Industrially Isolated
USB to Serial Adapter

User's Manual

UTS-31TBi / UTS-31DBi / UTS-231DBi
UTS-431DBi / UTS-1231DB

Table of Contents

1. Introduction 1
- **Features** 1
- **Specification**: 2

2. Windows OS Installation Guide 5

3. Driver Installation thru the FTDI Driver Package 7

4. USB to Serial Application Operation 10
- **Select Mode Operation** 14
- **Program All Ports Operation** 14
- **Setup RS232/RS422/RS485 on Each Port** 15

5. Driver Installation 20
- **Windows XP Installation Guide** 20
  - **Uninstalling Instruction** 28
  - **Troubleshooting** 29
- **Windows VISTA (Win 7, 8, 8.1, 10) Installation Guide** 31
  - **Uninstalling Instruction** 36
  - **Troubleshooting** 37
- **MAC OS X Installation Guide** 39
  - **Uninstalling instruction** 43
  - **Troubleshooting** 44

Regulatory Compliance 46

1. Introduction

The Isolated USB to 1/2/4-port serial interface adapter features 2.5kV isolation to ensure these serial devices by DB-9 port or terminal block connected require long range or multi-drop capabilities won't be damaged between the PC and serial applications. All configuration and electrical interface selections are handled through the driver, eliminating the need to open the enclosure to set jumpers or switches. The serial port is software configurable for RS-232, RS-422, and RS-485 with the electrical interface settings maintained locally, allowing the host computer to be repaired or upgraded without reconfiguring the serial port. Additionally, the isolated adapter can be configured at one computer and deployed to other computers.

The Industrial USB to 12-Port serial interface adapter ensures 12 serial devices by DB-9 port connected require long range or multi-drop capabilities won't be damaged between the PC and serial applications. All configuration and electrical interface selections are handled through the driver, eliminating the need to open the enclosure to set jumpers or switches. The serial port is software configurable for RS-232, RS-422, and RS-485 with the electrical interface settings maintained locally, allowing the host computer to be repaired or upgraded without reconfiguring the serial port. Additionally, the isolated adapter can be configured at one computer and deployed to other computers.

Features

- Full compliance with the USB Specification 2.0 & 1.1
- Enables to configure RS-232 / RS-422 / RS-485 (Echo mode / Bias resister / Terminal resister) thru application programmer of Windows OS.
- Supports 2.5kV Isolation; Bus powered, no external power required (for 1-port / 2-port / 4-port)
- Data transfer rate up to 230 kbps (RS-232) ~ 3 M Baud Rate (RS-422 or RS-485)
- Supports ±15kV (air), ±8kV (contact) ESD protection; Isolated ground loops (for 1-port / 2-port / 4-port)
- Supports 40A (5/50ns) & Peak Pulse Power 250 W (8/20 us) Surge and Transient spikes protection
- Compatible with Windows OS XP SP3 / Vista / 7 / 8 / 8.1 / 10 / 11; Windows Server 2003 / 2008 / 2008R2 / 2012 / 2012R2; Mac OS 8.6 , Linux OS 1.5.0 or higher
- Supports USB branching up to 3 tire levels (max. 48 devices connection; for 12-Port only)

Specification:

Model No.		UTS-31TBi	UTS-31DBi	UTS-231DBi
Chip		FTDI		
Data Rate	RS-232	230 kbps		
	RS-422 / RS-485	3 M Baud Rate		
LED		3 (TX / RX / PWR)	3 (TX / RX / PWR)	5 (2TX / 2RX / ACT)
Connector	Host	USB Type B Female		
	Serial Out	9-Pin Terminal Block x 1	DB-9/M x 1	DB-9/M x 2
USB Specification		USB 1.1/2.0 compliant		
Power Mode		Bus Powered		
Operating/Storage Temperature		-40 to 85°C (-40 to 185°F)		
Cable Length		1.8 m		
Housing		Aluminum		
Dimension (L x W x H)		90 x 73 x 31mm	90 x 73 x 31mm	130 x 74 x 30mm

Model No.		UTS-431DBi	UTS-1231DB
Chip		FTDI	
Data Rate	RS-232	230 kbps	
	RS-422 / RS-485	3 M Baud Rate	
LED		9 (4TX / 4RX / ACT)	3 (TX / RX / ACT) each port
Connector	Host	USB Type B Female	
	Serial Out	DB-9/M x 4	DB-9/M x 12
USB Specification		USB 1.1/2.0 compliant	
Power Mode		Bus Powered	DC5V
Operating/Storage Temperature		-40 to 85°C (-40 to 185°F)	
Cable Length		1.8 m	
Housing		Aluminum	Metal
Dimension (L x W x H)		170 x 94.5 x 30mm	268 x 102 x 40 mm

Terminal Block / DB-9 Male Pin Assignment			
Pin No.	RS-232	RS-422	RS-485
	Definition	Definition	Definition
1	DCD	RX-	
2	RXD	TX+	D+
3	TXD	RX+	
4	DTR	CTS-	
5	GND	GND	GND
6	DSR	TX-	D-
7	RTS	RTS+	
8	CTS	CTS+	
9	RI	RTS-	

UTS-31TBi

UTS-31DBi

UTS-231DBi

UTS-431DBi

UTS-1231DB

2. Windows OS Installation Guide

Driver can be installed through Windows Update automatically (Internet connection needed)
The FTDI drivers that have passed the WHQL tests are available for download using Windows Update.
OS requirements: Windows 7/8/8.1/10/11

Please go below ways for easy installation.

1. You may plug the device into host computer. And then it will pop up ‘Installing device driver software’ from the taskbar of the screen. (Fig. 1) Click and connect to the Windows Update.

2. It will check your computer OS and download the applicable driver at the Windows Update automatically.

Fig. 1

3. The program goes ‘Searching Windows Update’ from ‘Driver Software Installation’. (Fig. 2)

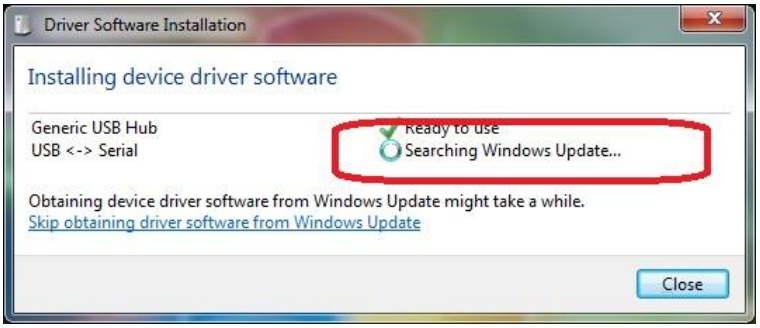


Fig. 2

4. When the applicable driver is detected, it will run ‘Installing device driver software’. (Fig. 3)

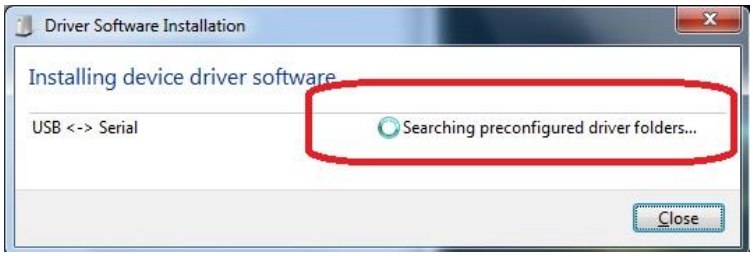


Fig. 3

5. Then it shows ‘USB Serial Port (COM8) installed’. Click ‘Close’ and go next step. (Fig. 4)

.

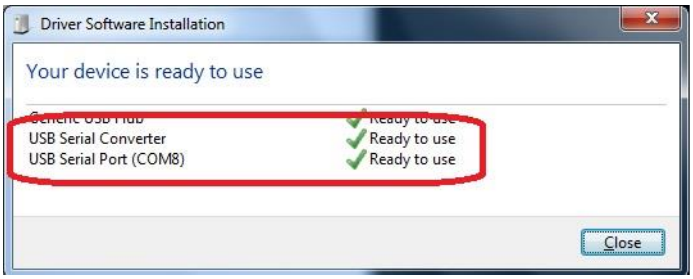


Fig. 4

6. Check ‘Device Manager’ of Control Panel from the computer OS and there shows USB Serial Port (COM8) under ‘Ports (COM & LPT)’; the other one shows USB Serial Converter under ‘Universal Serial Bus controllers’. (Fig. 5) Congratulation! You have finished installing the USB to Serial device successfully.

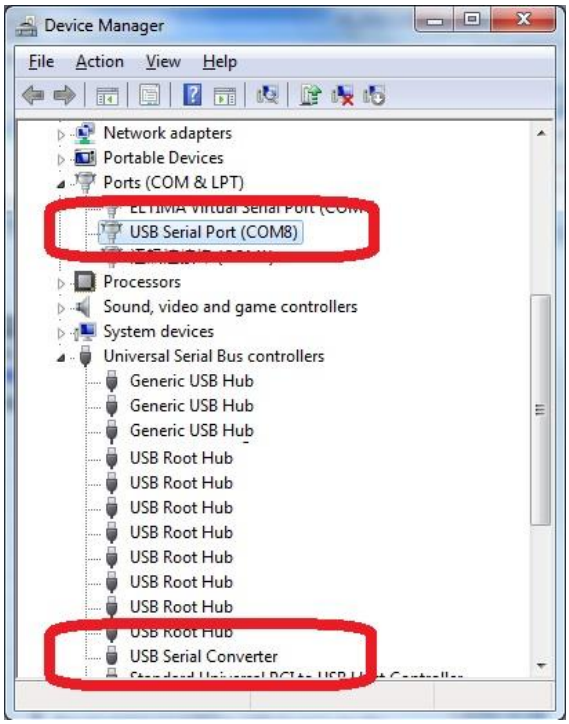
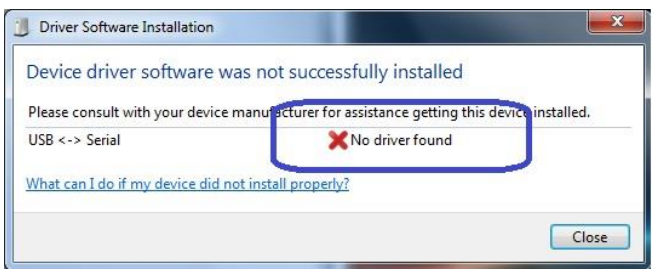


Fig. 5

NOTE: It may occur when driver is not installed successfully, please check below steps.

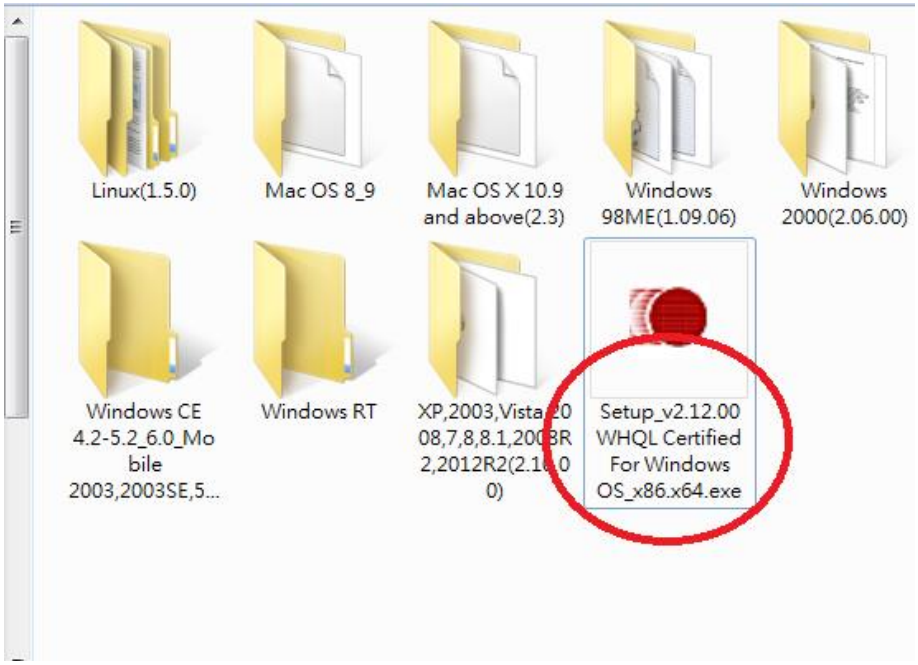
1. There is busy on access databank of Microsoft’s Support link. Please try again or install driver of CD-ROM provided.
2. Check your internet if it is failed to access Microsoft’s Support link.
3. Check your computer configuration if it is disabled on Windows Update wizard.



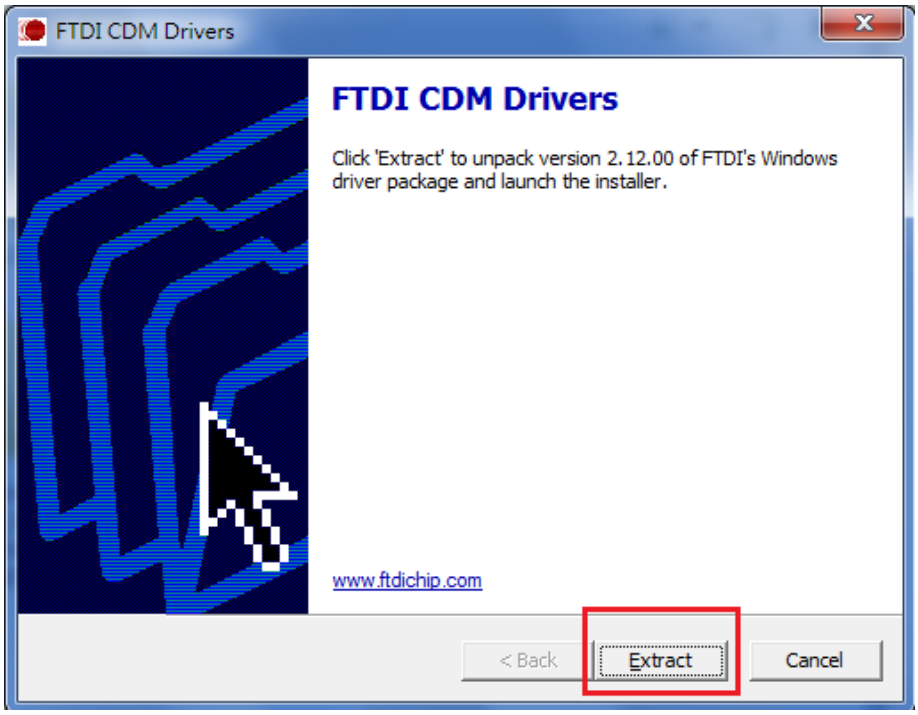
3. Driver Installation thru the FTDI Driver Package

Driver can be installed through the FTDI driver package of the CD-ROM provided.

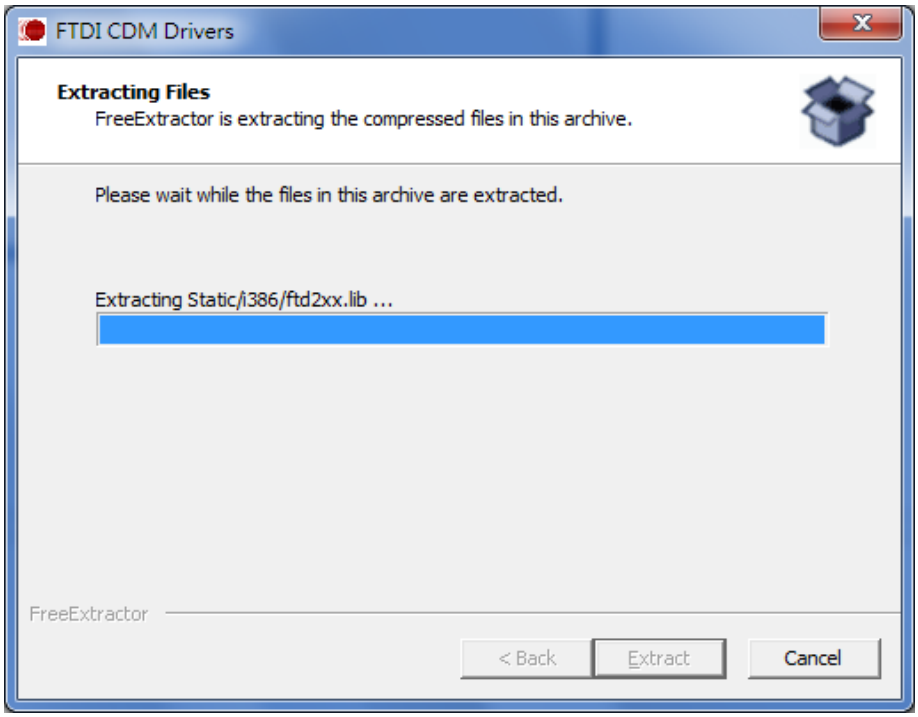
3.1. Double click ‘Setup_v2.12.00 WHQL Certified For Windows OS_x86.x64.exe’



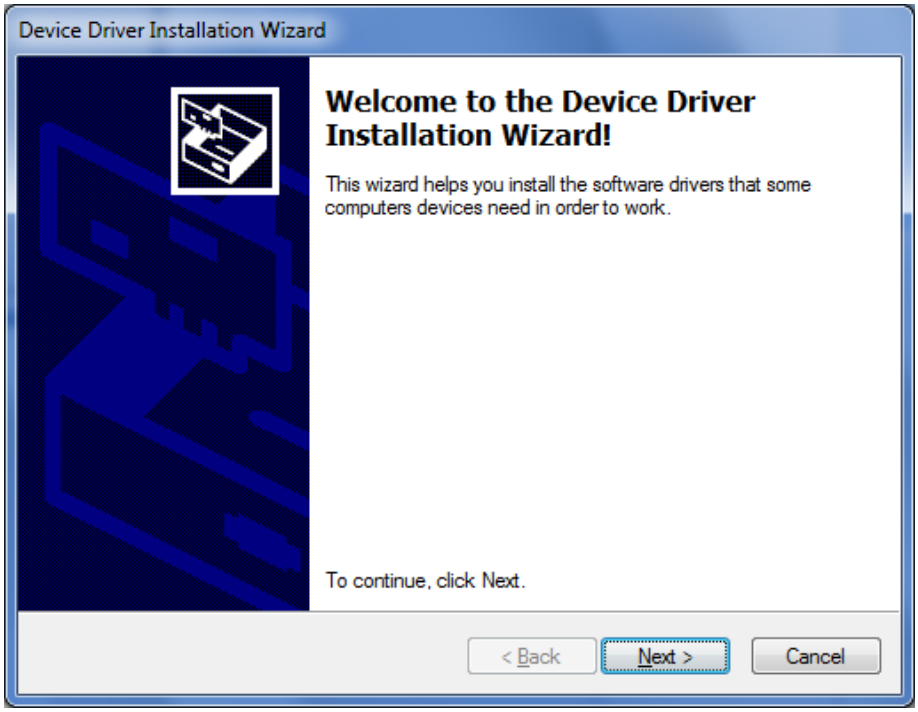
3.2. It will pop up ‘FTDI CDM Drivers’ from the screen. Click ‘Extract’ and go next step.



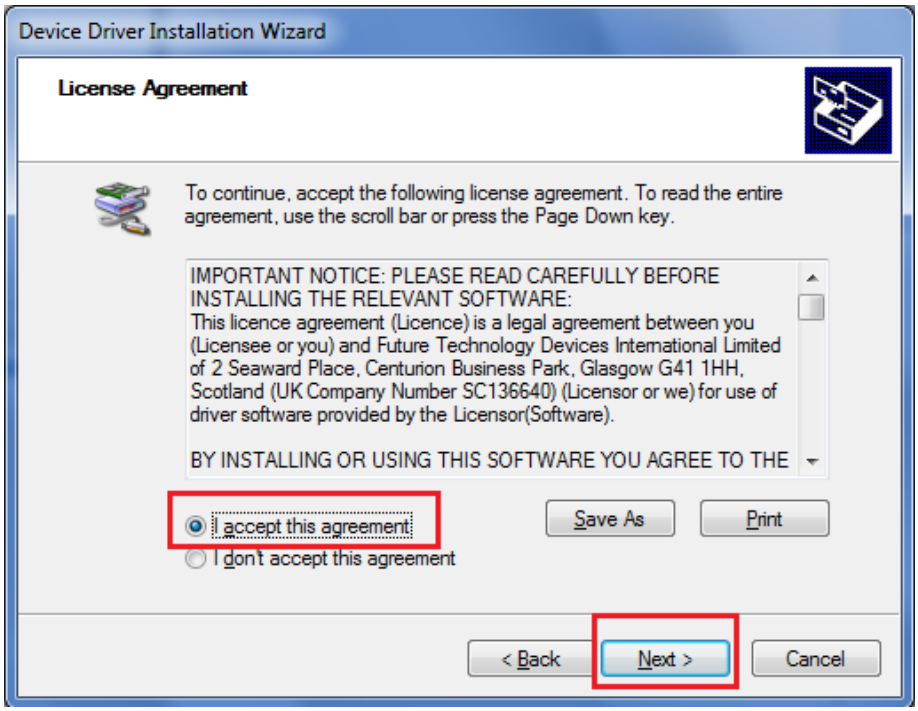
3.3. Extracting Files



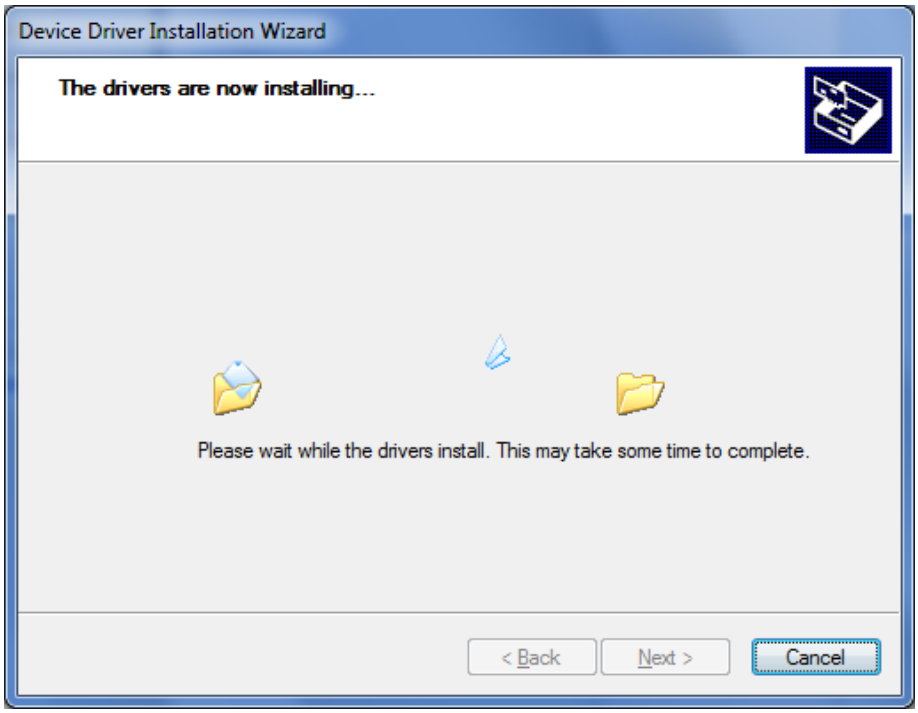
3.4. Click ‘Next’ to continue.



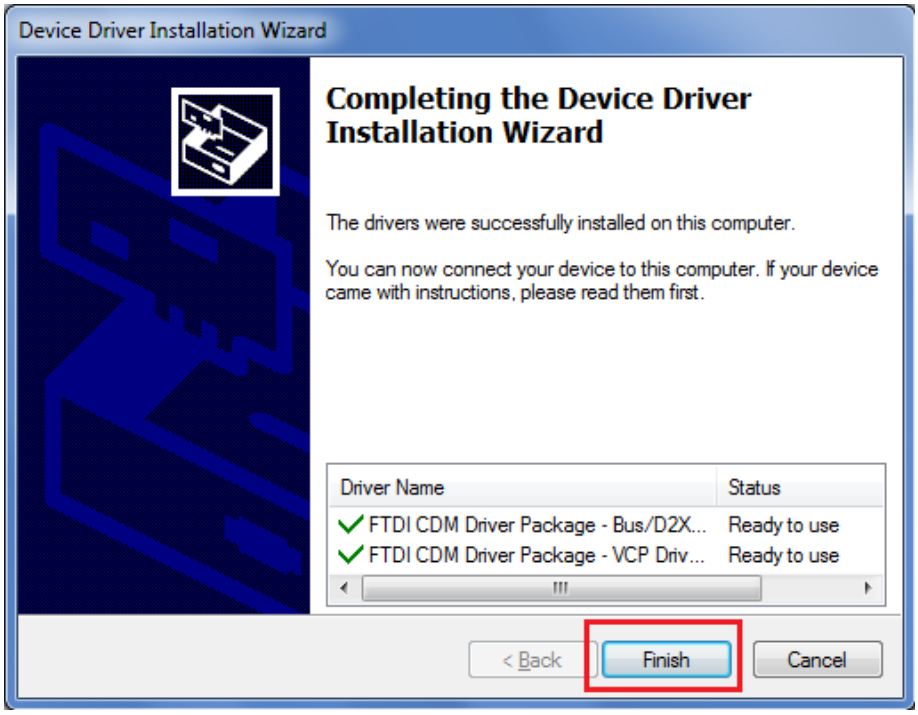
3.5. Select ‘I accept this agreement’ and click ‘Next’.



3.6. The Device Driver Installation Wizard will detect your computer OS and install the applicable driver automatically.



3.7. While the Device Driver Installation Wizard is completing, click ‘Finish’ to exit.



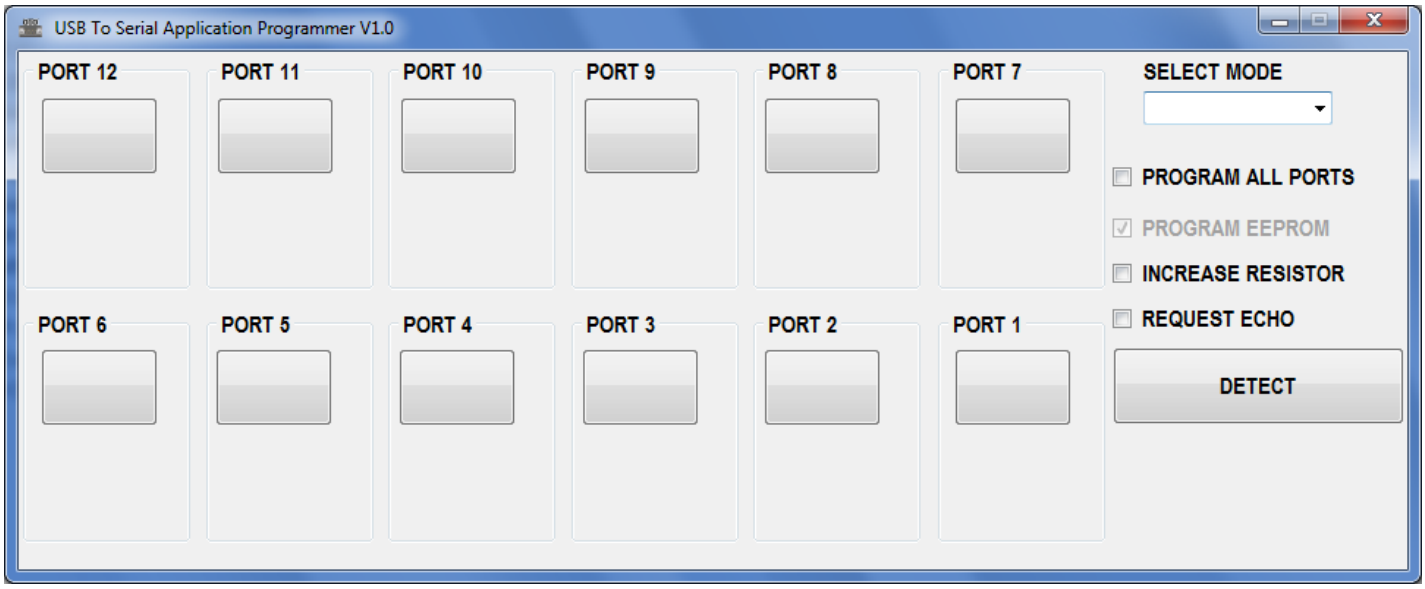
4. USB to Serial Application Operation

Note: The application programmer ‘USB_Serial_AP.exe’ Complies with Windows XP SP3 / Vista / 7 / 8 / 8.1 / 10 / 11

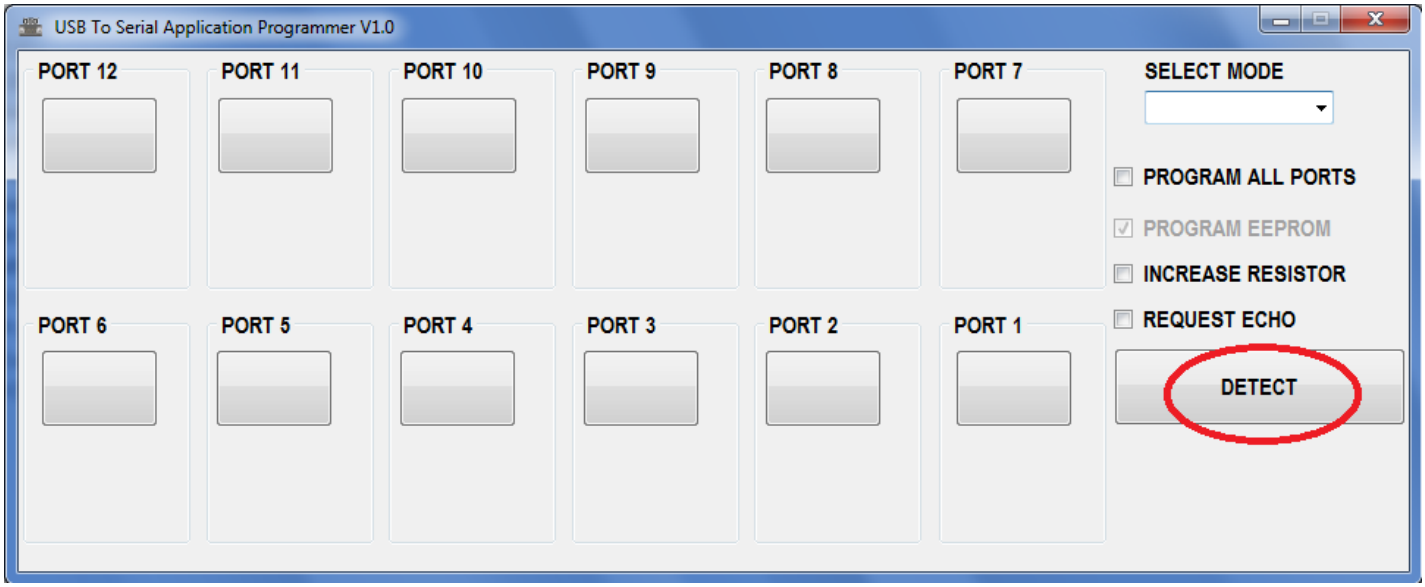
Steps:

4.1. Make sure the device drivers are installed; and double click the ‘USB_Serial_AP.exe’ to install.

4.2. The ‘USB To Serial Application Programmer V1.0’ screenshot will appear from the screen. It will detect all serial devices connected to the PC.

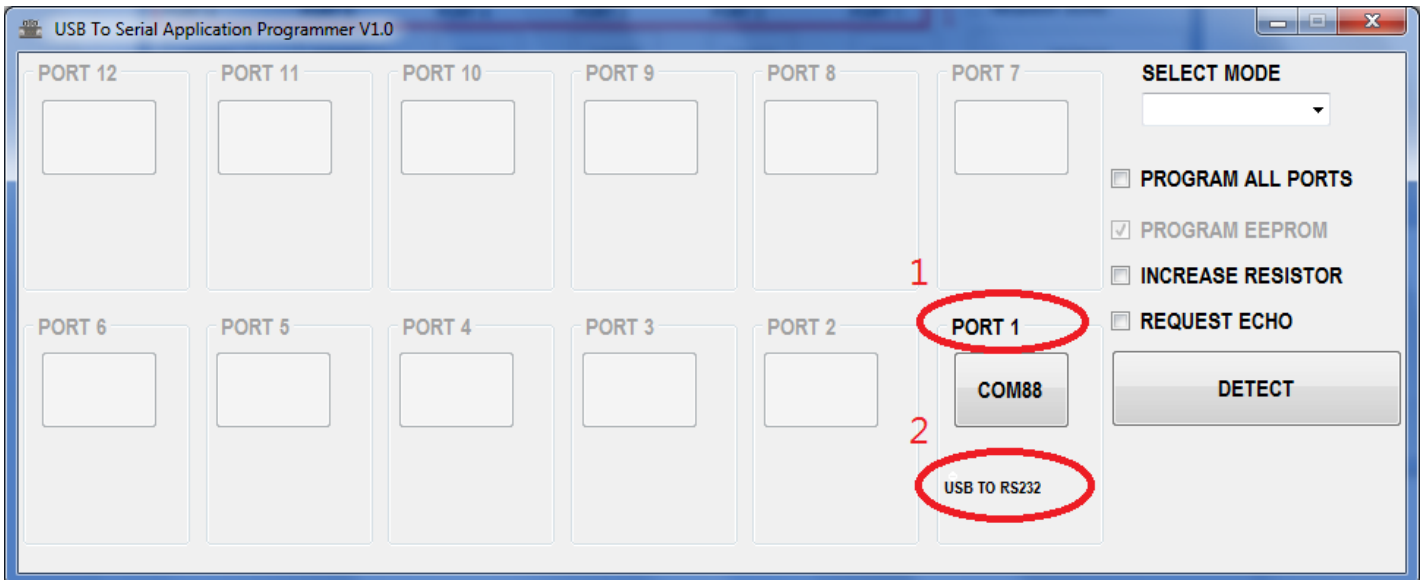


4.3. Click ‘DETECT’ and then it may detect in 5~10 seconds and show the device’s COM port automatically.



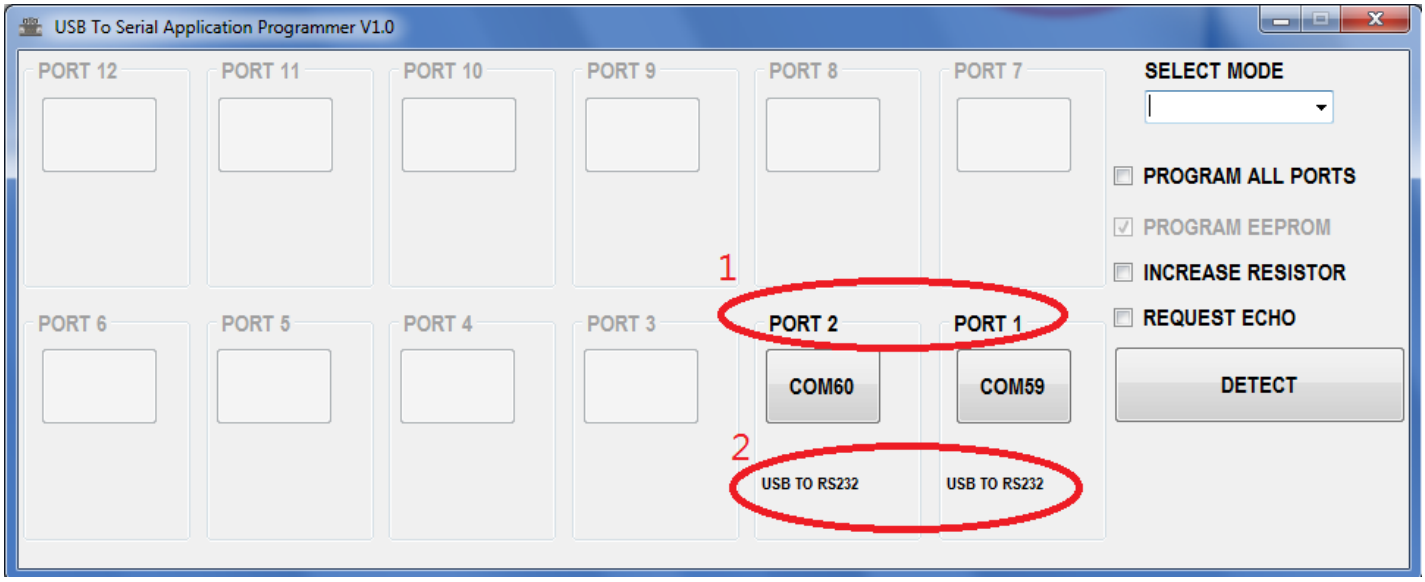
For detecting UTS-31DBi / UTS-31TBi

In this case we may see Port 1 is set at COM88; Select Mode is set as RS232.



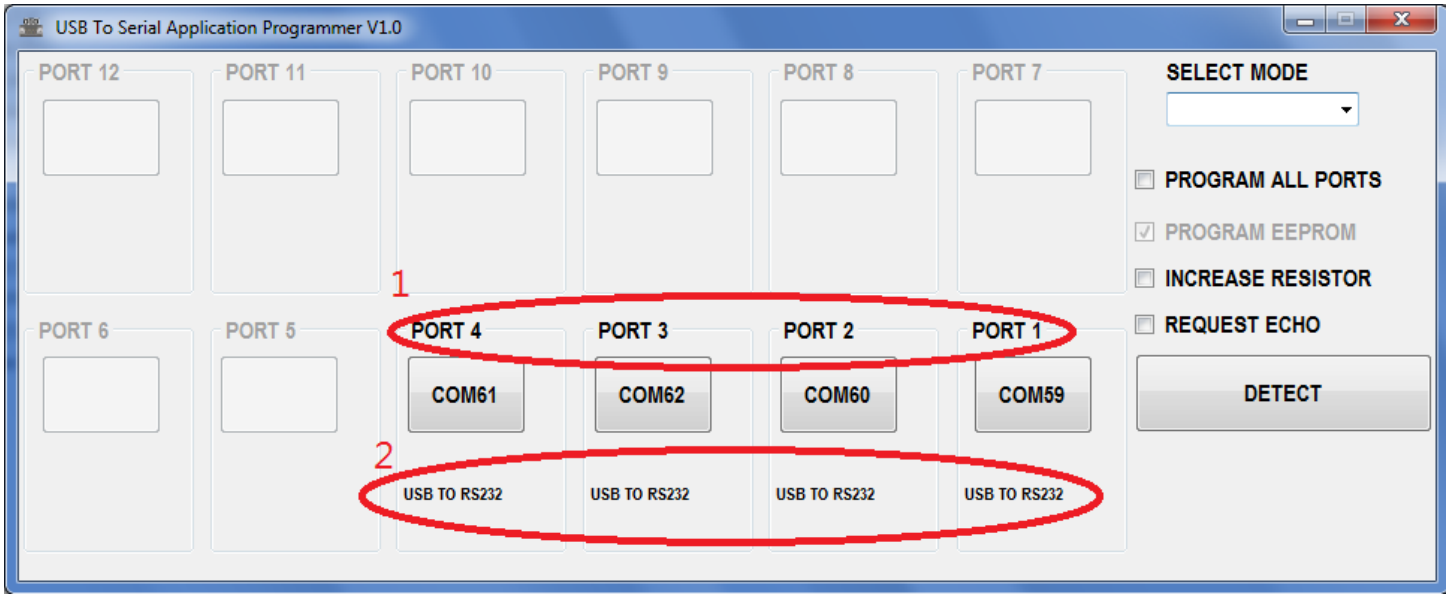
For detecting UTS-231DBi

In this case we may see Port 1 is set at COM59; Port 2 set at COM60; Select Mode is set as RS232 for both ports.



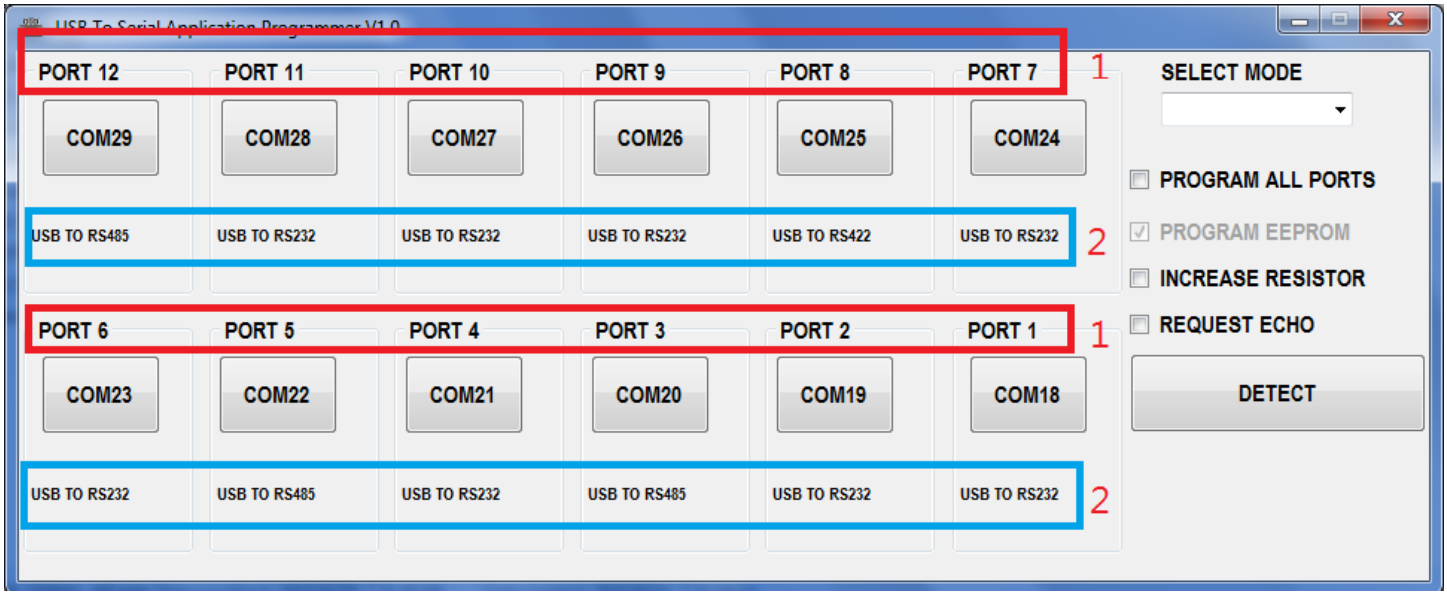
For detecting UTS-431DBi

In this case we may see Port 1 is set at COM59; Port 2 set at COM60; Port 3 set at COM62; and Port 4 set at COM61; Select Mode is set as RS232 for all ports.



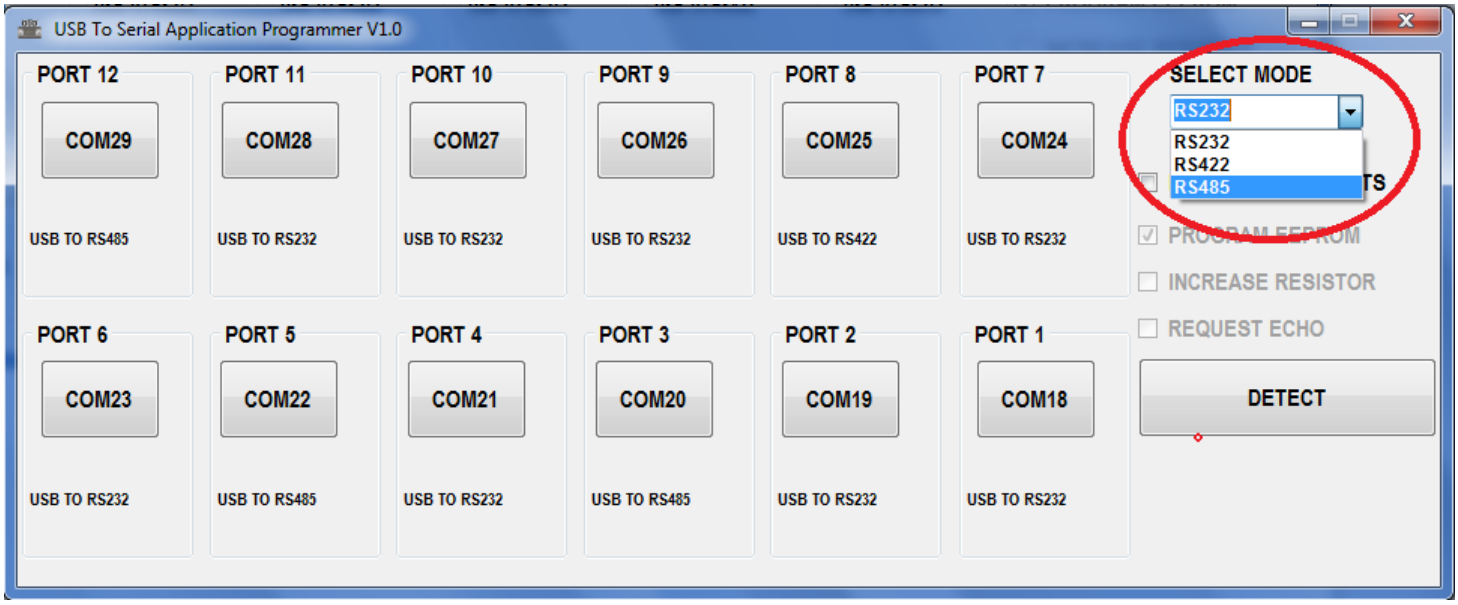
For detecting UTS-1231DB

In this case we may see Port 1 is set at COM18; Port 2 set at COM19…Port 11 set at COM28; and Port 12 set at COM29 etc., Select Mode is set partially as RS232, RS422, and RS485.



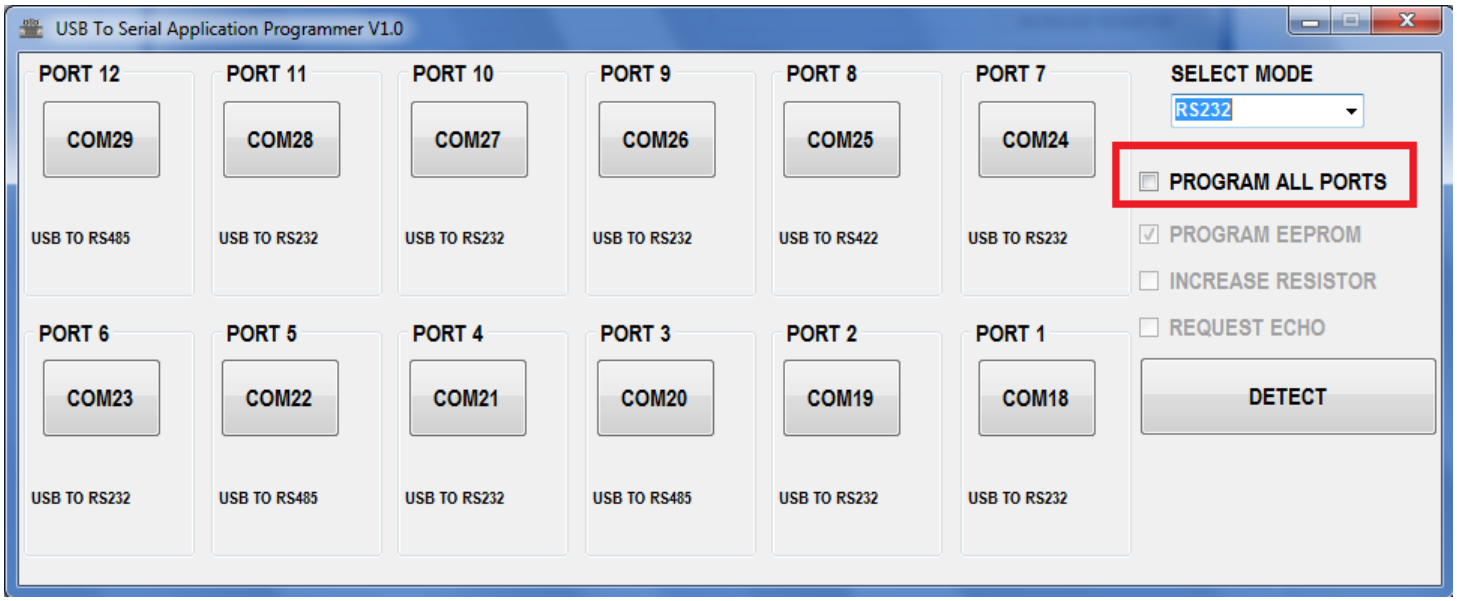
Select Mode Operation

There are 3 Select Modes available to setup; by RS232, RS422 or RS485 on the Application Programmer.



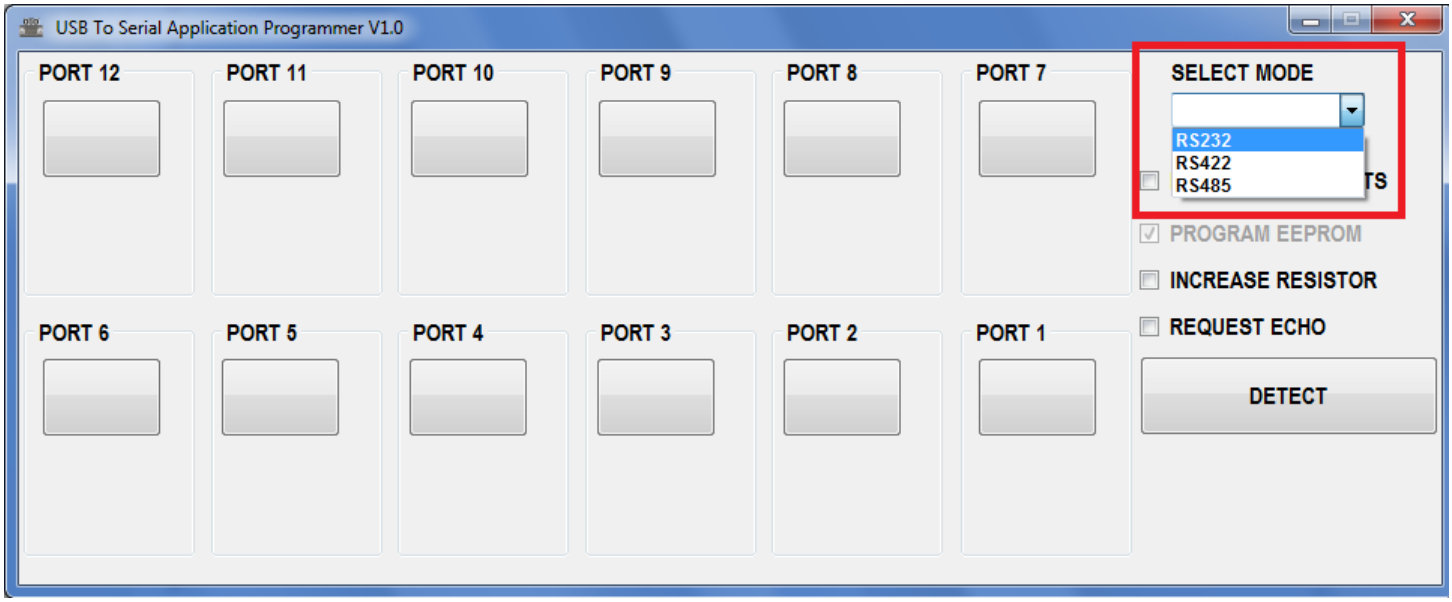
Program All Ports Operation

You may choose ‘PROGRAM ALL PORTS’ for programming the multi-port serial device at one time based on the Select Mode is set as one mode. Or you may setup individually on each port if there is one of all ports selects different mode.

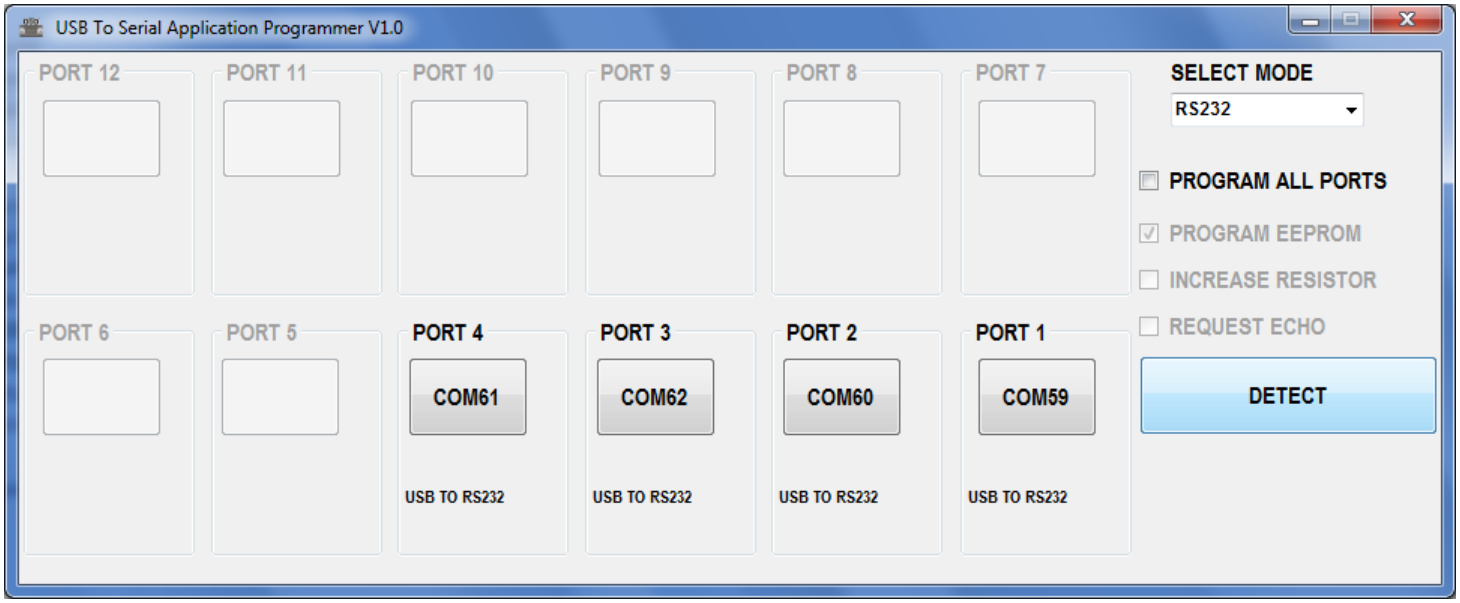


Setup RS232/RS422/RS485 on Each Port

Click the ‘Select Mode’ drop down to select the Serial mode. In this case we may see Select Mode is set as RS232.

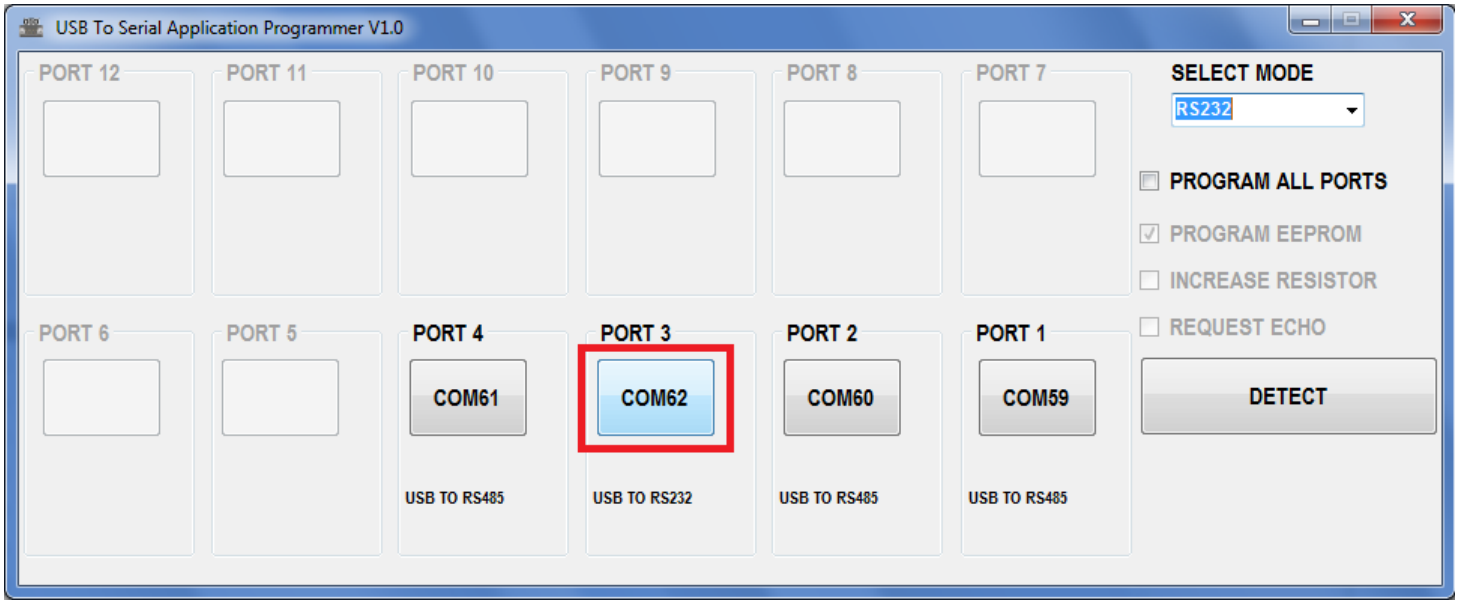


Click ‘DETECT’ and then it may detect in 5~10 seconds and show the device’s COM port automatically. In this case we may see Port 1 is set at COM59; Port 2 set at COM60; Port 3 set at COM62; and Port 4 set at COM61; Select Mode is set as RS232 for all ports for UTS-431DBi.

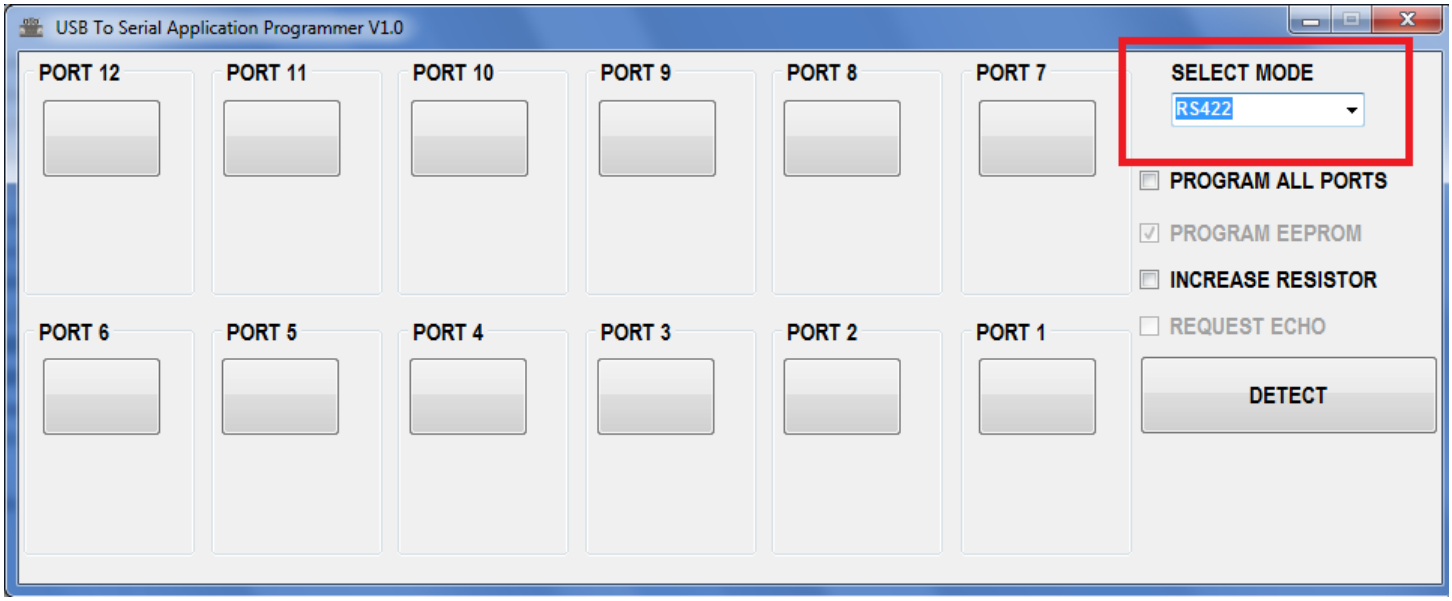


Click Select Mode and choose ‘RS232’, and then click the port you like to setup. In this case we may see Port 3 is changed to RS232; the others are set as RS485.

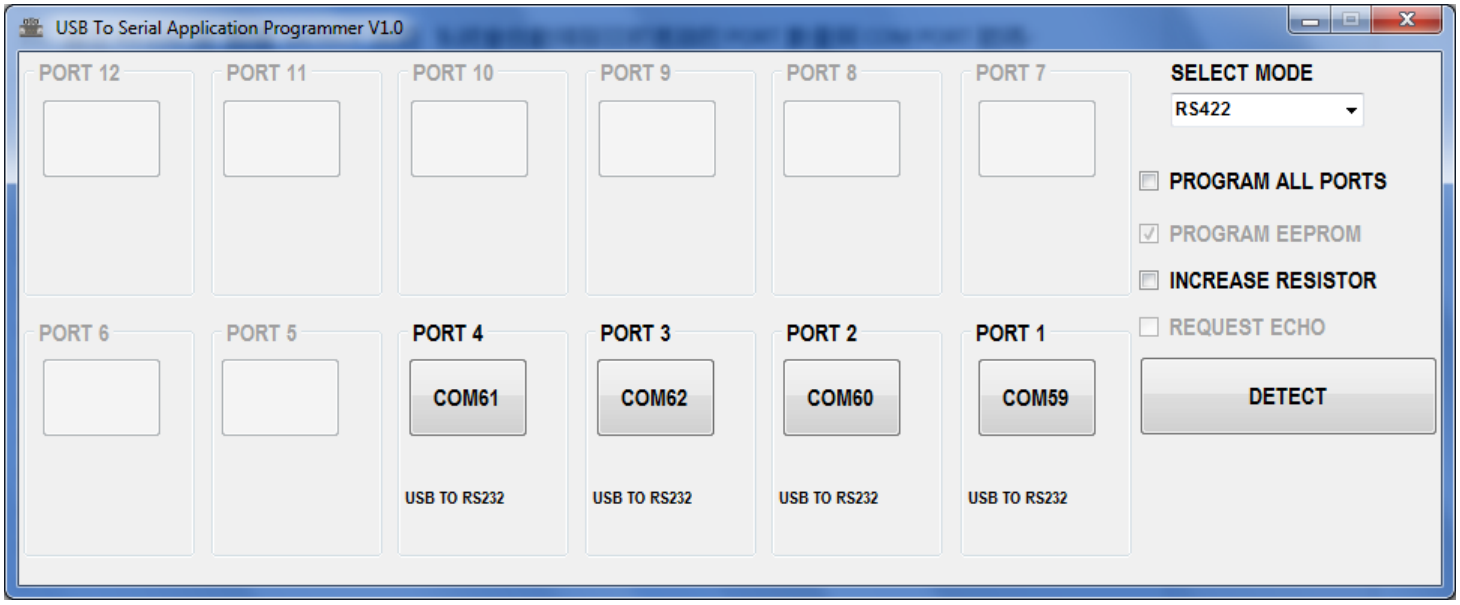
You may setup the COM port one by one, or setup all ports as one Serial mode at one time. There is no setup for plural ports by two or three different modes at one time.



Click the ‘Select Mode’ drop down to select the Serial mode. In this case we may see Select Mode is set as RS422.

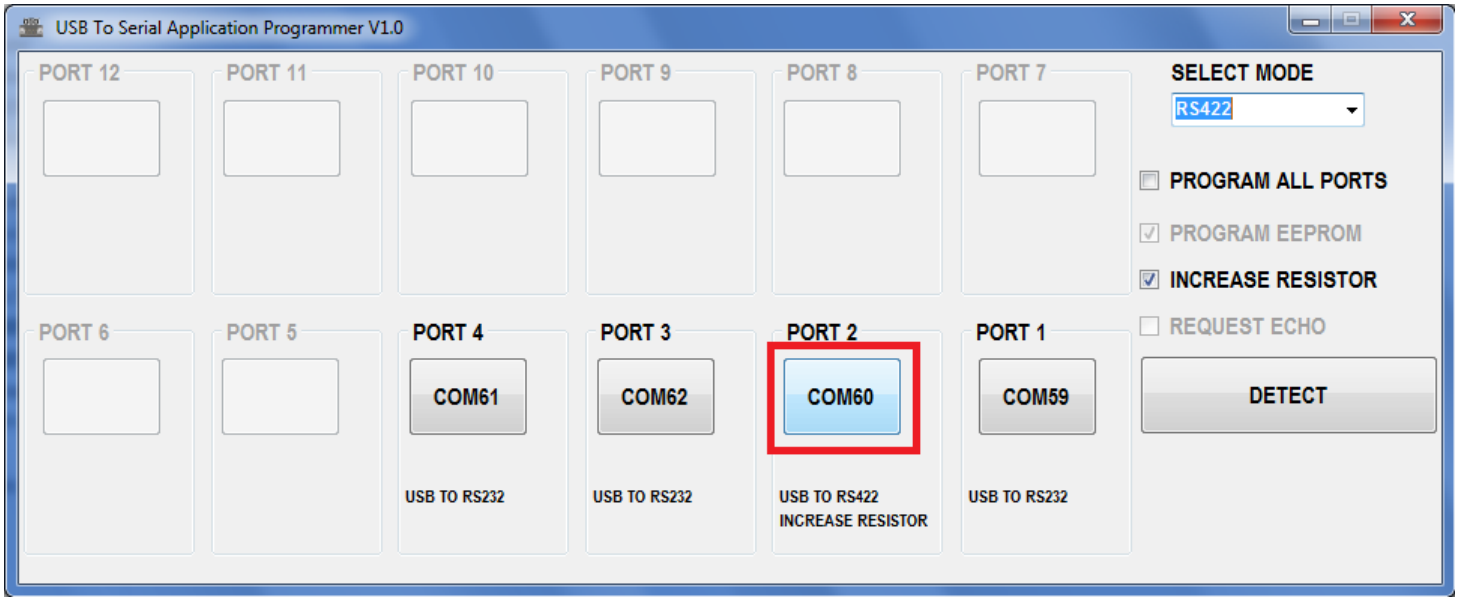


Click ‘DETECT’ and then it may detect in 5~10 seconds and show the device’s COM port automatically. In this case we may see Port 1 is set at COM59; Port 2 set at COM60; Port 3 set at COM62; and Port 4 set at COM61; Select Mode is set as RS232 for all ports for UTS-431DBi.

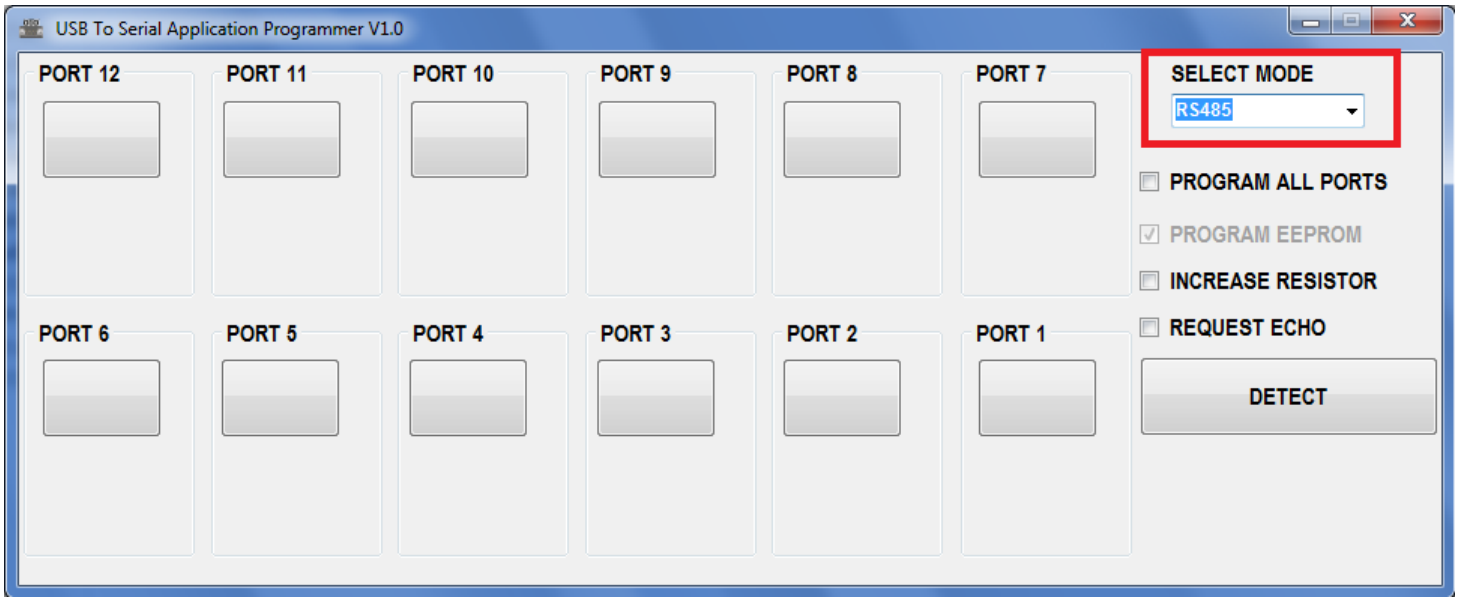


Click Select Mode and choose ‘RS422’, and then click the port you like to setup. In this case we may see Port 2 is changed to RS422; the others are set as RS232.

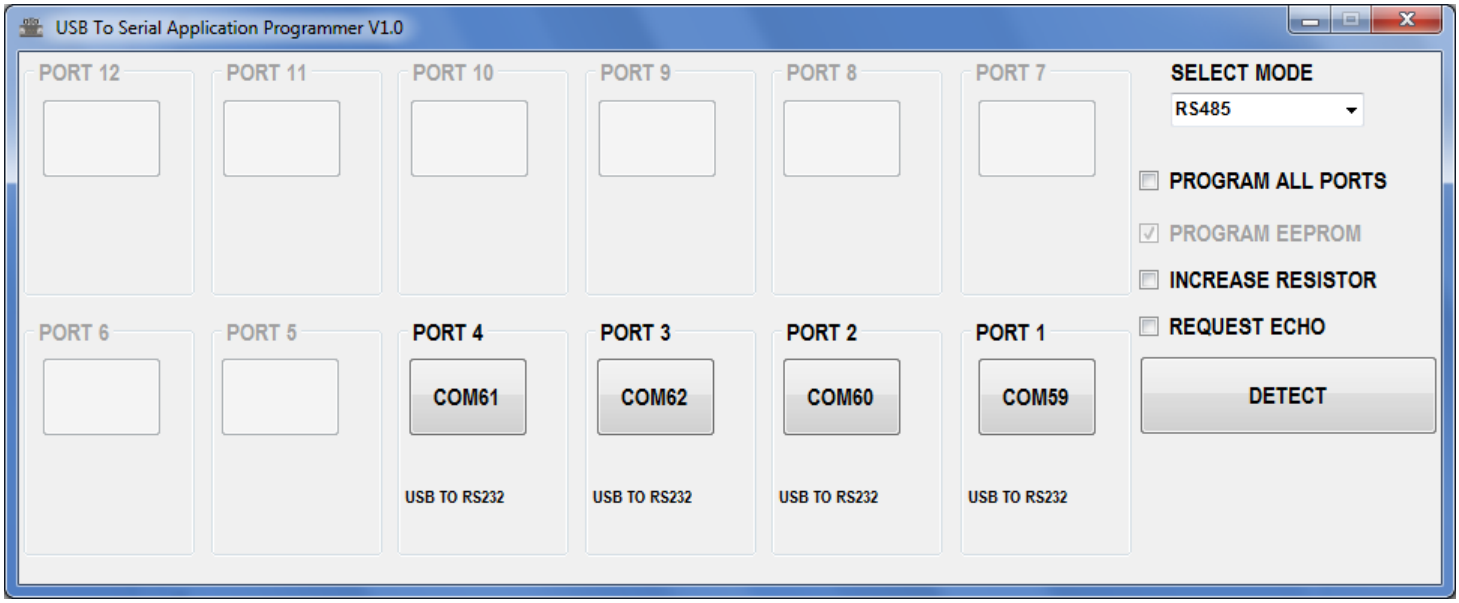
You may setup the COM port one by one, or setup all ports as one Serial mode at one time. There is no setup for plural ports by two or three different modes at one time.



Click the ‘Select Mode’ drop down to select the Serial mode. In this case we may see Select Mode is set as RS485.

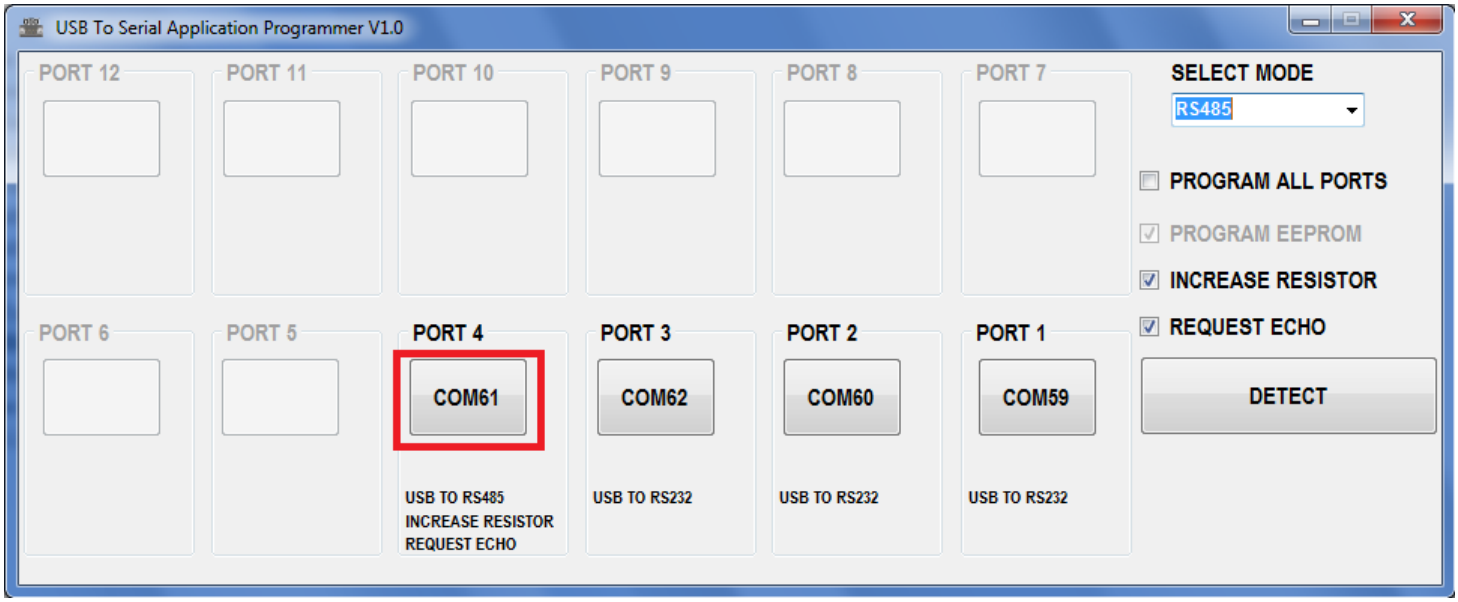


Click ‘DETECT’ and then it may detect in 5~10 seconds and show the device’s COM port automatically. In this case we may see Port 1 is set at COM59; Port 2 set at COM60; Port 3 set at COM62; and Port 4 set at COM61; Select Mode is set as RS232 for all ports for UTS-431DBi.



Click Select Mode and choose ‘RS485’, and then click the port you like to setup. In this case we may see Port 4 is changed to RS485; the others are set as RS232.

You may setup the COM port one by one, or setup all ports as one Serial mode at one time. There is no setup for plural ports by two or three different modes at one time.



Congratulation! You have finished installing the Isolated USB to Serial Adapter successfully.

Note: Some of host computers have built in USB 3.0 hub may not detect USB to Serial devices well. In order to prevent detecting failure, to connect to USB 2.0 port would be better.

5. Driver Installation

Windows XP Installation Guide

1. Installing Via the Found New Hardware Wizard

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 instruction.

Download the latest available drivers from the FTDI web site and unzip them to a location on your PC.

If you are running Windows XP or Windows XP SP 1, temporarily 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 "Control Panel\Network and Dial Up Connections", right clicking on the appropriate connection and selecting "Disable" from the menu. The connection can be re enabled after the installation is complete. This is not necessary under Windows XP SP 2 if configured to ask before connecting to Windows Update. Windows XP SP 2 can have the settings for Windows Update changed through "Control Panel\System" then select the "Hardware" tab and click "Windows Update".

Connect the device to a spare USB port on your PC. If there is no available Internet connection or Windows XP SP 2 is configured to ask before connecting to Windows Update, the screen shown in Figure
2.1 is displayed. 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.

Figure 2.1

Select "Install from a list or specific location (Advanced)" as shown in Figure 2.2 below and then click "Next".

Select "Search for the best driver in these locations" and enter the file path in the combo box ("C:\CDM 2.02.04" in Figure 2.3 below) or browse to it by clicking the browse button. Once the file path has been entered in the box, click next to proceed.

Figure 2.2

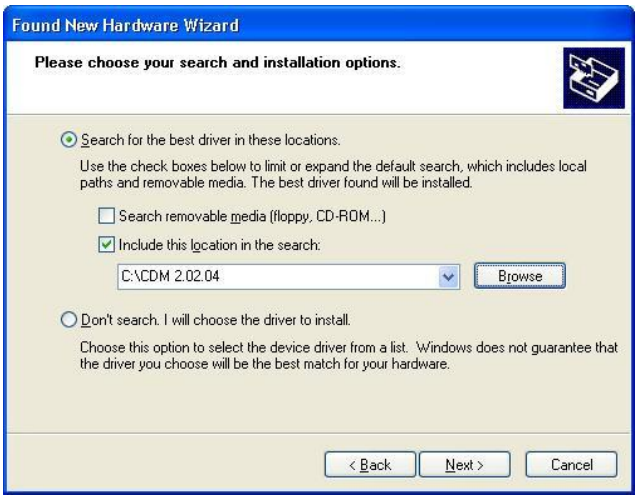


Figure 2.3

If Windows XP is configured to warn when unsigned (non WHQL certified) drivers are about to be installed, the message dialogue shown in Figure 2.4 will be displayed unless installing a Microsoft WHQL certified driver. Click on "Continue Anyway" to continue with the installation. If Windows XP is configured to ignore file signature warnings, no message will appear.

The screen shown in Figure 2.5 will be displayed as Windows XP copies the required driver files.

Figure 2.4

Figure 2.5

Windows should then display a message indicating that the installation was successful (Figure 2.6). Click "Finish" to complete the installation for the first port of the device.

The Found New Hardware Wizard will launch automatically to install the COM port emulation drivers. As above, select "No, not this time" From the options and click "Next" to proceed with the installation (Figure 2.7).

Figure 2.6

Figure 2.7

Select "Install from a list or specific location (Advanced)" as shown in Figure 2.8 below and then click "Next".

Select "Search for the best driver in these locations" and enter the file path in the combo box ("C:\CDM 2.02.04" in figure 2.9 below) or browse to it by clicking the browse button. Once the file path has been entered in the box, click next to proceed.

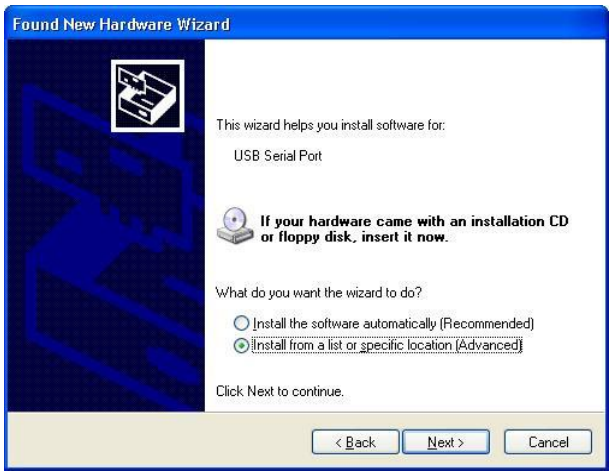


Figure 2.8

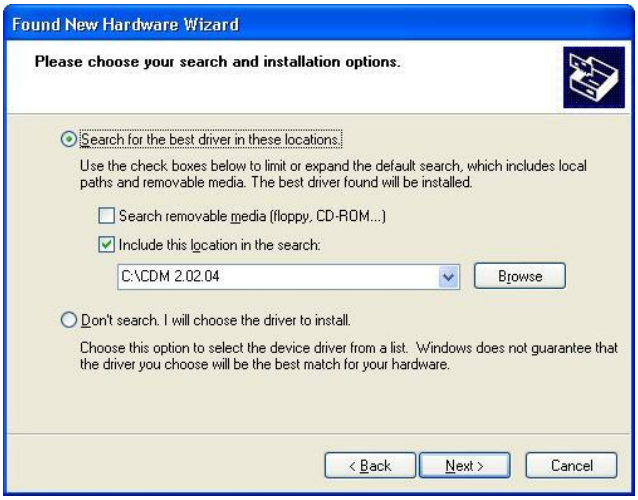


Figure 2.9

If Windows XP is configured to warn when unsigned (non WHQL certified) drivers are about to be installed, the message dialogue shown in Figure 2.10 will be displayed unless installing a Microsoft WHQL certified driver. Click on "Continue Anyway" to continue with the installation. If Windows XP is configured to ignore file signature warnings, no message will appear.

The screen shown in Figure 2.11 will be displayed as Windows XP copies the required driver files.

Figure 2.10

Figure 2.11

Windows should then display a message indicating that the installation was successful (Figure 2.12). Click "Finish" to complete the installation for the first port of the device.

Open the Device Manager (located in "Control Panel\System" then select the "Hardware" tab and click "Device Manger") and select "View > Devices by Connection", the device appears as a "USB Serial Converter" with an additional COM port with the label "USB Serial Port" (Figure 2.13).

Figure 2.12

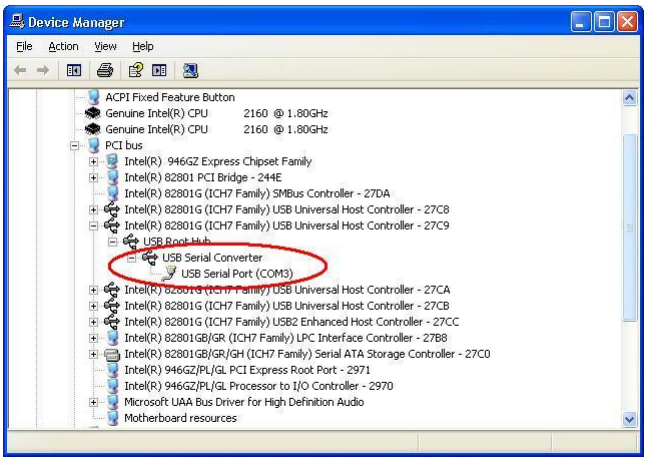


Figure 2.13

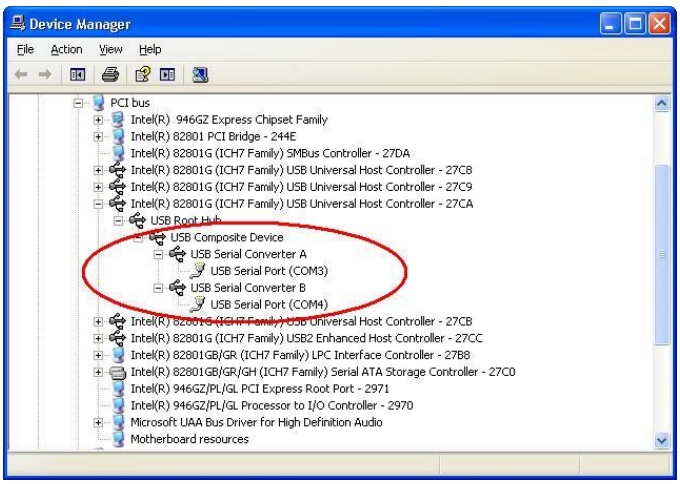


Figure 2.14

2. Installing Using DPInst

In the case of a Microsoft WHQL certified driver package, it is possible to preinstall the driver package using the Microsoft Driver Install Frameworks (DIFx) tools. The simplest tool provided is the Driver Package Installer (DPInst). When placed in the same directory as the INF files for the driver package, simply run DPInst.exe and the certified driver package will be installed on the machine.

The current driver package supports 32bit and 64bit systems through common INF files. DPInst has separate executables for 32bit and 64bit installation. This means that if a single solution is desired for 32bit and 64bit systems, the developer must be able to detect which version of DPInst is required for the system the driver is being installed on.

For more information on DPInst, see the FTDI Windows Driver Installation application note.

3. Installing From Windows Update

If a certified driver is available for the target operating system, it is possible to install the driver from the Windows Update web site.

Directions to install the driver from Windows Update are very similar to those outlined in 2.1 Installing Via The New Hardware Wizard, except that the “Yes, this time only” or “Yes, now and every time I connect a device” option should be selected on the first screen of the wizard when asked if Windows Update should be checked for a driver. If the wizard finds a matching driver on Windows Update, the driver will be automatically downloaded and installed for the device.

Please note:

1. For multiple-port converter, each port has to be installed with the driver individually, i.e. you have to repeat this installation procedure 2 times (2-port converter) or 4 times (for 4-port converter).

2. If you have any difficulties with the drivers we provided in this CD, you may download the updated or appropriate versions from FTDI Web site:
   www.ftdichip.com/Drivers/VCP.htm, supported device “FT232BL(M)”.

Uninstalling Instruction

Consequently, a new method for uninstalling has to be used. Devices can be removed using the Device Manager by simply right clicking on the device and selecting "Uninstall". This will delete the associated registry entries for that device only.

Under Windows XP, driver files and OEM INF and PNF files must be removed manually or by using a custom application. OEM INF and PNF files are located in the Windows\Inf directory and can be identified by searching for a VID and PID string matching the device installed e.g. VID_0403&PID_6001. Once the matching OEM INF files are found (e.g. oem10.inf for FTDIBUS.INF and oem11.inf for FTDIPORT.INF), the corresponding PNF files must also be removed (e.g. oem10.pnf and oem11.pnf). Driver files are located in the Windows\System32 and Windows\System32\Drivers directories.

Some points to note about this uninstallation method:

If the VCP driver has been installed, the COM port driver should be removed before the bus driver. If the bus is removed first, the COM port will no longer appear in the Device Manager.

If the driver files are deleted while other installed devices still require them those devices will not work correctly. This can be fixed by right clicking the device and selecting "Reinstall Driver" which will replace the missing files.

If a device to be uninstalled is not connected to the PC, the device can still be removed by setting the device manager to show phantom devices. This can also allow a virtual COM port to be uninstalled if the bus layer has been removed first. Instructions on how to display phantom devices are given in the Advanced Driver Options application note.

Troubleshooting

1. Windows XP 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 INF files for the driver. The VID and PID programmed into the device EEPROM may be found by using the USB View utility from the FTDI web site. These can then be checked against the VID and PID entries in the driver INF files. If they do not match, that driver cannot be installed for that device without either reprogramming the device EEPROM or modifying the list of VID and PID numbers in the INF files.

Please note that only your own company VID and PID or FTDI's VID (0x0403) and FTDI PID issued for use by your company should be used in the EEPROM and INF/INI files.

End customers should obtain modified drivers from the OEM of the device, and not necessarily edit the files themselves.

2. Windows XP 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. This usually occurs with the FTD2XX.DLL file. Selecting not to restart the computer then unplugging and re-plug the device may allow the device to function properly without restarting. Restarting the machine will allow the device to work correctly.

3. Driver Installation Fails and Windows XP Gives Error Code 10

Windows error code 10 indicates a hardware error or failed driver installation. This error may appear if a device has insufficient power to operate correctly (e.g. plugged into a bus powered hub with other devices), or may indicate a more serious hardware problem. Also, it may be indicative of USB root hub drivers being incorrectly installed.

Please refer to the example schematics on the FTDI web site for standard device configurations. If the error persists, please contact the FTDI support department.

4. 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.

Figure 4.1

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.

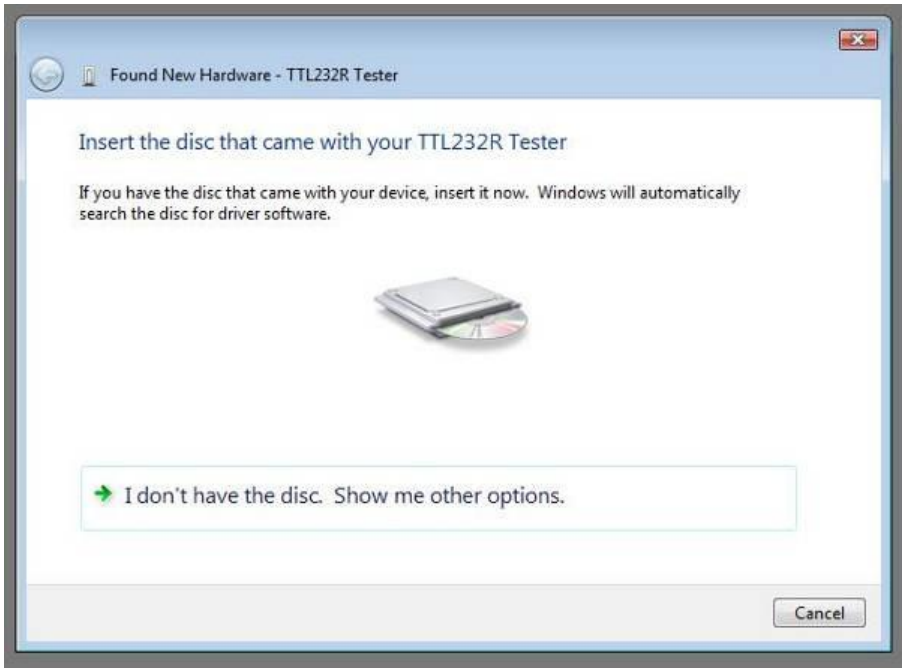
To change the current driver signing setting, go to "Control Panel\System", click on the "Hardware" tab and then click "Driver Signing". The desired signing option may then be selected.

Windows VISTA (Win 7, 8, 8.1, 10, 11) Installation Guide

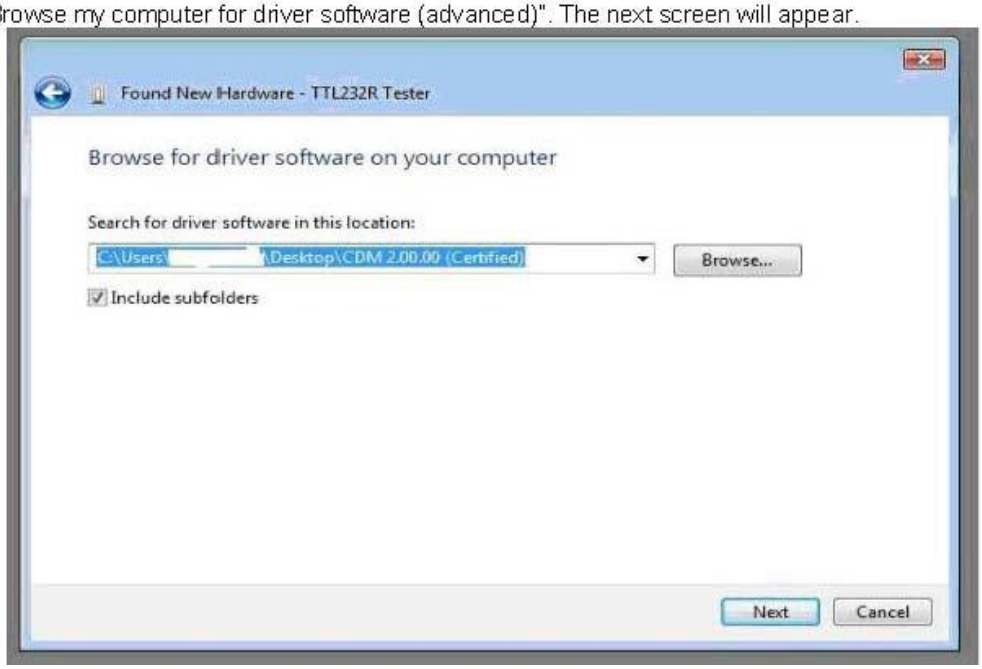
Connect the device to a spare USB port on your PC.

If there is an available Internet connection, Windows VISTA (Win 7, 8, 8.1, 10, 11) 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. If no suitable driver is automatically found then the following procedure should be followed.

When locate and install driver software (recommended)" is selected the following screen will appear. Note: the text “TTL Tester” is replaced with the description of the customer hardware.



Select "Browse my computer for driver software (advanced)". The next screen will appear.



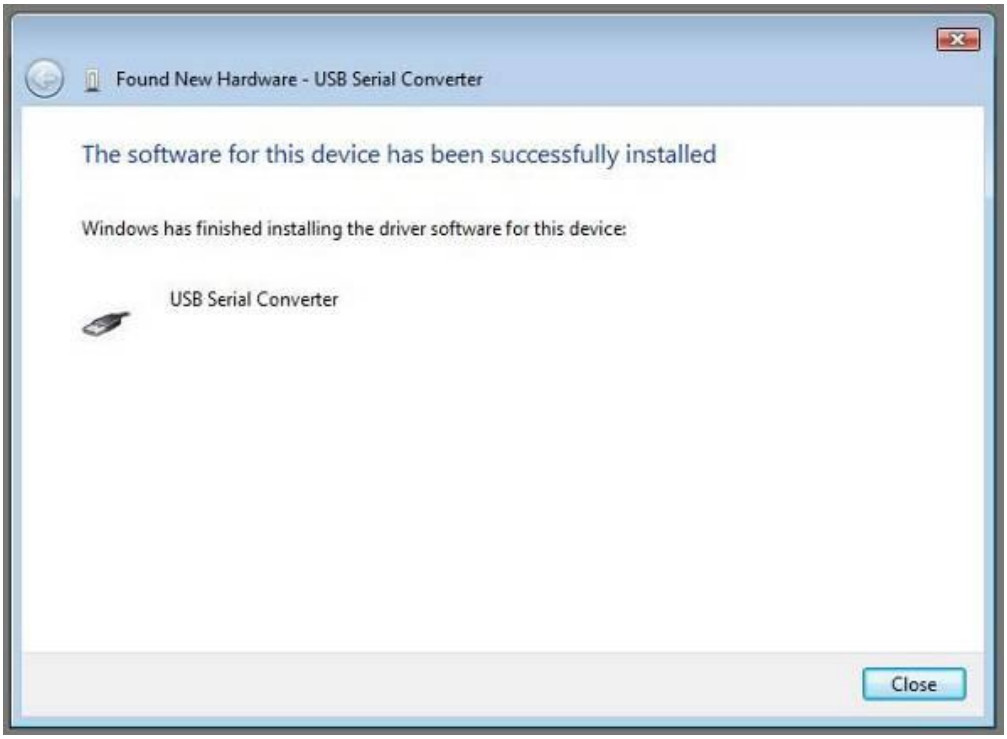
Select “I don’t have the disk. Show me other options” The next screen will appear.

Browse to the folder where the CDM driver has been stored (when uncompressed) and press “Next”

The example shown above uses a folder on the desktop.

The next screen will appear

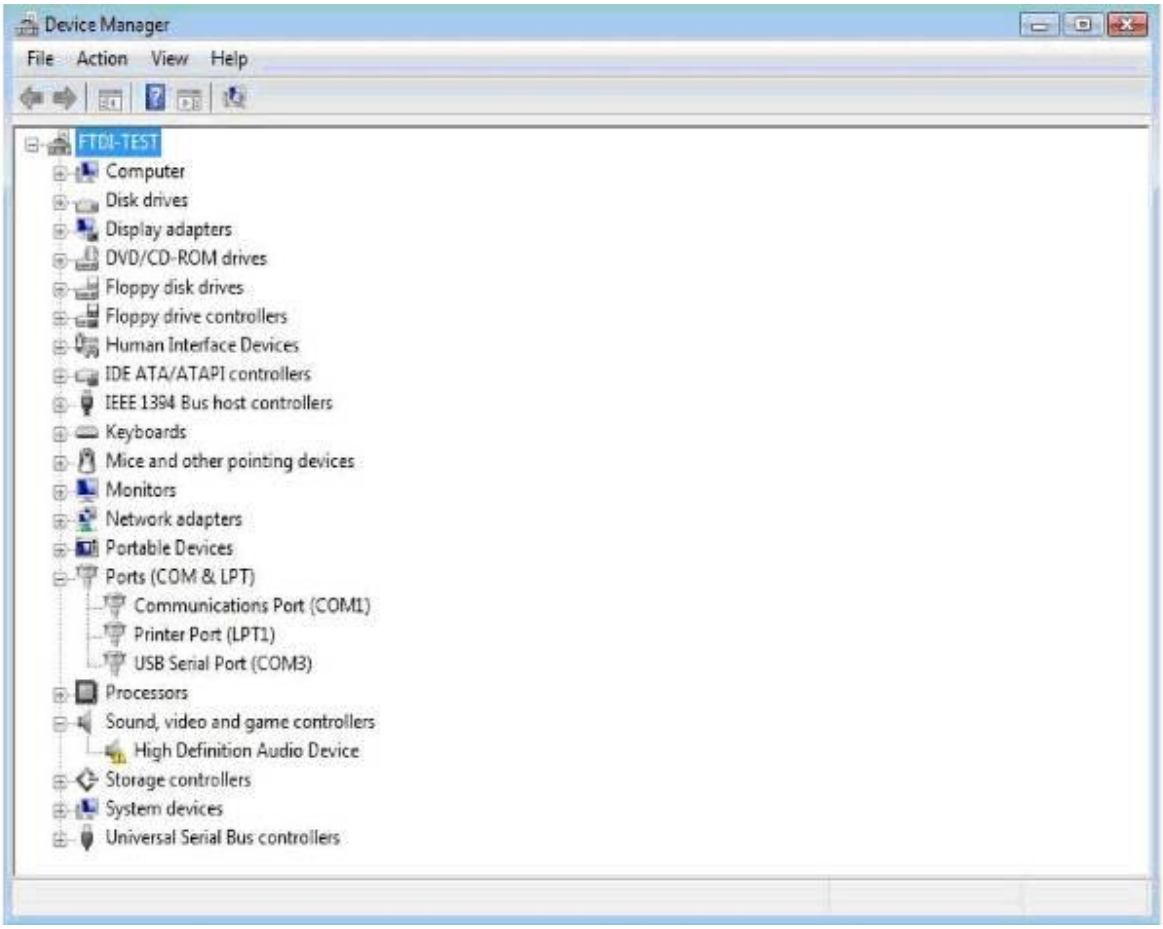
This screen will automatically complete and then change to the one below:



The bus layer of the driver is now installed.

After the driver is installed it is important to determine which COM port has been assigned to the device for configuring the application that will use the device.

Open the Device Manager (located in "Control Panel\System" then select the "Hardware" tab and click "Device Manager") and select "View > Devices by Connection", the device appears as a" USB Serial Converter" with an additional COM port with the label "USB Serial Port".



This screen shows the device connected to COM3.

Please note:

1. For multiple-port converter, each port has to be installed with the driver individually, i.e. you have to repeat this installation procedure 2 times (2-port converter) or 4 times (for 4-port converter).

2. If you have any difficulties with the drivers we provided in this CD, you may download the updated or appropriate versions from FTDI Web site:
   www.ftdichip.com/Drivers/VCP.htm, supported device “FT232BL(M)”.

Uninstalling Instruction

With the release of Microsoft Windows Vista, the FTDI uninstaller has been rendered unusable due to Windows Resource Protection preventing the executable from deleting driver files and associated registry values. Vista will only allow the system itself to modify files and registry values in these locations.

Consequently, a new method for uninstalling is required. Devices can be removed using the Device Manager by simply right clicking on the mouse and selecting "Uninstall". This will delete the associated registry entries for that device only. Vista provides an automatic method to delete driver

Windows 2000, XP and Server 2003 do not have this check box, so driver files and OEM INF and PNF files must be removed manually or by using a custom application.

Some points to note about the new uninstallation method:

If the VCP driver has been installed, the COM port driver should be uninstalled before the bus driver. If the bus is removed first, the COM port will no longer appear in the Device Manager.

If the files are deleted while other installed devices still require them those devices will not work correctly. This can be fixed by right clicking the device and selecting "Reinstall Driver" which will replace the missing files.

If a device to be uninstalled is not connected to the PC, the device can still be removed by setting the device manager to show phantom devices. This also allows a virtual COM port to be uninstalled if the bus layer has been removed first.

Troubleshooting

1. Windows VISTA can not 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 INF files for the driver. The VID and PID programmed into the device EEPROM may be found by using the USB View utility from the FTDI web site. These can then be checked against the VID and PID entries in the driver INF files. If they do not match, that driver cannot be installed for that device without either reprogramming the device EEPROM or modifying the list of VID and PID numbers in the INF files. Please note that only your own company VID and PID or FTDI's VID (0x0403) and FTDI PID issued for use by the customer should be used in the EEPROM and INF files.

End customers should obtain modified drivers from the OEM of the device, and not necessarily edit the files themselves.

2. Devices not shown in Device Manager for uninstalling

Devices that have been installed on a system but are not currently available are referred to as "phantom devices". These devices are not usually displayed in the device manager, but can be made to be displayed as though they are attached. This allows device properties to be changed or devices to be uninstalled via Device Manger even though the device is not physically connected to the PC.

To display phantom devices in Device Manager, a new system variable is required. Open "Control Panel > System" then select the "Advanced" tab and click "Environment Variables". In the System Variables section (NOT THE USER VARIABLES SECTION), click "New..." to display the following window:

Create a new System Variable called "DevMgr_Show_NonPresent_Devices" and set the value to 1, then click OK.

Open the Device Manager ("Control Panel > System" then select the "Hardware" tab and click "Device Manager…", or "Control Panel > Device Manger" in Vista) and select "View > Show Hidden Devices". Device Manager will then show all hidden and phantom devices available on that PC as shaded.

3. Windows Vista (Win 7, 8, 8.1, 10, 11) shows a warning that the driver is not certified

If the driver is not certified then a pop up window such as shown below will be displayed.

If you are certain of the source of the driver the warning can be ignored and you can continue installation by selecting “Install this driver software anyway”.

4. Driver will not install on VISTA x64

VISTA x64 OS will only allow certified drivers to be installed. The certified driver supplied by FTDI will work with VID 0403 and PID 6001 for FT232 and FT245 devices.

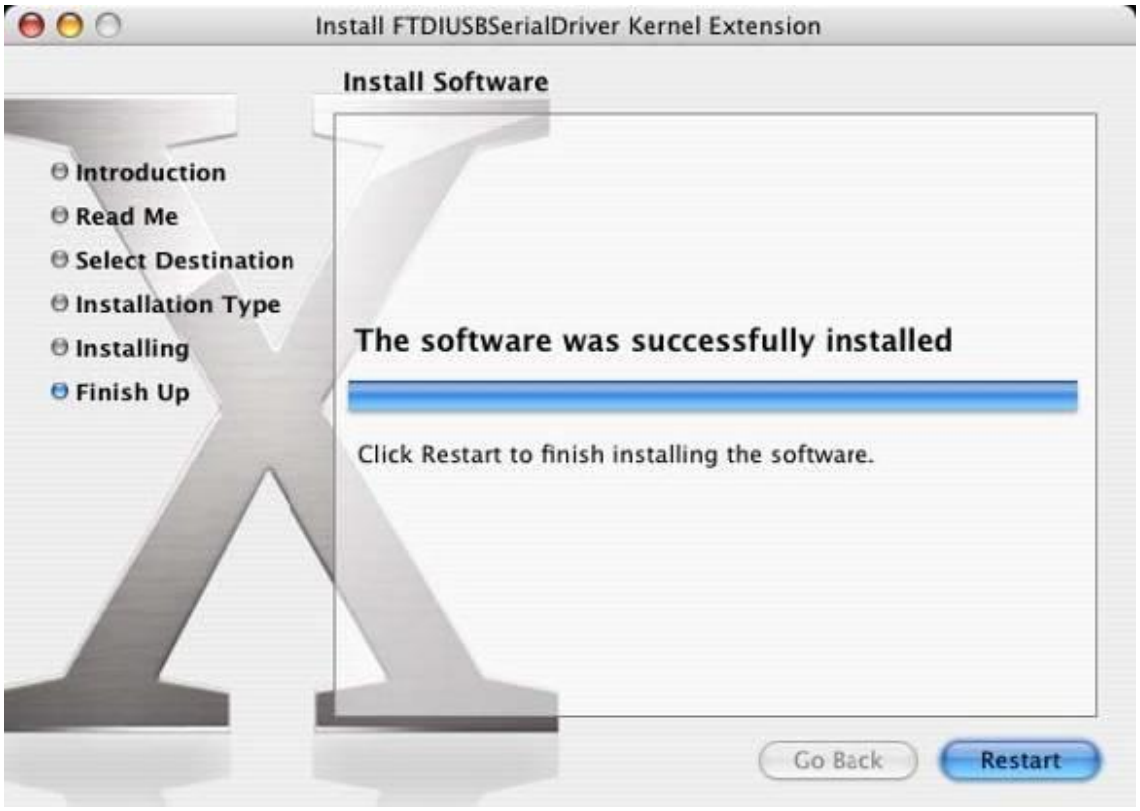
If you have a product where the manufacture has customized the driver but has not recertified it, then the driver will not load. You should contact your vendor to determine if they will support VISTA x64.

MAC OS X Installation Guide

Download the driver from the VCP Drivers section of the FTDI web site and save it to the hard disk. The driver is now available in disk image (.dmg) format. Run the installer by double clicking on the FTDIUSBSerialDriver.dmg icon.

Click Continue to proceed with the installation and follow the instructions on screen.

When the installation is complete, reboot the computer.



When the computer has rebooted, plug in the device. If the device is installed properly, you will see entries in the /dev directory:

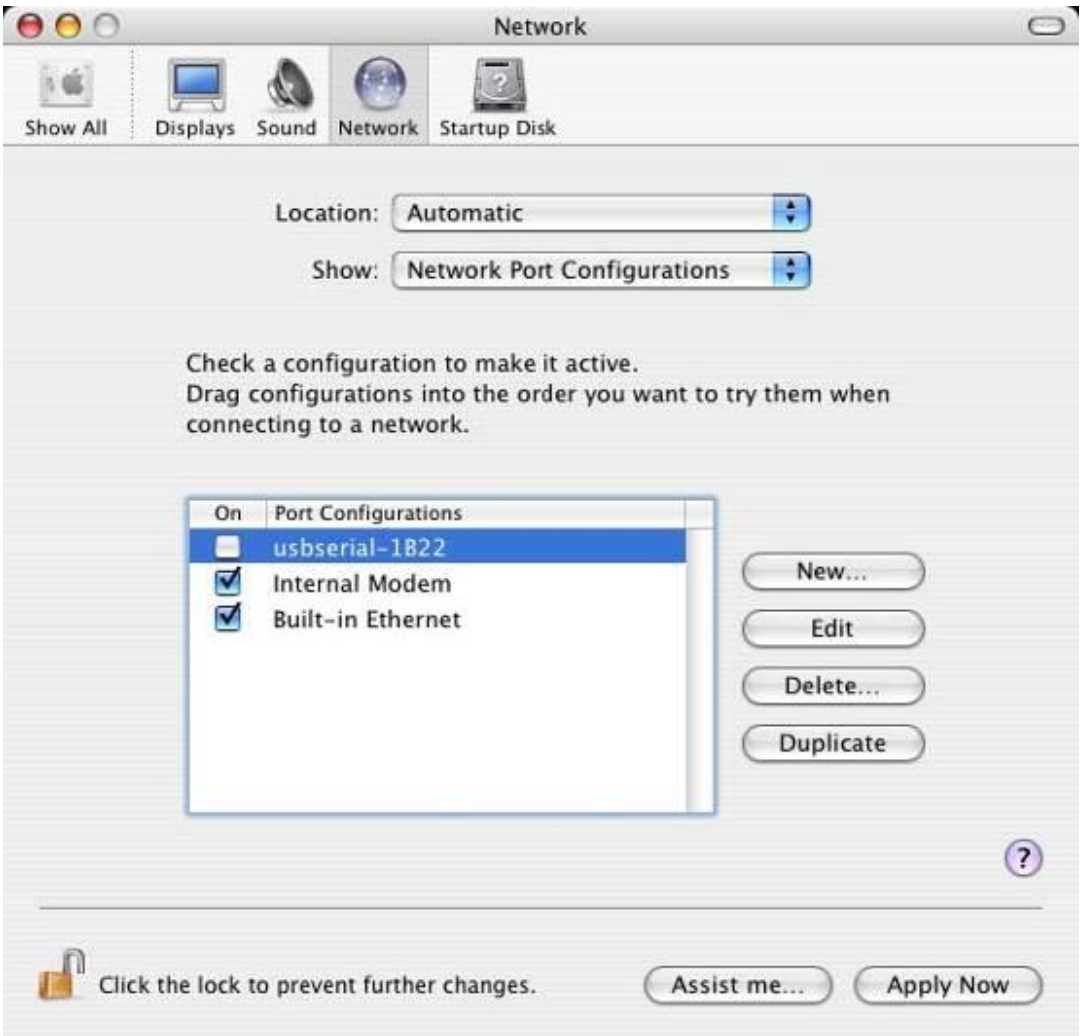
/dev/cu.usbserial-xxxxxxxx
/dev/tty.usbserial-xxxxxxxx

Where xxxxxxxx is either the device's serial number or, for unserialized devices, a location string that depends on which USB port your device is connected to. The Terminal application can be launched by selecting Go > Applications > Utilities > Terminal. Type the following lines in the Terminal window to produce the file list:

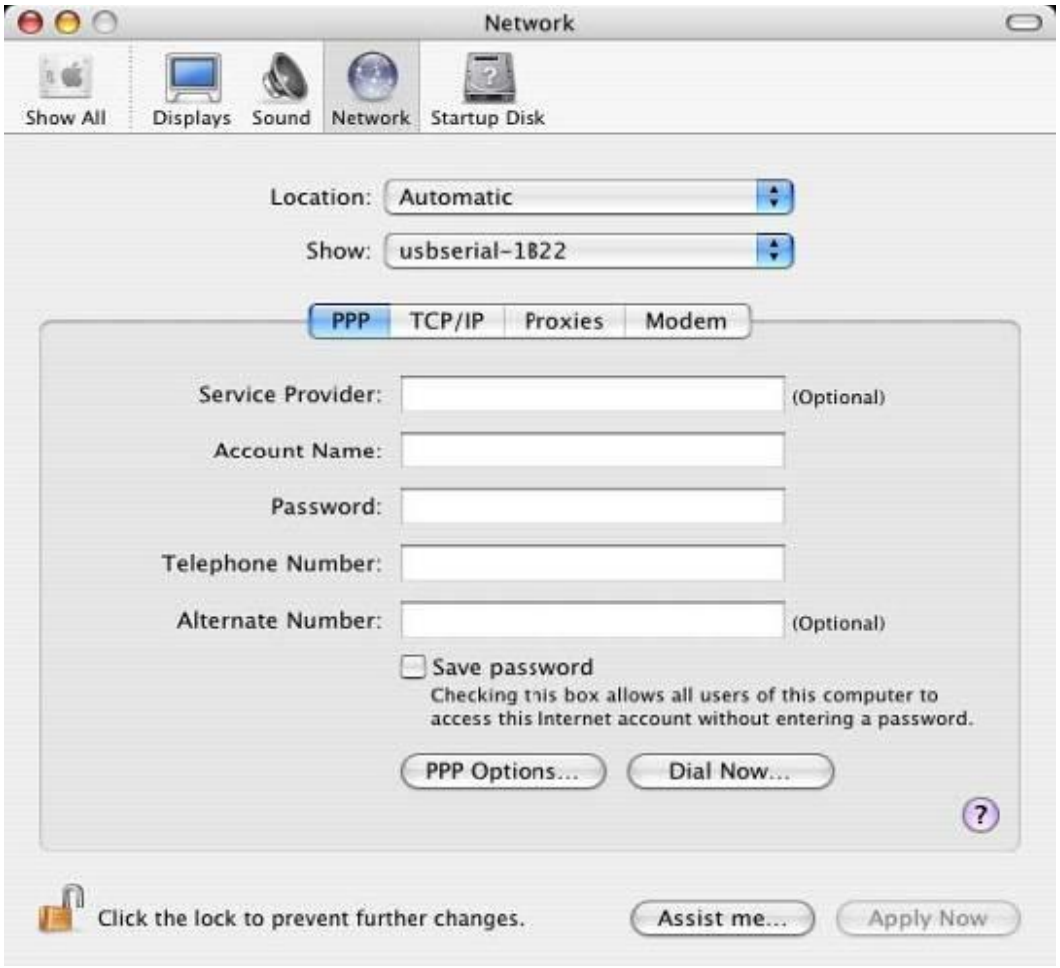
cd /dev
ls-l

If you run the application System Preferences and select Network (Go > Applications > System Preferences > Network), you should see the text "New Port Detected".

Click OK and select Network Port Configurations from the show list. The new port can be enabled from this screen by checking the on box and clicking Apply Now.



At this point, it is possible to exit Network and use the device as a COM port. If you wish to set the device up a modem for an Internet connection, select the new port from the show list to display the window below.



Entries for this screen are specific to the Internet account for each user. If you do not know the required details, contact your Internet service provide

Please note:

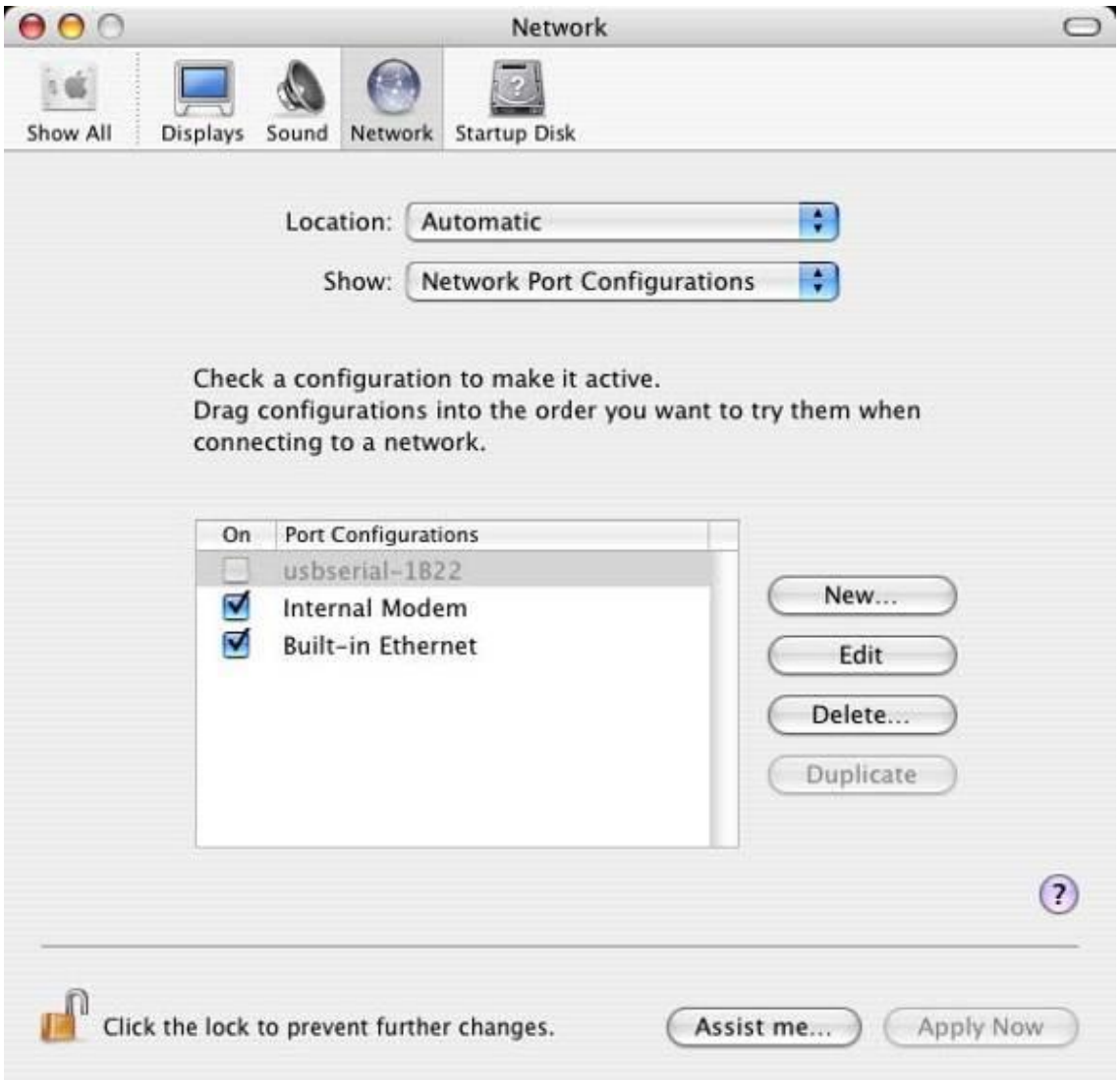
1. For multiple-port converter, each port has to be installed with the driver individually, i.e. you have to repeat this installation procedure 2 times (2-port converter) or 4 times (for 4-port converter).

2. If you have any difficulties with the drivers we provided in this CD, you may download the updated or appropriate versions from FTDI Web site:
   www.ftdichip.com/Drivers/VCP.htm, supported device “FT232BL(M)”.

Uninstalling instruction

To remove the drivers from Mac OS X, the user must be logged on as root. Root is a reserved username that has the privileges required to access all files.
Start a Terminal session (Go > Applications > Utilities > Terminal) and enter the following commands at the command prompt:
cd /System/Library/Extensions
rm -r FTDIUSBSerialDriver.kext
cd /Library/Receipts
rm -r FTDIUSBSerialDriver.kext
The driver will then be removed from the system.

To remove the port from the system, run the application System Preferences and select Network. Selecting Network Port Configurations from the Show menu will display the port as greyed out. Select the uninstalled port and click Delete. Confirm the deletion to remove the port.



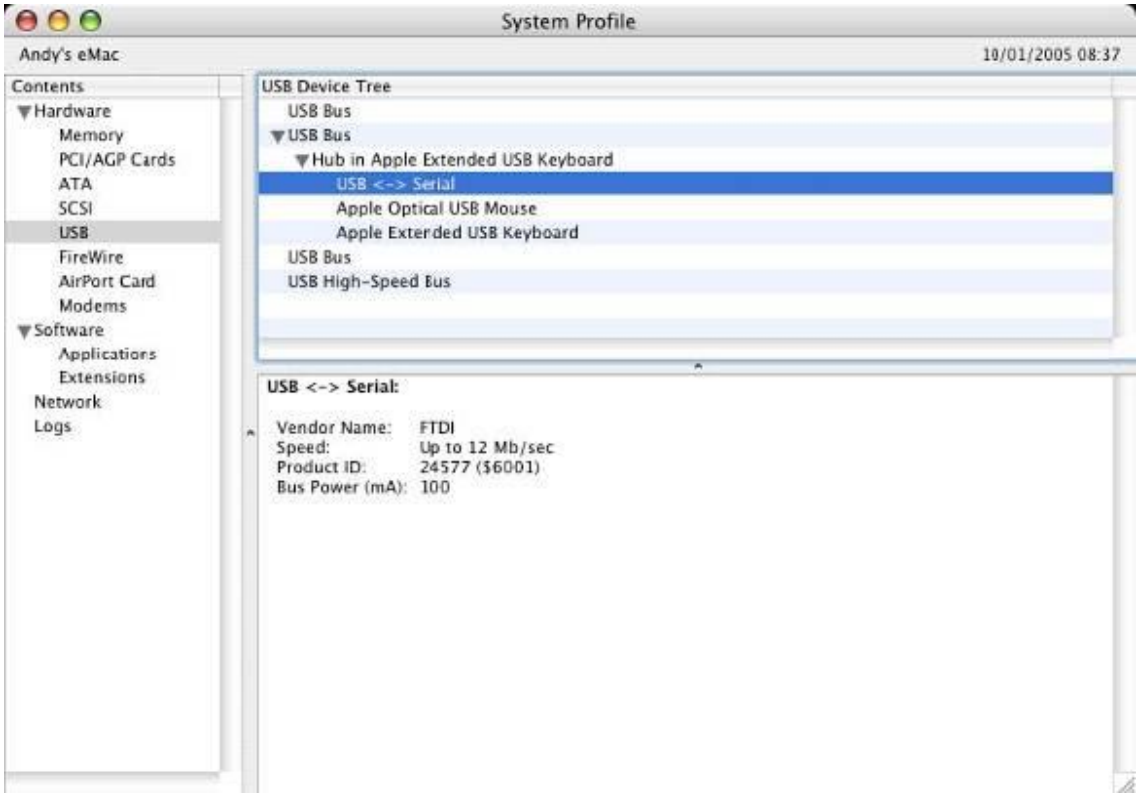
Troubleshooting

1. How do I know what my device ID is?

Launch the System Profiler utility, or Apple System Profiler for earlier versions of OS X. This can be accessed by going to the Finder and selecting Applications from the Go menu, then open the Utilities folder. Select USB under Hardware in the pane to the left and then select the appropriate device from the USB Device Tree. In the screen shot below (from OS 10.3), the device has a device ID given by:

Vendor Name: FTDI
Product ID: 24577 ($6001)

A Vendor Name of FTDI is equivalent to a Vendor ID of 1027 ($0403).



If the device does not work after installing the driver, it is likely to be because the PID is not supported by the driver. If this is the case, contact FTDI Support with the PID that needs to be added to the driver. If the VID is not 0x0403, it is likely that the device is not an FTDI device and we cannot support it.

2. The device does not appear in the /dev directory or the text "New Port Detected" is not displayed in System Preferences-Network

FTDI USBSeria Driver does not support your device ID (VID and PID). Disable the EEPROM so that the device reverts to its default device ID, then replug. To get support for your device ID built into FTDI USBSerial Driver, contact FTDI quoting your device ID and a description of your device.

3. The device cannot be accessed even though the device ID is Supported in FTDI USB Serial Driver

An ownership or permissions problem is preventing the system from making the device accessible. Check that the driver is owned by root and wheel. The most common symptom is the group for FTDI USBSerial Driver is not wheel. To change the group, login as root and perform the following script in a Terminal window (Go > Applications > Utilities > Terminal):
cd /system/library/extensions
chgrp -R wheel FTDIUSBSerialDriver.kext

Reboot for the change to take effect.

4. How do I open a Terminal window?

A Terminal window can be started by selecting Go > Applications > Utilities > Terminal .The terminal window is equivalent to a DOS prompt in Windows.

Regulatory Compliance

Disclaimer

Information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any other commercial damage, including but not limited to special, incidental, consequential, or other damages.

No part of this document may be reproduced or transmitted in any form by any means, electronic or mechanical, including photocopying, recording or information recording and retrieval systems without the express written permission of the manufacturer.

All brand names and product names used in this document are trademarks, or registered trademarks of their respective holders.

CE Certification

This equipment complies with the requirements relating to electromagnetic compatibility.

It has been manufactured under the scope of RoHS compliance.

FCC Compliance Statement

This equipment generates and uses radio frequency and may cause interference to radio and television reception if not installed and used properly. This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation

WEEE (Waste of Electrical and Electronic Equipment), Recycling of Electronic Products

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.

Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose or any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.