ResearchInChina
www.researchinchina.com

Research Report on Passenger Car Cockpit Entertainment--In-vehicle Game, 2024

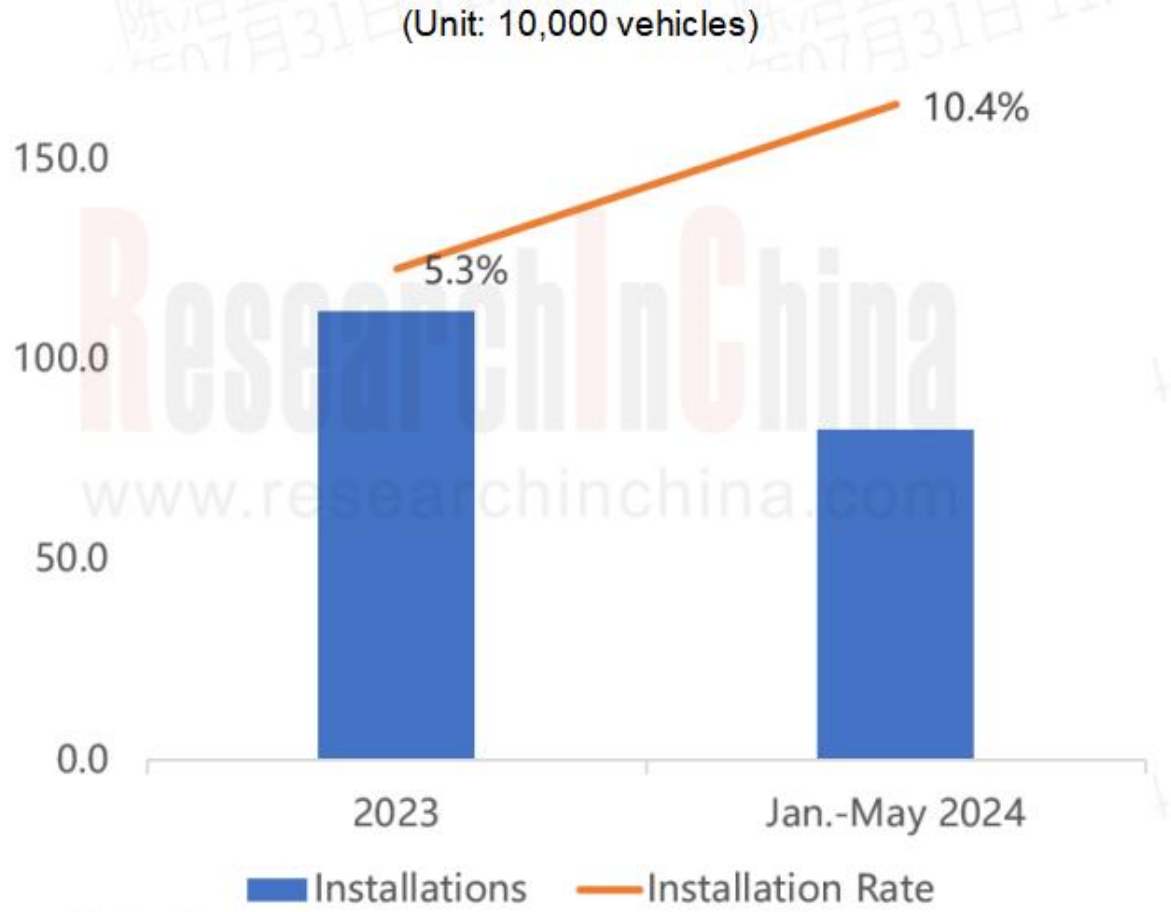
July 2024

In-vehicle entertainment screens are gaining momentum, and Chinese brands rule the roost

1. In-vehicle entertainment screens are gaining momentum, and Chinese brands rule the roost.

In-vehicle entertainment screens refers to display screens used for entertainment activities such as viewing and singing karaoke in the cockpit, mainly concentrated at the copilot seat and second-row seats. In 2023, OEM entertainment screens were installed in over one million passenger cars in China, with an installation rate of 5.3%. From January to May 2024, OEM entertainment screens were installed in over 800,000 passenger cars in China, with the installation rate higher than 10%. It is expected that the full-year installations will exceed 2 million cars. In-vehicle entertainment screens are gathering pace.

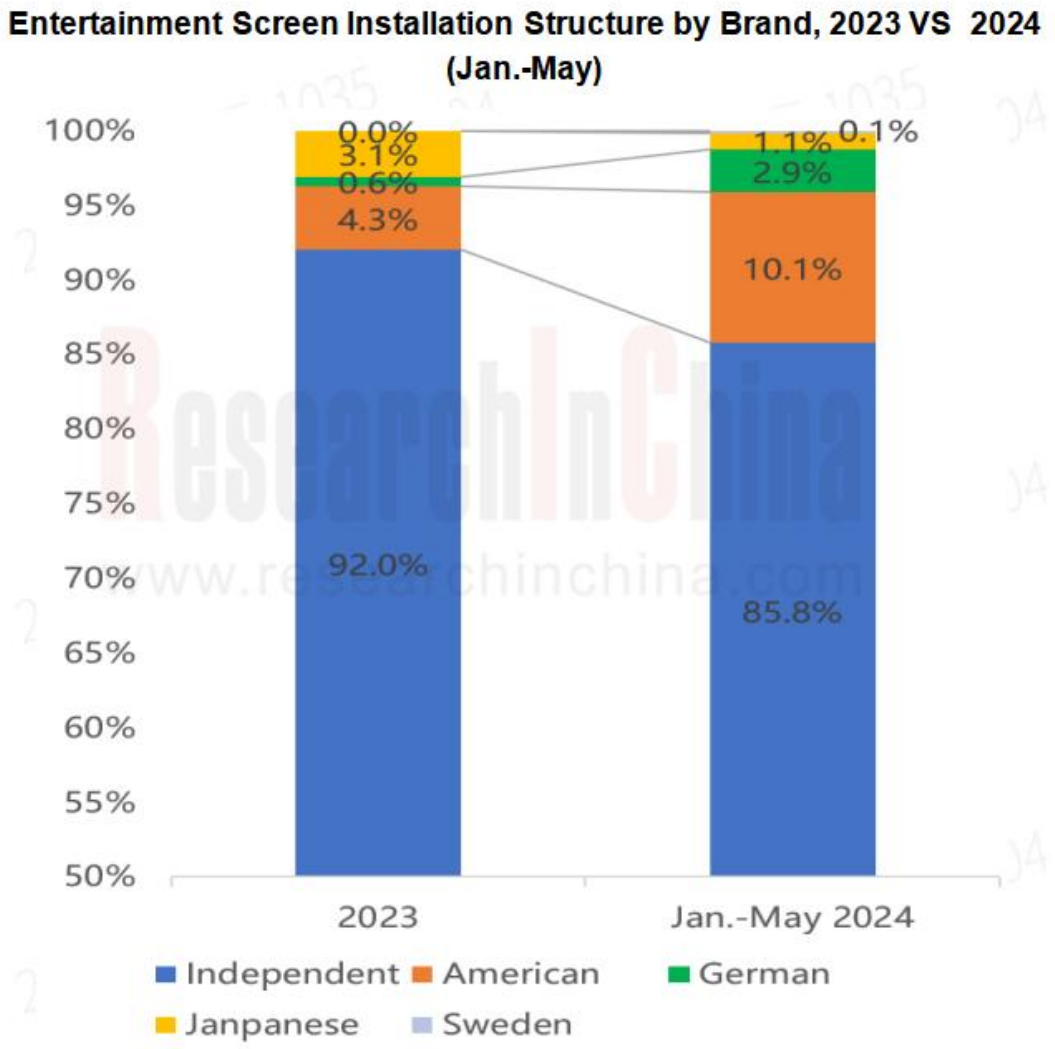
Installations and Installation Rate of OEM Entertainment Screens in Passenger Cars in China, 2023 –2024 (Jan.-May)



Source: ResearchInChina

Entertainment Screen Installation Structure by Brand, 2023 Vs 2024

Seen from brands installing entertainment screens, Chinese independent brands took the biggest share in entertainment screen installations. Between 2023 and the first five months of 2024, Chinese independent brands swept more than 85% of the entertainment screen installations.



Source: ResearchInChina

Installations of OEM Copilot Screens in Passenger cars in China

In terms of Chinese brands, Li Auto ranked first in entertainment screen installations, taking a market share of more than 20%.

Installations of OEM Copilot Screens in Passenger Cars in China, Jan.-May 2024

Copilot Screen Size	Typical Model	Installations (Unit:10,000 vehicles)
15.7 inches	Li L6/7/8/9, Li MEGA	14.6
12.3 inches	Voyah Dreamer, Xingyue L, Rising R7	14.0
10.25 inches	Leapmotor C11, Leapmotor C01, Avatr 11, Denza N7	4.1
16 inches	AITO M9	3.7
16.2 inches	Galaxy L7	1.7
14.96 inches	Xpeng G9	0.7
23.6 inches	Yangwang U8	0.5
15.5 inches	IM LS7, IM L6, IM L6	0.3

Source: ResearchInChina

Installations of OEM Rear-row Entertainment screens in Passenger Cars in China

By entertainment screen size, except for 15.7-inch copilot screens in Li Auto series, 12.3-inch copilot screens were the first choice for all brands, with typical models including Voyah Dreamer, Xingyue L and Rising R7. In addition to 15.7-inch rear-row ceiling screens in 4 models of Li Auto, the sizes of rear entertainment screens of other brands are varied, for example, 21.4-inch entertainment screen in Xpeng X9 and 32-inch entertainment screen in Denza D9 Four-Seat Edition.

Installations of OEM Rear-row Entertainment Screens in Passenger Cars in China, Jan.-May 2024

Rear-row Entertainment Screen Size	Typical Model	Installations (Unit:10,000 vehicles)
15.7 inches	Li L6/7/8/9	2.0
21.4 inches	Xpeng X9	1.1
32 inches	Denza D9	0.04
12.8 inches	Denza D9	1.0
11.6 inches	SIENNA, Granvia	0.9
12.8 inches	Yangwang U8	0.5

Source: ResearchInChina

How OEMs choose their route among multiple ways to introduce games in cars

2. How OEMs choose their route among multiple ways to introduce games in cars.

According to ResearchInChina, there are currently the following ways to introduce games in cars:

① Game porting

Port games on other platforms (mostly mobile phones and PCs) in the form of single APPs directly to IVI. Users download the APP on IVI to obtain game content.

Advantages: The games are popular enough on other platforms with stable user groups, and the playability of the games has been verified by the market.

Disadvantages: OEMs make high investment, and face the great challenges of choosing what kind of games to install in cars and how to combine them with in-car software and hardware.

Cases: Tesla, AITO

Beach Buggy Racing, ported by Tesla, has become the most popular game on its IVI. That's mainly because when playing Beach Buggy Racing in the car, users can control the game via the steering wheel, enjoying a gaming experience better than on mobile phones.

AITO cooperates with Talking Tom to launch multiple games on AITO M5 and AITO M7, including Talking Tom Gold Run and Talking Tom Friends. All their games can be downloaded from the AITO App Store.

Talking Tom Gold Run of AITO M5

Source: AITO

Game mirroring

② Game mirroring

The content of game consoles can be displayed on in-vehicle screens through mirroring.

Advantages: as game consoles have rich ecosystems, IVI does not need to have high computing power and adapt to the software. Only hardware adaptation needs to be completed, involving power supply of the game console, content transmission interface, and location selection for the game console in the car.

Disadvantages: the model can be copied. All the OEMs can implement screen mirroring, making it difficult to build differentiated competitive edges. In addition, in mirroring model, users' data and their spending in games belong to game providers. OEMs cannot gain profits in this model.

Cases: Li Auto

Switch Screen Mirroring of Li Auto

Source: Li Auto

Introduce large gaming platform in cars

③ Introduce large gaming platform in cars

Directly porting gaming platforms to IVI allows occupants to obtain extremely rich gaming contents.

Advantages: game contents are rich, user base is stable, and OEMs can try to make profits from the games.

Disadvantages: The computing power requirements for IVI are very high. In addition, there may be system incompatibility issues. For example, for Tesla IVI is built on Linux, Tesla can only introduce Steam Deck's games in cars.

Cases: Tesla

Steam Deck Platform of Tesla

Source: Tesla

Cloud gaming

④ Cloud gaming

Directly introducing cloud gaming platforms, OEMs only need to dock with cloud gaming platform providers.

Advantages: game contents are abundant, requirements for IVI computing power are not as high as game malls, and the game contents do not need to be downloaded and can be played immediately.

Disadvantages: high requirements for networks, and incompatibility between games on the cloud platform and car scenarios. Moreover, under this model, how to distribute the consumption of users is also a problem faced by cloud game platform providers and OEMs.

Cases: Rising Auto, GAC Aion, BYD, Buick

Rising F7: MiguPlay has deeply customized a "private game room" for Rising F7 owners. By connecting Bluetooth handles or mobile phone virtual handles, they can play games like "The King of Fighters XIV" and "Sword and Fairy 7" through multi-screen interaction and three-screen interconnection.

Buick New GL8 Firstland PHEV is installed with MiguPlay APP. At the same time, China Mobile Migu and Buick GL8 Firstland PHEV have also cooperated to customize a game handle controller to achieve touch + handle dual control.

MiguPlay × Buick New GL8 Firstland PHEV

Source: MiguPlay

BYD lays out "steering decoupling" to create ultimate in-vehicle gaming experience

3. BYD lays out "steering decoupling" to create ultimate in-vehicle gaming experience.

At its 2024 Dream Day Press Conference in January 2024, BYD disclosed its brand layout plan for in-vehicle gaming - BYD's full-stack self-developed gaming car solution.

* Steering decoupling: The motor and clutch structure are used to decouple the steering column. The column is disconnected during gaming to ensure tires will not be worn when the steering wheel is turned. Meanwhile, the damping motor is added to simulate the real hand feel. The joystick and 3D vibration functions on the customized steering wheel are specially developed for gaming.

* Support connecting wired or wireless game controllers, or mobile phone virtual controllers.

* Immersive gaming experience: Adopt the steering wheel decoupling solution, combined with audio, ambient lighting and air conditioning, to create an all-around in-depth cockpit perception experience.

* Create a car-exclusive game center for one-stop management of all games. It has been confirmed that games "Racing Master" and "Race Ace" will be introduced.

BYD Steering Wheel Decoupling Solution

Source: BYD

Table of Content (1)

Table of Content (2)

Contact

Beijing Headquarters

TEL: 13718845418
Email: report@researchinchina.com

Website: ResearchInChina

WeChat: Zuosiqiche

Chengdu Branch

TEL: 028-68738514
FAX: 028-86930659

zuosiqiche