



IHS Markit®

Automotive Industry Weekly Digest

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Contents

[OEM Sales Highlights] Chinese new vehicle sales grow 8.6% y/y in April	3
[OEM Sales Highlights] Xpeng and NIO report substantial increases in vehicle sales during May	5
[Co-operation Highlights] Changan, Huawei, and CATL to launch joint premium EV brand in May	7
[Co-operation Highlights] Chery Automobile deepens co-operation with iFlytek to develop series of intelligent products	7
[OEM Highlights] Rolls-Royce confirms move towards electrification, announces new coachbuilding arm	9
[OEM Highlights] Baidu-Geely JV to unveil first model at 2022 Beijing Motor Show	11
[GSP] India/Pakistan Sales and Production Commentary -2021.04	13
[Supplier Trends and Highlights] Continental, Censtar partner to offer hose solutions for hydrogen refueling stations in mainland China	15
[Supplier Trends and Highlights] Keysight develops 'C-V2X Autonomous Drive Emulation' solution	16



[OEM Sales Highlights] Chinese new vehicle sales grow 8.6% y/y in April

IHS Markit perspective

Implications	CAAM's data indicate strong growth in new vehicle demand for a fourth consecutive month in April, largely thanks to growing demand for sedans, crossovers, SUVs, MPVs, and minibuses. However, when compared with the previous couple of months, the growth rate in April slowed.
Outlook	IHS Markit expects light-vehicle sales in mainland China to grow by 5.0% to 24.85 million units in 2021 and light-vehicle production to increase 5.5% to 24.62 million units.

The auto market of mainland China experienced another month of strong growth in new vehicle sales in April, propelled by growing demand for passenger vehicles (PVs) and for commercial vehicles (CVs). According to data released by the China Association of Automobile Manufacturers (CAAM), new vehicle sales on a wholesale basis increased 8.6% year on year (y/y) to 2.25 million units in China last month, while production rose by 6.3% y/y to 2.23 million units.

In the year to date (YTD), China's new vehicle sales were up by 51.8% y/y to 8.75 million units, while production volumes grew by 53.4% y/y to 8.59 million units.

Of the total new vehicle sales and production in China last month, PV sales increased 10.8% y/y to 1.70 million units, while PV production rose by 7.9% y/y to 1.71 million units. The CAAM definition of PVs includes sedans, sport utility vehicles (SUVs), multi-purpose vehicles (MPVs), and minivans. During April, China's sales of sedans were up by 2.0% y/y to 757,000 units, while MPV sales increased 39.7% y/y to 85,000 units, SUV sales rose by 17.6% y/y to 821,000 units, and minivan sales grew by 13.0% y/y to 41,000 units. In the YTD, Chinese sales of PVs increased 53.1% y/y to 6.79 million units and production of PVs increased 55.3% y/y to 6.67 million units.



China's CV sales, including medium and heavy vehicles, also grew in April. Last month, sales volumes of CVs rose by 2.3% y/y to 548,000 units, while CV production increased 1.2% y/y to 521,000 units. In the YTD, CV sales rose by 47.3% y/y to 1.96 million units and CV production increased 47.0% y/y to 1.92 million units.

China's sales of new energy vehicles (NEVs), which include battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and fuel-cell vehicles (FCVs), increased 180.3% y/y to 206,000 units in April. Sales of passenger NEVs grew by 198.1% y/y to 193,000 units in April, while sales of commercial NEVs increased 51.2% y/y to around 13,000 units. In April, in the NEV passenger car category, sales of BEVs were up by 254.0% y/y to



158,000 units, while sales of PHEVs were 35,000 units, up 73.7% y/y. In the YTD, NEV sales in China rose by 249.2% y/y to 732,000 units.

China's new vehicle exports surged 114.6% y/y to 151,000 units in April. By vehicle type, PV export volumes jumped 113.4% y/y to 117,000 units, while CV export volumes increased 119.1% y/y to 34,000 units.

Outlook and implications

CAAM's data indicate strong growth in new vehicle demand for a fourth consecutive month in April, largely thanks to growing demand for sedans, crossovers, SUVs, MPVs, and minibuses. However, when compared with the previous couple of months, the growth rate in April slowed.

CAAM's data indicate strong growth in new vehicle demand for a fourth consecutive month in April, largely thanks to growing demand for sedans, crossovers, SUVs, MPVs, and minibuses. However, when compared to the previous couple of months (which benefited from a low base of comparison), the y/y growth rate in April slowed. This was mainly due to the fact that the country's new vehicle market in April last year stabilised after witnessing a free fall in February and March due to the coronavirus disease 2019 (COVID-19) virus pandemic. The country reopened its economy and prioritised support for business resumption. This improved consumer confidence during April last year and resulted in sales growth.



Meanwhile, China's CV sales witnessed rising demand for commercial vans and trucks in the past few months, thanks to government-led infrastructure building projects. The government's efforts to boost domestic consumption will continue to drive up demand for CVs.

Last month, the NEV market of mainland China also remained strong owing to government subsidies, and growing demand for new NEV models. Compared with a year ago, private-sector demand is now playing a more important role in underpinning the expansion of the NEV sector.

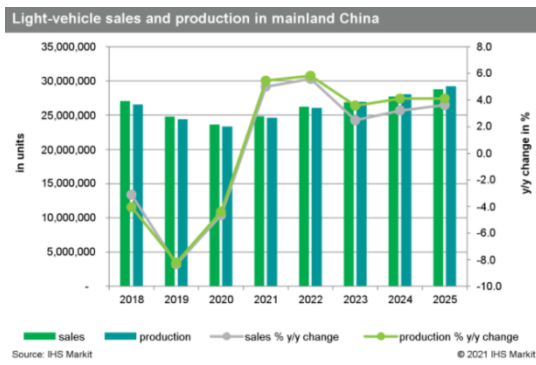
Government incentives and preferential policies will continue to play a role in boosting new vehicle demand in China during 2021. In February, the Ministry of Commerce once again urged local government authorities to support auto consumption in rural areas and raise quotas of licence plates to encourage consumers, especially car-less families, to purchase NEVs. The country is also increasing its focus on use of hydrogen-run cars.



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With the supply of semiconductors becoming tighter in March and April, increasing numbers of automakers reported experiencing or expecting to see shift reductions or temporary production halts at plants due to lack of microchips for certain automotive components. IHS Markit's latest assessment of the supply shortage issue indicated an estimated production volume loss of 364,774 units in mainland China during the first quarter. A further 116,600 units are now at risk in the second quarter of 2021. An assessment of the production volume loss will continue to be made through the rest of the year to reflect ongoing changes as the situation evolves.

According to IHS Markit's light-vehicle market forecasts, light-vehicle production in mainland China is to increase by 5.5% to 24.62 million units in 2021, after a decline of 4.4% in 2020. Light-vehicle sales in mainland China are expected to increase by 5.0% to 24.85 million units in 2021. Our light-vehicle forecast includes only passenger vehicles and light commercial vehicles.

[OEM Sales Highlights] Xpeng and NIO report substantial increases in vehicle sales during May

Chinese electric vehicle (EV) startup NIO said that its vehicle deliveries in May increased by 95.3% year on year (y/y) to 6,711 vehicles. The deliveries consisted of 1,412 units of the ES8 sport utility vehicle (SUV), 3,017 units of the ES6 SUV, and 2,282 units of the EC6, a couple-style variant of the ES6. In the first five months of 2021, cumulative deliveries of the ES8, ES6 and EC6 stood at 109,514 units. The automaker has maintained delivery guidance of 21,000–22,000 vehicles in the second quarter of 2021. In a separate statement, EV startup Xpeng said that it delivered 5,686 vehicles in May, consisting of 3,797 units of the P7 sedan and 1,889 units of the G3 SUV. In the year to date (YTD), deliveries stood at 24,173 units, up 427% y/y.





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Outlook and implications

Both the EV startup companies experienced strong delivery results, thanks to growing consumer demand for their smart EVs. NIO's mid-size electric SUVs, the ES6 and EC6, have become the company's backbone models, while the ES8 still appeals to consumers looking for a large six-seater SUV. The EC6 and ES6 are positioned in the premium EV segment with hefty price tags, but through its battery leasing programme NIO has effectively lowered the overall costs for both models. In comparison, Xpeng operates on a relatively smaller scale in terms of delivery volumes. Xpeng recently unveiled details of its third production model, the P5 electric sedan, featuring the in-house developed autonomous driving system XPILOT 3.5 and Xmart OS 3.0, Xpeng's latest in-car operation system. Both NIO and Xpeng are working towards expanding their production footprint in China. NIO has started construction of a smart EV industrial park in Hefei, Anhui province. Called the Neo Park, the facility covers an area of 11.2 million square metres and includes manufacturing and research and development (R&D) facilities with designed annual capacity of 1 million vehicles and 100 GWh of batteries. Xpeng has announced plans to invest in a manufacturing plant in Wuhan. The new plant is to have an annual production capacity of 100,000 units and will expand Xpeng's production network and support the launch of new models. IHS Markit forecasts total sales of NIO and Xpeng vehicles to be around 67,800 units and 42,300 units during 2021.



[Co-operation Highlights] Changan, Huawei, and CATL to launch joint premium EV brand in May

Chinese automaker Chongqing Changan Automobile Company (Changan) plans to introduce a new premium electric vehicle (EV) auto brand in co-operation with Huawei and CATL in China this month, reports Gasgoo. Codenamed AB Auto, the brand will be an independent brand from Changan New Energy.



Outlook and implications

Changan has been teasing the launch of a new, upmarket brand since 2018. Its partnership with CATL and Huawei will certainly help it to bring the latest EV battery and connectivity technologies to its new models. As the Chinese new energy vehicle (NEV) market gains momentum, automakers are introducing premium EV brands with models featuring advanced safety and autonomous systems. Last month, Chinese automaker SAIC Motor Group's (SAIC) Alibaba-backed IM brand announced pre-sales of its first mass-produced sedan, the L7, at the Shanghai Motor Show. Alibaba will help develop a suite of solutions for SAIC centred on intelligent vehicles, artificial intelligence (AI), and e-commerce. Zeekr, the premium EV brand introduced by Geely Auto, launched its first model, the 001. The model has been designed at Geely Design Gothenburg and includes features such as facial recognition to adjust the car's settings to personal preferences, air suspension that automatically adjusts ground clearance, and frameless automatic doors that open when a passenger approaches and then close behind them. According to IHS Markit's light-vehicle production forecast, the first model from AB brand will be a D-segment sport utility vehicle (SUV), codenamed E11. The model is expected to go into mass production next year.

[Co-operation Highlights] Chery Automobile deepens co-operation with iFlytek to develop series of intelligent products

Chery Automobile has deepened its co-operation with iFlytek to use each other's resources to develop a series of intelligent products. This includes the development of smart cockpit, Internet of Vehicles solutions, and intelligent vehicle audio systems. The partnership also aims at jointly trying in building an autonomous vehicle that can reach Level 4 under specific scenarios.



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Outlook and implications

Chery is accelerating its efforts to develop smart cars and has developed first and second generation of unmanned driving products. The automaker has integrated its Chery Lion 2.0 system with the Chery Tiggo 8 and EXEED models, which support functions such as voice control, facial recognition, AR navigation, internet service and smart home. Chery plans to achieve Level 4 highly autonomous vehicle operations in 2025.



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[OEM Highlights] Rolls-Royce confirms move towards electrification, announces new coachbuilding arm

IHS Markit perspective

Implications Rolls-Royce's CEO Torsten Müller-Ötvös has confirmed that the luxury automaker is developing a BEV as the company announces the launch of its new coachbuilding arm.

Outlook The brand will join other luxury automakers in the development of a BEV, as the technology now seems to have reached a point where it will meet the expectations of the brand's customers.

Rolls-Royce's CEO Torsten Müller-Ötvös has confirmed that the luxury automaker is developing a battery electric vehicle (BEV). When asked by Bloomberg TV about its parent company BMW Group filing a trademark for the name Silent Shadow at the German patent office in 2020, the senior executive said, "That is still a secret... But it will of course obviously be a brand-new Rolls-Royce, rest assured." However, he added, "Electrification fits perfect to Rolls-Royce - it's torque-y, it's super-silent... We are not known for roar-y, loud engines and exhaust noises whatsoever, and that's a big benefit."



Rolls-Royce Boat Tail
Source: Rolls-Royce

The comments coincided with the announcement that Rolls-Royce is to offer even more bespoke services to customers through its new coachbuilding business. According to a statement, Rolls-Royce Coachbuilt has been established in the wake of the interest created by the one-off Sweptail that it built for one of its longstanding customers that was revealed in 2017. The company said, "Sweptail set a new waterline of potential and ignited a fascination among a rarefied cohort: collectors, patrons of the arts and commissioning clients of now-iconic architecture. A number of these women and men approached Rolls-Royce to discover if they too could collaborate on a unique commission, one that was even more profound – one that provided an elevated sense of curation. The marque agreed, signalling the genesis of a permanent contemporary Coachbuilt department at the Home of Rolls-Royce."



Rolls-Royce Boat Tail



Source: Rolls-Royce

This has subsequently led to the development of the 'Boat Tail' that has been commissioned by three customers, a two-door open-roof car based on the second-generation Phantom, with a nautical theme. The vehicle measures 5.8 metres long, and 1,813 completely new parts have been created specifically for them. This includes the reconfiguration of the aluminium spaceframe architecture and the creation of an entirely new look. Exterior changes include the integration of the Rolls-Royce grille and new lighting at the front, alongside a wraparound windscreen. The "progressive negative sculpture in the lower bodyside" is said to be inspired by the running boards on the brand's early vehicles, while the rear tapers inwards to create the 'boat tail' look. Underlining this has been the application of Caleidolegno veneer on the rear deck. This also hinges along the centre line to provide openings to what Rolls-Royce refers to as a "generous hosting suite". The vehicle, designed for one specific customer, has a refrigerated element designed to hold drink, while the rest of the space is given over to food, cutlery, plates and glasses. Cocktail tables also emerge from this area along with two foldable stools that use the same leather as in the interior. The roof is a fixed canopy with a sweeping roofline that has removable flying buttresses. The company also offers a temporary tonneau for "static transitory shelter" in cases of inclement weather.

It also features bespoke materials and a reconfigured 15-speaker Rolls-Royce Audio System that reflects the changes that have been made to create the 'Boat Tail'. It also features specific reversible timepieces created by Brevet 1822 that are designed to be worn on the wrist or within the vehicle's fascia as the clock.

Outlook and implications

Until recently, luxury vehicle brands have been able to largely avoid the pressure to develop and introduce BEVs given their exceptionally low volumes or due to them being part of a far larger OEM that is already on a trajectory to reduce emissions with its higher-volume brands. However, growing regulatory pressures and greater consumer interest at all rungs of the market are now leading these brands to take steps forward in this area.



Rolls-Royce Boat Tail luggage space
Source: Rolls-Royce

Rolls-Royce has previously explored the prospect of BEV powertrain technology around a decade ago, when it showed the Phantom-based 102EX concept. Although the vehicle was said to offer many of the desirable traits that a customer of the brand could want, such as the instantaneous torque and silent running, the technology was very much in its infancy and one of the most notable issues was the short range – said to be around 125 miles. Developments in vehicle electrification technology as well as the reasons mentioned above are leading the company to take steps forward. There had already been speculation swirling since the beginning of the year. Not only has the registration of the name Silent Shadow – seemingly inspired by the Silver Shadow name used by the brand between 1965 and 1980 – fuelled this, but also reports of a Phantom BEV prototype at a BMW Group research and development (R&D) facility in Munich (Germany). At the time, enthusiast publication Autocar said that the company is said to favour an entirely



new car to make its launch in to this field, and that it would use powertrain technology developed elsewhere in the BMW Group, although it would use its own flexible vehicle architecture.

Rolls-Royce's decision follows the announcement made late last year by its former sibling and now rival Bentley, which intends to launch its first BEV in 2025 and become solely a BEV brand in 2030. Ferrari and Lamborghini, which are both positioned differently at the top of the market due to their emphasis on sports cars, have also announced plans to launch BEVs during the current decade. Even Aston Martin, which has pivoted away from the relaunching the Lagonda brand with an emphasis on electrification due to a change of ownership and management, will introduce new BEVs based on Daimler technology by the middle of the decade.

The launch of its Coachbuilt division is a huge step up from its traditional bespoke and customisation business. It also seems to set a new standard for customer expectations when offered such a service. Indeed, while Ferrari also offers its closest and most special customers the opportunity to work with it to create a bespoke vehicle, there are few, if any, changes to the architecture of the vehicle. As well as the changes made to the aluminium spaceframe that have already been mentioned, Rolls-Royce has said that the development of the Boat Tail requires five additional electronic control units to support components and mechanisms at the rear of the vehicle as well as a redesigned wiring harness that required nine months of research and development. The “hosting suite” has also been successfully tested in temperatures of 80 to -20 degrees Celsius. The vehicle has also undergone rigorous dynamic testing, including “high speed analysis to ensure the contents of the rear hosting suite are sufficiently fastened and therefore silent under power” as well as being fully-homologated for the road. The exclusivity of this service will be preserved by the cost to develop and build this vehicle, with many reports suggesting that the customers will have paid around GBP20 million for the privilege. The shift to electrification could also lead to designs being even more creative given the different packaging of such powertrains.

[OEM Highlights] Baidu-Geely JV to unveil first model at 2022 Beijing Motor Show

Jidu Auto, a joint venture (JV) between Baidu and Geely, plans to unveil its first electric vehicle (EV) model at the 2022 Beijing Motor Show, reports PanDaily.

Jidu Auto CEO Xia Yiping said that the concept car is to be a near-production version and pre-orders could start sometime in 2022. Geely is to be responsible for the development and manufacturing of the model, while Baidu is to equip the vehicle with its autonomous driving platform, Apollo. Meanwhile, Jidu is to work on brand positioning and sales. The price of the car is to be more than CNY200,000 (USD31,310) due to high costs of smart-car components. The JV is also planning a new funding round this year.





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Outlook and implications

Earlier this year, Geely and Baidu announced their partnership on EVs and appointed Xia Yiping as CEO, who was a co-founder of bike-sharing company Mobike. The two companies plan to invest CNY50 billion over the next five years in developing smart-car technology. The EVs planned by the JV are to be based on Geely's Sustainable Experience Architecture (SEA), a dedicated EV platform that Geely is eager to share with other automakers and companies outside the car-making sector. Meanwhile, Baidu's smart-car technologies, including an autonomous vehicle (AV) platform, high-definition maps, and cloud technology, could provide Geely with a much-needed technology edge in developing smart EVs. This partnership should also support Baidu in expanding its ecosystem as it competes with Chinese internet giants such as Tencent and Alibaba.



[GSP] India/Pakistan Sales and Production Commentary -2021.04

India/Pakistan sales

March 2021: +119%: 371,315 units vs. 169,351 units

YTD 2021: +35.3%: 1,083,104 units vs. 800,533 units

- The Indian subcontinent's light vehicle sales grew 119% in March 2021. Sales in the Indian automotive market in March rose 114%, while in Pakistan, light vehicle sales jumped 225%. The growth spike in India and Pakistan was due to a low base in March 2020 and the surge in demand as people are avoiding public transportation because of COVID-19-related fears. The accumulation of savings due to the cut in expenses has boosted consumers' ability to pay the down payment on a vehicle. Lower interest rates are also alluring customers to purchase a new car. However, price hikes on account of annual inflation and increasing commodity prices are deterrents to growth.
- In the first half of 2021, sales growth will be strong owing to the low base in 2020. However, growth may be subdued relative to earlier projections as a second wave of the COVID-19 pandemic may act as a spoiler. The situation is getting out of control as ICUs are packed and the state and central governments are unable to enforce complete lockdowns that would further damage the economy, all leading to an exponential rise in cases in the coming two weeks. On the macro side, the Indian economic growth forecast is expected to be strong, at around 8.9%, in 2021. Lower interest rates and the tendency to avoid public transportation and instead to use private cars may be the key drivers that will help the industry grow. A possible scrappage scheme would help the industry generate demand and bring the automotive industry back to a fast growth trajectory. In 2021, the market will grow around 29% on a year-on-year (y/y) basis.



- In Pakistan, automotive sales were up 225% in March 2021 because of the low base, entry of new players, and growing demand. The aggressive near-term macroeconomic outlook, lower interest rates, and recovery in businesses and the economy will remain major drivers to growth. There is a possibility of high short-term growth. However, in the medium term, a deterioration of macroeconomics is likely. In the long term, momentum is positive for the car industry, and the government is focused on pushing the automotive industry. Changes in private-sector policies will also help drive sales in the country.

India/Pakistan production



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March 2021: +83%; 418,492 units vs. 228,662 units
YTD 2021: +22.8%; 1.2 million units vs. 0.98 million units

- The Indian subcontinent's light vehicle production increased 83% year on year (y/y) in March 2021, with 418,492 units. Indian light vehicle production in March 2020 recorded 406,435 units, or an increase of approximately 84.1% y/y, mainly owing to the low base of last year. In March 2020, India witnessed a severe lockdown, which was extended until April and production ground to a halt. In May, carmakers started taking approvals from respective state governments to begin operations, hence the recovery rate remained very low during the second quarter of 2020. IHS Markit analysts expect light vehicle production to maintain growth because of low base of 2020.
- In 2021, production in the Indian subcontinent should grow 31%, with 4.41 million units, while India will likely bounce back to regain its fifth-largest light vehicle production rank from South Korea. The robust sales continued in India and brought low inventory levels at the dealer's end. The waiting period is continuously increasing for consumers. Vehicles such as the Hyundai Creta, Kia Seltos, and Tata Altroz are touching the 3–9 month waiting period.



[Supplier Trends and Highlights] Continental, Censtar partner to offer hose solutions for hydrogen refueling stations in mainland China

The agreement will develop safe, efficient dispensing hose solutions for hydrogen refueling stations



Source: Getty Images/JONGHO SHIN

Continental and Chinese hydrogen specialist Censtar H2-Electricity Science & Technology entered an agreement to expand their strategic cooperation for the mainland Chinese market. According to a company press release on 1 June, the signed agreement is aimed at developing dispensing hose solutions for hydrogen refueling stations.

Outlook and implications

Hydrogen has a very broad flammability range. Therefore, ensuring safe and efficient hydrogen dispensing is a key requirement at hydrogen fueling stations, which calls on stricter requirements for hydrogen-related hose systems taking into account higher chemical stability, low permeability, resistance to high pressure, aging, and hydrogen embrittlement.

Wei Yu, Business Head of Censtar commented: "It is particularly exciting for us to reach strategic cooperation with Continental, which marks a new milestone in our cooperation."

Continental has been supplying conventional gasoline refueling hose assemblies to Censtar since 2010. While Continental will leverage its expertise in rubber and thermoplastics sector to develop high-performance hose solutions for hydrogen dispensing and transferring, Censtar will provide its market knowledge in hydrogen dispensers in mainland China, hydrogen storage systems and hydrogen industry, and related market trends and structure information.

Andreas Gerstenberger, responsible for Industrial Fluid Solutions business unit, Continental commented: "Clean mobility not only hinges on the necessary technology for vehicles, but also on a comprehensive network of hydrogen filling stations. Safe and loss-free hydrogen supply systems are essential for the efficient refueling of fuel cell vehicles. We are already in the process of developing various vehicle components for the purpose, for example lines, hoses and engine mounts suitable for a nationwide roll-out of hydrogen fueling stations."



[Supplier Trends and Highlights] Keysight develops 'C-V2X Autonomous Drive Emulation' solution

Solution enables functional, protocol, and radio frequency measurements on 3GPP Release14 C-V2X devices

Keysight Technologies has unveiled a new cellular vehicle-to-everything (C-V2X) Autonomous Drive Emulation solution, it said in a press release on 2 June. The solution enables functional, protocol, and radio frequency measurements on 3GPP Release14 C-V2X devices from the Keysight UXM 5G Wireless Test platform. The C-V2X solution with the UXM 5G Wireless Test platform gives an environment emulator for in-lab testing versus realistic roadway scenarios.



Source: Getty Images/4X-image

“As the trend towards autonomous vehicles is continuously gaining momentum, the complexities for non-line-of-sight test cases and drive emulation scenarios are becoming increasingly important. Keysight’s C-V2X ADE solution will enable automotive engineering teams to emulate and verify complex closed-loop drive scenarios in a lab environment under controlled and repeatable test conditions to maximize safety for passengers and road users alike,” said Thomas Goetzl, VP and GM of Keysight’s Automotive & Energy Solutions business unit.

Outlook and implications

Using total scene generation, the solution exercises advanced driver assistance systems (ADAS) software using inputs to the actual sensors. This allows customers to validate the system performance early in the development cycle, use the platform to add relevant sensor types and expand as sensor systems, reduce integration costs. The solution also verifies performance relative to the intelligent transportation system (ITS) stack, covering cases in mainland China, Europe, and the United States.

In May, Keysight Technologies announced that DEKRA used Keysight’s SA8700A C-V2X test solution to be recognized as an OmniAir Authorized Test Laboratory (OATL) for certifying C-V2X devices.

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