

In 2021, NIO sold 90,805 cars, a year-on-year surge of 108%. However, its ranking among emerging automakers by sales volume dropped from the first in 2020 to the third. This is mainly affected by three factors.

First, the delivery plunged in October 2021 due to the reorganization and upgrade of the production line as well as the preparation for the launch of new products. Second, the upcoming ET7, ET5 and ES7 will all be delivered in 2022, which led to a gap throughout 2021 when the existing models ES6 and EC6 were squeezed by new stronger rivals such as Model Y and BMW iX3.

Third, new cars were mainly sold in first-tier cities. In 2021, NIO saw the highest sales volume in the economically developed coastal provinces and cities, especially Shanghai, Beijing and Hangzhou contributed the overwhelming 33%.



The delivery of ET7, ET5 and ES7 in 2022 hopefully helps a sales boom of NIO.



# **New Car Delivery Planning of NIO**

In 2022, NIO will deliver three new models one after another, and its sluggish sales is expected to fade out. ET7 delivered on March 28th is the first model based on the NT2.0 platform. It is equipped with NIO Autonomous Driving (NAD). Compared with NIO Pilot, it adds emergency active Parking Assist (EAS), emergency lane keeping (ELK), Advanced Driver Monitoring System (ADMS), Power Station Parking Assist (PSAP), autonomous driving functions on some urban roads, etc.



### Car-making History and New Car Delivery Planning of NIO





# **AD Hardware Configuration of NIO Models**

ET7 is equipped with four NVIDIA DRIVE Orin chips with a computing power of 1016TOPS. Two Orin SoCs are used as master chips to realize NAD fullstack computing. The third Orin SoC acts as a redundant backup; if any main chip fails, NAD can ensure safety. The fourth Orin SoC implements local training, and can personalize training as per user habits to speed up NAD evolution.

In terms of hardware configuration, ET7 is equipped with radar, ultrasonic radar, 1,550nm LiDAR and CVIS perception controls in preparation for software upgrades for higher-level autonomous driving in the future. It is worth mentioning that the solid-state LiDAR provided by Innovusion has a horizontal viewing angle of 120°, a maximum detection distance of 500 meters, and a maximum resolution of 0.06°x0.06°. In addition, the watchtower-like layout reduces the blind spots of the sensor.

Sensor Type	ES8/ES6/EC6	ET7/ET5				
Ultrasonic Sensor	12	12				
Radar	5	5				
Surround View Camera	4	4				
Forward ADS Camera		2				
Rear ADS Camera	ren n.	3				
Front View Camera	1 (Trino <mark>cu</mark> lar)	2 (Monocular)				
DMS Camera	archinchi					
LiDAR	aronnonn	1				
HD Positioning Unit	-	2				
V2X Vehicle-infrastructure Cooperation Sensing	-	1				
Total	23	33				
Source: NIO						

#### Autonomous Driving Hardware Configuration of NIO Models



### **NIO Operation Mode and Its User Service System**

Relying on Internet operation, community marketing has become a role model in the industry

Most traditional automakers take delivering orders as the ultimate goal, and they terminate marketing campaigns as soon as deals are completed. NIO regards the purchase of products by users as the beginning of its marketing, and makes experience and marketing penetrate into the entire life cycle of products.

In NIO's ripple model, core car owners are in the kernel, accounting for about 10% of the total car owners. Core car owners play an exemplary role to attract followers closer to them, and continuously expand their influence. Similarly, this model is also vividly reflected in the operation of APP community. For community operation, NIO has established a set of user service system, with the following operation methods and strategies: **1. Recruitment strategy:** the Internet operation method is adopted, with reward points for old users who invite new users successfully. The points earned by users can be exchanged for gifts at NIO Life (NIO's mall), or for coffee coupons, event tickets and some other rewards at NIO House (NIO's offline user center).

**2. User growth system:** three evaluation criteria - points, coupons and NIO Value.

Points: exchange for gifts and other benefits.

Cards and coupons: including drink coupons, one-click recharge coupons, destination mobility coupons, etc.

NIO Value: It is an accumulated value that records each user's activities in NIO community and his/her contribution to the community. Its unit is N.

**3. A community** was established to create a social circle for ordinary users: The community of NIO APP makes it easier for users to find like-minded people according to hobbies, regions and industries.

4. A membership system was erected to forge a high-end social circle.





The update frequency of NIO APP is very high. From its launch in November 2016 to February 2022, NIO APP experienced four versions - 1.0, 2.0, 3.0, and 4.0, with a total of 44 updates and an update every two months averagely. The functions of the APP are continuously optimized and adjusted, so that users can always feel refreshed.

Under such operational measures, NIO APP has become the cornerstone for establishing deep connections with users. So far, there have been over 2 million registered users, of whom about 200,000 are daily active users and nearly 50% of them are NIO fans who have not bought a car. In 2021, more than 11.6 million interactions happened among community users, and each EPclub member recommend 25 NIO cars for sale averagely, equivalent to RMB10 million as per the unit selling price of RMB400,000.

Registration and DAU of NIC AFF					
First rapid growth period: Nov 2016 - Dec 2018	Decline period:	Decline period: Dec 2018 - May 2020		veriod: May 2020 - Oct 2021	Stable growth period: Oct 2021 - present
ug 2018 Dec 2018	Mar 2020	May 2020	Dec 2020	Oct 2021	Oct 2021 - present
egistered users: 20,000 AUs: 120,000 AUs: 120,000 Eeasons for rapid growth: In the early days after the APP was launched, high reward points stimulated users to log in to earn points every day, so that there are considerable DAUs. In February 2018, the launch of points red envelopes improved the interactivity and fun of the APP. In November 2018, the launch of NIO Value inspired users to actively interact with the APP community. In November 2018, the APP was updated three times, and the continuous optimization spurred the growth of the APP's DAUs.	Registered users: - DAUs: 120,000 Reasons for dec - Due to the rar acquisition in adjusted the January 1, 20' were replace Moreover, technology to illegal phone r decrease in D.	Registered users: >1.2 million DAUs: -> 120,000 cline: mpant malicious points the APP, NIO has points policy since 19, namely fixed points d by random points. NIO introduced o combat the pool of numbers, resulting in a AUs.	Registered users: >1.6 million DAUs: 150,000 Reasons for the s • In May 2020, launched. Fri algorithms personalized in daily scenarios "smart comm users' demani reading p personalized us effectively profi DAUs.	Registered users: 2 million DAUs: 230,000 second rapid growth: NIO App 4.0 was rom this version, have integrated ecommendations into of NIO App, creating a unity" that satisfies d for diversification, preferences, and sage habits. This move motes the growth of	Registered users: > 2 million DAUs: So far, there have been over 2 million daily active users and nearly 50% of them in NO tans who have not bought a car. In 20 more than 11.5 million interactions happen among community users. Reasons for stable growth: • After early promotion, the bra has entered a relatively stat stage of development.

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# **NIO OTA History and OTA Frequency**

In terms of intelligent connectivity, NIO's smart cockpit is equipped with the NOMI in-vehicle artificial intelligence system, so that NIO car owners can communicate with other people and vehicles through NOMI. NIO also continuously upgrades and optimizes the functions of NOMI via OTA. For example, NIO has improved the recognition capability and wake-up rate (especially the response to children's wake-up) of NOMI in the Aspen 3.0 unveiled in September 2021; at the same time, it has ramped up NOMI's control over cars, such as memory of seat positions, adjustment of ambient light brightness, switching of sound field modes and other car control commands. In the Aspen 3.1 launched in January 2022, wake-up words + continuous instructions are added, without calling NOMI before giving a command. NIO plans to optimize the understanding, hearing, and understanding of NOMI in the future.

Besides, NIO has maintained a high frequency of OTA updates for the Internet of Vehicles. As of February 2022, NIO had launched three major versions, 1.0, 2.0, and 3.0, with a total of 24 OTA updates and about once every two months. Specifically, three updates occurred in 2018, nine in 2019, five in 2020, six in 2021, and one in January-February 2022.

#### OTA History and Its Frequency of NIO

- OTA Frequency: As of February 2022, Nio has launched three major versions 1.0, 2.0 and 3.0 with a total of 24 OTAs, approximately one OTA every two months. Among them, three times in 2018, nine times in 2019, five times in 2020, six times in 2021 and one time in January-February 2022.
- Version 1.0: NOMI interaction robot, voice-control car, HUD, in-car photo, etc.;
- · Version 2.0: UI design optimization, added intelligent scene recommendation, watch-control car, etc.;
- Version 3.0: Added emergency driver assistance (EDA), WeSing, new user interface and interaction design.
- Since NIO OS 3.0.0, the vehicle system of the first generation platform NT1 models (ES8, ES6, and EC6) is named Aspen; thevehicle system of the second generation platform NT2 models (ET7, ET5, ES7, etc.) is named Banyan.



#### Features of OTA updates for the Internet of Vehicles:

- All models support OTA updates.
- A major system upgrade is carried out almost every year, such as NIO OS 2.0 (Jun 2019), Aspen 3.0 (Sep 2021).
- As of February 2022, there had been 351 OTA updates, 56.1% of which were reflected in IVI, ADAS and autonomous driving.





In its future planning, NIO expects to form a closed "people-vehiclesmobile phones" loop through interconnection between mobile phones and IVI, realize data sharing, and provide users with more intelligent interactive life experience. It is reported that NIO is preparing for dabbling in the mobile phone industry. Yin Shuijun, the former president of Meitu, has joined NIO and leads the mobile phone business.











report@researchinchina.com

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### **Beijing Headquarters** TEL: 13718845418 FAX: 010-82601570 Email: report@researchinchina.com

Website: www.researchinchina.com

WeChat: zuosiqiche



### Chengdu Branch

TEL: 028-68738514 FAX: 028-86930659



