

Part Number: USB-232-1 CEFC 🐼





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INTRODUCTION

The USB-232-1 is a port-powered USB to RS-232 converter that can be used to convert any standard USB port (USB 2.0 - backward compatible) into a RS-232C port. The unit uses the latest FTDI chipset and is fully compatible with Windows 7/Vista/XP/Server2008/Server2003/2000/98 (32-bit), Windows 7/Vista/XP/Server2008/Server2008/Server2003 (64-bit), Win CE, Mac, and Linux.

Note: the latest drivers (chipset FT232B) are available at <u>http://www.ftdichip.com/Drivers/VCP.htm</u>.

FEATURES

- Adds one RS-232 port to your USB port.
- RS-232 data & signals: TX, RX, RTS, CTS, DTR, DSR, DCD, RI, and GND.
- Supports Windows 7/Vista/XP/Server2008/Server2003/2000/98 (32-bit), Windows 7/Vista/XP/ Server2008/Server2003 (64-bit), Win CE, Mac, and Linux.
- Supports remote wakeup and power management.
- Port-powered, no external power required.
- Plug and play (hot-pluggable, data format auto-sensing and self-adjusting).
- No IRQs required, no IRQ conflicts.
- Surface Mount Technology manufactured to RoHS and ISO-9001 standards.
- Safety: Strictly certified by SGS / 5-year manufacturer's warranty.

SPECIFICATIONS

Compatibility:	USB 2.0 (backward compatible) and EIA/TIA RS-232C standards
Power Source:	From USB port
Current Consumption:	Under 100mA
Output Power on Pin 3 (TX):	About -9VDC
RS-232 Data Rate:	300 to 128,000bps (auto-sensing and self-adjusting)
Distance:	USB side: 10ft (3m); RS-232 side: 16ft (5m)
Connectors:	USB side: Type A Female; RS-232 side: DB-9 Male
LEDs:	TX, RX and Power
Dimensions (H \times W \times D):	0.6 x 1.4 x 2.2 in (15 x 35 x 55 mm) (excluding cable)
Cable Length:	3.3 ft (1 m)
Weight:	2.6 oz (73 g)
Operating Temperature:	32°F to 95°F (0°C to 35°C)
Operating Humidity:	Up to 90% RH (no condensation)

PIN ASSIGNMENT

RS-232 Side (DB-9 Male Connector / DTE):

Pin	Function	Description
1	DCD	Data Carrier Detect
2	RX	Receive Data
3	ТХ	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Ground (Signal)
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indicator

■ DB-9 ⇔ DB-25 CONVERSION TABLE (DTE)

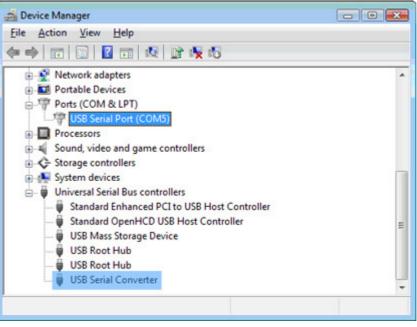
DB-9 Pin Assignment:	1	2	3	4	5	6	7	8	9
DB-25 Pin Assignment:	8	3	2	20	7	6	4	5	22
Function:	DCD	RX	ΤX	DTR	GND	DSR	RTS	CTS	RI

■ DRIVER INSTALLATION – QUICK GUIDE

- Drivers are included on the CD supplied with the converter; insert the CD into the drive.
- Connect the USB-232-1 to an available USB port, and the "Found New Hardware

Wizard" will guide you through the installation process. When prompted to connect to Windows Updates to search for drivers, select "No, not at this time", and follow the instructions for installing from the CD.

 Once the drivers are successfully installed, the USB-232-1 will show up in the Windows Device Manager: under "Ports (COM & LPT)" – labeled as "USB Serial Port (COMx)", and under "Universal Serial Bus controllers" – labeled as "USB Serial Converter" (Figure 1).



(Figure 1)

• The USB-232-1 uses DB-9 Male connector and function as a DTE device; the pin-outs are available on the PIN ASSIGNMENT table above.

Important notes:

- If it's the first time you install the driver for CommFront's USB to Serial device, you will need to install the driver twice. One is for "USB Serial Converter", and the other one is for "USB Serial Port". DO NOT close the 2nd "Found New Hardware Wizard" window while installing the driver.
- 2) Upon completion of driver installations, remember to check the Windows Device Manager to make sure that the drivers are installed properly (Figure 1). If the drivers are not installed correctly, there will be a yellow exclamation icon displayed under the "Ports (COM & LPT)" or "USB Serial Bus controllers", right-click on the yellow exclamation icon and select "Update driver". Then search for the driver in the CD supplied.
- 3) The drivers are not available via Microsoft Windows Updates, however, Windows Vista will search for the drivers via Microsoft Windows Updates by default, so **disconnect your Vista PC from the internet before the driver installation**.

DRIVER INSTALLATION - EXAMPLES

• Example 1 (Windows Vista)

- Disconnect your PC from the internet before driver installation. This is because the drivers are not available via Microsoft Windows Updates, but Windows Vista will search for the drivers via Microsoft Windows Updates by default.
- Insert the CD into the drive and connect the USB-232-1 to an available USB port, the "Found New Hardware" window will pop up. Click on the "Locate and install driver software (recommended)" button to continue (Figure 2).

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3) Windows Vista will look for the driver in the CD, click on the "Next" button to continue. This will start the driver installation for "USB Serial Converter" (Figure 3).

Insert the	disc that came with your USB HS SERIAL CONVERTER	
	the disc that came with your device, insert it now. Windows will automatically isc for driver software.	
A I day	"t have the disc. Show me other options.	



4) When the driver is successfully installed, the following window will pop up - confirming that the driver installation of "USB Serial Converter" has been completed successfully. Click on the "Close" button to continue (Figure 4).

Found New Hardware - USB Serial Converter	
The software for this device has been successfully installed	
Windows has finished installing the driver software for this device:	- 1
USB Serial Converter	
	Close

(Figure 4)

- 5) The 2nd "Found New Hardware" window will pop up, prompting you to install the driver for "USB Serial Port". DO NOT close this window! And repeat steps 1) to 4) to install the driver for "USB Serial Port".
- 6) When the 2nd driver installation is completed, remember to check the Windows Device Manager to confirm that the drivers are installed successfully (Figure 1). The USB-232-1 will show up in the Windows Device Manager: under the "Ports (COM & LPT)" – labeled as "USB Serial Port (COMx)", and "Universal Serial Bus controllers" – labeled as "USB Serial Converter".

• Example 2 (Windows XP)

1) Insert the CD into the drive and connect the USB-232-1 to an available USB port, the "Found New Hardware Wizard" window will pop up. Select "No, not this time" and click on the "Next" button to continue (Figure 5).

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Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Bead our privacy policy Can Windows connect to Windows Update to search for software? Yes, this time only Yes, now and gvery time I connect a device No, not this time
Click Next to continue.

(Figure 5)

 Select "Install from a list or specific location (Advanced)" to install the driver from CD (Figure 6).

Found New Hardware Wizard
Image: Second state of the second s
< <u>Back</u> <u>N</u> ext> Cancel



3) Select "Search for the best driver in these locations" and check the box of "Search removable media (floppy, CD-ROM...)". Then click on the "Next" button (Figure 7).

ease choose your search and ins	tallation options.
⊙ Search for the best driver in these	locations.
Use the check boxes below to limit paths and removable media. The b	t or expand the default search, which includes local sest driver found will be installed.
Search removable media (flo	oppy, CD-ROM)
Include this location in the s	earch
	Browse
O Don't search. I will choose the driv	er to install.
Choose this option to select the de the driver you choose will be the b	vice driver from a list. Windows does not guarantee
the driver you choose will be the b	ex materi for your naremate.

(Figure 7)

4) When the driver is successfully installed, the following window will pop up, confirming that the driver installation of "USB Serial Converter" has been completed. Click on the "Finish" button to continue (Figure 8).

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

(Figure 8)

- 5) The 2nd "Found New Hardware" window will pop up, prompting you to install the driver for "USB Serial Port". **DO NOT close this window!** And repeat steps 1) to 4) to install the driver for "USB Serial Port".
- 6) When the 2nd driver installation is completed, remember to check the Windows Device Manager to confirm that the drivers are installed successfully (Figure 1). The USB-232-1 will show up in the Windows Device Manager: under "Ports (COM & LPT)" – labeled as "USB Serial Port (COMx)", and under "Universal Serial Bus controllers" - labeled as "USB Serial Converter".

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• Example 3 (Windows 2000)

 Insert the CD into the drive and connect the USB-232-1 to an available USB port, the "Found New Hardware Wizard" window will pop up. Click on the "Next" button to continue (Figure 9).

Found New Hardware Wizard	
	Welcome to the Found New Hardware Wizard This wizard helps you install a device driver for a hardware device.
	< Back Next > Cancel

(Figure 9)

2) Select "Search for a suitable driver for my device (recommended)" and click on the "Next" button to continue (Figure 10).

1/22/22	erating system.
2	USB HS SERIAL CONVERTER
needs instalk	ice driver is a software program that makes a hardware device work. Windows driver files for your new device. To locate driver files and complete the stion click Next. do you want the wizard to do?
(•	Search for a suitable driver for my device (recommended)
	Display a list of the known drivers for this device so that I can choose a specific

(Figure 10)

 Check the box of "CD-ROM drives", and then click on the "Next" button to continue (Figure 11).

	h for driver files?
Search for driver files for the following h	lardware device:
USB HS SERIAL CONVERTI	ER
The wizard searches for suitable drivers any of the following optional search loc	s in its driver database on your computer and in ations that you specify.
To start the search, click Next. If you a insert the floppy disk or CD before click	re searching on a floppy disk or CD-ROM drive, ing Next.
Optional search locations:	
Floppy disk drives	
CD-ROM drives	
Specify a location	
Microsoft Windows Update	

 Windows will automatically locate the driver, for example, "e:\drivers\windows 2000_server 2003_xp_vista x32\ftdibus.inf". Click on the "Next" button to continue (Figure 12).

	s Search Results ard has finished searching for driver files for your hardware device.
The wiz	ard found a driver for the following device:
- 🌮	USB HS SERIAL CONVERTER
Window	rs found a driver for this device. To install the driver Windows found, click Next.
6 59	e:\drivers\windows 2000_server 2003_xp_vista x32\ftdibus.inf
	ard also found other drivers that are suitable for this device. To view a list of rivers or install one of these drivers, select the following check box, and then click
🗖 Insta	all one of the other drivers



5) When the driver is successfully installed, the following window will pop up, confirming that the driver installation of "USB Serial Converter" has been completed. Click on the "Finish" button to continue (Figure 13).

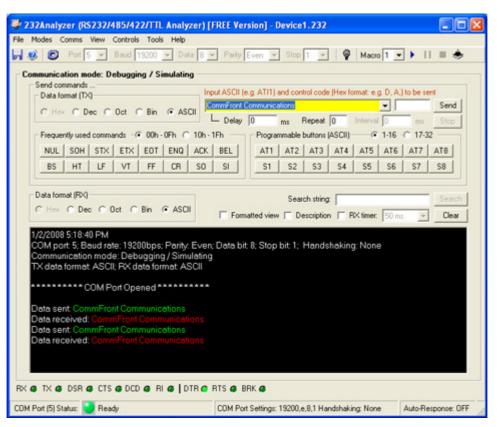
Completing the Found New Hardware Wizard USB Serial Converter Windows has finished installing the software for this device. The hardware you installed will not work until you restart your computer.
To close this wizard, click Finish.
< Back Finish Cancel

- 6) The 2nd "Found New Hardware" window will pop up, prompting you to install the driver for "USB Serial Port". **DO NOT close this window!** And repeat steps 1) to 5) to install the driver for "USB Serial Port".
- 7) When the 2nd driver installation is completed, remember to check the Windows Device Manager to confirm that the drivers are installed successfully (Figure 1). The USB-232-1 will show up in the Windows Device Manager: under "Ports (COM & LPT)" – labeled as "USB Serial Port (COMx)", and under "Universal Serial Bus controllers" - labeled as "USB Serial Converter".

TROUBLESHOOTING

General

- 1) Make sure that the USB-232-1 is connected to your USB port, and the driver is installed correctly (Figure 1); otherwise, please reinstall the driver (Please refer to the "Driver reinstallation examples" below).
- 2) Make sure the "Power" LED on USB-232-1 is lit up.
- 3) Perform a loopback test by using CommFront's 232Analyzer software (included on the CD supplied with the converter): Connect pin 2 and 3 of the DB-9 connector (RX to TX) and run the program. Then send commands from the software, you should receive an echo of the commands sent. By performing a simple loopback test like this, you can test both the transmitter and receiver of the converter. This is very helpful when you are in doubt about the performance of your converter (Figure 14).



(Figure 14)

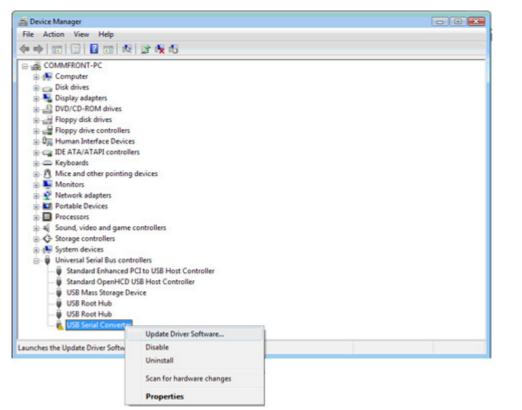
• Driver reinstallation examples

Drivers might not be installed properly if the above driver installation procedures were not followed; for example, the user did not disconnect the PC from the internet while installing drivers on Vista machines, or the 2nd "Found New Hardware Wizard" window was closed before the driver installation was completed. Below are some examples showing how to reinstall the drivers.

Example 1 (Windows Vista)

Symptoms: A yellow exclamation icon appears besides the "USB Serial Converter". Also, there is no display of the "Ports (COM & LPT)" in the Windows Device Manager (Figure 15).

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(Figure 15)

- 1) Right-click on the "USB Serial Converter" that displays with the yellow exclamation icon, and select "Update Driver Software..." (Figure 15).
- Click on the "Browse my computer for driver software" button to continue (Figure 16).

Search automatically for updated driver software Windows will search your computer and the Internet for the latest driver software for your device.
Browse my computer for driver software Locate and install driver software manually.

(Figure 16)

3) Locate the driver in the CD provided and click on the "Next" button to continue (Figure 17).

	Jpdate Driver Software - USB Serial Converter
Brow	wse for driver software on your computer
Searc	ch for driver software in this location:
E:\D	Drivers\Windows 2000_Server 2003_XP_VISTA X32
•	Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.

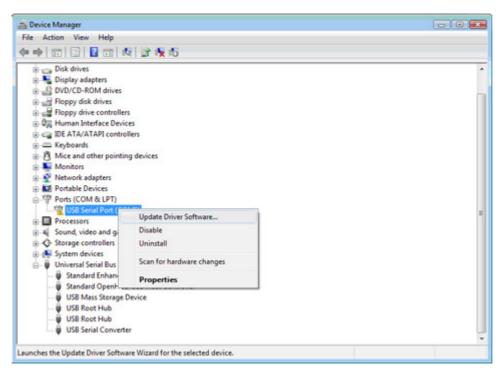
4) When the driver is successfully updated, the following window will pop up, confirming that the driver installation of "USB Serial Converter" has been completed. Click on the "Close" button to exit (Figure 18).

9	Update Driver Software - USB Serial Converter	
	Windows has successfully updated your driver software	
	Windows has finished installing the driver software for this device:	
	USB Serial Converter	
	Close	



Example 2 (Windows Vista)

Symptoms: A yellow exclamation icon appears besides the "USB Serial Port" (Figure 19).



(Figure 19)

- 1) Right-click on the "USB Serial Port" that displays with the yellow exclamation icon, and select "Update Driver Software..." (Figure 19).
- 2) Click on the "Browse my computer for driver software" button to continue (Figure 20).

+	Search automatically for updated driver software
	Windows will search your computer and the Internet for the latest driver software for your device.
+	Browse my computer for driver software Locate and install driver software manually.



 Locate the driver in the CD provided, and click on the "Next" button to continue (Figure 21).

	Jpdate Driver Software - USB Serial Port (COM5)
Bro	wse for driver software on your computer
Searc	ch for driver software in this location:
E:\[Vrivers\Windows 2000_Server 2003_XP_VISTA X32
+	Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.

4) When the driver is successfully updated, the following window will pop up, confirming that the driver installation of "USB Serial Port" has been completed. Click on the "Close" button to exit (Figure 22).

9	Update Driver Software - USB Serial Port (COM5)				
-	Windows has successfully updated your driver software				
	Windows has finished installing the driver software for this device:				
	USB Serial Port				
	Ωlos	-			

(Figure 22)

Example 3 (Windows Vista/XP/2003/2000/98/ME)

Symptoms: No yellow exclamation signs, but COM port does not exist or is not functioning.

- Locate and execute the driver un-installation program FTDIUNIN.exe in its respective folder. For example, for Windows 2000/Server_2003/XP/Vista 32-bit, the un-installation program is located at "E:\Drivers\Windows 2000_Server 2003_XP_Vista X32\"
- Unplug the USB-232-1, and click on the "Continue" button to uninstall the drivers (Figure 23).

If your USB device i	s connected, please unplug it n	ow
Press Continue to u	ninstall the drivers, or Cancel to	quit.



3) Click on the "Finish" button to complete the un-installation of the drivers (Figure 24).

Uninstalli	ng VID_0403&PID_0	6010	
Deleting	registry entries		
Deleting	files		
Press Fin	ish to exit.		

(Figure 24)

4) Follow the correct driver installation procedures above to reinstall the drivers for your USB-232-1 converter.

SUPPORT

Check out CommFront's website: www.CommFront.com for Product Updates, FAQs, and other Support.

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