Setting up the Adafruit BBIO Library

Instructors

October 21, 2015

1 Requirements

1. A BeagleBone Black running Ubuntu 14.04.3 LTS.
2. An valid internet connection set up on the BeagleBone Black.

2 Installation Steps

1. SSH into your BeagleBone Black.
2. Install the basic required packages for building code on your BeagleBone Black. This can be done using:

```
sudo apt-get update
sudo apt-get install build-essential python-dev python-setuptools -y
sudo apt-get install python-pip python-smbus git python -y
```

3. Verify you have a 3.8 version of the Linux kernel, without realtime enabled. The version initially tested with these instructions is 3.8.13-bone78. Getting the current version can be done with:

```
uname -r
```

and installing the required kernel packages can be done with:

```
sudo apt-get update
sudo apt-get install linux-image-3.8.13-bone78
sudo apt-get remove linux-image-4.1.*
sudo reboot
```

4. Activate the desired overlays. This is done by editing the /boot/uEnv.txt file, and searching for the line under the comment "3.8 Examples" that reads:

```
cape_enable=capemgr.enable_partno=
```

and modify it to remove the # at the beginning of the line (not shown above, but it's there in the actual file) and modify it to read:

```
cape_enable=capemgr.enable_partno=BB-ADC
```

5. Install the Adafruit BBB IO library for python by executing:

```
cd
git clone https://github.com/FleetRobotics/adafruit-beaglebone-io-python.git
cd adafruit-beaglebone-io-python
sudo python setup.py install
```

6. Reboot the BeagleBone Black. The system should reboot with devices enabled, and accessible using the tutorials for the BBBIO library.

NOTE: In order to access the hardware, you will need to run python as the root user.