

## Ubuntu 9.10

### X.Org X Server 1.6.4 X Protocol Version 11

### Kernel: 2.6.31-14-generic

## Install History

#### 1. Install the setserial

```
>sudo apt-get update
```

```
>sudo apt-get install setserial
```

#### 2. Check the Serial Port setting, Please refer to BIOS settings

```
>sudo setserial -g /dev/ttyS?
```

This command will return the serial ports settings such as **"setserial /dev/ttyS4 UART 16550A port 0x4F8 irq 5"**

#### 3. Unzip the driver and Install

```
>tar -zxvf ubuntu9.04RS232.tar.gz
```

```
>cd ubuntu9.04RS232
```

```
>install -o root -g root -m 666 xdrvrtouch_drv.so /usr/lib/xorg/modules/input
```

```
>cp FreeDraw /usr/local/bin
```

```
>cp Linear232 /usr/local/bin
```

```
>cp Calib_3P232 /usr/local/bin
```

```
>install -o root -g root -m 777 touch.calib /etc
```

#### 4. Add the following lines into xorg.conf(/etc/X11)file.

If your system will not have a mouse, then use "CorePointer" instead of

"SendCoreEvents" in the "ServerLayout" section. Ubuntu 9.10 not has the conf file, please use the Xorg --configure to create it.

#### Section "ServerLayout"

Identifier "Default Layout"

Screen "Default Screen"

InputDevice "Touchscreen0" "SendCoreEvents"

EndSection

#### Section "InputDevice"

Identifier "Touchscreen0"

Driver "xdrvrtouch"

Option "Device" "/dev/ttyS4"

Option "ScreenNo" "0"

Option "Rotation" "0"

Option "SwapY" "0"

Option "DebugLevel" "0"

Option "UpSound" "1"

Option "DownSound" "1"

Option            "RightButtonON"        "1"  
EndSection

#### 5. Run Touch Utility:

##### I.Run linearity utility

```
#Linear232 /dev/ttySx n
```

where x=0,1,2...n, 0=COM1, 1=COM2, ..., n = 5 or 9 <default>

##### II.Run calibration utility

```
#Calib_3P232 /dev/ttySx
```

where x=0,1,2...n, 0=COM1, 1=COM2, ...

##### III.Run FreeDraw utility

```
#FreeDraw
```

## Trouble Shooting

### Setup Serial Port on Ubuntu 9.10

#### 1. Modify grub.cfg permissions

```
sudo chmod +w /boot/grub/grub.cfg
```

#### 2. Modify grub.cfg boot menu

```
Menuentry "Ubuntu, Linux 2.6.31-14-generic"{
```

```
    Recordfail=1
```

```
    If [ -n ${have_grubenv} ]; then save_env recordfail; fi
```

```
    set quiet=1
```

```
    search --no-floppy --fs-uuid --set d2229fd4-f418-9a6d-4aca3099821e
```

```
    linux /boot/vmlinuz-2.6.31-41-generic root=UUID=d2229fd4-f418-4f8f-9a6d-4aca3099821e ro quiet splash
```

```
    8250.nr_uaarts=6
```

```
    initrd /boot/initrd.img-2.6.31-14-generic
```

```
}
```

## xorg.conf

### 1. How to create xorg.conf

# CTRL+ALT+F1 to command line mode:

#### 1. Stop X-window

```
>sudo service gdm stop
```

#### 2. Use the configure tool create xorg.conf file.

```
>sudo Xorg --configure
```

#### 3. Copy the file to /etc/X11.

```
>sudo cp /home/<user name>/xorg.conf.new /etc/X11/xorg.conf
```

#### 4. Restart the X-window

```
>sudo service gdm start
```

#### Section "ServerLayout"

Identifier "X.org Configured"  
Screen 0 "Screen0" 0 0  
InputDevice "Mouse0" "CorePointer"  
InputDevice "Keyboard0" "CoreKeyboard"  
InputDevice "Touchscreen0" "SendCoreEvents"

EndSection

#### Section "Files"

ModulePath "/usr/lib/xorg/modules"  
FontPath "/usr/share/fonts/X11/misc"  
FontPath "/usr/share/fonts/X11/cyrillic"  
FontPath "/usr/share/fonts/X11/100dpi:unscaled"  
FontPath "/usr/share/fonts/X11/75dpi:unscaled"  
FontPath "/usr/share/fonts/X11/Type1"  
FontPath "/usr/share/fonts/X11/100dpi"  
FontPath "/usr/share/fonts/X11/75dpi"  
FontPath "/var/lib/defoma/x-ttcidfont-conf.d/dirs/TrueType"  
FontPath "built-ins"

EndSection

#### Section "Module"

Load "dri2"  
Load "dri"  
Load "dbe"  
Load "glx"  
Load "extmod"  
Load "record"

EndSection

#### Section "InputDevice"

Identifier "Keyboard0"  
Driver "kbd"

EndSection

#### Section "InputDevice"

Identifier "Mouse0"  
Driver "mouse"  
Option "Protocol" "auto"  
Option "Device" "/dev/input/mice"  
Option "ZAxisMapping" "4 5 6 7"

EndSection

#### Section "InputDevice"

Identifier "Touchscreen0"  
Driver "xfdrvtouch"  
Option "Device" "/dev/ttyS4"  
Option "ScreenNo" "0"  
Option "Rotation" "0"  
Option "SwapY" "0"  
Option "DebugLevel" "0"  
Option "UpSound" "1"  
Option "DownSound" "1"  
Option "RightButtonON" "1"

EndSection

## Section "Monitor"

Identifier "Monitor0"  
VendorName "Monitor Vendor"  
ModelName "Monitor Model"

EndSection

## Section "Device"

### Available Driver options are:-  
### Values: <i>: integer, <f>: float, <bool>: "True"/"False",  
### <string>: "String", <freq>: "<f> Hz/kHz/MHz"  
### [arg]: arg optional  
#Option "NoAccel" # [<bool>]  
#Option "SWcursor" # [<bool>]  
#Option "ColorKey" # <i>  
#Option "CacheLines" # <i>  
#Option "Dac6Bit" # [<bool>]  
#Option "DRI" # [<bool>]  
#Option "NoDDC" # [<bool>]  
#Option "ShowCache" # [<bool>]  
#Option "XvMCSurfaces" # <i>  
#Option "PageFlip" # [<bool>]

Identifier "Card0"  
Driver "intel"  
VendorName "Intel Corporation"  
BoardName "Mobile 945GME Express Integrated Graphics Controller"  
BusID "PCI:0:2:0"

EndSection

## Section "Screen"

Identifier "Screen0"  
Device "Card0"  
Monitor "Monitor0"  
SubSection "Display"  
Viewport 0 0  
Depth 1  
EndSubSection  
SubSection "Display"  
Viewport 0 0  
Depth 4  
EndSubSection  
SubSection "Display"  
Viewport 0 0  
Depth 8  
EndSubSection  
SubSection "Display"  
Viewport 0 0  
Depth 15  
EndSubSection  
SubSection "Display"  
Viewport 0 0  
Depth 16  
EndSubSection  
SubSection "Display"  
Viewport 0 0  
Depth 24  
EndSubSection

## PC Speaker Beep Sound

1. Load modules  
`sudo modprobe pcspkr`
2. Add "modprobe pcspkr" in rc.local
3. Enable Buzzer
  - a). `sudo alsamixer`  
check Beep status not mute(MM).
  - b). `sudo alsactl store`

