

An0073

Windows XP Driver Installation for the COM-1480
High Speed Multimode Wireless Communications Module

Rev 1.0 - July 2009 - ETH_An0073_AN1.0

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Conventions used within this Application Note

Warnings and Important Notices:

Within this manual you will find the following tables, please ensure that you read and understand these as they are intended to highlight potential risks or precautions that should be taken.

**Danger, electrical shock hazards:**

Information to alert you to potential electrical shock hazards: potential personal injury, death or damage to a system, a device, or a program Instructions contained in the warnings must be followed. You should also use all other safety precautions, which you deem necessary for the operation of the equipment in your operating environment.

**Warning:**

Information to alert you to potential hazards: potential personal injury, death or damage to a system, a device, or a program Instructions contained in the warnings must be followed. You should also use all other safety precautions, which you deem necessary for the operation of the equipment in your operating environment.

**Information and/or Notes:**

Indicates important features or instructions that should be observed

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Introduction

This document describes how to install and test the Windows XP drivers for the COM-1480.

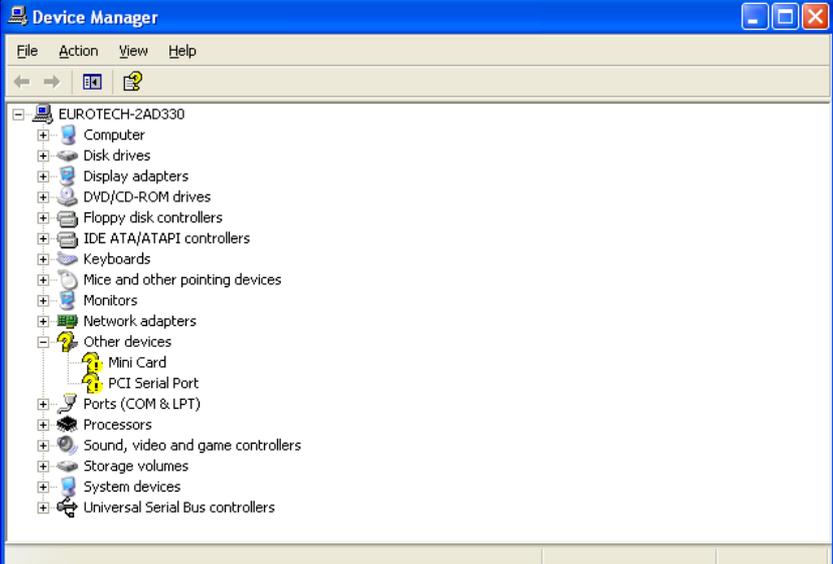
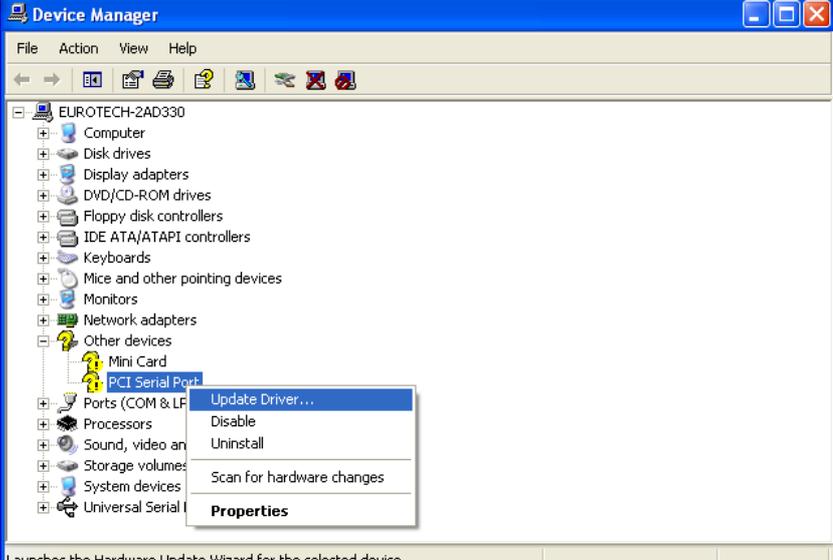
Note:

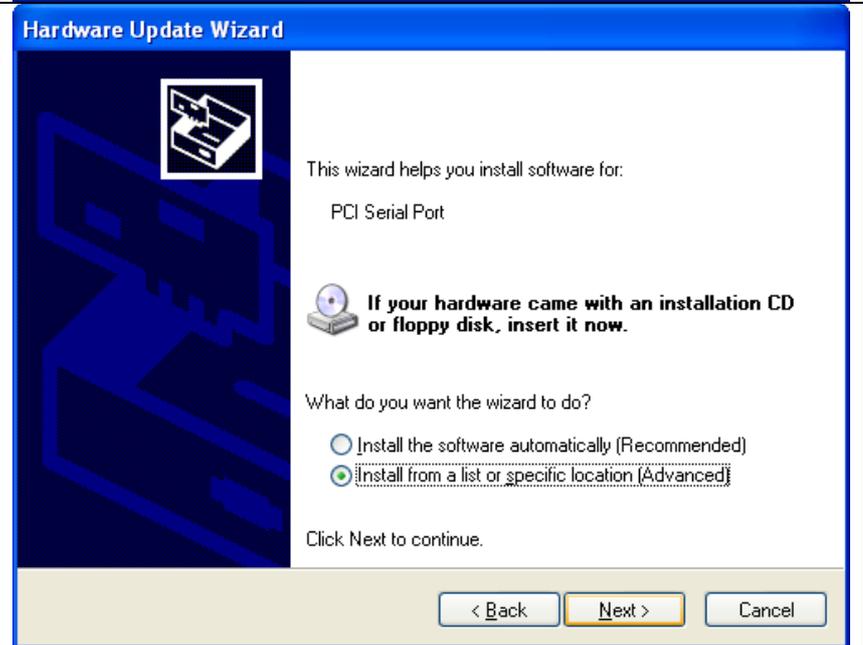
These instructions were compiled and verified using the following set-up:



- Eurotech CPU-1472 Celeron M CPU Module
 - Eurotech COM-1480
 - Eurotech Development Kit
 - Windows XP Professional Version 2002 Service Pack 2
 - Eurotech GPS Antenna
-

Installing GPS ports – Part 1

<p>1</p>	<ul style="list-style-type: none"> • Device Manager before installation showing: <ul style="list-style-type: none"> ○ Mini Card: Sierra Wireless Modem ○ PCI Serial Port: iTrax GPS module 	
<p>2</p>	<p>We suggest starting with the “PCI Serial Port” driver installation</p> <ul style="list-style-type: none"> • Right Click “PCI Serial Port” • Select “Update Driver...” 	 <p>Launches the Hardware Update Wizard for the selected device.</p>

<p>3</p> <ul style="list-style-type: none">• Select "No, not this time"• Select "Next >"		 <p>The screenshot shows the 'Hardware Update Wizard' window. The title bar reads 'Hardware Update Wizard'. The main content area has a blue background with a circuit pattern and a white box containing a USB icon. The text reads: 'Welcome to the Hardware Update Wizard'. Below this, it says: 'Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Read our privacy policy'. The question is: 'Can Windows connect to Windows Update to search for software?'. There are three radio button options: 'Yes, this time only', 'Yes, now and every time I connect a device', and 'No, not this time' (which is selected). At the bottom, it says 'Click Next to continue.' and there are three buttons: '< Back', 'Next >', and 'Cancel'.</p>
<p>4</p> <ul style="list-style-type: none">• Select "Install from a list or specific location (Advanced)"• Select "Next >"		 <p>The screenshot shows the 'Hardware Update Wizard' window. The title bar reads 'Hardware Update Wizard'. The main content area has a blue background with a circuit pattern and a white box containing a USB icon. The text reads: 'This wizard helps you install software for: PCI Serial Port'. Below this, there is a CD icon and the text: 'If your hardware came with an installation CD or floppy disk, insert it now.' The question is: 'What do you want the wizard to do?'. There are two radio button options: 'Install the software automatically (Recommended)' and 'Install from a list or specific location (Advanced)' (which is selected). At the bottom, it says 'Click Next to continue.' and there are three buttons: '< Back', 'Next >', and 'Cancel'.</p>

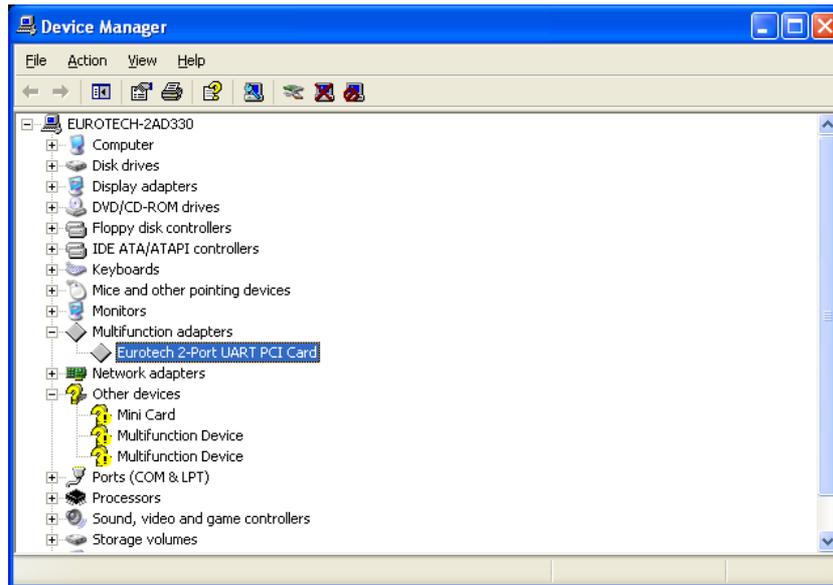
<p>5</p>	<ul style="list-style-type: none"> • Navigate to and select the folder containing the COM-1480 GPS drivers • Default package name "com1480-gps-winxpe-driver-1.0.1" • Select "Next >" 	
<p>6</p>	<ul style="list-style-type: none"> • Select "Continue Anyway" 	

<p>7</p>	<ul style="list-style-type: none">• Select "Finish"	 <p>The screenshot shows a Windows-style dialog box titled "Hardware Update Wizard". The main area has a dark blue background with a circuit board pattern. On the left, there is a small icon of a PCI card. The text reads: "Completing the Hardware Update Wizard", "The wizard has finished installing the software for:", and "Eurotech 2-Port UART PCI Card" with a small diamond icon. At the bottom, it says "Click Finish to close the wizard." and has three buttons: "< Back", "Finish" (highlighted with a blue border), and "Cancel".</p>
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Installing GPS ports – Part 2

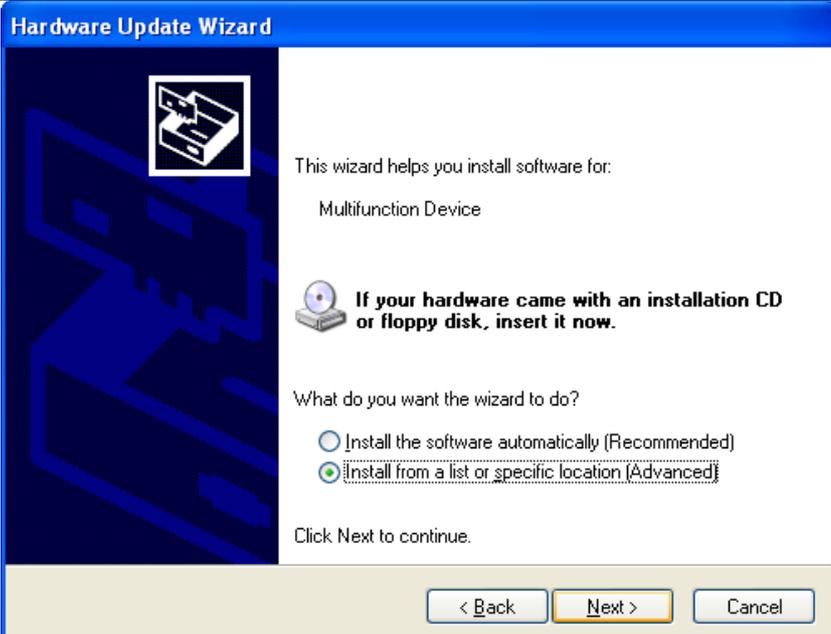
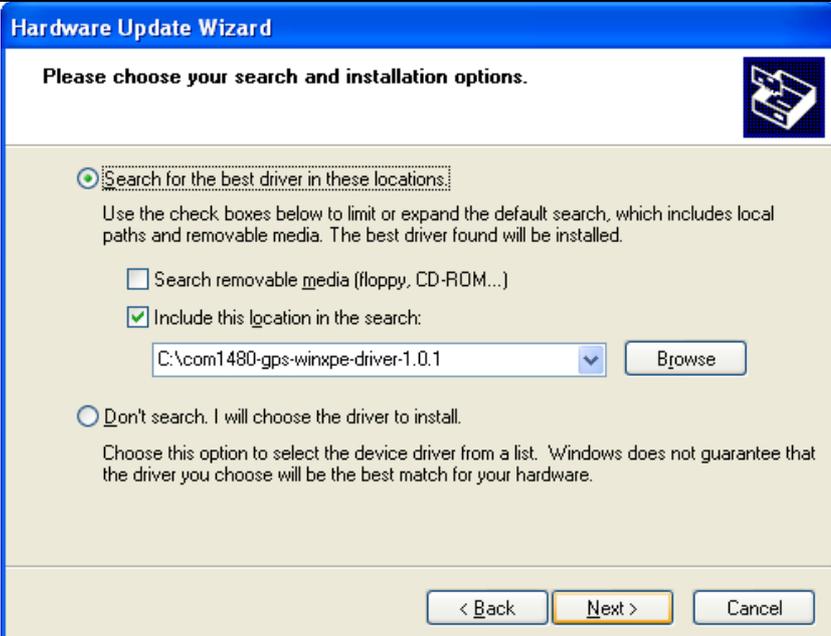
Part 1 should have added the following items to the Device Manager:

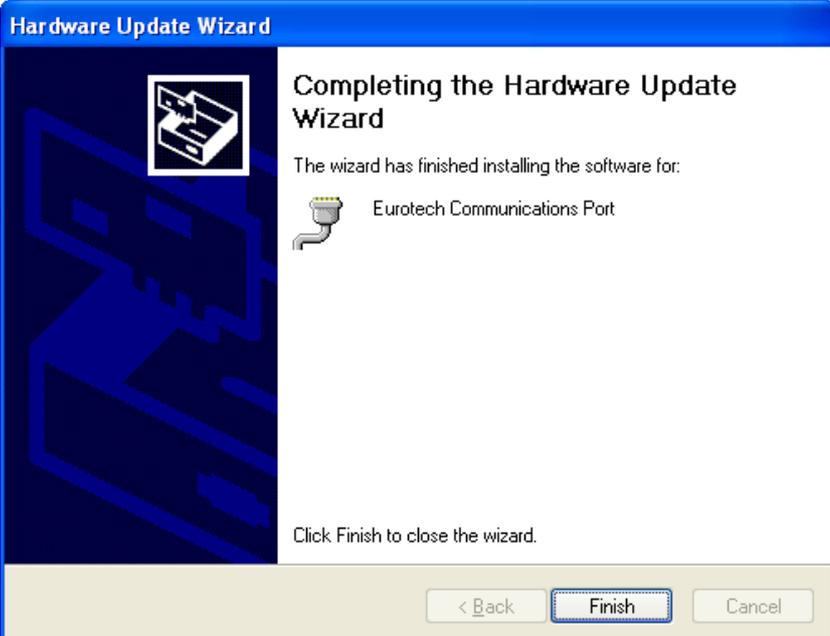
- Eurotech 2-Port UART PCI Card
- Multifunction Device
- Multifunction Device



Windows XP should automatically find and install the two Multifunction Devices; if not right-click each in turn and select "Update Driver"; following this the procedure is the same for "Automatic" or "Manual", as follows:

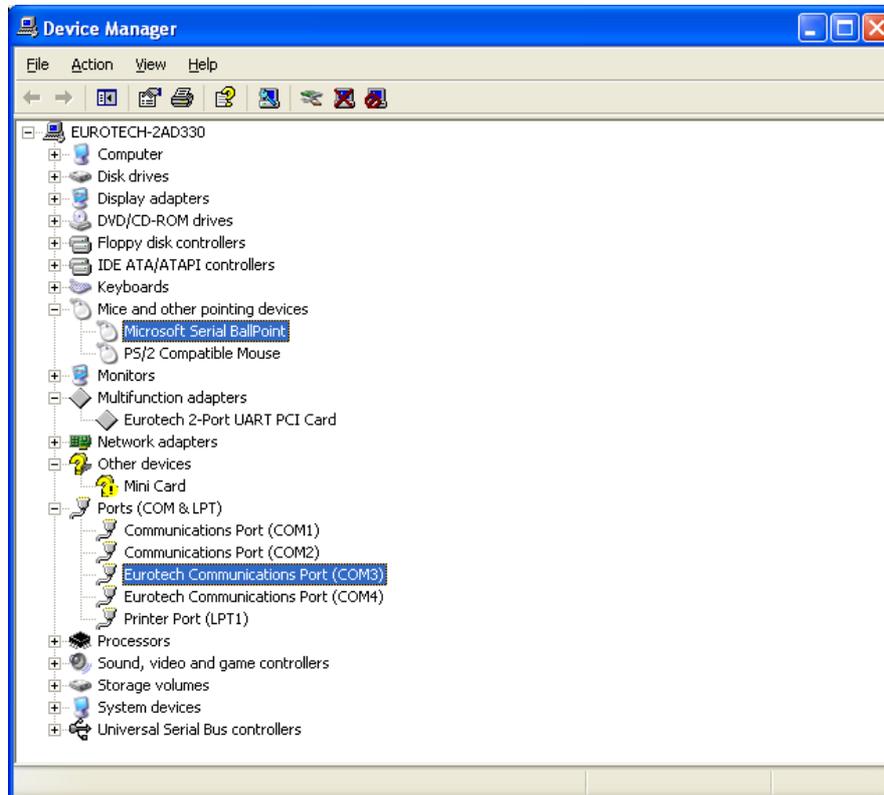
<p>1</p> <ul style="list-style-type: none"> • Select "No, not his time" • Select "Next >" 	<p>The screenshot shows the 'Hardware Update Wizard' dialog box. The title bar reads 'Hardware Update Wizard'. The main text says 'Welcome to the Hardware Update Wizard' and 'Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission)'. Below this is a link for 'Read our privacy policy'. The question is 'Can Windows connect to Windows Update to search for software?'. There are three radio button options: 'Yes, this time only', 'Yes, now and every time I connect a device', and 'No, not this time'. The 'No, not this time' option is selected. At the bottom, there are 'Back', 'Next >', and 'Cancel' buttons. The 'Next >' button is highlighted.</p>
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<p>2</p> <ul style="list-style-type: none"> • Select "Install from a list or specific location (Advanced)" • Select "Next >" 	 <p>Hardware Update Wizard</p> <p>This wizard helps you install software for: Multifunction Device</p> <p> If your hardware came with an installation CD or floppy disk, insert it now.</p> <p>What do you want the wizard to do?</p> <p><input type="radio"/> Install the software automatically (Recommended)</p> <p><input checked="" type="radio"/> Install from a list or specific location (Advanced)</p> <p>Click Next to continue.</p> <p>< Back Next > Cancel</p>
<p>3</p> <ul style="list-style-type: none"> • Navigate to and select the folder containing the COM-1480 GPS drivers • default package name "com1480-gps-winxpe-driver-1.0.1" • Select "Next >" 	 <p>Hardware Update Wizard</p> <p>Please choose your search and installation options.</p> <p><input checked="" type="radio"/> Search for the best driver in these locations:</p> <p>Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.</p> <p><input type="checkbox"/> Search removable media (floppy, CD-ROM...)</p> <p><input checked="" type="checkbox"/> Include this location in the search:</p> <p>C:\com1480-gps-winxpe-driver-1.0.1 <input type="button" value="Browse"/></p> <p><input type="radio"/> Don't search. I will choose the driver to install.</p> <p>Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.</p> <p>< Back Next > Cancel</p>

<p>4</p> <ul style="list-style-type: none"> Select "Continue Anyway" 	 <p>Hardware Installation</p> <p> The software you are installing for this hardware: Eurotech Communications Port</p> <p>has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)</p> <p>Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.</p> <p><input type="button" value="Continue Anyway"/> <input type="button" value="STOP Installation"/></p>
<p>5</p> <ul style="list-style-type: none"> Select "Finish" 	 <p>Hardware Update Wizard</p> <p> Completing the Hardware Update Wizard</p> <p>The wizard has finished installing the software for:  Eurotech Communications Port</p> <p>Click Finish to close the wizard.</p> <p><input type="button" value=" < Back"/> <input type="button" value=" Finish"/> <input type="button" value=" Cancel"/></p>

Installing GPS ports – Part 3

You should now have the device manager as shown below:



Note [GPS Installation]:

The previous steps install the following components:

- Eurotech 2-Port UART PCI Card
- Eurotech Communications Port (COM3) [NMEA]
- Eurotech Communications Port (COM4) [iTalk]

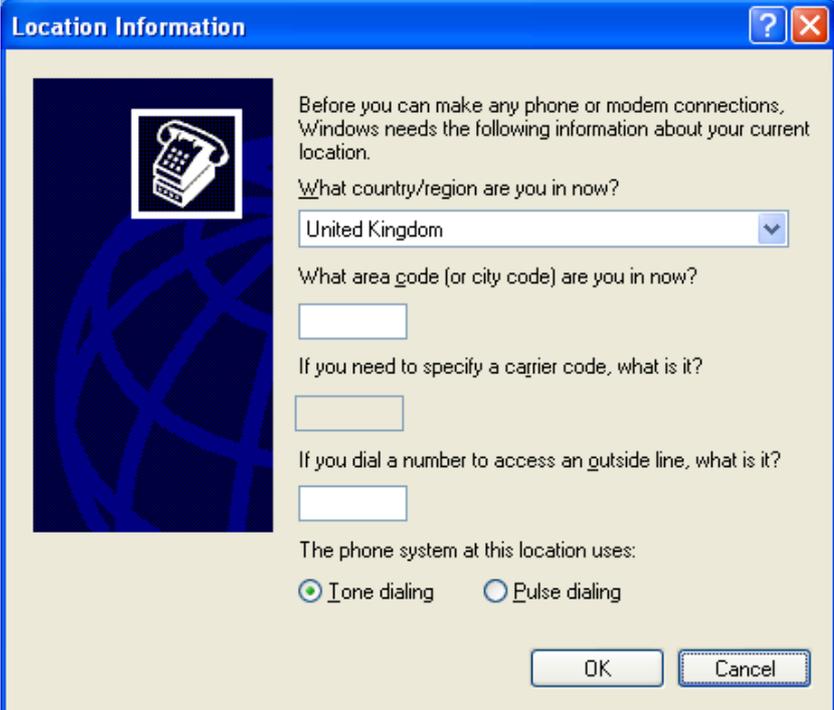
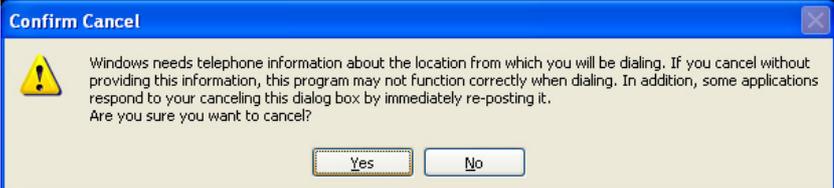
Note the actual COM port numbering may vary depending on the quantity of other COM ports present on your system, however, in general the system will select the next two available ports.

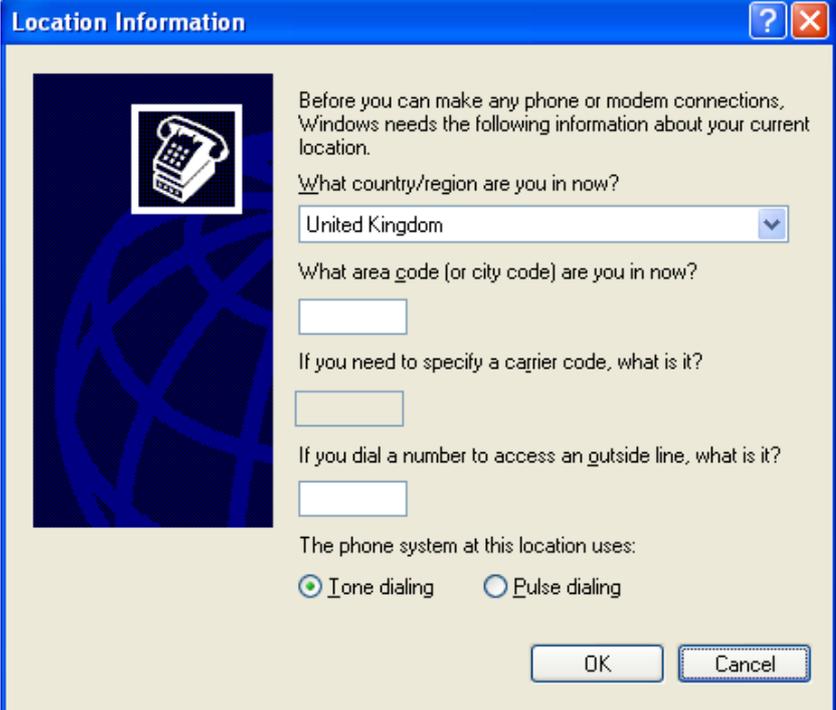
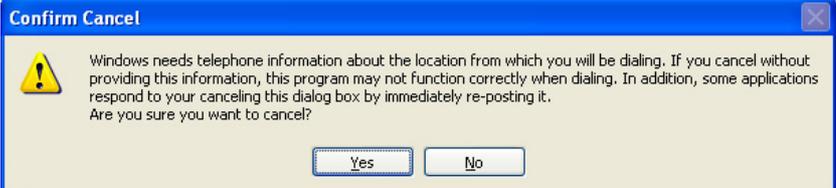
Information [Erratic Mouse Movement]:

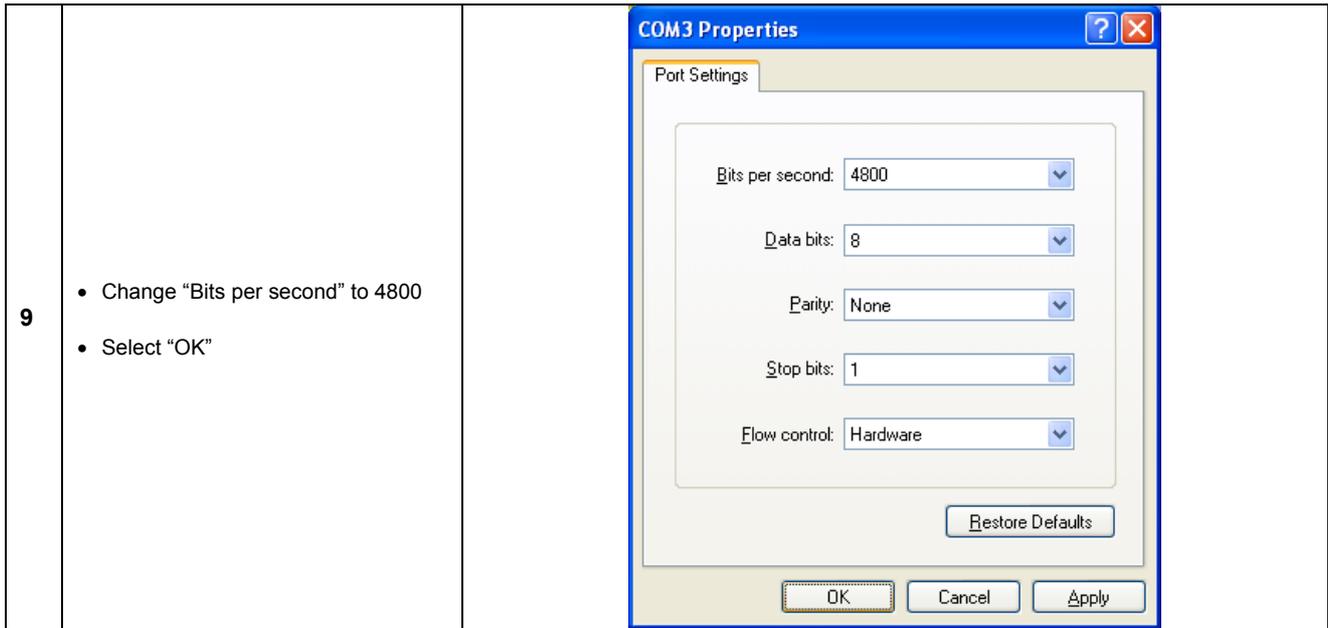
At this point it is very common for the Windows Mouse to start acting erratically, this is a problem with Windows XP and the GPS data-stream, note above that Windows has added a "Microsoft Serial BallPoint" device, this is what causes the erratic mouse movement.

To fix this problem simply select the "Microsoft Serial BallPoint" from the list and either [right-click] and Disable the device or click the "Disable" icon on the menu bar.

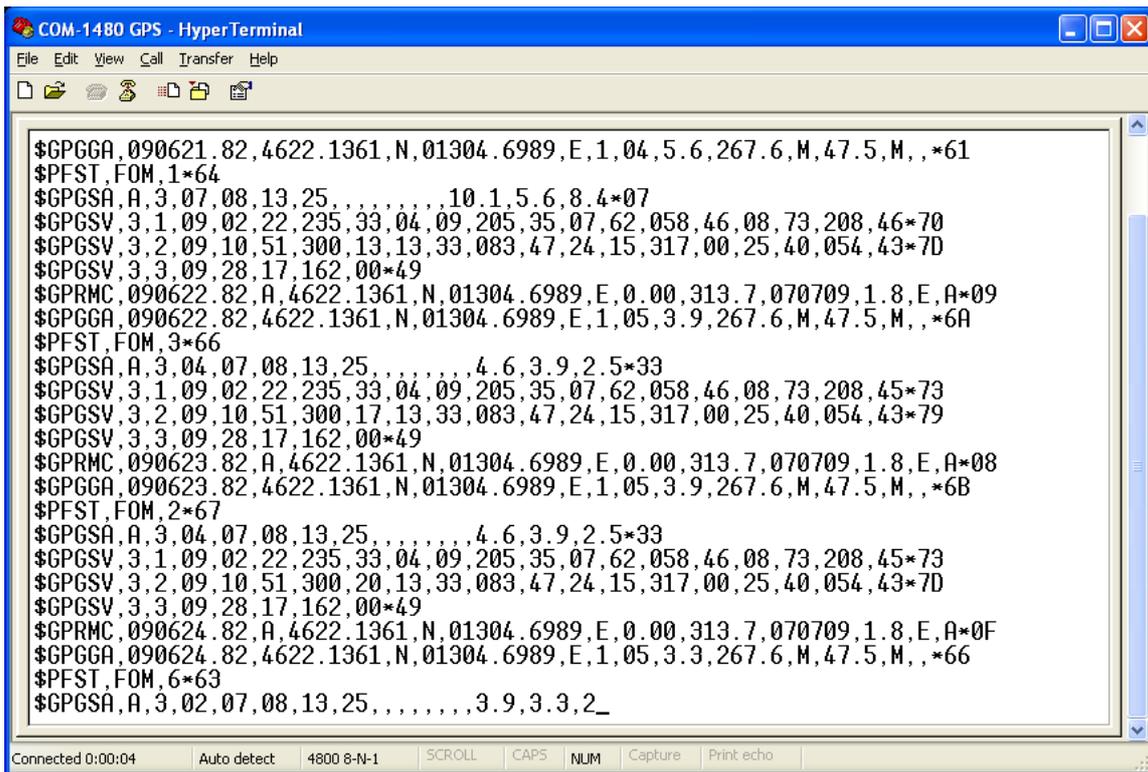
Installing GPS ports – NMEA Verification

<p>1</p>	<ul style="list-style-type: none"> Select "Cancel" 	 <p>Location Information</p> <p>Before you can make any phone or modem connections, Windows needs the following information about your current location.</p> <p>What country/region are you in now? <input type="text" value="United Kingdom"/></p> <p>What area code (or city code) are you in now? <input type="text"/></p> <p>If you need to specify a carrier code, what is it? <input type="text"/></p> <p>If you dial a number to access an outside line, what is it? <input type="text"/></p> <p>The phone system at this location uses: <input checked="" type="radio"/> Tone dialing <input type="radio"/> Pulse dialing</p> <p>OK Cancel</p>
<p>2</p>	<ul style="list-style-type: none"> Select "Yes" 	 <p>Confirm Cancel</p> <p>Windows needs telephone information about the location from which you will be dialing. If you cancel without providing this information, this program may not function correctly when dialing. In addition, some applications respond to your canceling this dialog box by immediately re-posting it. Are you sure you want to cancel?</p> <p>Yes No</p>
<p>3</p>	<ul style="list-style-type: none"> Select "OK" 	 <p>HyperTerminal</p> <p>Before HyperTerminal can dial or make connections, you must provide information about your location.</p> <p>OK</p>
<p>4</p>	<ul style="list-style-type: none"> Enter a "Name" Select "OK" 	 <p>Connection Description</p> <p>New Connection</p> <p>Enter a name and choose an icon for the connection:</p> <p>Name: <input type="text" value="COM-1480 GPS"/></p> <p>Icon: <input type="text" value=""/></p> <p>OK Cancel</p>

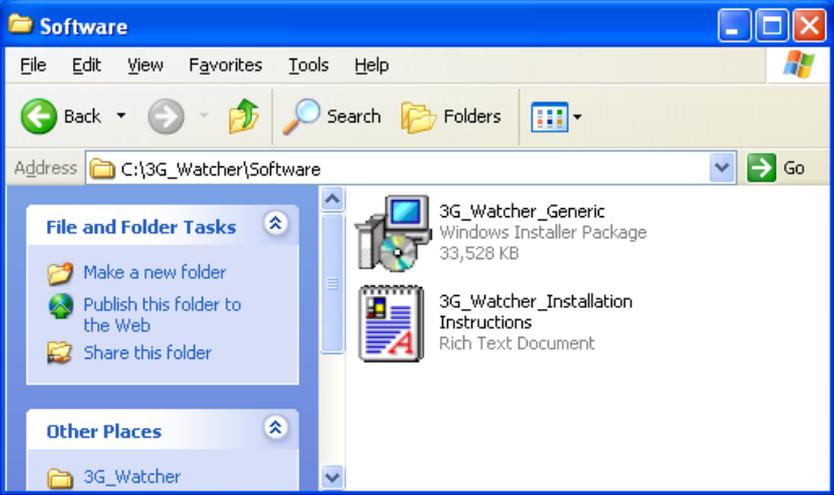
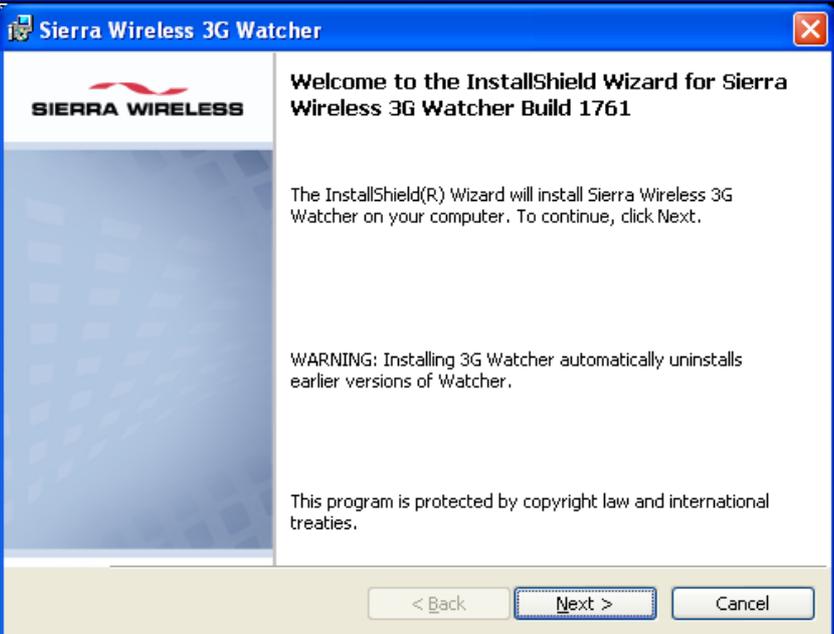
<p>5</p> <ul style="list-style-type: none"> Select "Cancel" 		 <p>Location Information</p> <p>Before you can make any phone or modem connections, Windows needs the following information about your current location.</p> <p>What country/region are you in now? United Kingdom</p> <p>What area code (or city code) are you in now? <input type="text"/></p> <p>If you need to specify a carrier code, what is it? <input type="text"/></p> <p>If you dial a number to access an outside line, what is it? <input type="text"/></p> <p>The phone system at this location uses: <input checked="" type="radio"/> Tone dialing <input type="radio"/> Pulse dialing</p> <p>OK Cancel</p>
<p>6</p> <ul style="list-style-type: none"> Select "Yes" 		 <p>Confirm Cancel</p> <p> Windows needs telephone information about the location from which you will be dialing. If you cancel without providing this information, this program may not function correctly when dialing. In addition, some applications respond to your canceling this dialog box by immediately re-posting it. Are you sure you want to cancel?</p> <p>Yes No</p>
<p>7</p> <ul style="list-style-type: none"> Select "OK" 		 <p>HyperTerminal</p> <p> Before HyperTerminal can dial or make connections, you must provide information about your location.</p> <p>OK</p>
<p>8</p> <ul style="list-style-type: none"> Select the appropriate COM port in the Connect using drop-down box Select "OK" <p>Note: This should be the first of the two installed COM ports in "Part 3"</p>		 <p>Connect To</p> <p> COM-1480 GPS</p> <p>Enter details for the phone number that you want to dial:</p> <p>Country/region: <input type="text"/></p> <p>Area code: <input type="text"/></p> <p>Phone number: <input type="text"/></p> <p>Connect using: COM3</p> <p>OK Cancel</p>



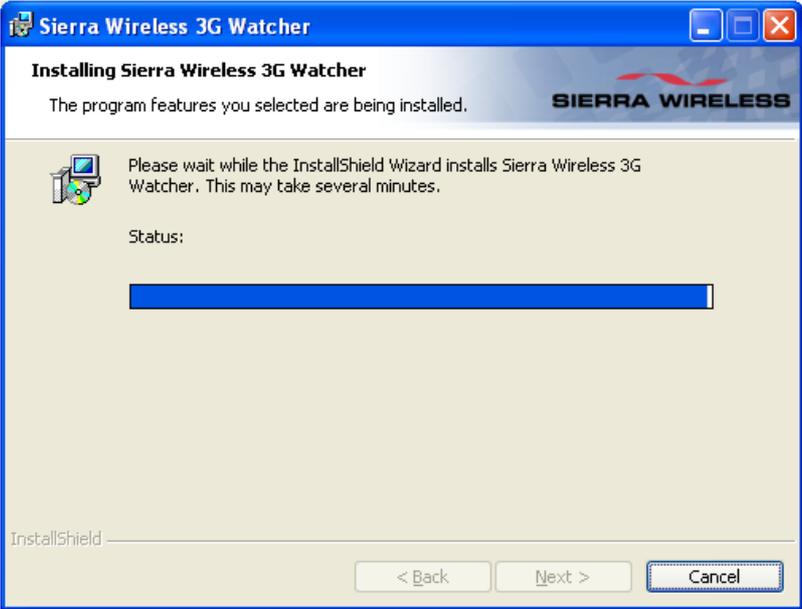
You should now see a display similar to the one shown below:



Installing Modem ports

<p>1</p>	<ul style="list-style-type: none"> • Navigate to the "3G Watcher" software package • Double-click "3G_Watcher_Generic" 	
<p>2</p>	<ul style="list-style-type: none"> • Select "Next >" 	

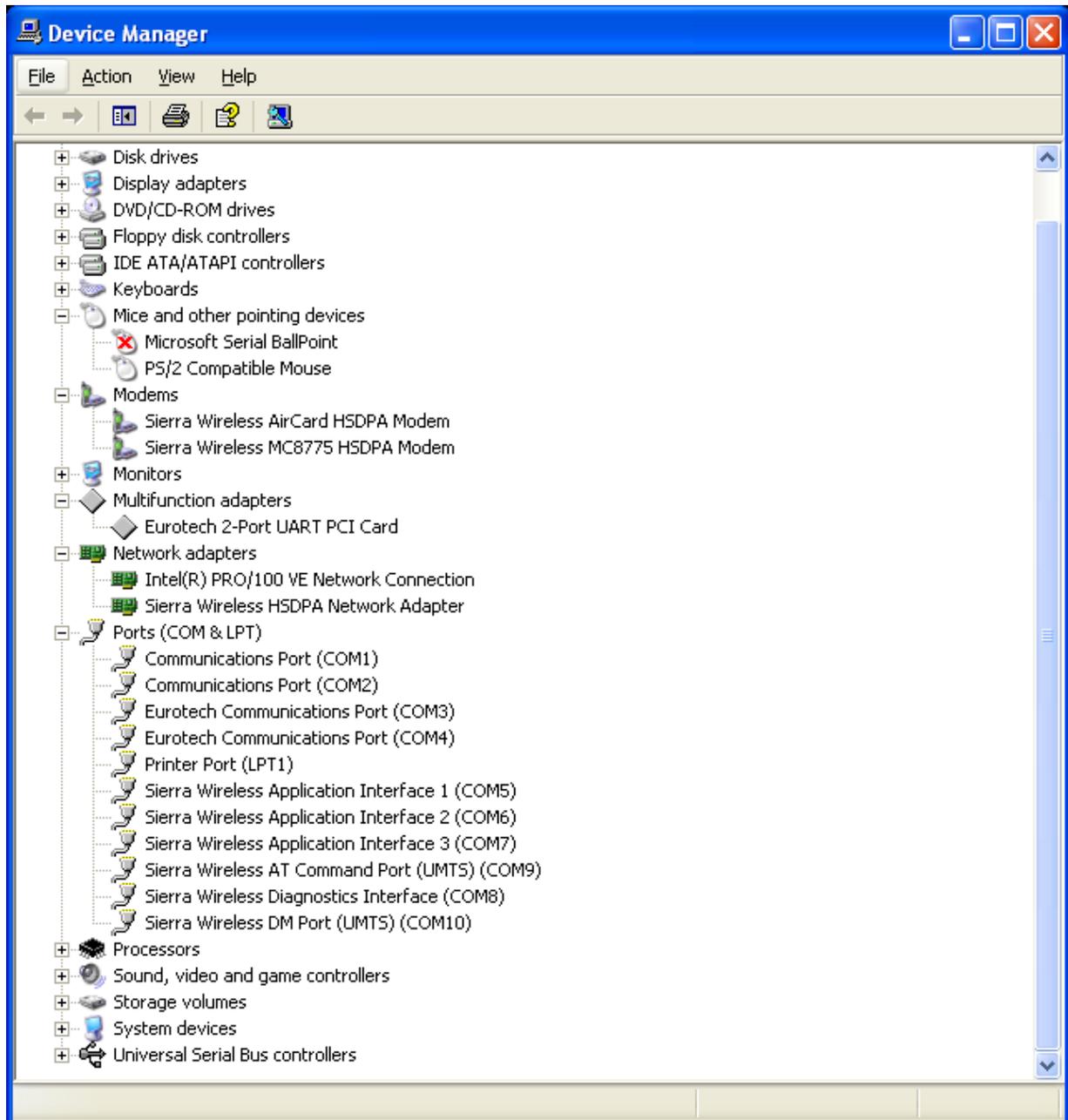
<p>3</p> <ul style="list-style-type: none"> Click "I accept the terms in the license agreement" Select "Install" 		
<p>4</p> <ul style="list-style-type: none"> The package will now install ... 		

<p>5</p> <ul style="list-style-type: none">• The driver installation progress is shown at the bottom right hand corner of the screen ...		 <p>The screenshot shows the 'Sierra Wireless 3G Watcher' installation window. The title bar reads 'Sierra Wireless 3G Watcher'. The main content area says 'Installing Sierra Wireless 3G Watcher' and 'The program features you selected are being installed.' Below this is a progress bar labeled 'Status:' which is partially filled with blue. At the bottom, there are buttons for '< Back', 'Next >', and 'Cancel'. A yellow tooltip at the bottom right of the window reads 'Sierra Wireless Device Drivers - Installing... In Progress (45%) - Please wait...'</p>
<p>6</p> <ul style="list-style-type: none">• Select "Finish"		 <p>The screenshot shows the 'Sierra Wireless 3G Watcher' installation window at the 'InstallShield Wizard' completion screen. The title bar reads 'Sierra Wireless 3G Watcher'. The main content area features the Sierra Wireless logo and the text 'InstallShield Wizard'. Below the logo is a blue-tinted image of a device. The text on the right says 'The InstallShield Wizard has successfully installed Sierra Wireless 3G Watcher. Click Finish to exit the wizard.' At the bottom, there are buttons for 'Cancel' and 'Finish'.</p>

Now wait for a few minutes while Windows XP Auto-detects the new devices and completes installation.

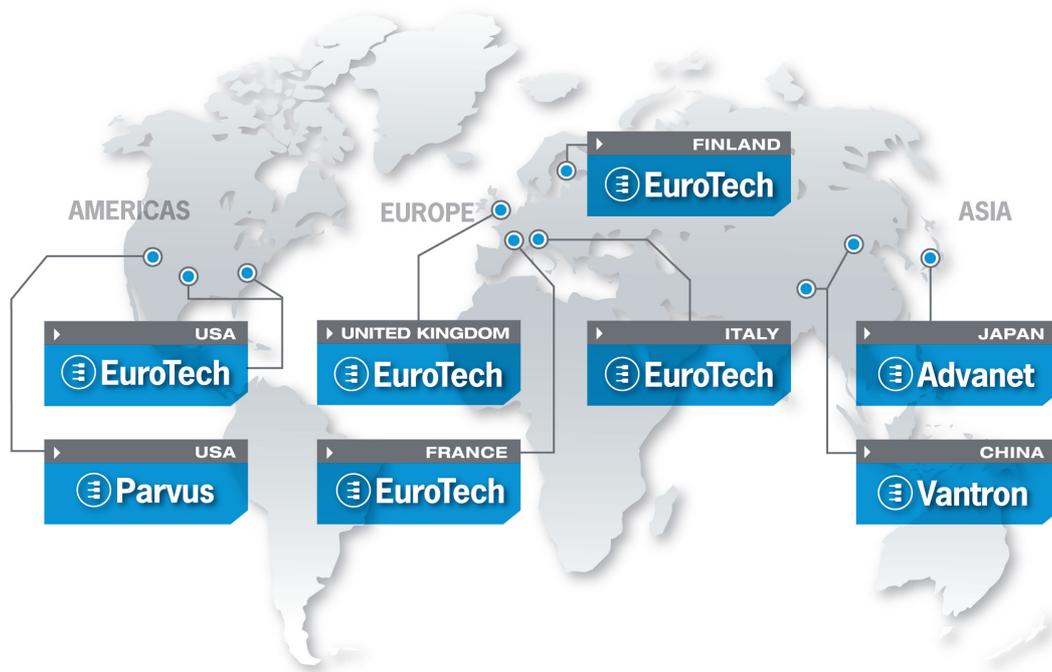
Installation Completed

The Device manager should now look like the image shown below:



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