Automotive Industry Weekly Digest

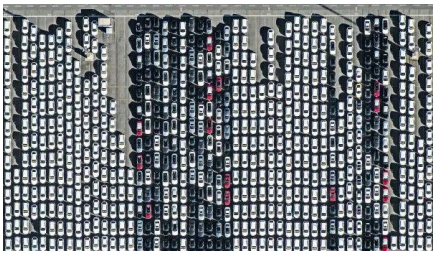
20May– 24May 2024

S&P Global
Mobility

Contents

[Forecast & Analysis Highlights] Chinese passenger vehicle retail sales contract in April, domestic brands' market share surpasses 57%

S&P Global Mobility perspective	
Implications	Mainland China's retail sales of passenger vehicles contracted by 5.7% year over year to 1.532 million units in April, according to data from the China Passenger Car Association (CPCA). Compared with March, mainland China's sales volumes of passenger vehicles decreased by 9.4% last month.
Outlook	Latest market data shows domestic brands expanded further their presence in the Chinese passenger vehicle market in April, taking market share from global carmakers. Global brands will continue to grapple with falling demand in the market due to a lack of competitive models in the BEV and PHEV segments.



Mainland China's retail sales of passenger vehicles contracted by 5.7% year over year to 1.532 million units in April, according to data from the China Passenger Car Association (CPCA). Compared with March, mainland China's sales volumes of passenger vehicles decreased by 9.4% last month. In the year to date (YTD; January to April), retail sales volumes of passenger vehicles in mainland China grew by 8.0% year over year to 6.364 million units. As to brand performance, Chinese brands' share in the retail market reached 57.4% in April, up 9 percentage points from a year earlier. In the YTD, the market share of Chinese brands was 56%, up 6.2 percentage points compared with the same period of 2023. In terms of wholesale volumes, domestic brands' market share hit a record, reaching 64% in April, up 7.9 percentage points from a year earlier. In comparison, German brands' market share in the retail market fell 2.2 percentage points to 19% in April, while the market shares of Japanese brands and American brands were 15.2% and 5.9%, respectively.

Chinese brands' growing market share reflects their expanding presence in mainland China's new-energy vehicle (NEV) market. In April, retail sales volumes of passenger NEVs, including battery electric vehicles (BEVs),

plug-in hybrid electric vehicles (PHEVs) and range-extended electric vehicles (REEVs), increased 28.3% year over year to 674,000 units. In April, sales of NEVs accounted for 66.8% of the overall sales of domestic brands and for just 7.5% of sales of mainstream joint venture brands. Overall, NEV sales as a share of overall passenger vehicle sales reached 43.7% in the mainland Chinese market in April.

By powertrain type, in April, retail sales of BEVs increased 12% year over year to 405,000 units, while sales of PHEVs rose by 64% year over year to 269,000 units. In the first four months of 2024, retail sales of BEVs grew by 14.3% year over year to 1.435 million units, while retail sales of PHEVs rose by 72.6% year over year to 1.013 units. Total NEV retail sales volumes in the first four months of 2024 rose by 32.9% year over year to 2.448 million units.

Top 10 vehicle manufacturers by retail sales volumes in mainland China, April

	Apr-24	Apr-23	YOY % change	Market share, %
BYD	245,131	193,902	31.1	16.6
FAW Volkswagen	119,032	141,012	-15.6	7.8
Geely	115,723	88,171	31.2	7.6
Changan	82,630	100,637	-17.9	5.4
Chery	79,456	49,718	59.8	5.2
SAIC Volkswagen	78,313	100,023	-21.7	5.1
GAC Toyota	52,251	77,006	-32.1	3.4
Dongfeng Nissan	52,018	57,527	-9.6	3.4
FAW Toyota	49,033	71,383	-31.3	3.2
BMW Brilliance	48,982	53,207	-7.9	3.2

Source: China Passenger Car Association© 2024 S&P Global

Top 10 NEV manufacturers by retail sales volumes in mainland China, April

	Apr-24	Apr-23	YOY change %	Market share %
BYD	245,131	193,902	31.1	37.5
Geely	49,155	27,889	76.3	7.3
Changan	40,507	18,494	119.0	6.0
SAIC-GM-Wuling	32,003	33,903	-5.6	4.7
Tesla	31,421	39,956	-21.4	4.6
GAC AION	26,109	41,012	-36.3	3.9
Li Auto	25,787	25,681	0.4	3.8
Seres	25,075	3,037	725.7	3.7

Top 10 vehicle manufacturers by retail sales volumes in mainland China, April

	Apr-24	Apr-23	YOY % change	Market share, %
Chery	22,640	71,383	173.4	3.3
Great Wall Motor	20,352	13,729	48.2	3.0

Source: China Passenger Car Association© 2024 S&P Global

Outlook and implications

Latest market data shows domestic brands expanded further their presence in the Chinese passenger vehicle market in April, taking market share from global carmakers. Global brands will continue to grapple with falling demand in the market due to a lack of competitive models in the BEV and PHEV segments. FAW-Volkswagen, VW's joint venture that sells VW and Audi brand models, saw sales tumbling by 16% year over year in April, while, SAIC-VW, VW's other JV in China, posted a contraction in sales of 22% year over year in April. Toyota's two Chinese JVs, GAC Toyota and FAW Toyota, witnessed even sharper declines in retail volumes in April, as new models launched by leading Chinese companies, such as BYD, Geely and Great Wall Motor, become more appealing to car buyers in terms of the availability of smart vehicle technologies, new cabin features and new powertrain technologies.

CPCA data shows that retail sales of premium car brands declined 12% year over year in China in April, a sign of softening demand for ICE vehicles of traditional premium brands. The market's swift transition to electric vehicles, coupled with domestic automakers' aggressive pricing strategies, poses a challenge to major premium car makers, including German brands. In April, retail sales of BMW Brilliance, BMW's Chinese JV, fell by 8% year over year to 48,983 units, according to CPCA data. The JV's YTD sales have fallen by 4.2% on a yearly basis. Porsche, which targets the top end of the premium car market, is also coping with softening demand. Latest available data indicates registration volumes of Porsche vehicles declined by 30% year over year in mainland China in January–February as sales of the Macan slowed down amid competition from Chinese startup brands.

[Forecast & Analysis Highlights] Great Wall Motor reports sales increase of 1.8% YOY in April

Great Wall Motor (GWM)’s vehicle sales increased by 1.8% year over year to 94,796 units in April. In the first four months of 2024, the company’s sales rose by 18.2% year over year to 370,129 units. Sales of the Haval brand declined by 10% year over year to 47,054 units in April. Haval remains the automaker’s best-selling brand despite the decline in sales volumes in April. Sales of Tank expanded by 87.5% year over year to 20,469 units in April. The off-road sport utility vehicle (SUV) brand of GWM contributed 22% of GMW’s sales in April, as the company’s second best-selling brand. The WEY brand also witnessed a rebound in demand in April, with sales at 4,458 units, up 87.7% year over year. GWM’s pickup truck sales were 18,069 units in April, down 3.1% year over year.

Outlook and implications

GWM’s overseas sales continued to grow in April to reach 36,141 units. The share of overseas sales in the automaker’s total sales increased to 35% in the first four months of 2024, from 24% in the same period of 2023. The Chinese automaker reiterated its global strategy at the Beijing Motor Show (Auto China 2024) in April, targeting over a million units in overseas sales by 2030, with high-end models making up over a third of overall sales. In China, Tank, GWM’s off-road SUV brand, has emerged as its fastest-growing brand in the SUV market. The brand’s sales reached 162,539 units in 2023, up 31.2% year over year. Tank’s products, which are positioned higher than Haval models, helped drive up GWM’s average vehicle selling price to 141,400 yuan (US$19,570) in 2023, up by 12,000 yuan from 2022.

[OEM Highlights] US plans increased tariffs on Chinese imports, including vehicles, some parts and EV components

S&P Global Mobility perspective	
Implications	The US completed a required four-year review of tariffs that were put in place in 2018; the result of the review includes recommendations for increasing tariffs on several auto-related elements, specifically addressing imports of EVs, batteries and battery materials.
Outlook	Media reporting ahead of the announcement largely laid the groundwork for what to expect, so there is little surprise in the White House announcement. It is significant that the US Trade Representative began the investigation two years ago, based on statutory requirements. While the recommendations reflect current concerns, these potential new tariffs were not initiated in response to a specific new threat. At the same time, President Biden is running for another term against former president Donald Trump, who has proposed a broader 60% tariff on anything from mainland China and the US presidential election has an impact on the proposals. This report provides only initial feedback on potential impact, and does not address specific forecast or OEM reaction possibilities.

In a briefing document from the US White House, the results of the US Trade Representative (USTR) review of a Section 301 investigation into mainland China policies and activities related to trade from two actions taken in 2018, one on July 6 and the other on Aug. 23. Both were under section 301 of the US Trade Act of 1974. The review was begun in May 2022, with the results released on May 14, 2024.

The White House statement from US President Joe Biden identify several conclusions from the tariff review. The White House noted that while the Section 301 tariffs have been effective in “encouraging China to take positive steps in addressing the issues identified in the Section 301 investigation… China’s actions do not represent a systematic and sustained response” to the issues raised. The administration also concluded that China has not “eliminated many of the technology transfer-related acts, policies, and practices at issue, nor removed their

burden or restriction on United States commerce." The conclusion also notes that while China has taken some limited measures to address negative perceptions of its technology transfer-related activity, "it continues to aggressively attempt to acquire and absorb foreign technology and intellectual property, particularly through cyber intrusions and cybertheft, adding to the burden or restriction on United States commerce." The administration's review found that the tariffs have been effective to an extent, but also that additional tariffs "would provide incentives for China to eliminate the acts, policies and practices at issue."

As a result, the Administration determined that the Trade Representative will maintain the ad valorem rates of duty and lists of products subject to the two section 301 actions in 2018. The Trade Representative will also increase tariff rates for certain products beginning in 2024 or 2026; along with products affecting the auto industry, port cranes and some medical equipment is affected (though not listed here). As with most governmental actions, the Trade Representative is required to publish a proposed list of products and corresponding tariff increases but is also required to have a "period of notice and comment" and to consult with "appropriate agencies and committees." Following those steps, the final list of products and tariff increases, if any, will be published and tariffs will be implemented. The Trade Representative is also required to establish a process where certain machinery used in domestic manufacturing under a specific subheading of the Harmonized Tariff Schedule be temporarily excluded; according to the White House statement, this largely applies to solar manufacturing equipment. The USTR will publish a separate notice on the process and procedures for submitting requests.

Tariff changes

Item	Tariff proposal
Battery parts (non-lithium-ion batteries)	Increase rate to 25% in 2024
Electric Vehicles	Increase rate to 100% in 2024, plus 2.5% tariff on all imported vehicles
Lithium-ion EV batteries	Increase rate to 25% in 2024
Lithium-ion non-EV batteries	Increase rate to 25% in 2024
Natural graphite	Increase rate to 25% in 2026
Other critical minerals	Increase rate to 25% in 2024
Permanent magnets	Increase rate to 25% in 2026
Semiconductors	Increase rate to 50% in 2024
Steel and aluminum products	Increase rate to 25% in 2024

Source: White House.gov

Responding to the US actions to setting up higher trade barriers for Chinese goods, the China's Ministry of Commerce in a statement issued on May 14 condemned the tariffs imposed by the US on Chinese electric vehicles (EVs), among other products, and warned that these new trade barriers "will seriously affect" cooperation between the two countries. The ministry said that the US "politicizes and instrumentalizes economic and trade issues," which, in its view, "constitutes a typical manipulation." The ministry expressed its "strong dissatisfaction", saying the US has violated World Trade Organization rules. "Instead of correcting its mistakes, the United States is determined to make them again," it said. The ministry also urged the US to "immediately rectify its erroneous approach and cancel the tariff measures imposed." Wang Wenbin, spokesperson for China's Foreign Ministry said on May 14 that China will "take all necessary measures" to "protect its legitimate rights and interests".

Outlook and implications

Media reporting ahead of the announcement largely laid the groundwork for what to expect, so there is little surprise in the White House announcement. It is significant that the USTR began his investigation two years ago, based on statutory requirements. While the recommendations reflect current concerns, these potential new tariffs were not initiated in response to a specific new threat. At the same time, President Biden is running for another term against former president Donald Trump, who has proposed a broader 60% tariff on anything from mainland China and the US presidential election has an impact on the proposals. At time of writing, an official response from mainland China was not available, although the action could also prompt negotiations between the two countries. This report provides only initial feedback on potential impact and does not address specific forecast or OEM reaction.

We will continue to monitor and include assumptions relating to this action in future S&P Global Mobility vehicle production and sales forecast rounds and will adjust accordingly as information is gathered and integrated into our models. At the time of writing, the tariffs do still have to go through another round of comment, and specific timing for imposing the 2024 changes is not clear.

The increases in EV and EV-related tariffs aim to address concerns over mainland China overtaking the US market in certain areas and can indirectly serve to support increased manufacturing investment in the US by making importing the relevant EV components from China for US assembly more expensive than investing in US or North American manufacturing. The increases on tariffs for batteries and critical minerals might work in conjunction with the incentives in the 2022 Inflation Reduction Act specific to support for manufacturing

investment by making importing elements like natural graphite more expensive. Batteries are also being produced with synthetic graphite and an alternate supply chain may be created.

The imposition of a 100% tariff on imports of EVs manufactured in mainland China, which would bring the true tariff to 102.5% because there is also an existing 2.5% tariff on vehicles imported from countries with which the US does not have a trade agreement, is aimed at making it unpalatable for mainland Chinese automakers to export small, inexpensive EVs to the US. BYD is gaining ground in many global markets with EVs which are competitive and compelling, at a price thousands of dollars lower than anyone else has been able to manage. The move seems designed to head off that threat before it fully comes to fruition. At the time of writing, it is unclear if those companies would build manufacturing in Mexico and export to the US through the USMCA free trade agreement between the US, Mexico and Canada. BYD is planning a plant in Mexico and introduced a new small pickup truck there, though the company has downplayed US ambitions. The USMCA also has a clause which requires the agreement to be reviewed in 2026; at time of writing, it is uncertain how this concern may (or may not) be addressed through the USMCA.

Mainland China exports to US				
Brand	2024	2028	2032	2036
Buick	25,907	67,817	83917.0	102,212
Land Rover	0	6,111	7430.0	7,621
Lincoln	16,275	30,580	31080.0	26,964
Lotus	1,832	6,877	7153.0	7,024
MINI	2,183	2,648	3826.0	6,684
NIO	0	158	35744.0	58,417
Polestar	12,445	12,014	13531.0	18,278
Volvo	13,611	9,690	12921.0	13,883
Total	72,253	135,895	195602.0	241,083

Source: S&P Global Mobility, April 2024 LV production forecast, export module

BYD and some other mainland China automakers have been successful in creating EVs which should be competitive to US buyers but can be sold for far less than EVs from traditional automakers, who are still struggling to create a profitable business model and most typically offer EVs priced notably more than comparably sized or equipped internal combustion engine (ICE) vehicles. The tariff could also affect plans from Geely-owned Volvo and Polestar. While Volvo has a plant South Carolina which will produce EVs for both Volvo and Polestar to offer in the US and export elsewhere, importing vehicles from China is part of the corporate

strategies for meeting US and global EV demand. The tariff could also affect General Motors (GM), as expectations are that GM intends to import Buick EVs to the US market, although GM has not publicly confirmed such a plan. Ford began importing the Lincoln Nautilus from mainland China to the US in January 2024; however, the Nautilus is offered with ICE or hybrid powertrains; a read of the initial statement suggests those vehicles may not be subject to the 100% tariff. The same is expected for the Buick Envision, which has been imported to the US from China for several years.

Prior to the announcement of these tariff plans, the S&P Global Mobility light-vehicle production forecast projected exports from mainland China to the US reaching about 225,000 units in 2034, a small percentage of the US market. Further, that current forecast includes plans from traditional automakers like Geely (Volvo/Polestar), Ford and General Motors and both ICE and EVs, and vehicles in a variety of segments. BMW is expected to export some Mini brand vehicles from mainland China to the US, although also well under 10,000 units annually through the forecast period. We have forecast that NIO is aiming to eventually build exports for the US, although at this time, the expected volume impact is low. The expectation is that BYD would like to enter the US market, but specific plans have not been confirmed with confidence to add to the forecast yet. The April 2024 forecast recognizes regulatory uncertainty relative to the trade relationship between the US and China as well as a lack of confirmed plans from mainland Chinese automakers. Selling in the US is a goal and many of these products could be competitive. The US also remains a very difficult market to bridge, and these automakers are still building a global footprint outside the US. It is unclear how quickly they plan to enter the market, or if automakers that already have strong footprints in the US can head off the competition.

[OEM Highlights] NIO teams up with GAC on battery swapping, reaches 500,000-unit production milestone

Chinese electric vehicle (EV) manufacturer NIO has signed a strategic agreement with Chinese state-backed automaker GAC Group on the development and promotion of battery-swapping technology. The signing of the agreement paves the way for the two companies to work on projects that promote the introduction of industry-wide standards for swappable battery packs used in EVs, the development of new models with swappable

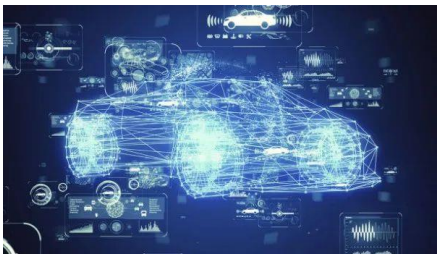
batteries and battery swapping network sharing. Separately, startup NIO reached the production milestone of 500,000 units on May 9. The 500,000th NIO vehicle, an all-new ES8 sport utility vehicle (SUV), rolled off the production line of NIO’ s Xinqiao plant in Hefei, Anhui province.

Outlook and implications

NIO has entered into partnerships with several Chinese automakers on battery-swapping technology development. Chongqing-based Changan Auto is the first Chinese state-backed automaker to collaborate with NIO on the development of battery-swapping technologies. Geely, JAC and Chery are among the automakers that have signed similar agreements with NIO. These deals with major Chinese automakers are strengthening NIO’ s role as a leading company in the EV battery-swapping sector, although there is no guarantee that companies that have signed a deal with NIO will invest significantly in new models featuring such technology. As of the end of April, NIO had established 2,411 battery-swapping stations in China, including 795 sites along expressways. The company’ s data shows that its battery-swapping facilities provided 55% of the power used in NIO’ s EVs in April.

[Technology & Mobility Highlights] Honda, IBM to collaborate on semiconductor and software technology

Honda has signed a memorandum of understanding (MOU) with IBM to conduct joint research and development (R&D) in the field of advanced semiconductor and software technology. The main issues they aim to address include processing power, energy efficiency, and the complex nature of semiconductor design. The ultimate goal is to pave the way for the creation of future software-defined vehicles (SDVs). Honda anticipates that starting from 2030, there will be a significant increase in the adoption of intelligence and AI technology across various societal sectors. This includes the mobility sector where SDVs powered by these technologies are projected to become the norm. These SDVs, compared with traditional vehicles, will demand considerably more processing power and will result in higher power consumption. Additionally, the design of semiconductors, a crucial component in these vehicles, is predicted to become increasingly complex.



Outlook and implications

The collaboration with IBM is in line with Honda’s long-term investment plans to expand in the area of vehicle electrification and software technologies. The automaker revealed in April 2022 that it was seeking to transform its business model by shifting the focus from its non-recurring hardware (product) sales business to recurring business involving both hardware and software and that it had allocated around ¥8 trillion overall to R&D. Of this, about ¥5 trillion will be used in the area of electrification and software technologies. Apart from IBM, Honda has also collaborated with other companies such as KPIT and SCSK Corporation on software development.

[EV & Energy Efficiency Highlights] Allego-backed Cross-E project to install high-power charging stations across Europe

Under the initiative, a total of 911 high-powered charging points, featuring 150 kW and 350 kW chargers, will be installed across 239 locations in Europe

Source: Getty Images/nicodemos

The Cross-E project, a cross-border EV charging infrastructure project set up by four companies — Allego, Petrol Group, GreenWay and Emobility Solutions — has been established to build a network of high-powered EV charging points along key routes and ports across Europe, Allego announced on May 13.

Under the initiative, a total of 911 high-powered charging points, featuring 150 kW and 350 kW chargers, will be installed across 239 locations in Europe. These planned EV charging sites will be tailored to light- and heavy-duty electric vehicles (LDVs and HDVs), Allego said, adding that the project has been selected to invest €130 million in building the high-power charging infrastructure. The project will receive a total grant of €34.45 million from the European Union and is scheduled to be finalized by October 2026.

The Cross-E project entails two initiatives under its umbrella — Cross-E General and Cross-E Cohesion. According to the company note, these projects are slated to receive co-funding from the Connecting Europe Facility (CEF), the EU funding program supporting European transport infrastructure.

The four companies chosen for the Cross-E project will operate across eight EU member states, including Croatia, Hungary, Poland, Slovakia, Slovenia, Belgium, Italy and the Netherlands. Collectively, these companies together are slated to install 838 EV charging points for LDVs (150-350 kW) and 73 recharging points for HDVs (350 kW).

The EV charging stations installed under the Cross-E project will also have to adhere to the European Commission's Alternative Fuels Infrastructure Regulation (AFIR), guaranteeing open access to the infrastructure. The regulation ensures that all abiding EV charging locations are accessible to the public 24/7 and support roaming and open-access payment methods.

[EV & Energy Efficiency Highlights] Webasto plans to increase energy content in traction batteries to 40kWh

Up to 18 Pro 40 batteries with a total energy content of up to 720 kWh provide sufficient power to drive electric commercial vehicles in the voltage range of 400 or 800 volts

Source: Getty Images

Webasto is planning to increase the energy content of its traction batteries from 35 to 40 kilowatt hours (kWh) as part of its product update strategy, the company announced on May 14.

The updated traction battery is called the new Standard Battery Pro 40. According to the company, up to 18 Pro 40 batteries with a total energy content of up to 720 kWh provide sufficient power to drive electric commercial vehicles in the voltage range of 400 or 800 volts.

The updated battery is also well equipped for the off-highway industry.

Like its predecessor, the Standard Battery Pro 40 is protected by a robust aluminum housing, which offers high requirements in terms of safety, availability and stability, Webasto said, adding that the standardized battery system weighs 297 kilograms and can be integrated vertically or horizontally into vehicles while offering system integrators and vehicle manufacturers flexibility in installation.

"Thanks to its identical dimensions, the high-voltage battery fits seamlessly into all installation spaces that already use the previous Webasto standard battery system," the company said in a statement.

These batteries come with Webasto's eBTM thermal management solution, which keeps traction batteries within the ideal temperature range regardless of the external temperatures. While in operation, a series of sensors continuously monitor the temperature of the battery so that the protective mechanisms, including various fuses, take immediate effect in the event of a malfunction.

Notably, Webasto develops and produces both the control electronics and the battery at its German sites in Schaidt, Schierling and Stockdorf.

Commenting on the new product development, Lena Beckmann, Director Batteries and Electrical Thermal Management at Webasto, said, "The electrification of commercial vehicles and machines is progressing at an ever-increasing pace, which also increases the demands on traction batteries. With the Webasto Standard Battery Pro 40, we now offer our customers an even higher energy content in a robust battery pack to provide sufficient reserves for an entire working day. With the update of our standard battery system and our extensive portfolio of electrical thermal management solutions, we offer system integrators and vehicle manufacturers a strong foundation to put the mobility transition in the commercial sector on a sustainable footing."

[Supplier Highlights] Sabic showcases new foam resin applications at NPE2024

Sabic's polypropylene-ultra melt strength foam resin has transportation applications for trucks, vans and recreational vehicles

Source: Getty Images/ sturti

Sabic showcased two transportation applications that illustrate the capabilities of its polypropylene-ultra melt strength (PP-UMS) foam resin at NPE2024. This material offers a high level of foamability, allowing for the creation of polypropylene (PP) foams with a low density, robust impact resistance and conformity with VDA 278 emission regulations. The resin's processing versatility enables it to be used in sandwich panels for trucks, delivery vans, and recreational vehicles, as well as in blow-molded air ducts.

According to Amanda Roble, director of advanced consumer solutions at Sabic, this distinctive foam resin with exceptional melt strength enables the extrusion of PP foam with very low density, which can help the transportation industry advance lightweighting goals by replacing heavier material combinations ranging from metal and wood to solid polymers.

Panels with PP foam cores created with Sabic's PP-UMS foam resin can help reduce weight and lower carbon dioxide emissions. The foam resin can be combined with other PP materials to create a foam core, and adding a glass fiber–reinforced PP face sheet results in a mono-material part that is simpler to recycle. The foam produced with Sabic's foam resin can be thermally bonded to the PP face sheet, eliminating the need for adhesives. This PP-UMS foam resin-based panel also possesses impact resistance and is durable as it does not react with water.

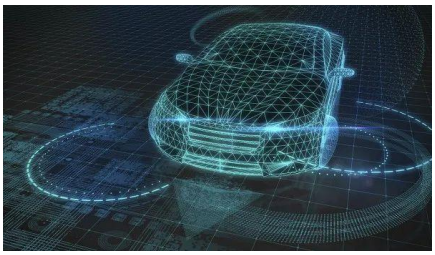
Moreover, blow-molded PP foam produced using the Sabic PP-UMS foam resin can be employed in automotive air ducts, aiding in weight reduction and simplifying the mounting process in vehicles. Alongside weight savings

and recyclability, the air duct also provides insulative capabilities which can conserve energy and extend the range of electric vehicles.

Sabic's PP-UMS foam resin is a new-generation, long-chain branched PP material with a high melt strength, enabling very low foam densities. It can be processed using various methods including foam extrusion, foam injection molding, foam blow molding, particle foaming, and foam blown and cast film. Sabic also provides support through its foam innovation center in the Netherlands, which offers leading-edge technologies and a platform for collaboration across the foam industry value chain.

[Supplier Highlights] Solectrix to present automotive imaging solutions at ADAS & Autonomous Vehicle Expo 2024

The virtual environment enables engineers to conduct extensive representative testing of AVs in simulation



Source: Getty/JackyLeung

Solectrix, a provider of imaging solutions, has announced its participation in the upcoming ADAS & Autonomous Vehicle Expo, where it will showcase two innovative imaging products. The event, scheduled from June 4th to 6th, 2024, will provide an opportunity for Solectrix to demonstrate its technologies, according to a press release on May 7 .

One of the highlights of Solectrix's presentation is the SXIVE Calibration SDK, which expands its comprehensive image processing ecosystem, SXIVE. This new software development kit enables the correction of color, lens distortion, and vignetting in received images, resulting in flawless visuals. With a user-friendly interface, the calibration process becomes more accessible, as it can be completed with just one click. The SDK is compatible with a wide range of image sensors and offers various options for accelerating image processing, including support for AMD SoCs, NVIDIA Jetson, RTX, CUDA, and TensorRT.

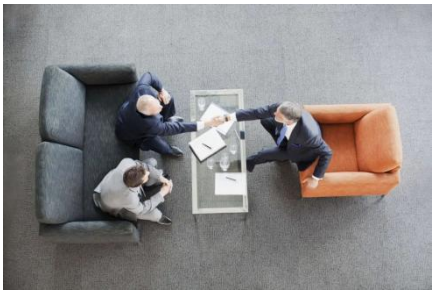
Additionally, Solectrix will showcase the proFRAME video grabber and playback system, a modular plug-in card (PCIe, CompactPCI Serial). Renowned for its low latencies and high data rates, proFRAME has been successfully utilized in data loggers for video capture and complex HiL test systems for video playback. This system has proven instrumental in validating ADAS/AD driving functions, automotive cameras, displays, and headlights. With the capability to capture or play back up to eight 4K video data streams per system, proFRAME offers exceptional performance and versatility.

The participation of Solectrix in the ADAS & Autonomous Vehicle Expo demonstrates its commitment to advancing imaging technologies for the automotive industry. By introducing groundbreaking products like the SXIVE Calibration SDK and proFRAME, Solectrix continues to drive innovation and contribute to the development of autonomous driving and advanced driver-assistance systems

[VIP ASSET] Tech innovators in the auto space: Q&A with Tencent

Mainland China's complex road systems, megacities, dense populations, and unique traffic behaviors present challenges for autonomous driving technology development. However, the country also offers rich scenarios, abundant data, and numerous rare and unexpected corner cases that are crucial for the safe and effective evolution of autonomous driving. The Gen-X demographic in mainland China, a significant portion of whom plan to purchase cars with Level 2+ driver assistance functions, provides ideal training conditions for autonomous driving. Leading global original equipment manufacturers could then establish research and development teams in mainland China and promote autonomous driving solutionsworldwide.

To address the autonomous driving and cloud needs of international companies, internet tech innovator Tencent has launched the Intelligent Vehicle Cloud platform. Built on Tencent's security and compliance capabilities, the platform provides advanced cloud data storage solutions to overcome the challenges of handling large volumes of data and high storage costs in autonomous driving development. It also supports the company’ s international strategy by offering technology solutions to foreign automakers entering mainland China's electric vehicle market. To learn more about this business and how it is strengthening its foothold in the automotive industry, we spoke to Dr. Pei Shen, general manager of strategy, Tencent Intelligent Mobility.



Key takeaways:

- Tencent's strategy in the automotive industry focuses on providing digital infrastructure, cloud services and built-platform services. The company collaborateswith automotive companies to connect userswith services such as music, in-carvideo, gaming and potentially meetings. It aims to leverage its digital content and expertise in the emerging intelligent mobility space.
- Tencent offers both cross-industry standard products and vertical-specific products for the automotive industry. It serves both upstream and downstream customers, helping OEMs connect with their downstream services through platforms likeWeChat.

- Its long-term objectives in the automotive industry include gaining market share in the auto cloud market, providing digital sales, marketing and in-cabin services, aswell as integrating its cloud services. Tencent also envisions changes in in-car digitalization, focusing on connecting with external services and providing mobile content within the car.
- The company's revenue streams in the automotive software market come from licensing, subscriptions for music and video services, revenue from mobility services, and integrated revenue from existing hardware. It sees the potential for gaming-related revenue as OEMs explore capabilities in cars.
- The collaboration landscape between tech companies and automakers is evolving towards business models that bring profits for both sides. Traditional supply modelswill continue to dominate, but ecosystem-based supply models are emerging, allowing OEMs to focus on their core businesswhile tech companies provide online transactions and cloud services.

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