

Installing PICAXE software on 64 bit Linux

1) Add 32 bit library and gcc support for Blockly, Axepad and PICAXE compilers

```
sudo apt-get install gcc-multilib  
sudo apt-get install lib32z1
```

Note that on Ubuntu 12.04 and earlier lib32z1 was called ia32-libs instead

```
sudo apt-get install ia32-libs
```

2) LinAXEpad also requires GTK2.x (enter all on one line)

```
sudo apt-get install libgtk2.0-0:i386 libcairo2:i386 libpango1.0-0:i386  
libgdk-pixbuf2.0-0:i386 libstdc++6:i386
```

3) Install LinAXEpad, Blockly and/or PICAXE compilers from www.picaxe.com/software

Unzip the downloaded files to a new folder and right click to check that the executable permissions are correctly set.

4) Make sure your user name is a member of the ports group to enable permissions to use the AXE027 USB cable at /dev/ttyUSB0. The group is normally called **dialout**, but in some Linux builds such as Arch may be called **uucp**

```
sudo usermod -a -G dialout username
```

(At this point you **must** reboot the computer)

5a) Either temporarily modify the FTDI driver to use the AXE027 PID (until next reboot)

```
sudo modprobe ftdi_sio  
sudo chmod 777 /sys/bus/usb-serial/drivers/ftdi_sio/new_id  
sudo echo "0403 bd90" > /sys/bus/usb-serial/drivers/ftdi_sio/new_id
```

(Now insert AXE027 Cable and the port /dev/ttyUSB0 should appear)

5b) Or add a rule to permanently modify FTDI driver to AXE027 PID

Create a new rule file using your favourite text editor with this filename:

```
/etc/udev/rules.d/99-ftdi.rules
```

Enter this text all on one line and save the file

```
ACTION=="add", ATTRS{idVendor}=="0403", ATTRS{idProduct}=="bd90",  
RUN+="/sbin/modprobe ftdi_sio" RUN+="/bin/sh -c 'echo 0403 bd90 >  
/sys/bus/usb-serial/drivers/ftdi_sio/new_id'"
```

Reload the rules (or simply reboot computer again)

```
sudo udevadm control --reload
```

(Now insert AXE027 Cable and the port /dev/ttyUSB0 should appear)

6) If the software such as LinAXEpad is having permissions issue accessing the port try running the software as sudo from the command line rather than clicking the icon e.g.

```
sudo ./LinAXEpad
```