Abstract

The user must have prior basic knowledge and save all his documents and sytem before use this documentation This pdf is an order and explanation of what I have understood and succeed to make my tablet run it's for most inspired of this link : PD1560 Driver Linux this document is to help people to make their tablet and stylus run on Antargos I have put somme extra comments in the script I cannot be held responsible for ANY damage in ANY means if the reader's computer have damage when he follow this tutorial

make gaomon pd1560 run on Antargos Linux

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April 11, 2018

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1 My Operating System

- Antargos 64bit
- linux version: 4.15.15-1-ARCH

2 Required packages and initial config

2.1 Activate AUR package

- clic on add sotware in Administration menu
- clic on sandwich menu
- clic on preferences
- clic on AUR tab
- clic on activate AUR support

2.2 Download Digimend and Wacom driver

- digimend-kernel-drivers-dkms-git with software manager (pamac, not the command line)
- Download linux-headers from pacman:
  - open the terminal
  - sudo pacman -S linux-headers
- Verify that all package: rmmod, make, install, modprobe are installed
- install xf86-input-wacom with software manager

3 Configuration of gaomon add-on

3.1 Download gaomon-driver

```
1 mkdir -p ~/install
2 cd ~/install
3 git clone https://github.com/anpaza/digimend-kernel-drivers.git
      digimend-kernel-drivers-gaomon
4 cd digimend-kernel-drivers-gaomon
5 sudo chmod 736 hid-uclogic-core.c
6 nano hid-uclogic-core.c
```

3.2 Modify hid-uclogic-core

- respect indentation, modify before the line:

```
("if (drvdata->has_virtual_pad_interface && (data[1] & 0x20))
```

put:

```
if (data[0] == 0x08 && (data[1] & 0xF0) == 0x80 && drvdata->
    is_hires && size >= 12) {
    u16 *data16 = (u16*)data;
    data16[1] = (u16)(((((u32) data16[1] & 0xffff) | ((u32)
        data16[4] << 16)) * 100 / 106));
    data16[4] = 0;
}
```

3.3 Install gaomon addon

```
sudo rmmod hid-uclogic
make clean
make
sudo make install
sudo modprobe hid-uclogic
```

3.4 Set the gaomon tablet in x server

```
sudo nano /usr/share/X11/xorg.conf.d/70-wacom.conf
```

add at the end of file:

```
Section "InputClass"
  Identifier "GAOMON"
  MatchUSBID "256c:006e"
  MatchDevicePath "/dev/input/event*"
  Driver "wacom"
EndSection
```

3.5 Script to initialise the 10 keys of gaomon tablet and gap of the stylus

```
#!/bin/bash

keyboard="Huion  Tablet Pad pad"  # Retrieve this value with '
    xinput list'
tablet="Huion  Tablet Pen stylus"

bindings=( # This variable contain all the 10 customised keys
    from top to bottom
"+shift"
"+ctrl"
"+z" # undo
"+x" # redo

"/"  # last brush
";"  # last layer

"+e"
"+a"
```

```
17 "+home"
18 "+m"
19 )
20
21 buttons=(1 2 3 8 9 10 11 12 13 14)
22
23 i=0
24 for binding in "${bindings[@]}"
25 do
26   xsetwacom --set "$keyboard" Button ${buttons[$((i++))]} key
       $binding # use the  custom key in  variable bindings and
       apply them on the tablet http://linuxwacom.sourceforge.net/
       wiki/index.php/Xsetwacom [Usage] https://forum.ubuntu-fr.
       org/viewtopic.php?id=319659&p=9 [step 5 stevens4c]
27 done
28
29 xinput set-prop "$tablet" --type=float "Coordinate␣
       Transformation␣Matrix" 0.5 0 0.5 0 1 0 0 0 1 # set the
       coordinate of the motion of the stylus https://wiki.ubuntu.
       com/X/InputCoordinateTransformation#
       Setting_the_Coordinate_Transformation_Matrix
30 xsetwacom --set "$tablet" Area 200 0 65100 38500 #  permit to
       adpat the stylus Area to fit to the bondaries of the desktop
       http://linuxwacom.sourceforge.net/wiki/index.php/Area_mapping
31 xsetwacom --set "$tablet" Button 2 button +2 # make gnome
       settings deamon mapping bettween it and the button of id 2 on
        the stylus    http://linuxwacom.sourceforge.net/wiki/index.
       php/Xsetwacom [Interaction with gnome-settings-daemon]
32 xsetwacom --set "$tablet" Button 3 button +3
```

- make it executable with right clic on the file in the file explorer
- clic on properties
- clic on permission tab
- check authorize execution like a program

```
1 sudo chmod+x <your_file>
2 ./<your_file>
```

3.6 Reboot

- reboot in order that the X server apply modifications

3.7 Key and pen Bindings

- line 105 to 116 in the script is to modify the 10 keys on the left of the tablet from top to bottom
- run the script any time you plug your tablet in order to fix the gap with the stylus and to customize your keys

- modify the bindings in the script as you wish but don't forget to keep the synthax

4 Uninstall

- revert to 3.1:make uninstall in the exact folder of gaomon add-on
- uninstall digimend from pamac
- remove wacom driver from pamac
- remove the configuration in xserver, on nano ctrl+o to save and ctrl+x to quit

```
cd/usr/share/X11/xorg.conf.d
sudo nano 70-wacom.conf
```

- remove the previous information you put here
- reboot

5 Usefull commands and exemples

```
show the id of all devices

        xinput list

show the transformation matrix of a stylus

        example:

                xinput list-props 'Huion  Tablet Pen stylus' |
                    grep "Coordinate Transformation Matrix"

show all parameters xsetwacom

        xsetwacom list parameters

        example:

                Area            - Valid tablet area in device
                    coordinates.
                Button          - X11 event to which the given
                    button should be mapped.

show the id of the stylus | pad | eraser
xsetwacom list devices

example:

```

```
25          xsetwacom list devices
26
27          Wacom Cintiq 12WX stylus              id: 8     type:
                STYLUS
28          Wacom Cintiq 12WX eraser              id: 12     type:
                ERASER
29          Wacom Cintiq 12WX pad                 id: 13     type: PAD
30
31
32
33 get the mapping of a button on the Tablet or stylus
34
35          xsetwacom get "<name␣retrieved␣by␣xinput␣list>" Button <
                number of the button>
36
37 Map a button on Tablet | Stylus | Eraser to an Action on the
       keyboard
38
39          xsetwacom set <id return by: xsetwacom list devices>
                button <physical button> key <assigned keyboard
                action>
40
41          example:
42
43                  xsetwacom set 13 button 1 key a
44
45                  assign the key a on the button 1 on the Wacom
                        Cintiq 12WX pad
46
47
48 get all button on the tablet or stylus
49
50          example:
51
52                  xsetwacom -s get "Huion␣␣Tablet␣Pen␣stylus" all
```

6 Sources

- PD1560 Gaomon Driver
- package to install before make file
- xset wacon documentation
- area mapping
- coordinate transformation matrix
- activate AUR in pamac software manager
- my experience