TI mmWave ROS Driver – Release Notes

Overview

The TI mmWave ROS driver integrates the mmWave out-of-box demo with Robot OS (ROS) in Linux. It sets up a ROS service as an interface to configure the mmWave Evaluation Module and publishes a ROS PointCloud2 message with the objects detected when the sensor is activated.

Features

- Compatible with TI mmWave SDK v1.2.0.5 out-of-box demo
- Offers the out-of-box demo Command Line Interface (CLI) as a ROS Service
- Reads Radar data from the mmWave EVM and publishes it as a ROS PointCloud2 Message
- Outputs the {X,Y,Z} coordinate and intensity of each detected point in the ROS PointCloud2 Message
- {X,Y,Z} coordinates use the ROS standard coordinate system where X=forward, Y=left, Z=up (see http://www.ros.org/reps/rep-0103.html for more details)

Limitations

The following is a list of known limitations for this release that were known at the time of release.

- Currently tested for the xWR1443 EVM and xWR1642 EVM only
- The mmWave EVM must be configured to only send the “detected objects” data. The other possible output data types such as “log magnitude range”, “noise profile”, heat maps, etc. are not currently supported by the ROS driver. Also, the Doppler field is not currently output in the ROS PointCloud2 Message.

Changes in Version 1.3

The following is a list of changes compared to the previous release.

- Chirp profile config (.cfg) files modified to work with out-of-box demo from TI mmWave SDK 1.2.0.5

Changes in Version 1.2.1

The following is a list of changes compared to the previous release.

- Fixed syntax error in mmWave_nodelets.xml file in driver package which caused driver to fail with newer releases of ROS Kinetic distribution

Changes in Version 1.2

The following is a list of changes compared to the previous release.

- Chirp profile config (.cfg) files modified to work with out-of-box demo from TI mmWave SDK 1.1.0.2
- Driver source code modified to be compatible with output data format used in out-of-box demo from TI mmWave SDK 1.1.0.2