Model:UT-8814 USB/RS-232 Commercial interface converter

Instruction Manual



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I. Overview

USB interface is gradually replacing the old-fashioned low-speed peripheral interfaces of PC with the continuous development of PC industry. But many vital devices in current industrial environment is still designed using RS-232 interface, so the USB to RS-232 converters are needed to transfer data between PC and RS-232 devices.

UT-8814 is a universal USB 4 port RS-232 converter which doesn't need external power supply and is compatible with USB and RS-232 standards. It can convert single-end USB signal to RS-232 signal, and it has built-in automatic transmit-receive switch without time delay. The unique I/O circuit can be used to automatically control the direction of data flow so as to make it plug-and-play and applicable to all existing communication software and interface hardware.

UT-8814 supports point-to-point communication with data rate of 300-921600bps. The power indicator and data traffic indicator lights can be used for fault indication. USB to RS-232 conversion is supported.

II . Main Features

Following communication modes are supported by UT-8814 interface converter: 1) Point-to-point communication mode

III. Hardware installation and application

Please read this manual thoroughly and connect the USB cable to the USB port of computer before the installation of UT-8814 interface converter. USB/DB9M connectors are adopted for the input/output terminal and twisted cable or screened cable can be used. RS-232 communication mode can be implemented without any configuration and the connection and disassembly are very convenient. The converter uses 9 wires which are DCD RXD TXD DTR GND DSR RTS CTS and RI with all signal connections.

IV. Performance parameters

- 1. Standards: Conforming to USB1.1, 1.0 and 2.0 standards and EIA RS-232 standard
- 2、USB signals: VCC、DATA-、DATA+、GND、FG
- 3、RS-232 signals: DCD RXD TXD DTR GND DSR RTS CTS RI
- 4、 Operating mode: Asynchronous mode, point-to-point mode

5. Data flow control: Automatic data flow control technique is adopted to automatically determine and control the data flow

- 6、Baud rate: 300-921600bps, automatically detecting the data rate
- 7. Load capacity: point-to-point communication mode is supported
- 8. Communication distance: 5 meters for RS-232 interface and no more than 5 meters for the USB port
- 9 Interface protection: surge protection, ± 15 KV ESD portection
- 10、Interface connection: A type male connector at USB side and DB9 male connector at RS-232 side

11、Signal indication: 2 signal indicators transmit (TXD) receive (RXD) 1 power indicator (POWER)

12, Transmission media: twisted-pair cable or shielded cable

13、Cable length: 1500mm

14. Working environment: -40 $^\circ C$ to 85 $^\circ C$, relative humidity of 5% to 95%

15, Supported OS: Support Windows2000/XP, Vista, server2003, Mac OS-X/OS9, LINUX, Windows7, Server 2008, and 64-bit.

V. Connector and signals

1) Pin assignment of RS-232C

DB9M(PIN)	RS-232C
1	Protective earth
2	Receive data SIN(RXD)
3	Transmit data SOUT(TXD)
4	Data terminal ready DTR
5	Signal ground GND
6	Data set ready DSR
7	Request to send RTS
8	Clear to send CTS
9	Ring indicator RI



2) USB-A type: USB signal input and pin assignment



1、VCC 2、DATA-(DM) 3、DATA+(DP) 4、GND

6. Product dimension and connection diagram



- 1. Standard USB A-type male connector
- 2. Filter magnetic ring
- 3. Screened black standard USB2.0 cable
- 4. Aesthetic shell (black)
- 5. Standard DB9 male connector
- 6. Master chip of FTDT company in England
- 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

VII. Faults and trouble-shooting

- 1, Data Communication Failure
 - A₂ Check the USB cable connection
 - B_{γ} Check the RS-232 connection
 - C_{γ} Check the power supply
 - D、 Check terminal connection
 - E, Check receive indicator and see if it flashes
 - F₂ Check send indicator and see if it flashes
- 2. Data loss or error
 - A₅ Check consistancy between data communication devices' rate and format

VIII. Driver installation procedure

Following dialogue will pop up automatically when the UT-8814 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".

rdware Upd	ate Wizard
Please cho	bose your search and installation options.
C <u>S</u> ea	rch for the best driver in these locations.
	the check boxes below to limit or expand the default search, which includes local s and removable media. The best driver found will be installed.
F	Search removable media (floppy, CD-FIOM)
Г	Include this location in the search:
	F.\ Browse
• Don	t search. I will choose the driver to install
	ise this option to select the device driver from a list. Windows does not guarantee that river you choose will be the best match for your hardware.
	< Back Next > Cancel

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

		4
Select a hardware type, then click	"Next" .	
Common <u>h</u> ardware types:		
Show All Devices		
😼 Display adapters		100.0
IDE ATA/ATAPI controllers		
IEEE 1394 Bus host controller Imaging devices	5	100
Infrared devices		
Modems		
Universal Serial Bus Controll	ers	
Hand Network adapters		•

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

Selec	t 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.
Shov	, compatible hardware
Model	
No driv	e for this device is found)
	Have Disk
	Have Disk
	Have Disk

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

iardware U	ipdate Wizard				
Select t	he device driver you want to ir	istall for this h	hardware.		
Se	elect the manufacturer and model of y	our hardware de	vice and then (you
Install Fro	om Disk			×	
5	Insert the manufacturer's installation make sure that the correct drive is s		OI Can		
	Copy manufacturer's files from:				
	AN		Brow	se Di	sk
-			100		
		< <u>B</u> ack	<u>N</u> ext>	Ca	ncel

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.

Locate File					? ×
Look in	DVD-RAM	Drive (F:)	• •	🌶 📂 🖽-	
My Recent Documents Desktop		0 ES232 Cable 0 ES232 Cable			
My Documents My Computer					
My Network Places	File <u>n</u> ame: Files of <u>type</u> :	FTDIBUS.INF	f)	•	Open Cancel

Select the appopriate 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.

Locate File					<u>?</u> ×
Look in:	🔁 USB 2.0 TO	RS232 Cable	•	3 🗊 📂 🖽-	
My Recent Documents Desktop My Documents My Computer	Windows CE 4	server2003 2008x64 Vis .2—5.2 Mobile 5 6 Pocke .2—5.2 Mobile 5 6 Pocke .0 ARM XScale Processor .0 x86 Processor	≥tPC 2003 AF ≥tPC 2003 x8	XM XScale Process	or
My Network	File <u>n</u> ame:	ftd2xx.inf		•	<u>O</u> pen
Places	Files of type:	Setup Information (* inf)		7	Cancel

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.

cate File					100		?
Look (n:	C Windows	Vista Vista x6	4 хр хр64 200	0 🖸 🥥 (2 10		
My Recent Documents	i 386 i 386 i tdibus. i ftdiport						
by Documents							
My Computer							
My Network	File <u>n</u> ame:	ftdibus.inf			•	<u>O</u> per	n
Places	Files of type:	Setup Informati	on (* inf)		-	Cano	el

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

	the manufacturer and model of your hardware device and then click Next. If y
Install	from the disk
-J	Insert the Installation disk from the Manufacuturer, then make sure to choose the right drive below.
	Copy source of the files from the manufacturer (C):
	H:\software\USB_Serial\USB 2.0 TO HS232 V Browse (B)

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

rdware Update Wizard		
Select the device driver you	want to install for this hardware	
	d model of your hardware device and ie driver you want to install, click Hav	
Chan annathle basines		
Show compatible hardware		
USB Serial Converter		
This driver is digitally signed.		Have Disk
This driver is digitally signed. Tell me why driver signing is impo	<u>ortant</u>	Have Disk
And a second	ortant	Have Disk

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".

lardware Update Wizard		
Select the device driver you want	to install for this hardware	
Select the manufacturer and mode have a disk that contains the drive		
Show compatible hardware Model USB Serial Converter		
This driver is digitally signed. <u>Tell me why driver signing is important</u>		Have Disk
	< Back Nei	kt > Cancel

The USB Serial Port installation wizard is completed just as shown in the following figure. Now the driver of UT-8814 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 and COM4, 5, 6 as shown in the following figure. Up to now the driver of UT-8814 has been installed successfully.

