XUANYUAN

An R&D Platform that Supports L2 to L5 Autonomous Driving

The Xuanyuan Platform will empower conventional vehicles with the basic capabilities of autonomous driving, such as control driving, braking, turning, transmission and lighting, in a stable and reliable manner. With the core parameters of wire control satisfying the R&D requirements, the platform can be integrated with more sensors and devices, and customized to suit the needs of hardware and software engineering. With flexible local technical support, the platform is able to meet the needs of developers in developing L2 to L5 autonomous driving systems.

At present, the platform covers the car models of Volkswagen Magotan, Buick Envision and Lincoln MKZ, and provides customized services for the other models.

Volkswagen Magotan

- 2017 380TSI (2.0T) DSG
- 2018 380TSI (2.0T) DSG
- 2019 380TSI (2.0T) DSG

Buick Envision

- 2017 28T AWD 4dr Preferred
- 2017 28T AWD 4dr Essence
- 2017 28T AWD 4dr Premium
- 2018 28T AWD 4dr Essence
- 2018 28T AWD 4dr Premium

Lincoln MKZ

- 2018 2.0H Hybrid Premiere

Vertical Control

Based on the original vehicle structure
Speed control ranging from -8 to 150 kph
Multiple safe exit mechanisms
Human driver takeover mechanism
Supporting acceleration control and speed control

Horizontal Control

Based on the original vehicle structure
Steering wheel direction ranging from -450° to 450°
Multiple safe exit mechanisms
Human driver takeover mechanism
Supporting torque control and angle control

Other Wire Control Systems

PRND transmission
Turn signals and warning lights
EPB

Hardware Interface

Control Interface:
CAN or ethernet
Power Interface:
MAXDC12V@80A, MAX AC220V@0.68A.

Hardware and Software that Xuanyuan

Sensor

Camera
LiDAR
Radar
Ultrasonic Radar
GNSS+IMU

Hardware

CAN Gateway
Computer Platform
Wireless Controller
In-Vehicle Network System

Software

Middleware (ROS, DDS, etc.)
Control Module
Sensor Driver
Sensor Integration Module
Custom Function/-Module Development