Thu, 16 January 2025
Weekly Newsletter

DVN
Interior

NEWSLETTER #244

Editorial

DVN At The Center Of Car Interiors

DVN IMAGE

The BMW Panoramic vision show was extremely innovative, from a product standpoint, and from BMW key message standpoint. We present the product in this week's Newsletter. But even more important is the message underlined by the show itself. The story was about shrinking presenters and visitors to cockpit scale. This bit of magic is supported by the BMW cockpit mockup at 10× life size.

This exercise demonstrates the BMW Panoramic Vision screen to be the centerpiece of the new system, when the new BMW Operating System X acts as an intelligence hub for the vehicle.

“High tech meets highly intuitive operation, a quarter of a century of pioneering work and technological leadership in operating concepts has been channeled into the new BMW Panoramic iDrive,’ said Frank Weber, member of the board of management of BMW AG, responsible for development.

That’s the very strong story for BMW, and also the strong story for the whole CES, with multiple technologies focused on safe, healthy and entertainment mobility, mostly existing around HMI and cockpit. And also a strong story for DVN Interior, when I’ve been shrunk to publish what becomes really in-depth!

We hope you enjoy these news, after the one published last week. And many additional news will be included into our upcoming DVN report, due in a couple of weeks. Stay tuned.

Sincerely yours,

Philippe Aumont
DVN-Interior General Editor

In Depth Interior Technology

DVN-I at CES '25: The Rest of the Story

LAS VEGAS CONVENTION CENTER, WEST HALL (DVN IMAGE)

CES represents the automobile industry, and this show is important, even if there are fewer automakers and suppliers exhibiting. CES was a bit of a new place to be, for car manufacturers. If you didn't want to be seen as an old-fashioned manufacturer, you had to show your face at CES. It is still the case, as most of industry leaders are still attending even if the market background is not very shiny!

With fewer automotive exhibitions, overall booth density in the West Hall—dedicated to mobility—was lower, with a few empty spaces. However, numbers are still striking: about 141,000 attendees; 6,000 members of the media, and 4,300 exhibitors, including about 1,500 startups. Among this last group, the Korean tech delegation was very noticeable as it occupied about 25 per cent of Eureka Park, the hall dedicated to startups.

Automaker Presence

BMW, Honda, Zeekr, and Suzuki were the highlights. And from a car interior perspective, BMW was really the star; for the product itself, and how is presented, putting car interior at the center of their communication story!

BMW Panoramic iDrive

BMW Panoramic iDrive cockpit is a pillar-to-pillar projection display combined with a large center screen and an optional head-up display. This new layout will be introduced in 2025 on Neue Klasse, first in the iX3.

BMW Group showcased the close-to-production version of the new BMW iDrive with Panoramic Vision, powered by BMW's latest Operating System X.

The new iDrive merges four central elements into a display and operating concept. The main feature is the Panoramic Vision, a head-up display concept newly developed by BMW for projecting content. It reflects information from A-pillar to A-pillar onto a black printed surface in the lower section of the windshield. This information will be visible to all occupants.

The important driving information will be projected into the driver's line of sight on their side of the car, above the steering wheel. The driver can personalize the content in the central and passenger-side areas via the central display. The integration of the BMW Panoramic Vision creates a 3D effect for the occupants. The head-up display above the Panoramic Vision also shows integrated navigation and automated driving information directly in the driver's field of vision.

The Panoramic Vision is easy to operate. As many as six widgets (selected content) are possible and can be arranged as desired. A new multifunction steering wheel uses BMW's shy-tech approach: relevant buttons are illuminated to highlight available functions. The steering wheel serves as the primary physical control, and its buttons provide active haptic feedback.

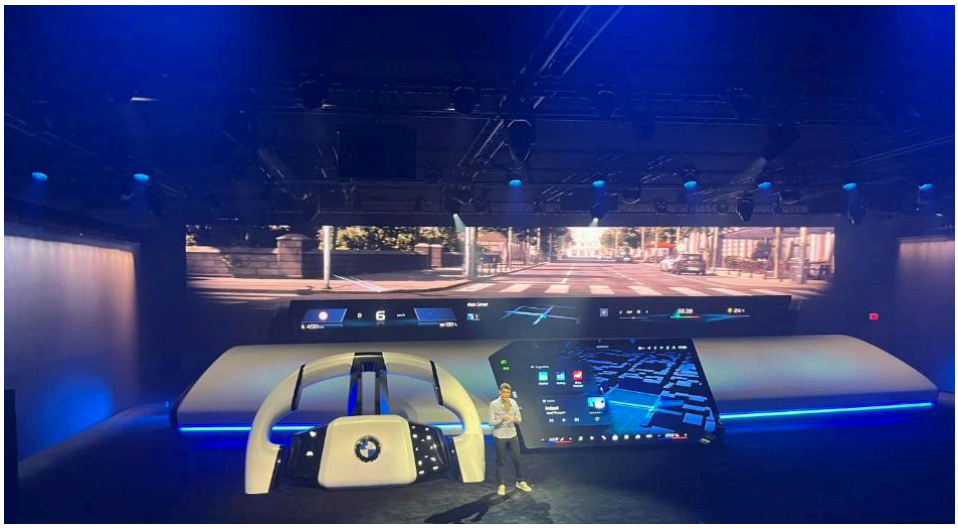
The new design uses an optimal combination of analog and digital controls through the use of switches, buttons, touch and voice control. There are haptic switches for the windshield wipers, turn signal indicators, exterior mirrors, volume control, gear selectors and window de-icers (in accord with the new Euro NCAP initiative to encourage non-touchscreen controls for those functions). Other functions are optimized for operation using touch/voice control or via the steering wheel, such as telephone functions, media control systems, navigation, assisted driving, personalization of displays, etc.

BMW says the development phase included numerous studies conducted in the brand's usability labs, in which around 3,000 customers were involved. "High tech meets highly intuitive operation—a quarter of a century of pioneering work and technological leadership in operating concepts has been channeled into the new BMW Panoramic iDrive," said Frank Weber, member of the Board of Management of BMW, responsible for development.

BMW has opted for a mixture of voice, haptic buttons and touch points. Buttons are still helpful despite all the digitalization. There are haptic controllers for indicators, seat settings and volume, for example.

The new BMW Operating System X is based on an Android Open-Source Project (AOSP) software stack. It is stated to offer greater update and upgrade capability than the prior system.

The BMW Operating System X works together with the Panoramic Vision, optional 3D head-up display, central display, and multifunction steering wheel in such a way that physical and digital experiences merge.

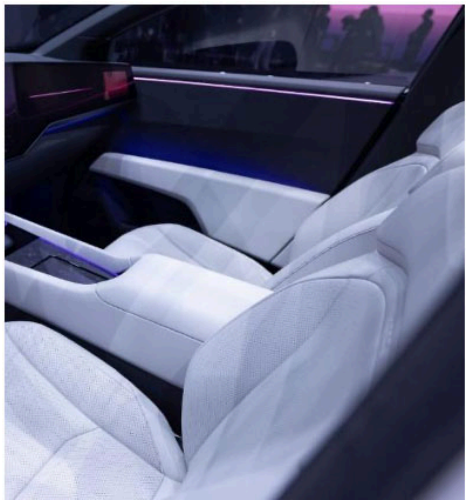


DVN IMAGE

It was introduced to the public in a very Vegas type of show, putting on stage a 10× life size cockpit, presented by a comedian, backed up by experts with a story for spectators to be shrunk, to dimensional consistency with the cockpit. BMW spent millions to make that story exist; their big exhibition area had just two cars on the side, and this Panoramic Display show at the center of stage. It really reflects the importance of user experience within the vehicle.

Honda

Honda showcased the first two models from its 0 Series line of BEVs, a midsize crossover and a low, wedge-shaped sedan with a daring design. The vehicles made their first appearance at CES 2024. Interiors were not visible, as the cars were not opened. Production will begin in the company's US EV hub in 2026.



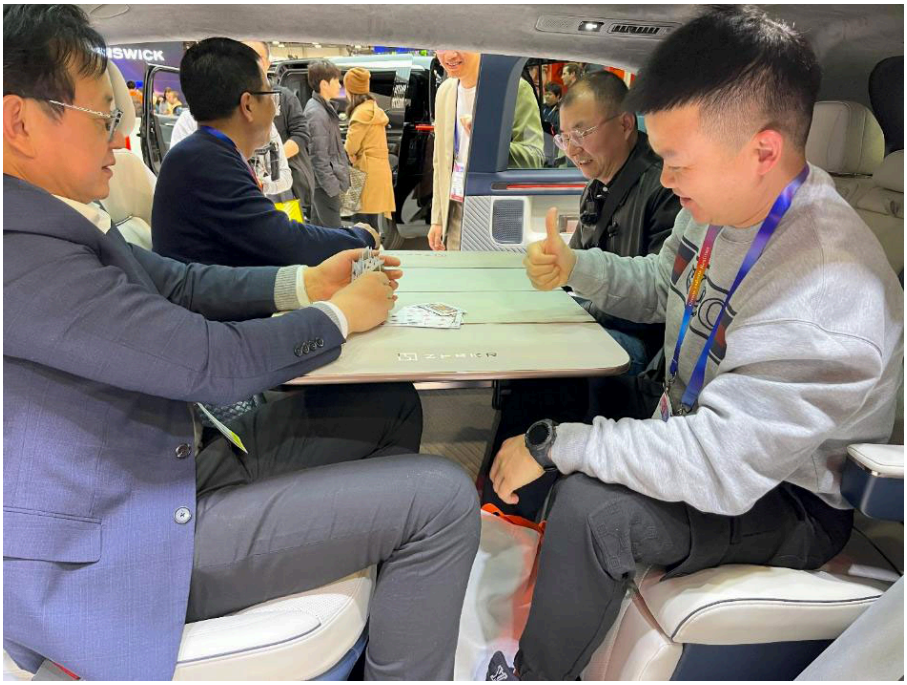
Sony Honda Mobility's Afeela presented the launch version of their first vehicle, the Afeela 1 sedan, fitted with a pillar-to-pillar physical display. It featured a lidar and two cameras mounted on the roof. Deliveries will start in California mid 2026, initially with a version priced at USD $103k and a targeted range at 500 km with a 91-kWh battery. The car is available to order and will be distributed via a direct-to-consumer model.

Zeekr

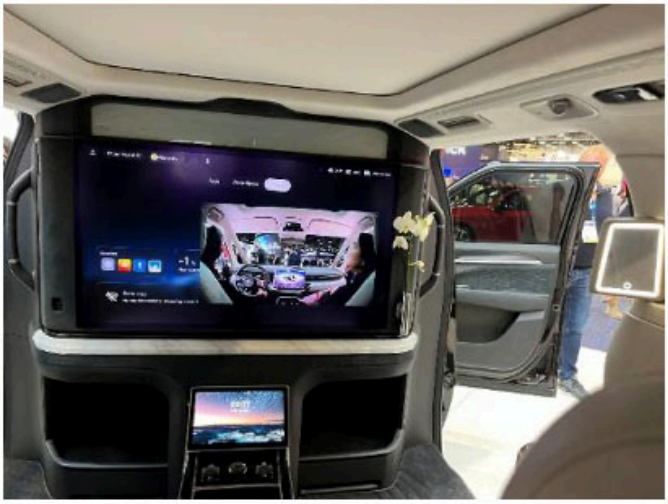
ZEEKR BOOTH (DVN IMAGE)

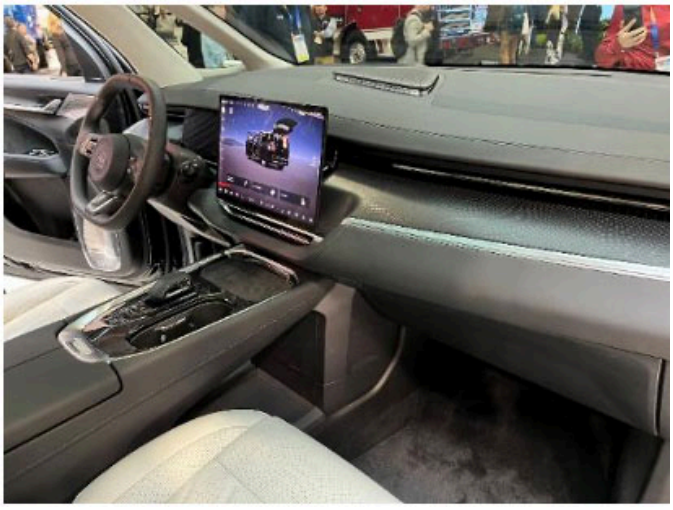
ZEEKR 001 (DVN IMAGE)

Zeekr, the young Geely subsidiary, had a strong presence with three vehicles on display, including the 001FR capable of 0-100 km/h in 2.02 seconds as well as an EV charging setup. Zeekr also announced the release of an Nvidia Thor-based driving kit for the cars it will deliver to Waymo in the US this year. The fast-growing brand sold 222,000 vehicles in China as well as through 500+ showrooms abroad.

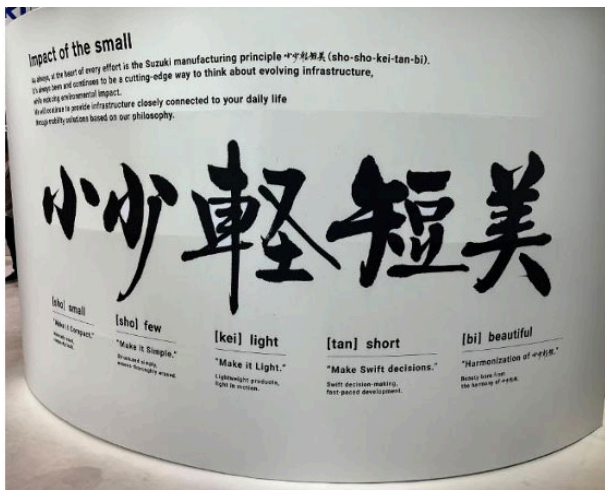


ZEEKR MIX SALOON (DVN IMAGE)





ZEEKR 009 WITH CINEMA SET UP IN THE REAR (L), COCKPIT (R) (DVN IMAGES)



SUZUKI EV CONCEPT (L), IMPACT OF SMALL BOARD (R) (DVN IMAGES)

Suzuki unveiled an EV concept, within a “Impact of the Small” lineup, featuring compact vehicles and cutting-edge autonomous tech. Impact of Small is Suzuki contribution to less impactful mobility, thanks to small, simple, light, short, but beautiful, principles to be applied to product design, manufacturing processes, and city infrastructure.

SCOUT INTERIORS (DVN IMAGES)

Scout presented their very first products, the Traveler SUV and Terra pickup, both built on the same platform. BEV and EREV versions are offered; the latter was added recently to address the current resistance towards BEVs. Ranges are estimated at 560 and 800 km, respectively. These vehicles, which will be distributed via a direct-to-consumer model, will be VW Group’s first to benefit from the Group's partnership with Rivian to share zonal and domain electronic architecture and software.

Tier-1 suppliers

VALEO PANOVISION (DVN IMAGE)

Valeo maintained their full presence with two sites, featuring a wide range of technologies. Valeo also announced a partnership with AWS, aiming to reduce SDV development time by 40 per cent. Their main interior feature from their Brain division is Valeo Augmented Panovision, hidden displays are projected onto the windscreen to keep the driver’s attention focused on the road. It includes seeing machines DMS engine to detect drowsiness, and infotainment options when the vehicle is not in use. And an in-car demonstrator was presented in front of the Center Plaza booth.

OPmobility had a strong presence, doubling the size of its previous booth. The €11bn French supplier showcased technologies ranging from lighting solutions (including the first Adaptive Driving Beam for the US market), to displays integrated in body panels and leveraging SDV capabilities, battery packs, modules, H2 tech and more. Several solutions were developed in partnership with startups like Sonatus.

Continental showcased several technologies. Among those several have been reported in last week edition; 'Intelligent Vehicle Experience Car', and "Emotional Cockpit" with Swarovski.

Interior

Key takeaways on Interior, besides the BMW demonstration:

Augmented Reality (AR) on the windshield

AR is conquering vehicles, especially windshields, with various technologies, because it is an ideal and elegant interface to provide drivers with relevant information and increase safety.

Driver Monitoring and other sorts of comfort and health monitoring

The amount of new driver monitoring systems was impressive—as was the potential that results from the data generated. This can be used to develop features that not only support drivers, but also significantly improve general road safety.

Comfort & Wellbeing everywhere

Comfort is being redefined: from massage chairs to individually adjustable LED concepts. The car of the future will become an oasis of well-being and entertainment that could soon compete with the living room in terms of coziness.

Voice activation

Voice activation has been on table for decades, with many first applications along time, which were not very smart. Now, it seems we are getting smart voice HMI interaction thanks to LLM, and natural language supports. It will help simplify interactions, reduce buttons and touch screens, and overall distraction for better safety.

Hyper-personalization

Thanks to 'AI', countless possibilities open up to adapt the vehicle to the individual preferences of the user. From 'AI'-generated wallpapers to experience programs and personalized driving profiles, the car becomes the perfect companion.

SDV

The software-defined vehicle (SDV) is increasingly in companies' messages. However, we are still in the early stage of deployment, mainly with dedicated hardware and software presentations. 'AI' is even more present than in 2024, though such solutions were not very visible yet. Nvidia's CEO made very ambitious announcements, touting the massive demand growth yet to come for their chips to support 'AI' training and inference needs, including for autonomous and assisted driving where the company intends to play a key role (e.g., use generative 'AI' to create driving scenarios).

AWS (Amazon Web Services, the cloud division of Amazon) has a big presence in the car, since their cloud is the biggest. They also do a part of computing. In any case, everything is digitalized, everything is connected, and everyone needs a cloud. We are erasing the boundaries between physical and digital. Google has almost no presence at this year CES.

Robotaxis

Robotaxis are reflecting progress toward L^4 and L^5 automation, the ultimate goal that CES has showcased for years now. Robotaxi players were present with Waymo and Zoox, as in 2024. This mobility mode is quickly gaining in maturity with Waymo reaching 175,000 paid rides per week between Phoenix, San Francisco and Los Angeles, and launches are planned in Austin, Atlanta, Miami and Tokyo. The company displayed the existing Jaguar iPace as well as the Zeekr and Hyundai vehicles which will be operational in 2025 with Waymo's Gen 6 HW and SW. Zoox presented their purpose-built vehicle which will be used for commercial rides in San Francisco and Las Vegas in the coming weeks.

As said, these technologies support mobility to be more comfortable, personalized, and safer. And the emphasis is on doing! Demos and showcases are all well and good, but in the end, what counts is what actually ends up in the product and inspires customers. We are, at DVN Interior, excited to see what progress we'll see all along the new models until next CES!

Interior News

Ceres, Eastman, Covestro to Boost Holo-Transparent HUD

INTERIOR NEWS

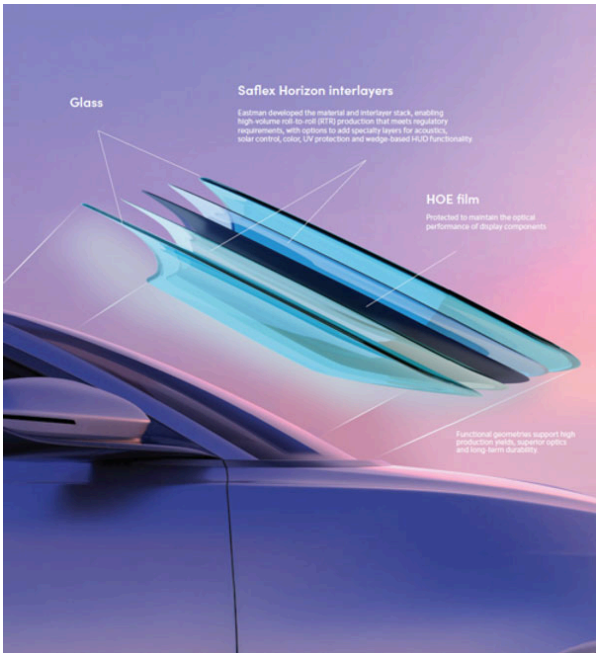
DVN IMAGE

Eastman, Ceres Holographics, and Covestro have signed a memorandum of understanding (MOU) to explore the commercial production of the cutting-edge holographic in-plane transparent displays (HIPTD) laminated solution for automotive and transportation glazing applications they have jointly developed. This collaboration focuses on enabling next-generation HUDs, addressing the growing demand for enhanced convenience, safety, and user experience features among automakers.

EASTMAN-CERES CES TEAM WITH DVN INTERIOR (DVN IMAGE)

These new displays overcome the performance, size and geometric limitations of traditional HUD systems, enabling the practical and scalable implementation of multiple displays in one windshield and elsewhere in side-light glazing. Proofs of concept developed with automakers were showcased at CES.

Eastman employs approximately 14,000 people around the world and serves customers in more than 100 countries. The company had 2023 revenue of approximately USD $9.2bn and is headquartered in Kingsport, Tennessee, USA. Ceres Holographics and Covestro are well known to DVN Interior members. The partnership aims to accelerate the commercialization of the HUD solution, with Eastman leveraging their relationships with automakers and tier-1 suppliers.



EASTMAN-DEVELOPED HOE INTERLAYER STACK (CERES HOLOGRAPHICS IMAGE)

In 2024, Ceres and Eastman demonstrated the latest holographic transparent display HUDs to automakers in Europe, the USA, and China. These HUDs featured multiple transparent displays within a single, fully laminated windshield, each measuring up to 40 × 30 cm. Custom-designed holographic optical elements were incorporated into a single sheet of Bayfol HX film, laminated with Eastman's new developed interlayer stack, achieving the industry's largest field of view.

This achievement was enabled by combining Covestro's expertise in photopolymer films, Ceres' digital mastering and HoloFlekt roll-to-roll replication system, which produces finished films up to 140 cm wide, and Eastman's solutions to encapsulate functional films into automotive approved laminates.

At the SID2024 conference, Ford reported on their two-year program with the partners and glass laminator, validating the production process, and performance of the triple-screen holographic HUD system.

"We have been working closely with global OEMs for years and are now at a tipping point for adoption and scaling of this display technology," said Andy Travers, CEO of Ceres Holographics. "This is being driven by a combination of a desire for more safety-oriented and intuitive information display features, pressure from safety regulators to reduce driver distractions, and the accelerated pace of innovation and associated need for differentiation among a new generation of car makers."

This agreement joins the material expertise of Covestro, Eastman's interlayer solutions and encapsulation know-how, as well as Ceres capabilities in mastering and high-volume manufacturing technology for the successful commercialization and industrialization of holography in transparent displays for windshields.

Meanwhile, Ceres and Appotronics announced another international partnership, combining Ceres technologies for in-car display solutions, including driver and passenger transparent heads-up displays (HUDs), and Appotronics projectors.

Ceres' HoloFlekt holographic-enabled display technology can now be combined with Appotronics ALPD®-based projection solutions to display information in bright, large and non-distractive formats on any glass surface to enhance safety, HMI and UX

Appotronics is a laser display technology enterprise, one of the first companies to list on the SSE STAR Market. The company has independently invented ALPD semiconductor laser light source technology that has become the go-to technology internationally.

Inova Pioneers SDV Lighting

INTERIOR NEWS

DVN-I'S PHILIPPE AUMONT (L), INOVA'S THOMAS NICKL (R) (DVN IMAGE)

Inova Semiconductors showcased their advancements in software-defined lighting (SDL) and software-defined vehicles (SDV) at CES. Renowned for innovative chips that enhance digital displays and LED control, Inova introduced new technologies:

- ISELED LED Technology: A smart lighting architecture featuring pre-calibrated LEDs, managed by a minimal-computation microcontroller capable of controlling up to 4,079 LEDs. The system supports multivendor solutions and Ethernet integration via ISELED Alliance partners.
- Inova Display Link (APIX): this technology underpins in-vehicle infotainment systems, offering high performance across all car displays.
- APXpress: A cutting-edge development for infotainment and automated driving (ADAS), supporting data rates up to 32 Gbit/s for seamless connectivity and advanced sensor integration. Series production is targeted for 2029.

Inova’s chip designs emphasize minimal size, weight, and power consumption while delivering maximum performance, to be used for infotainment and dynamic lighting solutions.

Camera-Behind-Display DMS from Emotion3D and BHTC

INTERIOR NEWS

DVN IMAGES

Emotion3D and BHTC, (who specialize in automotive display and control systems) showcased an innovative joint system of display and DMS. The system integrates advanced features that address active safety and user experience, setting a new benchmark for in-cabin monitoring systems.

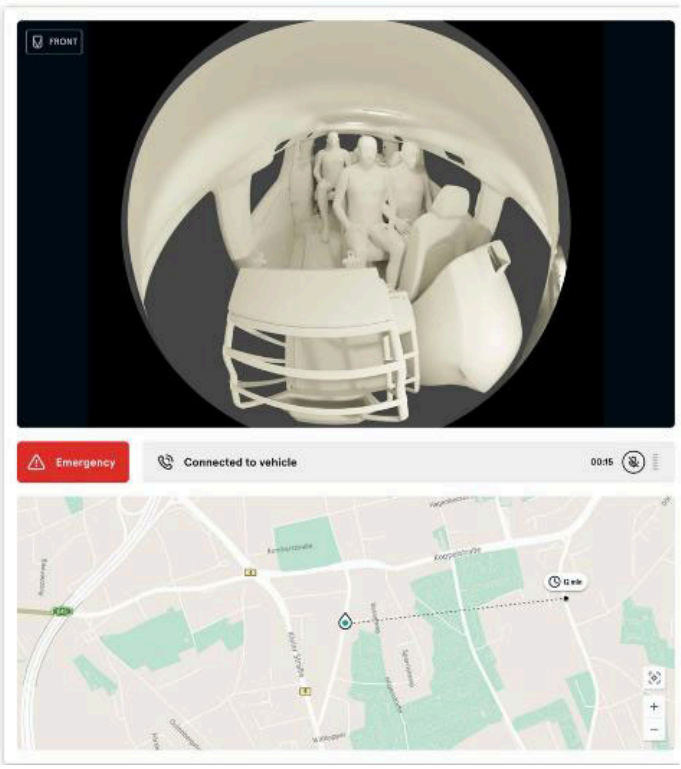
A key highlight of the system is its unique design: a strategically placed camera positioned behind the display. This approach not only maintains an aesthetically pleasing in-cabin appearance but also ensures maximum safety through a reliable monitoring method. Emotion3D brings their expertise in processing the distinctive image characteristics generated by this configuration, resulting in a seamless and effective solution for real-world applications.

“We’re excited to collaborate with Emotion3D to deliver a system for future in-cabin safety and convenience,” said Alexander Waldeyer, Manager Technical Marketing & IP at BHTC. “This system marks a significant step forward for the industry, combining cutting-edge technology with user-centric design.” Emotion3D also highlighted the importance of this partnership in advancing in-cabin technology. “Our collaboration with BHTC allows us to showcase how our *CABIN EYE* software can adapt to unique hardware setups,” said CEO Florian Seitner. “We aim to enhance in-cabin safety and comfort, leveraging advanced AI techniques, to continuously innovate and shape the automotive in-cabin industry.”

Emotion 3D presented as well their DMS technology, including all new features, such as seat belt, leg-on-the-dashboard, out-of-position, hands-on-wheel, to prevent submarining, distance-to-airbag, and GSR, and EuroNCAP-required features.

Emotion 3D technology, as its name suggests, goes beyond DMS, they have now one program at SOP in India, and several RFQs requesting it in Asia.

Emotion 3D keeps using their original business model, they sell and license software; this model is more challenging in China, where automakers reject upfront payments.

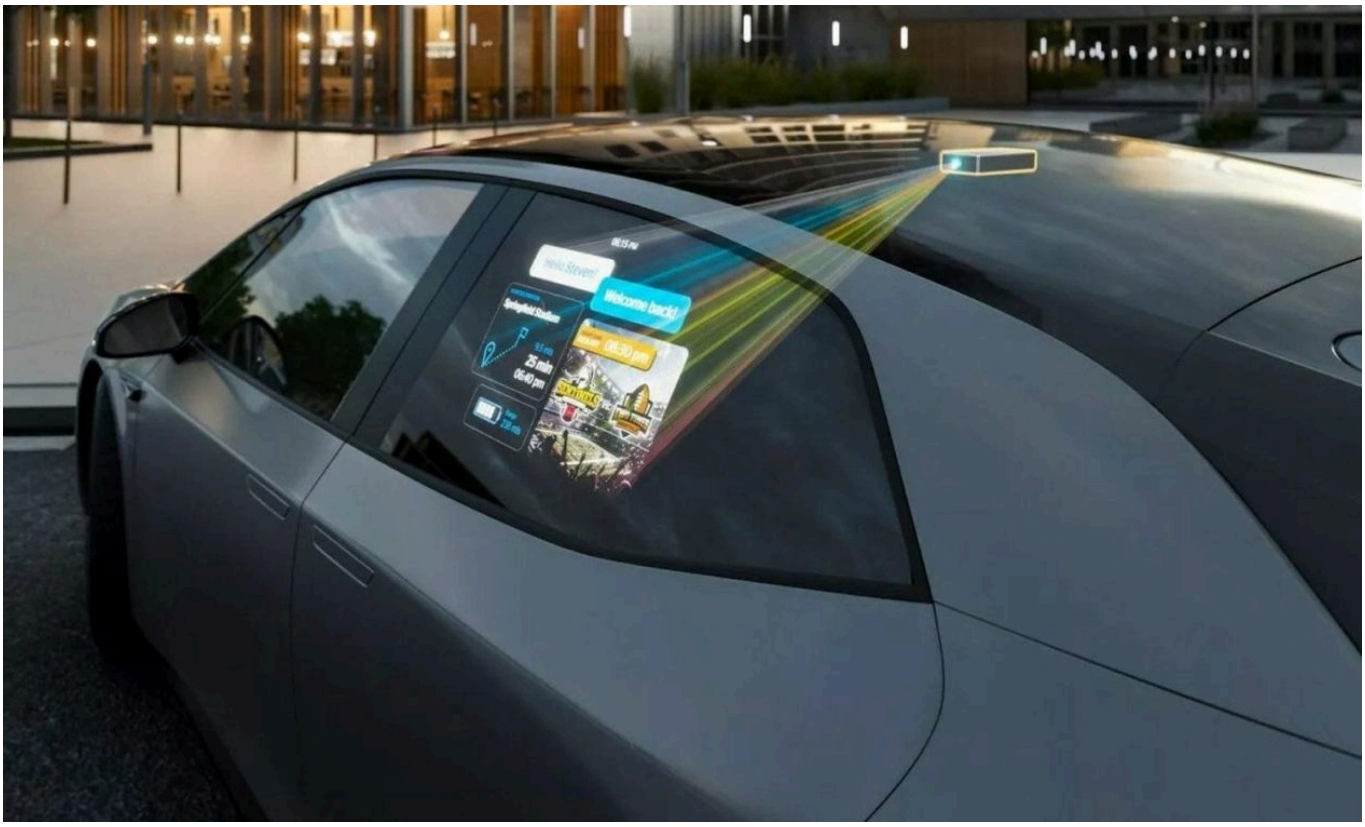


Emotion3D and MOIA (ride pooling) have developed an 'AI' solution to manage tasks of driver safety, in application for upcoming autonomous operations with the ID.Buzz in Hamburg.

The software uses 'AI' to take over safety tasks such as detecting if the doors can be opened or closed, and checking the permitted number of passengers and correct use of seatbelts. Within seconds, it signals the self-driving vehicle to start driving or, if necessary, to hand over to the fleet control center.
In the coming months, the interior analysis and customer experience of automated processes will be tested. Safety drivers will also be on board during this phase to monitor the processes.

Continental's Intelligent Window Projection System

INTERIOR NEWS



CONTINENTAL IMAGE

Continental presented a technology to project content visible from the outside onto the rear side windows of the vehicle. This allows the vehicle to communicate directly with its surroundings when parked. As examples, the supplier mentions the charge status of electric vehicles or the logo of the favorite club. The system uses a miniature projector with corresponding software. The projection surface is an electrically dimmable side window.

The "eTravel.companion" is integrated into the functional scope of the projection system as a software component. This is an AI-based travel companion. It uses data on driving habits, geo and weather data as well as other information from the vehicle sensors to create new user experiences. Continental is cooperating with the platform provider Banbutsu. The Berlin-based company (founded in 2019) operates a digital platform and provides personalized and context-based content. Based on data, learned preferences and the current situation, the software generates suggestions in real time that can be displayed in the side window even before getting into the vehicle.

Glass Roof Antennas from AGC

INTERIOR NEWS

AGC IMAGE

The roof of a car is a good position for aerials: The shark fin became a design element with recognition value. Some car manufacturers no longer want these antennas on their models, and panoramic roofs make it difficult to find a suitable place for the systems.

With "Pulsaart", the supplier AGC (Asahi Glass Company) is presenting an alternative to the usual roof antennas in shark fin design. Instead, the engineers distribute the antennas on the surface. This is intended to minimize interference and increase the diversity of antenna systems. With a direct view of the sky, it is particularly suitable for satellite communication antennas such as GNSS (Global Navigation Satellite System), SDARS (Satellite Digital Audio Radio Service) and LEO (Low Earth Orbit).

In addition, the invisible integration of fast and wireless 4 × 4 MIMO antenna systems is possible for communication with 4G LTE and 5G mobile networks, GPS communication services, the in-vehicle Wi-Fi router, vehicle communication systems and IoT applications. A low-E coating keeps the heat inside the vehicle in winter, while an IR-reflective layer on the outside prevents the summer heat from entering the vehicle interior. In addition, a UWB (ultra-wideband) antenna system can be integrated, which is used both for access control and for detecting occupants inside the vehicle.

Harman's 'AI' Avatar and ADAS Infotainment HPC

INTERIOR NEWS

HARMAN IMAGE

Together with Cerence AI, Harman presented an avatar that uses 'AI' and is designed to act as an assistant. "Luna" has the potential to completely change the way people interact with their cars. Already pre-integrated into Cerence AI's AI voice assistant platform, the system can be adapted to new 'AI' technology. With personalized, 'AI'-powered interactions that anticipate needs and respond naturally through voice and visual elements, “Ready Engage” creates a connection between a vehicle and its occupants. This should feel friendly and intuitive for the occupants.

Harman has announced another partnership: with HL Klemove (Korea), the supplier has integrated the domain controllers for cockpit and ADAS into a Central Compute Unit (CCU). This utilizes Harman's Ready Upgrade Cockpit Domain Controller and Klemove's Level 2 software stack and ADAS sensors. In the next phase of their collaboration, the two companies will develop a product-ready CCU platform that integrates the companies' latest cockpit and ADAS capabilities, offering automakers faster time-to-market and full customization flexibility.

Zeekr Mix is Bulli-Van Blend

INTERIOR NEWS

GEELY IMAGES

With the Mix, Zeekr has their sights firmly set on the VW ID.Buzz. This EV celebrated its North American premiere at CES.

At 4.69 meters, it is almost as long as its counterpart from VW. The wheelbase (3 meters) and width (2 meters) are also almost the same as the original Buzz, but at 1.78 meters, the Zeekr is 15 centimeters flatter. Short overhangs and smooth surfaces combine to create a modern mix that should also appeal on our roads.

The electric ranges are 550 and 705 kilometers according to the Chinese standard—which is more or less in line with our city consumption. The rear wheels are driven by a 421-hp electric motor, with a top speed of 180 km/h and a sprint of 6.2 seconds to 100 km/h on the data sheet. Anyone who drives the Mix in the city is also likely to experience a small turning miracle. Thanks to a special axle, the front wheels can pivot by up to 50 percent and the turning circle is said to be five meters, on a par with a subcompact car.

In the cockpit, the Zeekr Mix shows a face that we are now familiar with from many Chinese electric cars. Everything is almost antiseptically clean, tidy, and devoid of buttons and switches, with an impressive display in the middle and the interior flooded with light thanks to a huge panoramic roof. Where the ID.Buzz

has one or two sliding side doors, the Zeekr Mix has four electric doors. Because there is no B-pillar, the entrance portal is a generous 1.48 meters wide. It feels like a Smart could drive through. The vehicle floor is only 39 centimetres high, making it easy for children and older passengers to get in.

Studies show that Chinese people stay in their cars for up to 30 minutes on average after arriving home to enjoy digital entertainment. Accordingly, Zeekr has set up the Mix as a mobile living room. The front seats can be rotated 270 degrees to form a seating area, and rails are embedded in the floor of the cabin on which, for example, a multifunctional box with a large table can be moved electrically. The best entertainment is a must, as are countless standard assistance systems supported by lidar, radar and high-resolution cameras. The Mix also has an interface for steer-by-wire, which is important for future autonomous driving.

Kyocera Innovations at CES '25

INTERIOR NEWS

KYOCERA IMAGES

Kyocera's exhibits at CES showed off their latest innovations in aerial image display technology, 'AI'-based depth sensor, wireless optical underwater communication, millimeter-wave sensors, camera/lidar fusion sensor, bifocal mirrors and other solutions for safer autonomous driving.

Kyocera's 'AI'-based depth sensor camera, which offers world-record resolution in measuring extremely small and shiny/semi-transparent objects, is a versatile tool for numerous requirements. It enables accurate measurement of objects that are difficult to measure with conventional methods and achieves 10 times higher accuracy than traditional monocular measurements.

Kyocera has developed a millimeter wave sensor that can accurately detect minute vibrations without contact. This technology helps improve healthcare by accurately measuring heart rate and other changes in vital signs from almost anywhere, such as in a car (DMS) or bathroom, while respecting the user's privacy. In addition, Kyocera has developed a SLAM (simultaneous localization and mapping) technology using millimeter waves that can replace mechanical lidar systems using 4D imaging radar. With the increasing demand for driver assistance systems, this technology enables more precise and safer driving through sensing, even in poor weather conditions, at a very low cost.

Electronic car mirrors are becoming increasingly popular, but drivers with age-related farsightedness (presbyopia) often have difficulty focusing them due to differences in distance and field of vision. Like a head-up display, Kyocera's bifocal mirror displays a magnified image in the distance, making it easier for drivers to adjust their focus and immediately see the image clearly. The AR technology also supports driving safety by instantly displaying information recognized by the rear-view camera in the mirror.

CarUX for Harmonius UX

INTERIOR NEWS

CARUX WINDSHIELD REFLECTIVE SOLUTION (CARUX IMAGE)

CarUX Technology, under the slogan "More than Display, and Far Beyond," showcased new vision solutions for automotive products based on their rubric **Harmonious User Experience** "HUE"

CarUX automotive solutions feature organic shapes that integrated into vehicle styles. The displays are characterized by outstanding performance, including ultra-low reflection rate, high brightness, high contrast, wide color gamut, energy efficiency, and fast response times. In addition to CarUX's ongoing AM miniLED, MicroLED as well as the first OLED solution are in their portfolio of vision solutions.

The Design Lounge

Italdesign Quintessenza: Italian Style GT with Pickup Versatility

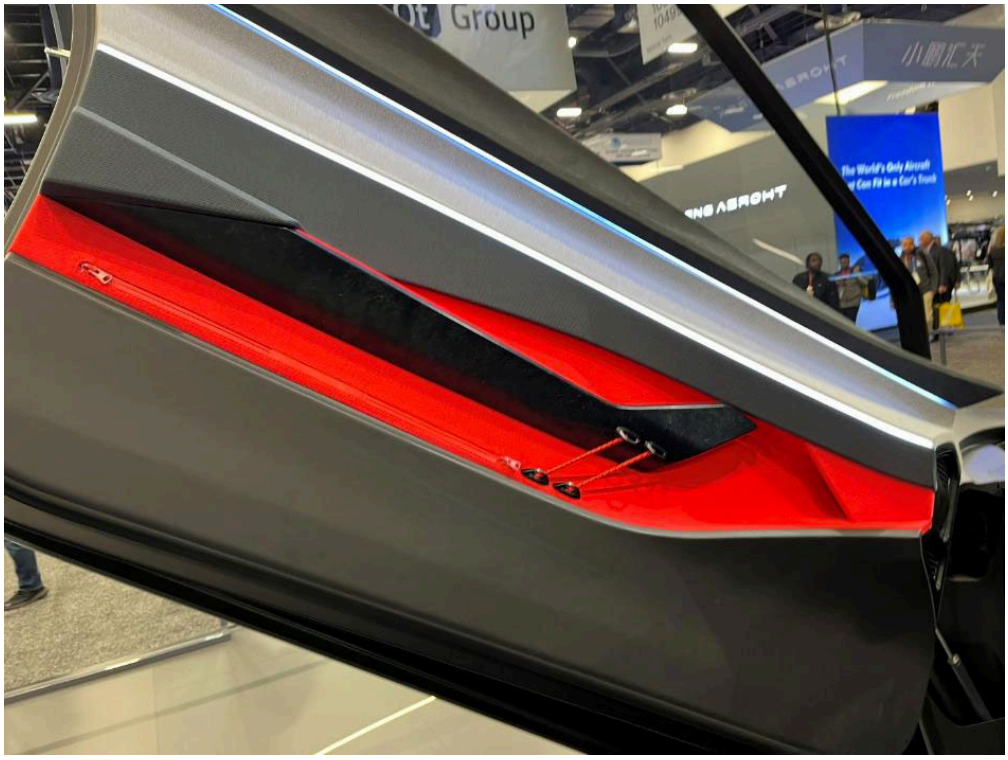
THE DESIGN LOUNGE

DVN IMAGES

To underline their commitment to the American market, Italdesign—supported by their operating subsidiary near Detroit, returns to the United States with their Quintessenza. After a first public presentation at the prestigious Pebble Beach Concours d'Elegance in August 2024, the show car is back at CES.

The Quintessenza is not just a show car, but a true ambassador of the services that Italdesign offers to clients all over the world, thanks to their almost 60 years' experience in advanced and sustainable mobility, as well as the research they continue to conduct. By combining the dynamic power of an Italian style GT with the versatility of a pickup, the Quintessenza offers its four passengers an original design and functionality experience. The ability to rotate the rear seats 180 degrees promises an unforgettable panoramic and 'stargazing' experience. For the event in Las Vegas, the Quintessenza showed off the latest generation of in-wheel motors from Elaphe, a leading company in zero-emission powertrains and propulsion systems.

The cockpit combines the simplicity of your smart phone just installed on the wheel with a wide display underneath the windscreen for no-distraction interaction.



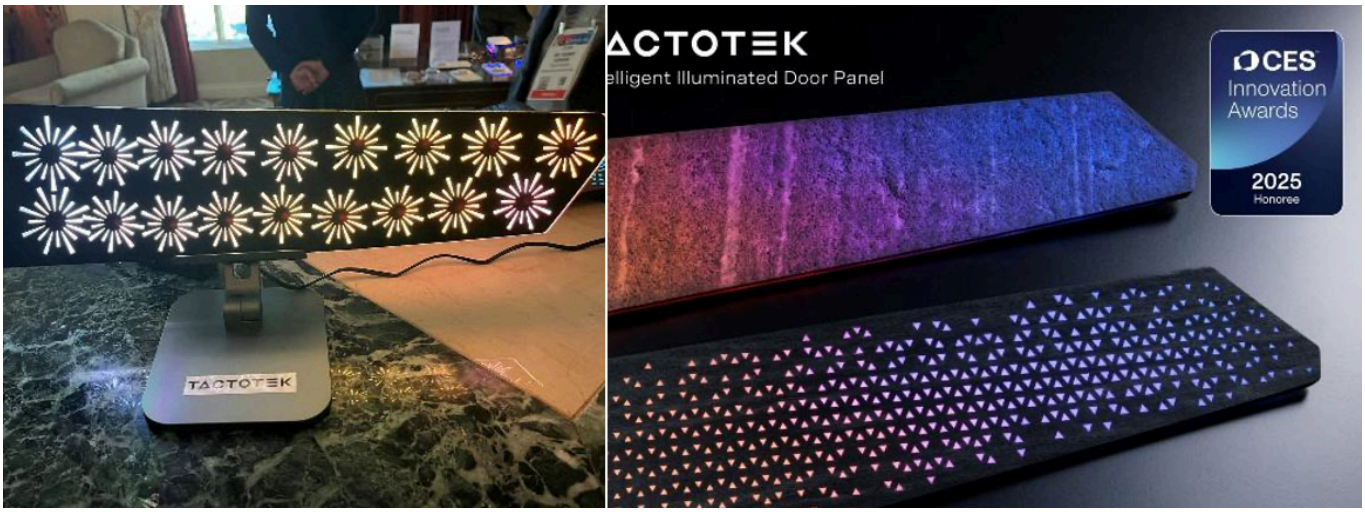
QUINTESSENZA DOOR

The Quintessenza's design harmoniously blends technology and human-machine interaction, incorporating elements of nature to create a unique bond between the car's occupants and the outside world. The redefinition of electric propulsion by Elaphe, together with the innovative materials and technologies linked to nature used both inside and outside—Bcomp's linen fiber for the exterior and interior elements, Fili Pari's soft marble powder fabric for the dashboard and door panels, Stoll Italia's 3Dknit technology to reduce material waste, and Hero Flooring made with Nike Grind Rubber from recycled sports footwear—everything contributes to making the Quintessenza a sustainability champion.

Fabrizio Mina, CEO of Italdesign USA says the Quintessenza "is a testament to our ability to innovate, our technological potential and the end-to-end solutions we are able to offer since 1968. It creates a unique emotional experience, giving to the visitors the opportunity to see and interact with a vehicle that tomorrow they could be able to see on the streets of their city or, even better, use with their family to observe the world around them, creating long lasting memories".

TactoTek + Sundberg-Ferar = Design Freedom

THE DESIGN LOUNGE



DVN IMAGES

TactoTek announced at CES during a Design Hour session, a strategic partnership with Sundberg-Ferar, a leader in industrial design and innovation. This collaboration seeks to merge their unique strengths, combining TactoTek's advanced electronic integration techniques (IMSE, as the technology for thinner, smaller, and low power electronic integration into car trim, with Sundberg-Ferar's 90 years of expertise in human-centered design, and design harmony. Together, they are dedicated to redefining the landscape of design and technology, beauty and function, creating next-generation solutions that elevate user experiences across several sectors, including mobility and consumer electronics.

"Working with TactoTek represents a significant step forward in our mission to create meaningful solutions," said David Thimm, Director of Design at Sundberg-Ferar. "By integrating our design capabilities with TactoTek's technology, we can offer forward thinking companies unparalleled innovation. We are committed to delivering products that not only look and work great but also provide enhanced durability, manufacturing efficiencies and simplified structural complexities."

News Mobility

Xpeng Aeroht Shows "Land Aircraft Carrier"

NEWS MOBILITY

DVN IMAGE

Xpeng Aeroht presented at CES their new land-air vehicle combination. The Land Aircraft Carrier is intended as a flying car for mass production.

With its modular design, the land-air vehicle combination from Xpeng Aeroht combines a ground module for driving (kind of like a Cybertruck with 6 wheels) with an air module for flying. The 5.5(L) × 2(W) × 2(H)-meter "mothership" with battery-electric six-wheel drive transports the eVTOL in the trunk. The Land Aircraft Carrier has an 800V silicon carbide platform, which is said to offer a combined CLTC range of more than 1,000 km (WLTP value not yet available). The three-axle floor module charges the eVTOL with electricity while driving and parking.

A command triggers autonomous separation, during which the arms of the flying cab and the landing gear are extended. It can then take off for up to six flights. After landing, the air module reconnects electronically with the ground module, folds up the arms and disappears into the luggage compartment. The panoramic cockpit of the aircraft is made of carbon fiber and features a dual six-rotor design with folding propellers and arms. The two-seater 270° panoramic cockpit is designed to provide good all-round visibility during flight operations.

The intelligent flight control system includes fly-by-wire technology with triple redundancy, electronic fencing, multi-source navigation and dual environmental adaptability and electromagnetic compatibility. Propulsion, power supply, communication, flight control and operation are redundant, and there is also an automatic emergency response.

More than 3,000 orders have already been placed for the Land Aircraft Carrier. As the world's first modular flying car to be produced in series, it is set to be delivered by 2026. It will be manufactured in a special facility for modular flying cars in Guangzhou (China). Up to 10,000 flying modules are to be produced there each year.

General News

First Part of Toyota's Woven City

GENERAL NEWS

TOYOTA IMAGE

After three years of construction, Toyota announced at CES that they have completed the first section of their city of the future, called Woven City, in Japan. Over time, around 2,000 residents are to move into the city, including researchers, Toyota employees and retirees, as company boss Akio Toyoda said at CES.

The Japanese car manufacturer also announced Woven City on the site of a former factory at the foot of Mount Fuji at CES five years ago. The idea behind it is to create a place where technologies of the future can be tried out in everyday life. This includes, for example, robots for the elderly and small drones with lanterns that can accompany you when you go jogging. Toyota's autonomous shuttles are to be used for transportation.

Toyoda also emphasized that the Group is also interested in rocket technology. "Because the future of mobility should not just be reduced to Earth—or a single car company," he said, with an obvious dig at billionaire techbro Elon Musk, who owns Tesla and SpaceX. Toyota's first step was to invest in the Japanese rocket company Interstellar Technologies.