## Appendix A

## **USB Communication Interface Setup**

### Summary:

- 1. Obtain the appropriate USB Virtual COM Port Driver .zip file for your PC operating system.
- 2. Install the Virtual COM Port Driver.
- 3. Determine USB Virtual COM Port setting

### Detailed Instructions:

# Step 1. Obtain the appropriate USB Virtual COM Port Driver .zip file for your PC operating system.

Future Technology Devices International (FTDI) provides drivers for the USB communications interface contained in your data logger. The USB driver files can be obtained from the FTDI web site.

The latest available USB Virtual COM Port driver for your operating system can be found at the FTDI Virtual COM Port Driver web page:

http://www.ftdichip.com/Drivers/VCP.htm

See **Figure A-1**. Download and save the file appropriate to your operating system to a location on your PC. Extract the contents fo the appropriate zip file to a folder on your computer. Note the location of the folder.

😻 Virtual COM Port Drivers - M	1ozilla Firefox					<u>- 0 ×</u>	
Eile Edit View History Bo	okmarks <u>T</u> ools <u>H</u> elp					12	
C X 🟠 🐌 http://www.ftdichip.com/Drivers/VCP.htm						P	
🔎 Most Visited 🏾 🌪 Getting Start	ed <u> Latest Headlines</u>						
Future Technology Devices International Ltd.							
Chip	USB Device Solutions ASIC Design Product Design						
<u>Home</u>	Virtual COM Po	rt Drivers					
Products	This page contains the V	CP drivers currently available	for FTDI devices.				
<u>Drivers</u>							
<u>VCP</u>	For D2XX Direct drivers, p	For D2XX Direct drivers, please click here.					
	Installation guides are available from the Installation Guides page of the Documents section of this site for selected operating systems.						
Documents							
Resources							
Projects	VCP Drivers	history action the LICR device	te enner en en eddit	ianal COM and availabl	a ta tha DC . Application asflurate can asso		
Support	Virtual COM port (VCP) drivers cause the USB device to appear as an additional COM port available to the PC. Application software can access the USB device in the same way as it would access a standard COM port						
<u>Knowledgebase</u>							
<u>Sales Network</u>			<b>.</b>		- · ·		
<u>Web Shop</u>	Operating System	Devices Supported	Driver Version	Release Date	Comments	-	
Design Services	Windows Server 2008 Windows Server 2008				Microsoft WHOL certified		
<u>Corporate</u>	x64				Also available as a <u>setup executable</u> for de	efault	
<u>Press</u> ETDI Neweletter	Windows Vista				VID and PID values.		
Contact	Windows Vista x64 Windows XP	FT232R, FT245R, FT2232, FT232B, FT245B,	2 04 06	20th March 2008	For custom VID and PID combinations see AN232R-03	3	
Contact	Windows XP x64	FT8U232AM, FT8U245AM	<u>2.01.0</u> 0	2011 114101 2000	Combined driver model (D2XX and VCP).		
	Windows 2000				Devices programmed as VCP will expose a	a	
	Windows Server 2003 Windows Server 2003				CUM port, as will AM and BM devices. Release Notes		
	х64						
	Windows 98	FT232R, FT245R, FT232B,			No longer actively supported		
	Windows ME	FT245B, FT8U232AM, FT8U245AM	<u>1.09.06</u>	25th November 2004	FT2232 not supported.		
					No longer actively supported.		
	Windows 98				Only for use with Windows 98/ME. Not Microsoft WHQL certified		
	Windows ME	FT2232	<u>1.0.3</u>	12th March 2004	This driver can be used as a combined VCI	P 🚽	
Done					10000011 0 100 1 0000000 1 -		

Figure A-1

#### Step 2. Install the Virtual COM Port Driver.

For convenience a concise and brief guide for installation of the USB Virtual COM Port driver utilizing the *Windows XP Found New Hardware Wizard* is contained below.

Thorough installation guides for *Windows XP*, *Windows 2000*, *Windows 98*, *Windows ME*, and *Mac OSX* platforms are also available at the FTDI website at

http://www.ftdichip.com/Drivers/VCP.htm

Via a USB cable, connect a USB port on the PC to the Com Port on the Q-DL-2100 panel. (The data logger power does not need to be on during this step, although it is ok if it is).

When using *Windows XP*, the *Found New Hardware Wizard* should activate and display a window as shown below in **Figure A-2**.



Figure A-2.

To the question "Can Windows connect to Windows Update to search for software?" Select the "No, not this time" option as shown, and click Next.



Figure A-3

The window shown in **Figure A-3** should now be displayed. Select "Install from a list or specific location (Advanced), and click Next. The window shown below in **Figure A-4** should appear.



**Figure A-4** 

Select the option button "Search for the best driver in these locations". Then clear the checkbox "Search removable media (floppy, CD-ROM...)" and select the "Include this location in the search" checkbox. Use the Browse button to select the folder where the USB FTDI drivers were extracted in Step 1 above, and then click Next.

The installation of the drivers will begin. A window as shown in **Figure A-5** will appear confirming successful installation of the USB Virtual COM Port drivers (called a USB Serial Converter by *Windows*).

Found New Hardware Wizard				
	Completing the Found New Hardware Wizard			
	The wizard has finished installing the software for:			
	USB Serial Converter			
	Click Finish to close the wizard.			
	< Back Finish Cancel			

Figure A-5

### Step 3. Determine USB Virtual COM Port setting.

After Step 2 is complete, the USB Virtual COM Port should be installed. This will make the USB connection to the data logger behave as a *Windows* serial port,

otherwise known as a COM port. To verify this, leave the USB port on the PC connected to the COM connector on the data logger. Now go to the *Windows* Control Panel (accessible from the Start Menu). In the Classic View mode, the Control Panel window will look something like that shown in **Figure A-6**.

😼 Control Panel				
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🕞 Back 🔻 🕥 👻 🏂 🔎 Sea	rch 🦻 Folders 🔢 🕇			
Address 🔂 Control Panel			💌 🄁 Go	
	Name 🔺	Comments		
Control Panel	🔥 Accessibility Options	Adjust your computer set		
	💐 Add Hardware	Installs and troubleshoot		
Switch to Category View	🔂 Add or Remove Programs	Install or remove progra		
5	🦏 Administrative Tools	Configure administrative		
	🥸 Automatic Updates	Set up Windows to auto		
See Also 🕆	🔗 Date and Time	Set the date, time, and ti		
A Ulia da wa Ula da ka	🕵 Display	Change the appearance		
	🔂 Folder Options	Customize the display of		
Help and Support	🖾 Fonts	Add, change, and manag		
	🖙 Game Controllers	Add, remove, and config		
	🔂 Internet Options	Configure your Internet		
	🕌 Java	Java(TM) Control Panel		
	💩 Keyboard	Customize your keyboard		
	4 Mail	Microsoft Outlook Profiles		
	Mouse	Customize your mouse se		
	🐼 Multi-channel Sound Manager	Multi-channel Audio Cont		
	🛸 Network Connections	Connects to other compu		
	💁 Network Setup Wizard	Launch the Network Setu		
	🖢 Phone and Modem Options	Configure your telephon		
	Captions	Configure energy-saving		
	Separate Printers and Faxes	Shows installed printers a		
	🔮 Regional and Language Options	Customize settings for th		
	Scanners and Cameras	Add, remove, and config		
	🚰 Scheduled Tasks	Schedule computer tasks		
	💙 Security Center	View your current securit		
	Sounds and Audio Devices	Change the sound schem		
	Speech	Change settings for text		
	System	See information about yo		
	💤 Taskbar and Start Menu	Customize the Start Men		
	See Accounts	Change user account set		
	🔁 Windows CardSpace	Manage Information Car		
	🨻 Windows Firewall	Configure the Windows F	•	

Figure A-6

Select System to open up the System Properties window, shown in Figure A-7.

System Properti	es			<u>?</u> ×
System Res	store /	Automatic Up	dates	Remote
General	Computer Nar	ne   H	lardware	Advanced
		System: Micro Profe Versi Serv Register Gary 5527 Compute AMD 3500 2.19 Phys	osoft Window essional ion 2002 ice Pack 3 ed to: Womack 4-0EM-0049 ar: Athlon(tm) 6- )+ GHz, 960 ME ical Address I	s XP 422-09039 4 Processor 8 of RAM Extension
		OK	Cancel	Apply

Figure A-7

Select the Hardware tab to reveal a window of the form shown in Figure A-8.

System Prop	oerties				<u>? ×</u>
System	n Restore	Automa	itic Updates	1	Remote
General	Computer	Name	Hardware	4	Advanced 🛛
	Manager The Device Mana on your computer. properties of any d	gerlists all Use the D levice.	the hardware de evice Manager	evices inst to change	talled 9 the
	Device Manager				
Drivers	Driver Signing lets compatible with W how Windows con	you make indows. W inects to W	sure that installe indows Update /indows Update	ed drivers lets you so for drivers	are et up s.
	Driver Signing Windows Update				
Hardwar	e Profiles Hardware profiles ; different bardware	provide a v	vay for you to se	et up and s	store
		computat	Hardw	are <u>P</u> rofile	15
		OK	Car	ncel	Apply

### Figure A-8

Select Device Manager and look for an entry under Ports (COM & LPT) which corresponds to the USB Virtual COM Serial Port. It will look like any other COM port, but usually will be assigned a number higher than 2. i.e., COM3 in **Figure A-9** below.

🚇 Device Manager	<u>- I X</u>
Eile Action View Help	
Image: Second	

Figure A-9

If multiple serial ports show up, unplug the USB cable from the COM port on the Q-DL-2100 data logger and identify which COM port number disappears. It should reappear when the USB cable is plugged in again.

Note the COM Port number assigned to the data logger USB interface.

To communicate with the data logger you will need to make use of PC based terminal emulation software such as *Windows HyperTerminal* or *Tera Term Pro*. See **Appendix B** for setup instructions for these programs.