IHS Markit now a part of S&P Global

Automotive Industry Weekly Digest

14March – 18March 2022

Contents

[OEM Highlights] Seres begins deliveries of AITO M5 in China

Chinese automaker Seres, formerly SF Motors, began deliveries of the AITO M5 in China on 5 March. According to Gasgoo, deliveries of the M5 have started in 36 Chinese cities, including Shanghai, Hangzhou and Chongqing, however, it is unclear how many customers have placed orders for the M5. The M5, a mid-size sport utility vehicle (SUV), is an extended-range electric vehicle (EREV) designed and developed by Chinese tech giant Huawei, while Seres is producing the model at its Chongqing plant. Three model variants are available for sale, all fitted with a 1.5-litre turbocharged gasoline (petrol) engine and a 40-kWh battery pack.

Outlook and implications

The M5 is viewed as the first "Huawei-endorsed vehicle" in the Chinese market which will help the tech giant to gauge the market's response to a car powered by Huawei's automotive technologies. The design of the M5 is led by Huawei's smartphone development team, and the model uses some of Huawei's most advanced solutions developed for cars, including the HarmonyOS operating system and its DriveOne range extending technology. According to Yu Chengdong, head of Huawei's smart car business unit, the M5 is an intelligent luxury SUV developed by Huawei to compete with some of the best-selling luxury models on the market. However, he also stressed that Huawei has no plans to make its own branded cars and instead will continue to focus on providing advanced smart vehicle technologies to its OEM partners. In the new energy vehicle market, EREVs are niche offerings. The Voyah Free SUV from Dongfeng Motor Group and Li One SUV from Li Auto are the two best-selling models.

[OEM Highlights] Changan Auto plans mass production of Level 4 autonomous vehicles by 2025

Changan Auto plans to achieve mass production of Level 4 autonomous vehicles (AVs) by 2025, reports Gasgoo. The company said its Level 4 autonomous products would range from automated valet parking to robotaxis.

Outlook and implications

Changan has been working in the three areas of AVs, intelligent interaction, and intelligent interconnection to provide a smart-driving experience. In 2020, Changan unveiled a Level 3 automated vehicle system, which is to be rolled out on all of its recently released UNI-T models. In the same year, Changan Auto started its Level 4 AV project with a CNY1-billion (USD160-million) investment. The project, which has an estimated due date in 2025, is designed with an annual production capacity of 500,000 sets of Level 1 to Level 4 intelligent driving products.

[Technology & Mobility Highlights] GAC Group invests in autonomous vehicle startup Holomatic

Autonomous vehicle (AV) startup Holomatic has raised hundreds of millions of yuan in funding from GAC Group, reports China Daily. This deal will enable the two companies to integrate their capabilities and to accelerate development of GAC's automated driving technologies and industrialisation. The investment will also help reduce overall mass production costs. According to the report, GAC's models deployed with Holomatic's autonomous system will be launched in the market this year.

Outlook and implications

GAC and Holomatic's partnership dates back to October 2021 when both the companies signed an agreement to focus on the development of Level 2+ automated driving functions and autonomous parking. The two companies are now engaged in the in-depth research and development of Level 3 and higher autonomous technologies. Holomatic, founded in 2017, offers a full-stack automated driving solution ranging from AI algorithms and big data closed-loop to embedded systems and system iteration.

[Technology & Mobility Highlights] Hyundai partners with Uniphy to develop next-generation smart HMI solutions

Uniphy has announced a partnership with Hyundai to develop automotive smart Human Machine Interfaces (HMIs), according to a company statement. The companies will use Uniphy's patented Canvya 3D smart-surface technology to develop an in-car user interface. "HMETC [Hyundai Motor Europe Technical Center] considers Uniphy's 3D smart-surface solution to be unique and enabling, because it has the advanced capabilities to combine the richest range of HMI features, based on intrinsic properties of Uniphy's patented technology. This allows the easy realization of 3D Smart Surfaces whilst also giving product designers creative freedom. We can't wait to introduce the new solutions that we are developing in cooperation with Uniphy, to the world," said Firat Tapti, Body Interior Engineering Design at HMETC.

Outlook and implications

Uniphy's solution uses algorithms and patented technologies to develop a 3D smart interface. It unifies non-conductive, finger pressure touch sensing with the integration of physical HMI features including dials, buttons, and sliders. It also supports haptic feedback, touch-gesture and proximity recognition. “We are delighted and honored to collaborate with Hyundai Motor Group, an automotive world leader with a stated and demonstrated commitment to relentless and responsible innovation. I have no doubt that the combination of the two companies' capabilities and expertise will transform the in-car experience like never before.", said Uniphy CEO Jim Nicholas.

[EV & Energy Efficiency Highlights] Geely chairman calls for unified standards on battery-swapping technologies and policy support for methanol vehicles

IHS Markit is now part of S&P Global perspective	
Implications	Several top executives of Chinese automotive companies have submitted their proposals covering a range of aspects concerning the development of the auto industry to the country's industry regulators, during the ongoing 'Two Sessions' of China's main political bodies.
Outlook	Geely chairman Li Shufu has proposed unified standards on battery-swapping technologies. This follows industry discussions on the development of the battery-swapping sector, especially regarding the commercial viability of battery-swapping technology and the best use cases for EVs with swappable batteries.

Shutterstock

Several top executives of Chinese automotive companies have submitted their proposals to the country's industry regulators covering a range of issues concerning the development of China's auto industry. The automakers' proposals have been made during the ongoing 'Two Sessions' meetings of China's two main political bodies, the National People's Congress (NPC) and the Chinese People's Political Consultative Conference National Committee. According to a China Daily report, the automakers' wide-ranging proposals on the development of China's automotive industry cover topics including vehicle safety, low-carbon technology development, and electric vehicle (EV) battery-swapping infrastructure.

In his proposals, Li Shufu, NPC deputy and chairman of Zhejiang Geely Holding Group (Geely), has suggested that China should promote methanol-fuelled vehicles with favourable policies to attract more companies to focus on research and development of such vehicles, to help accelerate carbon neutrality in the transportation sector. Li says that, as a low-carbon and oxygen-containing fuel, methanol is efficient, clean and renewable. It is safer and more convenient for storage, transportation, and use than other types of new energy and clean energy.

In his other proposal, Li calls for national standards on battery-swapping technologies and urges more support for the establishment of battery-swapping stations. In his proposal, Li says that, compared to the conventional mode of energy replenishment for EVs, which is recharging the vehicle at a battery charging station, battery swapping takes much less time and can drive down the upfront cost for consumers when purchasing an EV. He argues that, since batteries account for roughly 40% of the cost of an EV, by separating the battery pack from the vehicle,

automakers will be able to widen their EV customer base quickly with much cheaper models. Li says the introduction of national standards on battery-swapping technologies would allow automakers to adopt unified design and technical standards for battery-swapping stations and battery packs for EVs featuring swappable batteries.

Outlook and implications

Geely chairman Li Shufu has proposed unified standards on battery-swapping technologies. This follows industry discussions on the development of the battery-swapping sector, especially regarding the commercial viability of battery-swapping technology and the best use cases for EVs with swappable batteries.

Many industry observers believe battery-swapping technology is the key to the electrification of heavy-duty vehicles, which carry a much bigger battery compared to passenger vehicles and so recharging takes longer. Several companies have announced plans or partnerships to widen the adoption of battery swapping for commercial EVs. In February, Chinese battery-maker Contemporary Amperex Technology Co Ltd (CATL) launched a heavy-truck battery-swapping demonstration project with Chinese machinery giant Sany in Ningde, Fujian province. The battery maker said battery swapping for commercial vehicles helps to relieve customer anxiety over charging time and improve vehicle operational efficiency. Sany's electric heavy trucks use CATL's large-capacity lithium-iron-phosphate battery, for which it only takes three to five minutes to complete a swap.

Battery-swapping technology is also receiving attention from fleet operators of taxis and shared vehicles. For example, Aulton operates 415 battery-swapping stations in China, according to data for the end of January, as the second largest operator of such facilities in the country. The company does not manufacture EVs, but supplies battery-swapping solutions to automakers to make EVs with swappable batteries for the rental and shared-vehicle markets. BAIC Motor Group and FAW Motor Group are among Aulton’s customers. According to a Gasgoo report, under a partnership with FAW, Aulton plans to build 120 battery-swapping stations in three phases in Changchun, Jilin province, accommodating the needs of 8,000 new energy vehicles. The Changchun network will then become the largest battery-swapping network in this severe cold weather area of China.

[EV & Energy Efficiency Highlights] Bosch, Mitsubishi, Blue Park Smart Energy to co-operate on EV battery-swapping services

Bosch Intelligent & Connected Technology, Mitsubishi Corporation, and Blue Park Smart Energy (Beijing) Technology have signed a memorandum of understanding (MOU) on co-operation relating to the ‘Battery-as-a-Service’ business model. According to a statement released by Bosch on 4 March, the three companies plan to make joint efforts to develop and offer third-party insights and management services on battery swapping for passenger vehicles, including forecasts of battery ageing and battery health, management of battery charging, and visualisation and management software. These products and services are to be offered mainly to car fleet operators and financial companies. In its statement, Bosch said, “The newly-formed partnership will help commercial fleet operators raise their returns on investment, provide innovation technologies for digitalized

financial businesses, and contribute to the achievement of carbon neutrality by improving the battery swap efficiency for car fleets."

Outlook and implications

According to Bosch, its Battery in the Cloud system, a cloud-based service, will lay the technical foundation for this co-operation. The system monitors and analyses the data collected by vehicle fleets to optimise battery conditions and improve the life span of batteries, says the company. From a market perspective, battery leasing and battery-swapping technologies are likely to receive wider adoption among commercial fleets if key financial metrics on battery costs, battery life span, and business returns are gauged properly using big-data collected by vehicles in operation already. In this sense, the co-operation between the three companies is likely to have positive effects on the commercialisation of battery-swappable EVs in operational vehicle networks.

[Forecast & Analysis Highlights] Geely Auto posts sales growth of 2% y/y in February

Chinese automaker Geely Auto has reported that its sales in February increased by 2% year on year (y/y) to 78,478 vehicles, including 68,627 units sold in mainland China. Of Geely's total sales volumes in February, 14,501 units were electrified models, including full hybrid vehicles, battery electric vehicles (BEVs), and plug-in hybrid vehicles (PHEVs). Sales of the Lynk&Co brand totalled 10,524 units, down 11% y/y, while sales of the Geely brand contracted by 3% y/y to 63,420 units. The automaker's electric vehicle (EV) brand, Zeekr, began deliveries of the Zeekr 001 EV in October 2021; deliveries of the 001 EV were 2,916 units in February. By vehicle type, sales of sedans were 32,065 units, up 3% y/y, while sales of sport utility vehicles (SUVs) were 45,893 units, up 1% y/y in February, only 520 units of multi-purpose vehicles (MPVs) were sold, flaty/y. In the year to date (YTD), Geely's sales fell by 4% y/y to 224,858 units.

Outlook and implications

The automaker is facing headwinds in the premium vehicle market as sales of the Lynk&Co brand have contracted by 23% y/y in the first two months of 2022. The brand sold 220,516 vehicles last year, contributing to 17% of Geely's total sales. Looking ahead, Geely said it aims to sell 1.65 million vehicles this year, an increase of 24% y/y. This target will be underpinned by the launch of several refreshed and all-new models during 2022. New and updated models from Geely brand include the 2022 model year Geely Binyue SUV and the plug-in hybrid variant of the Xingyue L SUV. The Lynk&Co 01 PHEV is likely to feature Geely's latest plug-in hybrid technology when the 2022 model year version go on sale later this year. In the new energy vehicle market, Zeekr's product line will continue to expand during 2022. Zeekr's second model is likely to be a battery electric MPV based on Geely's SEA EV architecture.

[Forecast & Analysis Highlights] GAC reports sales increase of 37% y/y in February

Chinese automaker GAC Group has recorded a 36.5% year on year (y/y) increase in sales to 143,464 units during February, according to a company statement. Among the group's joint ventures (JVs), GAC Honda led the sales in February. The JV sold 57,102 vehicles in February, up 39.1% y/y. Sales of the GAC Toyota JV increased 20.7% y/y to 50,100 units last month. Sales of the GAC Mitsubishi Motors JV showed an improvement during February. The JV reported growth in sales volumes of 21.0% y/y to 3,632 units. In comparison, sales of the GAC Fiat Chrysler Automobiles JV experienced a sales decline of 94.6% y/y to 134 units. Sales of GAC's wholly owned brands managed by GAC Motor, the group's passenger vehicle subsidiary, increased 73.5% y/y to 23,793

units in February. GAC AION New Energy, the subsidiary that manages the AION electric vehicle (EV) brand, sold 8,526 vehicles during February, a surge of 163% y/y.

Outlook and implications

GAC's wholly owned subsidiaries, GAC Motor and GAC AION, have experienced strong sales growth during February. However, sales of GAC's self-owned product lines only have a relatively small share of the group's total sales. Regarding the group's JVs, GAC Fiat Chrysler is lagging far behind GAC Honda and GAC Toyota in sales volumes and market share. The JV's sales deteriorated further in February and are forecast to remain at a low level during 2022 due to a lack of new models. GAC is in talks with automotive group Stellantis on a turnaround plan to revive GAC Fiat Chrysler's sales in China. According to Stellantis, the group has already reached an agreement with GAC to increase its stake in the Chinese JV from 50% to 75%.

[Forecast & Analysis Highlights] BYD sales soar in February on robust NEV demand

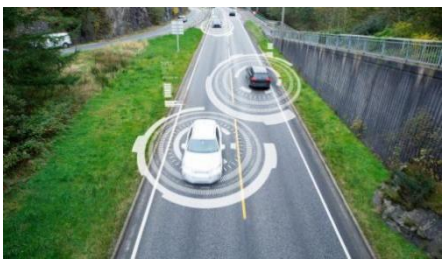
BYD recorded its highest monthly sales for February thanks to strong demand for its new energy vehicles (NEVs). The automaker sold 91,078 vehicles last month, marking an increase of 335% year on year (y/y). This figure includes NEVs and traditionally fuelled vehicles. BYD's sales of NEVs, which consist of battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), totalled 88,283 units. compared with 10,355 units in the same month of 2021. Passenger PHEVs were the highest selling with sales of 44,300 units, compared with 2,288 units in February 2021. Sales volume of passenger BEVs were 43,173 units in February, compared with 7,835 units in February 2021. Sales of BYD's traditionally fuelled vehicles were 2,795 units last month, down 74% from 10,572 units in February 2021. In the first two months, sales of BYD increased by 194.5% y/y to 186,500 units.

Outlook and implications

BYD's strong February results show the automaker's NEVs are in high demand. Deliveries in February were down 3% from January, however, given February has less working days due to the week-long Lunar New Year festival holiday, sales still beat expectations. BYD's internal combustion engine (ICE) product line only accounts for 3% of its February sales. Although it has yet to announce a firm timeline to end production for its traditionally fuelled vehicles, ICEs will play an increasing smaller role in its product mix. In 2022 BYD will continue to fasten the roll out of the DM-i plug-in hybrid technologies across its PHEV product line. The Song Max multi-purpose vehicle will be the next in BYD's Dynasty product line to feature this new technology.

[Supplier Highlights] Smart Driving Labs launches SDL Tools V2X platform

SDL solutions are used by Renault Groupe, BMW Group, and Mitsubishi



Source: Getty Images

Smart Driving Labs (SDL) has launched SDL Tools, Traffic Technology reported on 9 February. The Tools are a set of pre-built ready-to-use modular elements for deploying connected transportation infrastructure. Companies will be able to develop businesses based on vehicle-to-everything (V2X) technologies in a quick and cost-effective manner. The solutions are based on a cloud infrastructure and software which is secure and enables collection, processing, analysis, and transmission of data from connected vehicles to customers.

Outlook and implications

Smart Driving Labs has developed a telematics module, theft prevention solutions, a mapping service, scoring systems, a fleet management portal, and custom mobile applications for car owners and drivers. The company says that its cloud infrastructure can be adapted to different requirements and integrated with nearly every hardware and software solutions. SDL Tools gives access to knowledge base, technical and marketing support, staff training programs and certification assistance so that its partners can launch their connected car services in a short space of time. SDL solutions are used by Renault Groupe, BMW Group, and Mitsubishi, with over 100,000 vehicles connected to its cloud platform globally.

[Supplier Highlights] Uhnder introduces 4D digital imaging radar-on-chip

4D imaging radars offer higher levels of accuracy in terms of detecting vulnerable road users (VRUs)

Source: Getty Image/ Scharfsinn86

The US-based Uhnder, an automotive digital imaging radar solutions provider, launches 4D digital imaging radar-on-chip, the company announced on 8 March 2022. The company further said that it will commence mass production of 4D digital imaging radar-on-chip in April 2022 to become the first to do so in the industry.

The company claims that its 4D digital imaging radars are effective in detecting standing or moving objects, at short and long distances including in poor weather and low lighting conditions. Unlike legacy analog radar systems, its 4D imaging radars offer higher levels of accuracy in terms of detecting vulnerable road users (VRUs).

“Digital radar provides 16 times better resolution, 24 times more power on target, and 30 times better contrast than today’s analog offerings, improving detection capabilities for better road safety for all users—drivers, passengers, cyclists, and pedestrians,” said Manju Hegde, CEO and cofounder, Uhnder, “As more and more radars are fitted onto vehicles and other mobility solutions, interference among adjacent radar becomes problematic. Our radar, based on Digital Code Modulation, mitigates this problem.”

Outlook and implications

Uhnder’s 4D digital radar-on-chip (S80 radar-on-chip) is a 77GHz chip specialized to be used for ADAS (Advanced Driver Assistance System) applications such as adaptive cruise control, pedestrian autonomous emergency braking, blind-spot detection, lane-keeping assist, and autonomous vehicles.

Uhnder said that its 4D radar-on-chip will be used in Magna’s ICON Digital Radar which is due to launch in 2022 production vehicles.

Other industry start-ups and suppliers that are in the race to develop 4D imaging radars include Arbe, Continental, Oculii, and Vayyar Imaging.

"Uhnder's 4D digital imaging radar-on-chip is a next-generation product that demonstrates new ways to advance automotive safety to save lives," said Douglas Campbell, president, Automotive Safety Council. "Fatalities of vulnerable road users are now 20% of all roadway deaths in the US and even more in developing countries. ADAS technologies, such as pedestrian automatic emergency braking (P-AEB) that can reliably operate at night, can help reduce pedestrian fatalities per the latest report from the Insurance Institute for Highway Safety. Improved high-resolution perception sensors, such as Uhnder's radar-on-chip, can potentially help reduce this rising fatality category."

[VIP ASSET] CERAWeek 2022: Lithium producers need major investors to hike production for global decarbonization efforts

Lithium producers needs the backing of major investors as well as faster permitting and processing capabilities to raise their production for the world's decarbonization efforts, mining executives said at a 9 March panel discussion about battery supply chain disruptions.

Speaking at the CERAWeek 2022 conference by S&P Global in Houston, Lithium Americas President and CEO Jonathan Evans rued that the lithium industry doesn't enjoy the same level of financial support as oil and gas companies or its counterparts in the copper industry.

09 March 2022 Amena Saiyid

Compounds of lithium are crucial to the manufacture of energy storage batteries in electric vehicles, and other clean energy technologies, that are deemed essential to decarbonize the global economy.

With many governments and businesses committing to reducing emissions, S&P Global Market Intelligence estimates that global lithium demand will grow to 2 million metric tons (mt) per year by 2030 from 640,000 mt/year in 2022. 84% of all lithium produced is expected to go into battery making.

Funding is difficult because the global lithium market is relatively small with a size of roughly $4 billion, compared with the copper or oil and gas industries, Evans said.

"If you look at the companies involved, there's a limit to what they can do. They can really do one project or two at the same time," Evans said. Major investors are needed to be able to absorb the business risk that smaller companies cannot handle, he added.

He pointed to the recent announcement by global midstream energy and petrochemicals firm Phillips 66 to invest in the technology Novonix has developed to produce synthetic anode material used in lithium-ion batteries.

Risk profile is complicated

Also participating in the discussion was the CEO of Australian lithium miner Allkem, Martín Pérez de Solay, who said the risk profile of lithium projects is different from other mining projects because of the complexity involved. It's not just about mining the metal, but also providing the product that can be used in batteries that will be installed in cars.

"Sometimes investors will not realize the risks involved in the industry and they think that building a plant is easy," de Solay said.

Allkem is not facing the constraints as it is in the throes of expanding a mine in Argentina and firming up plans for a mine in Japan, according to de Solay.

Evans agreed that processing the mined lithium is vital, but he said, "you have to have the raw material to process."

Securing permits to produce the raw material can take anywhere from five to eight years, de Solay said.

However, Evans reminded the audience that Lithium Americas has spent 13 years securing permits for the Thacker Pass mine in Nevada that holds the largest known deposit in the US, owing to legal battles with the local communities over water resources and sacred lands.

###

Email

AsiaPacificAutomotive@ihsmarkit.com

Local Automotive Site

中国（中文）： IHSMarkit.com/China_Automotive

日本（日本语）：IHSMarkit.com/Japan_Automotive

韩国（韩国语）：IHSMarkit.com/Korea_Automotive