



DTUSB – Information for Existing DT80 Series Users

1 Overview

This document is intended for existing DT8x Series 2 users wishing to use the new "plug and play" facilities for establishing a PPP connection to the logger via USB. A PPP connection allows the user to access the logger web interface ("dEX") over USB. This has been possible in the past, but the process of setting up a PPP connection on Windows was complicated.

The new solution comprises

- a modified low level USB driver, the **DtUsb Driver**, which can now distinguish between DT8x loggers
- a new Windows driver program, **DtUsb**, which will automatically establish a PPP connection and optionally launch a web browser and direct the user to the logger's home page.
- updated firmware (version 8.00 and later)
- a new Windows utility, **UsbSerialiser**, which will write a unique USB serial number to an existing logger and change its "product ID" code so that it will be recognised by DtUsb.

2 Upgrading to DtUsb

Follow these steps if you have a DT8x Series 2 logger with firmware version 7.14 or earlier, and wish to access dEX (the web interface) via a USB connection.

You should have received:

- DT8x firmware version 8.00 or later
- DtUsb installation package Version 1.02 or later, e.g. **DtUsbPackage-102.exe**

Note: It is assumed that, as an existing logger user, your computer already has the standard FTDI serial drivers installed. This will be the case if you have previously communicated with the logger (e.g. with DeLogger or DeTransfer) using either the USB port, or the RS232 port in conjunction with a USB to serial adapter.

If you have never connected your computer to the logger via USB then your first step should be to install the standard FTDI drivers. This normally happens automatically when you connect to the logger via USB for the first time; the drivers may be installed from Windows Update or from the dataTaker resource CD. Before proceeding, verify that you can connect to the logger from DeTransfer or DeLogger using a USB connection.

Step 1 – Upgrade logger firmware

Load firmware version 8.00 or later into the logger in the usual way.

Step 2 – Install driver software

This step will first pre-install the DtUsb Driver, then install DtUsb itself.

Note: depending on your Windows version, you may receive various prompts during the DtUsb Driver and the DtUsb installation processes requesting your permission to run software published by Thermo Fisher Scientific. Answer Yes to these.



1. Ensure that you have administrator rights for your computer.
2. Double click on the package file, which will extract the required files then launch the driver installer:



3. Click Next and the drivers will be pre-installed
4. A screen similar to the following should then be displayed. Check that two green ticks are shown.

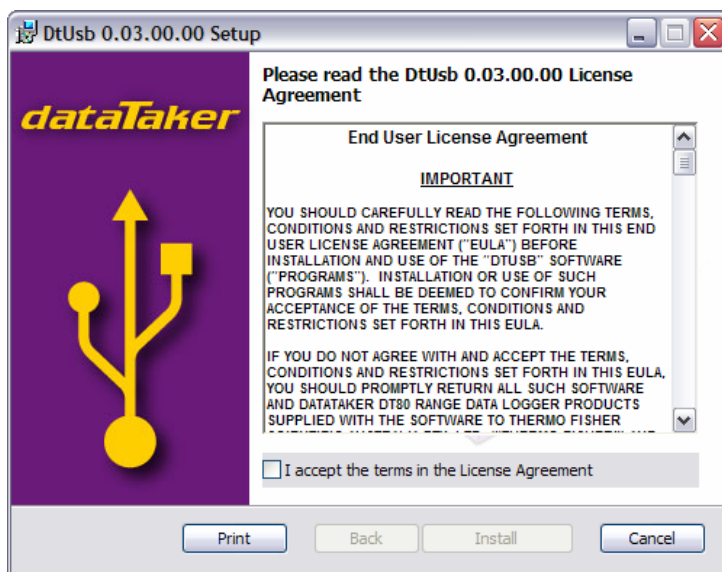


5. The DtUsb installer will then run automatically.

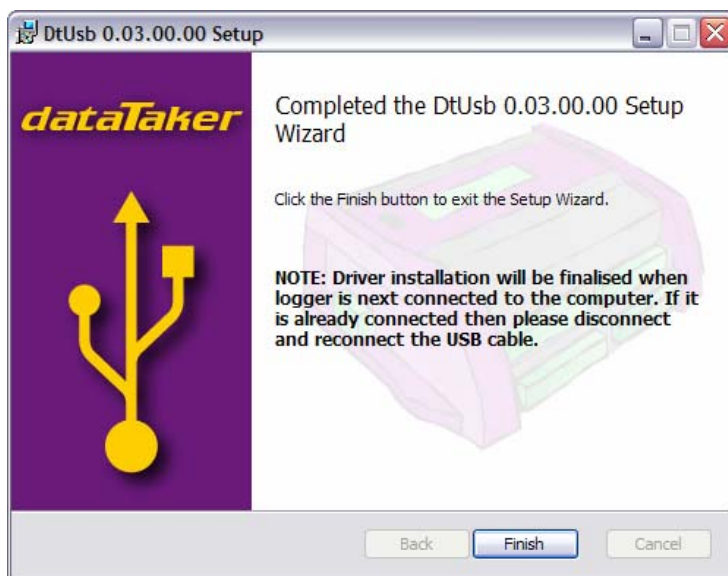
This will first check whether you have Microsoft .NET installed. If you have previously installed *DeLogger* on your computer, or are using Windows Vista or Windows 7 then you should already have .NET installed. If not then an error message will be displayed. If this is the case then you should download and install .NET 2.0 or later from Microsoft

<http://www.microsoft.com/downloads/details.aspx?FamilyID=0856eachb-4362-4b0d-8edd-aab15c5e04f5&displaylang=en>

6. Assuming .NET is installed, the DtUsb installer wizard will start:



7. Read every word of the license agreement, tick the checkbox and click Install
8. DtUSB will then be installed. At the end of the process a screen similar to the following will be displayed:



Step 3 – Connect logger

Connect the logger via USB, if it is not already connected.

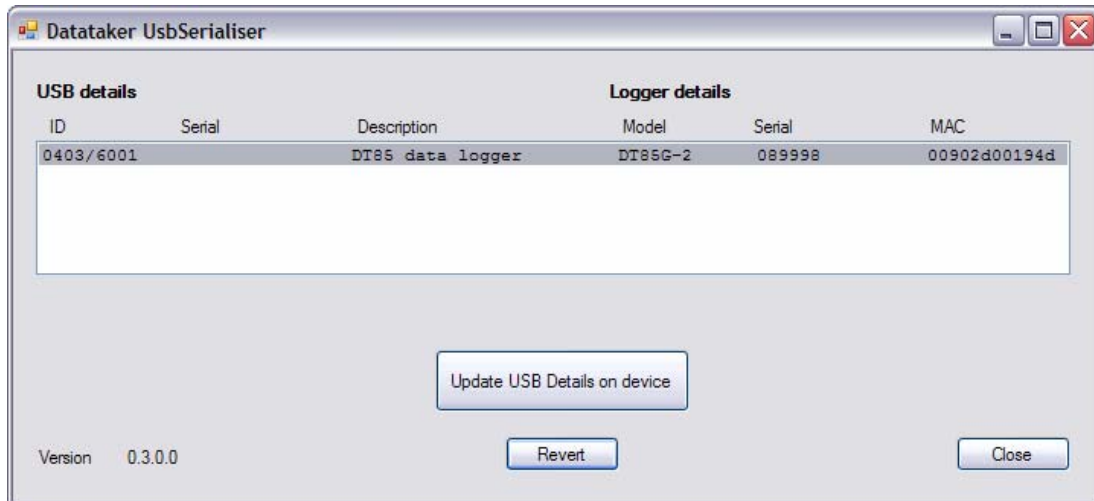
Note that even though DtUSB is now installed and running, it will not recognise the logger because the logger will not have been "serialised".

Step 4 – Serialise the logger

The next step is to use a special utility to change the logger's USB product code and serial number. DtUSB will then be able to distinguish different loggers, and differentiate between loggers and FTDI USB to serial converter dongles. This needs to be done once only for each logger.

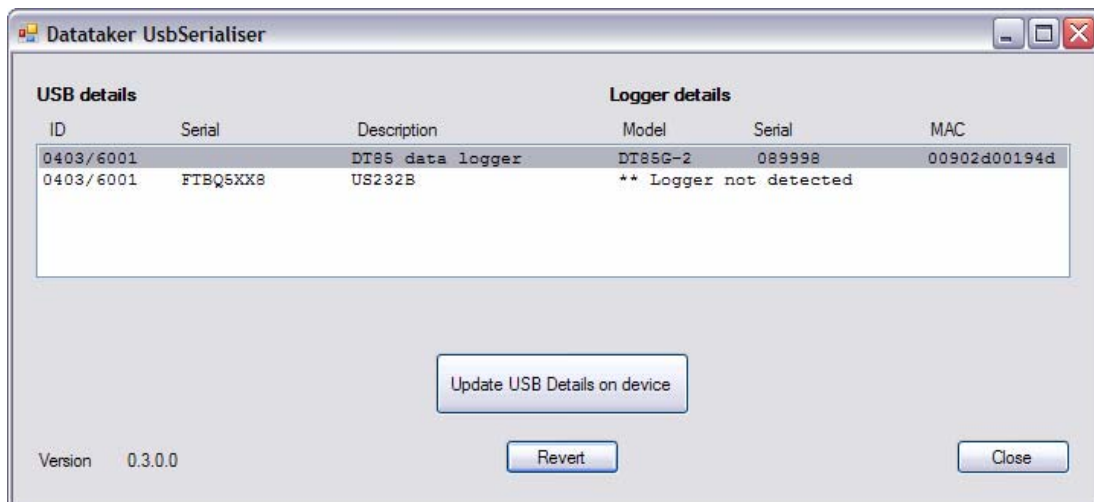


1. Open the Start menu, then select All Programs / dataTaker / DtUsb / UsbSerialiser
2. The UsbSerialiser utility will run. A screen similar to the following should be displayed, which will list all currently connected FTDI-based devices:

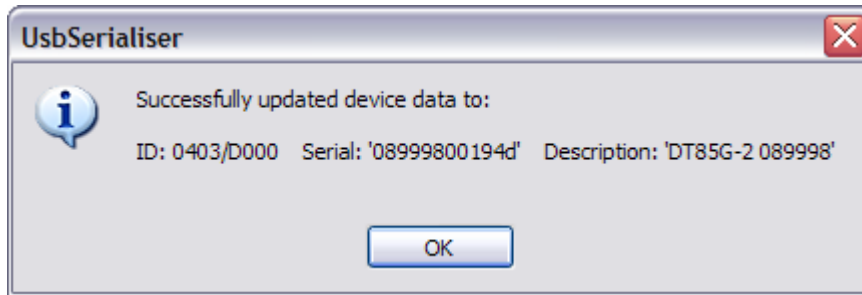


Notice that the "Serial" column is empty, which indicates that the connected logger is unserialised.

If you also had an FTDI USB to serial converter plugged in, it would be shown in the list too, eg.



3. To serialise your logger, make sure its row is highlighted in the table, then press "Update USB Details on device"
4. This will then generate a unique USB serial number for the logger and write it to the USB chip on the logger. It will also update the logger's "USB ID" code to 0403/D000, which indicates a dataTaker device. A confirmation message will be displayed:



5. Press OK.

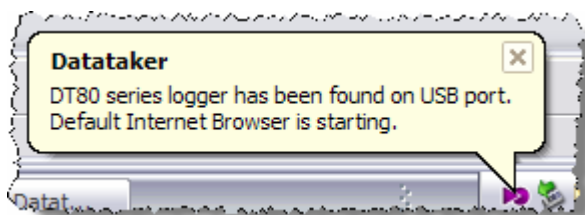
Step 5 – Complete driver installation and start DtUSB

As soon as you press OK on the confirmation dialog in the previous step, a flurry of activity should begin in the system tray area.

First, Windows will detect that a new device has been connected. What happens next will vary according to your Windows version.

- For Windows XP, the drivers that you pre-installed in Step 2 will be automatically installed with a minimum of fuss. A couple of "New hardware found" balloon messages will appear, then finally it should say "Your new hardware is ready to use"
- For Windows Vista, you will be asked whether you want to locate and install driver software, or do nothing. Specify that you do want to locate and install drivers. It will then search for the drivers on Windows Update. Assuming you have a working internet connection, it should find the drivers there and install them. If not then the Windows Update search will time out and it will install the drivers that you pre-installed in Step 2. Eventually Windows should report that "Your new hardware is ready to use".
- For Windows 7, the initial prompt will be skipped and it will go straight to Windows Update. As with Vista, if this is successful then it will install the drivers it finds there, otherwise it will eventually time out and use the pre-installed drivers.

Once the two parts of the DtUSB Driver (USB driver and virtual COM port driver) have been installed, DtUSB should notice that a logger has been connected. A new icon should appear in the system tray:



By default, DtUSB will now automatically launch your default web browser, and the *dEX* home page should be displayed:



If desired, you can now log out and log in as a non-administrator user. DtUsb will start automatically each time any user logs in.

For more information about *DtUsb* and *dEX*, check out the DT80 User's Manual (Revision A9 or later).