PRODUCT CATALOGUE

Streaming Rear View Mirror

AR-HUD

CMS

L2+ADAS

50 km/h

Digital Cluster

CMS

IVI System

Copilot Screen

32℃   15:57

50

11:07

Smart Cockpit Domain Controller

Global Automotive Intelligent Solution Supplier

COMPANY PROFILE

Established in August of 2006, Shenzhen RoadRover is a high-tech company that provides solutions for automotive informatization, intelligentization, and smart travel.
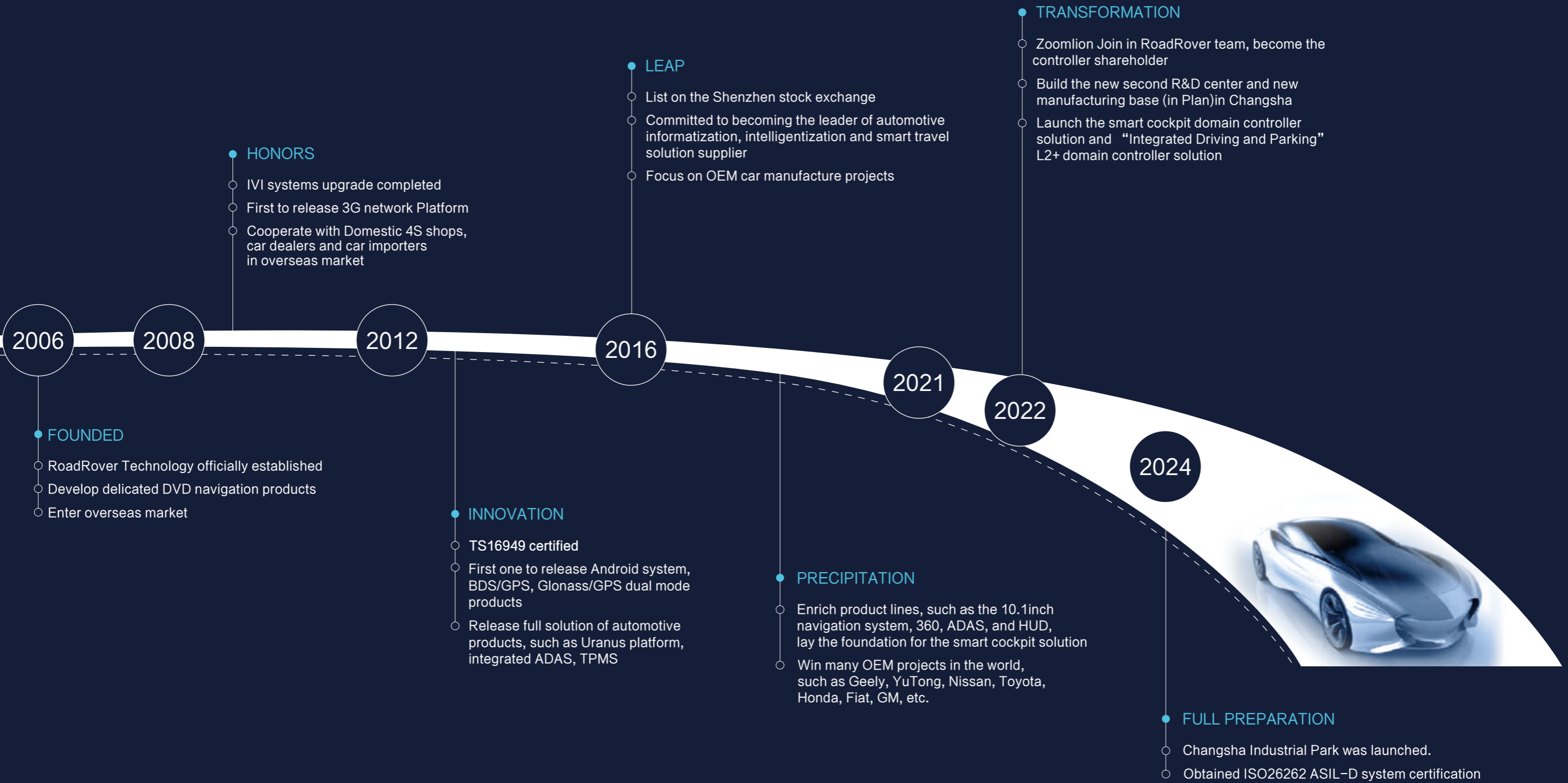
RoadRover Technology was listed on the main board of the Shenzhen Stock Exchange in October 2016 (Stock Code:002813), focusing on the OEM projects to become the Tier 1 supplier in the automotive industry.

In 2022, Zoomlion joined the RoadRover team and became the shareholder. Zoomlion is an Intelligent, International, and Ecological Global leader in Equipment Manufacture. Zoomlion was established in 1992, and listed on both Shenzhen and HK Stock Exchange. Until now, Zoomlion products are in the leading position in the industry, such as the sales volume of construction cranes being the first in the world.

Now Shenzhen RoadRover is dedicated to providing customers with Smart Cockpit and Smart Driving solutions, including the solution of Smart Cockpit Domain Controller, Intelligent Autonomous Driving Controller(L2+ADAS, APA), Digital Cluster, In-vehicle Infotainment, CMS, HUD, 360 Surround View, Streaming Rear View Mirror, DVR, Wireless Charger, etc.

Based on the intelligent solutions and products, RoadRover has expanded its business into the global market and won many OEM projects such as FIAT, Nissan, Toyota, Honda, Hyundai, etc.

HISTORY

TRANSFORMATION
- Zoomlion Join in RoadRover team, become the controller shareholder
- Build the new second R&D center and new manufacturing base (in Plan)in Changsha
- Launch the smart cockpit domain controller solution and "Integrated Driving and Parking" L2+ domain controller solution

LEAP
- List on the Shenzhen stock exchange
- Committed to becoming the leader of automotive informatization, intelligentization and smart travel solution supplier
- Focus on OEM car manufacture projects

HONORS
- IVI systems upgrade completed
- First to release 3G network Platform
- Cooperate with Domestic 4S shops, car dealers and car importers in overseas market

2006 2008 2012 2016 2021 2022 2024

FOUNDED
- RoadRover Technology officially established
- Develop delicated DVD navigation products
- Enter overseas market

INNOVATION
- TS16949 certified
- First one to release Android system, BDS/GPS, Glonass/GPS dual mode products
- Release full solution of automotive products, such as Uranus platform, integrated ADAS, TPMS

PRECIPITATION
- Enrich product lines, such as the 10.1inch navigation system, 360, ADAS, and HUD, lay the foundation for the smart cockpit solution
- Win many OEM projects in the world, such as Geely, YuTong, Nissan, Toyota, Honda, Fiat, GM, etc.

FULL PREPARATION
- Changsha Industrial Park was launched.
- Obtained ISO26262 ASIL-D system certification
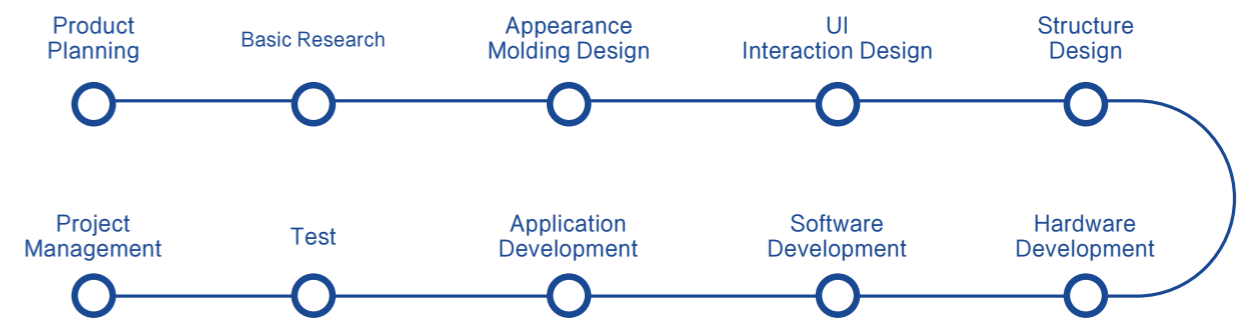
MANUFACTURING CAPACITY

RoadRover production base is in Dongguan, with a workshop area of 18,000 square meters. It has 6 fully automatic high-speed SMT lines, 9 automatic assembly lines, 2 automatic camera module production lines and 1 HUD automatic assembly line. The annual production capacity for the IVI system is more than 850,000 units; The Image product production capacity is more than 2 million units.

R & D STRENGTH

RoadRover has fully independent comprehensive capabilities from planning, design, development, tooling making and production.

Until October 2023, RoadRover has more than hundreds of R&D engineers, 36% proportion of the total number of employees. We have 35 invention patents, 33 utility model patents, 273 appearance patents, and 116 computer software copyrights.

Product Planning	Basic Research	Appearance Molding Design	UI Interaction Design	Structure Design
○	○	○	○	○

Project Management	Test	Application Development	Software Development	Hardware Development
○	○	○	○	○

VALIDATION TEST

OEM Standard Test Facility

RoadRover R&D laboratory has passed the national CNAS certification. There are two testing bases for the R&D center and manufacturing factory (more than 80 square meters areas), and there are more than 10 professional testing engineers and thousands of experimental equipment. Every procedure is strictly implemented in accordance with national and industry standards. Every step is strictly checked and rigorously required, and most of the National standards, International standards, and Car OEM standards related to automotive electronic products can be implemented.

High and Low Temperature Test
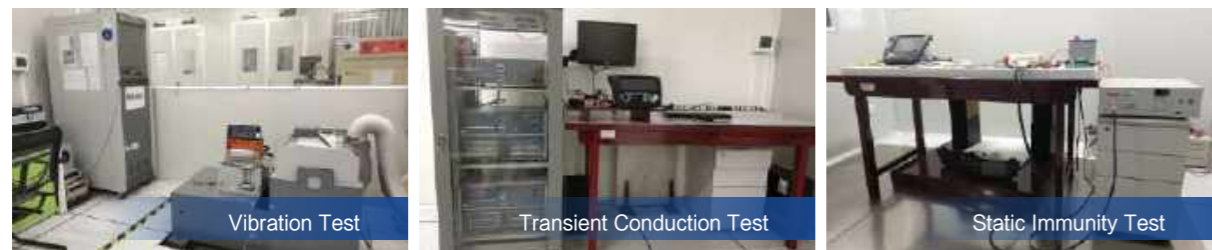
Vibration Test

Transient Conduction Test

Static Immunity Test

Electronic Shielding Test

Plug Life Test

Power Variation Test

QUALITY ASSURANCE

RoadRover has passed and strictly implemented the ISO9001: 2000，ISO 26262 ASIL-D and IATF 16949 quality management system and certification standards. The products have passed the verification of the National Quality Certification Center, 3C certification, and international certification such as CE, E-mark, and FCC.
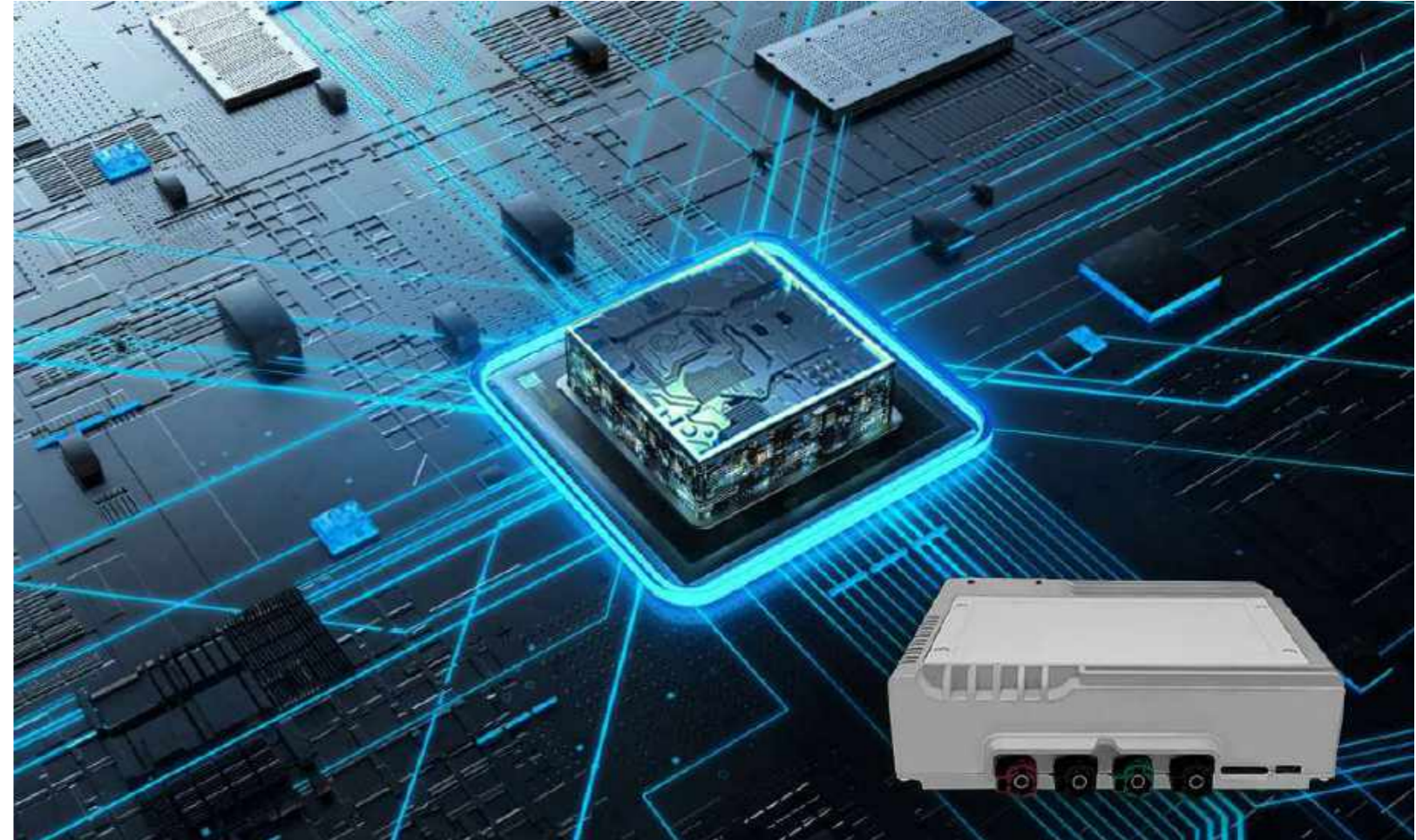
Cockpit Domain Controller

HD DVR

ADAS / APA(Auto Parking Assist)

Streaming Rearview Mirror

DMS / OMS

Telematics System

Headrest Screen

AR- HUD
(Augmented Reality Headup Display)

Power Tailgate System

Digital Cluster

360 Panoramic Camera System

Blind Spot Detection

Wireless Charger / USB Fast Charger

Camera Monitor System

Infotainment System

Electric Pedal
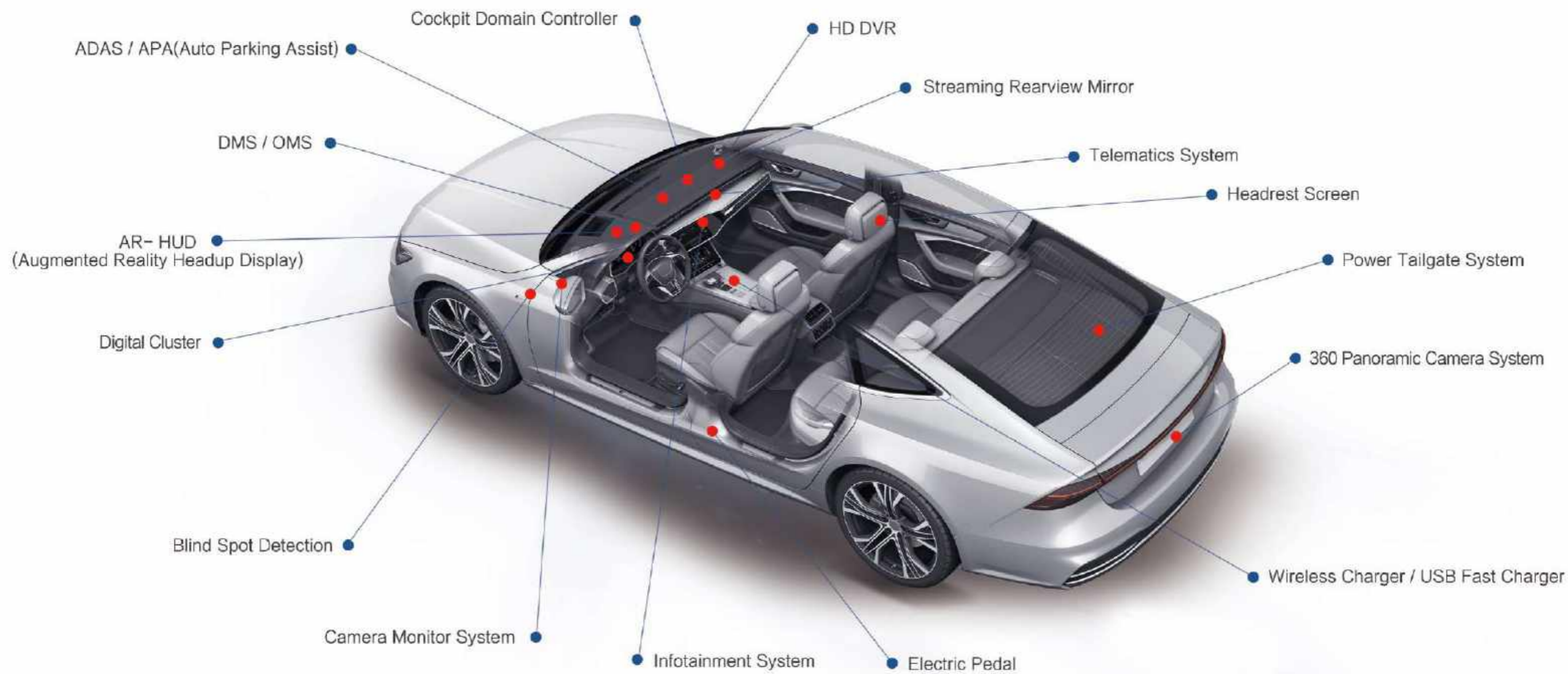
SMART COCKPIT DOMAIN CONTROLLER

RoadRover Smart Cockpit Domain Controller is a "one chip multi-screen" solution.

It can provide a platform which integrated with multiple OS(Linux & Android) and safety level functions (such as Digital Cluster, In-vehicle Infotainment, Copilot Screen, Air Conditioning Screen, Headrest Screen, HUD, 360, Rearview mirror system, DVR, DMS, ADAS, T-box).

It can fit customized requirement with high performance, high integration and high expansibility.

Our Smart Cockpit Domain Controller Solution has rich experience in OEM project. It is one mature chip solution, and can fulfill automotive grade(AEC-Q100).

Smart Cockpit Domain Controller

- Octa-core High-performance Processor
- Multi-screen Display, Support Max 6 Display Screens（1920 x 720P）
- Integrated GPS / Wi-Fi / BT / 4G T-box
- Support Up To 12 Channel HD Cameras
- Integrated AVM / Front DVR / Incar DVR / BSD(Right) / ADAS / DMS
- Support Carplay, Android Auto, E-Link, Hi-Car, Carlife

VARIOUS
PRODUCT FORMS

RoadRover SMART COCKPIT DOMAIN Solution can integrate the media for interactions between humans and environments inside and outside cars, it is one highly integrated customized solution according to different car manufacture requirement.

》Product Form 1: Digital Cluster + IVI System + Copilot Screen + Headrest Screen


》Product Form 2:　Digital Cluster + IVI System + Copilot Screen + Air Conditioning Screen

》Product Form 3: Digital Cluster + IVI System + HUD

SMART AUTONOMOUS DRIVING CONTROLLER SOLUTION

RoadRover Smart Autonomous Driving Controller is an "Integrated Driving And Parking" L2.99 domain controller solution.

It has a built-in GPU and integrates forward and surround-view cameras, front radar, angle radar, and ultrasonic sensors to achieve a single-chip solution that operates driving and parking functions in parallel.

It can realize L2 level autonomous driving functions such as APA/AVP, forward ADAS, 3D panorama, DMS/OMS, CMS and other functions.

This solution has rich experience in OEM projects and can fulfill ISO26262 ASIL-B, and AEC-Q100 Grade-2 standards.

- Long-Range Radar
- LIDAR
- Camera
- Short/Medium-Range Radar
- Ultrasound
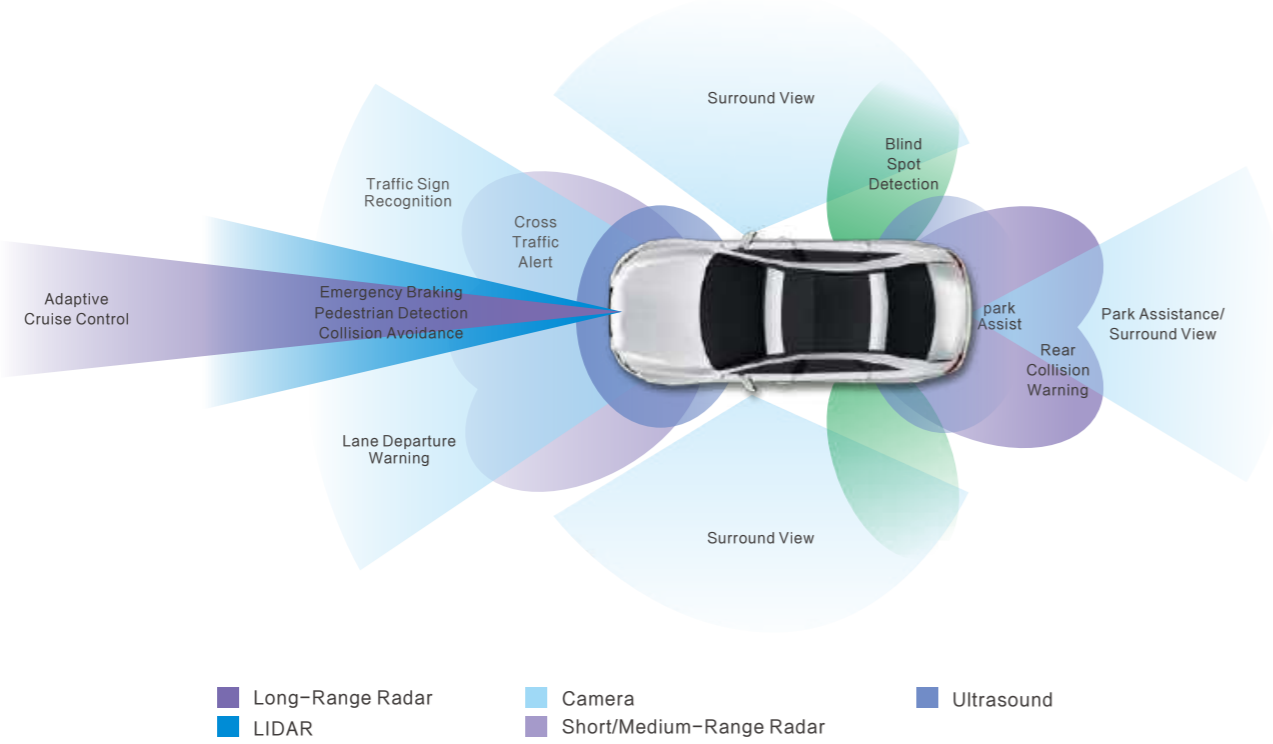
We can provide a variety of sensor options to meet different levels of intelligence needs.

AUTOMATIC PARKING ASSIST SYSTEM

APA means automatically parks the vehicle by controlling the vehicle's acceleration, deceleration, and steering angle. The surround-view cameras (AVM) and sensor probe (PDC) scan the surroundings of the vehicle while the vehicle is driving, collect the surrounding parking space line image information and spatial parking space information for analysis and fusion processing, and identify information such as parking spaces, vehicles, pedestrians and other obstacles. Calculate the parking trajectory and perform fully automatic parking, thereby improving the comfort and intelligence of parking.

| SINGLE CHIP HIGH INTEGRATED | DUAL OS | 4PCS CAMERA | 12PCS ULTRASONIC RADAR | 360 PANORAMIC VIEW | ASIL-B | AUTOMOTIVE GRADE |

L2 + ADAS

L2+ ADAS is a Multi-functional Domain Controller solution, which can fulfill the Automotive standard and the functional safety can reach ASIL-D.
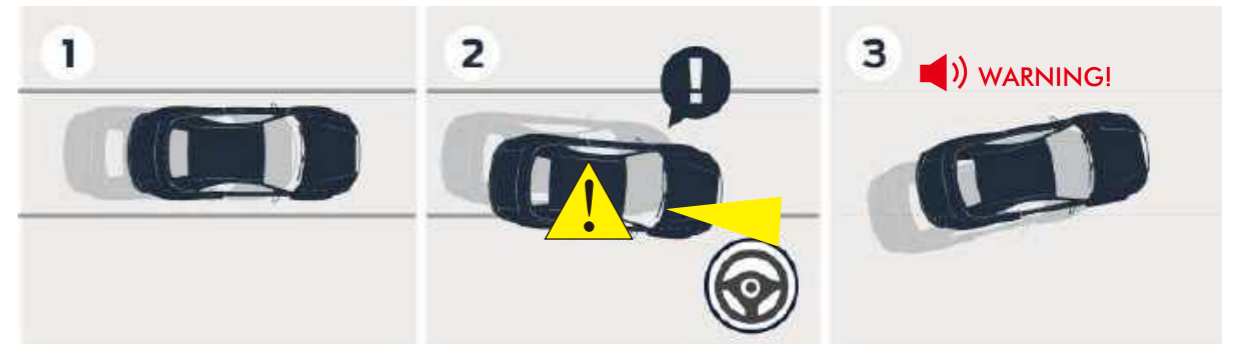
The sensing chip can achieve high performance at low latency and achieve real-time detection and recognition of nearly a hundred types of targets in six categories, including vehicles, pedestrians, road lines, traffic signs, license plates, and traffic lights.

This solution can be customized for different functions according to different levels of intelligence needs.

- Lane Departure Warning System
- Pedestrian Collision Warning
- Lane Centering Keep
- Rear Collision Warning
- Adaptive Cruise Control

- Forward Collision Warning
- Autonomous Emergency Braking
- Lane Changing Warning
- Blind Spot Detection
- Traffic Sign Recognition

» Lane Departure Warning(LDW)

» Forward Collision Warning(FCW)

» Pedestrain Collision Warning（PCW）
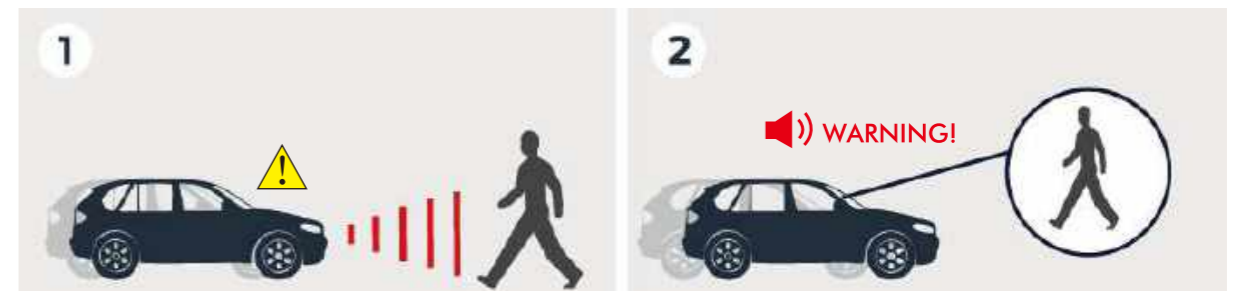
» Autonomous Emergency Braking(AEB)

DIGITAL CLUSTER

Fully Reconigurable Instrument Cluster for OEM

- Larger，Higher-resolution Display
- 3D Effect for a more Immersive Experience
- Automotive Grade Design and Quality

Solution Offerings

» Instrument Cluster

7-Inch Display

7-Inch Display

10.25-Inch Display

12.3-Inch Display

» Integrated Cluster

Two 12.3-Inch Displays

Linux and Android Integrated

Linux and Linux Integrated

IN-VEHICLE INFOTAINMENT SYSTEM

- Quad-core High Performance
- Android 10.0 System
- Integrated 360 AVM
- 4G Network Access
- Support Front & Rear Camera AHD Signal
- Support Wired / Wireless CarPlay & Android Auto Certification

- Quad-core High Performance
- Android / Linux System Available
- Integrated 360 AVM
- Reverse Camera with Dynamic Trajectory
- Support Wired / Wireless CarPlay & Android Auto Certification

- Dual Core Cortex-A7, Linux System
- Full HD, Max Support 2048*2048 Resolution
- Integrated 128M / 256M DDR
- Integrated HiFi 4 DSP
- Support 4K Multi-Format Video
- Support Wired / Wireless CarPlay & Android Auto Certification

- Dual Core Cortex-A7 1G, Linux System
- 3D GPU
- Integrated Digital Cluster & IVI system
- Full HD, Max Support 1920*720 Resolution
- Automotive AEC-Q100 Grade
- Support Wired / Wireless CarPlay & Android Auto Certification

CAMERA MONITOR SYSTEM

CMS is a solution that uses a combination of camera + screen to replace the traditional optical rearview mirror. The rear road image information is displayed on the display near the A-pillar through the camera outside the car, thereby improving the intelligent driving experience and driving safety.

For Commercial Vehicles

- Dual Core Cotex A7, NPU1.2 TOPs
- Screen size can be a max of 15.1inch
- Supports up to 2 *1080P + 2 * 720P HD cameras input simultaneously
- Safe and reliable, not affected by bad weather such as rain and fog
- Automatically adjust ambient light and intelligently adjust brightness to maintain clear vision
- Expand the field of view, reduce blind spot, wind resistance and noise, and improve the cruising range
- Can be customized and adapted to a variety of models

For Passenger Vehicles

- Quad-core Cortex A7
- Supports up to 4 HD camera inputs cand 2 MIPI output
- Lightweight structural design, supports electric folding
  (Smaller in size, reduces wind resistance and noise, improves cruising range)
- Dynamically adjust the field of view to reduce blind spots
  (In scenes such as turning or reversing, adjust the camera and road images to expand the driver's field of vision)
- Built-in ISP, high image definition, strong resistance to weather interference
  (Support multi-channel splicing, digital defogging, highlight suppression, AI anti-shake and various visual algorithms)
- 8 TOPs NPU, integrates multiple AI functions to assist safe driving
  (Can support various auxiliary safety functions such as ADAS/DMS/BSD)
- Automotive AEC-Q100 Grade / ECE R46 / GB15084 -2022

| AEC Q100	Quad	7inch	AI	Built-in ISP		ECE R46	GB 15084

HEADUP DISPLAY

The HUD (Headup Display) can map road condition information, ADAS, Internet of Vehicles, and other information on the transparent medium in front of the driver, saving the driver time to lower his head to observe instruments, reducing the occurrence of ignoring road conditions, and improving driving safety.

RoadRover HUD can be customized to display various key information: AR navigation, speed, cruise, warning, etc. It supports automatic brightness adjustment, temperature control, position adjustment, and CAN and LVDS video communication, and can be upgraded via OTA.
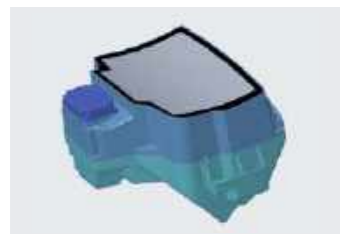
AR HUD – TFT
- PGU: 4.1 Inch TFT
- Resolution: 1280*640
- FOV: 11*5°
- Virtual Image Size：75inch
- VID: 8m
- Brightness: > 18000nits
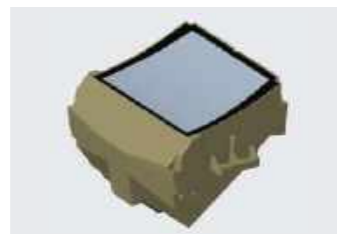
AR HUD – LCOS
- PGU: LCOS
- Resolution: 1920*1080
- FOV: 10*3°
- Virtual Image Size：60inch
- VID: 7.5m
- Brightness: > 15000nits
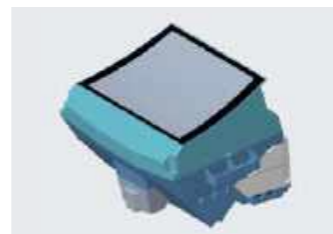
AR HUD – DLP
- PGU: DLP
- Resolution: 1152*576
- FOV: 13*5°
- Virtual Image Size：75inch
- VID: 8m
- Brightness: > 15000nits

360 PANORAMIC SURROUND VIEW SYSTEM

Bird View without Blind Spots

- 3D Panorama Surround View
- Dynamic Track Line
- Dark Night Vision
- RoadRover Self−developed Algorithm
- Larger View Angle
- Four Way Driving Record
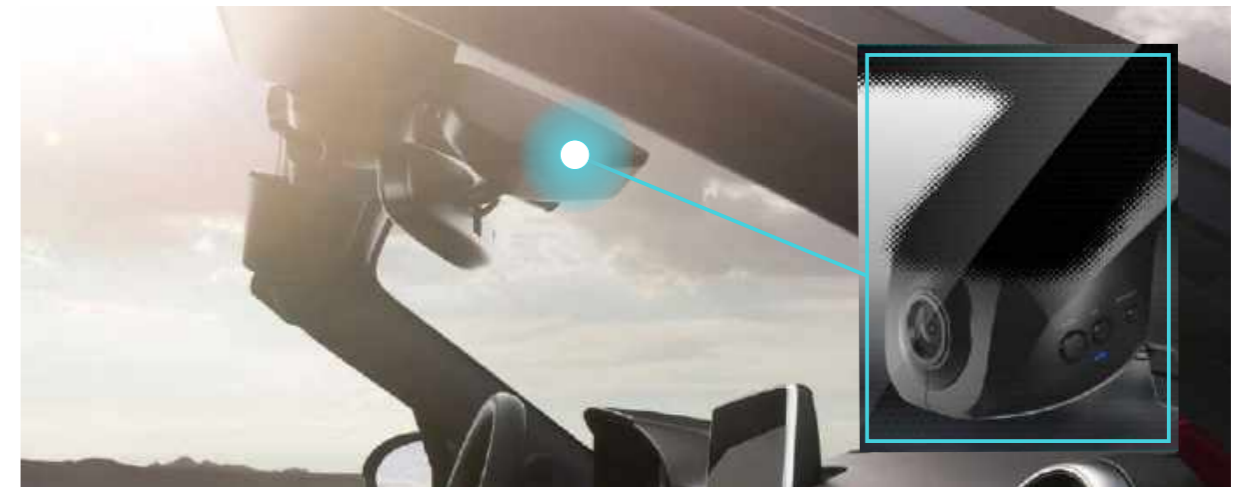- OE Style, HD Rendering Model

STREAMING REAR VIEW MIRROR SYSTEM

Direct a Safe Driving Life

- 4K/2K Ultra HD
- AHD Transmission
- Strong Light Suppression
- Dual Recording
- Automotive Grade

- 9.66" IPS Full HD Display
- 140° Wide Angle
- Dark Night Vision
- IP69
- OE Style

9.66   140°   IP69

DIGITAL VIDEO RECORDER

HD DEDICATED DRIVING RECORDER

1.1080P HD Record

2.Collision Induction&Motion Detection

3.Lane Departure Warning

4.WIFI Interconnection

PRODUCT FUNCTION

5.150° Wide-angle Recording&Two-way HD Video Recording

6.Video Output

7.GPS Track Positioning

8.Parking Monitoring,Loop Record

OTHER PRODUCTS

Geely Bo Yue

Geely LX-1

WIRELESS CHARGER

15W/50W

- Executive Standard：WPC Qi1.2.4 / Qi1.3.3 / Qi2.0
- Chip Standard：AEC-Q100
- Standard WPC：Class 4
- Input Voltage：DC9-16V
- Output Maximum Power：15W
- Output Maximum Current：2A@12V
- Charging Efficiency：>78%
- Charging Frequency：110KHz ~ 205KHz
- Number of Coils：3

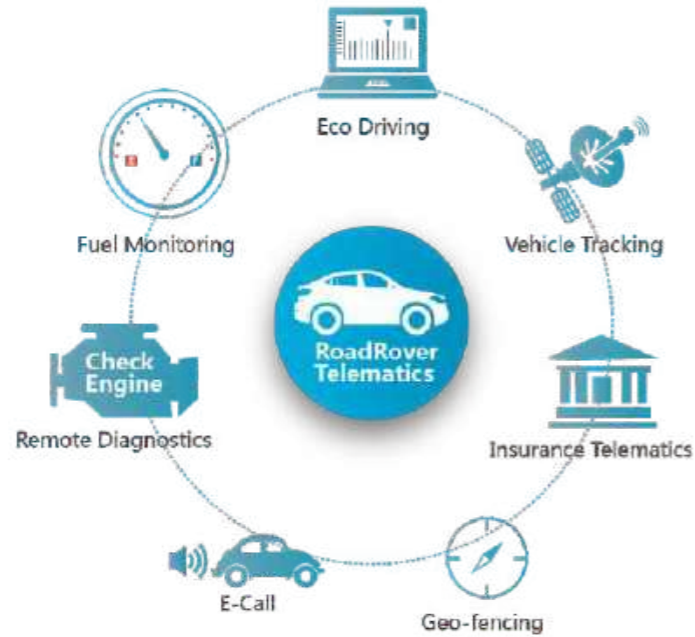| WIRELESS CHARING | HIGH SECURITY | INTELLIGENT CONTROL | DEDICATED | ENERGY EFFICIENT | FAST CHARING | MULTIPLE COIL |

AUTOMOTIVE TAILGATE SYSTEM

Smart Tailgate, Elegant Lifestyle

- Multi-access Control
- Height Setting
- Safety Override
- Audible Warning

- Automatic Soft-close
- Smooth Operation
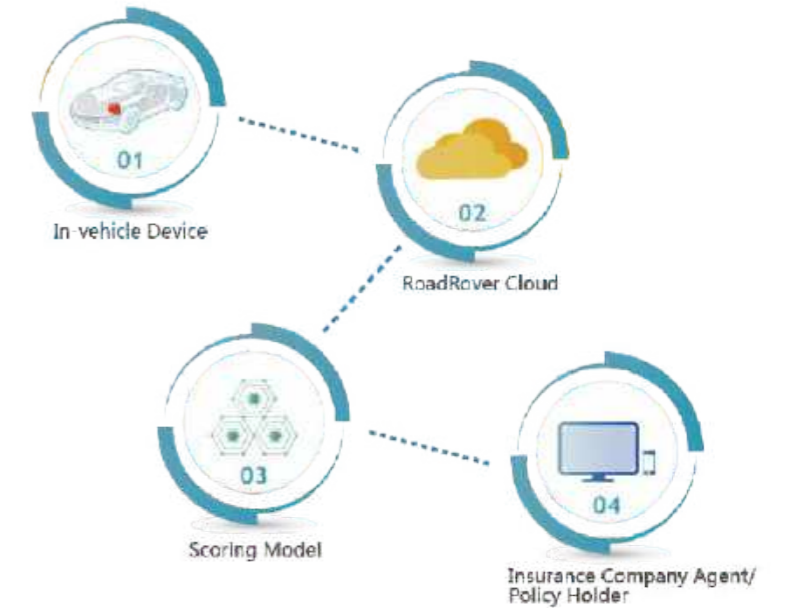- Nondestructive Installation
- Built to Last

Hands Free Operation(Optional)

Safety Override

Multi-access Control

Intelligent Height Setting

Audible Warning

Automatic Soft-close
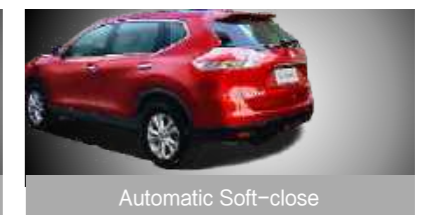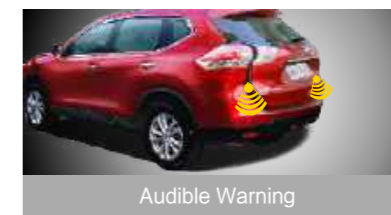
TELEMATICS SOLUTION

What RoadRover T-BOX Can Bring

Solution for Fleet Management

>> Benefits for You

- Reduced fuel and maintenance costs
- Improved driver safety
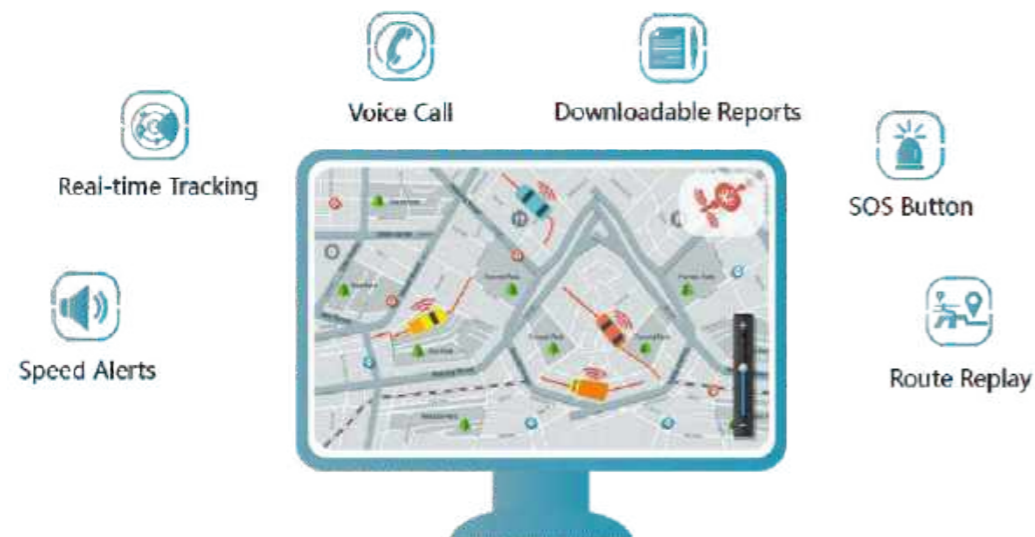- Enhanced customer service

Solution for Auto Insurance(UBI)

>> Benefits for You

- Set premiums based on individual driving patterns
- Recover stolen vehicles and reduce property loss
- Improve customer satisfaction and loyalty

Solution for E-Call

RoadRover can help automotive manufacturers develop ecall solutions to support the European or other countries initiative designed to bring rapid assistance to motorists involved in collision.

>> Benefits for You

- Vehicle sends accident data to RoadRover
- Associate speaks to the passenger and notifies the local rescue services

HONORS

Qualifications Recognized by the Government

- National High-Tech Enterprise
- Torch Plan Key High-Tech Enterprise
- Guangdong Provincial Key Software Enterprise
- Shenzhen Top 100 Software Enterprise
- "Professional, Special And New" Medium-Sized Enterprises

Innovation Institution Recognized by the Government

- Shenzhen Telematics Engineering Technology Center
- Guangdong Provincial Telematics Intelligent Information System Engineering Technology Center
- Shenzhen In-vehicle Infotainment Engineering Technology Laboratory

PARTNERS