is Microsoft WHQL certified, then the .CAT files will be located with the other driver files and should be installed automatically.
- Windows should then display a message indicating that the installation of the serial converter driver was successful. The COM port emulation driver must now be installed. Click "Finish" to complete the installation of the serial converter and proceed to the COM port emulation driver.





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Under Windows 98, the COM port emulation driver will be automatically installed from the same location as the serial converter driver. However, if the driver is not WHQL certified as explained above for the serial converter driver, the wizard will ask for the location of .CAT files. Click "OK" on the "Insert Disk" message box.



The following window will appear to assist in locating the file. To proceed with the installation without the .CAT file, click "Skip File".

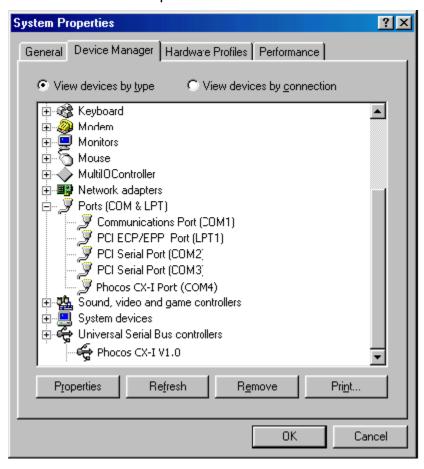


If the driver being installed is Microsoft WHQL certified, then the .CAT files will be located with the other driver files and should be installed automatically.



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 By examining the Device Manager (located in "Start" — "Control Panel"—"System" then select the "Device Manger" tab), the device appears as an additional COM port with the label "Phocos CXI port".





2.2. Windows 2000

If you are using Windows 2000, the Found New Hardware Wizard should be used to install devices when they are connected to the PC for the first time.

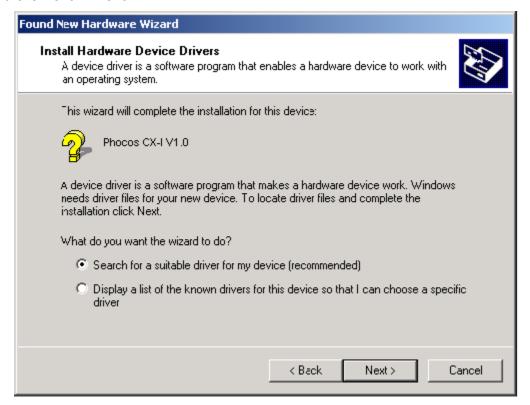
Attempting other methods for installing VCP drivers may corrupt driver installation and result in the device becoming unusable with the installation PC.

- If a device of the same type has been installed on your machine before and the drivers that are about to be installed are different from those installed already, the original drivers need to be uninstalled. Please refer to the **Uninstalling Phocos MXI** section of this document for further details of this procedure.
- Download the latest available "Windows 2000" Phocos MXI driver from the Phocos web site or from your Phocos MXI driver USB stick and unzip them to a location on your PC.
 (e.g. C:\Phocos MXI)
- Connect the device to any open USB port on your PC. This will launch the Windows Found New Hardware Wizard. Click "Next" to proceed with the installation.



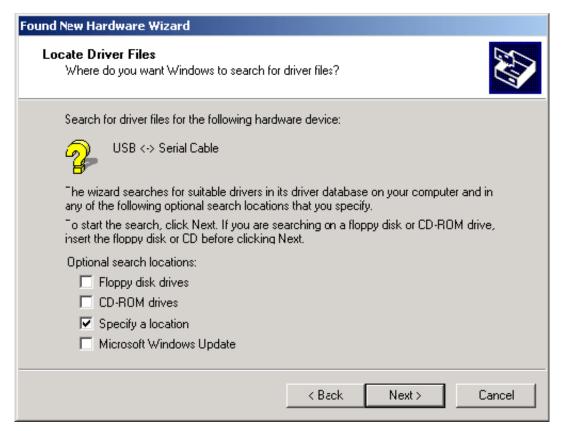


 Select "Search for a suitable driver for my device (recommended)" as shown below and then click "Next"





Check the box next to "Specify a location" and uncheck all others as shown below.



Click "Next" displays a dialog box for you to enter to the location of the drivers.





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• Once Windows has found the required driver .INF file, click "Next" to proceed.





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Windows should then display a message indicating that the installation was successful. Click "Finish" to complete the installation. This has installed the serial converter. The COM port emulation driver must be installed after this has completed.

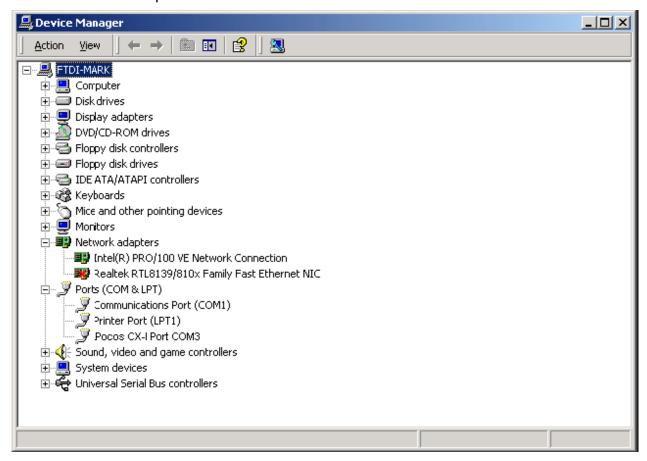


After clicking "Finish", the Found New Hardware Wizard will continue by installing the COM port emulation driver. The procedure is the same as that above for installing the serial converter driver.



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• By examining the Device Manager (located in "Start"--"Control Panel" --"System" then select the "Hardware" tab and click "Device Manger..."), the device appears as an additional COM port with the label "Phocos MXI Port".





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2.3. Windows XP

If you are using Windows XP, the "Found New Hardware Wizard" should be used to install devices when they are connected to the PC for the first time.

Attempting other methods for installing VCP drivers may corrupt driver installation and result in the device becoming unusable with the installation PC.

- If a device of the same type has been installed on your machine before and the drivers that are about to be installed are different from those installed already, the original drivers need to be uninstalled. Please refer to the Uninstalling Phocos CXI section of this document for further details of this procedure.
- Download the latest available "Windows XP" Phocos MXI driver from the Phocos web site or from your Phocos MXI Driver USB stick and unzip them to a location on your PC.
 - (e.g. C:\Phocos MXI)
- Disconnect your PC from the Internet. This can be done by either removing the network cable from your PC or by disabling your network card by going to the "Start"--"Control Panel"--"Network and Dial-Up Connections", right-click the appropriate connection and selecting "Disable" from the menu. The connection can be re-enabled after the installation is complete.



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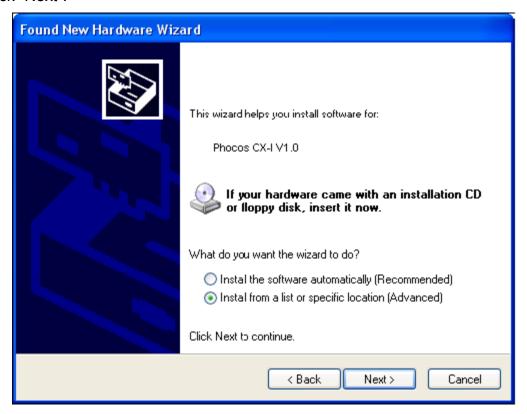
Connect the device to a spare USB port on your PC. This will launch the Windows
Found New Hardware Wizard. If there is no available Internet connection, the screen
below is shown. Select "No, not this time" from the options available and then click
"Next" to proceed with the installation. If there is an available Internet connection,
Windows XP will silently connect to the Windows Update website and install any
suitable driver it finds for the device in preference to the driver manually selected.





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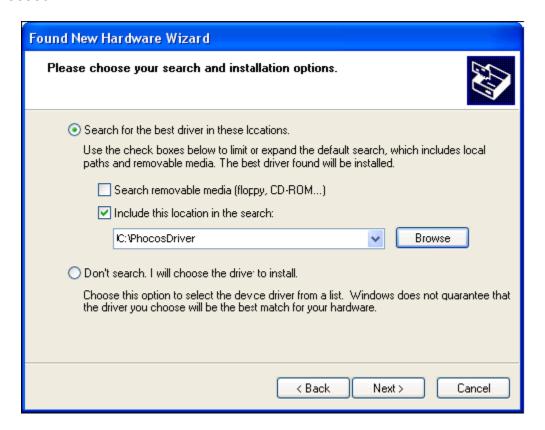
 Select "Install from a list or specific location (Advanced)" as shown below and then click "Next".





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 Select "Search for the best driver in these locations" and enter the file path in the combo-box ("C:\Phocos MXI driver" in the example below) or browse to it by clicking the browse button. Once the file path has been entered in the box, click "Next" to proceed.





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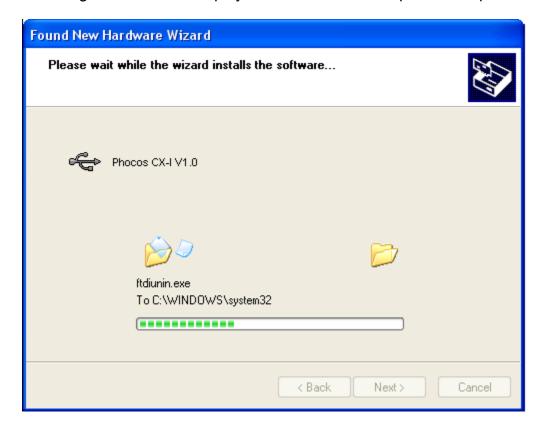
 If Windows XP is configured to warn when unsigned (non-WHQL certified) drivers are about to be installed, the following screen will be displayed. Click on "Continue Anyway" to continue with the installation. If Windows XP is configured to ignore file signature warnings, no message will appear.





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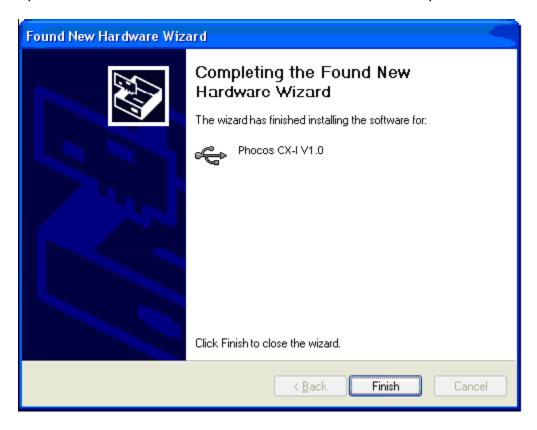
The following screen will be displayed as Windows XP copies the required driver files.





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Windows should then display a message indicating that the installation was successful.
 Click "Finish" to complete the installation. This has installed the serial converter. The
 COM port emulation driver must be installed after this has completed.

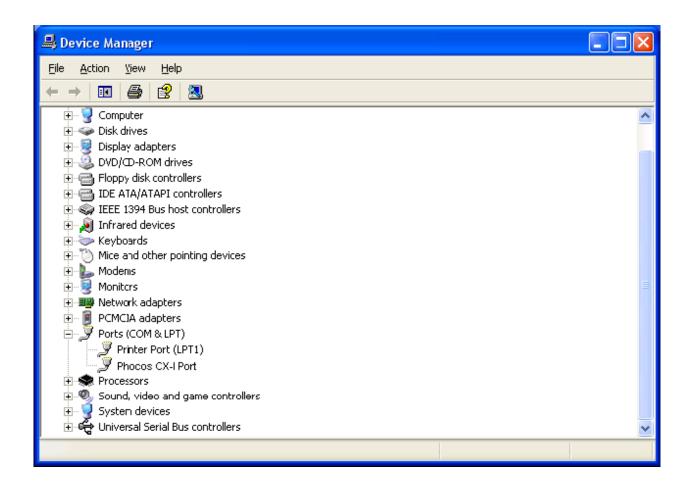


 After clicking "Finish", the Found New Hardware Wizard will continue by installing the COM port emulation driver. The procedure is the same as that above for installing the serial converter driver.



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• By examining the Device Manager (located in "Start" — "Control Panel" — "System", then select the "Hardware" tab and click "Device Manger"), the device appears as an additional COM port with the label "Phocos MXI port"



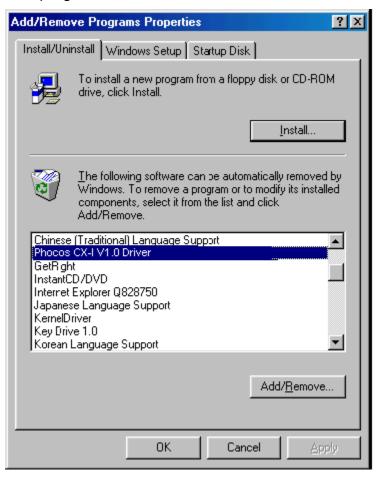


3. Uninstalling Phocos CXI

3.1. Windows 98 and Windows ME

Uninstalling Phocos MXI drivers from Windows 98 or Windows ME should always be done through the Add/Remove Programs utility. This uses the Phocos MXI driver uninstaller program to remove files and registry entries to leave a clean system. Other methods may leave fragments of the driver that may interfere with future installations.

- Disconnect any Phocos MXI that is attached to the PC.
- Open the Add/Remove Programs utility located in "Start" "Control Panel"—"Add/Remove Programs". Select "Phocos MXI V1.0 Driver" from the list of installed programs.



 Click the "Add/Remove" button. This will run the Phocos MXI driver uninstaller program.

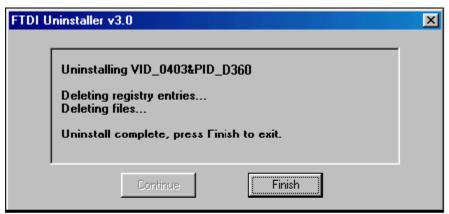


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• Click "Continue" to run the uninstaller or "Cancel" to exit.



• When the uninstaller has finished removing the device from the system, the caption on the "Cancel" button will change to "Finish". Click "Finish" to complete the process.

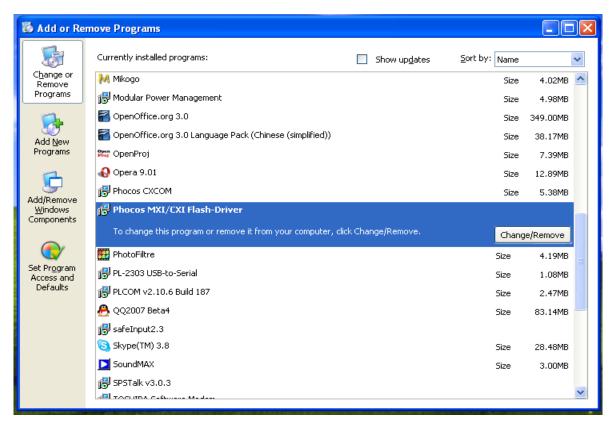




4. Windows 2000

When uninstalling devices from Windows 2000, this should always be done through the Add/ Remove Programs utility. This uses the Phocos MXI driver uninstaller program to remove files and registry entries to leave a clean system. Other methods may leave fragments of the driver that may interfere with future installations.

- Disconnect any FTDI devices that are attached to the PC.
- Open the Add/Remove Programs utility located in "Start" "Control Panel"
 —"Add/Remove Programs". Select "Phocos MXI" from the list of installed programs.



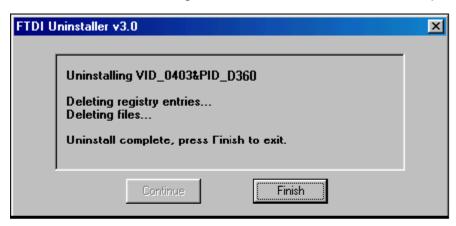


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- Click the "Change/Remove" button. This will run the Phocos MXI uninstaller program.
- Click "Continue" to run the uninstaller or "Cancel" to exit.



• When the uninstaller has finished removing the device from the system, the caption on the "Cancel" button will change to "Finish". Click "Finish" to complete the process.

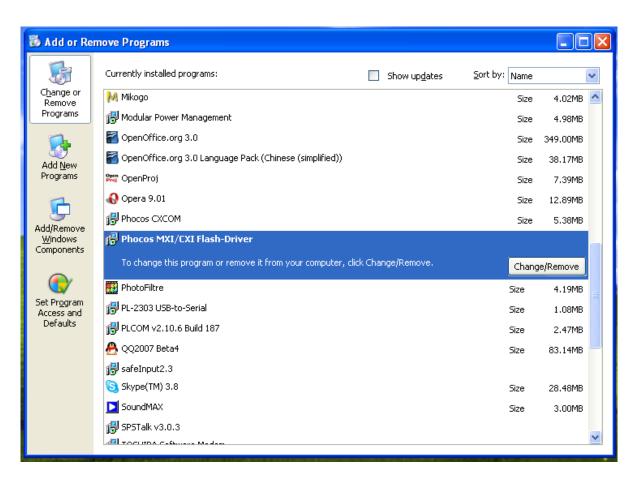




4.1. Windows XP

Uninstalling FTDI device drivers from Windows XP should always be done through the Add/Remove Programs utility as this uses the Phocos MXI driver uninstaller program to remove files and registry entries to leave a clean system. Other methods may leave fragments of the driver that may interfere with future installations

- Disconnect any FTDI devices that are attached to the PC.
- Open the Add/Remove Programs utility located in "Start" "Control Panel"
 —"Add/Remove Programs". Select "Phocos MXI" from the list of installed programs.





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- Click the "Change/Remove" button. This will run the Phocos MXI uninstaller program.
- Click "Continue" to run the uninstaller or "Cancel" to exit.



• When the uninstaller has finished removing the device from the system, the caption on the "Cancel" button will change to "Finish". Click "Finish" to complete the process.





5. Utilities

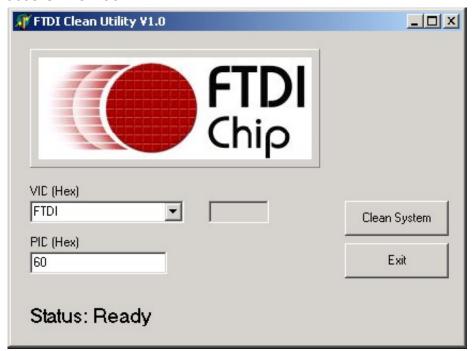
5.1. FT_Clean Utility

A program has been written to remove registry entries and files relating to Phocos MXI drivers. The FT_Clean program generates INI files for the uninstaller appropriate to the version of Windows installed and runs the uninstaller for each INI file generated. No user input is required for the uninstaller to run.

The program can be used to remove a single device, a consecutive range of devices or all devices with the same VID. A message box will appear to confirm which VID and PIDs combinations are going to be removed. A second message box will provide a final chance to cancel the uninstallation. The mouse and keyboard will be disabled for a few seconds while the uninstaller is running.

The example below shows the FT_Clean program configured to remove all devices with a FTDI VID and PIDs beginning with 60 i.e. all PIDs from 6000 to 60FF inclusive. A four digit PID will remove a single specific device while leaving the PID box blank will remove all devices with the same VID.

The PID of Phocos CXI is D361.



Should you experience problems with installing the Phocos MXI driver twice, run this program and do not enter a PID. The Program cleans your PC and then start again with the chapter "Installing the Phocos MXI driver".



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6. Troubleshooting

6.1. General Troubleshooting

This chapter includes information on common difficulties experienced when trying to install the driver. If problems occur with your driver installation, please consult this section before contacting Phocos support. If the information here fails to remedy the problem, contact Phocos support who will attempt to rectify the situation as quickly as possible.

Windows forces a reboot after installing a device

This problem can occur if an application is accessing a file while the New Hardware Wizard is trying to copy it. If installing a device, selecting not to restart the computer then unplugging and re-plugging the device may allow the device to function properly without restarting. Restarting the machine will allow the device to work correctly.

Windows cannot find drivers for my device

This error can occur if the VID and PID programmed into the device EEPROM do not match those listed in the driver files, or when an old driver is already installed. When this happens, a screen similar to that shown below is displayed (screen shown from Windows 2000):





In this case remove the old driver by as described in the Chapter "Uninstalling Phocos MXI" If the problem still exists after the uninstall program then run the FT_Clean program and remove all old drivers. After a reboot you will be able to install the Phocos MXI driver as described in Chapter 2.



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6.2. Windows 98 and Windows ME

Windows complains about missing .cat files

Files with the .cat extension are signature files issued by Microsoft that indicate a device driver is WHQL certified. If a driver is not certified, there will be no .cat files available. When installing drivers in Windows 98 or Windows ME, the user is prompted to locate the .cat files if the operating system cannot find them. If the driver is not certified but you wish to install it anyway, the files may be skipped by clicking the "Skip" button.

· Windows complains about missing ftccomms.vxd file

This can occur when the USB Composite driver has been installed if the user has not browsed to the location of the driver files. If this message appears, do not skip it but browse to the driver file location. The wizard will then be able to correctly install the device.



6.3. Windows XP

• Windows XP displays an error and then terminates installation

If the following screen is displayed with this message, Windows XP has been configured to block the installation of any drivers that are not WHQL certified.



Two options are available to successfully install the device. Either a certified version of the driver can be installed (if available) or the driver signing options can be changed to either warn or ignore to allow the installation to complete.

To change the current driver signing setting, go to "Start"--"Control Panel"--"System", click on the "Hardware" tab and then click "Driver Signing". The desired signing option may then be selected.



7. Contact Information

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