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| Task. No.: | 2 | Points: | 5 | Point Cloud Generation |

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| Objectives:  1. Using Simulink. 2. Working LIDAR. |

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| Description: In this exercise, we will capture LIDAR data from the RP LIDAR A2 on the QCar platform, send the data to a polar plot, and generate a point cloud map.. |

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| Step | Action |
| 1 | Use Simulink implementation of Lidar Point Cloud.  Capture LIDAR data points to Create and display point cloud polar_plot/image. Immediately below Capture LIDAR data is Monitor Timing. |
| 2 | Change the the *maximumDistance* (m) parameter within the *pointCloud* subsystem and show the result point cloud.  Resulting point cloud |
| 3 | Adjust the *decay* parameter to change the rate of update of the map. Note that you can do this online while the application is deployed.  Diagram  Description automatically generated |

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