HOW TO: Using a Camera GoPro® Hero 3+ Silver Edition for Image Processing

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This HOW-TO was performed on an Ubuntu 14.04 64 bits machine, using VLC media player version 2.1.4 and ffmpeg version 1.2.6-7.

1 - GoPro's Default Configuration

Default Wi-Fi password is “goprohero”, and default Wi-Fi name is something like “GOPRO-BP-….”, for me this name was “GOPRO-BP-D89685ADB78e”.
Default camera's IP address is 10.5.5.9

2 – Steps for Streaming from your Camera

Step 1 (Activating Wi-Fi):

Put your GoPro into GoPro App mode.

Step 2 (Connecting to your GoPro's Wi-Fi):

Connect to your GoPro Wi-Fi. You can either use the graphical environment or terminal mode to connect to it.

Connecting using the terminal:

sudo iwconfig wlan0 essid GOPRO-BP-D89685ADB78e key goprohero
sudo dhclient wlan0

* Observation: If you choose to connect using terminal mode, disable Wi-Fi in graphical mode.

Step 3 (Streaming and saving it to a file):

The following URL is what you need for streaming from your GoPro.

http://10.5.5.9:8080/live/amba.m3u8

Type in your terminal the following command and then press [ENTER]:

vlc http://10.5.5.9:8080/live/amba.m3u8 -L

The -L flag means “loop all”, and it will stream your video in VLC with no stops.
You will perceive a huge delay due to the protocol used to transmit the video, by default a GoPro camera uses HTTP for streaming, we are studying a way to use a protocol based on UDP for streaming such as RTSP.

You can save the streaming to a file, e.g.: mp4 file. The command below saves the streaming from *http://10.5.5.9:8080/live/amba.m3u8* to *test.mp4*.

ffmpeg -i "http://10.5.5.9:8080/live/amba.m3u8" -an -vcodec libx264 -s 400x300 -strict experimental -b:v 300k -b:a 4k -f flv "test.mp4"

If by any chance you need to split your video into frames, the commando below will help you to do that.

ffmpeg -i test.mp4 -r 1 -s 400x300 -f image2 test%03d.jpeg