



September 15, 2022 TSC

Progress and planning of design docs

Prepared by TIER IV

Progress and planning of design docs

- Purpose
Encourage more developers to contribute to design docs with the current progress and future planning
- Location of design docs
<https://autowarefoundation.github.io/autoware-documentation/main/design/>
- Configuration of design docs
Refer to the right column

Design	
Autoware concepts	
How is Autoware Core/Universe different from Autoware.AI and Autoware.Auto?	
Autoware architecture	
Sensing	
Map	
Localization	
Perception	
Planning	
Control	
Vehicle	
Node diagram	
Autoware interfaces	
AD API	▼
Use cases	
List	
Components	▼
Planning	
Control	
Vehicle Interface	
Vehicle dimensions	
Configuration management	
Development process	
Repository structure	
Release process	

Autoware's Design

Architecture

Core and Universe.

Autoware provides the runtimes and technology components by open-source software. The runtimes are based on the Robot Operating System (ROS). The technology components are provided by contributors, which include, but are not limited to:

- Sensing
 - Camera Component
 - LiDAR Component
 - RADAR Component
 - GNSS Component
- Computing
 - Localization Component
 - Perception Component
 - Planning Component
 - Control Component
 - Logging Component
 - System Monitoring Component
- Actuation
 - DBW Component
- Tools
 - Simulator Component
 - Mapping Component
 - Remote Component
 - ML Component
 - Annotation Component
 - Calibration Component

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No	Topics	Progress and planning	Remarks
1	Architecture - Sensing	None - Work in progress at TIER IV The initial update should be done in Nov	
2	Architecture - Map	None	This will be handled at Map WG
3	Architecture - Localization	Completed! (initial version)	The implementation plan will be clarified
4	Architecture - Perception	None - Planning at TIER IV	
5	Architecture - Planning	Completed! (initial version)	Some update could happen in near future

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No	Topics	Progress and planning	Remarks
6	Architecture - Control	None - Planning at TIER IV	
7	Architecture - Vehicle	Completed! (initial version)	
8	Architecture - Node diagram	Completed! (initial version)	Will be updated as necessary
9	Autoware interfaces	Completed! (initial version)	Expect requests like V2X from partners through Discussions/Issues
10	AD API - Use cases	Completed! (initial version)	Will be updated with additions like simulation

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No	Topics	Progress and planning	Remarks
11	AD API - List	Completed! (initial version)	Will be updated with additions like simulation
12	Component Interface - Planning	Completed! (initial version)	The interface for Autoware Core will be reflected later
13	Component Interface - Control	Completed! (initial version)	Same as above
14	Component Interface - Vehicle interface	Completed! (initial version)	Same as above
15	Component Interface - Vehicle dimensions	Completed! (initial version)	Same as above