



Automotive Industry Weekly Digest

15 November – 19 November 2021





WeChat



Auto VIP

Contents

[OEM Highlight] Geely Auto reveals vision for 2025 in new strategy	3
[OEM Highlight] VW expects its scale to help move to autonomous vehicle technology	3
[Sales Highlights] BYD reports 88.4% y/y increase in sales during October	5
[Sales Highlights] Proton's sales surge 17.3% y/y in October	5
[EV Highlights] Hyundai may produce Genesis EVs in US as soon as 2022	7
[EV Highlights] Geely Group's commercial arm unveils new-energy semi-truck concept	7
[GSP] North America Sales and Production Commentary -2021.10	9
[Supplier Trends and Highlights] Innoviz Technologies collaborates with JueFX to improve road safety and traffic alerts for autonomous vehicles in China	12
[Supplier Trends and Highlights] ADLINK Technology partners with Askey Computer to develop C-V2X solution	13



WeChat



Auto VIP

[OEM Highlight] Geely Auto reveals vision for 2025 in new strategy

Geely Auto Group has revealed its vision for the next five years with nine ambitious initiatives under its “Smart Geely 2025 Strategy”. The initiatives include full-stack in-house development of autonomous vehicle (AV) technologies, CNY150 billion (USD23.4 billion) of investment in research and development (R&D), and launching over 25 new smart vehicle models in the next five years. The automaker aims to achieve global sales of 3.65 million units, with overseas sales of 600,000 units, by 2025. Geely also aims to reduce its carbon emissions by 25% in the next five years, realise a 100% full-scenario digital value chain, achieve an EBIT margin of over 8%, and assign 350 million shares to the first batch of 10,000 employees, reports Gasgoo.



Outlook and implications

This development coincides with Geely launching global powertrain brand Leishen Power and a new modular intelligent hybrid powertrain platform, Leishen Hi-X. Geely shared its vision of AVs at the 2019 Dragon Bay Forum in Hangzhou Bay, China, as well as its aim of developing a Level 4 autonomous-operation system by 2022 with vehicle-to-everything (V2X) and 5G technologies. In addition, the automaker has begun mass production of low-earth-orbit satellites to enable accurate navigation data for AV development.

[OEM Highlight] VW expects its scale to help move to autonomous vehicle technology

The Volkswagen (VW) Group’s head of architecture and security Stephan Krause has said that the company’s scale will be an advantage for developing autonomous vehicle (AV) technology, according to an Automotive News Europe (ANE) interview. As head of architecture and security, Krause oversees VW’s AV technology development programme through VW Group’s CARIAD software subsidiary. Often VW’s sheer scale is held up as a disadvantage with non-legacy OEM competitors such as Tesla. However, in the area of developing AV technology, Krause believes that it is a major advantage. He said, “One hard part of developing autonomous driving is you need a lot of data to teach and verify these systems and make sure everything is work,” adding, “A fleet of a few cars may give you a few insights, but we have a fleet of millions of cars, and we can generate data a lot faster than a startup, and that’s a big advantage.”



WeChat



Auto VIP



Outlook and implications

VW is playing catch-up in the field of developing digital platforms and architectures. It has recognised that its digital architecture development capability needed to be vastly improved in the face of competition from Tesla and other tech-company-affiliated disruptors that do not come from a traditional carmaking background but do have the nimble, entrepreneurial spirit that has been fostered in Silicon Valley for the past two decades. VW's automotive software company CARIAD is currently working on three software platforms. E³ 1.1 allows for upgrades and over-the-air (OTA) updates of the MEB product portfolio. In 2023, CARIAD plans to introduce the premium software platform 1.2 (E³ 1.2), which will enable a variety of functions including a new unified infotainment system and OTA updates for Audi and Porsche vehicles. VW plans to introduce a universal software platform, which will be a cloud-connected and scalable end-to-end electronic architecture that supports features such as Level 4 autonomous operations. CARIAD is tasked with launching the unified software stack 2.0 (E³ 2.0) in 2025, which allows all the Group's vehicles to run on the same software. This will be tied to the development of the SSP platform and the company expects this union to open new data-based business models.



[Sales Highlights] BYD reports 88.4% y/y increase in sales during October

Chinese automaker BYD sold 89,935 vehicles in October, an increase of 88.4% year on year (y/y). This figure includes new-energy vehicles (NEVs) and traditionally fuelled vehicles. Last month, BYD's sales of NEVs, which consist of battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), totalled 81,040 units, up by 249.0% y/y. Passenger BEVs remained the top-selling category in the automaker's NEV line-up in October, with sales totalling 41,232 units, up by 176.4% y/y. In October, BYD's sales of passenger PHEVs totalled 38,771 units, compared with 7,126 units in October 2020. Sales of BYD's traditionally fuelled vehicles totalled 8,895 units last month, down by 63.7% y/y. Within this total, sedan sales stood at 1,224 units, down from 4,669 units in October 2020, and sport utility vehicle (SUV) sales came in at 7,019 units, compared with 16,832 units in October 2020. Sales of multi-purpose vehicles (MPVs) totalled 652 units in October, compared with 3,014 units in October 2020. In the year to date (YTD), BYD's sales were up by 71.4% y/y to 542,679 units.



Outlook and implications

BYD is one of leading automakers in terms of NEV sales in China and is benefiting from the NEV wave in the country. The NEV segment has been experiencing substantial growth in the country despite the impact of the coronavirus disease 2019 (COVID-19) virus pandemic, supply-chain constraints, and recent floods. In order to keep up with growing demand for NEVs, BYD recently announced plans to build a major plant in the east China province of Anhui, which will have the capacity to assemble 400,000 electrified vehicles annually, to help cater to growing demand for BYD vehicles. The new facility will also produce electric motors, electric control systems, and other key components for electrified vehicles. IHS Markit estimates that BYD's global light-vehicle sales will reach around 570,700 units in 2021 and 573,400 units in 2022.

[Sales Highlights] Proton's sales surge 17.3% y/y in October

Proton's sales (domestic and export) jumped by 17.3% year on year (y/y) to 13,362 units during October, according to data released by the company. It is estimated to have captured 20.5% of Malaysia's new vehicle market during the month. Last month's figure also represents a 28.7% increase from what the automaker managed in September (10,380 units). Proton claims that three of its models led their respective segments last month. The Saga was the automaker's best-selling vehicle during October with 5,107 units sold – and the second best-selling vehicle in the A-sedan segment. The newly launched X50 sport utility vehicle (SUV) was the best-selling vehicle in the B-SUV segment, with sales of 3,839 units last month. The X70 SUV topped the C-SUV segment with 2,165 units, while the Persona was third in the B-sedan segment with sales of 1,393 units last month. The Iriz hatchback finished in fourth place in the B-hatchback segment with sales of 497 units last month, and the Exora multi-purpose vehicle (MPV) was the best-selling vehicle in the C-MPV market with 359 units sold.



WeChat



Auto VIP

In the year to date (YTD; January–October), Proton’s total sales grew by 1.6% y/y to 86,379 units, with an estimated market share of 22.7%.



Outlook and implications

Proton returned to positive territory in October after experiencing declining sales in the previous four consecutive months, thanks to strong consumer demand on the back of price reductions due to a sales tax exemption and the relaxation of coronavirus disease 2019 (COVID-19)-related restrictions. “Proton’s sales in October can be summarized as a story of strong buyer demand and unrealized sales potential. While we are happy with the continued popularity of the Proton Saga and our achievement with the two SUVs, we missed out on adding more units to our final tally as we continue ramping up our supply of components. Market demand however is expected to remain strong towards the end of year, so we are working diligently towards closing 2021 on a high note,” said Proton Edar CEO Roslan Abdullah. Proton has welcomed the recently announced extension of the sales and services tax (SST) exemption. The Malaysian government recently decided to extend the 100% sales tax exemption on locally assembled completely knocked down (CKD) passenger vehicles and the 50% exemption on fully imported completely built-up (CBU) passenger vehicles until 30 June 2022. The sales tax exemption, which has been in place since 15 June 2020, was scheduled to come to an end on 31 December 2021. “Proton would like to thank the Malaysian government for extending the SST exemption. By doing so, it gives us a chance to fulfil the bookings we have already received and doesn’t unfairly penalise customers who are waiting due to circumstances beyond their control. We predict the extension will also help to spur sales through the first half of next year when there could be more new models introduced to the market,” said Roslan. Prior to the government’s move to extend the tax relief until June 2022, IHS Markit had estimated that Proton’s sales in Malaysia would decline by 5.0% y/y to around 103,000 units in 2021 and would grow by just 0.5% y/y in 2022 to around 103,500 units. The impact of the latest development will be reflected in our next forecast round. Our light-vehicle sales forecast includes passenger vehicles and light commercial vehicles.



[EV Highlights] Hyundai may produce Genesis EVs in US as soon as 2022

Hyundai could begin producing Genesis electric vehicles (EVs) in the US in 2022, perhaps with planned electric version of the GV70, according to a report in the Korea Economic Daily. The report cites industry sources as indicating the EV version could be produced at Hyundai's Alabama plant, and that it would be followed by US production of the Ioniq5 and Kona EV for Hyundai and the GV60 EV for Genesis.



Outlook and implications

Although this report is yet to be confirmed, in May 2021, Hyundai announced a USD7.4-billion investment in EVs and mobility for the US market, and that included EV production. IHS Markit does forecast production of the Ioniq5 at the Alabama plant beginning in 2022, followed by the Ioniq 9 and the Kia EV6 in 2023 and Kia EV9 in 2024. Since taking office in January 2021, US President Joe Biden has announced more aggressive efforts for moving the US to EVs, and there are tax incentives proposed which would favour US production.

[EV Highlights] Geely Group's commercial arm unveils new-energy semi-truck concept

Geely Group's commercial vehicle (CV) brand, Farizon Auto, has unveiled its next-generation smart new-energy semi-truck, the Homtruck. According to a company statement, production and deliveries of the Homtruck are planned for early 2024. The company says that, with the semi-truck, it is focusing on efficiency, and driver and pedestrian safety. The Homtruck is to have a number of powertrain options, including range extender, methanol hybrid, and pure electric with battery-swapping option based on government standards.



Outlook and implications



WeChat



Auto VIP

Farizon Auto says it is focusing on producing clean- and new-energy commercial vehicles. The company's core products are light commercial vehicles, as well as urban buses and coaches. Farizon Auto's core drivetrain technologies are self-developed, with a focus on achieving zero-emission capability with pure electric solutions and range extension. If this semi-truck concept comes to reality, the Homtruck will be one of its kind in the medium and heavy commercial vehicle (MHCV) industry and could make Farizon a strong competitor to existing players such as TuSimple and Plus in the autonomous segment. The truck reportedly features Level 4 hands-off autonomous driving functions and will be capable of connecting to logistics network big-data platforms to enable drivers to obtain the most optimal orders in real time, analyse and track deliveries, and calculate operating costs along routes. Reportedly, the truck's interior includes a bathroom complete with a shower and toilet, as well as a single bed, refrigerator, tea maker, kitchen, and even a small washing machine. In addition, the truck features sensors such as lidar, millimetre-wave radar, ultrasonic radar as standard equipment, as well as 5G and V2X communication. The Homtruck is to be fully capable of receiving over-the-air software upgrades.



[GSP] North America Sales and Production Commentary -2021.10

North America sales

September 2021: -23.0%; 1.23 million units vs. 1.60 million units

YTD 2021: +13.9%; 13.82 million units vs. 12.14 million units

Auto production levels pressured by supply-chain issues continue to present the biggest immediate risks to auto sales levels within the region. Consumers, especially in the United States and Canada, have shown a great propensity to sustain spending levels, but even a strong consumer cannot overcome the limits of new vehicle availability. It is now assumed that the issues that have wreaked havoc on global light vehicle production levels will remain stubbornly sticky, certainly through the remainder of calendar year (CY) 2021, and likely through much of CY2022. The supply limits will leave an imprint on new vehicle sales and short inventory levels will linger for a while.

With a sales pace of 12.2 million units (seasonally adjusted annual rate: SAAR), light-vehicle sales levels in September continued to reflect the limitations foisted onto auto consumers by supply-chain constraints and subsequent slowdown in production levels. While consumer interest and buying conditions (beyond inventory limits and resulting impacts) have not changed much, auto sales are expected to continue to bump against lack of inventory levels through at least the first half of 2022. IHS Markit continues to expect very limited improvement from the supply side of the equation as the industry progresses through the fourth quarter 2021, with a growing likelihood that new vehicle demand will continue to be stymied moving through 2022. As such, the US light vehicle sales forecast has been lowered in the near term, with annual volume projections now sitting at 15.1 million units in 2021 and 15.5 million units in 2022, 390,000 and 282,000 units lower than the prior forecast release. Pent-up demand should be released at the beginning of 2023 and through 2025, with a peak market volume of 17.45 million units expected in 2024.



Canadian auto demand levels, while experiencing some month-to-month volatility, have realized the strongest year-to-date (YTD) growth result in the region, up by approximately 14%. Canadian consumers continued to sustain their capacity to spend, with those who are willing, ready, and being able to enter a new car purchase continuing to do so. However, harder lockdown provincial measures implemented in April and extended through May, especially in Ontario, along with vehicle inventory pressures, have caused a slight slowdown in the new auto sales recovery. The inventory pressures pushed against a sustained volume recovery as incoming September figures point to a year-on-year (y/y) volume decline of over 17%, while monthly volume was essentially even with the month-prior level at approximately 140,000 units for the month. While a surging housing market, economic reopenings, and consumers with plenty of room to spend set up the potential for buildup in pent-up auto demand levels, the current supply constraints will push against any demand momentum over the next 12 months. Canadian light-vehicle sales projections have been lowered modestly to 1.69 million units in



2021 and 1.72 million units in 2022, 20,000 units and 10,000 units lower, respectively, from the previous forecast release.

For three years before the current COVID-19 effect, Mexican light vehicle demand was leading in terms of auto sales declines in the region; the current situation adds additional pressure to an economy that is already stagnating. Auto sales in the country continue to reflect the weakest recovery levels within the region and CY2020 demand reflected a 28% decline for the year. Volume in 2021 has so far sustained this trend, with YTD volume up just over 13% through September 2021, the slowest YTD growth in the region. However, with September 2021 volume down by approximately 1% y/y, Mexican auto sales have realized the strongest results in the region over the past five months. Nonetheless, light vehicle demand in the near term will be stymied by supply constraints. Sales in CY2021 have been downgraded by approximately 50,000 units to 1.03 million units, with demand rising by 1.33 million units by 2024, eclipsing the level during the pre-COVID-19 CY2019.

Global light vehicle production was disrupted by the microchip shortage in the first quarter, among other supply-chain pressures, and the disruption is now expected to have downside impacts on demand levels through 2022. Stabilization of microchip supplies may not emerge until later next year and lost-production-recovery efforts will only start in earnest in the second half of 2022. This delicate balance between supply and demand will continue to constrain regional sales levels in the immediate term as reflected in the incoming sales results of the past four months. Regional sales are projected to increase just 4.6% in 2021 to 17.87 million units (down by 390,000 units from the previous forecast due to United States sales downgrade), followed by a supply-constrained growth of 2.2% in 2022 (down 282,000 units from the previous forecast). Pent-up demand should be released come 2023, with annual regional sales volumes projected to reach over 17 million units from 2023 to 2025, peaking at 17.8 million units in 2024.

North America production

September 2021: 30.5%; 0.95 million units vs. 1.37 million units

YTD 2021: 6.8%; 9.80 million units vs. 9.17 million units

The North American light vehicle forecast was revised down 0.9%, or 119,515 units, to total 13.0 million units for 2021, as the semiconductor supply chain took a greater toll on production at Toyota (down 19.9% versus forecast) and Honda (down 32.1% versus forecast) in September than the already discounted outlook for those manufacturers. Both manufacturers are expected to continue to face supply chain issues, with production at Toyota and Honda revised down 19.0% and 15.0%, respectively, in fourth quarter 2021. Conversely, Ford continued to show marked improvements in September, with production up 12.1% versus forecast, with General Motors (down 3.2% versus forecast) and Stellantis (up 2.4% versus forecast), relatively in line with previous projections. Improvements at Ford are expected to continue, with production in fourth quarter 2021 revised 19.9% higher, while GM remains relatively flat, with a marginal 0.8% increase and Stellantis revised higher by 7.8% for the quarter. Additional downtime projections across all manufacturers in the region contribute to the 38,233-unit or 1.2% decline forecast for fourth quarter 2021. Despite ongoing issues, manufacturers continue to focus their efforts on preserving production of their more profitable vehicle lines, with this pattern remaining evident despite weaker overall performances. Production in 2022 remains effectively unchanged, with production revised a marginal 5,186 units higher, totaling 15.24 million units, following the significant reductions implemented for the September 2021 forecast release. The October 2021 forecast continues to reflect those reductions more heavily weighted in the first half as expectations are for the supply of semiconductors to steadily improve throughout the year. While production is projected to improve over the low bases of 13.0 million in 2020 and 2021, production



WeChat



Auto VIP

will remain constrained by not only the shortage of semiconductors and their long lead times, but other supply chain—, logistics-, and worker-related issues hampering a return to more normalized production levels. Opportunities remain for manufacturers to outperform the reduced volumes in 2022 based on their ability to secure the needed components and resources to maintain vehicle production. This is expected to vary by manufacturer and by vehicle within a given manufacturer, with volatility and visibility into weekly planning and scheduling expected to remain problematic over the coming months. While cycles of short-term peaks and valleys in uptime and downtime are expected, the forecast reflects a more stable pattern derived from a manufacturer's ability to maintain production to date at any given plant while also factoring in forward visibility. Asian manufacturers will be eager on ramping up production in first quarter 2022 as that quarter aligns with the fourth and final quarter of their fiscal year. The industry will continue to struggle to keep pace with demand, with vehicles arriving at dealerships and being immediately sold, leaving little inventory restocking that is expected to continue through 2022. Based on the economic and demand fundamentals, production in 2022 theoretically needs to increase to nearly 18.0 million units to meet pent-up demand and restock inventory back to 3.0 million units. However, this will not be possible given the ongoing semiconductor shortage, along with other production constraints. Manufacturers will be able to get away with overbuilding, where possible, for the next two years, before getting into any trouble in terms of excess inventory, but constraints will prevent this from occurring in most situations.



[Supplier Trends and Highlights] Innoviz Technologies collaborates with JueFX to improve road safety and traffic alerts for autonomous vehicles in China

JueFX intends to install Innoviz's lidar on infrastructure to monitor real-time traffic and send alerts to autonomous vehicles



Source: Getty Images Plus/metamorworks

Innoviz Technologies announced its collaboration with JueFX, an innovative artificial intelligence (AI)-driven technology company focusing on developing location-based services (LBS) data engines and offering onboard applications for autonomous driving, in an official press release dated 3 November. JueFX intends to install InnovizOne lidar on traffic poles and bridges to monitor real-time traffic activity. The data will then be shared with autonomous vehicles on the road via JueFX's vehicle-to-everything (V2X) technology, improving road safety and traffic efficiency.

"We are excited to expand our technology collaboration with JueFX, the current market leader in V2X-enabled cars, and integrate our high-resolution, solid-state lidar into their vehicle-to-everything solutions," said Omer Keilaf, CEO and cofounder of Innoviz. "Lidar is well-known for its ability to enable safe automated and autonomous driving; however, attention is now being given to how it can improve V2X solutions—the missing piece of the autonomous driving puzzle. To create safer roads, autonomous vehicles need to be able to identify, categorize, and react to objects in their path as well as anticipate blind spots and what's to come."

Outlook and implications

The solutions provided by JueFX are centered on the digitalization of road scenes. The company's solutions allow for the integration of real-time sensor data with environmental data, as well as the combination of road data and a computing engine to form a rich data and decision platform. JueFX provides high reliability and high safety autonomous driving solutions for intelligent mobility by combining road data and edge computing. The company will install the InnovizOne onto traffic poles to monitor traffic in real time, using Innoviz's solid-state lidar sensor as its primary sensor.

Vehicle manufacturers developing highly automated and autonomous vehicles are the primary customers for JueFX's platform's roadside data and HD maps.



WeChat



Auto VIP

[Supplier Trends and Highlights] ADLINK Technology partners with Askey Computer to develop C-V2X solution

The collaboration integrates AI-enabled technologies and applications with 4G LTE/sub-6GHz 5G NR vehicle network connectivity, smart traffic lights, and signal controllers



Source: Getty Images Plus/ Natee Meepian

ADLINK Technology has partnered with Askey Computer, Institute for Information Industry (III) and Excellence Opto to develop and deploy an end-to-end cellular vehicle-to-everything (C-V2X) solution, it said in a press release on 27 October. The collaboration integrates artificial intelligence (AI)-enabled technologies and applications with 4G LTE/sub-6GHz 5G NR vehicle network connectivity, smart traffic lights and signal controllers.

“We are excited to work with our partners Askey, III and EOI to build and test the advanced C-V2X solution. We are seeing a strong momentum worldwide in developing and implementing C-V2X as the technology can substantially improve road safety, traffic efficiency and revolutionize logistics. And importantly, C-V2X can greatly accelerate technology innovation and commercialization of autonomous driving. A quick and broad adoption of C-V2X requires extensive collaboration of industry participants, which is why ADLINK is dedicated to building a comprehensive ecosystem. With a strong commitment to leading consortia, such as the Autoware Foundation and Open Source Robotics Foundation, we will continue our contribution to technology advancements of C-V2X, connected cars and autonomous driving,” said Henry Hu, director, Global Business Development for Networking, Communications and Public Sector, ADLINK.

Outlook and implications

The collaboration addresses challenges like data collection and communication to processing in real-time using ADLINK’s expertise in developing AI-enabled in-vehicle computers, private 5G networks, 5G edge servers, and intelligent edge infrastructure. The C-V2X solution integrates ADLINK’s AI-enabled in-vehicle computer platform with Askey’s onboard/roadside unit (RSU/OBU), III’s AI-enabled applications like image-based AI vehicle identification, tracking and warning technology, and EOI’s smart traffic light and traffic signal controller.

###



WeChat



Auto VIP

Email

AsiaPacificAutomotive@ihsmarkit.com

Local Automotive Site

中国（中文）：[IHSMarkit.com/China Automotive](https://IHSMarkit.com/China_Automotive)

日本（日本語）：[IHSMarkit.com/Japan Automotive](https://IHSMarkit.com/Japan_Automotive)

韩国（韩国语）：[IHSMarkit.com/Korea Automotive](https://IHSMarkit.com/Korea_Automotive)

Disclaimer

The information contained in this report is confidential. Any unauthorized use, disclosure, reproduction, or dissemination, in full or in part, in any media or by any means, without the prior written permission of IHS Markit Ltd. or any of its affiliates ("IHS Markit") is strictly prohibited. IHS Markit owns all IHS Markit logos and trade names contained in this report that are subject to license. Opinions, statements, estimates, and projections in this report (including other media) are solely those of the individual author(s) at the time of writing and do not necessarily reflect the opinions of IHS Markit. Neither IHS Markit nor the author(s) has any obligation to update this report in the event that any content, opinion, statement, estimate, or projection (collectively, "information") changes or subsequently becomes inaccurate. IHS Markit makes no warranty, expressed or implied, as to the accuracy, completeness, or timeliness of any information in this report, and shall not in any way be liable to any recipient for any inaccuracies or omissions. Without limiting the foregoing, IHS Markit shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with any information provided, or any course of action determined, by it or any third party, whether or not based on any information provided. The inclusion of a link to an external website by IHS Markit should not be understood to be an endorsement of that website or the site's owners (or their products/services). IHS Markit is not responsible for either the content or output of external websites. Copyright © 2020, IHS Markit®. All rights reserved and all intellectual property rights are retained by IHS Markit.

