

# 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**, and should not be changed for any reason.

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.

← → ↻ Not secure | 192.168.131.20

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# Velodyne® LiDAR

Sensor Model:  S/N:  MAC:  Factory MAC:

## VLP-16 USER INTERFACE

Require GPS receiver valid: ☐ On ☒ Off

Phase Lock ☐ On ☒ Off Offset:

Host (Destination)

IP Address:  Data Port:  Telemetry Port:

Network (Sensor)

DHCP: ☐ On ☒ Off

IP Address:  Mask:  Gateway:

MAC Address:

GPS Position: ☐ PPS:

Motor State:  RPM:  Lock:  Phase:

Laser State:

Velodyne® LiDAR

## Connecting to an Ubuntu PC

For other applications, the destination's IP address is set to **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.

← → ↻ ⚠ Not secure | 192.168.131.20

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# Velodyne® LiDAR

Sensor Model:  S/N:  MAC:  Factory MAC:

## VLP-16 USER INTERFACE

☐ Require GPS receiver valid. ☐ On ☒ Off

Phase Lock ☐ On ☒ Off Offset:  + - Set

Host (Destination)

IP Address:  Data Port:  Telemetry Port:  Set

Network (Sensor)

DHCP: ☐ On ☒ Off

IP Address:  Mask:  Gateway:

MAC Address:  Set

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GPS Position: ☐ PPS:

Motor State:  RPM:  Lock:  Phase:

Laser State:

Velodyne LiDAR

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 [tutorial](#) helpful. However, it only works for VLP-16 Lidar with the default IP setting, which is different from what we have on the Jackal.