Data Management Guide

Kent Scientific
CORPORATION

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Kent Device Data Management Guide

Your Kent Scientific Device supports a robust and customizable set of data collection, storage and upload features:

- History –stores the most recent roughly 1000 records from your runs. This data can be sent to a PC through the USB port. See **Main > History**.

- Upload –uploads real-time data to your computer through the USB port. See **Main > Config > Upload**.

All data saved in your History is in the form of comma separated values. In some cases, it includes headings, units, ranges and other extra data.

You can collect and monitor this data using a serial over-USB connection and the Free Serial Port Terminal program under Windows® Vista® or Windows® 7 or 8. Once the data is on your computer, you can use a variety of programs there to examine the data.

To upload data successfully, you must upload and install:
- *The latest FTDI driver*
- *Free Serial Port Terminal.exe*

FTDI Driver Installation Guide

Download and install the FTDI driver to enable your computer's USB port to communicate with your Kent Scientific device:

1. In a browser, navigate to **http://www.ftdichip.com/Drivers/VCP.htm**.

2. Find the latest **Currently Supported VCP Drivers** table. Click the link that says **setup executable**.

3. When the prompt appears, click **Save File**.

Currently Supported VCP Drivers:

Operating System	Release Date	x86 (32-bit)	x64 (64-bit)	PPC
			Processor Architecture	
Windows*	2014-09-29	Available as setup executable Contact support1@ftdichip.com if looking to create customised drivers		-

Opening CDM v2.12.00 WHQL Certified.exe

You have chosen to open:

CDM v2.12.00 WHQL Certified.exe

which is: Binary File (2.1 MB)
from: http://www.ftdichip.com

Would you like to save this file?

Save File   Cancel

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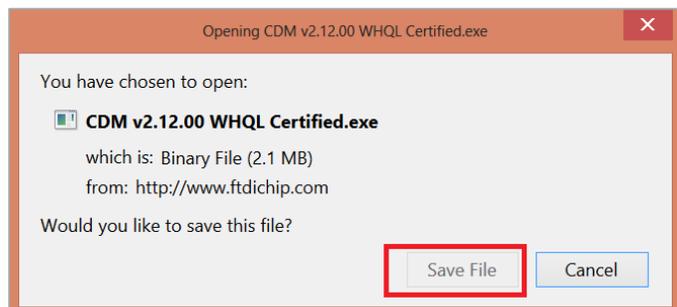
4. When the download is complete, locate the saved file on your computer and open it.
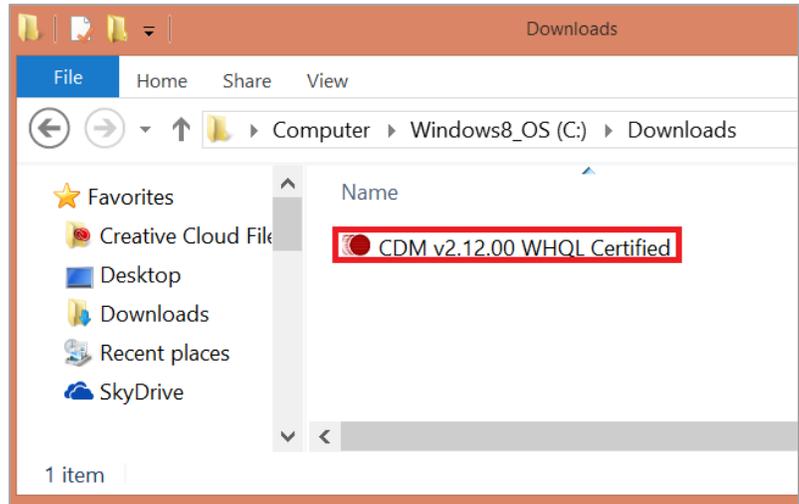
5. Click **Extract** to extract the driver installer and launch the installation program.
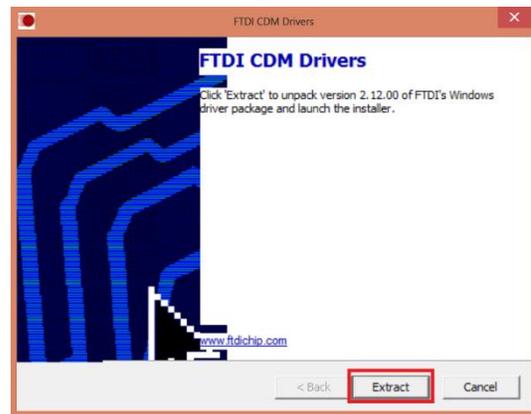
6. When the extraction is finished, the computer will launch the **Device Driver Installation Wizard**. Click **Next** to begin installation of the communication drivers.

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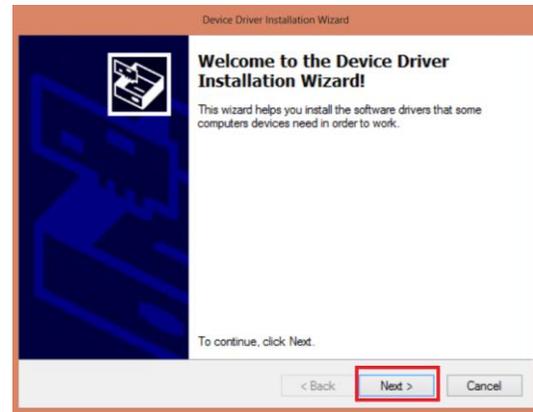
7. Accept the License Agreement and click **Next**.
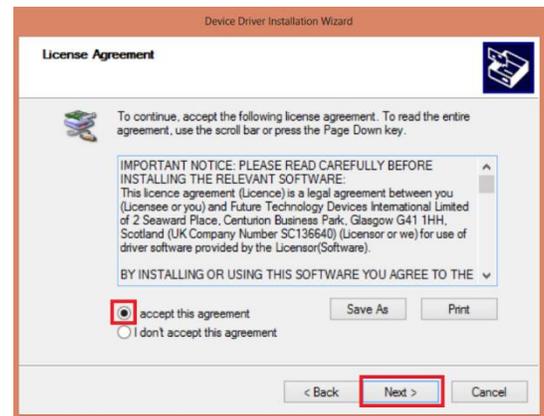
8. When the driver installation is complete, click **Finish** to close the driver installation program. You have now finished installing the FTDI-Chip drivers.

9. Turn your Kent Scientific device on and connect it to your PC using the USB to Mini-USB cable included with your system.

10. Open **Control Panel** and from there, open **Device Manager**.

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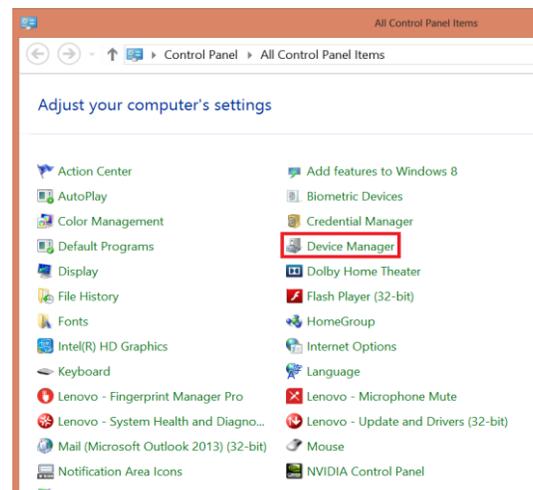
11. In **Device Manager**, open the **Ports (COM & LPT)** tab. If your device is installed properly, it will show up as a USB Serial Port. **COM9** in the image below is an example of a port number. Your port number may be different.
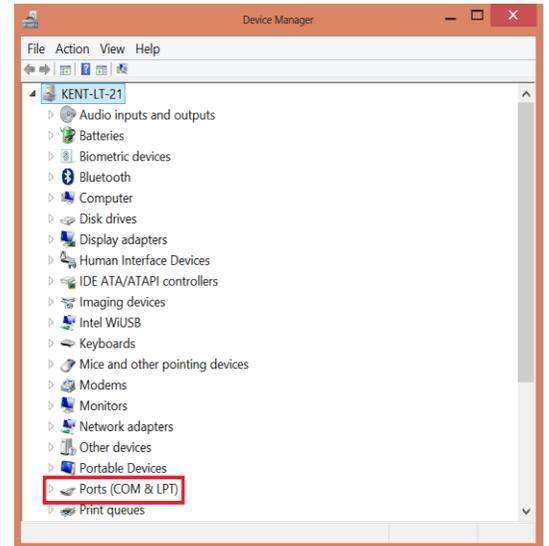
Terminal Emulator Setup Guide

These directions are for use with Free Serial Port Terminal.exe, a program that allows your computer to receive data from your Kent Scientific device. Please note that some features, such as the location of menus or settings, may vary from those presented in this guide, depending upon your operating system and your data collection program.

> **Free Serial Port Terminal is a freeware third-party program and is not developed or supported by Kent Scientific Corporation. It is provided as is. Kent Scientific is not responsible for loss of data or time, or for damage to property, due to misuse of this program or caused by any bugs in this software or conflicts caused by the use of this software.**

Before you begin:

- ◎ Confirm that the FTDI VCP drivers are installed on your system. Kent Scientific devices will not be able to upload data properly if this driver is not installed. See *FTDI Driver Install Guide* for directions.

- ◎ Connect your Kent Scientific device to your computer using the included USB to Mini-USB cable.

- ◎ Download and Install Free Serial Port Terminal using this URL: http://www.softpedia.com/get/System/System-Miscellaneous/Free-Serial-Port-Terminal.shtml.
  Please note that this freeware, third-party program was not developed by and is not supported by Kent Scientific.

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Setup

1. At the Windows **Control Panel**, open **Device Manager**. Locate the **Ports (COM & LPT)** selection.
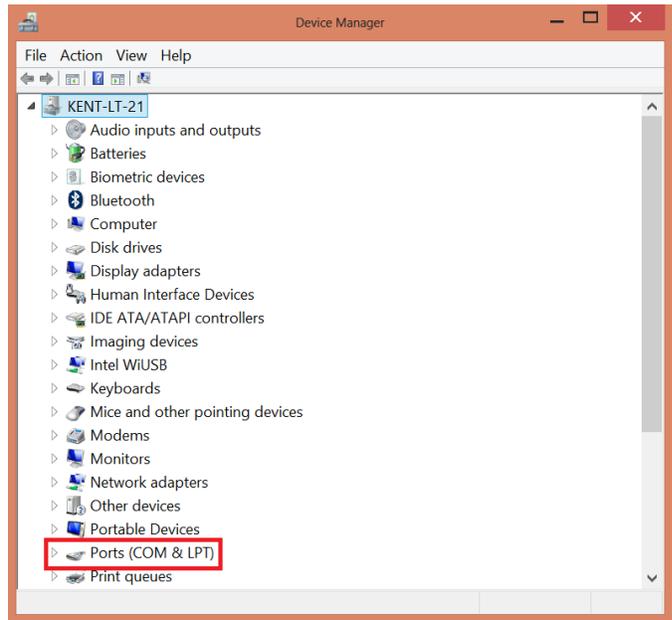
2. Open the **Ports (COM & LPT)** menu. Note the COM port number of the device, shown as **USB Serial Port (COM##)**.

3. Locate the icon for Free Serial Port Terminal and open the program.

4. Open the **COM Port** drop down menu and select the COM Port of the device. In the Settings drop down menu, select **COM Port Settings**. The number you see after **COM** will not necessarily be **9**.
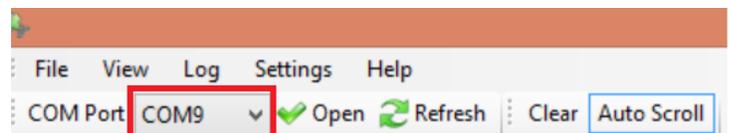
5. Set the COM port settings to:
   Bits per second: 115200
   Data Bits: 8
   Parity: None
   Stop bits: 1
   Flow Control: DTR: green **RTS**: green

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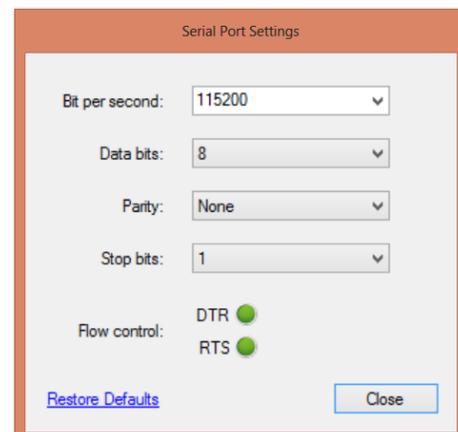
6. Press the **Open** button on the Toolbar to open the COM port and begin communication between the Kent Scientific device and computer. Be sure you have enabled data upload in the Kent Scientific device to receive readings in the terminal emulator.

| File | View | Log | Settings | Help |
| COM Port | COM9 ⌄ | ✔ Open | ⟳ Refresh |

Logging Data

The Terminal emulator will not save data to disk unless you enable Data Logging. Data Logging allows you to record experimental data for later analysis in programs such as R, Excel and Matlab.

 To begin logging data:

1. Select **Start Logging** from the **Log Menu**.

2. In the resulting **Save As** dialog box, type your desired file name in the **File name** field.

3. In the **Save as Type** field, select **Text file (*.txt)** from the drop down menu.

4. Click **Save**.

The data stream is now be saved for later use.

Unable to upload data?

If you are not able to upload data, please check that:

- You have enabled **Upload** through the Kent Scientific Device menus.

- You have selected one or more Parameters to be uploaded.

- Your Kent Scientific Device is in Run Mode if your settings require that. See **Main > Upload**.

- Your Kent Scientific Device has successfully been assigned to a COM port. To verify this, open **Device Manager**.

- You have entered the correct COM port settings.

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Version 2.00.00 2/10/16