Sources: <https://code.google.com/archive/p/easycap-somagic-linux/wikis/GettingStarted.wiki>

Second souce (kernel): <https://ubuntuforums.org/showthread.php?t=1958478>

Third source (kernel): <https://github.com/jonjonarnearne/smi2021>

Fourth source (kernel): <http://randomlinux.com/uncategorized/how-to-properly-install-usb-easycap-device-in-ubuntu/>

Tested on: Ubuntu 14.04, somagic v 1.1.

**Installing Easycap drivers**

**FIRST:** Using the display, make sure the camera is working.

**FOLLOW the tutorial in the first link along with this documentation.**

1. Download the following packages:

$ sudo apt-get install wine git build-essential libusb-1.0-0-dev libgcrypt11 mplayer usbutils

$ sudo apt-get install libvdpau-va-gl1

2. Download and install the somagic driver and tool. You can get the debian packages following the instructions on sections:

* **Somagic-capture 1.1 Debian package**
* **Somagic-capture-tools 1.1 Debian package**

3. I could not do the git steps yet. So just skip section “Downloading and building git sources” for now.

4. Install the firmware (need the CD-ROM!!!). Follow the steps on section **Extracting firmware.** Some hints follow:

* On the command-line: $ wine PATH\_TO\_CDROM/Driver/Setup.exe
* The file SmiUsbGrabber3F.sys might be on the folder program file (x86). Copy it to easy location, such as /home or a folder you created for the easycap.
* Extract the firware there as shown in the instructions

**Running:**

Make sure you have connected the camera on channel 2 or 3 on the A/D converter!!!

$ lsusb

Look for the line : Bus 003 Device 015: ID **1c88:0007** Somagic, Inc. SMI Grabber (EasyCAP DC60+ clone) (no firmware) [SMI-2021CBE]

Now, on the terminal, first initialize the driver (**you MUST DO that everytime you plug the Easycap**)

$ sudo somagic-init

Again

$ lsusb

You should see something like: Bus 003 Device 016: ID **1c88:003f** Somagic, Inc.

The ID change from 0007 -> 003x will assure you have it corrected installed. To open the video:

$ sudo somagic-capture -n | mplayer -vf yadif,screenshot -demuxer rawvideo -rawvideo "ntsc:format=uyvy:fps=30000/1001" -aspect 4:3 -

4. If you see some message saying “LIRC: Could not open socket”, type in the terminal:

$ echo “ lirc=no“ >> ~/.mplayer/config

**Recognize as /dev/videoX**

1. Download and compile v4l2 kernel driver for the smi2021 video capture chips (more info at <https://github.com/jonjonarnearne/smi2021>)

$ git clone git://github.com/Manouchehri/smi2021.git  
 $ cd smi2021/  
 $ sed -i '0,/obj/{s/$(CONFIG\_VIDEO\_SMI2021)/m/}' Makefile   
 $ make -C /lib/modules/$(uname -r)/build M=$PWD modules

2. Load the modules (instructions at <https://ubuntuforums.org/showthread.php?t=1958478>). (**you MUST DO that everytime you plug the Easycap**). The smi2021.ko file is the folder you pushed from the git repository.

$ sudo modprobe videodev  
 $ sudo insmod smi2021.ko

4. For testing purpose, make sure you have VLC installed

$ sudo apt-get install vlc

3. Make sure you have 1) Easycap plugged and 2) driver initialized ($ sudo somagic-init)

$ ls /dev/video\*

It should list a /dev/video0. IF you have a webcam, EASYCap will be place at /dev/video1

4. Let’s make sure it is working properly (copied from <http://randomlinux.com/uncategorized/how-to-properly-install-usb-easycap-device-in-ubuntu/>):

$ vlc v4l2:///dev/videoX :v4l2-standard= :input-slave=alsa://plughw:X,0

In /dev/videoX, the X is the number of the device, on my computer it’s 1, because my web\_cam is 0, but it might be any number.

**ROS**

Download usb-cam package

$ sudo apt-get install ros-indigo-usb-cam