

Instructions 1: How to Stream from the CrabCam

These instructions are for Macbooks only. It's possible to connect through a Windows laptop, but internet sharing is more complicated and the terminal system is different. Everything after Step 8 should be the same on a Windows laptop.

1. Plug one end of the ethernet cable into a Macbook using a USB adapter. The Pi should be powered off during this step.
2. Open the settings. Make sure you're connected to the wifi source you want to use.
3. Use the search bar to find internet sharing and turn it on. Turn on the AXX88...B toggle and the Internet Sharing toggle. (Fig. 2 and Fig. 3).
4. Plug the other end of the ethernet cable into the Pi.
5. Turn on the battery pack.
6. Wait for the green blinking light, this means it's booting on. Once you see it, wait another 30 seconds to give it time to boot up. It's slow.
7. Open the terminal (Fig. 6). If the owner of the Macbook doesn't keep the terminal in their dock, search for it under Launchpad (Fig. 7 and Fig. 8).
8. Type this command: `ssh Roy@192.168.2.2` (Fig. 4 and Fig. 1) from your home directory. If you just opened a new terminal window, you should already be in your home directory.
9. Paste this link in your laptop browser: <http://192.168.2.2:8080/ui>
10. Enter the username (sharkbite) and password (Phytoplankton-BI00m) (Fig. 9)
11. Click "Connect to camera"
12. Turn on the toggle next to the word "Twitch" in the side bar to broadcast to Twitch.
13. Click "Disconnect" to turn off the stream.
14. Open the terminal and type this command before unplugging: `sudo poweroff` (Fig. 5 and Fig.1)

```
Linux camerapi 6.6.51-rpt-rpi-v8 #1 SMP PREEMPT Debian 1:6.6.51-1-rpt3 (2024-10-08) aarch64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Wed May 21 16:52:20 2025

Wi-Fi is currently blocked by rfkill.

Roy@camerapi:~$ sudo poweroff

Broadcast message from root@camerapi on pts/1 (Thu 2025-05-22 14:30:36 PDT):

The system will power off now!

Roy@camerapi:~$ Connection to 192.168.2.2 closed by remote host.
Connection to 192.168.2.2 closed.
(base) camerondalke@Camerons-MacBook-Air-2 ~ % ssh Roy@192.168.2.2
Roy@192.168.2.2's password:
Linux camerapi 6.6.51-rpt-rpi-v8 #1 SMP PREEMPT Debian 1:6.6.51-1-rpt3 (2024-10-08) aarch64

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Last login: Thu May 22 14:31:19 2025

Wi-Fi is currently blocked by rfkill.

Roy@camerapi:~$ sudo poweroff

Broadcast message from root@camerapi on pts/1 (Thu 2025-05-22 14:55:39 PDT):

The system will power off now!

Connection to 192.168.2.2 closed by remote host.
Connection to 192.168.2.2 closed.
(base) camerondalke@Camerons-MacBook-Air-2 ~ % ssh Roy@192.168.2.2
Roy@192.168.2.2's password:
Linux camerapi 6.6.51-rpt-rpi-v8 #1 SMP PREEMPT Debian 1:6.6.51-1-rpt3 (2024-10-08) aarch64

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Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu May 22 14:31:24 2025 from 192.168.2.1

Wi-Fi is currently blocked by rfkill.

Roy@camerapi:~$ sudo poweroff

Broadcast message from root@camerapi on pts/1 (Thu 2025-05-22 15:52:23 PDT):

The system will power off now!

Connection to 192.168.2.2 closed by remote host.
Connection to 192.168.2.2 closed.
(base) camerondalke@Camerons-MacBook-Air-2 ~ %
```

The screenshot shows the 'System Settings' application on a Mac. The 'Sharing' pane is selected on the left sidebar, and the 'Internet sharing' section is active. The 'Wi-Fi' toggle is turned on. Below it, the 'Leitz Phone 2_4102' network is listed as 'Connected'. Under 'Known Networks', three networks are listed: 'Leitz Phone 2_4102' (checked), 'OTCnet', and 'University of Washington'. Under 'Other Networks', three networks are listed: 'eduroam', 'OTCnet_5G', and 'UW MPSK'. At the bottom, the 'Ask to join networks' toggle is turned on. The top of the screen shows the menu bar with 'System Settings', 'File', 'Edit', 'View', 'Window', and 'Help' menus, along with system status icons and the date/time 'Thu May 22 16:20'.

Fig. 3

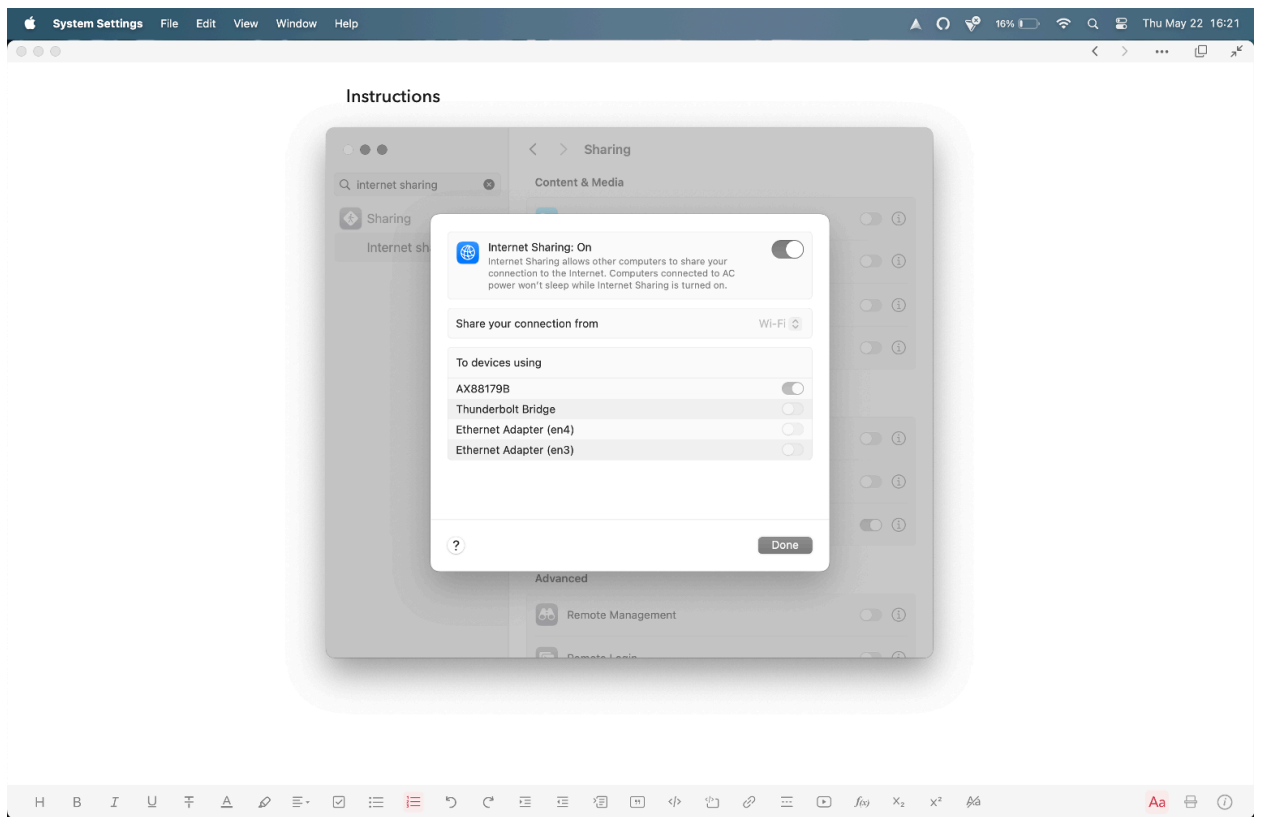


Fig 4.

```
ssh Roy@192.168.2.2
```

Fig. 5

```
sudo poweroff
```

Fig. 6

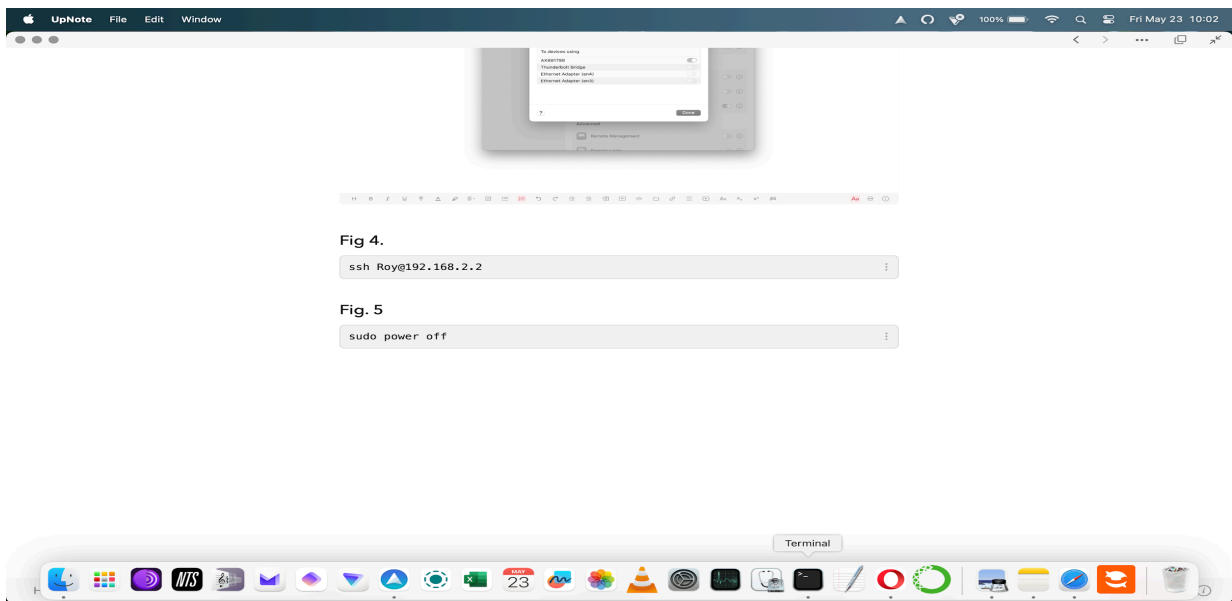


Fig. 7

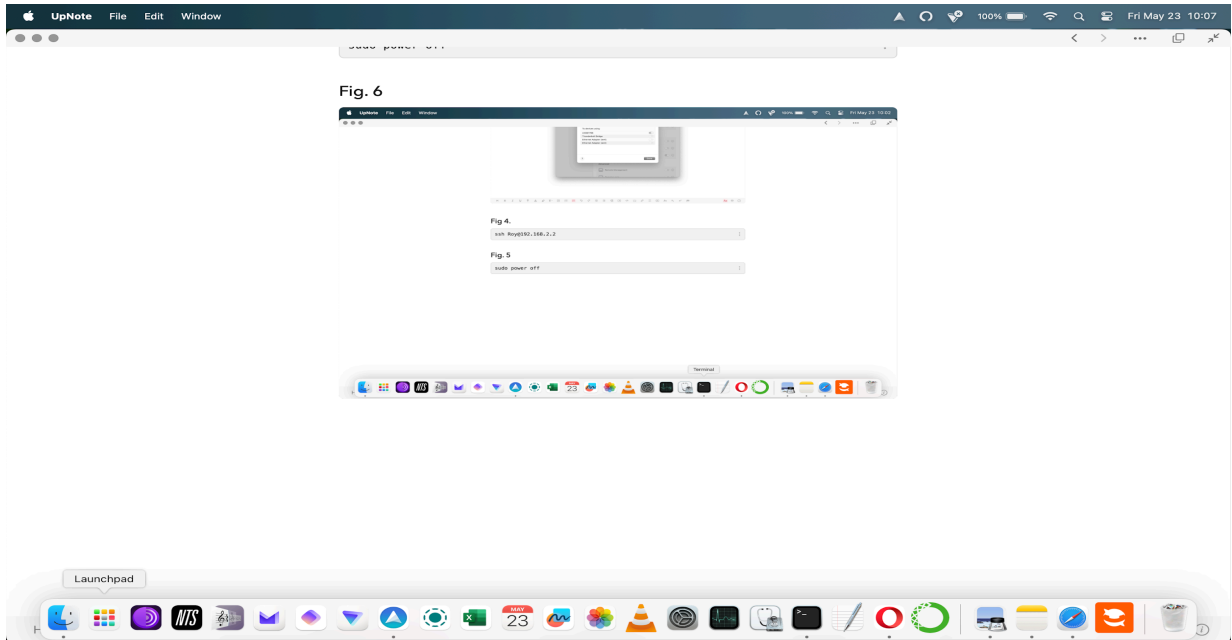
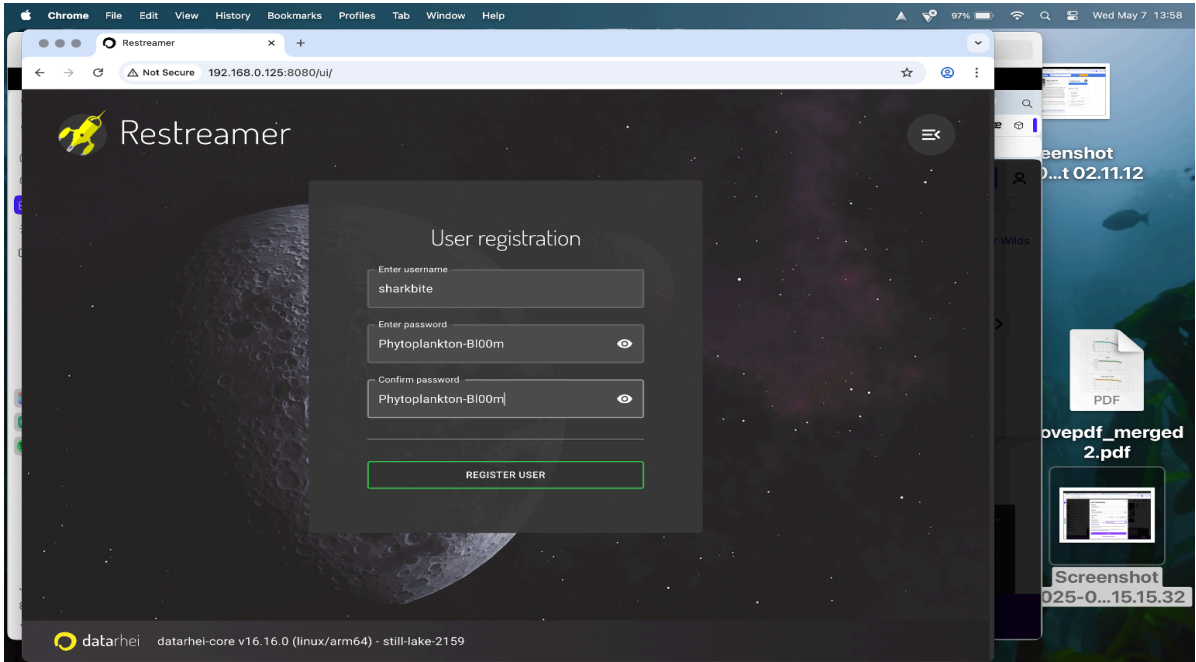


Fig. 8



Fig. 9



Instruction 2: How to turn on the Camera

1. Turn on the Power bank
2. Connect the power bank into the micro pi power source
3. Close the housing
4. Deploy