

 autowarefoundation / autoware Public[Code](#) [Issues 29](#) [Pull requests 15](#) [Discussions](#) [Actions](#) [Security](#)

Releases

Tags

Draft a new release

Mar 23, 2019

 kfunaoka  1.11.0  37b9feb  [Compare](#)

Autoware Ver.1.11.0

Latest



Announcement

- Obsolete packages and nodes were removed as announced at [Ver.1.10.0](#) (#1812)
- Please use colcon for source build. Catkin is no longer supported (#2042)
The following commands are required once, when you build from source

```
sudo apt-get install -y python3-pip python3-setuptools
sudo pip3 install -U setuptools
sudo apt-get install -y python3-colcon-common-extensions
```

New Features

- PointPillars: Fast Encoders for Object Detection from Point Clouds (#2029)
<https://drive.google.com/file/d/1I6Grsg0JbBX5s7-JQ6eXQY169PCewJnW/view>
- Baidu's CNN based LiDAR segmentation (#1800)
<https://www.youtube.com/watch?v=fw7522gDBAc>
- Shape/Pose Estimation based on PointCloud (#1815)
- Autoware Health Checker (#1943, #1970, #2004)
- ROS driver for pointgrey cameras using Spinnaker SDK (#1984)

- RosbagController ([#1791](#), [#2046](#))

Experimental Features

- Autoware Launcher provides simple easy-to-use user interface ([#1950](#))
- Decision maker is rebuilt based on real-world's requirements ([#1609](#))

Improvements

- Improved Hybrid A* ([#1594](#)) and Cost Map using prediction ([#1774](#))
<https://www.dropbox.com/s/ista3yrnxc2sbdo/hybrid-astar-avoidance-moricoro-01-x3.mp4?dl=0>
- Removed CUDA dependencies for Darknet ([#1784](#))
- Improved AS vehicle interface ([#1945](#))
- Gazebo Simulator can be launched from Runtime Manager ([#1930](#))
- LVSVL Simulator can be launched from remote machine ([#1893](#))
- Docker cleanup ([#1946](#))
- Divided waypoint_loader into waypoint_loader, waypoin_replanner, and waypoint_extractor ([#1951](#))

Bug Fixes

- Fixed rosbag split size in runtime manager ([#1817](#))
- Fixed max velocity on right turns at twist_filter ([#1880](#))
- Fixed first topic of gnss_pose that kills ndt_matching ([#1913](#))
- Fixed no prediction about objects at $x \leq 0$ or $y \leq 0$ ([#2122](#))
- Inserted install commands for all the packages ([#1861](#))

▼ Assets 2

 [Source code \(zip\)](#)

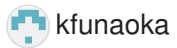
Mar 22, 2019

 [Source code \(tar.gz\)](#)

Mar 22, 2019



Jan 23, 2019



1.10.0

5c46036

Compare ▾

Autoware Ver.1.10.0



Announcement

- Autoware is now protected under Apache License Version 2.0 (#1707)
- ROS Indigo is no longer supported as announced at Ver.1.9.0 (#1743)
- The following commands are required once when you build from source (#1689)

```
cd Autoware/ros
rosdep update
rosdep install --from-paths src --ignore-src --rosdistro $ROS_DISTRO
```

- Catkin is deprecated but please use it until transit to colcon (#1704, #1865)
- Obsolete packages and nodes will be removed in the next release (#1812)

New Features

- We can enjoy autonomous driving with LGSVL Simulator without real cars (#1795)
<https://www.youtube.com/watch?v=cBmliR3jRvE&feature=youtu.be>
- points_map_filter filters out point cloud far from ego vehicle (#1658)
<https://www.youtube.com/watch?v=LpKluI5b4DU&feature=youtu.be>
- FLIR ADK camera driver (#1809)
- Ouster LiDAR driver (#1748)
- Blinker for ZMP Minivan (#1667)
- Vehicle Info for Toyota Estima (#1700)

Improvements

- Added functionality to run.sh in docker/generic (#1617)

- Tracking accuracy can be measured by KITTI data ([#1671](#))
- Crossbuild support of multiple gmsl cameras ([#1683](#))
- Added /sim_lidar tf frame to wf_simulator ([#1710](#))
- ymc actuation package uses vehicle_cmd instead of twist_cmd for working with twist_gate ([#1649](#))

Bug Fixes

- Disable forced termination when ndt_matching can not write log data ([#1824](#))
- Fixed a bug where the speed is handled as positive when the gear is reverse ([#1740](#))
- Fixed a bug where intrinsic calibration cannot detect OpenCV version ([#1696](#))
- Fixed a bug where ros-kinetic-grid-map-visualization is not installed ([#1780](#))
- Fixed Milee urdf ([#1687](#))
- Fixed a bug where pcd_filter fails when point cloud has large values ([#1730](#))

Known Bugs

- Unable to launch Runtime Manager with colcon build ([#1865](#))

▼ Assets 2

 [Source code \(zip\)](#)

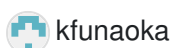
Jan 23, 2019

 [Source code \(tar.gz\)](#)

Jan 23, 2019



Nov 7, 2018



1.9.1



3ede921

Compare ▼

Autoware Ver.1.9.1



Announcements

- Ver. 1.9.0 and 1.9.1 have the security fixes [#1674](#) and [#1680](#), respectively. Please apply the fixes if you want to use old versions.

Security Fixes

- Fixed [CVE-2018-1000656](#) ([#1680](#))

Bug Fixes

- Fixed an issue where `lidar_naive_l_shape_detect` can not be built ([#1681](#)).

▼ Assets 2

 [Source code \(zip\)](#)


Nov 6, 2018

 [Source code \(tar.gz\)](#)

Nov 6, 2018



Nov 1, 2018

 [kfunaoka](#)



1.9.0



8fe7f1b

[Compare](#) ▼

Autoware Ver.1.9.0



Announcements

- **There is a security fix. Please apply [#1674](#) if you want to use old versions.**
- Indigo is marked as deprecated, and will be removed in a future release ([#1663](#)).
- Obsolete packages and nodes will be removed in future releases ([#1664](#)).

Security Fixes

- Fixed [CVE-2018-18074](#) (#1674).

New Features

- Object motion can be predicted by [naive_motion_predict](#) (#1616).
<https://www.youtube.com/watch?v=T6ediU0CHP0>
- Static objects in point cloud map can be filtered out by [compare_map_filter](#) (#1559).
<https://www.youtube.com/watch?v=7nK6JrI7TAI>
- [vision_beyond_track](#) smoothly tracks image objects (#1473).
<https://www.youtube.com/watch?v=KFfD3Mkkz4Y>
- [L-shape fitting](#) for stably tracking cars (#1457).
<https://www.youtube.com/watch?v=Zd37mE7sXyl>
- [RoboSense LiDAR driver](#) (#1500).
- Selectable topics in Runtime Manager (#1596).
- [data_rate_checker_plugin](#) visualizes topic rate (#1491).
- Nodes and topics can be monitored by [diagnostic_lib](#) (#1516, #1528, #1527).

Improvements

- Customizable classification name in darknet YOLO (#1535).
- Cross build for driveworks no longer requires the full NVIDIA SDK (#1534).
- Docker image is built from local repo instead of cloning GitHub (#1635).
- The settings of ImageViewerPlugin are saved with the RViz configuration (#1511).

Bug Fixes

- Fixed an issue where docker image can not be built (#1536).
- Fixed an issue where `ndt_mapping` will fail when lidar is mounted in a different direction from `base_link` (#1472).
- Fixed an issue where euclidean cluster dies if not enough input points (#1606).
- Fixed an issue where euclidean cluster doesn't work on CPU w/o multiple thres (#1606).
- Fixed an issue where catkin runs multiple times in `catkin_make_release` (#1620).

- Fixed the setup instructions of SSD (#1613).
- Fixed an issue where lidar_imm_ukf_pda_track is not connected to the other nodes (#1582).
- Fixed the compilation error of darknet on Indigo (#1608).
- Fixed an issue where Topic Frequency in DataRateCheckerPlugin is invisible depending on window size (#1515).
- Fixed an issue where Point Size of ImageViewrPlugin is not saved with RViz configuration (#1515).
- Fixed an issue where the intrinsic calibration node outputs an anti-aliasing error (#1581).
- Fixed the yaml compatibility issue in autoware_camera_calibration (#1622).
- Fixed an issue where the coordinate frame of camera_info on frame_id is not considered (#1565).

▼ Assets 2

 [Source code \(zip\)](#)

Nov 1, 2018

 [Source code \(tar.gz\)](#)

Nov 1, 2018



Nov 1, 2018



kfunaoka



1.8.0



dc9bb6c

Compare ▼

Autoware Ver.1.8.0



New Features

- Results of vision detector and lidar detector can be combined by [range_vision_fusion](#) (#1419).
<https://www.youtube.com/watch?v=GEUVmO7xWDA>
- Colors of vision data can be projected into lidar data by [pixel_cloud_fusion](#) (#1297).

https://www.youtube.com/watch?v=KhcEpT_3GB4

- [Fake perception](#) generating fake object and pointcloud message ([#1439](#)).
<https://www.youtube.com/watch?v=F7yCnQz1FmQ>
- Cross build for NVIDIA DRIVE PX2 ([#1447](#)) and generic aarch64 ([#1433](#)).
The build time for NVIDIA DRIVE PX2 is shortened dramatically.
- [Docker for 96boards](#) ([#1356](#)).
- [Drivers of Sick LD-MRS lidar](#) ([#1287](#)).
- [Grid divider of Point Cloud Map](#) ([#1271](#)).
- Convenient [autoware_bag_tools](#) that rename frame IDs ([#1307](#)) and extract GNSS nmea data ([#1345](#)).
- Using TF generator when tf.launch is not given ([#1239](#)).
- Pure pursuit publishes deviation of current position ([#1357](#)).
- Can limit maximum scan range of ndt_mapping ([#1412](#)).

Improvements

- Euclidean cluster classifies pointcloud more precisely ([#1426](#)).
- Up to 8 lidars are supported by concat filter ([#1255](#)).
- Speed-up Points to Image processing ([#1286](#)).
- Brush up the internal structure of OpenPlanner ([#1400](#)).

Bug Fixes

- Fixed an issue where multiple cameras publishes the same frame id ([#1296](#), [#1313](#)).
- Fixed ndt_matching and ndt_mapping with GPU of Drive PX2 and Jetson TX2 ([#1340](#)).
- Fixed an issue where /can_velocity and /vehicle/odom are not generated from /vehicle_status ([#1351](#)).
- Fixed an issue where transform from map to base_link is not published in ndt_mapping ([#1376](#)).
- Fixed an issue where the app button of lidar_kf_contour_track and lidar_imm_ukf_pda_track do not work ([#1436](#)).

Known Issues

- Kanade – Lucas – Tomasi (KLT) Tracker does not work on Indigo (#1415).

▼ Assets 2

 [Source code \(zip\)](#)

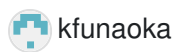
Aug 31, 2018

 [Source code \(tar.gz\)](#)

Aug 31, 2018



May 21, 2018



kfunaoka



1.7.0



a3bf7b3



Compare



Autoware Ver.1.7.0



New features

- Fix the multi cam support of Traffic Light recognition feat_proj node.
- Add support to multi traffic signal located in the same pole.
- Add support to ueye from IDS Imaging cameras using the ueye ros package.
- Update Hokuyo 2D driver.
- Add multi LiDAR calibration tool.
- Add Camera-LiDAR calibration tool.
- Enable Matlab engine for chessboard detection.
- Update velodyne drivers and new VLP32C driver.
- Add support to AVT cameras using the Vimba SDK.
- Add traffic light recognizer based on MxNet framework.
- Add Yolo v3 detector.
- Add acceleration to ctrl_cmd.
- Add vehicle status node/topic.
- Fix compile error on decision_maker.
- Fix velocity planning at end of waypoint.

- Updated README, Added FAQ, Travis-CI status, new nodes.
- Add NDT matching safe monitor.
- Update Docker README.md.
- Add multiple objects tracking algorithms by IMM-UKF-PDA tracker.
- Add velocity re-planning tool for waypoint.
- Update concat filter to increase the supported number of lidars from 2 to 8.
- Rename and restructure packages

▼ Assets 2

 [Source code \(zip\)](#)

May 21, 2018

 [Source code \(tar.gz\)](#)

May 21, 2018



Feb 27, 2018

 yk-fujii  1.6.2  5809cdf 

Compare ▼

Autoware Ver.1.6.2



Release 1.6.2

Release 1.6.2

Merge pull request #1113 from CPFL/hotfix/add_dw_interface_on_dpx2
Hotfix/add dw interface on dpx2

▼ Assets 2

 [Source code \(zip\)](#)

Feb 27, 2018

 [Source code \(tar.gz\)](#)

Feb 27, 2018



Dec 11, 2017



YamatoAndo



1.6.0



3f42da7



Compare



Autoware Ver.1.6.0



New features

- Add GPU NDT Matching
- Add controllable vehicle from Autoware. The following cars will be controllable:
 - Yamaha Motor Powered Products Co., Ltd. G30Es Li
 - Autonomous-stuff, PACMod equipped
- Add new Rviz models.
- Add docker file for the ubuntu 16.04 with ROS Kinetic
- Add Ray Ground Filter
- Enhance DecisionMaker, it can control vehicle according to rule based.
- Enable to perform split loading of maps in NDT in real time.
- Add Ray ground filter. it can be filtering ground when using multiple velodyne.
- Add to support multi traffic signal
- Deprecated WebRTM
- Fix some bugs
- rviz window position
- NDT Matching does not work when lidar rotates.

Known Issues:

- When "use_gpu" of ndt_matching (also ndt_mapping) is true, As the map size increases, the CUDA memory is insufficient and the program drops
- When "use_fast_pcl" of ndt_matching (also ndt_mapping) is true, if load a large map, use too huge memory.

▼ **Assets** 2

[Source code \(zip\)](#)

Dec 11, 2017

[Source code \(tar.gz\)](#)

Dec 11, 2017



Sep 25, 2017



1.5.1

083ff48

Compare ▾

Autoware Ver.1.5.1

Pre-release



Release v.1.5.1

Bug Fixes

- Fix build issues

Known Issues

- ladybug node is not build.

▼ Assets 2

[Source code \(zip\)](#)

Sep 25, 2017

[Source code \(tar.gz\)](#)

Sep 25, 2017



Sep 21, 2017



1.5.0

5ff7722

Compare ▾

Autoware Ver.1.5.0



Release v.1.5.0 #763 / [#809](#)

New Features

- Add Web-UI
- Add Decision Maker [WIP]
- Add GarminGPS support
- Add multiple cross-walk detector
- Add ENet image segmenter
- Add aarch64 support and NVIDIA DrivePX2 installation manual
- Add simulated obstacle creator for astar planning/dp_planner
- Fix docker files, Update nvidia-docker version.
- Fix some issues.

Demos/Documentation

Known Issues

▼ Assets 2

 [Source code \(zip\)](#)

Sep 21, 2017

 [Source code \(tar.gz\)](#)

Sep 21, 2017



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