

IDWedgeKB Serial Port and Chrome Serial API

The IDWedgeKB is a barcode scanner that reads and parses the information encoded on the 2D barcode found on U.S. Drivers Licenses. IDWedgeKB has two modes of operation; Keyboard and Serial Port. This document describes how to interface the Serial Port data from the scanner to the Serial API available in the Chrome Browser.

Required material:

IDWedgeKB Users Guide Version 1.12.pdf

<https://www.idscanner.us/documentation/idwedgekb-user-manual-version-1-12/>

Chrome Browser

Chrome Serial Port Test Extension

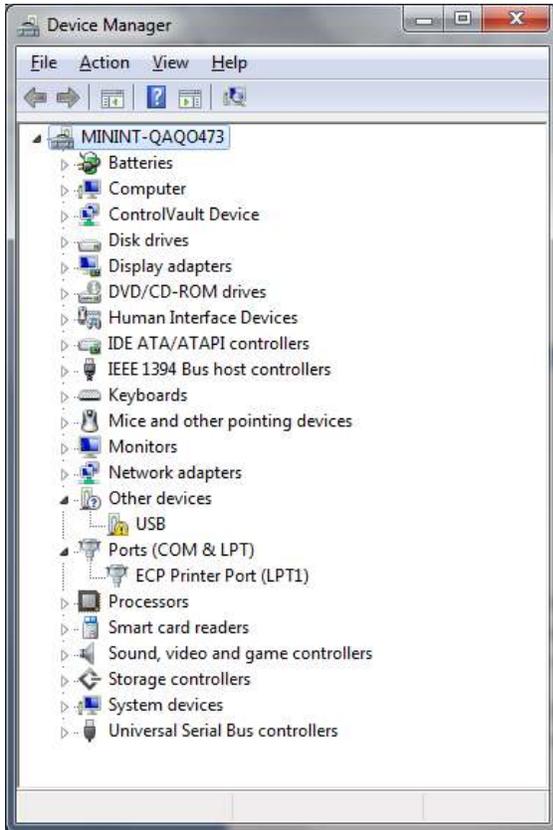
IDWedgeKB *inf* files

Drivers License with 2D barcode

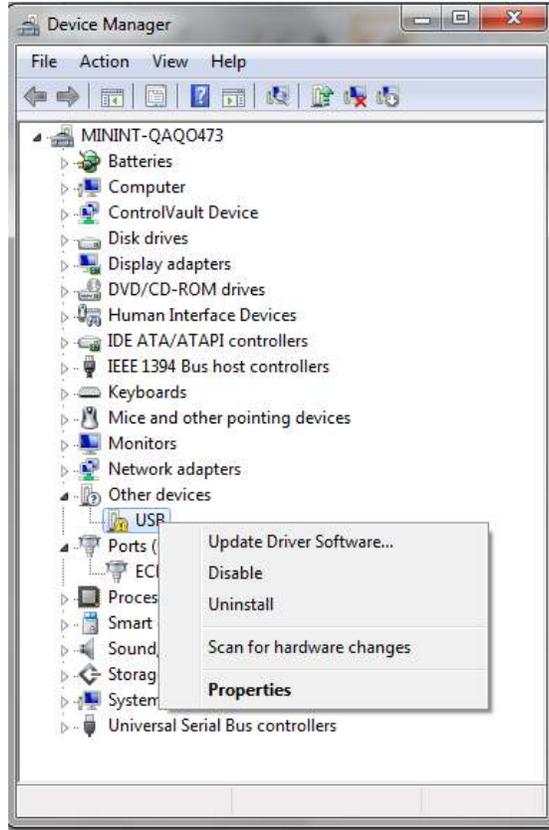
Installing the IDWedgeKB hardware

The following instructions were developed for a PC and the screen shots/steps may be different for other platforms. These instructions assume you are familiar with IDWedgeKB and have configured the scanner for Serial Port mode. See appendix for details on configuring IDWedgeKB for Serial Port.

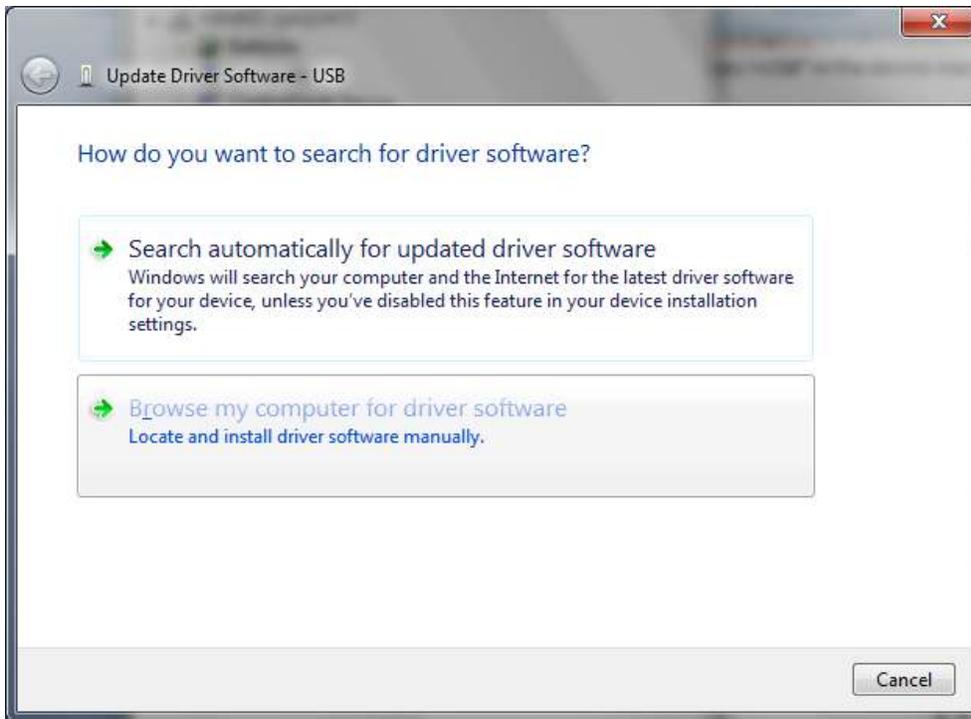
Connect the IDWedgeKB to the PC with the supplied USB cable. Open the Device Manager and locate the “other devices->USB” in the device manager, and right click the entry to display the menu.



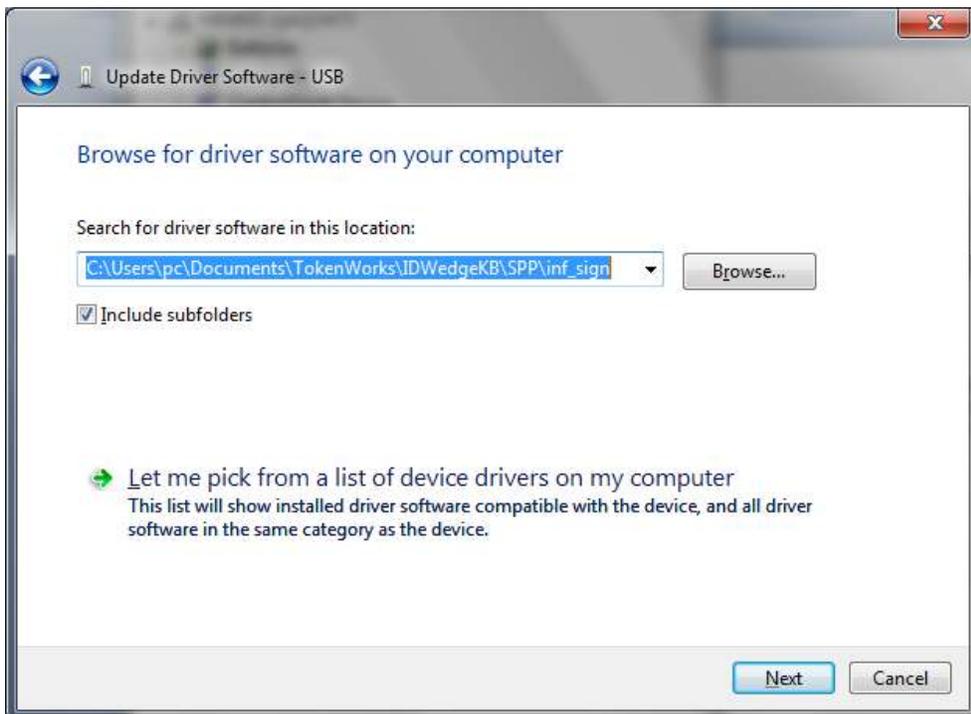
Unknown Device



Right click to update Driver Software



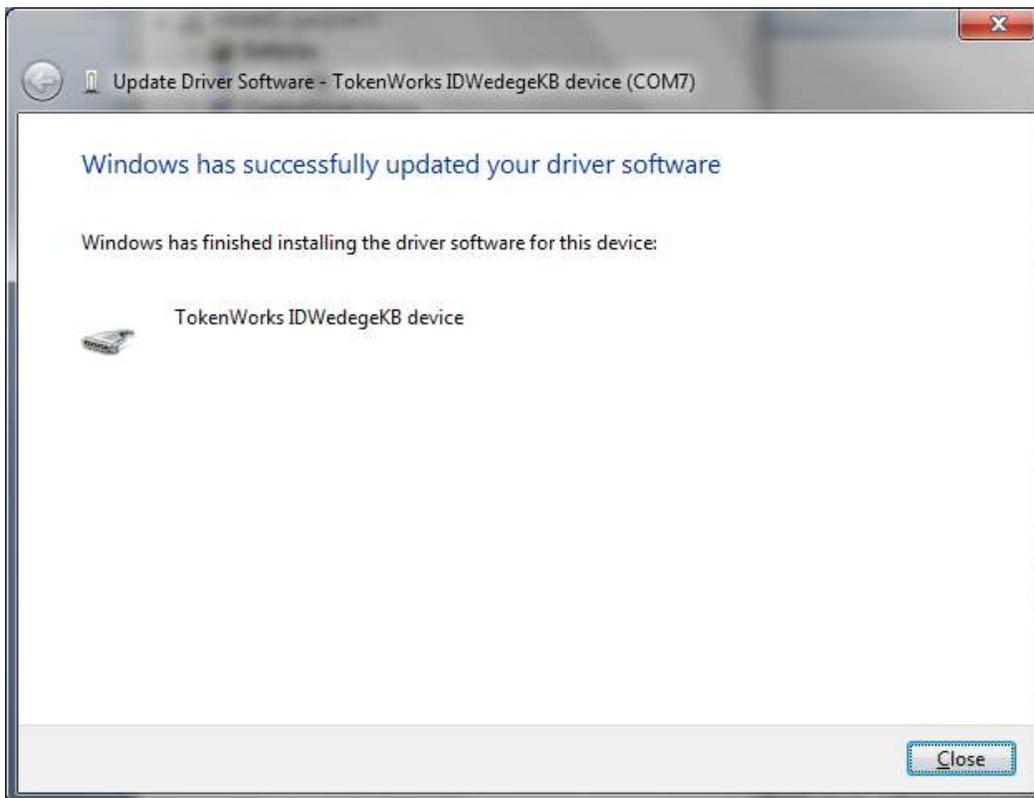
Select the Browse my Computer



Navigate to the folder called inf_sign and click next.



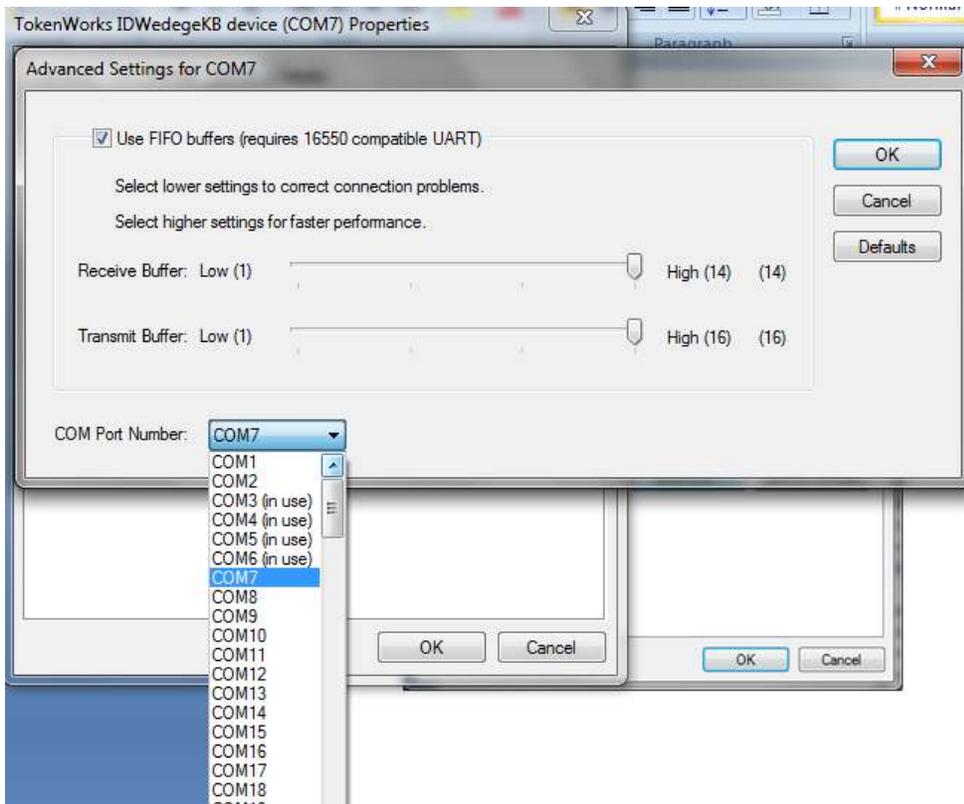
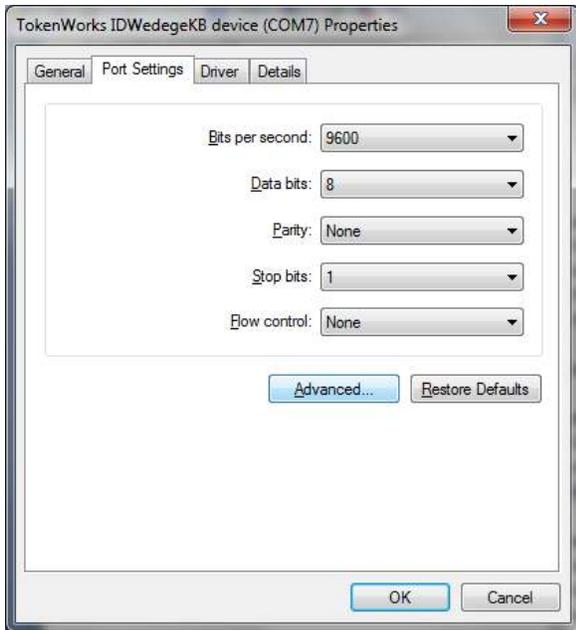
When prompted click on Install and wait for the installation to complete, this may take a minute..



Click close to complete the installation. The inf file helps to configure the built in Usbsys.sys driver on windows PCs.



The PC has selected COM7 for this PC. The Chrome Extension Serial Port test app uses ports 1-9, so if your installation selected a higher port, you can change this by right clicking the entry in the device manager and select properties, then select Advanced on the properties page, and select a lower com port:

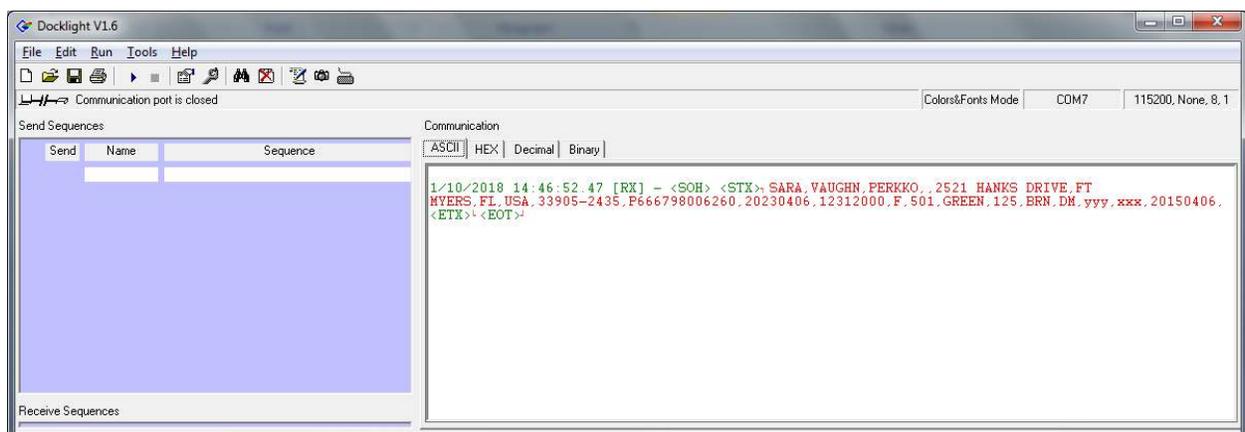
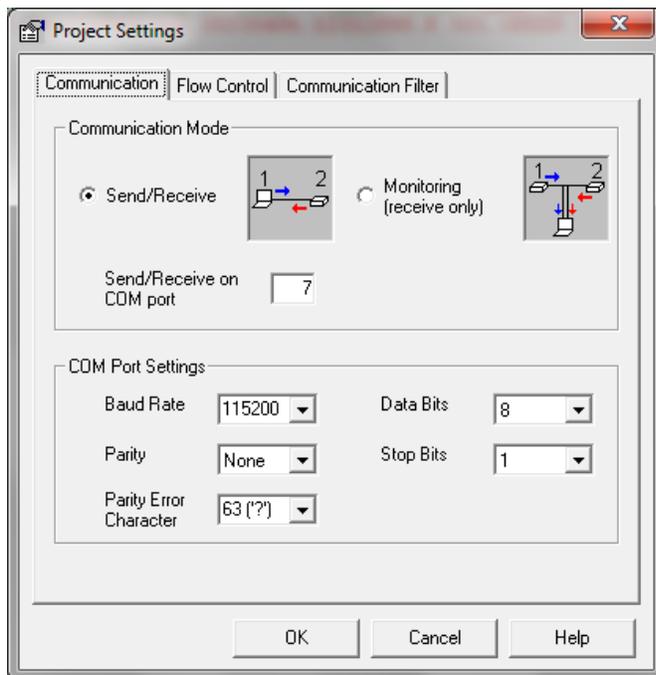


Optional – Selecting a different Com port

Test scanner using terminal emulator software

At this point it is possible to open a connection to the IDWedgeKB using terminal emulation software, and scanning a card to ensure you have correctly configured the PC to work with the hardware:

Open the port using 115200 baud, 8 bits, 1 stop bit, parity=none and scan a Drivers license:



You should see a Comma Separated Value (CSV) string as the output from the IDWedgeKB. Consult the user's guide for field ordering information.

NOTE: Close the port on the terminal emulation software, so you can use the port with Chrome!!

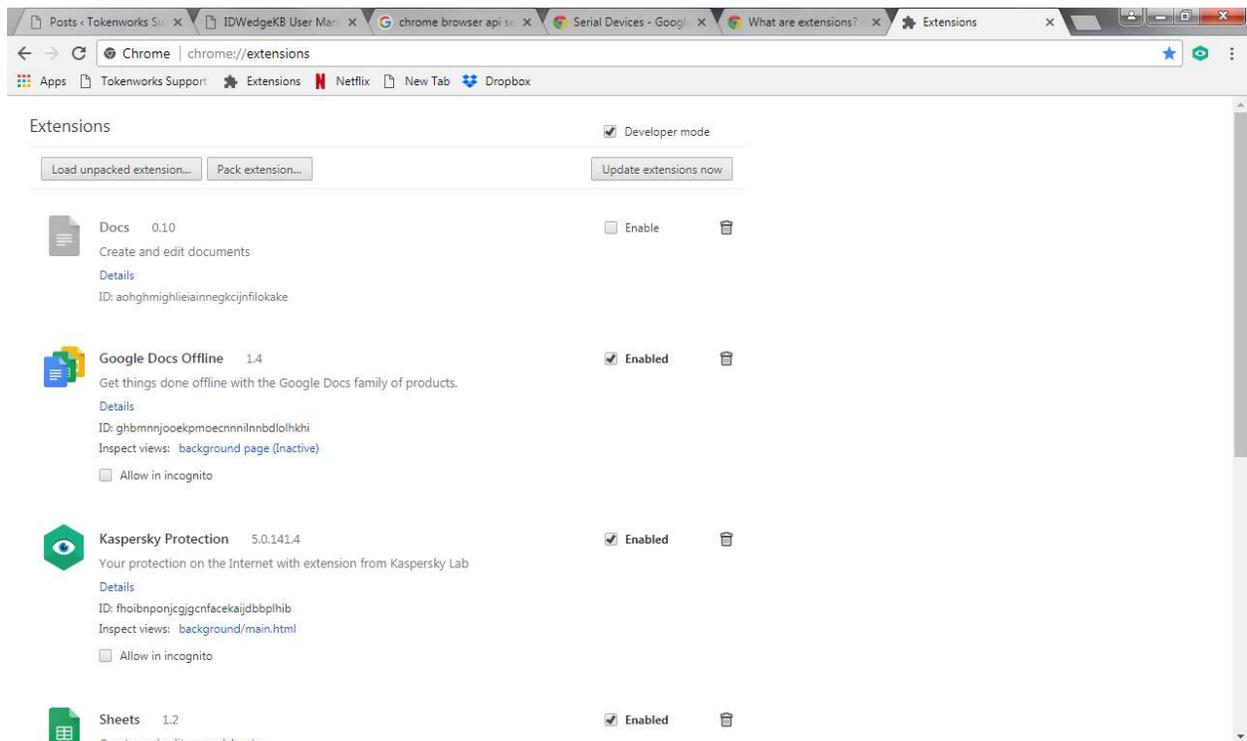
Installing the Serial Port test app as a Chrome Extension

Chrome apps allow you to write a single application that runs anywhere that the Chrome browser runs, this includes Windows, Linux and OSx and Chromebooks. Chrome extensions are apps built with html and javascript to do specific chores with the browser, like read and write serial devices

The Serial Port test app is an html page with some javascript that access the Serial API available in the Chrome browser. To install the app into Chrome, follow these instructions.

Open Chrome and go to the following address: `chrome://extensions/`

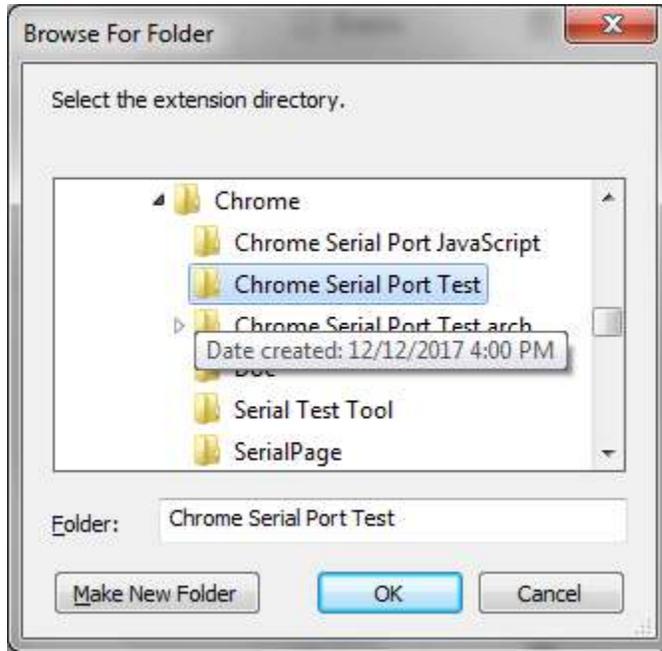
You will see something like this:



Make sure to check the developer mode checkbox at the top of the page.

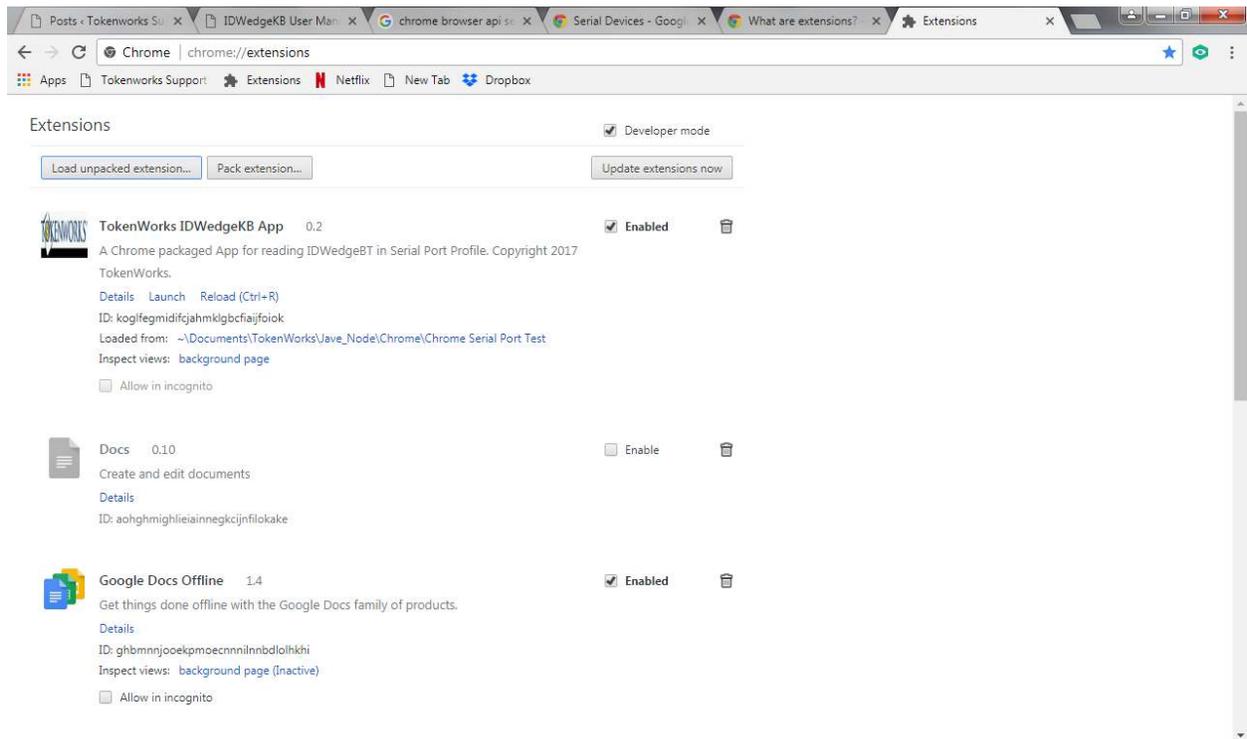
Click on the button at the top of the page labeled “Load unpacked extensions”

Then navigate to the folder that contains the Serial Port Test app from TokenWorks

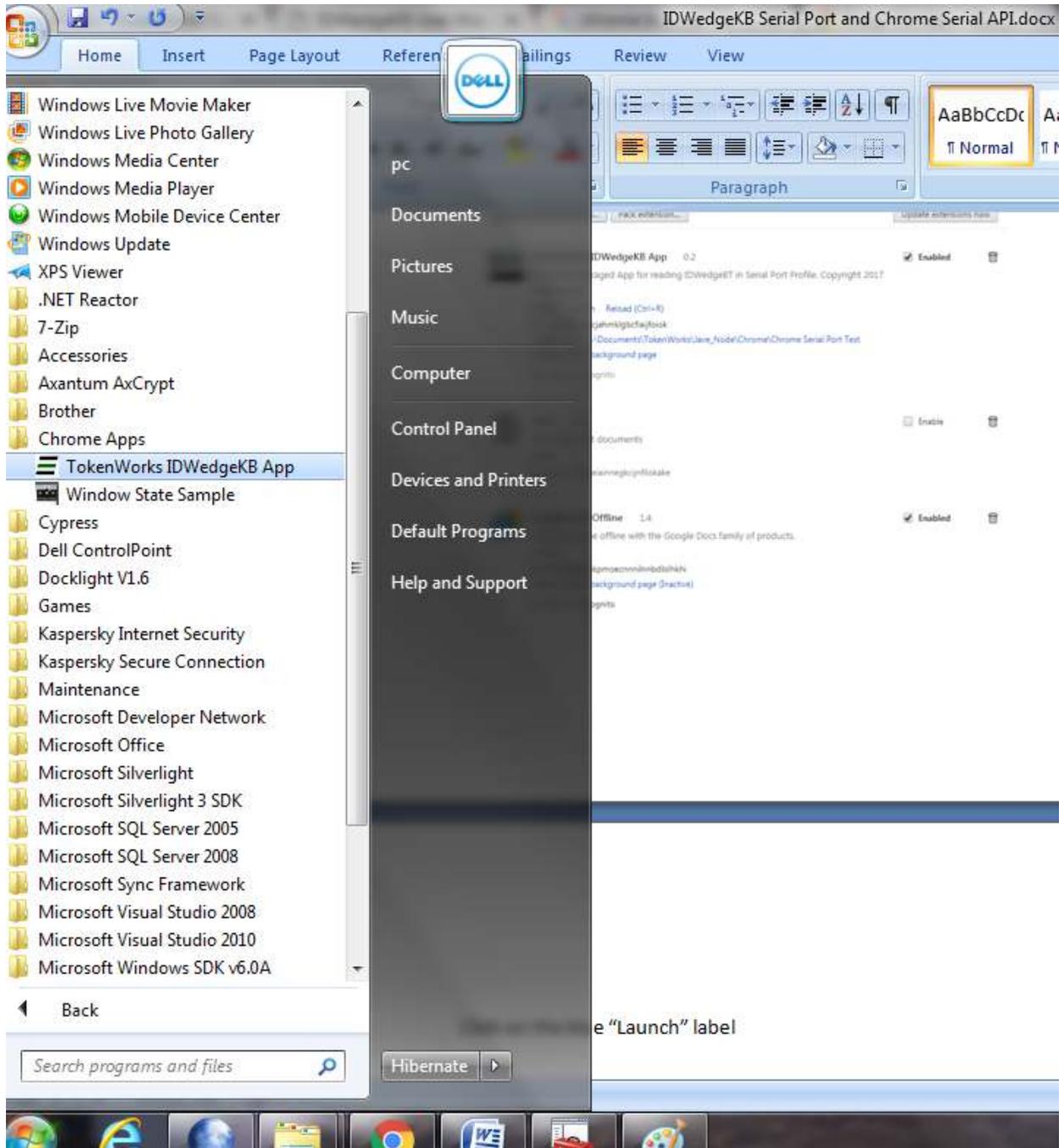


Then click OK.

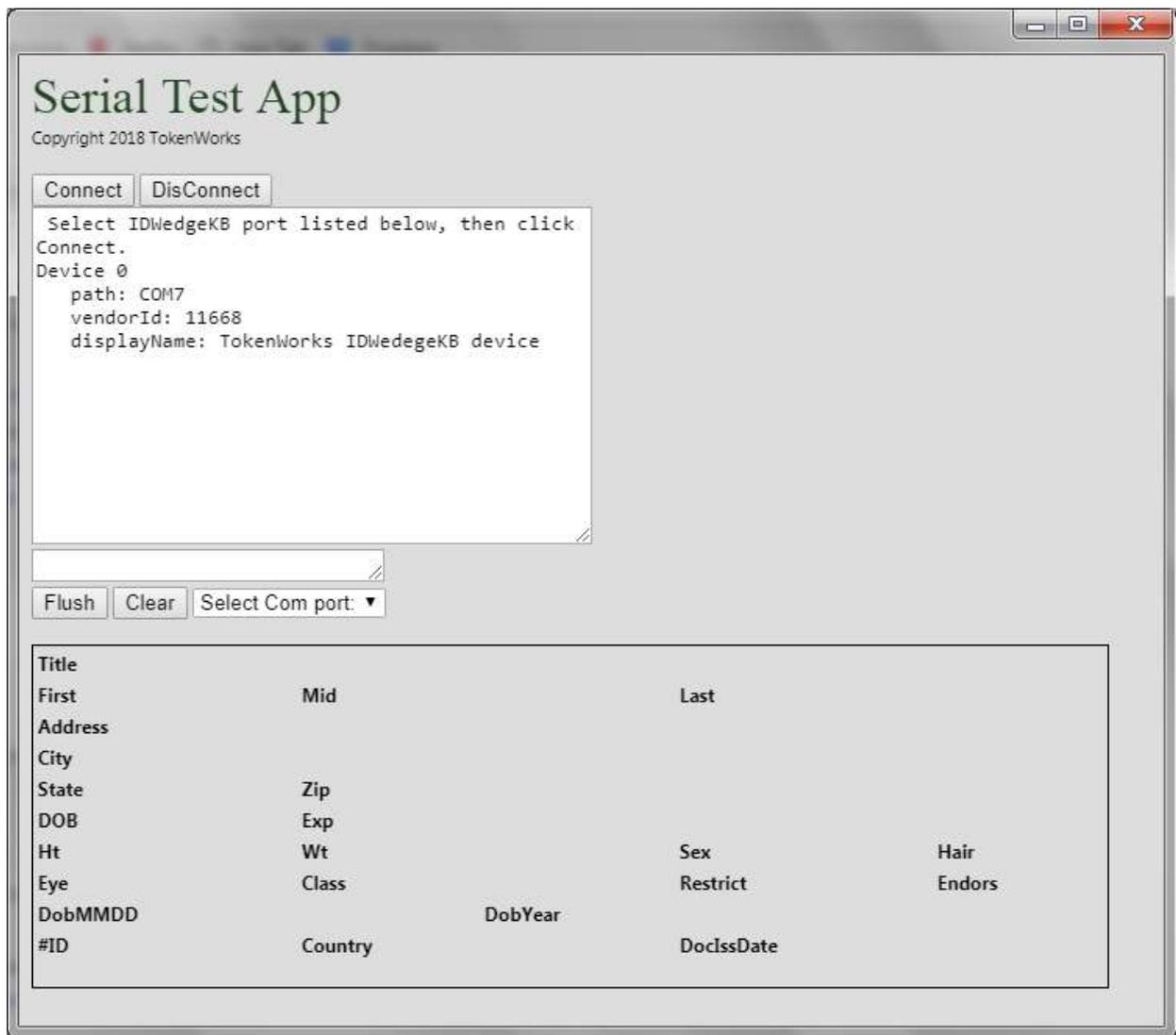
You should now see the test app as an entry on the extensions page:



Click on the blue “Launch” label to run the app, or you can click on the start button and find the new Chrome app->TokenWorks IDWedgeKB app

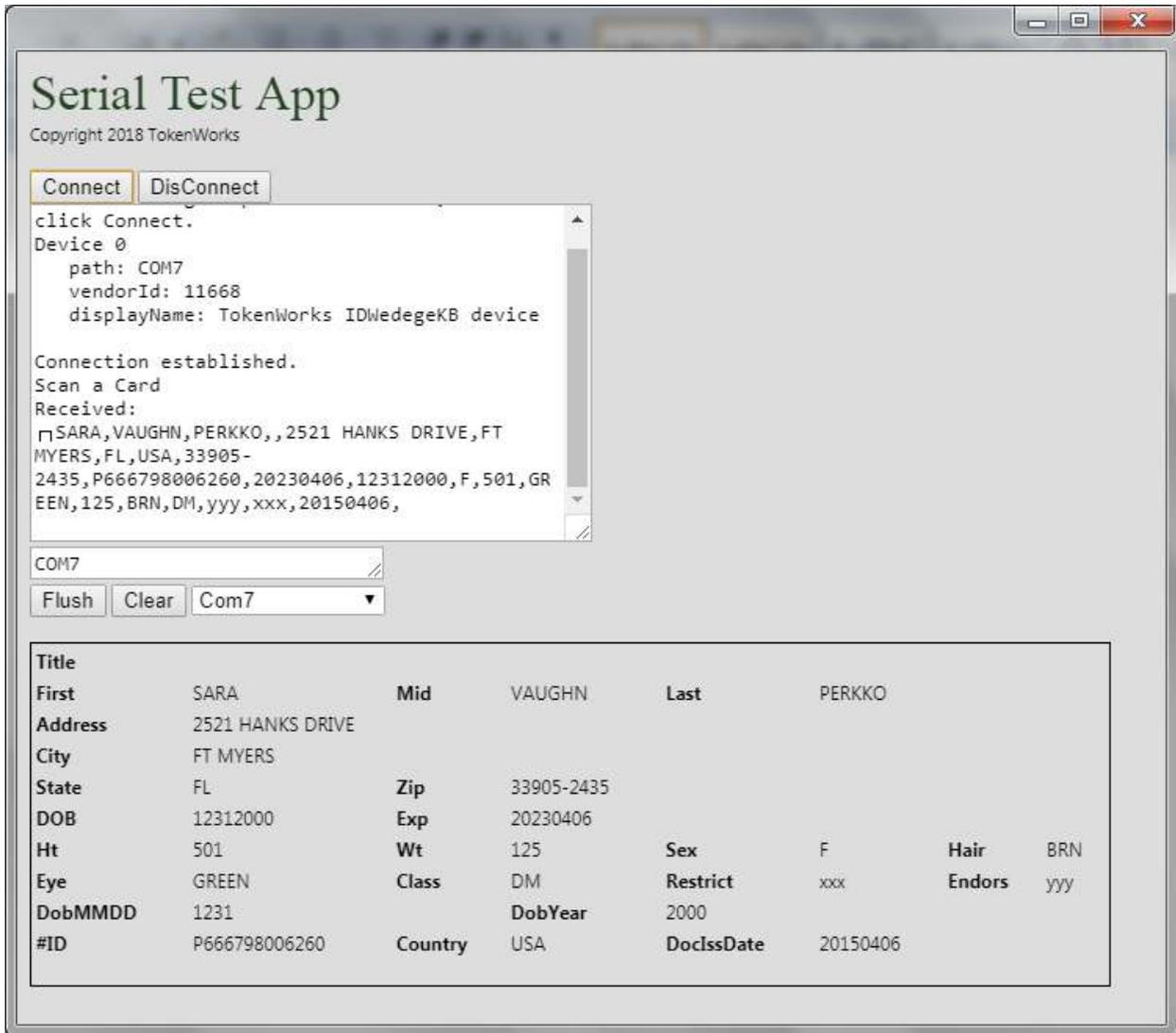


This will launch the extension



The TokenWorks Serial test app running on the PC.

To use the app, select the comport assigned to IDWedgeKB and then click the connect button, then scan a card to fill in the form below the text box:



The app only allows for Com1 – Com9 as written. You can examine the Javascript file called script.js if you want to change Com ports ranges or tinker with how the data is displayed.

You can observe the CSV string printed in the text box above, the javascript parses the CSV string and assigns the table below the text box with field information.

Click Disconnect to free up the com port, or close Chrome, to make the com port available to other apps on the PC.

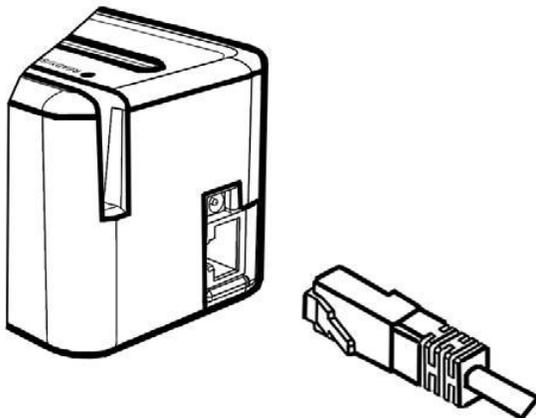
End of Demo.

Appendix

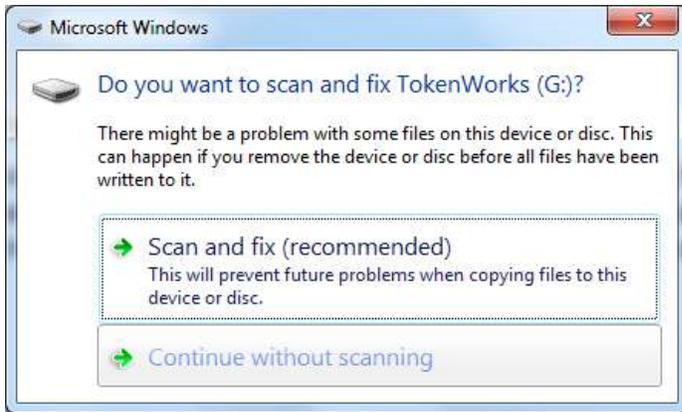
Configure IDWedgeKB for Serial Port mode



Location of Function Button.



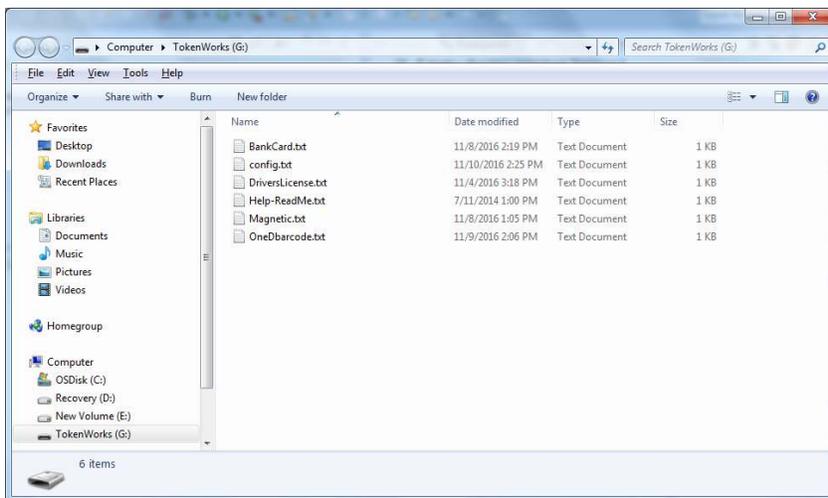
To access the file system of IDWedgeKB, hold the function button depressed, while plugging in the USB cable. You will see a new drive dialog appear when you a plug in the USB cable:



Select Continue without scanning, and you will see:



Use explore to view the contents of the IDWedgeKB file system, and edit the file called Config.txt:



Below is an example of the contents of the default *Config.txt* file in USB Keyboard mode.

```
<Version=2.4>  
<CreditCard=True>  
<1Dbarcode=True>  
<MagTrackCard=True>  
<MidInitial=False>  
<FirstInitial=False>  
<5DigitZip=False>  
<DobYYOnly=False>  
<ExpYYOnly=False>  
<ScanMsg=True>  
<DisableMagDL_CC=False>  
<USBKeyboard=True>  
<USBSerialPort=False>  
<CharDelay=0>
```

Use Windows Notepad to edit the text file or other simple text editor, do not use MS Word as it will add formatting characters that will interfere with IDWedgeKB operating system.

Set the USBKeyboard to False, and USB SerialPort to True, save the file and disconnect the IDWedgeKB, so that the next time you plug it in the scanner will be in serial port mode:

```
<Version=2.4>  
<CreditCard=True>  
<1Dbarcode=True>  
<MagTrackCard=True>  
<MidInitial=False>  
<FirstInitial=False>  
<5DigitZip=False>  
<DobYYOnly=False>  
<ExpYYOnly=False>  
<ScanMsg=True>  
<DisableMagDL_CC=False>  
<USBKeyboard=False>  
<USBSerialPort=True>  
<CharDelay=0>
```

The above shows the IDWedgeKB in Serial port mode