Model:UT-8812 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-8812 is a universal USB 2 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-8812 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-8812 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-8812 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: $\pm 15 \text{KV}$ 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
 - A, Check the USB cable connection
 - B_{x} Check the RS-232 connection
 - C_{λ} 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-8812 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".

Hardware Update Wizard
Please choose your search and installation options.
○ <u>S</u> earch for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
🔽 Search removable media (floppy, CD-ROM)
Include this location in the search:
F:\ Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext > Cancel

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

	 	N.
Select a hardware type, then click "Next"		
Common hardware types:		
Show All Devices Show All Devices		-
BIDE ATA/ATAPI controllers		
Service 1394 Bus host controllers		
Imaging devices		
🔊 Infrared devices		
Nodems		
Universal Serial Bus Controllers		- 1

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

Hardware Upda	ite Wizard		
Select the o	device driver you want	to install for this hard	ware.
	the manufacturer and mode disk that contains the drive		
Show compa	atible hardware		
Model			
(No drive for th	is device is found)		
			Have Disk
		< Back	Next > Cancel

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

Hardware l	Update Wizard			
Select	the device driver you w	want to install for this I	hardware.	Ð
_~ S	elect the manufacturer and	model of your hardware de	evice and then click Nex	t. If you
Install Fr	om Disk		x	
-		installation disk, and then ct drive is selected below.	OK Cancel	
	Copy manufacturer's files	from:		
	AN		Browse	Disk
				J
		< <u>B</u> ack	<u>N</u> ext >	Cancel

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					<u>? ×</u>
Look <u>i</u> n	: 🥝 DVD-RAM E	Drive (F:)	•	G 🕸 🖻 🗄	•
My Recent Documents Desktop My Documents My Computer	USB 1.1 TO				
My Network	, File <u>n</u> ame:	FTDIBUS.INF		•	<u>O</u> pen
Places	Files of type:	Setup Information	n (*.inf)	~	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					? X
Look in:	USB 2.0 TO	RS232 Cable	•	G 🖸 🗈 🖽	•
My Recent Documents Desktop My Documents My Computer	Windows CE 4	server2003 2008x6 .2-5.2 Mobile 5 6 .2-5.2 Mobile 5 6 .0 ARM XScale Proc .0 x86 Processor	PocketPC 2003 : PocketPC 2003 :	ARM XScale Proces	1507
My Network Places	File game:	ftd2xx.inf		•	<u>Q</u> pen
T Idues	Files of type:	Setup Information ("inf)	Ψ.	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.

Locate File							? X
Look <u>i</u> n:	🔁 Windows V:	ista Vista x64	хр хр64 20	000 💌	G 🖻 🖻		
My Recent Documents Desktop My Documents My Computer	and64 i 386 ftdibus.in						
My Network	File <u>n</u> ame:	ftdibus.inf			•	<u>O</u> pe	en
Places	Files of type:	Setup Information	n (*.inf)		7	Can	cel

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

Select the	device driver you want to install for this hardware.
9	the manufacturer and model of your bardware device and then click. Next, If you from the disk
Moc	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 ES232 V Browse (B)
	< Back Next > Cancel

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

Hardware Update Wizard	
Select the device driver you want to inst	all for this hardware.
Select the manufacturer and model of you have a disk that contains the driver you w	r hardware device and then click Next. If you ant to install, click Have Disk.
Show compatible hardware	
Model	
USB Serial Converter	
😭 This driver is digitally signed.	Have Disk
Tell me why driver signing is important	
	< Back Next > Cancel

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".

Hardware Update 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.
Show compatible hardware
Model
USB Serial Converter
This driver is digitally signed.
Tell me why driver signing is important
< Back Next > Cancel

The USB Serial Port installation wizard is completed just as shown in the following figure. Now the driver of UT-8812 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 as shown in the following figure. Up to now the driver of UT-8812 has been installed successfully.

