

**Future Technology Devices
International Ltd.**

Windows 2000 Installation Guide

2.2 Installing VCP Drivers

To install VCP drivers for an FT232BM, FT245BM, FT8U232AM or FT8U245AM device under Windows 2000, follow the instructions below:

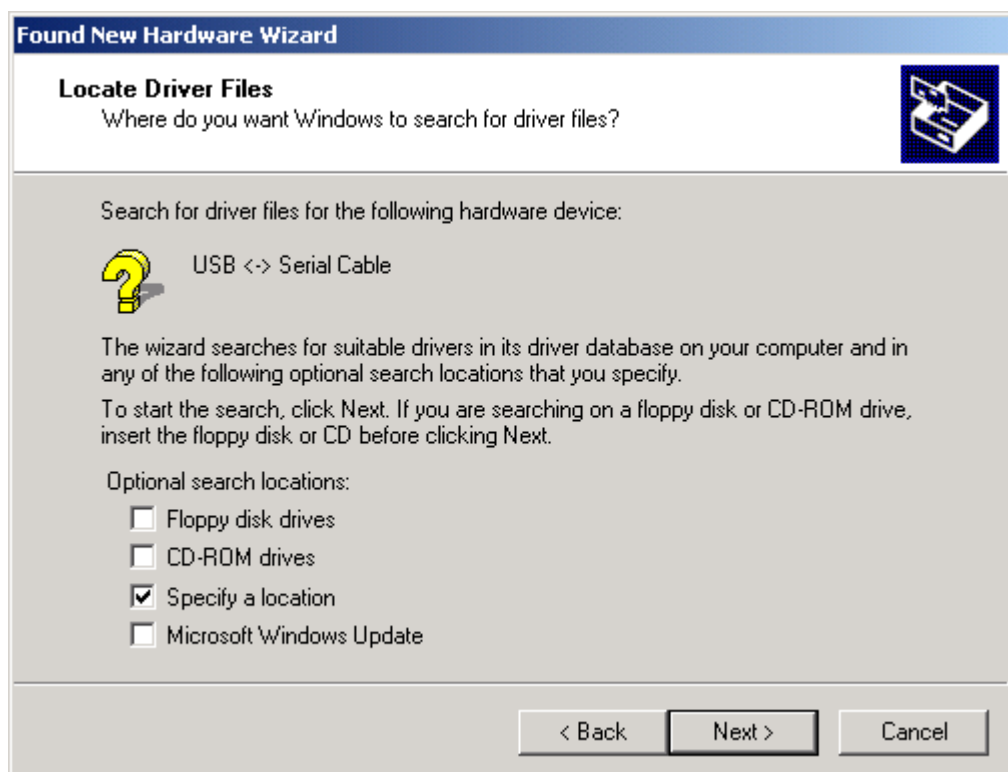
- If a device of the same type has been installed on your machine before and the drivers that are about to be installed are different from those installed already, the original drivers need to be uninstalled. Please refer to the [Uninstalling FT232BM, FT245BM, FT8U232AM and FT8U245AM](#) ^[33] Devices section of this document for further details of this procedure.
- Connect the device to a spare USB port on your PC. This will launch the Windows Found New Hardware Wizard. Click "Next" to proceed with the installation.



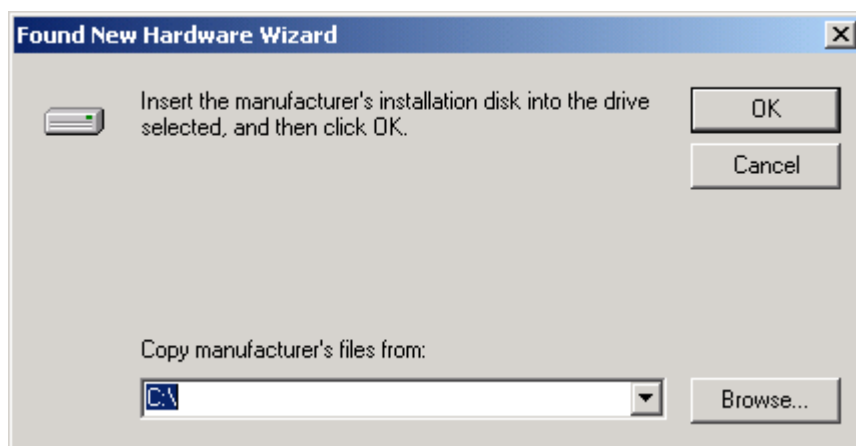
- Select "Search for a suitable driver for my device (recommended)" as shown below and then click "Next".



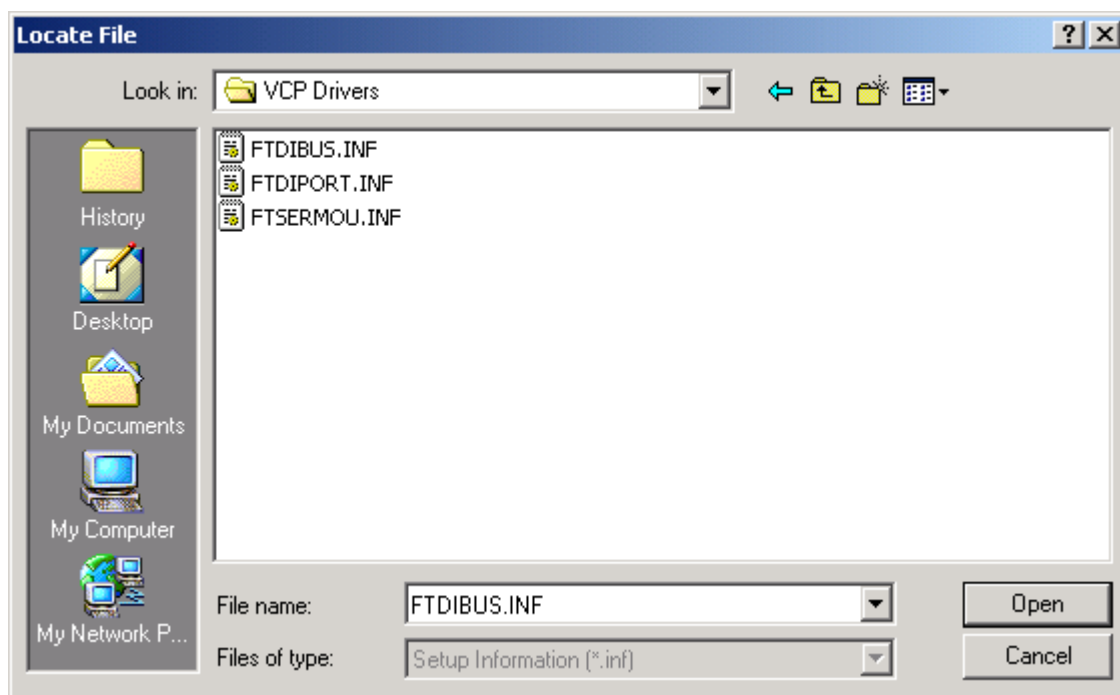
- Check the box next to "Specify a location" and uncheck all others as shown below.



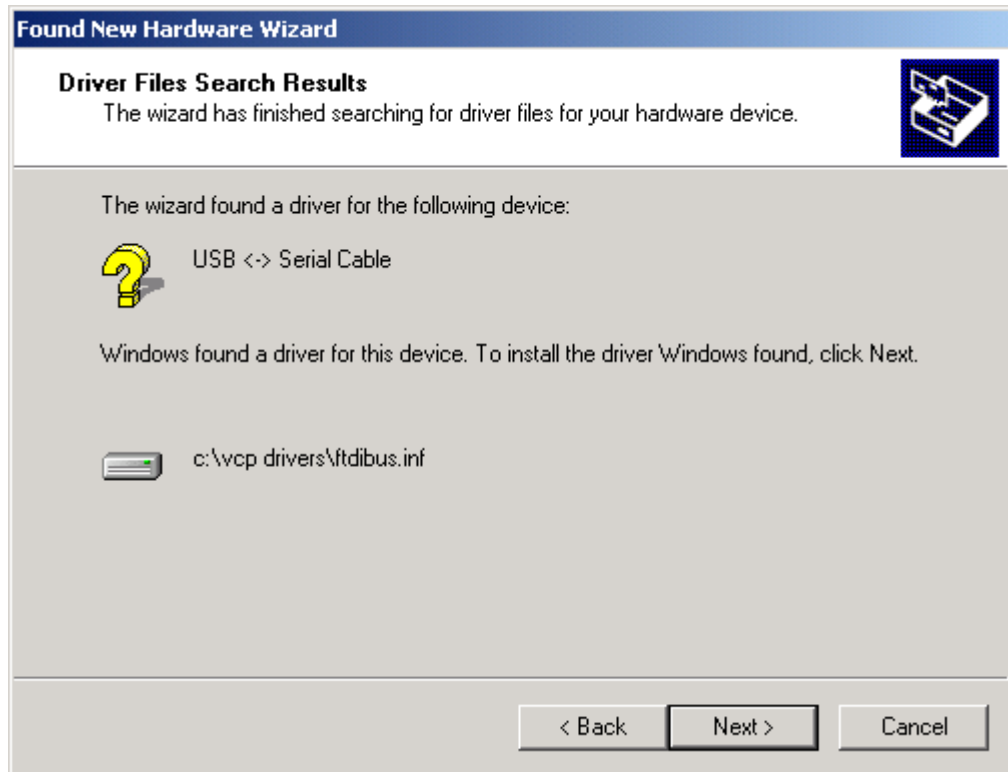
- Clicking "Next" displays a dialog box for you to enter to the location of the drivers.



- Click "Browse" to display an open file dialog box.



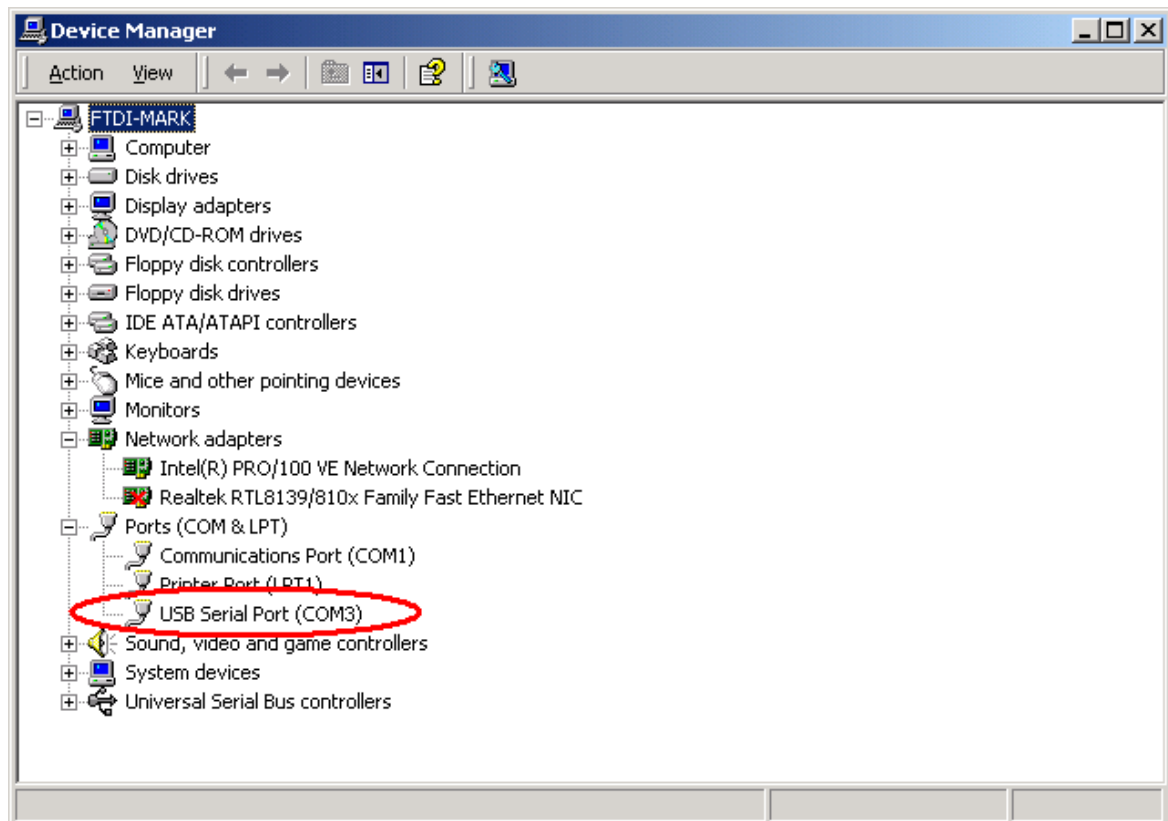
- Locate the folder containing the latest drivers downloaded from the [FTDI website](#) above and click "Open", then click "OK". The PC autoselects the correct INF file, in this case FTDIBUS.INF. Once Windows has found the required driver .INF file, click "Next" to proceed.



- 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, except the PC will autoselect the FTDIPORT.INF file.
- Open the Device Manager (located in "Control Panel\System") then select the "Hardware" tab and click "Device Manger...") and select "View > Devices by Type". The device appears as an additional COM port with the label "USB Serial Port".



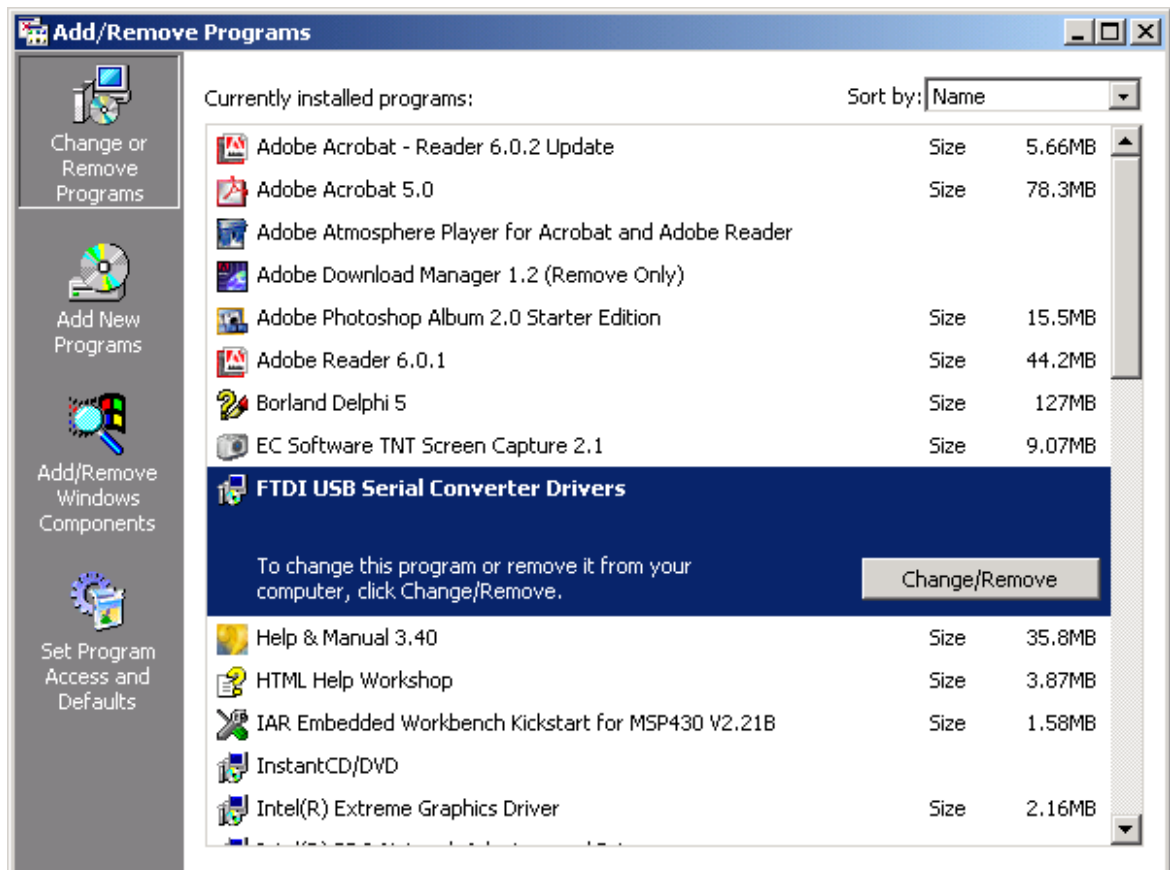
4 Uninstalling FT232BM, FT245BM, FT8U232AM and FT8U245AM Devices

When uninstalling devices from Windows 2000, it should always be done through the Add/Remove Programs utility as this uses the FTDI 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.

4.2 Uninstalling VCP Drivers

To uninstall VCP drivers for FT232BM, FT245BM, FT8U232AM and FT8U245AM devices, follow the instructions below:

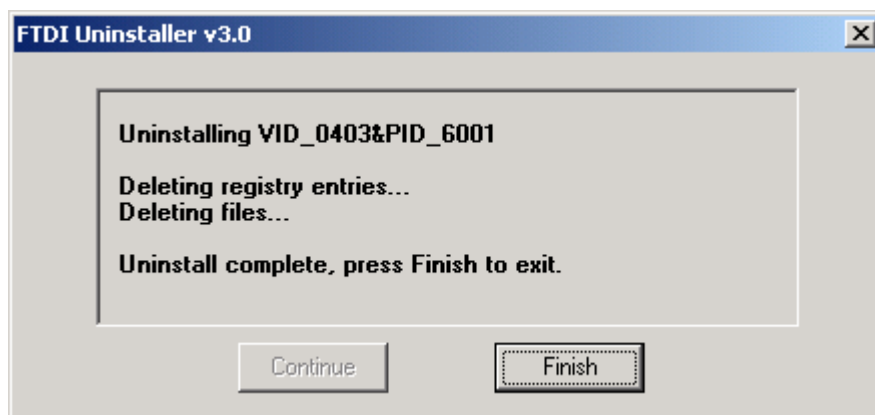
- Disconnect any FTDI devices that are attached to the PC.
- Open the Add/Remove Programs utility located in "Control Panel\Add/Remove Programs". Select "FTDI USB Serial Converter Drivers" from the list of installed programs.



- Click the "Change/Remove" button. This will run the FTDI 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.



6 Troubleshooting

6.1 Windows 2000 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 [USBView](#) utility from the [FTDI website](#). 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 re-programming 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.

6.2 Windows 2000 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. If installing a D2XX 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.

6.3 Driver installation fails and Windows 2000 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 website](#) for standard device configurations. If the error persists, please contact the [FTDI support](#) department.

6.4 FT232BM or FT245BM device hangs randomly during operation under Windows 2000

This is not caused by the driver, but is a hardware compatibility problem. Some newer USB 2.0 hubs and host controllers can be susceptible to noise and can cause random device failures. This can be overcome by fitting 47pF capacitors to ground on the USBDP and USBDM lines on the USB connector side of the 27 Ω series resistors.

6.5 Windows 2000 automatically installs a device driver but the other driver is desired

In the cases of FT8U232AM, FT8U245AM, FT232BM and FT245BM devices, this can happen if there is a device already installed on the system with the same VID and PID. Windows 2000 will detect that the device being installed has the same VID and PID combination as a device already installed and will install the same driver for it. This causes the limitation that a system can only contain devices using VCP drivers or D2XX drivers.

In the case of FT2232C devices, the driver setting in the EEPROM dictates which drivers are loaded when using the FTC combined drivers. The MProg utility available from the [Utilities](#) section of the [FTDI website](#) can be used to check or change the driver setting in the EEPROM.