



**ResearchInChina**  
www.researchinchina.com

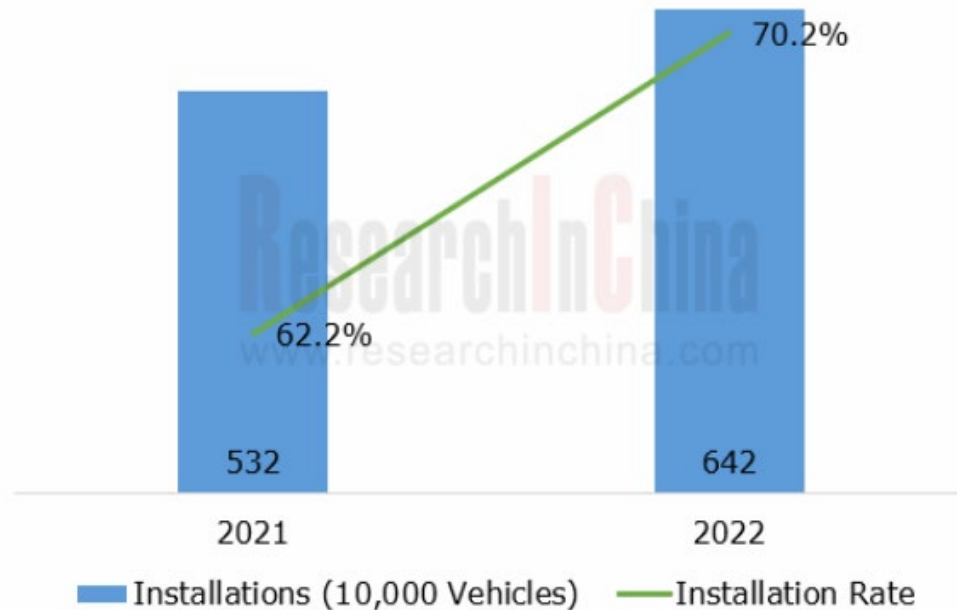
# Chinese Independent OEMs' Telematics System and Entertainment Ecosystem Research Report, 2022

Feb. 2023

# Vehicle telematics system research: the control scope is expected to expand to the entire vehicle

From January to December 2022, Chinese independent OEMs installed telematics systems in 6.42 million vehicles, surging by 20.6% on the previous year, with the installation rate higher than 70%, up 8 percentage points from the prior-year period.

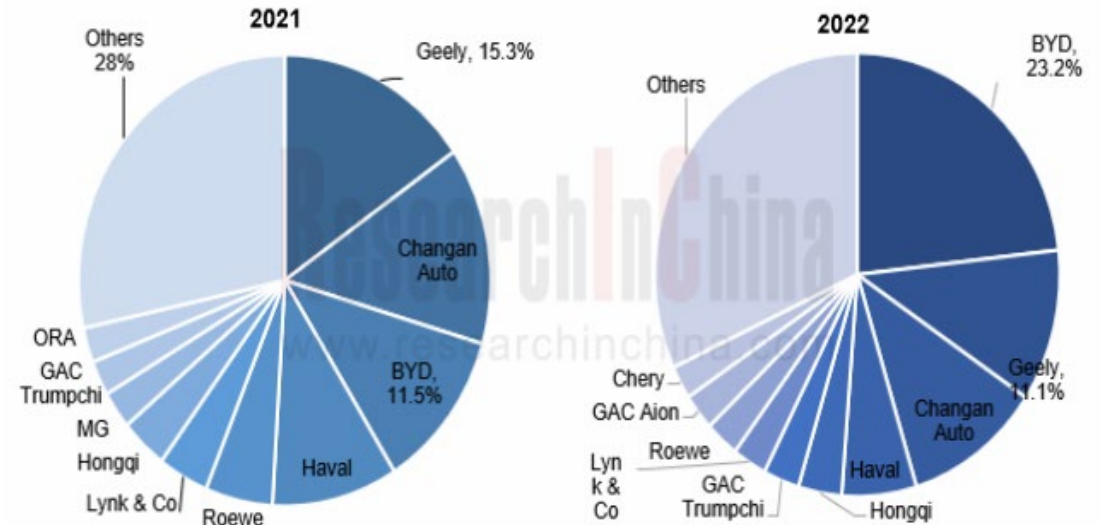
**Installations and Installation Rate of Telematics Systems in Passenger Cars of Chinese Independent OEMs, 2022**



Source: ResearchInChina

By brand, in 2022, driven by the new energy market (from January to December 2022, BYD's new energy vehicle sales exceeded 2.2 million units), BYD installed the most telematics systems in the market, accounting for more than 23%, 11.7 percentage points higher than the same period last year; Geely followed, with its share down 4.2 percentage points year on year.

**Market Shares of TOP10 Chinese Independent Brands by Telematics System Installations, 2021-2022**



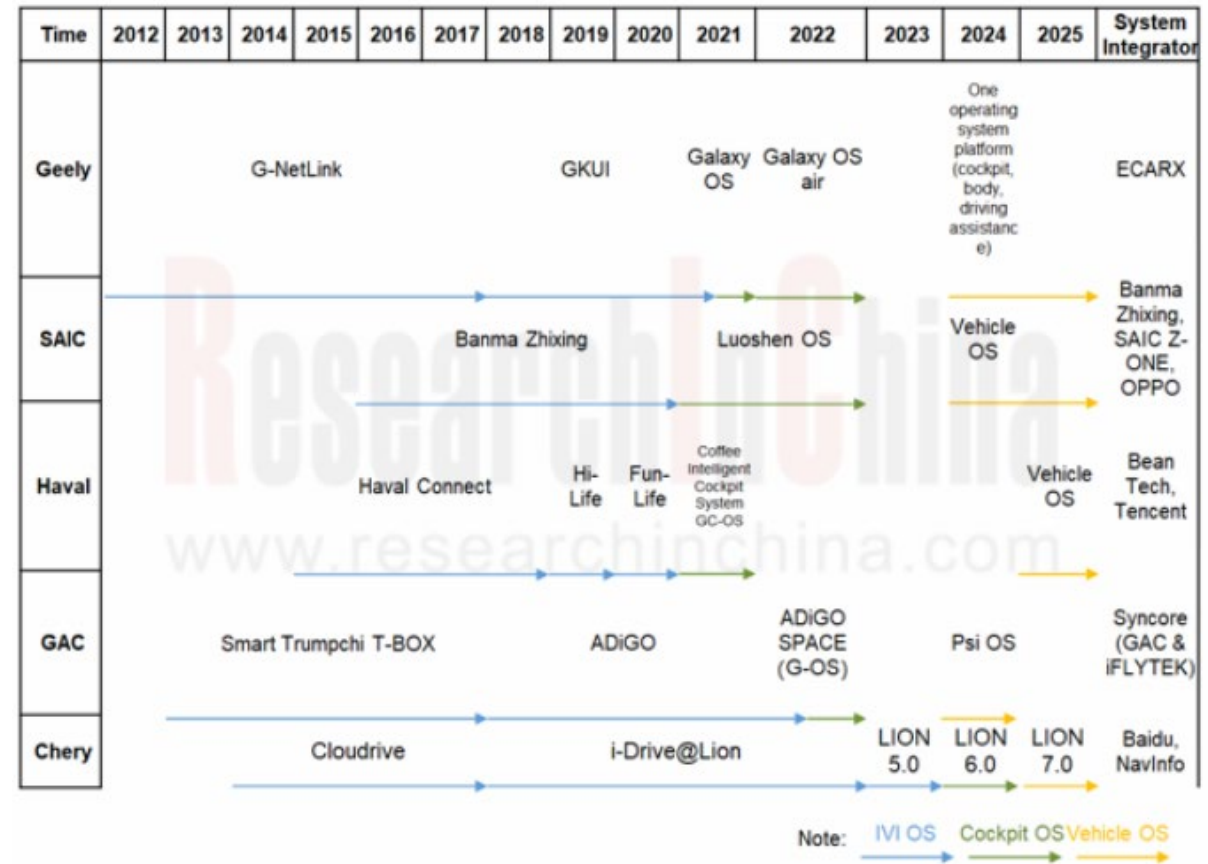
# Development highlights of Chinese independent brands in telematics systems

In 2022, the development of Chinese independent brands in telematics systems highlights the following:

**1. Starting from 2024, the control scope of telematics systems is expected to expand to the entire vehicle.**

In 2022, the control scope of telematics systems expanded to the whole cockpit. According to the plans of OEMs, from 2024 onwards, they will expand the control scope of their telematics systems to AD/ADAS, body and other domains, that is, the entire vehicle.

Comparison of Telematics System Iteration between Some Chinese Independent Brands



# Four development phases of Geely's telematics system

*Geely's telematics system has gone through four development phases: G-NetLink, GKUI, Galaxy OS, and Galaxy OS Air. In 2024, its telematics system will realize control over the entire vehicle.*

**G-NetLink:** during 2012-2017, based on Android, and equipped with mainstream functions, e.g., Carlife/Carplay, voice, and remote control

**GKUI Era:** during 2018-2021, built by ECARX on the E01 platform, introduce WeChat and Alipay account login, and support car-home interconnection, watch control car and other functions

**Galaxy OS:** applied in vehicles in 2021, built by ECARX on the E02 platform, open more than 1,800 car control signal interfaces, and enable control on more than 200 vehicle functions, ensuring that users can "control what they see" in the car

**Galaxy OS Air:** seen in vehicles in 2022, add the speech chip-based V01+5G communication on the basis of Galaxy OS. The speech data processing speed is increased by 13 times, and such functions as "see and speak" and sound localization in four sound zones are supported.

According to ECARX's R&D plan, in 2024 Geely will launch a vehicle operating system platform that integrates cockpit, body, and driving assistance domains.

# Three development phases of GAC's telematics system

GAC has experienced the three phases: Smart Trumpchi, ADiGO, and ADiGO SPACE. In 2024, it will enable the cross-domain vehicle operating system - GAC Psi OS.

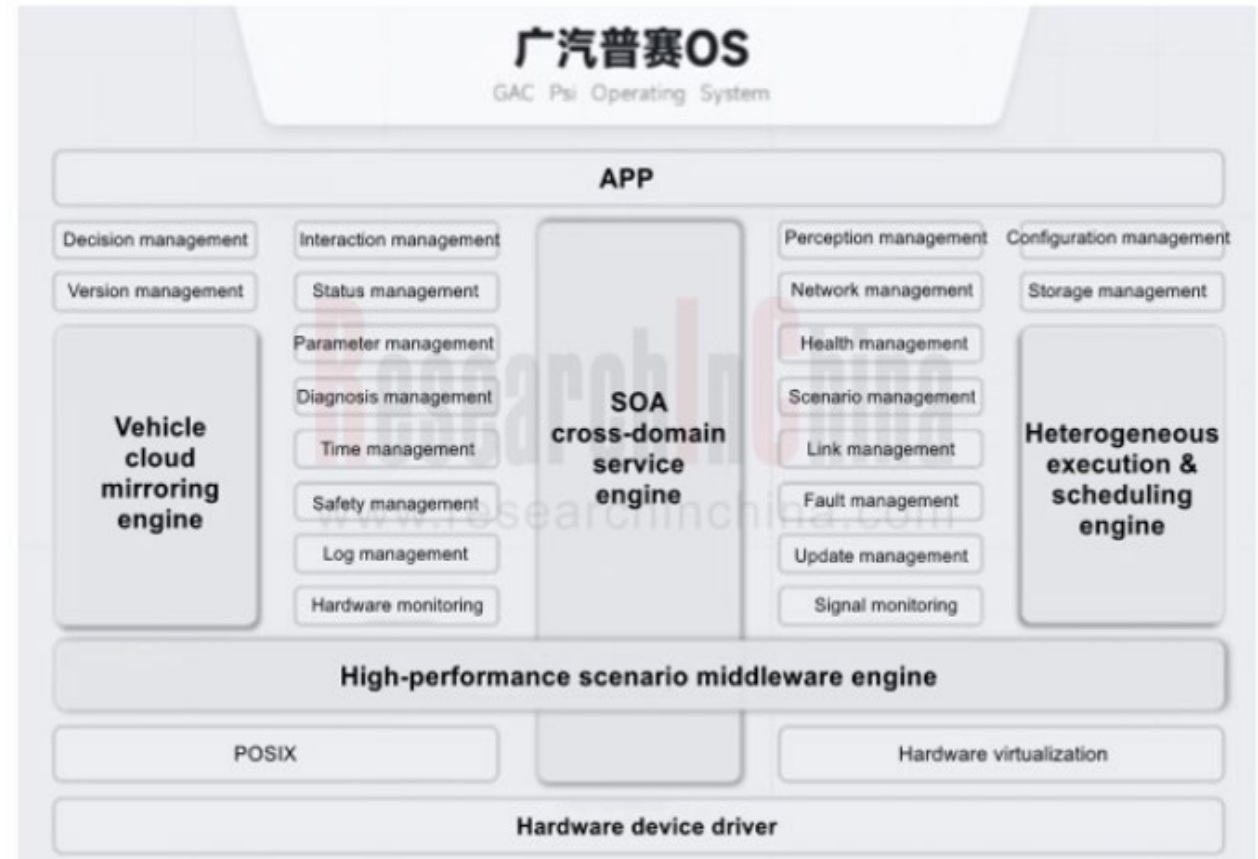
**Smart Trumpchi:** during 2013-2017, based on WinCE, and equipped with mainstream functions, e.g., 3G and remote control.

**ADiGO:** during 2018-2022, based on Android, upgrade 4G networks, online navigation, online entertainment, voice and other mainstream functions in deep cooperation with Tencent Auto Intelligence (TAI), and work with Syncore to create G-OS operating system.

**ADiGO SPACE:** used in vehicles in 2022, enhance voice interaction, and add user-defined voice command and “see and speak” functions; enrich the car entertainment ecosystem by introducing applications, e.g., Mango TV, Kugou and Car Vinyl Music.

**Psi OS:** expected to be available on vehicles in 2024. It will control the three major domains of driving assistance, infotainment, and smart car control in a unified way to improve software development efficiency and iteration speed, enabling software iteration in a minute compared with previous iteration every month.

## Cross-domain Standardized Vehicle Operating System Developed on X-Soul Architecture—GAC Psi OS



Source: GAC

# Cockpit games and metaverse will become a new trend for vehicle applications

## 2. Supported by hardware such as AR/VR and holographic projector, cockpit games and metaverse will become a new trend for vehicle applications.

By the end of 2022, the difference between vehicle application ecosystems among brands has been narrowing, and software such as social contact, map, audio and video has found massive application in vehicles. Meanwhile, as technologies like powerful chips, holographic projection, and AR/VR, vehicle games have begun to be available on vehicles. Vehicle games are expected to become a next development direction for vehicle applications.

Current Mainstream Vehicle Applications



Source: ResearchInChina

In December 2022, GAC announced the ADiGO SPACE Intelligent Cockpit Upgrade Plan, and introduced two products: ADiGO PARK Metaverse and ADiGO SOUND, an all-scenario sound interaction ecosystem. Wherein, ADiGO PARK Metaverse carries a VR head-mounted display jointly developed by GAC Group and iQIYI Qiyu VR. This device features 5K-level binocular display resolution, and 16MP exterior stereo camera, an equivalent to a 130-inch display, meeting display requirements of 3A games.

In October 2022, Chery released the Lion Ecosystem 2023, according to which Lion 6.0 (2024) will highlight a "third-space" intelligent cockpit and expansion of scenarios (e.g., game/KTV/video office); Lion 7.0 (2025) will feature "space + metaverse", and enable cockpit connection to AR/VR devices.

# Powerful chips will further enhance the capabilities of telematics systems

## 3. Powerful chips will further enhance the capabilities of telematics systems.

The rapid iteration of telematics systems and the development of vehicle application ecosystems are inseparable from IVI system chips. In 2022, multiple models of Chinese independent brands used high computing power chips like Qualcomm 8155 and Huawei Kirin 990A. Among them, Geely Boyue L, Lynk & Co 09 EM-P and 3rd-generation Roewe RX5 (Sliding Screen Edition) were equipped with Qualcomm 8155 as a standard configuration.

Among the current mainstream cockpit chips, Qualcomm 8155, a 7nm SoC with 1000GFLOPS GPU and 8TOPS NPU, supports up to 6 cameras, 4 2K screens or 3 4K screens. Also it allows different displays to use different operating systems, and supports passenger capacity/passenger recognition, and face recognition & classification/behavior analysis.

The performance of the next-generation cockpit chips will be still ever higher. For example, Qualcomm 8295, a 5nm chip with 30TOPS AI computing power, supports the integration of multiple ECUs and domains, covering dashboard, AR-HUD, center console screen, rear seat displays, electronic rearview mirror, and in-vehicle monitoring. In addition, the chip provides video processing capabilities and supports integration of driving recording function. Higher-performance chips will make telematics systems more capable.

The Latest Telematics Systems and IVI System Chips in Typical Models of Some Chinese Independent Brands, 2020

Brand	Latest Telematics System	Typical Model	Selling Price (RMB10,000)	IVI System Chip
Geely	Galaxy OS Air	Boyue L	12.57-17.07	Qualcomm 8155
Lynk & Co	Lynk OS N	Lynk & Co 09 EM-P	31.99-37.49	Qualcomm 8155
Geometry	Harmony OS	2022 Geometry G6/M6	14.98-18.98	Huawei Kirin9610A
Roewe	Luoshen OS	3rd generation Roewe RX5 (Sliding Screen Edition)	11.49-15.29	Qualcomm 8155
Haval	Coffee Intelligent Cockpit System GC-OS	Haval Shenshou	12.10-15.80	Qualcomm 8155
Great Wall WEY	MO.Life 1.0	Latte DHT-PHEV	22.9-26.3	Qualcomm 8155
ORA	ORA Smart-café OS	ORA Lightning Cat	18.98-26.98	Qualcomm 8155
TANK	Tank Smart Sharing Interconnection	Tank 500	33.50-39.50	Qualcomm 8155
GAC	ADiGO SPACE	Trumpchi EMKOO (Max Edition)	11.98-16.98	Qualcomm 8155
BEIJING	BEIJING OS	Mofang (Mid-to-high Configuration)	9.49-14.89	Huawei Kirin 990A

Source: ResearchInChina

# Table of Content (1)

## **1 Telematics System Market Size of Chinese Independent OEMs**

- 1.1 Installations and Installation Rate of Telematics Systems in China: Overall
- 1.2 Installations and Installation Rate of Telematics Systems of Chinese Independent OEMs
  - 1.2.1 Installations: by Brand
  - 1.2.2 Installation Rate: by Brand
  - 1.2.3 Installations: by Price
  - 1.2.4 Installations: by System

## **2. Comparison of Telematics Functions between Chinese Independent OEMs**

- 2.1 Cockpit Display
- 2.2 Cockpit Interaction
- 2.3 Vehicle Ecosystem
- 2.4 Remote Control
- 2.5 5G and V2X Application
- 2.6 Iteration
- 2.7 Scenario Mode

## **3. Telematics Systems of TOP 10 Chinese Independent OEMs**

### **3.1 Geely**

- 3.1.1 Layout of Telematics System
- 3.1.2 Development History of Telematics System
- 3.1.3 Installations and Installation Rate of Telematics Systems
- 3.1.4 Introduction to GKUI System

- 3.1.5 Galaxy OS 1.2 Update
- 3.1.6 Highlights of Galaxy OS Air
- 3.1.7 First Vehicle Model Installed with Galaxy OS Air: Boyue L
- 3.1.8 Iteration of Lynk & Co's Telematics System
- 3.1.9 First Vehicle Model Installed with LYNK OS N: Lynk & Co 09 EM-P
- 3.1.10 New Telematics Partner of Lynk & Co: Meizu
- 3.1.11 Geometry Auto G6/M6 Adopt Huawei Harmony Underlayer
- 3.1.12 Cockpit Entertainment Ecosystem for All Geely Brands
- 3.1.13 Telematics Partners
- 3.1.14 Dynamics in Telematics System (2020-2021)

### **3.2 SAIC**

- 3.2.1 Layout of Telematics System
- 3.2.2 Telematics System Features of SAIC's Brands
- 3.2.3 Installations and Installation Rate of Telematics Systems
- 3.2.4 Banma Zhixing System
- 3.2.5 Luoshen OS
- 3.2.6 First Vehicle Model Installed with Luoshen OS: MG ONE
- 3.2.7 Vehicle Models Installed with Luoshen OS: The 3rd Generation Roewe RX5

- 3.2.8 Introduction to SAIC Maxus' Telematics System
- 3.2.9 SAIC Maxus' Typical Models with Luoshen OS: MAXUS MIFA 9
- 3.2.10 Cockpit Entertainment Ecosystem for All SAIC Brands
- 3.2.11 Major Telematics Partners
- 3.2.12 Dynamics in Telematics System (2020-2021)

### **3.3 Changan Auto**

- 3.3.1 Telematics Strategy
- 3.3.2 Installations and Installation Rate of Telematics Systems
- 3.3.3 Development History of Telematics System
- 3.3.4 Main Functions of Interactive Monitoring System (IMS)
- 3.3.5 Typical Model with IMS: Changan UNI-V
- 3.3.6 Development History of Oshan's Telematics System
- 3.3.7 Oshan OnStyle5.0
- 3.3.8 Typical Model with OnStyle 5.0: Changan Oshan Z6
- 3.3.9 Cockpit Entertainment Ecosystem for All Changan Brands
- 3.3.10 Major Telematics Partners
- 3.3.11 Dynamics in Telematics (2020-2021)

### **3.4 Great Wall Motor**

- 3.4.1 Positioning of GWM's Brands and Their Telematics Strategy



# Table of Content (2)

- 3.4.2 Telematics Layout
- 3.4.3 Installations and Installation Rate of Telematics Systems
- 3.4.4 Development History of Haval's Intelligent Connection System
- 3.4.5 Main Functions of Haval L.E.M.O.N. Platform
- 3.4.6 Core Highlights of Coffee Intelligence GC-OS
- 3.4.7 Typical Model with Coffee Intelligence GC-OS: Haval H6S
- 3.4.8 Development History of WEY's Telematics System
- 3.4.9 Main Functions of WEY MO.Life 1.0
- 3.4.10 WEY's Typical Model with MO.Life 1.0: Mocca
- 3.4.11 Development History of ORA's Intelligent Connection System
- 3.4.12 Functions of ORA Smart-café OS
- 3.4.13 ORA's Typical Models with ORA Smart-café OS: Ora Lightning Cat
- 3.4.14 Introduction to Tank Smart Sharing Interconnection System
- 3.4.15 Tank's Typical Models with Smart Sharing Interconnection System: Tank 500
- 3.4.16 First Vehicle Model Installed with SAR Telematics: Mecha Dragon
- 3.4.17 Cockpit Entertainment Ecosystem for All GWM Brands
- 3.4.18 Telematics Partners
- 3.4.19 Dynamics in Telematics (2020-2021)

## **3.5 GAC**

- 3.5.1 ADiGO Intelligent IOT System
- 3.5.2 Development History of Telematics System
- 3.5.3 Installations and Installation Rate of Telematics Systems
- 3.5.4 Super Sensing Interactive Smart Cockpit
- 3.5.5 Typical Model with Super Sensing Interactive Smart Cockpit: Trumpchi GS4 PLUS
- 3.5.6 Vehicle OS——Psi OS
- 3.5.7 Core Highlights of ADiGO SPACE
- 3.5.8 Typical Model with ADiGO SPACE: Trumpchi Emkoo
- 3.5.9 Cockpit Entertainment Ecosystem for All GAC Brands
- 3.5.10 Intelligent Connection Partners
- 3.5.11 Dynamics in Telematics (2020-2021)

## **3.6 BYD**

- 3.6.1 Development History of Telematics System
- 3.6.2 Installations and Installation Rate of Telematics Systems
- 3.6.3 Introduction to DiLink System
- 3.6.4 Function Iteration of DiLink System
- 3.6.5 Vehicle Control System: BYD OS
- 3.6.6 Details of DiLink 4.0 Functions
- 3.6.7 Typical Models with DiLink 4.0: Seal
- 3.6.8 BYD Vehicle APP
- 3.6.9 Cockpit Entertainment Ecosystem for All BYD Brands

- 3.6.10 Major Telematics Partners
- 3.6.11 Dynamics in Telematics (2020-2021)

## **3.7 Chery**

- 3.7.1 Development Plan for Telematics System
- 3.7.2 Development History of Telematics System
- 3.7.3 Installations and Installation Rate of Telematics Systems
- 3.7.4 Introduction to i-Connect@Lion 4.0/4.1
- 3.7.5 Main Functions of i-Connect@Lion 4.0/4.1
- 3.7.6 Typical Model with i-Connect@Lion 4.1: Lingyun 400T
- 3.7.7 Lion Ecosystem 2023 (Lion 5.0-7.0)
- 3.7.8 Cockpit Entertainment Ecosystem for All Chery Brands
- 3.7.9 Partners of Lion Ecosystem
- 3.7.10 Dynamics in Telematics (2020-2021)

## **3.8 Dongfeng Motor**

- 3.8.1 Layout of Telematics System
- 3.8.2 Installations and Installation Rate of Telematics Systems
- 3.8.3 Development History of Aeolus's Telematics System
- 3.8.4 Highlights of Aeolus WindLink 6.0
- 3.8.5 OTA Upgrade of WindLink6.0 Telematics
- 3.8.6 Highlights of Aeolus WindLink OS
- 3.8.7 Development History of Forthing Futurelink System
- 3.8.8 Introduction to Forthing Futurelink 4.0
- 3.8.9 Introduction to Fengon's New Generation MY Fengon System
- 3.8.10 MY FENGON APP

# Table of Content (3)

- 3.8.11 Cockpit Entertainment Ecosystem for All Dongfeng Motor Brands
- 3.8.12 Telematics Partners
- 3.8.13 Dynamics in Telematics (2020-2021)

## **3.9 BAIC**

- 3.9.1 Telematics Layout of Major Brands
- 3.9.2 Installations and Installation Rate of Telematics Systems
- 3.9.3 Development History of BEIJING's Telematics System
- 3.9.4 Highlights of BEIJING OS (HarmonyOS-based)
- 3.9.5 Darwin System
- 3.9.6 Development History of ARCFOX's Telematics System
- 3.9.7 Main Functions of ARCFOX HarmonyOS Telematics System
- 3.9.8 ARCFOX's Typical Model with Telematics System: αS Huawei HI
- 3.9.9 Cockpit Entertainment Ecosystem for All BAIC Brands
- 3.9.10 Telematics Partners
- 3.9.11 Dynamics in Telematics (2020-2021)

## **3.10 FAW**

- 3.10.1 Development Strategy for Intelligent Connection
- 3.10.2 Installations and Installation Rate of Telematics Systems
- 3.10.3 Development History of Hongqi's Telematics System
- 3.10.4 Main Functions of Hongqi Connect 3.0 PLUS
- 3.10.5 Hongqi's Typical Model with Connect 3.0 PLUS: Hongqi E-HS9 (2022 Refitted Edition)
- 3.10.6 Development History of Bestune's Telematics System
- 3.10.7 Main Functions of Bestune D-life 5.0
- 3.10.8 Cockpit Entertainment Ecosystem for All FAW Brands
- 3.10.9 Major Telematics Partners
- 3.10.10 Dynamics in Telematics (2020-2021)



## Beijing Headquarters

TEL: 010-82601561, 82863481

Mobile: 137 1884 5418

Email: [report@researchinchina.com](mailto:report@researchinchina.com)

Website:  
[www.researchinchina.com](http://www.researchinchina.com)

WeChat: [zuosiqiche](#)



## Chengdu Branch

TEL: 028-68738514

FAX: 028-86930659