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Analysis on Huawei's Electrification, Connectivity, I n t e l l i g e n c e a n d Sharing,2023-2024

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Analysis on Huawei's Electrification, Connectivity, Intelligence and Sharing: Comprehensive layout in eight major fields and upgrade of Huawei Smart Selection

The "Huawei Intelligent Driving Business Report 2023" released in June 2023 mentioned that Huawei sold 10,000 and 40,032 intelligent vehicles in May 2023 and January 2024 respectively, reflecting rapid growth.

At the end of 2023, the most eye-catching Huawei City NCA were available in 45 cities. In February 2024, Huawei City NCA began to cover most cities in China with the support of intelligent driving technology independent of HD maps.

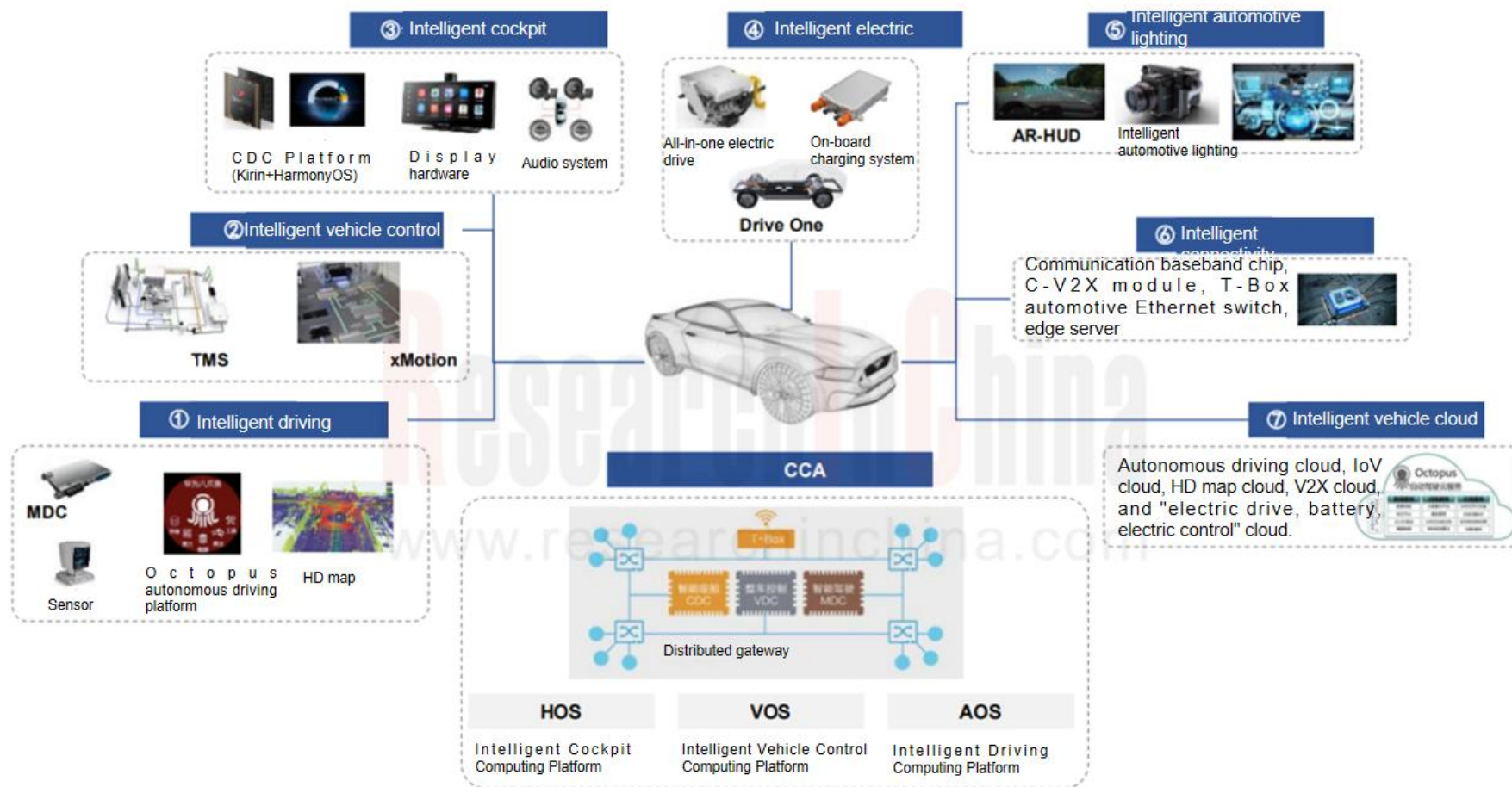
Upgrade of City NCA* nationwide

The capabilities of HUAWEI ADS 2.0 have advanced, and City NCA) that can be available all over the country is coming! Without relying on HD maps, it covers not only national highways, elevated roads and expressways, but all urban roads in large and small cities and even towns. It supports all urban roads (trunk roads/secondary trunk roads/branch roads, etc.), national roads, county roads, township roads, county towns and other open roads, covering 99% of road sections. It avoids special-shaped obstacles, gives way to pedestrians at zebra crossings in a timely manner, and can predict in advance the mixed traffic of motor vehicles and non-motor vehicles. It can make decisive decisions like an "experienced driver" and come and go freely.

Source: AITO

Huawei's Layout in the Field of Smart Cars

In the field of smart cars, Huawei has deployed CCA, intelligent driving, intelligent car control, intelligent cockpits, intelligent electric, intelligent automotive lighting, intelligent connectivity, and intelligent car cloud.



Source: GF Securities

Progress in parts supply model

Huawei cooperates with car companies through three models: parts supply model, solution model (ie. Huawei Inside), and Huawei Smart Selection (upgraded to Harmony Intelligent Mobility Alliance (HIMA)).

Progress in parts supply model

By the end of 2022, Huawei had launched more than 30 smart auto parts and shipped nearly 2 million sets of parts, including smart cockpits, smart driving, smart electric, smart car cloud, radar, cameras, gateways, lidar, computing platforms, AR HUD, T-Box and other products and solutions.

On February 24, 2024, Huawei and GAC Trumpchi announced that the Master Pioneer Version of Trumpchi M8 equipped with Huawei HarmonyOS debuted.



Source: GAC Trumpchi

Huawei's HarmonyOS cockpits are widely used in the new models of Changan, GAC and Dongfeng

Traditional car companies are not as sophisticated as Huawei and other IT companies in terms of IT ecological layout. As a result, the IVI (and cockpit) experience of most traditional car companies is not as good as that of emerging automakers. Therefore, Huawei's HarmonyOS cockpits are widely used in the new models of Changan, GAC and Dongfeng.

Although Huawei ships considerable smart auto parts, the output value is not high due to the fierce competition among parts manufacturers.

Huawei's Intelligent Automotive Solution Business Unit earned the revenue of about RMB2 billion in 2022, and about RMB1 billion in the first half of 2023, which basically did not grow or cover the cost of more than RMB10 billion per year. Therefore, Huawei has gradually weakened the parts supply model, paid more attention to Huawei Inside and Huawei Smart Selection, and achieved the goal of gradually turning losses around by upgrading Huawei Inside and Huawei Smart Selection.



Source: Voyah



Source: Warrior

Upgrade of Huawei Inside

Huawei Inside is a cooperative mode in which Huawei and car companies jointly define and develop smart cars. In this mode, Huawei will integrate its self-developed intelligent driving systems, cockpit systems, domain controllers, chips, motors and various sensors into smart cars, and cooperate with car companies in depth. In short, Huawei Inside is developed by Huawei and car companies together. Huawei provides full-stack solutions to help car companies make cars, but the ultimate dominance still lies with the car companies.

Since the introduction of Huawei Inside, BAIC ARCFOX and Changan Avatr have chosen this mode. GAC once cooperated with Huawei in Huawei Inside, but later withdrew.

Due to the large investment in intelligent business, it is difficult for Huawei to support its Intelligent Automotive Solution Business Unit to make a profit alone. In addition, the solution provided by Huawei Inside to car companies is a package solution, which is unacceptable to most OEMs. Therefore, Huawei changed its strategy and set up joint ventures with car companies instead at the end of 2023 to bind each other.

On November 26, 2023, Changan Automobile announced to sign the Investment Cooperation Memorandum with Huawei. Through negotiation between both parties, Huawei plans to set up a company (target company) engaged in R&D, design, production, sale and services of automotive intelligent systems and parts solutions, and Changan Automobile intends to invest in this target company and carry out strategic cooperation with it.

According to the memorandum, Huawei will integrate the core technologies and resources of smart car solutions business into the new company. Changan Automobile and its related parties will intend to invest in the company, with a contribution of no more than 40%, and support the future development of the company with Huawei.

On January 16, 2024, Shenzhen Yinwang Intelligent Technology Co., Ltd. was established with a registered capital of RMB1 billion. Shenzhen Yinwang Intelligent Technology Co., Ltd. will secure the current technologies and resources of Huawei's Intelligent Automotive Solution Business Unit as Huawei's wholly-owned subsidiary which will welcome more partners in the future. On the same day, Zhu Huarong, Chairman of Changan Automobile, revealed at the "2024 Changan Automobile Global Partner Conference" that the new joint venture between Changan and Huawei was tentatively named "Newcool", which involved seven fields, such as intelligent driving, intelligent cockpits, intelligent automotive digital platforms, intelligent vehicle cloud, AR-HUD and intelligent headlights, and Huawei's future goal was to reduce its shareholding to less than 30%.

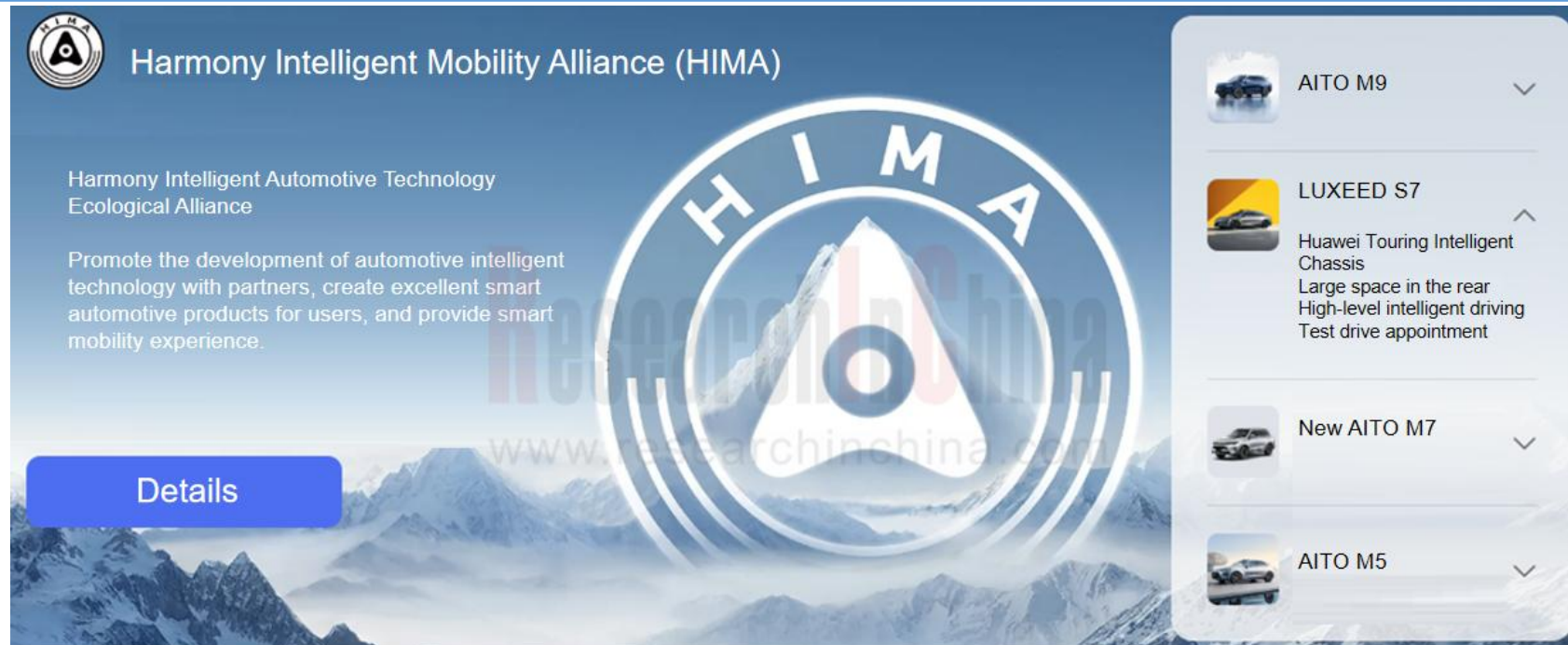
After the upgrade of Huawei Inside, Huawei reached cooperation with Dongfeng Voyah and Dongfeng Warrior in early 2024.

Upgrade of Huawei Smart Selection

Based on Huawei Inside, Huawei Smart Selection is deeply involved in product definition, research and development, manufacturing and marketing. In Huawei Smart Selection, Huawei enjoys the dominance. Seres AITO and Chery LUXEED have opted Huawei Smart Selection, and STELATO and Aojie will follow suit.

Compared with Huawei Inside, Huawei Smart Selection has achieved initial success under the leadership of Yu Chengdong (AITO has ranked first among emerging brands by sales volume). Huawei Smart Selection is a ToC model where, Yu Chengdong, the CEO of the Consumer BG at Huawei Technologies, has rich experience in addition to marketing and brand building.

By the end of 2023, Huawei Smart Harmony Intelligent Mobility Alliance (HIMA). Under HIMA, Huawei empowers partners in all aspects, such as products, quality, sale, services and marketing.



Source: Harmony Intelligent Mobility Alliance (HIMA)

Huawei has begun to build independent HIMA stores

If Huawei cannot unify the car purchase process of its HIMA partners, different OEM brands will compete with each other, which will bring disadvantages to the promotion of Huawei Smart Selection. In view of the increase in car models, the need to expand the showroom area, and the necessity of unifying the HIMA sales and delivery process, Huawei has begun to build independent HIMA stores.

On January 10, 2024, HIMA's official Weibo account stated that China National Postal & Telecommunications Appliances Co., Ltd. (PTAC) was building a new HIMA user center. It is estimated that about 800 HIMA stores will be built in 2024 and the number will hit 1,000 in 2025.

With the soaring sales volume of Huawei Smart Selection, the construction of charging piles, the most important supporting facilities for electric vehicles, is also imminent, let alone the expansion of sales stores.

In 2023, Huawei, together with a number of partners, deployed more than 10,000 charging piles nationwide, covering 31 provinces. It is expected that by the end of 2024, Huawei will deploy more than 100,000 fully liquid-cooled ultra-fast/fast charging piles in 340+ cities and on major highways across the country. The maximum output power of Huawei's fully liquid-cooled supercharging terminal is 600kW, which is close to "one kilometer per one second".

Hou Jinlong, the president of Huawei Digital Energy Technologies, predicted that in the next decade, the ownership of electric vehicles will escalate from the existing 20 million to astonishing 200 million, with the charging capacity swelling from 100 billion kWh to 1 trillion kWh. The number of charging piles is expected to increase by fivefold in the next decade.

To sum up, in the transformation of automotive electrification, connectivity, intelligence and sharing, Huawei has set a benchmark for domestic and foreign automotive enterprises and Tier 1 suppliers.



Source: www.ql1d.com

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