



Automotive Industry Weekly Digest

29 March – 02 Apr 2021





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[OEM Highlights] SAIC Motor launches new tech brand R-TECH

IHS Markit perspective

Implications SAIC intends to create a new ecosystem for the development of its R-branded EVs, leveraging its partnerships with leading tech companies such as Alibaba Group, NVIDIA, Luminar, and Tencent.

Outlook The ES33 will be the first model powered by technologies introduced under the R-TECH brand. These new technologies are expected to deliver next-level user experiences in terms of automated vehicle operation, smart cabin, and intuitive connectivity system to R models.

SAIC Motor has launched its new technology brand R-TECH during a recent company event held in Shenzhen (China) to outline technology strategies for the automaker's R brand. As a highlight of the event, the automaker unveiled the ES33, a full-size sport utility vehicle (SUV) concept to be powered by new technologies introduced under the R-TECH brand. According to SAIC, the interior of the ES33 will be unveiled in April. The production version of the ES33, which will begin sales in the second half of 2022, will be fairly close to the concept model that is characterised by a lowered roof line, strong shoulder lines, and irregular-shaped fog lights. The automaker said it invested over CNY20 billion (USD3.07 billion) to develop the R-TECH during the past five years, which offers "the pluggable, replaceable and upgradeable hardware, the definable software available for purchase and sale, as well as the rechargeable, replaceable and upgradeable batteries", according to a company statement. Laser LiDAR startup Luminar will supply high-tech sensors and software to R-brand electric vehicles. Luminar's Iris LiDAR will be integrated into the roofs of R-brand vehicles, and its Sentinel software, which enables highway autonomy and automated safety capabilities in urban driving, will also be used. The production version of the ES33 will also be powered by NVIDIA DRIVE AGX Orin chip, which boasts 500 to 1,000 tera operations per second (TOPS) of computing power.



SAIC said that the R brand will expand its recharging services to vehicle users. Consumers will be able to find a public charging point through their mobile application within a radius of 1 km and the R brand will also introduce EV models featuring swappable batteries, which can be replaced in just two minutes.

Outlook and implications

SAIC intends to create a new ecosystem for the development of its R-branded EVs, leveraging its partnerships with leading tech companies such as Alibaba Group, NVIDIA, Luminar, and Tencent. The ES33, which will be the third model from the R brand, will be the first model powered by technologies introduced under the R-TECH brand. These new technologies are expected to deliver next-level user experiences in terms of automated vehicle



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operation, smart cabin, and intuitive connectivity system to R models. Future R models including the ES33 will feature replaceable and upgradeable hardware and software, according to SAIC. Vehicle owners, for instance, will be able to upgrade their batteries when higher capacity, or higher-density batteries become available. However, it is a bit of a disappointment that the production version of the ES33 will only be launched in the second half of 2022 and the charging services for the R brand will still be predominantly provided by SAIC's partners, including State Grid and StarChase. The rollout R models with swappable batteries, however, are likely to help SAIC grow the user base of the R brand by lowering the purchase price of its new models and enable fast recharging through battery swapping.



[Technology Highlights] Hyundai Mobis partners with Meridian Audio to offer premium-branded sound systems

Hyundai Mobis has announced a collaboration with Meridian Audio to deliver premium-branded sound systems to Kia, according to a company press release. The companies have designed premium sound systems for the upcoming Kia K8 sedan. Following this, Hyundai Mobis will supply the sound system to various global customers. "We are glad to work with Meridian, the symbol of craftsmanship and high-class quality, built on pioneering the premium audio market and high performance for more than 40 years. With the infotainment technology of Hyundai Mobis, we expect to advance into the global auto market," said Hyundai Mobis vice-president of global sales strategy Won-woo Lee.



Outlook and implications

Earlier this week, Meridian Audio announced that it is providing a purpose-designed 14-speaker surround sound system for Kia's new K8 model. Meridian Horizon is an upmixing technology, which provides a multichannel audio from two-channel stereo content, as well as centre image and ambience level controls for the user.

[Technology Highlights] Velodyne Lidar demonstrates PAEB system for pedestrian safety

Velodyne Lidar demonstrated a rider-based pedestrian automatic emergency braking (PAEB) system solution, according to company sources. In a new video released by Velodyne, the company's rider-based PAEB solutions perform well under all circumstances and were advantageous over radar and camera-based systems. Velodyne's PAEB solution is a combination of Velodyne's proprietary software and Velodyne's lidar sensor. The CEO of Velodyne Lidar said: "Our PAEB testing initiative clearly demonstrates that it is essential for regulators and laboratories to include nighttime situations in their PAEB assessment protocols." They added that, "Everyone, including car makers and drivers, will expect it to work effectively at night, when the most fatal accidents occur", and said that Velodyne's lidar data and Vella processing software has the "potential to save the lives of thousands of pedestrians annually."



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Outlook and implications

In the near future, the National Highway Traffic Safety Administration (NHTSA) could incorporate PAEB to its New Car Assessment Program (NCAP) under the Advanced Driver Assistance Systems (ADAS) head. Velodyne is one of the pioneers of LiDAR solutions for ADAS and AV applications. LiDAR sensors are necessary for AVs as they measure distance via pulses of laser light and generate 3D maps of the world around them. In February 2021, Velodyne Lidar and ThorDrive entered into a five-year LiDAR sensor supply agreement. In 2020, Velodyne signed major agreements including with Hyundai-Aptiv joint venture Motional for AVs, ThorDrive for autonomous industrial applications, and a smart city partnership with Qualcomm.



[EV Highlights] BorgWarner looking to expand electrification revenues

IHS Markit perspective

Implications	Automotive supplier BorgWarner has announced plans to increase its electric vehicle (EV) revenues to 45% of total revenues by 2030 and to achieve carbon neutrality by 2035. This is a significant shift from a prior balanced propulsion strategy.
Outlook	Several automakers have announced plans to shift to a full zero-emission or battery-electric vehicle future, while a number of EV startups have arrived and regulatory influences are also pushing for the propulsion shift, so it follows that some traditional suppliers are looking to make similar bets. With an increasing number of automakers strengthening investment in EVs and likely to pull many of the rest along, now could be a good time for suppliers to signal their commitment to this shift as well. In making the heavy transition now, BorgWarner expects to be able to capture a leading role in the industry.

Automotive supplier BorgWarner yesterday (23 March) announced plans at an investor day presentation to increase its EV revenues to 45% of total revenues by 2030 and to achieve carbon neutrality by 2035. BorgWarner has a sweeping plan to accelerate its electrification strategy to deliver organic and inorganic growth while maintaining high margins. Through a new plan called Project Charging Forward, the company targets revenue from EVs to grow from 3% of the total in 2021 to 25% as soon as 2025, and then to 45% by 2030. To get there, BorgWarner CEO Frédéric Lissalde said that the company will profitably scale electric light vehicles, expand into electric commercial vehicles (eCVs), and optimise its combustion portfolio by selling businesses with between USD3 billion and USD4 billion in aggregate revenue. With regard to scaling electric light-vehicle business, BorgWarner is targeting organic growth as well as pursuing inorganic growth to strengthen its capabilities. The supplier will adjust its combustion portfolio to focus on technologies “that support customers as they bridge to electrification, interconnect with EVs and have a strong financial profile,” it said. BorgWarner expects to increase its electric light-vehicle revenue to about USD8 billion in 2030 and about USD3.5 billion in 2025, with nearly half of the 2030 revenue as a result of merger and acquisition activity undertaken through to 2025. As for eCVs, BorgWarner aims to get involved as this segment develops, and targets revenue of about USD1 billion in 2025 and about USD2 billion in 2030. In 2021, BorgWarner’s electric light-vehicle business is expected to reach about USD250 million and its eCV business about USD100 million. To fund the merger and acquisition activity, BorgWarner expects to generate about USD4.5 billion in free cash flow between 2021 and 2025, prior to acquisitions and dispositions. The supplier says it has about USD5.5 billion available for merger and acquisition activity by 2025, from a combination of free cash flow generation, combustion dispositions, and available leverage.

In a statement, Lissalde said, “Our company’s 100-plus year history is a story of evolution, built on superior product leadership, an agile, decentralized operating model and disciplined financial and operational management. As we plan for the next decade-plus of profitable growth, now is the time to move away from a balanced propulsion strategy and accelerate our shift towards electrification. We believe the electrification opportunity is real, large, near term and important to our sustainability goals. We’ve been building toward capitalizing on this opportunity for years and are confident we have the scale, portfolio, financial strength and team to execute successfully.”



While the strategy involves acquisitions, BorgWarner also notes research and development (R&D) and capital spending for electric products (eProducts) of more than USD3 billion over the next five years. Before acquisitions, BorgWarner expects to allocate nearly 50% of R&D spending to eProducts. In 2025, BorgWarner expects its content-per-vehicle opportunity in the light-vehicle space to be about USD907 in combustion products, USD1,875 in hybrid products, and USD2,640 in EV content. BorgWarner's estimate also assumes USD100 billion in the total addressable combustible and hybrid market in 2025 and USD38 billion in the electric light-vehicle space; BorgWarner is looking to be a more significant player in the electric light-vehicle space in expectation of better positioning in the long term, even though in 2025 the larger addressable market will, according to BorgWarner's statement, be in the combustion and hybrid business.

BorgWarner's expectations for the eCV business are based on the premise that there is a natural opportunity to build on its existing technologies and capabilities. On the eCV business, BorgWarner identifies a total addressable market of USD29 billion in 2030, compared with about USD8 billion in 2021 (according to the company presentation, this estimate includes forklift chargers, batteries for trucks and buses, material handling, rail, marine, construction and mining, and inverters, motors, and eGear drives for global on-road EV trucks and buses, as well as off-road estimates). BorgWarner expects its existing customer relationships to also support penetration into a newer segment for the company. BorgWarner logically sees an opportunity to leverage its existing electric light-vehicle portfolio, as well as offerings for fuel-cell-based eCVs. BorgWarner expects that its components offerings in this segment could include e-motors, electric drive modules, on-board chargers, inverters, charging stations, battery modules and packs, and e-heaters. Of that total addressable market for eCVs, BorgWarner expects to capture about USD2 billion in revenue in 2030, with a combination of organic growth, as-yet-unidentified merger and acquisition activity through to 2025, and the pending Akasol acquisition.

BorgWarner's areas of focus for combustion products will be components that support customers as they bridge to electrification and technologies that interconnect with EVs and future mobility needs. BorgWarner will also prioritise strong margins, cash flow, and scale benefits. The businesses the supplier will look to dispose of will include those where it is not a product leader, those where there is low growth through to 2025, and those which have a "more challenged margin profile".





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BorgWarner's president of PowerDrive Systems, Stefan Demmerle, also laid out the components and systems areas in which BorgWarner expects to have an advantage. While the company is still working through the acquisition of Delphi Technologies and the integration of Delphi engineering is an area of near-term focus, engineering priorities will move towards execution and securing programme launches; the pursuit of growth; and the innovation necessary for future positioning. BorgWarner's product and system capabilities are core to the strategy, including inverters, motors, and gearboxes that create its integrated drive modules. In 2025, BorgWarner estimates a USD1.9-billion addressable light-vehicle outsourced market for the gearboxes that are the foundation for the drive module integration. The supplier will look to build on the advantage it has whereby its customers view it as a partner and product leader in the area, noting that the company's work on the Ford Mustang Mach-e integrated drive module showcases its integration expertise. With regard to electric motors, BorgWarner notes that they are part of the drive module, but also eCV expansion opportunities. In 2025, BorgWarner expects this will be a USD4.2-billion addressable light-vehicle outsourced market. BorgWarner has a range of motors to support 400V, 800V, and 48V applications, with technology that delivers superior power density. Along with the gearboxes and inverters, motors enable full module offerings, BorgWarner notes. BorgWarner also estimates that the addressable light-vehicle outsourced market will reach USD8.8 billion in 2025. The supplier expects its scale in electronics, proprietary inverter power module design, vertical integration, and speed to market means that it can deliver technology advantages that create value added for its customers. BorgWarner also notes that combination units of other power electronics will create another USD9.7 billion in addressable light-vehicle outsourced opportunities in 2025. Combination units such as a combined dual inverter, DC/DC converter, and hybrid supervisory control ECU that BorgWarner already has in production can also be applied to either 400V or 800V batteries. In the near term, BorgWarner expects electric propulsion revenue growth opportunities from inverters globally, integrated drive modules in Asia, and eCV opportunities.

Outlook and implications

Several automakers have announced plans to shift to a full zero-emission or battery-electric vehicle future, while a number of EV startups have arrived and regulatory influences are also pushing for the propulsion shift, so it follows that some traditional suppliers are looking to make similar bets. This is also a long-term strategy, as in the next few years we are likely to see more EVs on the market than consumers ready to buy them, particularly in North America. BorgWarner has laid out a clear plan with clear terms for measuring its own success (45% of revenue to come from EV systems); with an increasing number of automakers strengthening investment in EVs and likely to pull many of the rest along, now could be a good time for suppliers to signal their commitment to this shift as well. BorgWarner's planning assumptions include a forecast of global light-vehicle sales of 102 million units in 2030, with 36% using traditional combustion systems, 34% using hybrid propulsion systems, and 30% EVs. In making the heavy transition now, BorgWarner expects to be able to capture a leading role in the industry.



For BorgWarner, this is a significant shift from a prior balanced propulsion strategy including combustion, hybrid, and electric vehicles. Although BorgWarner at this point has not identified which businesses it will divest or which it plans to acquire, the company has pointed to acquisitions since 2015 that have increased its EV capabilities. These include Remy for electric motors, Sevcon for industrial-focused power electronics, RMS/AMRacing for electronics for startup EV customers, Romeo Power Technology for battery packs and modules, Delphi Technologies for its power electronics and software, and the latest pending acquisition of Akasol, also for battery packs and modules. BorgWarner says that these acquisitions, in addition to its own product portfolio in 2014, will lead to the opportunity to supply about USD2,640 in content per electric light vehicle, with USD1,614 of that coming from the combination of the Delphi and Sevcon acquisitions.

BorgWarner expects to increase its revenue even with the plans for the disposition of some combustion business. In its investor presentation, BorgWarner said that it expects revenue to grow from USD15 billion in 2021 to USD18 billion in 2025 and more than USD22 billion in 2030. The increase from 2021 to 2025 presumes that BorgWarner will see organic and acquisition growth collectively of between USD6 and USD7 billion, with revenue lost to dispositions amounting to between USD3 and USD4 billion. In addition, BorgWarner will be able to redeploy capital from the dispositions and increase its focus on EVs. Investments and capital allocation will continue to maintain return on invested life-of-project capital focus, chief financial officer Kevin Nowlan noted, even though the company believes that EV investments can have longer return profiles. Between 2025 and 2030, the supplier expects growth to be a result of its new market mix. The company also anticipates maintaining a double-digit margin with the shift.

[EV Highlights] SEAT announces plans for new BEV city car, production at Martorell

IHS Markit perspective

Implications SEAT has announced plans for a new battery electric city car to be built at its Martorell facility as part of the VW Group's wider electrification strategy.

**Outlook**

The volumes suggested by vehicles based around this project are hugely ambitious, and would seem to indicate either an expansion at the site or a pivot away from some of its current models to accommodate. However, the plan is currently dependent on support from the Spanish government and the European Union via the region's COVID-19 virus pandemic relief fund.

SEAT has announced that it will launch a battery electric city car by 2025, as part of the brand's Future Fast Forward plan presented at its 2021 Annual Press Conference that took place yesterday (22 March). According to a statement, the “urban electric vehicle” will be priced between EUR20,000 and EUR25,000 and be built at its Martorell (Spain) facility at a rate of up to 500,000 units. In comments related to the announcement, SEAT president Wayne Griffiths said that the vehicle will not only be developed and built at its facilities to sell under its own banner, but will also be used by other Volkswagen (VW) Group brands.

The company said that as well as being significant in production scale, “it represents an important milestone on the road to sustainability and the fight against climate change and aims to become the engine for the transformation of the Spanish automotive industry.” With this in mind, it has said that the project includes the creation of an electric ecosystem, stimulating demand and developing public charging infrastructure, and that the next step is to focus on localising the battery electric vehicle (BEV) value chain, starting with the “electric battery ecosystem”.

The project includes 15 partners within at least six sectors that will support the plan. As well as SEAT, this will include component suppliers Antolín, Delta Vigo, Ficosa and Gestamp; technology businesses Aeorum and Mind Caps; robotics companies Asti Mobile Robotics and Sayer Technologies; financial institution CaixaBank; tooling company Fisas Navarro; energy supplier Iberdrola; mining company Lithium Iberia; logistics firm Sesé and telecoms business Telefónica.



However, Griffiths added, “The support of the Spanish Government and the EU Commission for this cross-sectorial and nation-wide plan is needed for the Volkswagen Group to be able to take the final decision on its execution”. It has been previously suggested that this would be partly funded from the EUR140 billion that will be provided by the EU to Spain as part of the COVID-19 relief fund which is designed to boost sustainability in the region.

The same event also brought confirmation that the Cupra brand will benefit from a second BEV following the launch of the Born at the end of the year. Griffiths has said that this will be the Tavascan, which was previously shown as a concept at the 2019 Frankfurt Motor Show. This will be based on the VW Group's MEB architecture for sale in Europe and overseas markets in 2024.

Outlook and implications



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The announcement with regards to SEAT's future has come as the brand has revealed that it is hopeful for a positive 2021 after the challenges presented by the coronavirus disease 2019 (COVID-19) virus pandemic during 2020. During that year, SEAT's sales revenues fell by 21.3% y/y to EUR8,784 million, as it sold 427,000 units, a fall in demand of 25.6%. It added that this drop had been expected as some of its most important markets such as Spain, UK and Italy have been the worst affected. The company said that this had caused its operating income to fall from a profit of EUR352 million in 2019 to a loss of EUR418 million, while profit after tax dropped from EUR346 million to a loss of EUR194 million. It noted that its operating results were negatively affected by emissions-related expenses of over EUR260 million.

Griffiths has said that the automaker's goal for 2021 "is to increase sales and recover our volumes to pre-COVID levels" before adding, "In 2021 we must return to profitability. This is our financial target. We're working hard to be in black figures as soon as possible." He noted that "key levers to achieve profitability in 2021 will be an increase in the PHEV [plug-in hybrid] mix and the launch of the fully electric CUPRA Born, which will enable us to achieve our CO2 targets." The senior executive has also said that the company will "put our attention on reducing overheads and on revenue management, by focusing on the most important markets and channels."



The Cupra brand is expected to play an important role in this as it helps broaden the automaker's range at higher price point. After selling 27,400 units during 2020, an increase of around 11% y/y, which helped to lift revenues to EUR900 million, it is forecasting this to double during 2021, boosted by a full year of Formentor and new generation Leon sales alongside the Born BEV. Overall, the share of SEAT volumes made up of the Cupra brand is expected to grow from 5% to 10%.

Beyond this point, broadening SEAT's BEV portfolio was inevitable given the VW Group's strategy and the announcements that have been made by its sibling brands in recent days at similar events. The Cupra Tavascan is expected to be built alongside the Cupra Born; VW's ID.3 and ID.4; and Audi's Q4 e-tron, to which it will be closely related. IHS Markit forecasts that production of this compact crossover will be around 12,700 during its first full year on sale in 2025, but will steadily rise to a peak for the first generation of just over 20,000 units per annum towards the end of the decade.

More interesting though, is the planned city car. This ambitious project is something that SEAT has confirmed will be largely developed at its own technical centre. IHS Markit forecasts that two SEAT brand models are set to be built on this entry-level BEV architecture, referred to in our data as MEB-Entry. These will be a sub-compact crossover followed by a hatchback. We also currently expect them to be joined by an Audi-branded sub-compact crossover. However, the production numbers referred to by SEAT indicate volumes for this project that are far more ambitious than we have for these vehicles. Indeed, this would actually be around the production volume of the site seen in 2020 which included the SEAT Ibiza, Leon and Arona and Audi A1. This suggests either that the plant will pivot away from some of these models when they are replaced to other VW Group brand vehicles, or that expansion at the site is on the horizon. The fact that the entire site would become BEV only in time is almost inevitable, given



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the direction of travel of the automotive industry and specifically the VW Group. Indeed, the German automaker announced a couple of weeks ago that BEVs will account for more than 70% of its total European vehicle sales by 2030, compared with a previous target of 35%. If it did scale up to produce BEVs at this level, it would seem likely that it would benefit from the one of the six battery facilities that it plans to set up in Europe by 2030 which could also supply the VW Group's vehicle production facility in Pamplona (Spain) as it makes its own transition towards BEVs.



[GSP] Global Sales and Production Commentary -2021.02

Global sales

January 2021: +0.8%: 6.53 million units vs. 6.48 million units

- COVID-19 recovery cycles will be largely determined by the path of the pandemic, including progress on vaccine programs. Many markets have been forced to extend restrictions, which could limit automotive recovery prospects. The crisis is intensifying operational and economic pressures on an already-stressed global automotive industry, especially as OEMs and suppliers fine-tune strategies toward coping with “new normal” demand levels. Ongoing rollouts of fully tested, clinically authorized vaccines are progressing across many key regions while many are experiencing declining levels of COVID-19 virus infections. Hopes are building that effective rollouts of COVID-19 vaccines should accelerate across the world through first quarter 2021 and be widely available by midyear.
- Global economic growth slowed in January as COVID-19 containment measures were tightened in several regions. The JPMorgan Global Composite Output Index (compiled by IHS Markit) fell 0.4 point to 52.3, reflecting decelerations in both services and manufacturing. Global real GDP posted an estimated 4.0% contraction in 2020 and is projected to increase 4.4% in 2021 and 4.1% in 2022 (no change). The price of Dated Brent crude oil is expected to rise from an average of USD42 per barrel (/barrel) in 2020 to USD48/barrel in 2021 and USD56/barrel in 2022.
- Runaway virus levels and stringent lockdown restrictions decimated 2020 automotive demand. The low point of the current cycle was in April 2020, down 46% year on year (y/y). Sales fell by 33% in May, 14% in June, 5% in July, and 10% in August; rose by 2.8% in September and 2% in October; and fell by 2.6% in November. Estimates for December sales suggest a 1.3% increase, with some markets back in lockdown owing to rising COVID-19 cases. Full-year 2020 global demand posted an estimated 76.8 million units, down by 14.4% (mild upgrade).



- Benchmarked against the IHS Markit pre–COVID-19 forecasts made in January 2020, COVID-19–related downgrades for 2020 represent over 12 million units of losses compared with potential global auto demand. Compared with a two-year peak-to-trough decline of 8% during the global recession in 2008/09, this highlights the sheer scale of delayed and destroyed demand from the COVID-19 crisis.
- While the world is expected to emerge from the gloom in 2021, IHS Markit remains cautious on recovery prospects. Some markets appear close to double-dip recessions, notably the eurozone, reflecting an economic fallout from additional virus control restrictions (lockdowns). Many governments have support and stimulus packages in place to help economies through the healing process, some with targeted auto



stimulus programs. Global demand for 2021 is set at 84.4 million units, up by 9.9% y/y (no change). We continue to monitor the semiconductor shortage, with the possibility that supply chain pressures will extend into second quarter 2021.

- First in, first out—effective pandemic containment enabled an impressive demand rebound for mainland China, with full-year 2020 demand estimated at 23.6 million units, down by 4.7% y/y. Bright spots included premium demand and the light commercial vehicle (LCV) sector, with LCV sales buoyed by a six-month delay to the China-6 emissions deadline. The 2021 forecast is unchanged at 25.1 million units (up 6.2% y/y), although some auto incentives are phasing out and the mainland Chinese authorities have been forced to deal with some localized COVID-19 resurgences.



- Despite elevated COVID-19 levels, US auto demand continues to recover, supported by OEM/dealer incentives, online sales, government stimuli, the new presidency, and improving economics. The year 2020 posted 14.6 million units, down 14.6% y/y. Demand in 2021 will benefit from a higher starting point, optimism on effective vaccines, and a fresh stimulus package—with an unchanged forecast of 16.1 million units for 2021 (up 10.6% y/y). Forecast risks include still-weak fleet sales and tight inventories; risks to restocking efforts include component shortages or further virus restrictions in first quarter 2021.
- European recovery prospects appear mixed into 2021, with worrying virus levels, post-Christmas restrictions, and concerns for some countries' vaccine rollouts. Total Western and Central European automotive demand for 2020 posted 13.8 million units, down 23.7% y/y. Some government auto stimulus measures from mid-2020 remain in play, especially for the Big 4 EU markets, and the UK-EU trade deal emerged broadly in line with IHS Markit expectations. Vaccine programs should help recovery momentum and confidence through 2021, with the forecast set at 15.46 million units, up by 12% (no change).

Global Production

January 2021: -2.5%, 6.58 million units vs. 6.75 million units

It normally takes time to finalize production volumes around the world after the end of the calendar year. Many 2020 numbers will remain forecast estimates at this stage and for much of the first quarter. This month the forecast for 2020 was upgraded by 90,000 units, over the January setting to 74.59 million units, which is 16.1% below the level reached in 2019 and the lowest level since 2010. The February forecast reflects upgrades for Japan/Korea and Middle East/Africa, which are offset by downgrades for Greater China, North America, and South Asia; Europe and South America are effectively flat. Despite these adjustments, the full year outlook should show a significant 13.4% improvement over 2020 levels at 84.61 million units, or a 10.01-million-units increase on last year.

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[Supplier Trends and Highlights] Vitesco develops new master controller motion for powertrains

The controller simplifies the electronics architecture in all powertrain topologies



Source: Vitesco Technologies

Vitesco Technologies has developed a new master controller for automotive powertrains to reduce the number of networked ECUs, the company said in a press release on 23 March. The new master controller features technology that allows integration of individual sub-functions, also by over-the-air (OTA) updates.

“The current complexity of many networked stand-alone ECUs in the drivetrain domain can be better managed with a central controller and by software. For that purpose, you have to develop the future hardware so that it matches the requirements of the software and is scalable. This is what we do with the Master Controller Motion. Like a small server, it delivers everything that makes the vehicle drive. Single functions can be flashed onto the MCM individually, and they can be updated at any time. Because it is a single component, the MCM is easier to integrate into the vehicle than a whole ECU network. This is the future of the powertrain,” said Wolfgang Breuer, EVP, Electronic Controls business unit at Vitesco Technologies.

Outlook and implications

The controller simplifies the electronics architecture in all powertrain topologies. Vitesco is also developing zone controllers, which execute master controller commands on an intermediate architecture level. Combined, these controllers will cover the entire scope of future drivetrain E/E architecture requirements in the vehicle.

“Tested embedded apps can be installed individually for each vehicle with this technology. Also, individual apps can be updated at any time, for instance, when a charging standard changes,” said Markus Hackelsperger, head of Product Group Management, Electronic Products, Vitesco.

[Supplier Trends and Highlights] Garmin to integrate Alexa Custom Assistant into in-vehicle infotainment systems



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Garmin OEM clients include BMW Group, Daimler, Ford, Honda, Toyota, and Geely



Source: Getty Images Plus/ metamorworks

Garmin has announced a partnership with Amazon under which it will integrate Alexa Custom Assistant into its in-vehicle infotainment systems, a company press release dated 23 March read. The Alexa Custom Assistant technology will be available on Garmin's latest infotainment solutions, which are built on Qualcomm's latest generation chipsets. However, automakers will still work with Amazon directly to create their custom wake word and voice for their Alexa Custom Assistant implementation.

"Garmin is honored to be the first tier-1 auto OEM supplier to integrate Alexa Custom Assistant capabilities into in-vehicle infotainment and navigation systems. This collaboration allows Garmin's voice solutions team to provide leading automakers with a custom intelligent assistant using Amazon's industry-leading AI technology. Garmin has collaborated with Amazon on several projects, and we look forward to continuing our strong relationship," said Matt Munn, Garmin Auto OEM managing director.

Outlook and implications

Garmin provides infotainment systems, navigation software, voice recognition and other electronics to OEMs including as BMW Group, Daimler, Ford, Honda, Toyota, and Geely.

"Our collaboration with Garmin marks an important milestone as we scale global access to Alexa Custom Assistant. Garmin deeply understands the unique challenges and opportunities that automakers face as they develop and integrate the next generation of connected digital cabins, and we're excited to extend our collaboration to deliver bespoke, best-in-class customer experiences without the investment, long development cycles, and resources required to build it from scratch and maintain over time," said Ned Curic, VP, Alexa Automotive.

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