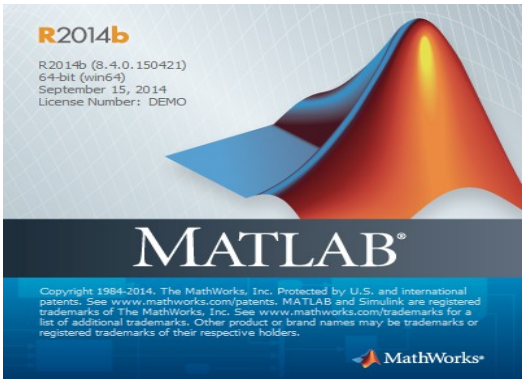
How to use iWorxDAQ.dll in Matlab



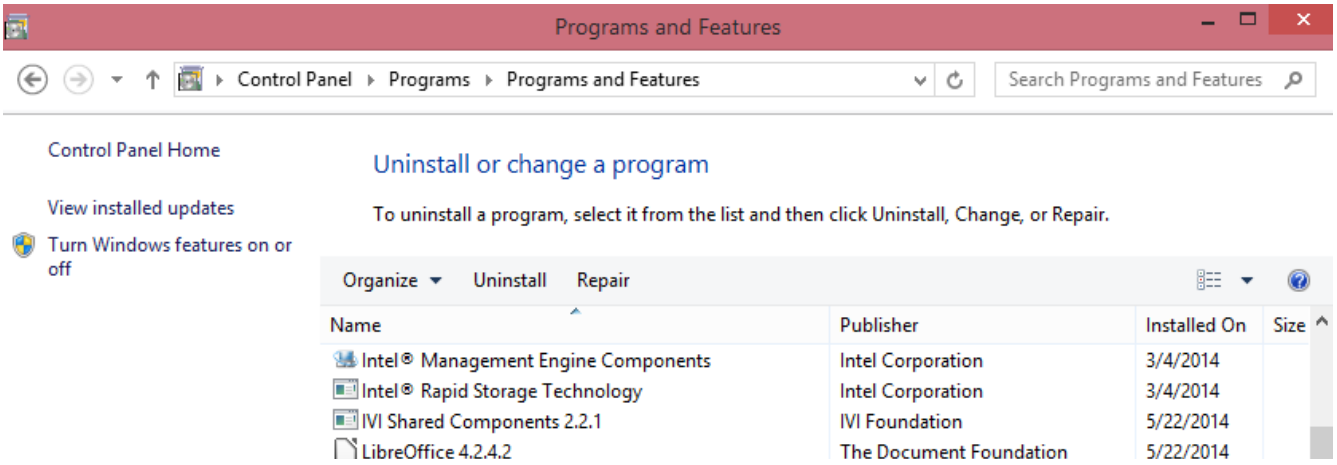
1) Open Matlab

2) Make sure that your version of Matlab has a working C compiler by typing in the command window "mex -setup c".

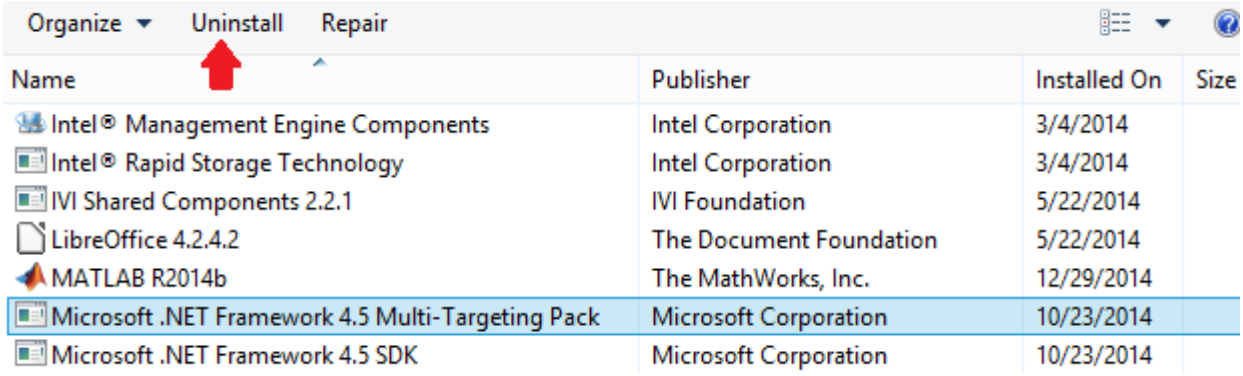
```
Trial>> mex -setup c
MEX configured to use 'Microsoft Windows SDK 7.1 (C)' for C language compilation.
Warning: The MATLAB C and Fortran API has changed to support MATLAB
     variables with more than 2^32-1 elements. In the near future
     you will be required to update your code to utilize the
     new API. You can find more information about this at:
     http://www.mathworks.com/help/matlab/matlab_external/upgrading-mex-files-to-use-64-bit-api.html.
Trial>>
```

3) If your Matlab doesn't have a C compiler or you are receiving errors:

3.1) Look through programs to see if .NET Framework 4.5 and Microsoft Visual Studio C++ 2010 SP1 are installed.

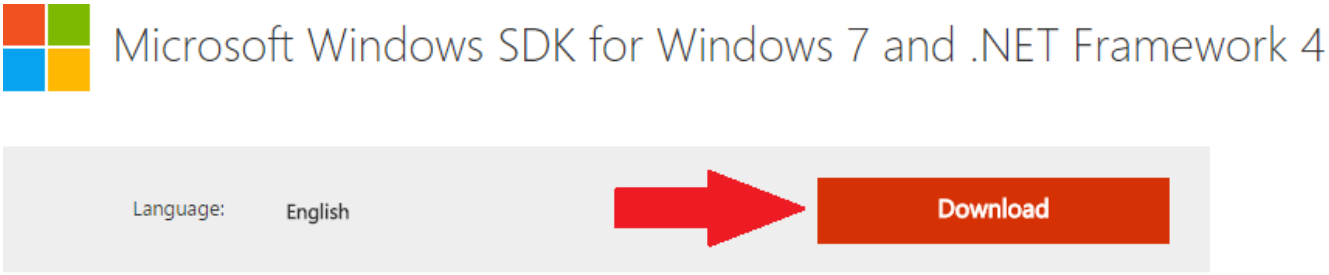


3.2) If .NET Framework 4.5 and/or Microsoft Visual 2010 SP1 packages are installed then you must uninstall them.



3.3) Install SDK 7.1 at this link:
http://www.microsoft.com/en-us/download/details.aspx?id=8279.

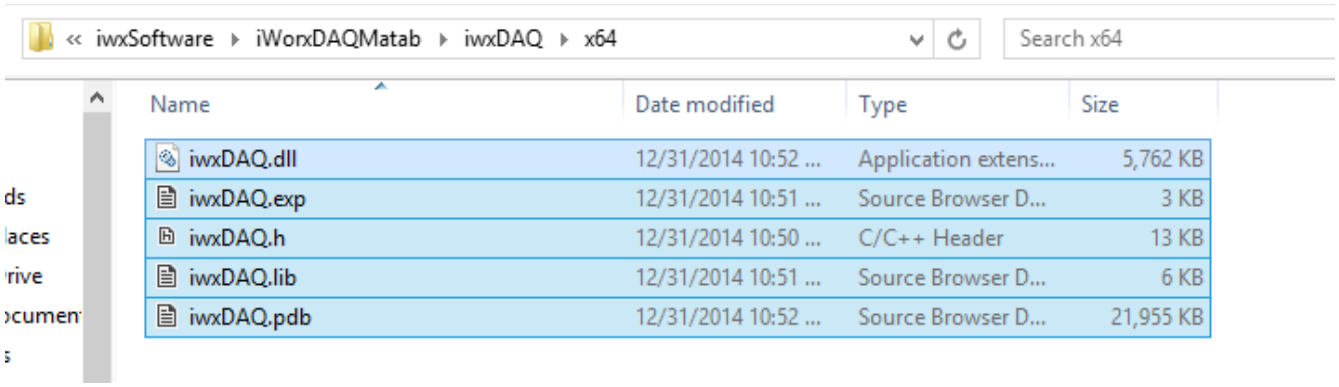
If there are any errors installing SDK 7.1 then refer to steps 3.1 and 3.2.

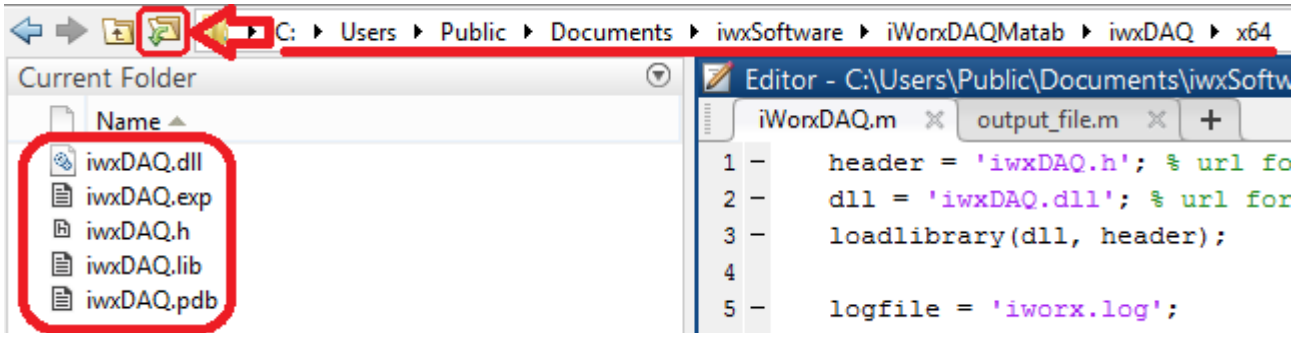


3.4) You may reinstall your old version of .NET Framework 4.5 and MicrosoftVisual 2010 SP1 if necessary.

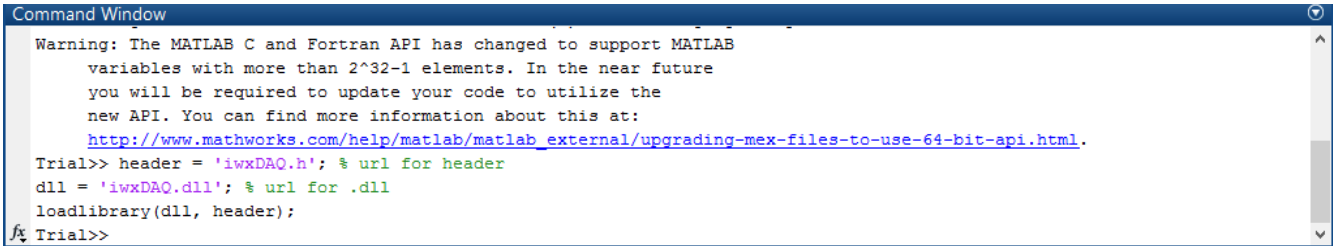
4) Ensure that your version of the .dll matches your version of Matlab.
- 32-bit Matlab must utilize the 32-bit .dll
- 64-bit Matlab must utilize the 64-bit .dll.

5) Move all iwxDAQ files to the same root directory and set Matlab's current folder to that directory.





6) Test the command “loadlibrary('iwxDAQ.dll', 'iwxDAQ.h')” to make sure that the current folder is correct and that all of the files are properly placed.

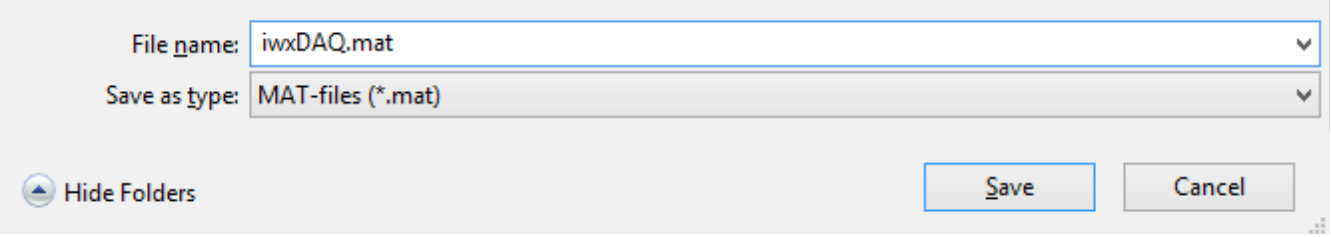


6.1) If the url is incorrect for the dll then you will receive the following warning:
Warning: The library name is not a valid name.

6.2) If the url is incorrect for the header then you will receive the following error:
Error using loadlibrary>lFullPath

6.3) If there are no errors then most likely you are fine.

7) Save your Matlab project by clicking the command window then pressing ctrl+s. This way you won't have to change your current folder every time that you access iwxDAQ.dll



8) Refer to iWorxDAQ.m as a guide for implementing the .dll functions in matlab.

9) To use the iWorxDAQ.m file you will need to create a settings file in LabScribe first. Refer to the LabScribe manual to create a settings file.
This file sets up the acquisition parameters. In the example “test214.iwxset” is the settings file used. Make sure that the setting file is created for the device that you are recording from.