Velodyne Lidar VLP16 PuckLite Basic Setup Tutorial (for Linux Ubuntu 14.04 and ROS Indigo)

1. Assuming you already have ROS and Git installed in your PC, install the PCL package by running the commands below:

```
sudo apt-repository ppa:v-launchpad-jochen-sprickerhof-de/pcl
sudo apt-get update
sudo apt-get install libpcl-all
```

2. Install the velodyne package from the repositories:

```
sudo apt-get install ros-indigo-velodyne
```

3. Download the content in the github velodyne repositories with the command:

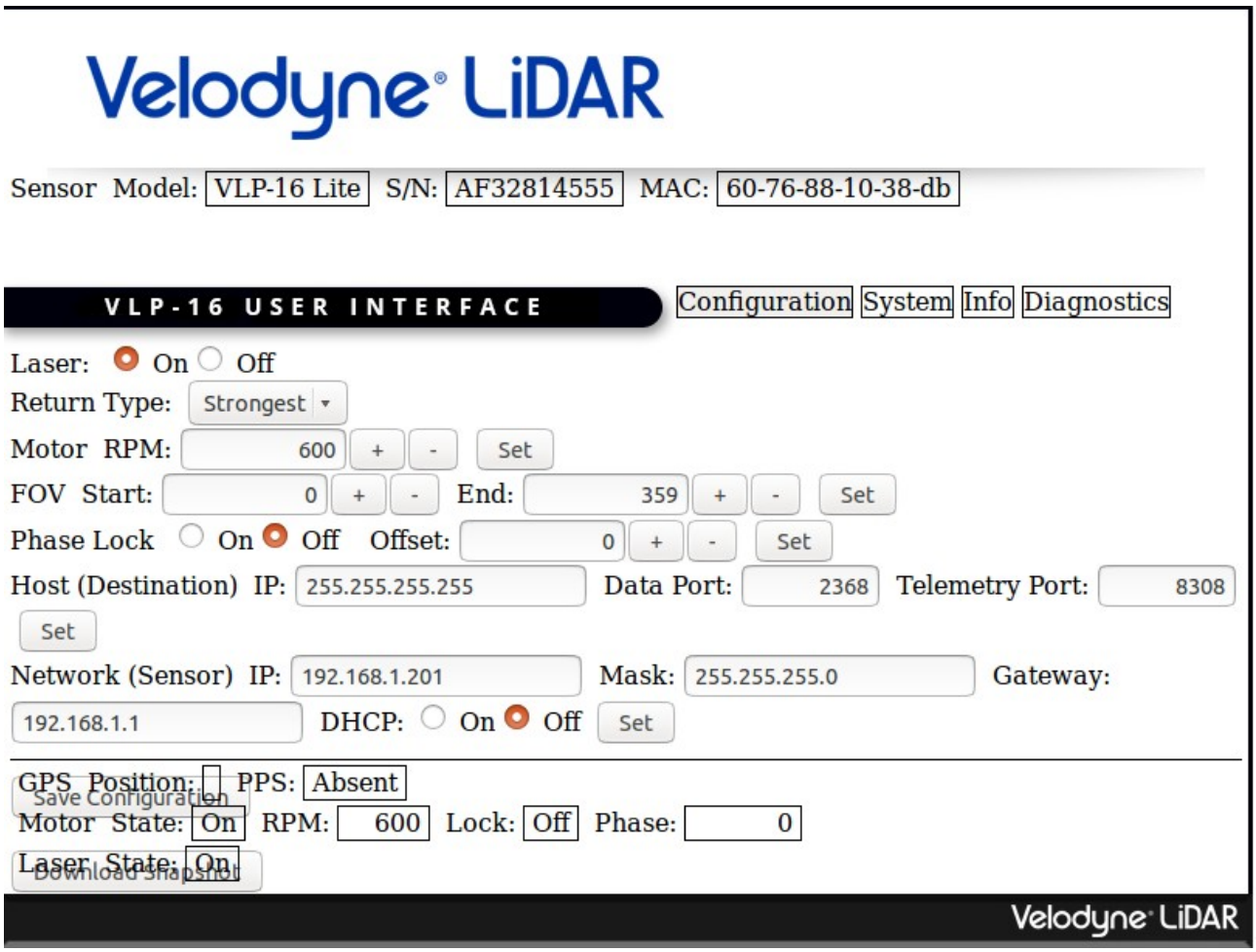
```
git clone https://github.com/ros-drivers/velodyne.git
```

4. Move the directory velodyne downloaded with the git clone command to your ROS packages workspace. Build your workspace with catkin_make.

5. Remove from box, plug power cable into outlet and ethernet cable into ethernet port on your PC.

6. Open network configurations and edit a new connection. Set it to manual mode on the IPv4 settings. Set the network address to 192.168.1.xxx , where xxx is any number ranging from 54 to 999 except for 0, 255 and 201. Set the netmask to 255.255.255.0.

7. Open your Web Browser and type in the address 192.168.1.201 into the address bar. You should be able to see the Velodyne Lidar configuration panel:



8. Launch the launch file VLP16_points.launch contained in the launch directory of velodyne_pointcloud using the command below:

roslaunch velodyne_pointcloud VLP16_points.launch

9. Visualize the Lidar mapping with the rviz node (if you don't have it, download it with sudo apt-get install rviz):

rosrun rviz rviz -f velodyne

10. In 'Global Options' click on 'Add' and then choose the option 'By Topic'. Select the option under 'velodyne_points'. You should be able to visualize the mapping: