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INTRODUCTION

The USB to DIC (Data Industrial Corporation) Converter facilitates the connection of legacy (RS-232) devices to the modern USB-equipped computer, for the purposes of configuration and data logging. Peripherals used with the USB to DIC Converter include the host computer and the connected legacy device. Legacy devices include a variety of flow sensors and signal transmitters. The USB to DIC Converter is typically connected during the configuration of a sensor or transmitting device.

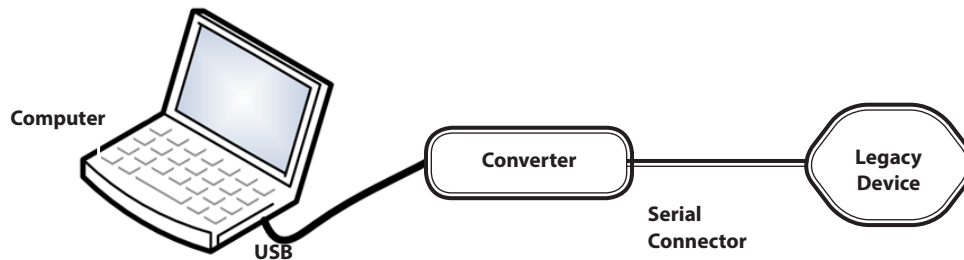


Figure 1: USB to DIC Converter Connections

ITEMS REQUIRED

- Computer with a USB port
- Badger Meter USB to DIC Converter featuring a DIC serial interface
- USB cable with ferrite beads (signal interference filter) with a connector to mini-USB
- Current release of Badger Meter DIC product software
- Access to FTDI drivers within the Windows® driver base or from the FTDI site

SOFTWARE INSTALLATION

Badger Meter DIC Product Software Installation

1. Download the Badger Meter DIC product software from http://www.badgermeter.com/Badger-Files/Program-Executables/Industrial/350_setup.exe and save it (*Save As*) to a preferred location on the computer's hard drive.
2. Open the installer file (350_setup.exe) from that location and follow the subsequent prompts. Administrative privileges may be required. When completed, a "DataIndustrial.exe" file will appear in the same preferred location, as in Step 1.

FTDI Driver Installation

1. From the FTDI website (<http://www.ftdichip.com/Drivers/VCP.htm>), click on the appropriate *Processor Architecture* link for the appropriate computer platform and operating system.
2. To download the driver files, click **Save As** to save the files to a convenient storage location. These files will be needed for the driver installation process.
3. Plug the USB cable from the USB to DIC Converter to a USB port on the computer.

- When prompted about the Windows Update driver installation, select **Yes, this time only**, then click **Next**.



Figure 2: Driver Installation from the Internet

- Select **Install the software automatically (Recommended)**, then click **Next**.

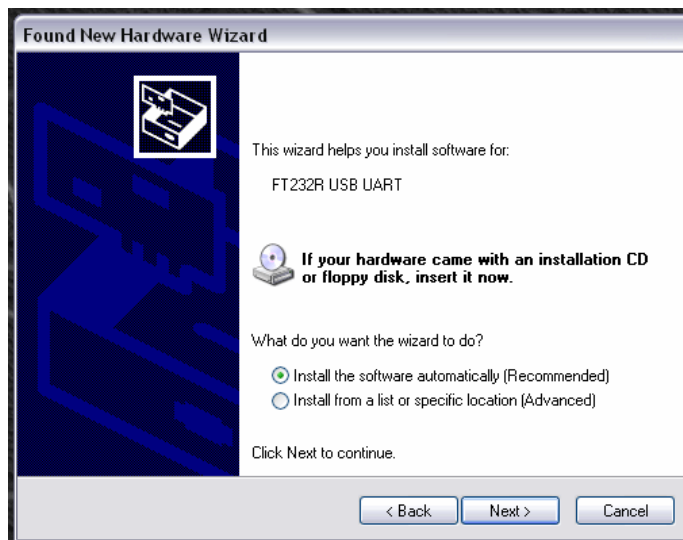


Figure 3: Automatic Driver Installation

6. If the computer is running a pre-XP version of a Windows operating system or cannot connect to the Internet, use a newer, Internet-connected computer to download the FTDI driver package to a flash drive, CD-ROM, floppy disk or other storage device.

Refer to Steps 7 and 8 for FTDI driver installation from a storage device. Steps 9 through 15 are the same for Internet and storage drive installation.

7. Select **No, not this time** to the Windows update prompt, then click **Next**.



Figure 4: Driver Selection from a Storage Device

8. Select **Install from a list or specific location (Advanced)**, then click **Next**.

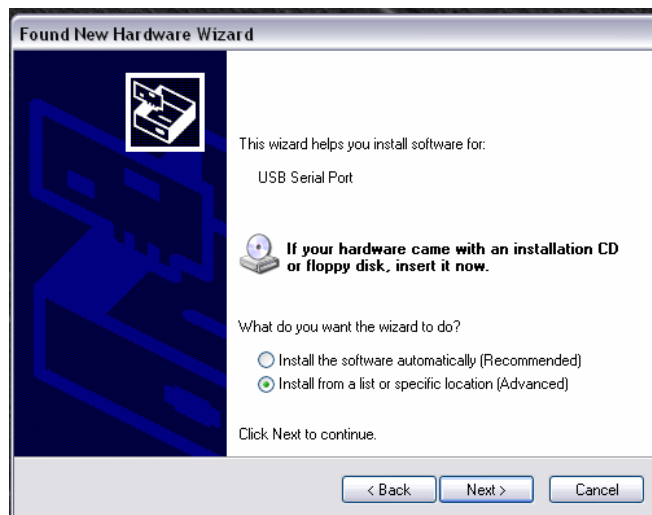


Figure 5: Select the Specific Location Option

9. Using Windows Explorer, navigate to the FTDI driver package, then right-click on the zip file to extract the files.
10. Check the boxes labeled **Search removable media (floppy, CD-ROM...)** and **Include this location in the search**.
11. Click the **Browse** button to find the location of the FTDI driver package.

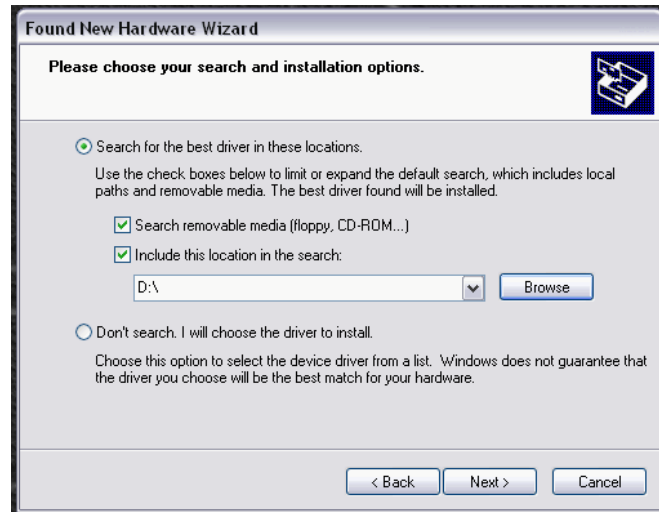


Figure 6: Include a Relevant Search Path

12. Browse to the folder location of the extracted FTDI driver files, then click **Next**.

NOTE: Clicking the *Next* button in Step 12 copies the .inf (descriptor file for the USB device) to the Windows driver directory.

13. If a prompt appears warning about the lack of Windows logo testing, select **Continue Anyway**.

A status bar will indicate that the driver files are being copied to the required destination. The final prompt will appear indicating that the process was successful, as shown in Figure 7 on [page 9](#).

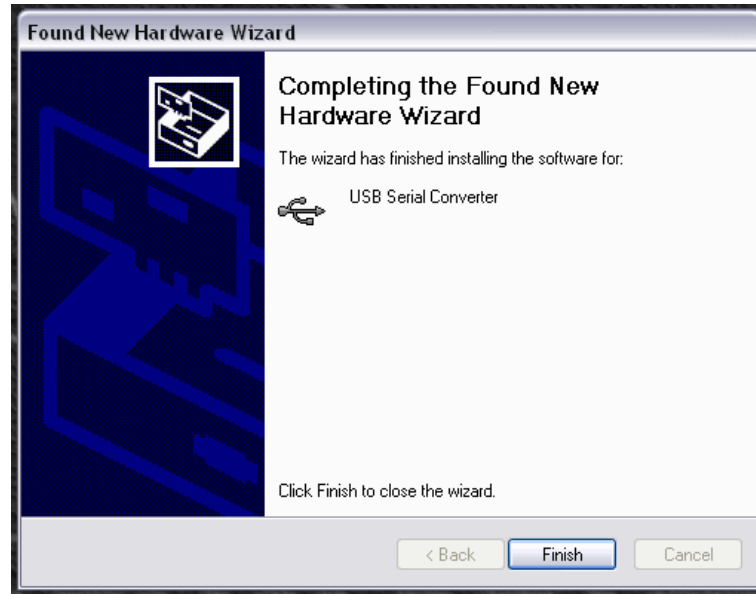


Figure 7: Finish the Driver Installation

14. An additional driver installation prompt may appear requesting the installation of a "USB Serial Port" driver. If that installation prompt appears, the installation process must be repeated. To repeat the process, start again at Step 1 under "FTDI Driver Installation" on page 5.
15. To complete the driver installation process, click **Finish**.

SOFTWARE CONFIGURATION

Prior to using the DIC product software, the proper communications (COM) port number must be established.

1. Open the Device Manager by selecting the **Start** button, then type "Run" in the search field, then press the keyboard **Enter** key and then type "devmgmt.msc" in the *Open* field.

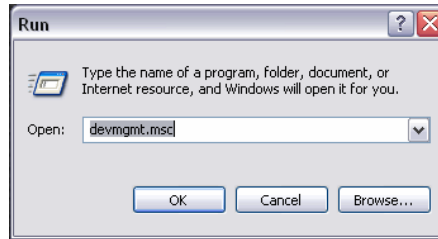


Figure 8: Starting the Device Manager from the Run Dialog

2. Click the **OK** button to open the *Device Manager* window.

The COM port number assigned to the USB serial port is indicated under the *Ports (COM & LPT)* heading. The port assignment shown below is COM16. On other computers, the port assignment number may be different.

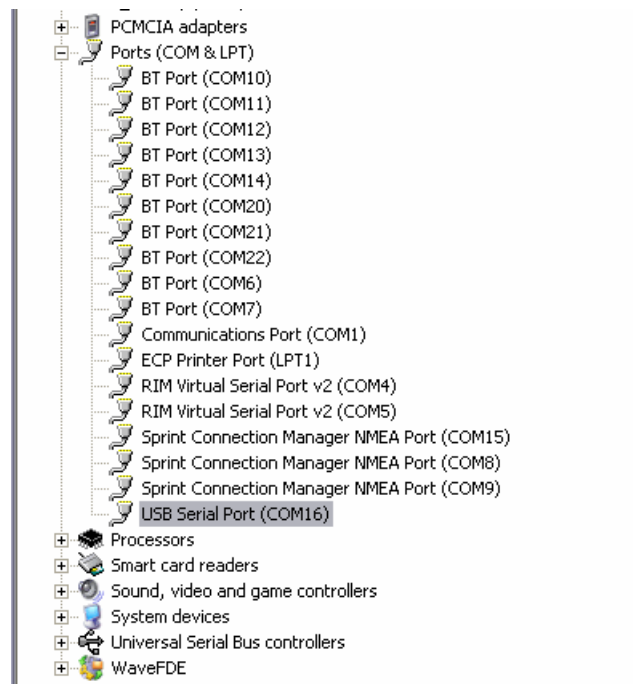


Figure 9: Device Manager Port Listings

3. Open the “DataIndustrial.exe” file from Step 2 of the “Badger Meter DIC Product Software Installation” on [page 5](#).

The Badger Meter DIC Product Software (version 3.12) is configured to use the communications port number of the USB serial port, per Step 2, on page 10.

4. Select the **Set Comm Port** menu option, from the *Configuration* menu, per Figure 10.
5. Click on the **Comm Settings** drop-down menu, then select the appropriate port number from that menu.

NOTE: The USB serial port number (Figure 9) and the *Comm Settings* number (Figure 11) must be the same number.

6. Click **OK** to complete the connection configuration.

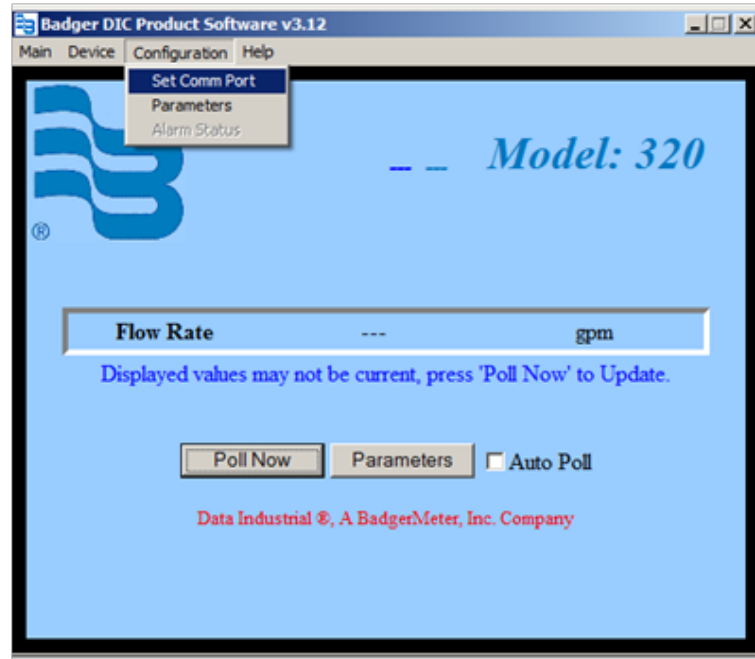


Figure 10: Select “Set Comm Port”

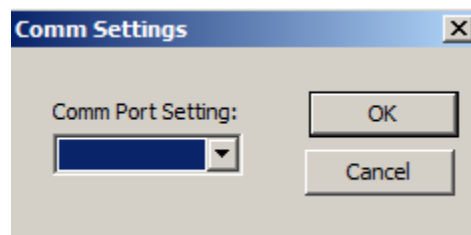


Figure 11: Matching COM Port Settings

7. Select the appropriate device from the *Device* menu in Figure 10.
8. Set the appropriate parameters from the *Configuration* menu in Figure 10 or click the **Parameters** button.

The Badger Meter DIC Product Software is now ready for use with the USB to DIC Converter and legacy devices.

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