

# Manually Installing Hardware Drivers for the QF4A512-DK Evaluation Board

## 1) Introduction

*If installing drivers for the first time, follow the Startup Guide that came with the QF4A512-DK. If problems occur after installing drivers per that Guide, follow the instructions in this Application Note.*

*This Application Note is only valid for QF4A12-DK hardware version 2.3 or earlier.*

The Quickfilter QF4A512-DK Development Board uses a chip from FTDI to handle the USB interface with the host PC. The FTDI FT2232C is the diagonal chip on the bottom of the board.

Newer computers and computers that have been updated from Microsoft will experience problems with the drivers. Although no permanent damage will occur, the board will be inoperable until the correct drivers are (re)loaded. In those cases **it is important to carefully follow the instructions in this document**. Simply pointing the Found New Hardware Wizard at the drivers on disk will not work because Windows is simultaneously checking the web for a matching driver. Since the driver it finds on the web is signed and the one on the Development Kit CD isn't, Windows automatically (and transparently) uses the one from the web.

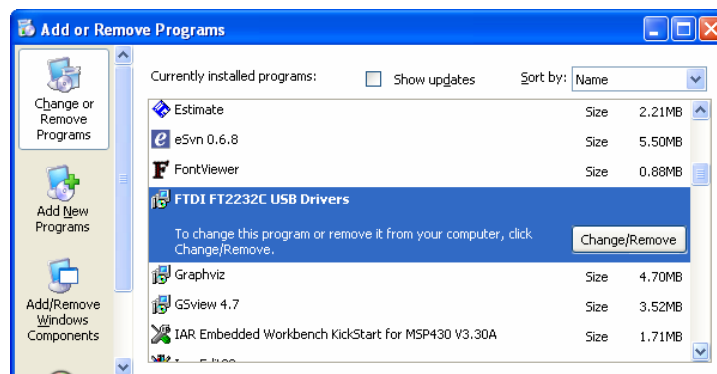
## 2) Why is this an Issue?

The FT2232C can take on one of three different personalities, depending on the application. It can operate as an RS-232 device (also known as a virtual COM port), a SPI port or a parallel port. Recently, Microsoft certified only the Virtual COM Port (VCP) mode and included the driver in the Windows OS and automatic updates. Computers that use Automatic Updates will receive this driver automatically.

When Windows sees the FT2232C it assumes it is being used in VCP mode and loads the VCP drivers automatically. Since the QF4A512-DK uses the parallel port mode, it will not work until the appropriate driver is (re) loaded per the instructions in this Application Note.

## 3) Removing Existing FTDI Drivers (if they exist)

If the FTDI drivers need to be reloaded, the first step is to remove the existing FTDI drivers. Unplug the QF4A512-DK and start the *Add or Remove Programs* application under the *Control Panel*. The screen below shows existing FTDI drivers. If there is no entry for FTDI Drivers, ignore this step.

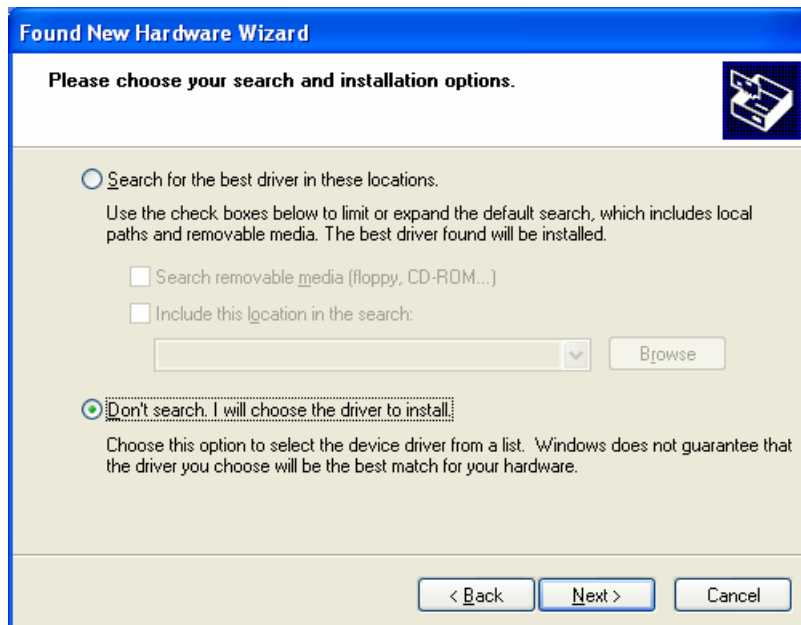


#### 4) Manually Installing the FTDI Drivers

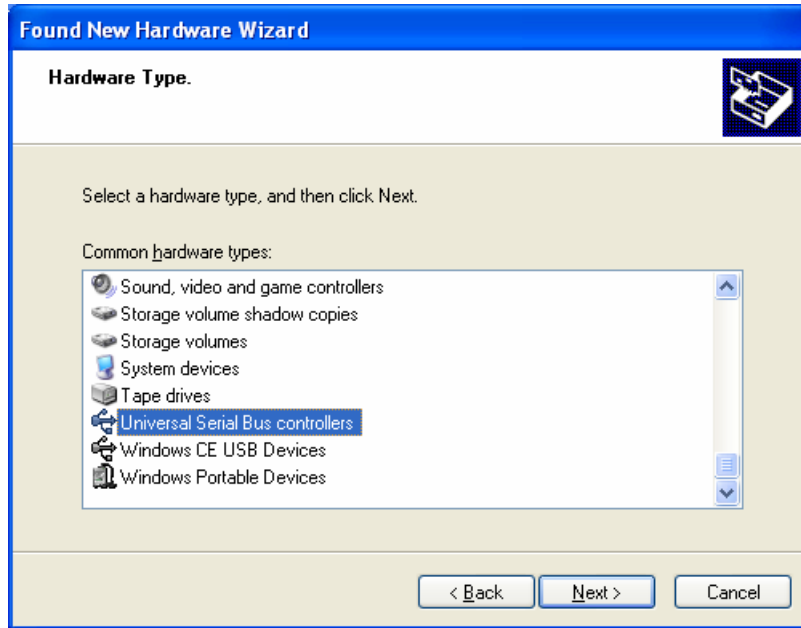
Insert the QF4A512-DK in the USB slot. Windows will detect the insertion and ask for a driver source. Select “Install from a list or specific location (Advanced)” as shown below.



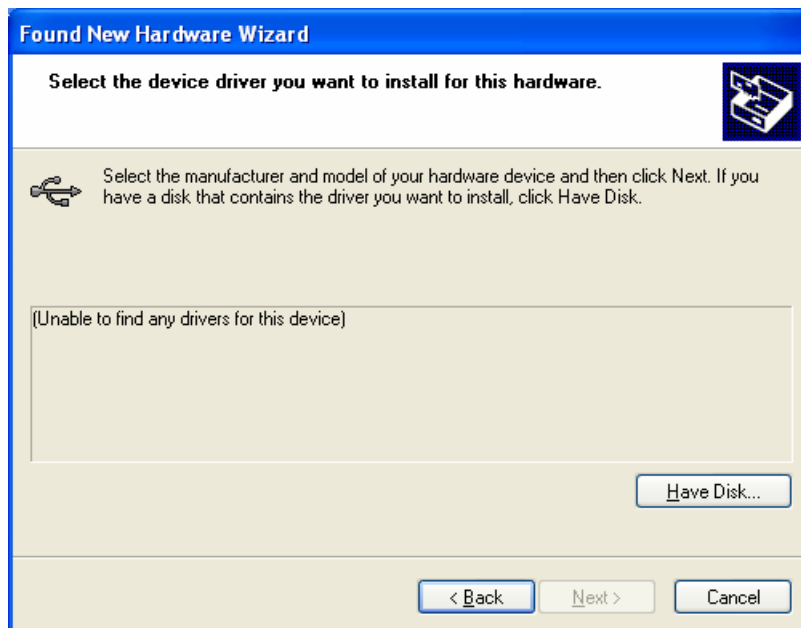
Then be sure to select the “Don’t Search...” option as shown below.



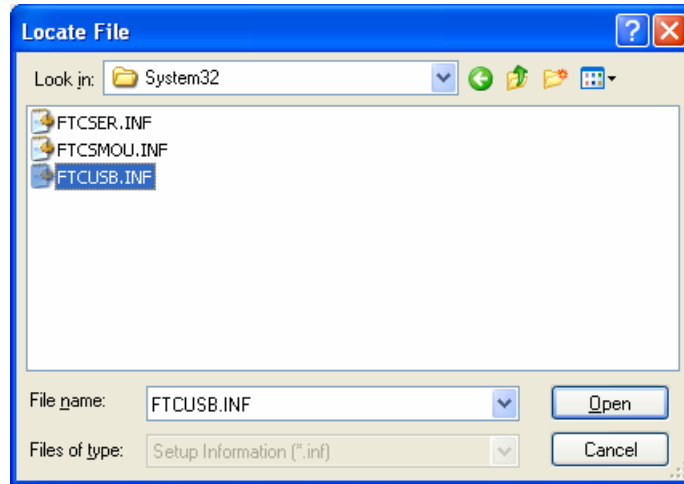
The FTDI device is a Universal Serial Bus controller, so select that type.



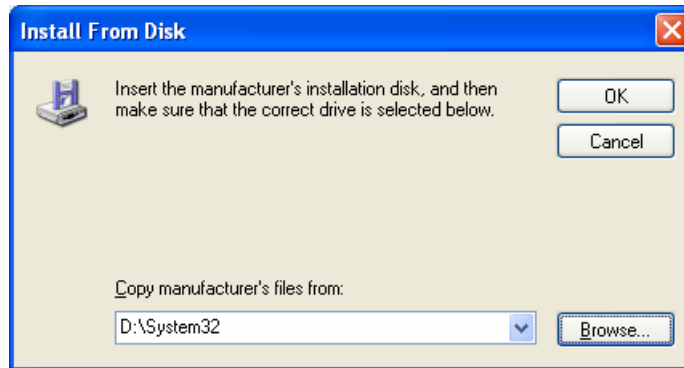
Now show Windows where the drivers are by selecting the “Have Disk...” button.



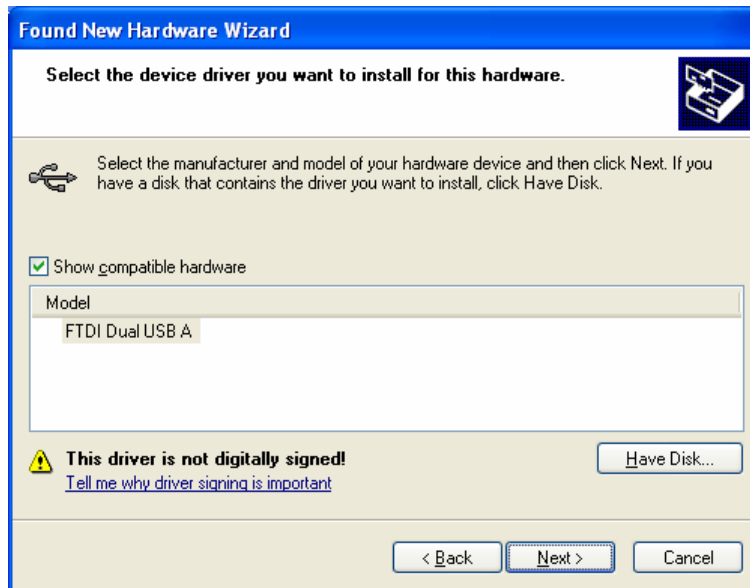
Navigate to the System32 folder on the Software CD provided with the QF4A512-DK and select FTCUSB.INF.



Select OK below.



Move on to the next step as shown below.



The FTDI driver is not signed by Microsoft. Select the Continue Anyway button below.



Select Finish to complete the initialization for the first channel of the FTDI chip, Channel A.

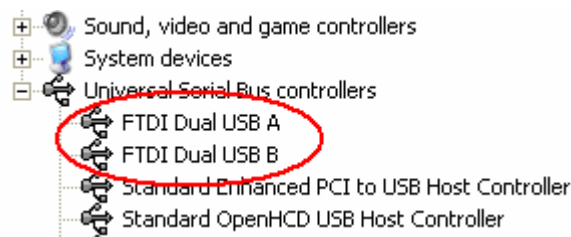


Next, Windows will detect the B channel and ask for a driver source as shown below. Repeat the same installation process starting at Step 3 (Manually Installing the FTDI Drivers).

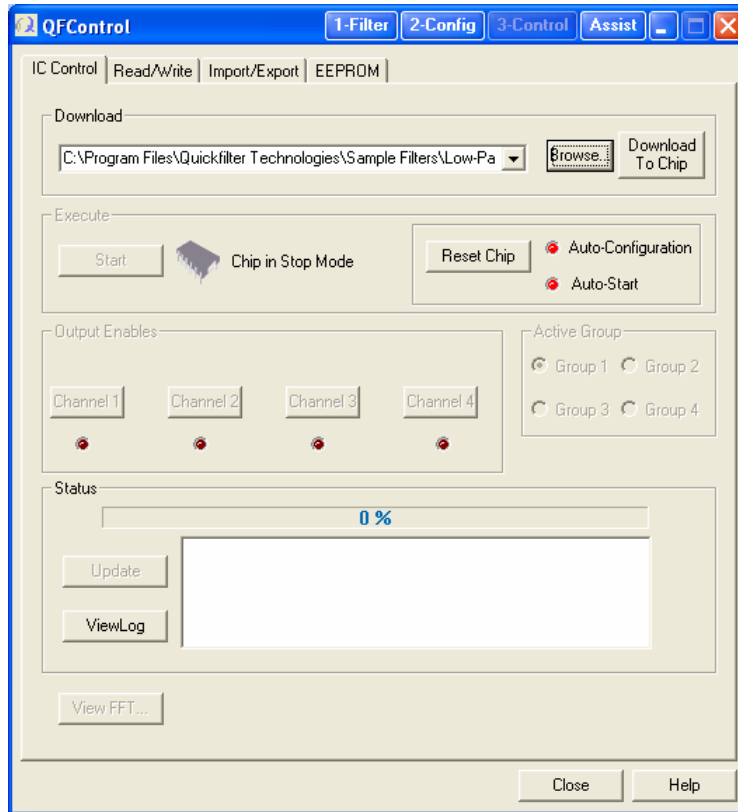


### 5) Verifying the Installation

When installation is complete, the evaluation board should appear in the Device Manager as shown below. The board is a USB Composite Device and the individual channels are FTDI Dual USB x devices.



The final test is whether QFilter can find the Evaluation board. Open the QFilter application and select File->Open QFControl from the menu. The following dialog should appear.



## 6) Conclusion

In some situations care must be taken to install the FTDI drivers correctly. This application note describes the detailed procedure for installing those drivers and verifying their proper installation.



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