## LiDAR Configurations for Jackal and PC (Ubuntu 18.04)

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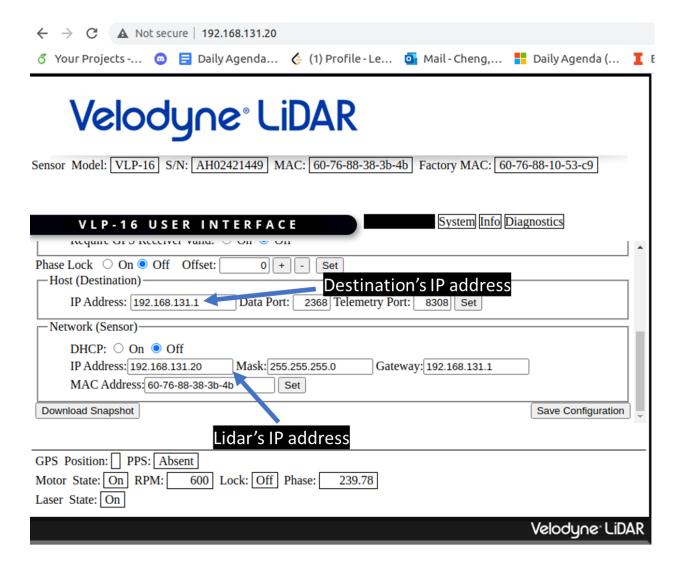
The Velodyne VLP-16 Lidar is connected to Jackal and PC through an ethernet cable. The IP address for Velodyne VLP-16 Lidar is set to **192.168.131.20**, <u>and should not be changed for any reason.</u>

The configuration page can be found by typing the Lidar's IP address in a browser.

## **Connecting to Jackal**

For Jackal's application, the destination's IP address is set to 192.168.131.1 (Jackal's IP)

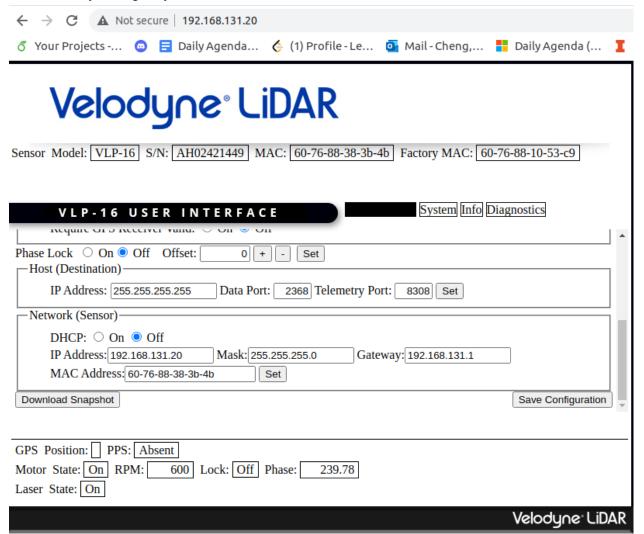
Theoretically, it does not require any additional configuration for connecting the VLP-16 Lidar to Jackal.



## Connecting to an Ubuntu PC

For other applications, the destination's IP address is set to **255.255.255.255.255** (It allows you to send the Lidar data to any device that the ethernet cable is connected to.)

Note: For any changes, you must click the 'Set' button.



In addition, it requires two additional steps to configure the ethernet port to the given IP address.

```
$ sudo ifconfig eth0 192.168.131.10
$ sudo route add 192.168.131.20 eth0
```

Note: the name of your ethernet port may not be eth0. The name can be found by typing \$ ifconfig command in your Ubuntu terminal.

The default launch file for the VLP-16 Lidar has a different IP address. In order for the Lidar to work properly, the IP address must be changed to **192.168.131.20**.

The launch file can be found in the following directory. Depending on the file name, it might be slightly different on your own PC.

```
file:///home/nvidia/catkin_ws/src/velodyne/velodyne_pointcloud/launch
/VLP16 points.launch
```

Find this line inside the launch file (it might have an empty IP address):

```
<arg name="device_ip" default="192.168.1.201" />
and change it to the following:
<arg name="device_ip" default="192.168.131.20" />
```

Note some of you may find this <u>tutorial</u> helpful. However, it only works for VLP-16 Lidar with the default IP setting, which is different from what we have on the Jackal.