Model HK-5204A

USB/RS-232 4-Port Interface Converter

User Manual

HighTek ®

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I. Summary

With rapid development of computer industry, USB is taking the place of variouskinds oftraditionallowspeedperipheralinterfaces. However, RS-232 interface designs are still used in many of the important facilities under currentindustrial environment, therefore,converter isused by manyusersto implement the data transmission from USB of a computer to RS-232 equipments.

HK-5204A is a universal USB/RS-232 interfaceconverter. Noexternalpower supply needed. Compatible with USB and RS-232 standards, HK-5204A is capabletoperform the conversionfrom single-ended USB signal into UART signal of RS-232. DB9maleconnectors areusedfor connection fromRS-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.

Thedatacommunication ratecan beas highas 300-921.6Kbpsbythepoint-to-point communicationby HK-5204Ainterface. Power indicator lightand data traffic indicator light are also available with the converter for malfunction indication. ConversionfromUSBtoRS-232iss upported.

II. Functions

HK-5204A interfaceconvertersupports thefollowing communicationmode:

1. Point-to-pointcommunication mode.

III.Hardware installment and application

Read the user manual carefully before installing the HK-5204A interface converter. Put the signal cable of the equipment into the USB socket.USB/DB9 male connectors are adopted for input/output interface connection forthis product.

IV.Performance parameters

1. Standards: conformingto USBV1.0,1.1and2.0andEIARS-232.
2. USB signals:VCC,DATA+,DATA-,GNDandFG..
3. RS-232signals:DCDRXDTXD DTR GNDDSRRTSCTS RI
4. Workingmode:asynchronouspoint-to-point.
5. Direction control: adoption of automatic data stream control for automatic recognitionandcontrolofdatatransmissiondirection.
6. Baud rate: 300-921.6Kbps, automatic detection of the transmission rate of t he serialinterfacesignal.
7. Transmissiondistance:5 meters forRS-232andless than5 meters forUSB.
8. Interfaceprotection:+-15KVelectrostaticprotection.
9. Interfaceforms:B interfacefemaleconnector andDB9maleconnectorforUSB.
10.Signalindication:9indicator lightsforPower(PWR),Send(TXD)and Receive (RXD).
11.Transmissionmedia:twisted-paircableorshielded cable.
12.Dimensions:159mmX130mmX33mm.
13.Workingenvironment:-40   85 , relativehumidity5% to95%.
14.Windows95/98/2000/XPandIMAGaresupported.
15.BothBUS andexternal power supply aresupported.

# V. Connector and signal

1.DB9PIN:RS-232outputsignalsandPINassignment

DB9Female (PIN)	RS-232Cinterfacesignal
1	ProtectiongroundingDCD
2	ReceivingdataSIN(RXD)
3	SendingdataSOUT(TXD)
4	DataterminalpreparationDTR
5	SignalgroundingGND
6	DataequipmentspreparationDSR
7	RequestsendingRTS
8	ClearsendingCTS
9	RingindicationRI

DB9PIN
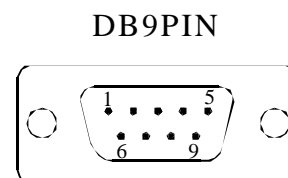
2.USB-Bfemale:USBoutputsignalsandPINassignment

DATA-   VCC

DATA+   GND
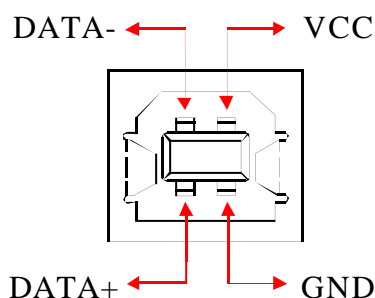
VI. Communication Connection Chart
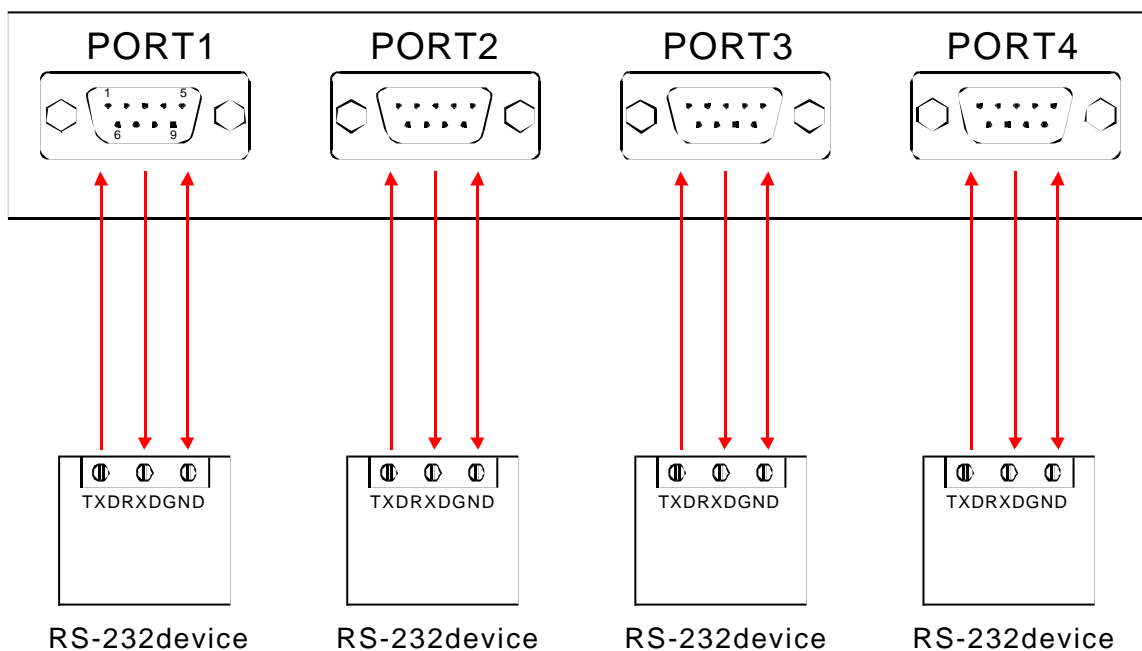
1 DCD 2 RXD 3 TXD 4 DTR 5 GND 6 DSR 7 RTS 8 CTS 9 RI
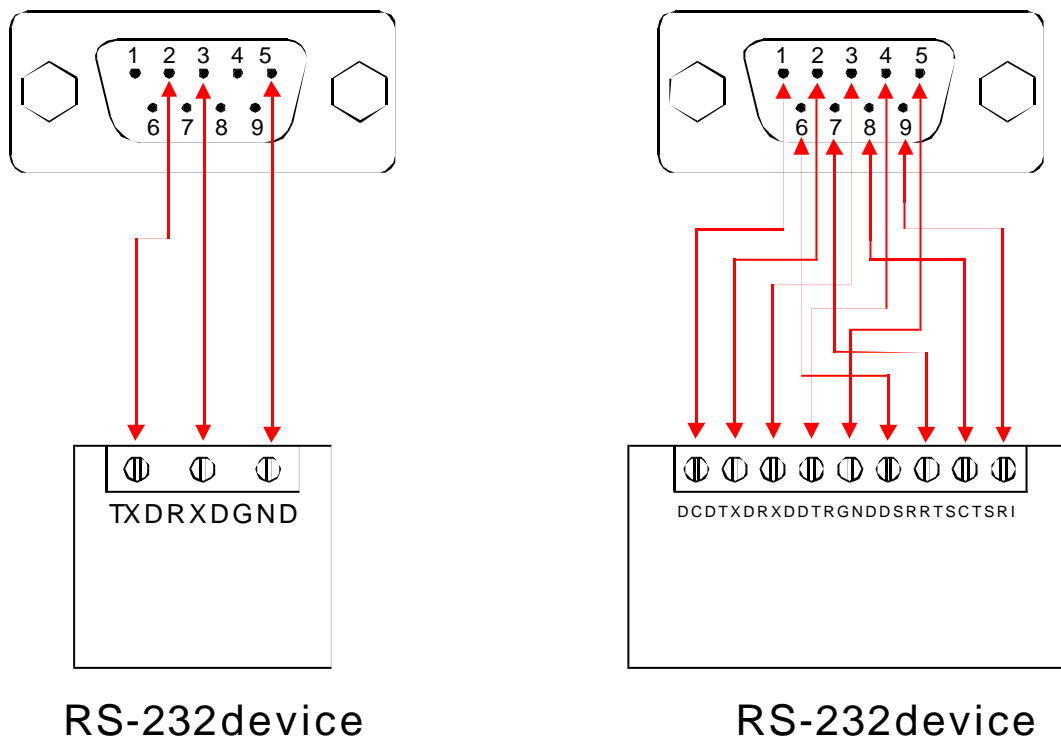
VII.Problems andtroubleshooting

1.Datacommunicationfailure

    A. Check tomakesure USBcableis OK.
    B. Make sureRS-232outputinterfaceconnection iscorrect.
    C. Make sure power supplyis OK.
    D. Make surethewireterminalconnection isOK.
    E. Make sure the indicatorlightsflashwhen receiving.
   F. Makesuretheindicatorlightsflashwhen sending.

2.Datamissingor incorrect

    A. Check to see whether the data rate and format at both ends of the communicationequipmentareconsistent.

VIII.Productimage
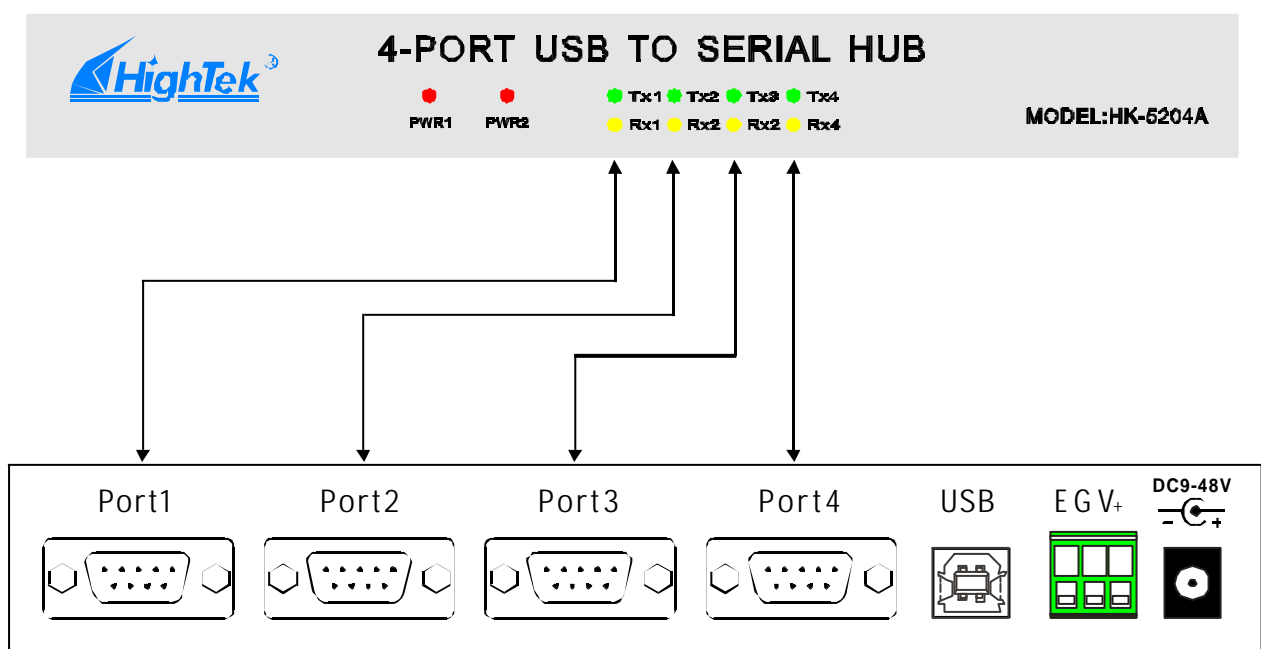
IX. Driver installation

Once a HK-5204A converter is connected with the USB port, the following windowwill popup.SelectInstallfrom a list orspecificlocation(Advanced), ,then click Next t o c ontinue.
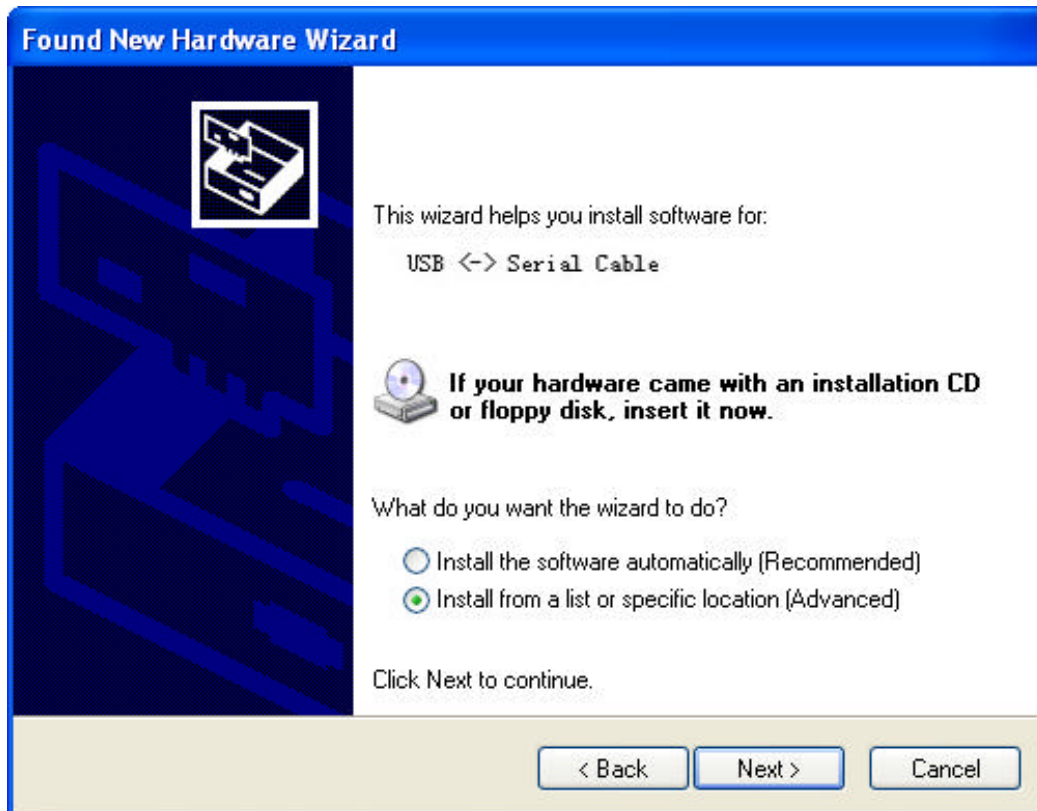

Then a window pops up to choose search and installation options as the following, please select Don't search. I will choose thedriverto install., and thenclickNexttocontinue.
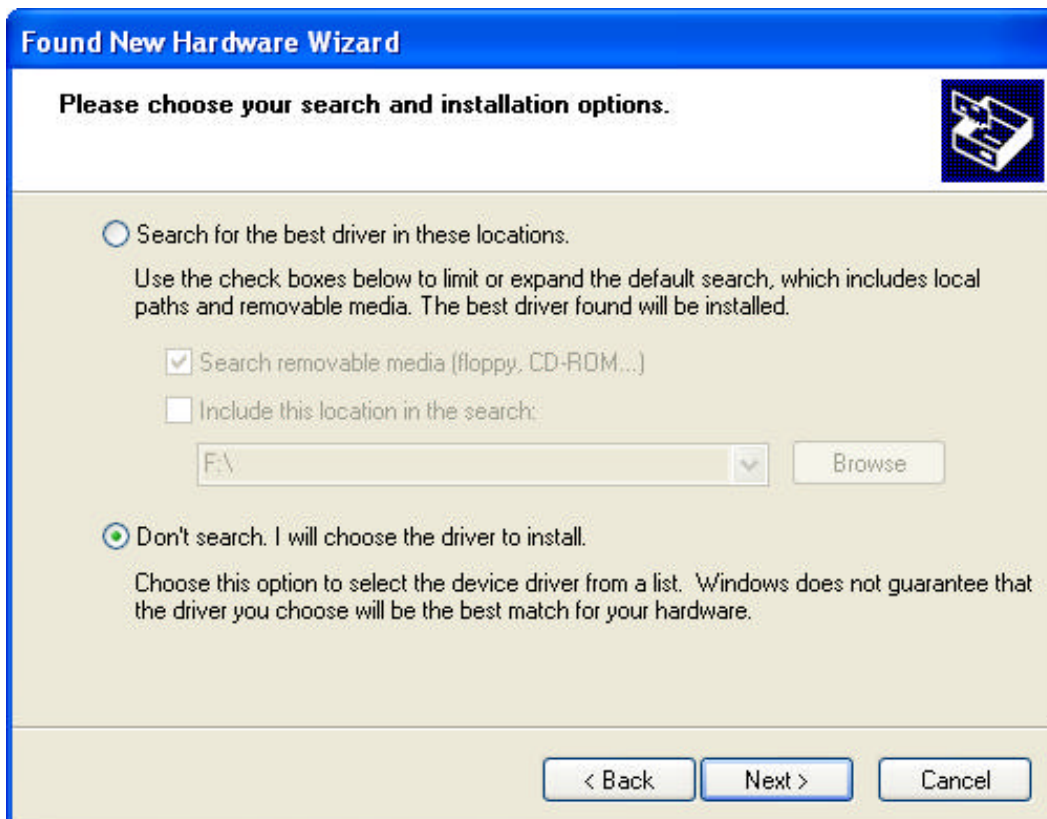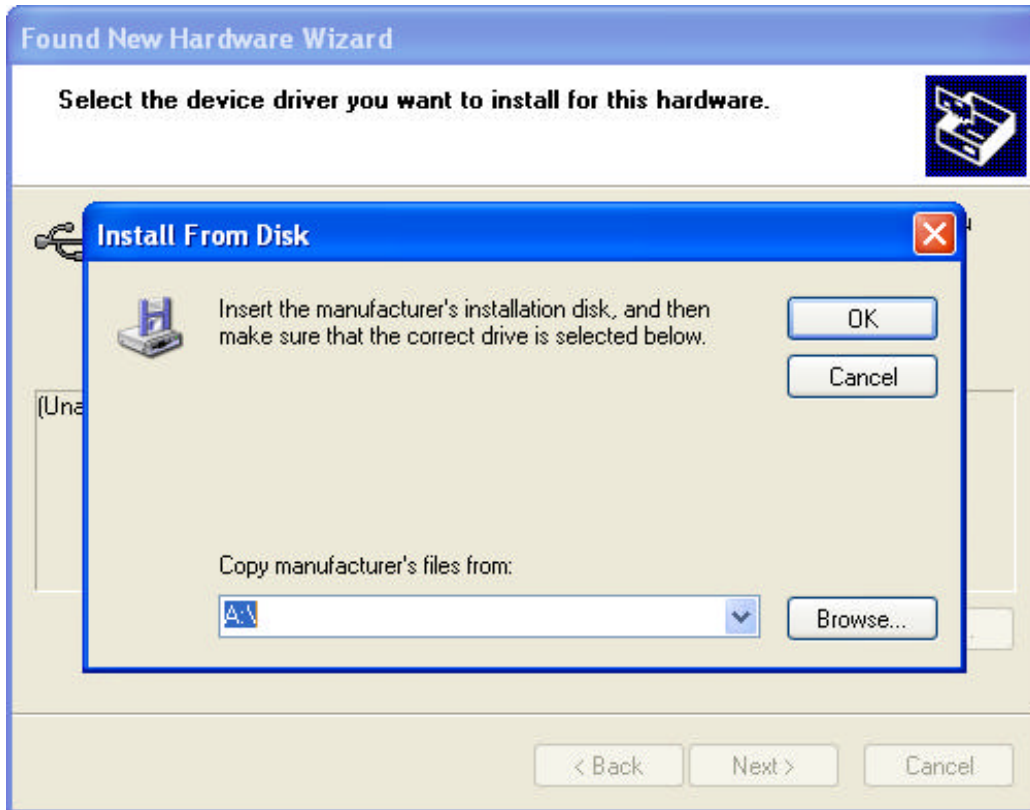
Then a window pops up for Hardware Type listing, pull the scroll bar to select Universal Serial Bus Controllers and click Next to continue.
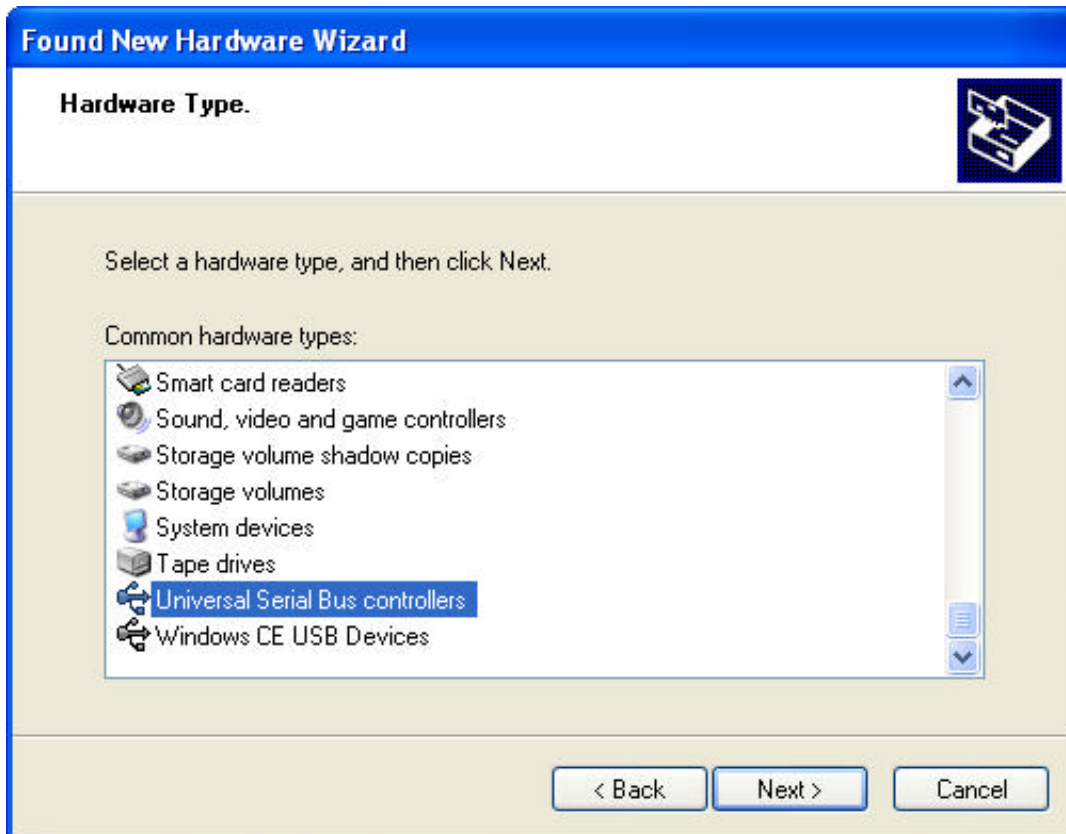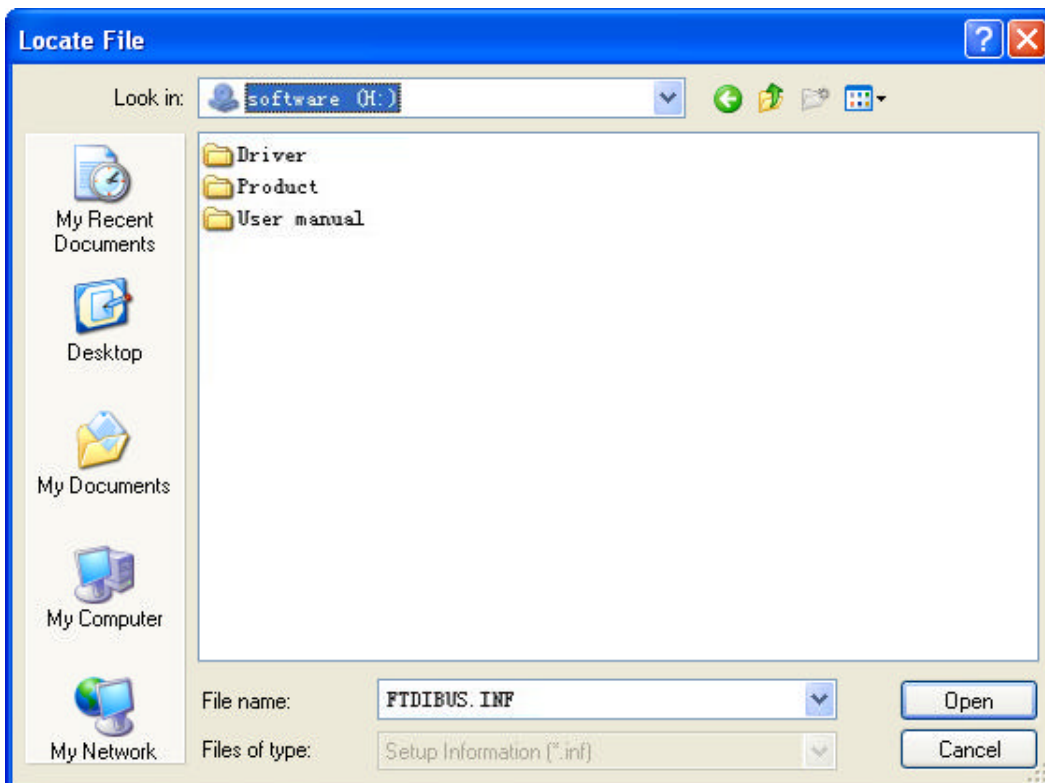

In the following Select the device driver you want to install for this hardware, click Have Disk to continue.
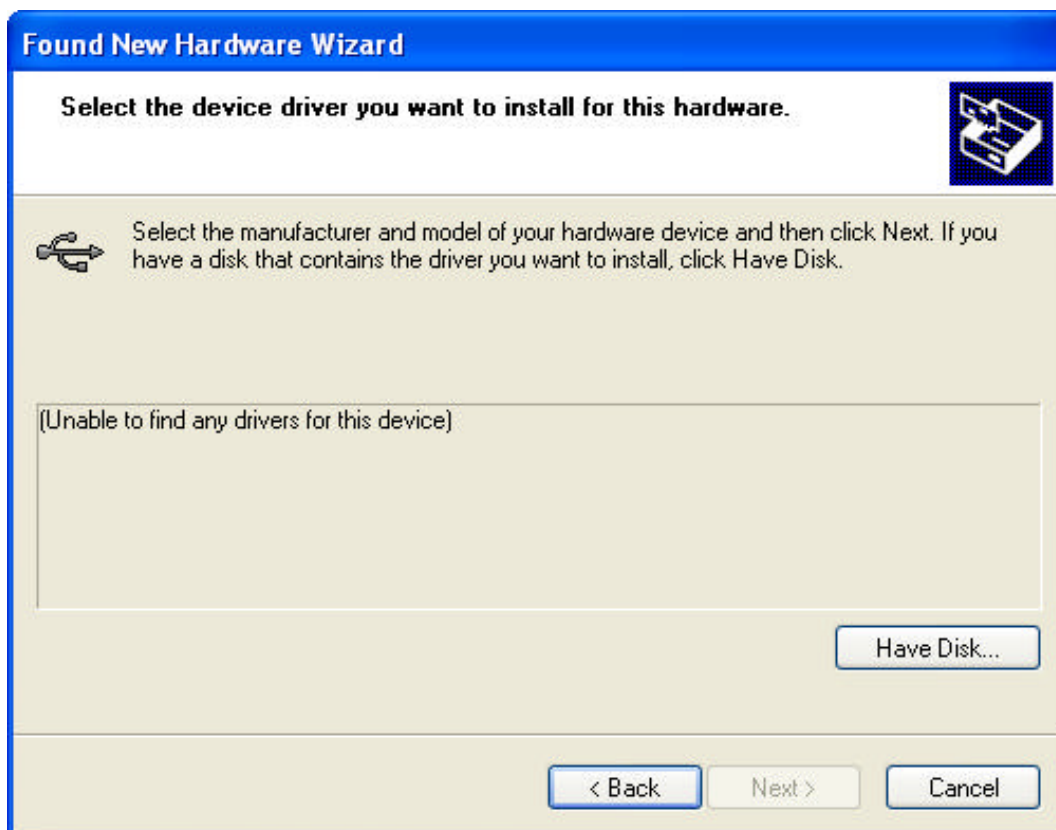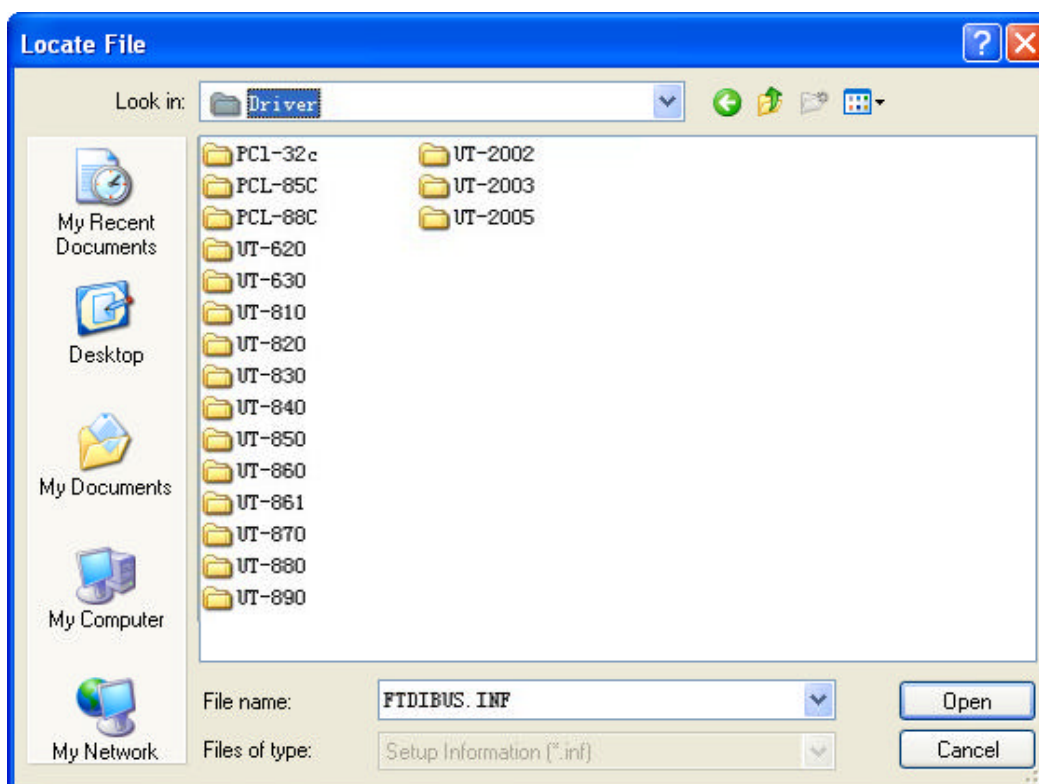
In the Install From Disk window, click Browse to select the path of the device driver.
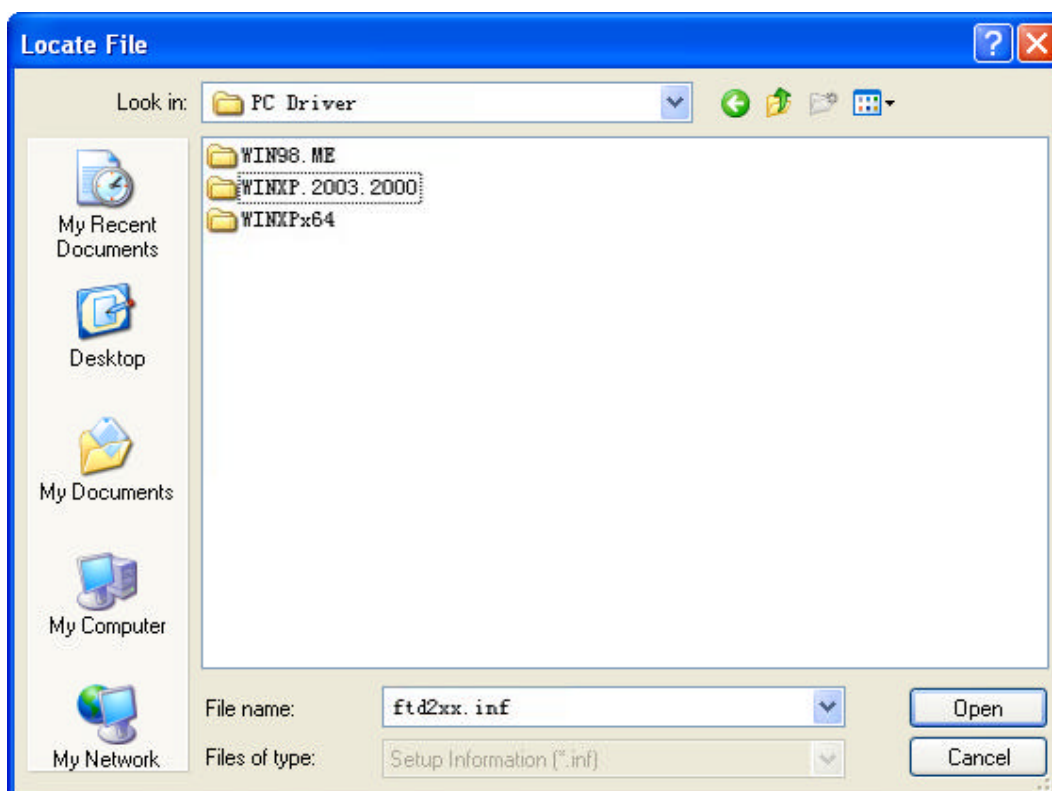

In the Locate File window, select CD path, then choose the directory Driver and click the button Open or double click to open.
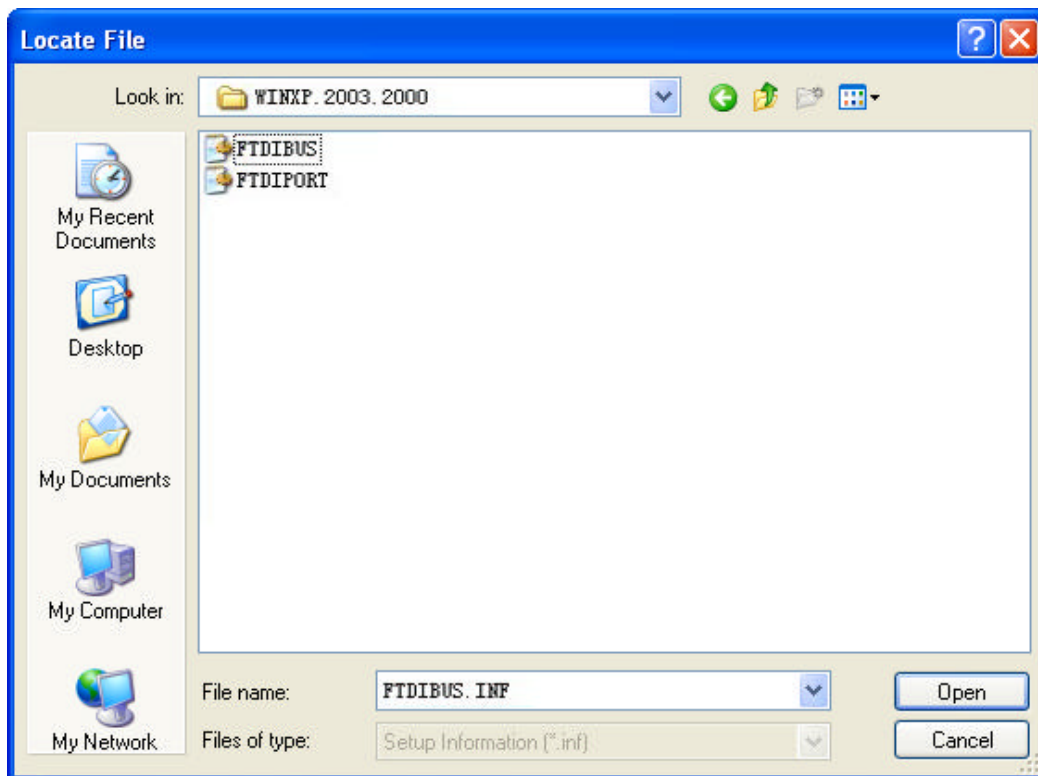
Select the driver model as the following, then click the directory HK-5204A to open, select PCDriver directory.
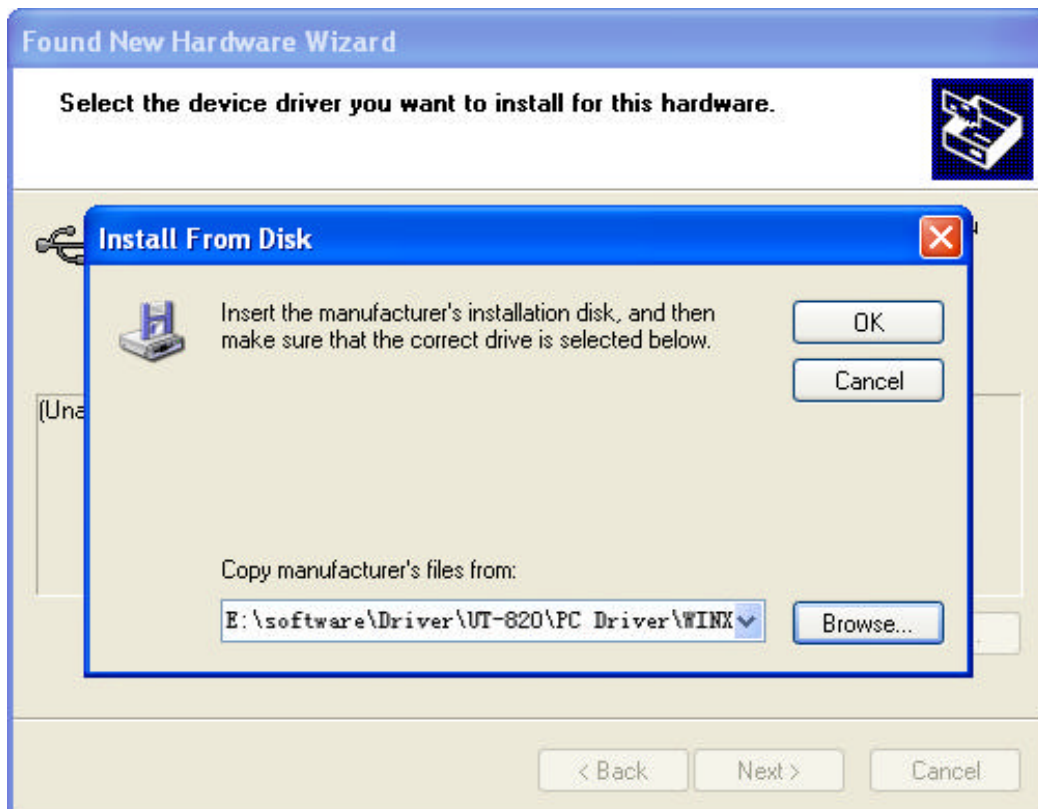

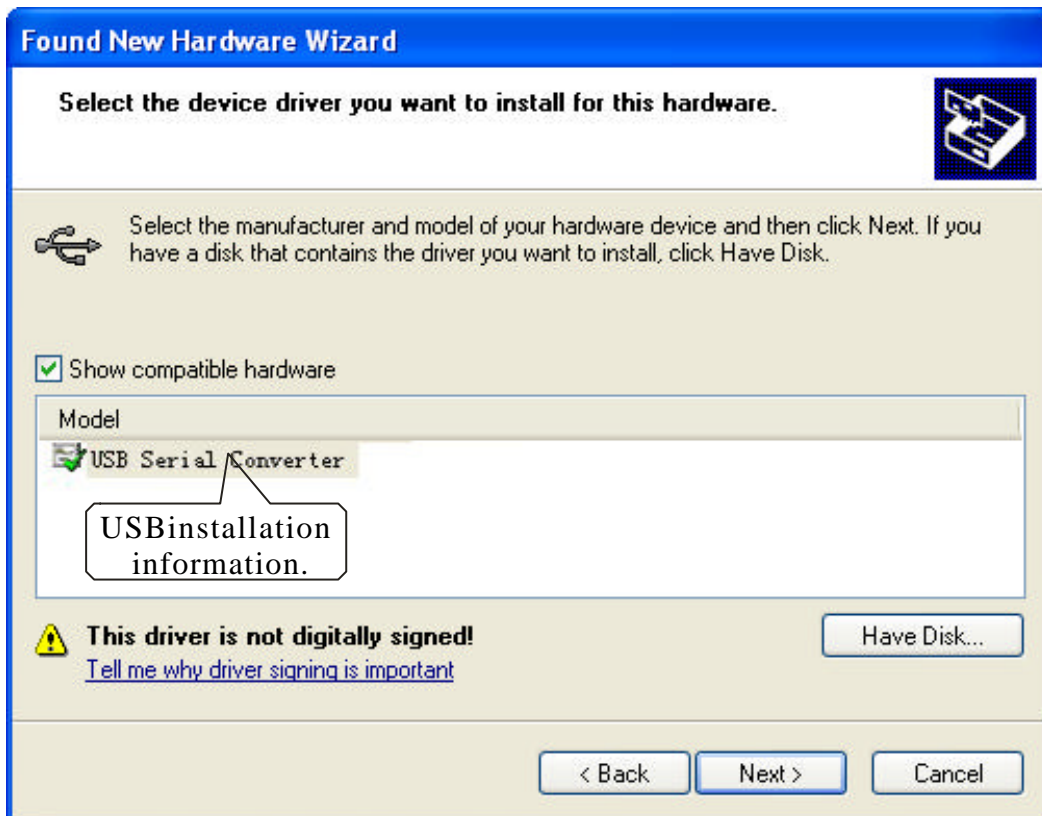Select the applicable operation system, e.g. select and double click to open WINXP.2003.2000 for Windows XP.
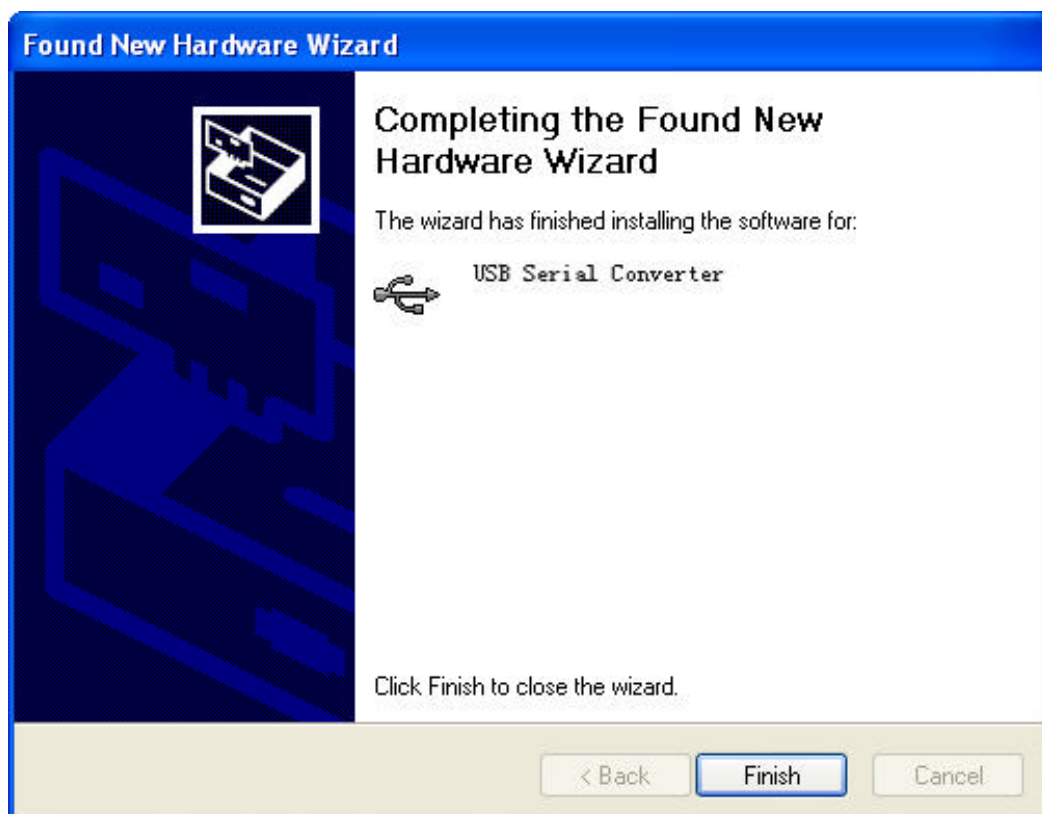
SelectthefileFTDIBUS.INF, thenclickOpen.
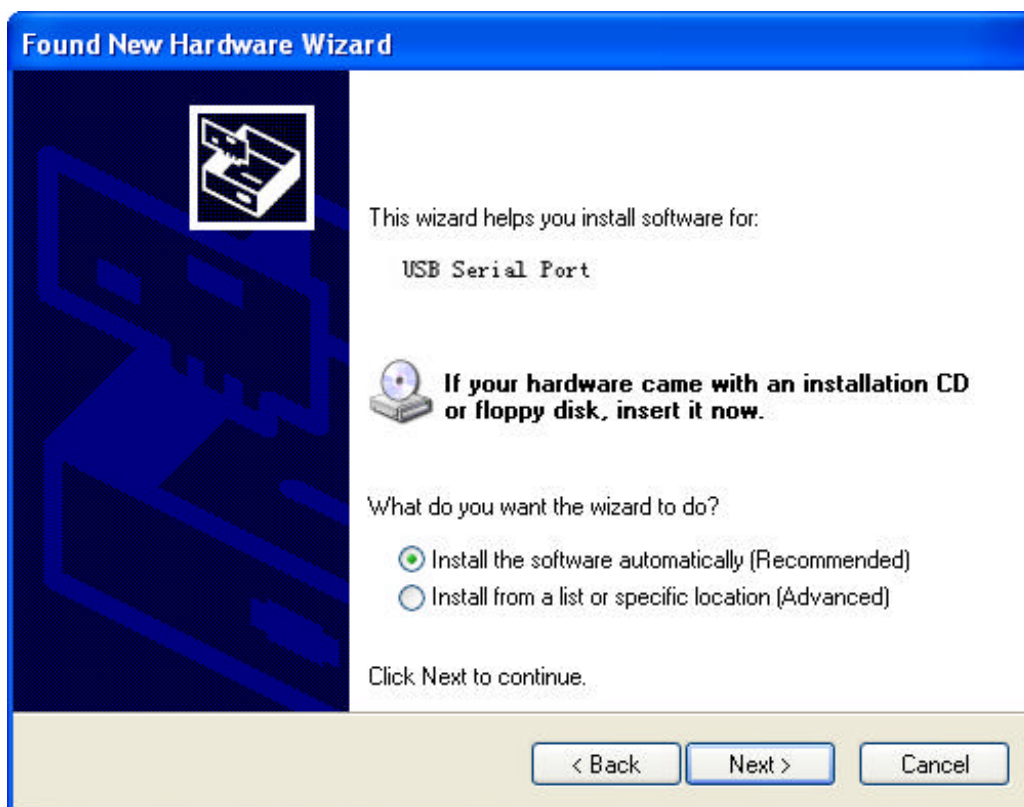

In thefollowing InstallFromDiskwindow,justclick OK.

Installation informationhasbeenlocatedby thesystemas thefollowing, just click Nexttocontinue.

The following shows that the USBSerial Converter installation is finished, thenthesystemwizard willdetectUSB Serial Portautomatically.
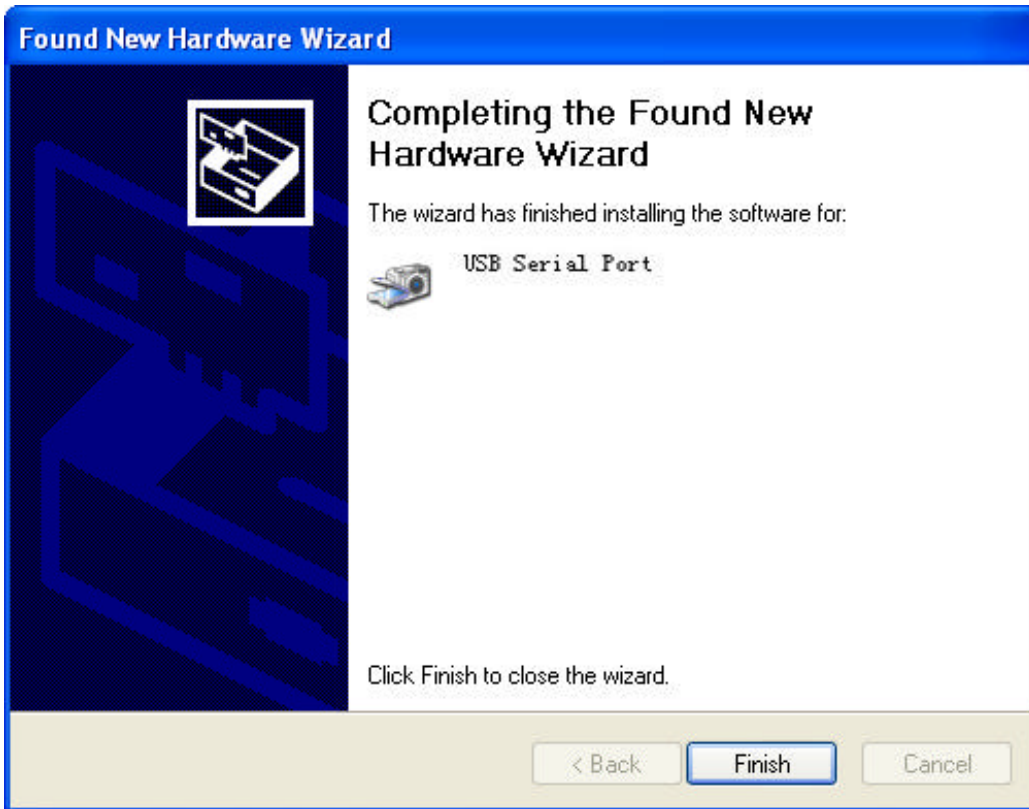
The following is the Found New Hardware Wizard for USB Serial Port, click Next as for USB Serial Converter, the same steps are omitted here.

Installation information has been located by the system as the following, just click Next to continue.
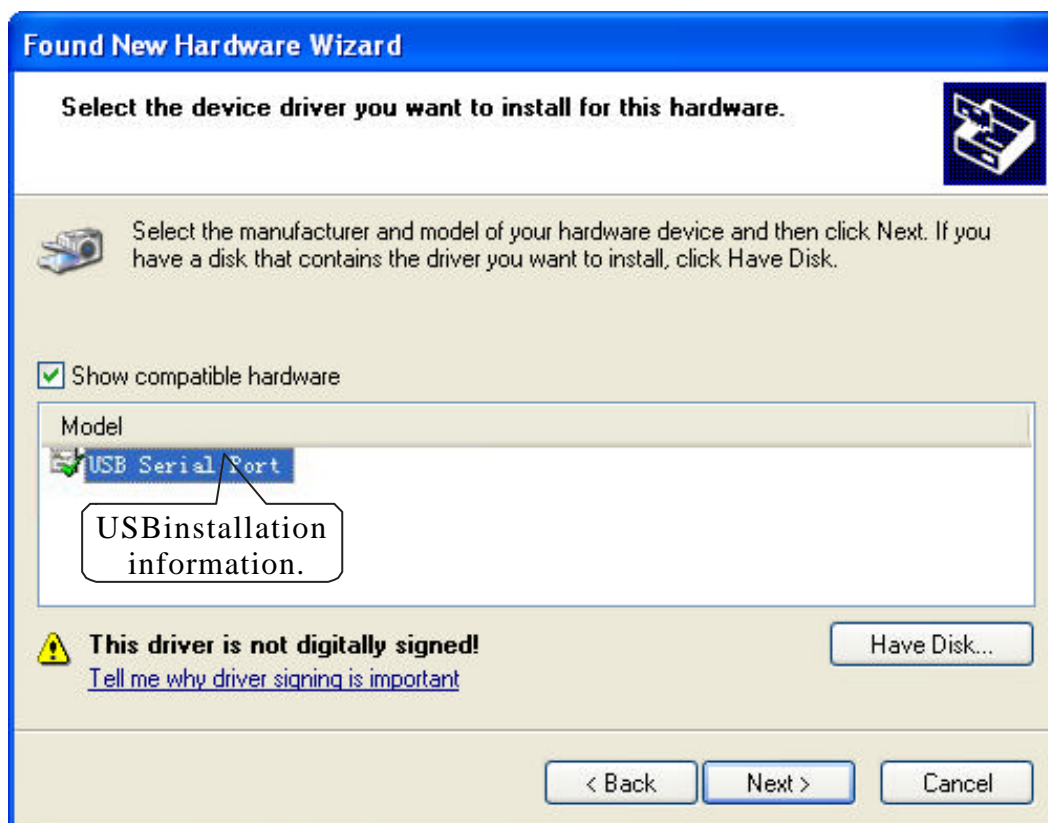
The followingshowsthe USB Serial Portinstallation isfinished. Upto now, all thedriversfor HK-5204Aare installed.

After installation, you can open Device Manager to check it there are COM ports availablenow, ifnoUSBdrivers havebeeninstalledpreviously. System default COM ports are COM3, 4, 5 and 6 as illustratedbelow. Now, all the installation isfinished.