

**Model USA-FTDI-A36**  
**USB/RS-232**  
**Interface Converter**

**User Manual**



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## **I. Summary**

With rapid development of computer industry, USB is taking the place of various kinds of traditional low speed peripheral interfaces. However, RS-232 interface designs are still used in many of the important facilities under current industrial environment, therefore, converter is used by many users to implement the data transmission from USB of a computer to RS-232 equipments.

USA-FTDI-A36 is a universal USB/RS-232 interface converter. No external power supply needed. Compatible with USB and RS-232 standards, USA-FTDI-A36 is capable to perform the conversion from single-ended USB signal into UART signal of RS-232. DB9 male connectors are used for connection from RS-232 interface. The unique I/O circuit of the internal zero delay auto transceiver contained in the converter controls the data stream direction automatically. The converter is plug-and-play. All these features ensure a universal application on all the existing communication software and hardware interfaces.

The data communication rate can be as high as 300-921.6Kbps by the point-to-point communication by USA-FTDI-A36 interface. Power indicator light and data traffic indicator light are also available with the converter for malfunction indication. Conversion from USB to RS-232 is supported.

## **II. Functions**

USA-FTDI-A36 interface converter supports the following communication mode:

1. Point-to-point communication mode.

## **III. Hardware installment and application**

Read the user manual carefully before installing the USA-FTDI-A36 interface converter. Put the signal cable of the equipment into the USB socket. USB/DB9 male connectors are adopted for input/output interface connection for this product.

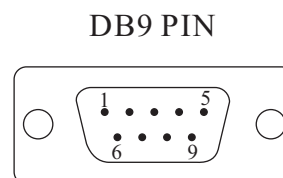
## IV. Performance parameters

1. Standards: conforming to USBV1.0, 1.1 and 2.0 and EIA RS-232.
2. USB signals: VCC, DATA+, DATA-, GND and FG..
3. RS-232 signals: DCD RXD TXD DTR GND DSR RTS CTS RI
4. Working mode: asynchronous point-to-point.
5. Direction control: adoption of automatic data stream control for automatic recognition and control of data transmission direction.
6. Baud rate: 300-921.6Kbps, automatic detection of the transmission rate of the serial interface signal.
7. Transmission distance: 5 meters for RS-232 and less than 5 meters for USB.
8. Interface protection: +-15KV electrostatic protection.
9. Interface forms: B interface female connector and DB9 male connector for USB.
10. Signal indication: 9 indicator lights for Power (PWR), Send (TXD) and Receive (RXD).
11. Transmission media: twisted-pair cable or shielded cable.
12. Dimensions: 200mm.
13. Working environment: -40°C to 85°C, relative humidity 5% to 95%.
14. Supported OS: Support Windows2000/XP, Vista, server2003, Mac OS-X/OS9, LINUX, Windows7, Server 2008, and 64-bit.
15. Both BUS and external power supply are supported.

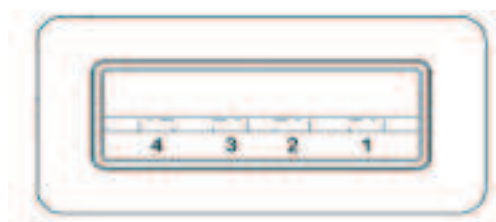
## V. Connector and signal

1. DB9 PIN: RS-232 output signals and PIN assignment

DB9 Female (PIN)	RS-232C interface signal
1	Protection groundingDCD
2	Receiving data SIN (RXD)
3	Sending data SOUT (TXD)
4	Data terminal preparation DTR
5	Signal grounding GND
6	Data equipments preparation DSR
7	Request sending RTS
8	Clear sending CTS
9	Ring indication RI

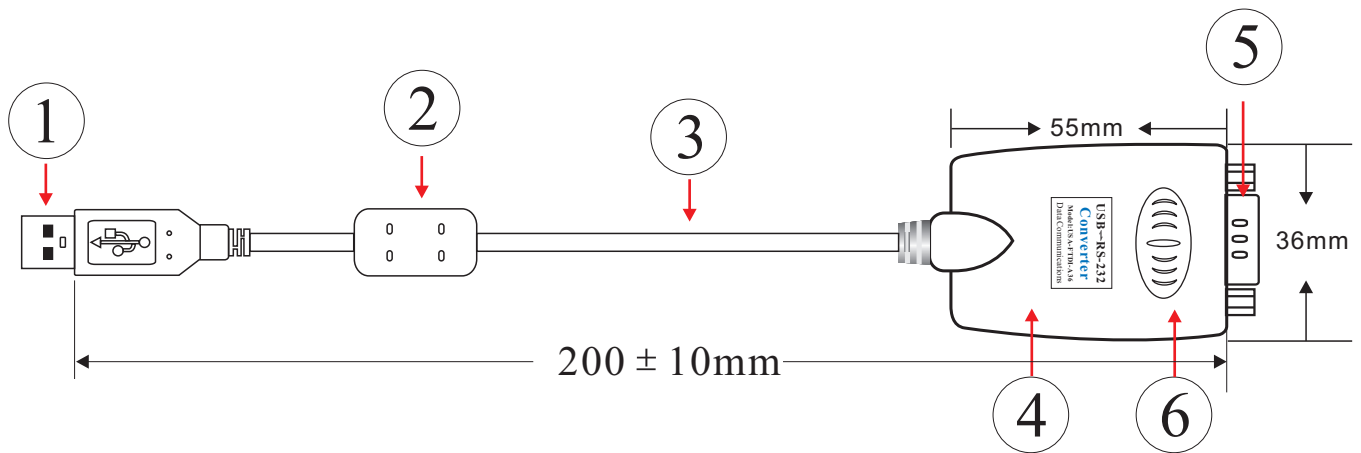


2. USB-B female: USB output signals and PIN assignment



- 1、 VCC
- 2、 DATA-(DM)
- 3、 DATA+(DP)
- 4、 GND

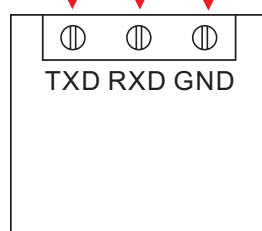
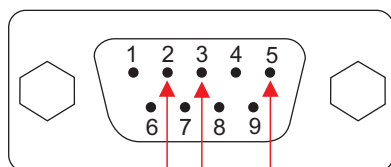
## VI. Communication Connection Chart



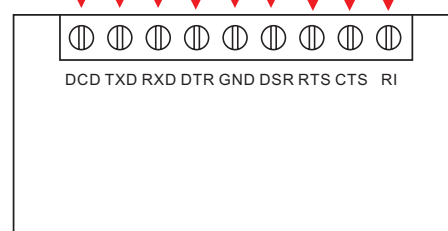
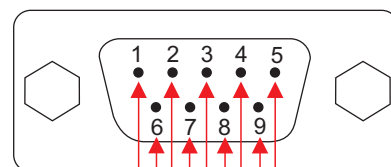
- 1、 Standard USB A type male connector
- 2、 Filter magnetic pole
- 3、 Transparent and shielded standard 2.0 communication line
- 4、 Fine shell(blue)
- 5、 Standard DB9 male connector
- 6、 MCU adopts the product of the British FTDI company

### USB To RS-232 Communication

- 1、 DCD 2、 RXD 3、 TXD 4、 DTR 5、 GND 6、 DSR 7、 RTS 8、 CTS 9、 RI



RS-232 device



RS-232 device

## **VII. Problems and troubleshooting**

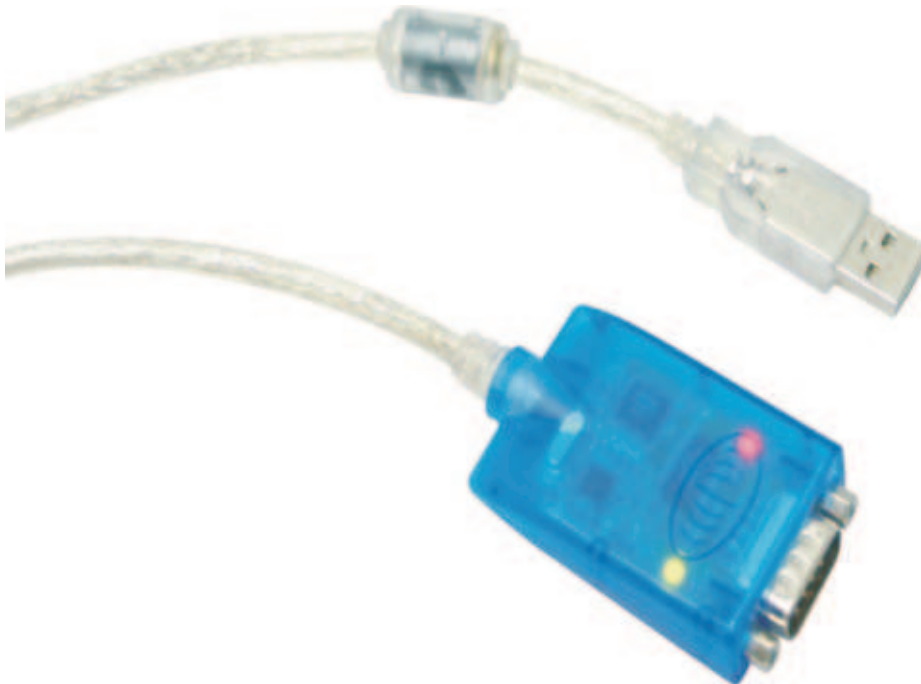
### 1. Data communication failure

- A. Check to make sure USB cable is OK.
- B. Make sure RS-232 output interface connection is correct.
- C. Make sure power supply is OK.
- D. Make sure the wire terminal connection is OK.
- E. Make sure the indicator lights flash when receiving.
- F. Make sure the indicator lights flash when sending.

### 2. Data missing or incorrect

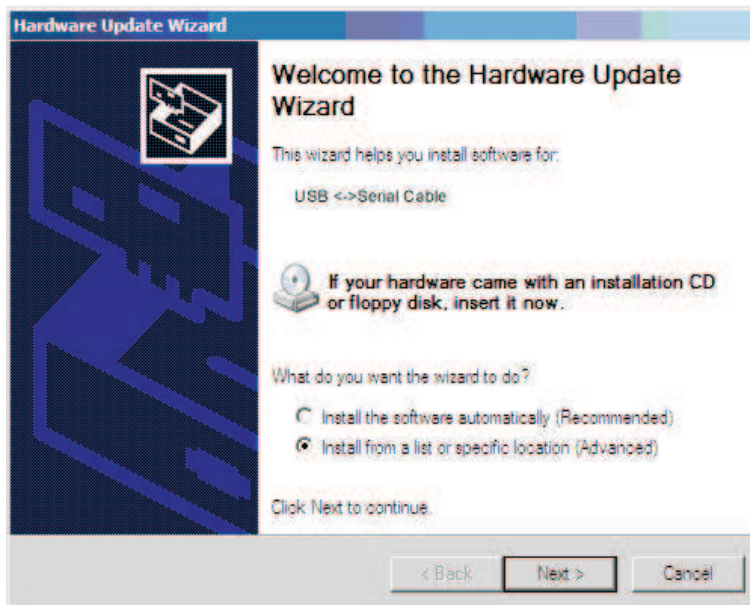
- A. Check to see whether the data rate and format at both ends of the communication equipment are consistent.

## **VIII. Product image**

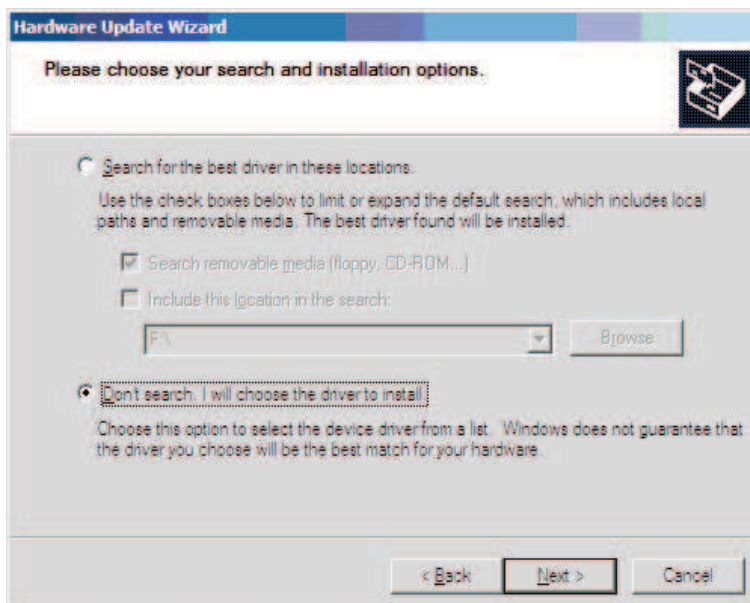


## IX. Driver installation

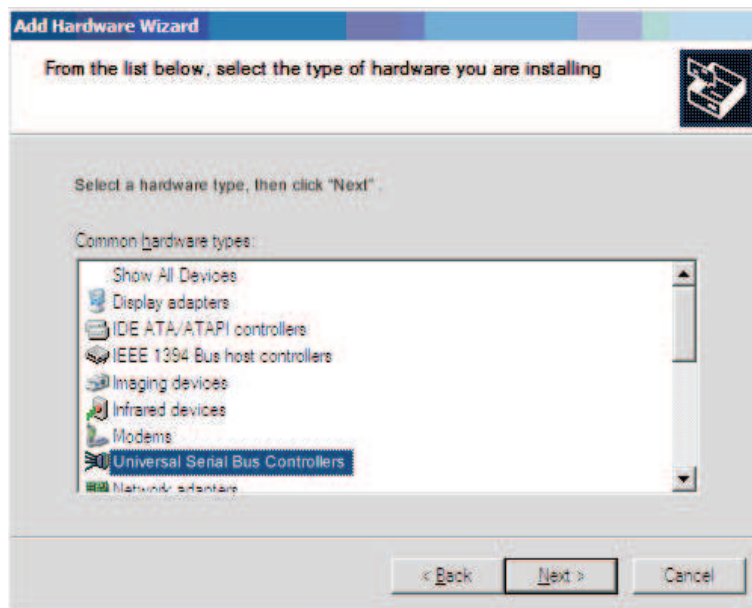
Following dialogue will pop up automatically when the USA-FTDI-A36 is connected to PC. Please select [install from list or specified location (For advanced user)] and click “Next” .



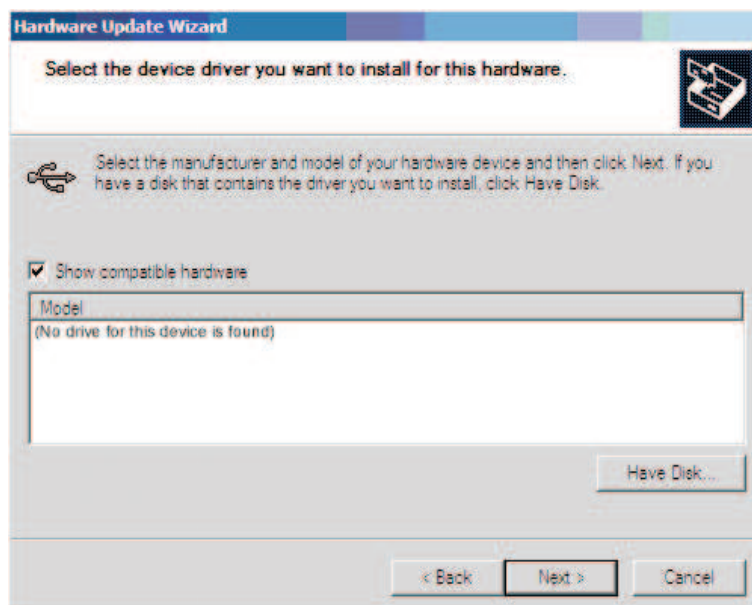
The following dialogue of path selection will be shown, and please select [Don't search. I'll select the driver to be installed by myself (D)] and click “Next” .



Then the hardware type dialogue will be shown and please scroll to (Universal serial bus controller) and click “Next” .

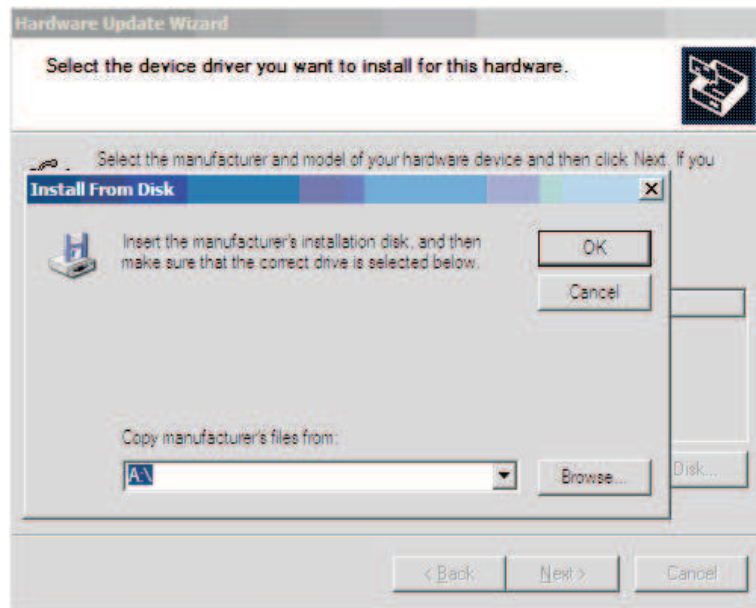


The dialogue of “select the driver to be installed for this hardware” will be shown and please click [install from hard disk (H)]

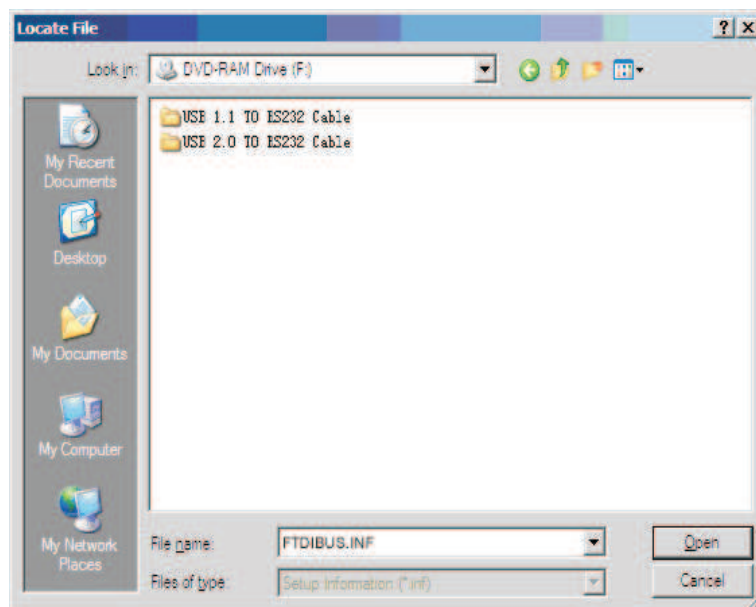




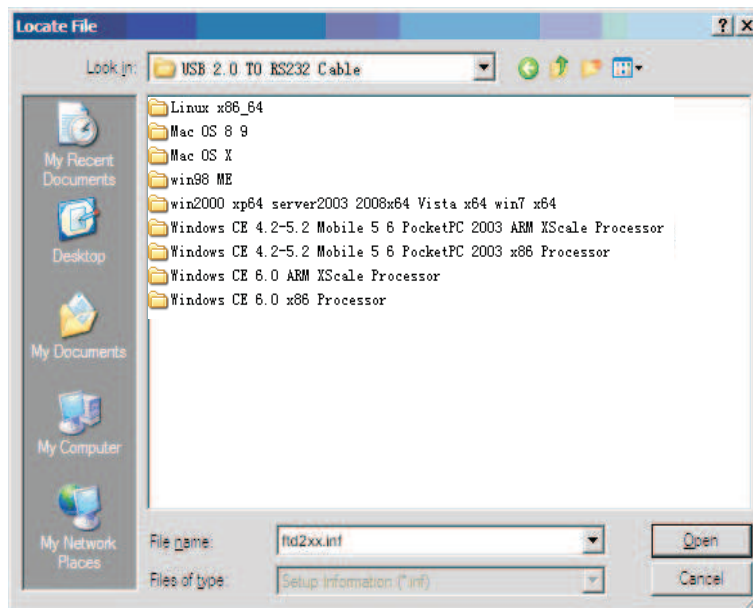
Then the dialogue of “install form hard disk” will be shown and please click (browse) to select the path of driver.



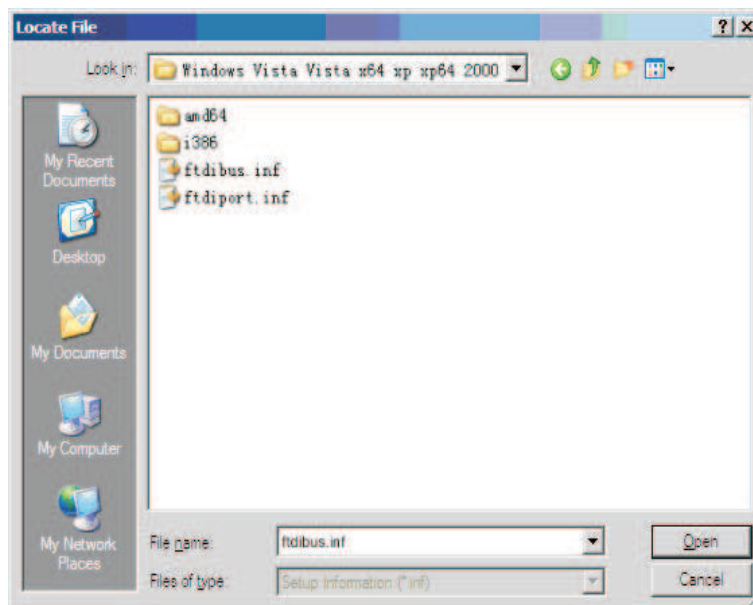
The dialogue of “Find files” will pop up, and then select the CD path. Select (USB 2.0 TO Rs232 Cable) and open or just double click it as shown in the following figure



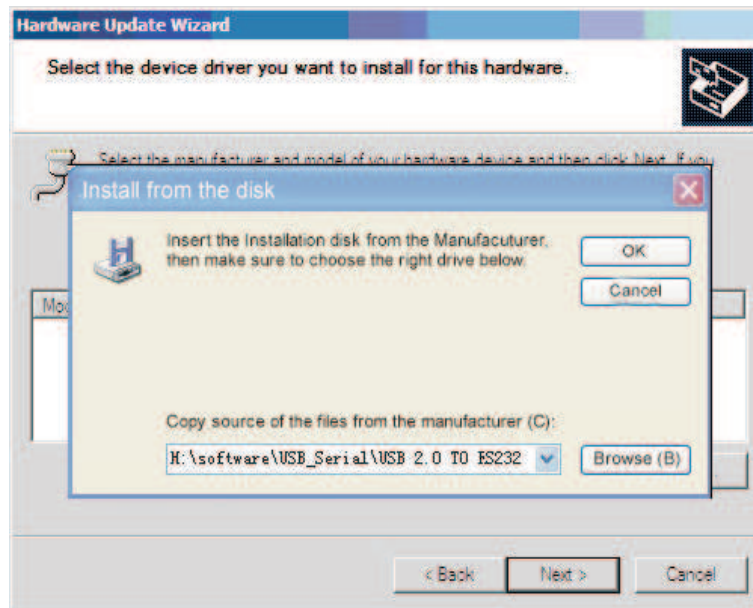
Select the appropriate operating system (such as windows xp), and select (win2000 xp64 server2003 2008x64 Vista x64 win7 x64) and click to open it or double click it.



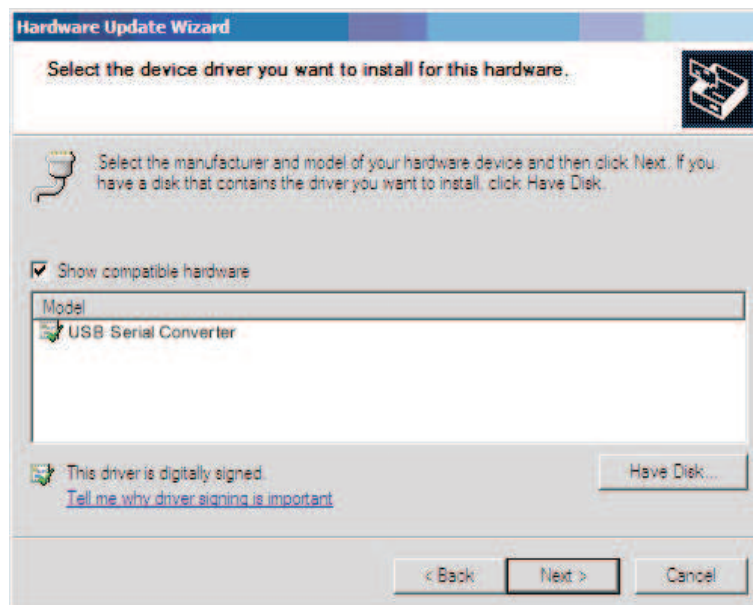
In the popped up dialogue select FTDIBUS. INF and click it to open it, then a new dialogue with selected FTDIBUS file will be shown.



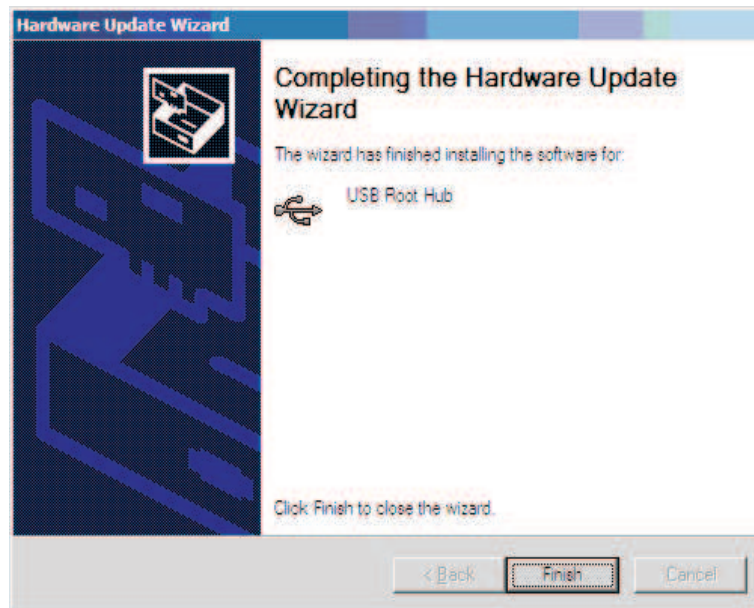
Below is the driver path and then please click (OK).



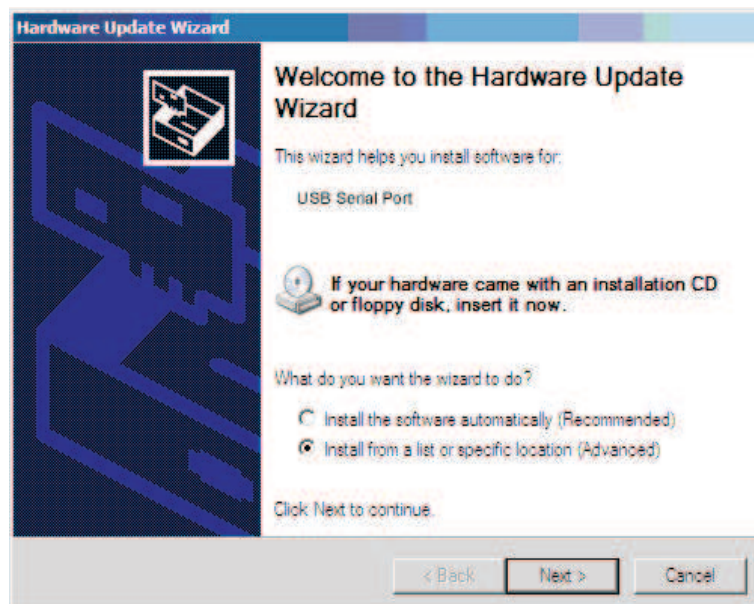
The system has found the hardware installation information of the USB Serial Converter as shown in the figure below, then click “Next” .



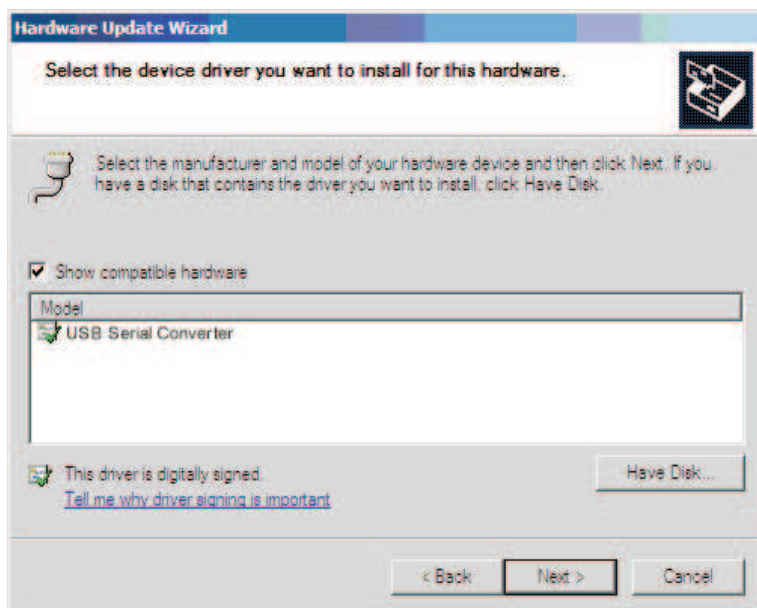
The USB Serial Converter installation wizard is completed just as shown in the following figure. Then the system will detect the USB Serial Port automatically and show the “New hardware found” wizard.



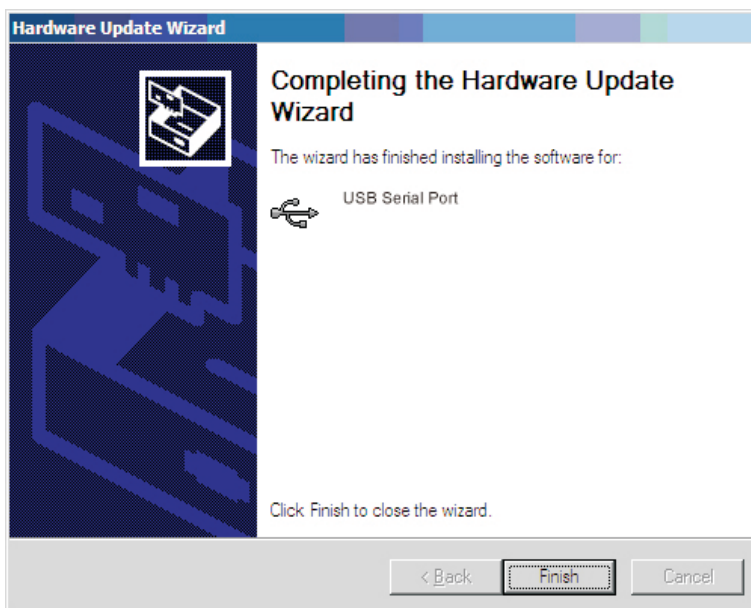
The following dialogue shows the new hardware wizard of USB Serial Port. Please click “Next” and the following steps are just the same as the wizard of USB Serial Converter, so we won't describe it in detail here.



The system has found the hardware installation information of the USB Serial Port as shown in the figure below, then click “Next” .



The USB Serial Port installation wizard is completed just as shown in the following figure. Now the driver of USA-FTDI-A36 has been installed completely.



After the driver has been installed correctly please have a look at the device manager to make sure whether there is virtual COM port. If it's the first time to install the USB driver on this system then the default COM ports are COM3 as shown in the following figure. Up to now the driver of USA-FTDI-A36 has been installed successfully.

