## Model HK-5204A USB/RS-232 4-Port Interface Converter

# **User Manual**



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#### I. Summary

With rapid development of computer industry, USB is taking the place of variouskinds of traditional lowspeed 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 manyusers to 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 are used for 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 high as 300-921.6Kbpsbythepoint-topoint communication HK-5204Ainterface. Power indicator light and data traffic indicator light are also available with the converter for malfunction indication. ConversionfromUSBtoRS-232is supported.

#### **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-, GND and FG...
- 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 the serialinterfacesignal.

7. Transmissiondistance: 5 meters for RS-232 and less than 5 meters for USB.

8. Interfaceprotection:+-15KVelectrostaticprotection.

9. Interfaceforms: B interfacefemaleconnector and DB9 maleconnector for USB.

10.Signalindication:9indicator lightsforPower(PWR),Send(TXD)and Receive (RXD).

11. Transmissionmedia: twisted-paircableorshielded cable.

12.Dimensions:159mmX130mmX33mm.

13.Workingenvironment:-40 到 85, relativehumidity5% to95%. 14.Windows95/98/2000/XPandIMAGaresupported.

15.BothBUS and external power supply are supported.

#### 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



#### **VI.** Communication Connection Chart



1、DCD2、RXD3、TXD4、DTR5、GND6、DSR7、RTS8、CTS9、RI



**RS-232device** 

**RS-232device** 

#### VII.Problems and troubleshooting

1. Datacommunication failure

- A. Check tomakesure USBcableis OK.
- B. Make sureRS-232outputinterfaceconnection iscorrect.
- C. Make sure power supplyis OK.
- D. Make sure the wire terminal connection is OK.
- E. Make sure the indicator lights flash when 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





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#### 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 Nexttocontinue.

Found New Hardware Wizard			
	This wizard helps you install software for: USB ←> Serial Cable		
	< Back Next > Cancel		

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 windowpopsupforHardwareTypelisting,pullthe scroll bartoselect UniversalSerialBusControllers andclickNexttocontinue.

Found New Hardware Wizard			
Hard <del>w</del> are Type.			
Select a hardware type, and then click Next. Common hardware types:			
<ul> <li>Smart card readers</li> <li>Sound, video and game controllers</li> <li>Storage volume shadow copies</li> <li>Storage volumes</li> <li>System devices</li> <li>Tape drives</li> <li>Universal Serial Bus controllers</li> <li>Windows CE USB Devices</li> </ul>			
(	< Back Next > Cancel		

In the following Select the device driver you want to install for this hardware, click Have Disk to continue.

Found	Found New Hardware Wizard			
Sele	ct the device driver you want to install for this hardware.			
đ	Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.			
(Unable	to find any drivers for this device)			
	Have Disk			
	< Back Next > Cancel			

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IntheInstallFrom Disk window, click Browse toselect the path of the device driver.

Foun	Found New Hardware Wizard				
Se	Select the device driver you want to install for this hardware.				
P	Install F	rom Disk	i -		
(Una	-	Insert the manufacturer's installation disk, and then OK make sure that the correct drive is selected below. Cancel			
		Copy manufacturer's files from:			
		Browse			
-					
		<pre></pre>	el		

In the Locate File window, select CD path, thenchoose the directory Driver and click the button Openordouble click to open.

Locate File						? 🗙
Look in:	isoftware (	H:)	~	3 🕫	۳ 🖽	
My Recent Documents	Driver Product User manual					
Desktop						
My Documents						
My Computer						
	File name:	FTDIBUS. INF			*	Open
My Network	Files of type:	Setup Information (".inf)			~	Cancel

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Selectthedrivermodelas thefollowing, then click the directory HK-5204Ato open, select PCDriverdirectory.

Locate File						? 🛛
Look in:	Driver Driver		~	3 🔊	• 🖭 👏	
My Recent Documents Desktop My Documents	PCL-32c PCL-85C PCL-88C VT-620 VT-630 VT-810 VT-810 VT-820 VT-820 VT-830 VT-840 VT-850 VT-860 VT-861 VT-861 VT-870 VT-880 VT-880 VT-880	C UT-2002 UT-2003 UT-2005				
	File name:	FTDIBUS. INF			<b>~</b> (	Open
My Network	Files of type:	Setup Information (*.inf)			· (	Cancel

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

Locate File					? 🛛
Look in:	🚞 PC Driver		<b>~</b> (	3 🤣 📂 🛄-	
My Recent Documents	WIN98. ME	. 2000			
Desktop					
My Documents					
My Computer					
	File name:	ftd2xx.inf		~	Open
My Network	Files of type:	Setup Information (* inf)		~	Cancel

SelectthefileFTDIBUS.INF, thenclickOpen.

Locate File					? 🛛
Look in:	🚞 WINXP. 200	03. 2000	G	🍺 📂 🛄•	
My Recent Documents	FTDIBUS				
My Documents					
My Computer					
	File name:	FTDIBUS. INF		<b>~</b> (	Open
My Network	Files of type:	Setup Information (*.inf)		- (	Cancel

In the following InstallFromDiskwindow, justclick OK.



Installation information has been located by the system as the following, just click Next to continue.

Found New Hardware Wizard			
Select the device driver you want to ins	tall for this hardware.		
Select the manufacturer and model of you have a disk that contains the driver you v	ur hardware device and then click Next. If you vant to install, click Have Disk.		
Model			
USB Serial Converter USB installation information.			
This driver is not digitally signed! <u>Tell me why driver signing is important</u>	Have Disk		
	<pre></pre>		

The following shows that the USBSerial Converter installation is finished, then the systemwizard will detect USBS erial Portautomatically.

Found New Hardware Wiz	ard
	Completing the Found New Hardware Wizard The wizard has finished installing the software for: USB Serial Converter
	< Back Finish Cancel

The following is the FoundNew Hardware Wizard for USB Serial Port, click Next as for USB Serial Converter, the same steps are omitted here.

Found New Hardware Wizard	
	This wizard helps you install software for: USB Serial Port USB If your hardware came with an installation CD or floppy disk, insert it now. What do you want the wizard to do? Install the software automatically (Recommended) Install from a list or specific location (Advanced) Click Next to continue.
	< Back Next > Cancel

Installation information has been located by the system as the following, just click Next to continue.

Found New Hardware Wizard	
Select the device driver you want to install for this hardware.	
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.	
Model	
USB Serial Port USBinstallation information.	
This driver is not digitally signed!     Have Disk Have Disk	
<pre>&lt; Back Next &gt; Cancel</pre>	

The followingshowsthe USB Serial Portinstallation is finished. Upto now, all the drivers for HK-5204A are 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.

