

Hamster: using Python via USB-BLE Dongle for Windows, Linux, OS X

1. Install: USB dongle driver
 - a. Automatic: Plug in the USB dongle to the computer (For Windows, this will automatically install the driver).
 - b. Manual: Make sure to **unplug*** USB dongle and then install drivers from <https://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx>
*Note: If driver is manually installed while USB dongle is plugged in, you need to uninstall with administrator privilege and then reinstall.
2. Install: Python 2.7 (this will also install “pip”)
 - a. Download from <https://www.python.org/downloads/>
 - b. Windows: Make sure to add python path to PATH environment variable
 - i. During Python27 installation, choose “Add python.exe to Path” in the install setup menu (at the bottom of the install options list).
 - ii. Or After the installation, manually append “C:\Python27;C:\Python27\Scripts;” to the beginning of PATH environment variable.
 - c. Linux and OS X: Python should be pre-installed. Check if version is 2.7.
3. Install: pySerial 2.7
 - a. In the command window(cmd.exe) or in the terminal(Linux, OS X)
> pip install pyserial
or in the terminal(Linux or OS X)
> sudo easy_install -U pyserial
If not working, refer to “pip” site: <https://pip.pypa.io/en/latest/installing.html>
4. Connect: Hamster with USB dongle
 - a. First time: turn on the Hamster near USB Dongle (10~20 cm)
 - b. From then on: turn on the Hamster anywhere (BTL range: ~ 10 m)
 - c. BTL indicators: on Hamster and on USB dongle
 - i. pre-connection: blinking blue
 - ii. post-connection: solid blue
5. Modify your main program to use USB communication.
6. Modify your main program using robot API in HamsterAPI/robot.py.
7. Start: the main program (hamster_class.py)
 - a. In the command window(cmd.exe) or in the terminal(OS X)
> python hamster_class.py
or in the terminal (Linux)
> sudo python hamster_class.py
8. Hamster Time!