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Flaircomm Microelectronics, Inc.

FLC- Bluetooth Evaluation Kit User Manual

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1. Introduction

FLC-BT EVK is an Evaluation Kit for FLC-Bluetooth radio module that allows OEM to add wireless capability to their products. This Evaluation Kit can be used to test the performance of most FLC-Bluetooth modules.

1.1 Features

- Support USB, LPT(SPI)
- UART
- Audio
- 3.3V power supply



2. Hardware Description

2.1 Evaluation Board

Figure 1 shows the top view of FLC-Bluetooth Evaluation Board. Figure 2 shows the top view of Carrier board.

FLC-Bluetooth module can be connected to Evaluation Board via Carrier Board.

Power Supply: At USB2UART CONN, the USB 5V is reduced to 3.3V by LDO in the EVK for BT power and audio power.

UART port is connecting to USB2UART CONN.

SPI port is connecting to LPT CONN. The SPI port can be used to debug SW, or connect to a PC to use the test SW.

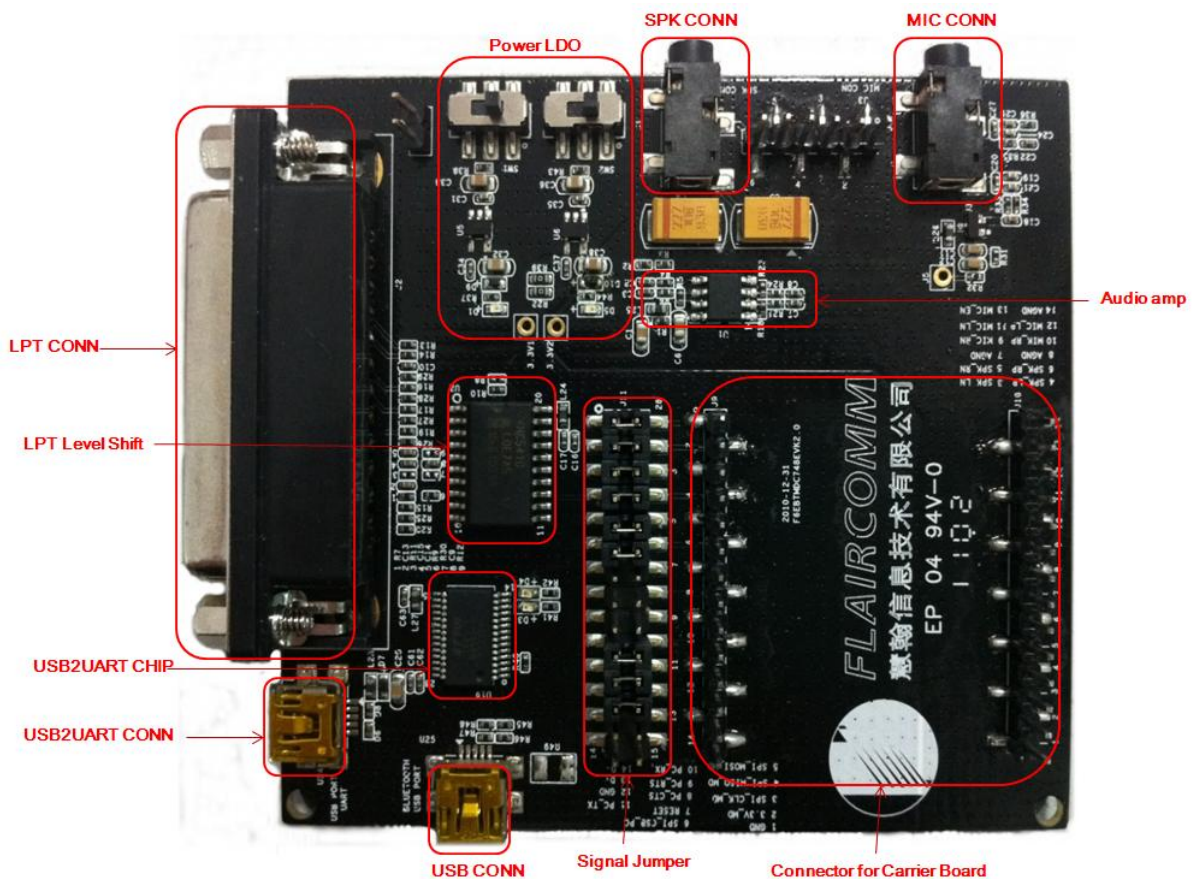


Figure 1: Top View of the EVK Board

2.2 Carrier Board

Figure 2 shows the top view of Carrier board (take BTM403IQ2C for example).

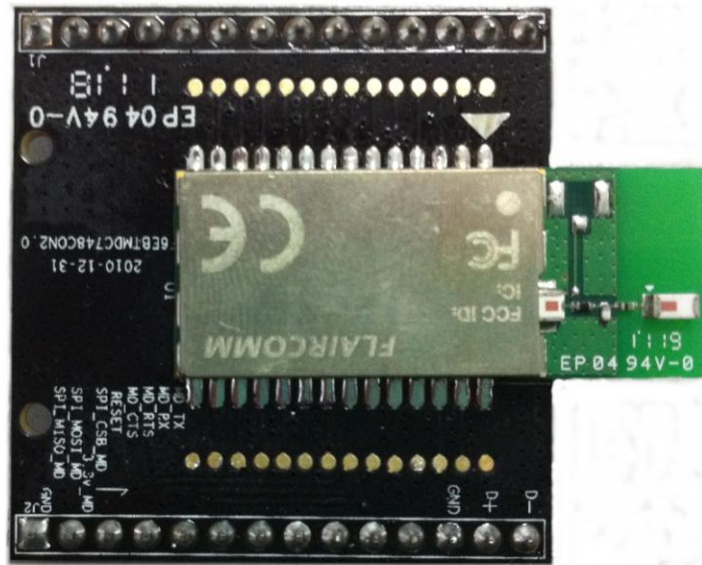


Figure 2: Top View of Carrier Board (BTM403IQ2C)



2.3 Full Evaluation Kit (take BTM403IQ2C for example)

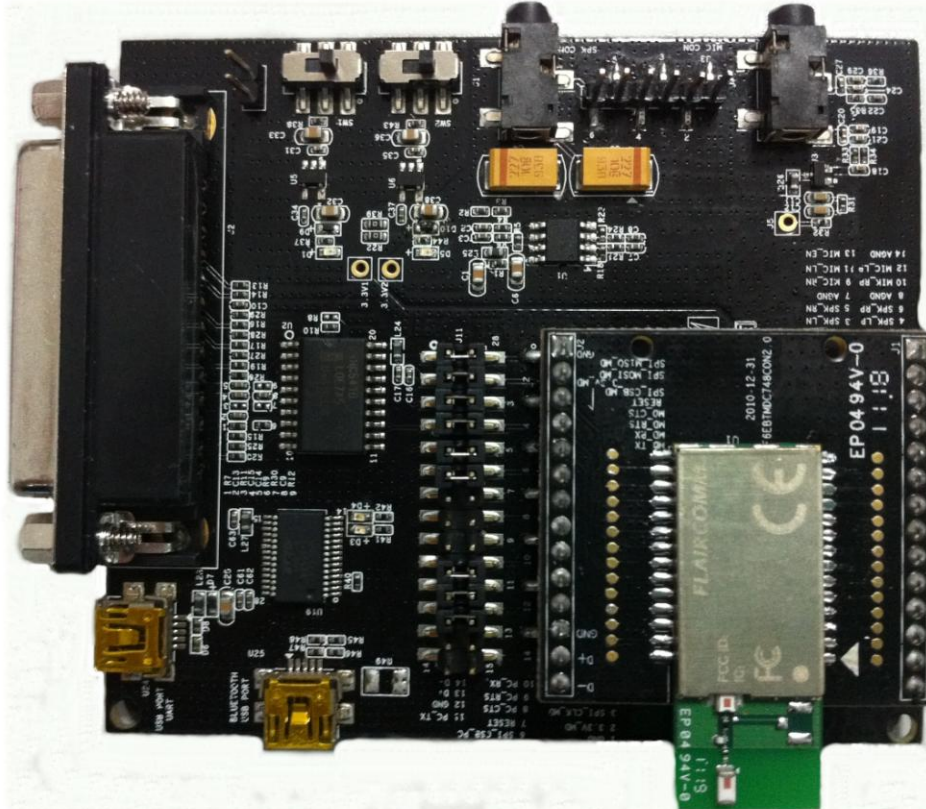


Figure 3: Full Evaluation Kit (Carrier on EV Board)



3. Schematics

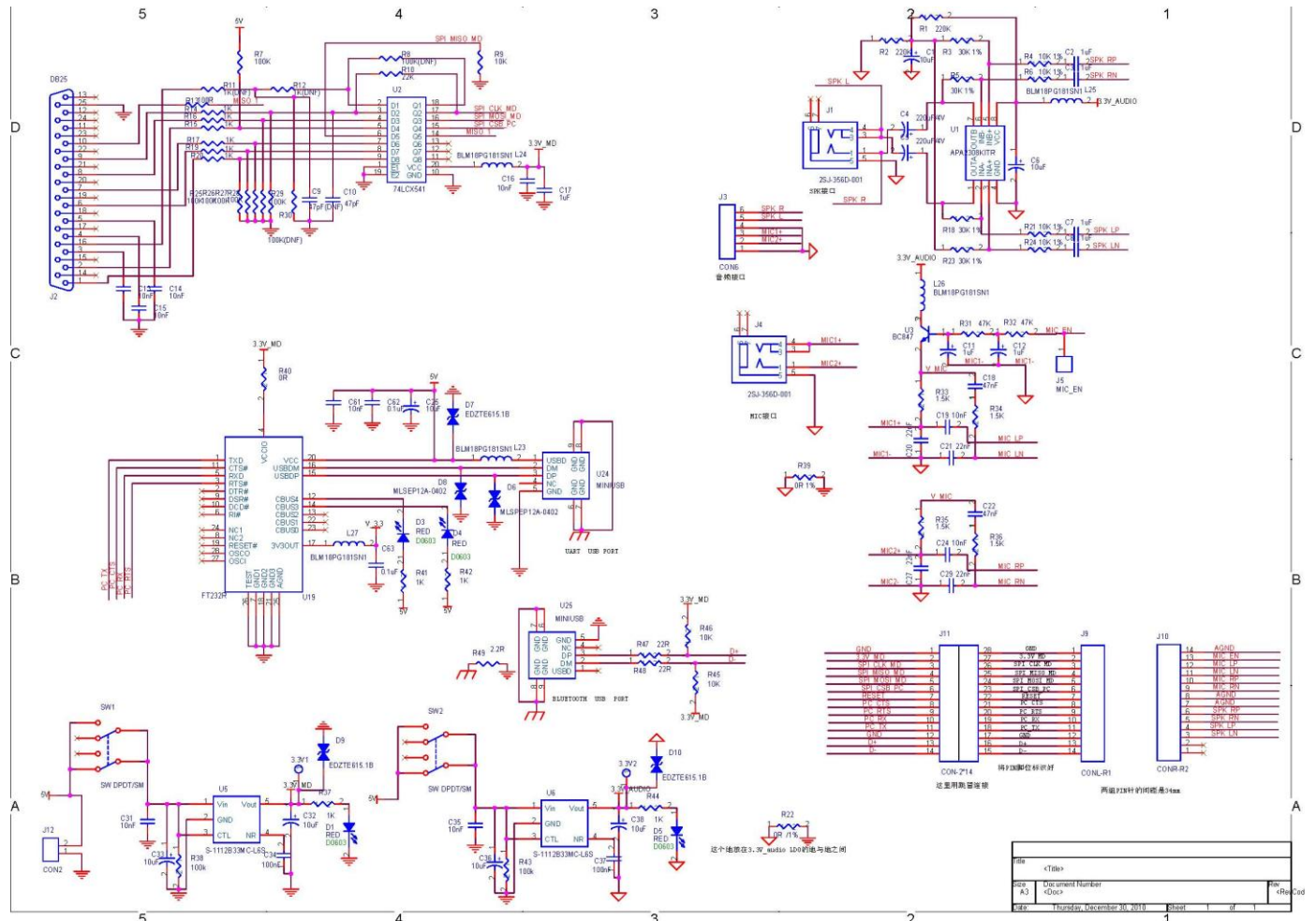


Figure 4: Evaluation Board Schematics

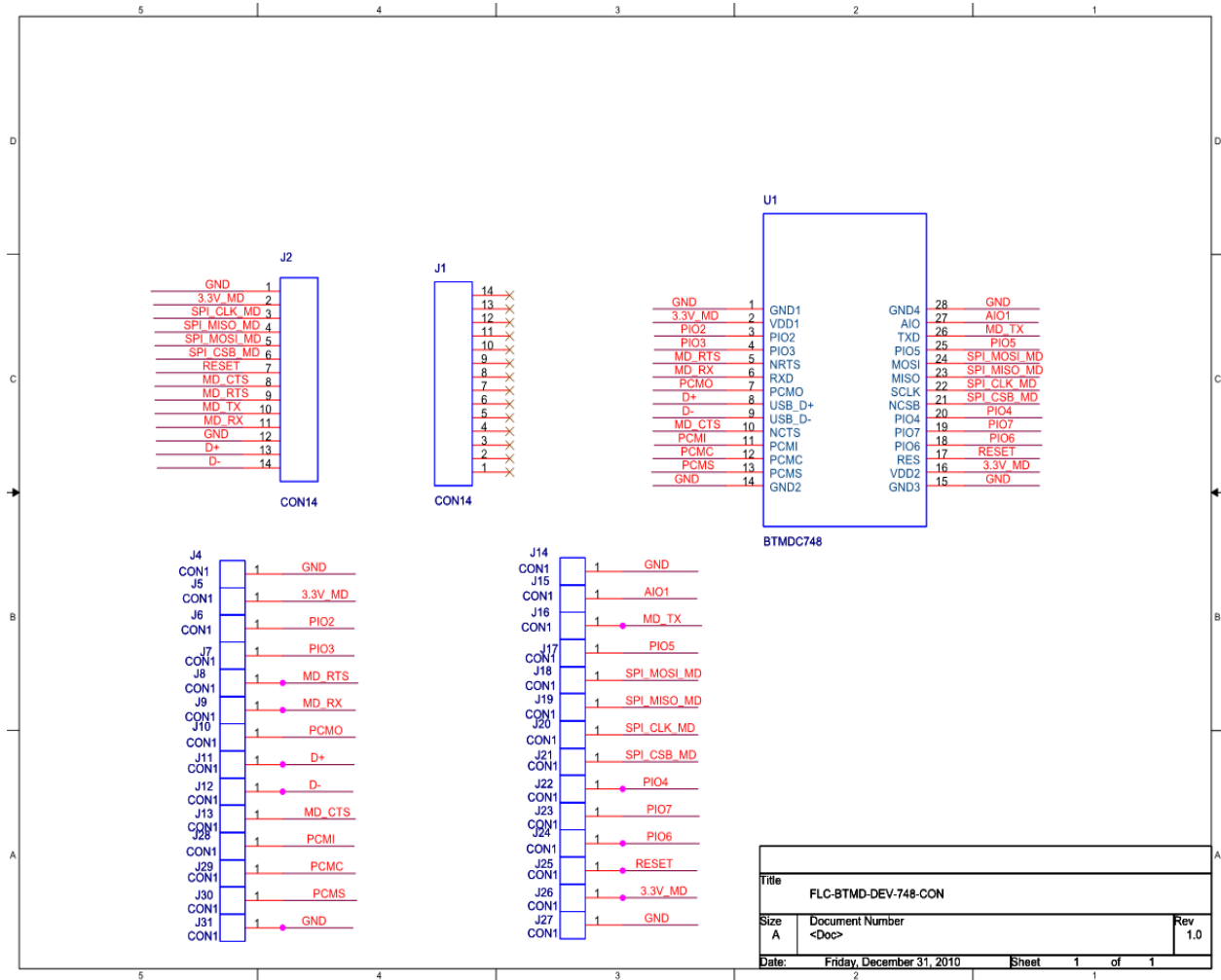


Figure 5: Carrier Board Schematics



4. Driver Installation Instructions

To install CDM drivers for an FLC DEV BOARD device under Windows XP, 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 CDM Drivers section of this document for further details of this procedure.
- 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 the device is based on the FLC DEV BOARD, the Microsoft composite device driver is automatically loaded in the background. Once the composite driver has been installed Windows Found New Hardware Wizard will launch. 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 6 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 6



- Select "Install from a list or specific location (Advanced)" as shown in Figure 7 below and then click "Next".

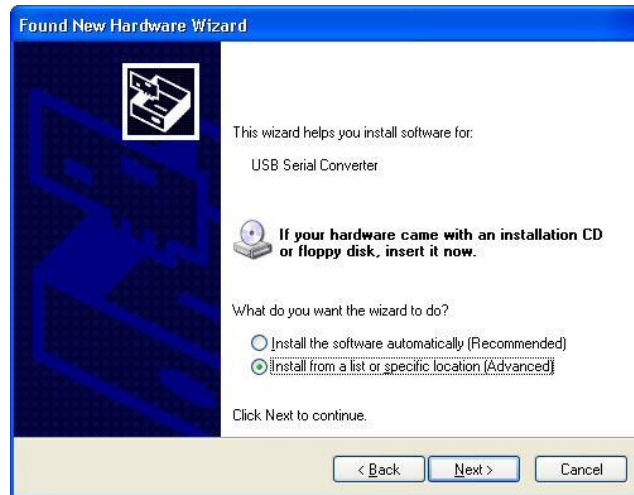


Figure 7

- Select "Search for the best driver in these locations" and enter the file path in the combo-box ("C:\CDM 20808" in Figure 8 below) or browse to it by clicking the browse button. Once the file path has been entered in the box, click next to proceed.

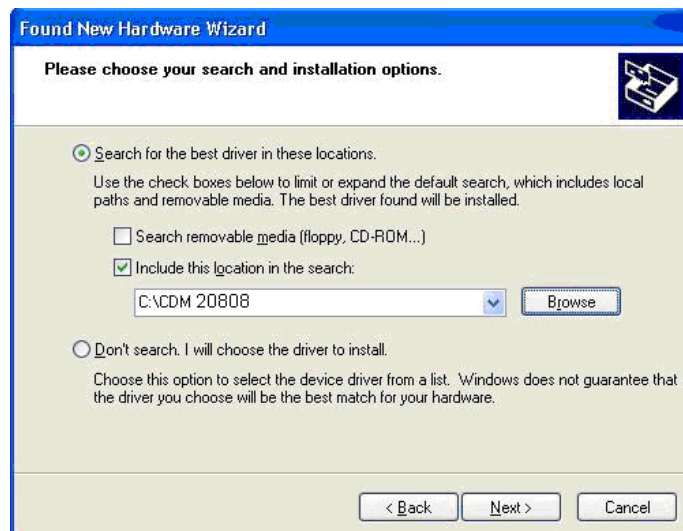


Figure 8



- If Windows XP is configured to warn when unsigned (non-WHQL certified) drivers are about to be installed, the message dialogue shown in Figure 9 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.



Figure 9

- The screen shown in Figure 10 will be displayed as Windows XP copies the required driver files.



Figure 10



- Windows should then display a message indicating that the installation was successful (Figure 11).
Click "Finish" to complete the installation for the first port of the device.



Figure 11

- If the device is based on the FLC DEV BOARD, the Found New Hardware Wizard will continue by installing the USB Serial Converter driver for the second port of the FLC DEV BOARD device. The procedure for installing the second port is identical to that for installing the first port from the first screen of the Found New Hardware Wizard. This is done automatically if the driver is Microsoft WHQL certified. If the device is not based on the FLC DEV BOARD, the COM port emulation driver is loaded as indicated in the following steps.
- 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 12)



Figure 12



- Select "Install from a list or specific location (Advanced)" as shown in Figure 13 below and then click "Next".



Figure 13

- Select "Search for the best driver in these locations" and enter the file path in the combo-box ("C:\CDM 20808" in figure14 below) or browse to it by clicking the browse button. Once the file path has been entered in the box, click next to proceed.

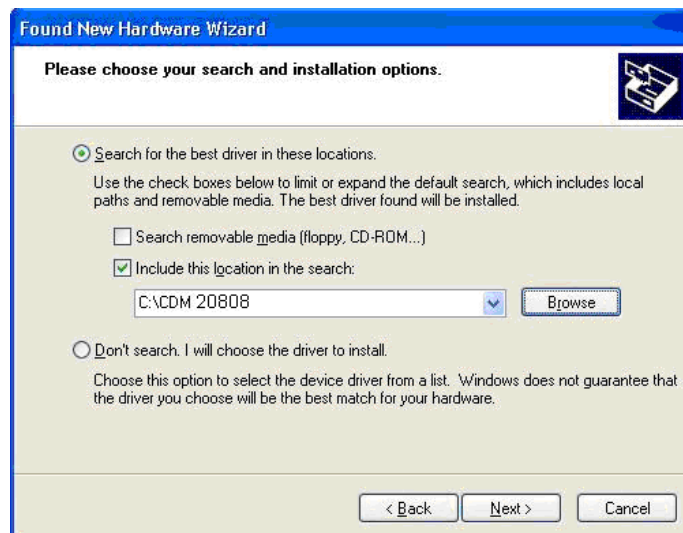


Figure 14



- If Windows XP is configured to warn when unsigned (non-WHQL certified) drivers are about to be installed, the message dialogue shown in Figure 15 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.



Figure 15

- The screen shown in Figure 16 will be displayed as Windows XP copies the required driver files.

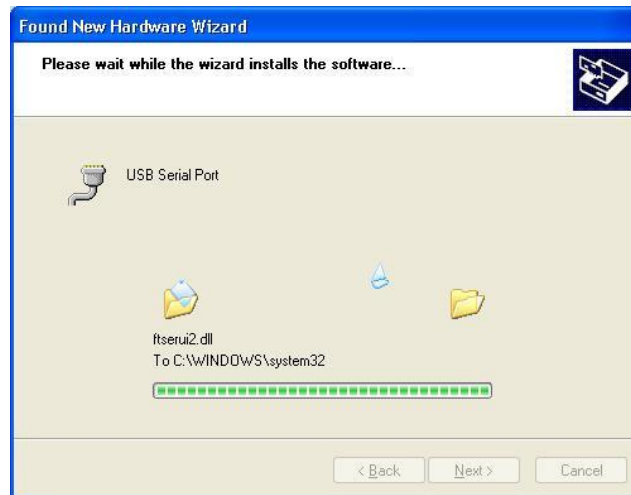


Figure 16



- Windows should then display a message indicating that the installation was successful (Figure 17).
Click "Finish" to complete the installation for the first port of the device.



Figure 17

- If the device is based on the FLC DEV BOARD, the second port must also be installed. The procedure for installing the second port is identical to that for installing the first port from the first screen of the Found New Hardware Wizard for the USB Serial Port device. If the driver is Microsoft WHQL certified, this is done automatically.
- 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 18). If the device is based on the FLC DEV BOARD, two ports will be available from a composite USB device.

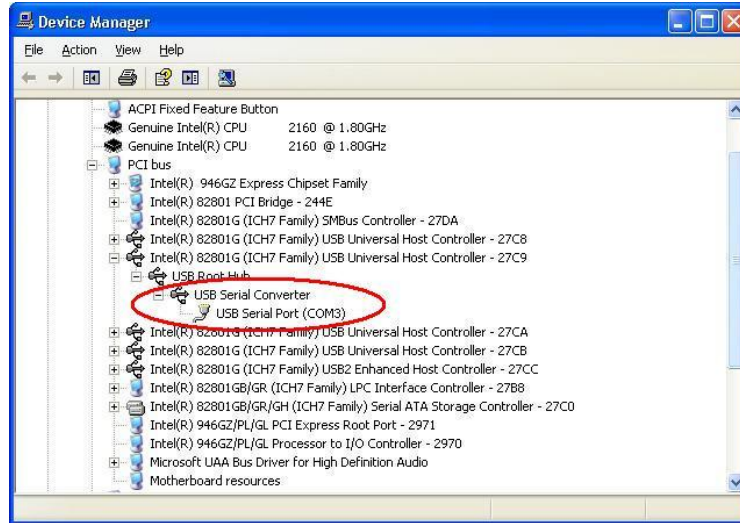


Figure 18

- In the case of the FLC DEV BOARD, port A of the FLC DEV BOARD will be installed as COMX and port B will be installed as COMX+1 where COMX is the first available COM port number.

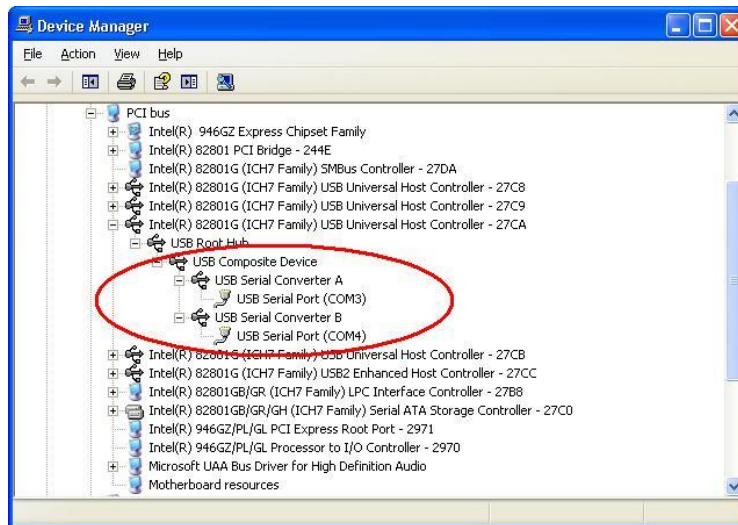


Figure 19