**How to set up GPIB driver on linux and python?**

1. Download the latest version of gpib driver (eg: linux-gpib-3.2.21.tar.gz) from <http://sourceforge.net/projects/linux-gpib/?source=typ_redirect>
2. Open terminal and enter sudo mode to get root privilege.
3. Do the following to build and install the gpib driver (Ubuntu only):
   1. $ sudo -s
   2. $ dpkg -r linux-gpib (remove existing package, if reinstalling)
   3. $ tar -xzf linux-gpib-3.2.21.tar.gz
   4. $ cd linux-gpib-3.2.21/
   5. $ ./configure --prefix=/usr
   6. $ make
   7. $ make install
4. Then edit /etc/gpib.conf to fit your hardware. The default config board\_type = "ni\_pci" seems to work with the NI PCI-E card. For the USB-GPIB device we need board\_type = "ni\_usb\_b".
5. One can add details of your device in the file /etc/gpib.conf like (guess this is optional, as step 8. can be used to initialize the equipment as well):

*/\* agilent mux/dmm \*/*

*device {*

*minor = 0 /\* first gpib-card/usb-dongle \*/*

*name = "dmm"*

*pad = 8 /\* primary address, configure on instrument front-panel\*/*

*sad = 0 /\* secondary address, always zero? \*/*

*}*

*/\* kikusui psu controller \*/*

*device {*

*minor = 0*

*name = "kikusui"*

*pad = 1*

*sad = 0*

*}*

1. The sourceforge package contains some improved python bindings, but it won't install them if it can't find the Python.h header file. The solve this, we can add the python-dev package before building linux-gpib from the source tarball. To add the improved bindings, first remove the ubuntu python-gpib package if you installed it. Then, in your linux-gpib source tree, do the following:
   1. $ sudo -s
   2. $ cd linux-gpib-3.2.21/ language/python
   3. $ python setup.py build
   4. $ python setup.py install
2. This should compile the bindings. To reiterate, these steps should only be necessary if python-dev was installed \*after\* linux-gpib.
3. Then run the command:

$ gpib\_config –minor 0

this will initiate the gpib driver.

1. To test whether it has been added coorectly, cd to some other directory, open python and try it out:

>>> import Gpib

>>> inst = Gpib.Gpib(0,12) # zeroth board, address 12

>>> inst.write("\*IDN?")

>>> inst.read(100) # read 100 bytes

Output should be: **'instrument name\r\n'**

References:

1. <http://sourceforge.net/projects/linux-gpib/?source=typ_redirect>
2. http://www.ugcs.caltech.edu/~mezurit2/old\_linux\_gpib.html
3. <http://ubuntuforums.org/showthread.php?t=1665036>
4. <http://ubuntuforums.org/archive/index.php/t-1665036.html>
5. <http://www.anderswallin.net/2013/11/gpib-on-linux/>
6. <http://ubuntuforums.org/showthread.php?t=1941397>
7. https://groups.google.com/forum/?hl=en#!msg/comp.lang.python/x4xm\_lve9gg/6Df9Eq2kvREJ