

HOW-TO: Setting up developer tools for Piksi

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Windows Installation Instructions

These instructions have been tested on Windows 7 (SP1).

Miscellaneous dependencies

You'll need to install the following tools.

MinGW and MSYS (<http://www.mingw.org/>) provide a basic set of unix tools such as make and bash used to build the software.

Follow the instructions at http://www.mingw.org/wiki/Getting_Started and get the `mingw-get-inst` installer. In the install wizard select the options to download an updated package list and **check the options to install MSYS and the MinGW Developer Tools**.

git (<http://git-scm.com/>) is a version control system, we will use it to obtain the latest versions of the code. A windows installer package can be downloaded from:

<http://git-scm.com/download/win>.

Git isn't included in the MinGW Shell path by default. You must add the path to the Git executable to your system PATH environment variable as follows:

- From the Desktop, right-click My Computer and click Properties.
- Click Advanced System Settings link in the left column.
- In the System Properties window click the Environment Variables button.
- Add the Git path `C:\Program Files\Git\bin`; to the PATH environment variable.

CMake (<http://www.cmake.org/>) is used as a build system. A Windows installer can be found here:

<http://www.cmake.org/cmake/resources/software.html>.

Be sure to select "Add CMake to system path" in the install wizard.

Doxygen (<http://www.stack.nl/~dimitri/doxygen/>) is used for building documentation and is optional. If you want to install it an installer is available from:

<http://www.stack.nl/~dimitri/doxygen/download.html>.

Running Commands

In these instructions we will sometimes ask that you issue a command at the command prompt. This is usually shown as follows:

```
$ command
Output from command
```

e.g.

```
$ date
Fri Jul 5 17:55:20 PDT 2013
```

On Windows you should use the "bash" command prompt included with MinGW/MSYS (Programs -> MinGW -> MinGW Shell).

Installation Location

Some of the libraries used will not build if there is a space in their path so they should not be placed in, for example, "My Documents". We recommend creating a working folder in the root of the C: drive as follows:

```
$ cd /c
$ mkdir swift
$ cd swift
```

Setting up Python

Install the [Python\(x,y\)](https://code.google.com/p/pythonxy/wiki/Downloads?tm=2) (<https://code.google.com/p/pythonxy/wiki/Downloads?tm=2>) distribution - this includes most of the dependencies you will need.

When installing Python(x,y), you **must install** the PySerial and ETS modules. To do this, in the "Choose Components" Window, expand the "Python" tab. Check the boxes next to "PySerial" and "ETS".

We'll need to manually install the SBP module:

```
$ pip install sbp
```

We must also reinstall pyparsing to make sure we have the right version.

Enter the following commands in the command prompt:

```
$ pip uninstall pyparsing  
$ pip install intelhex pyparsing==1.5.7
```

GNU toolchain for embedded ARM processors

Get the Windows installer from <https://launchpad.net/gcc-arm-embedded/>

On the last page of the install wizard, check the options for adding path to the environment variables and running gccvar.bat.

Installing FTDI USB drivers

The Piksi uses a built in FTDI USB to Serial converter to communicate with the host.

Install the FTDI Virtual COM Port (VCP) drivers available from the FTDI website:
<http://www.ftdichip.com/Drivers/VCP.htm>.

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