

# ADAS & AUTONOMOUS VEHICLE TECHNOLOGY EXPO EUROPE

JUNE 4, 5 & 6, 2024  
MESSE STUTTGART, GERMANY

150+  
EXHIBITORS  
80+  
SPEAKERS

# SHOW PREVIEW

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SHOW PREVIEW

JUNE 4, 5 & 6, 2024

STUTTGART, GERMANY

# ADAS & AUTONOMOUS VEHICLE TECHNOLOGY EXPO | EUROPE

# SOURCE EVERYTHING YOU NEED FOR YOUR ADAS & AV DEVELOPMENT PROGRAM!

JUNE 4, 5 & 6, 2024  
STUTTGART, GERMANY

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This year's ADAS & Autonomous Vehicle Technology Expo Europe once again takes place alongside Automotive Testing Expo, with exhibitors across both shows presenting their latest innovations to enable and accelerate end-to-end autonomous and ADAS applications, including next-generation testing tools, state-of-the-art simulation, the very best new sensors, and the most recent advances in AI and sensor fusion! Both shows are completely free to attend, bringing together thousands of international visitors with the industry's leading ADAS and autonomous tech suppliers, all in one dedicated meeting place.

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## Next-generation datalogger for secure data acquisition and transfer

### InoNet

Collecting and processing large amounts of data from multiple sensors during test drives is essential for the development and validation of autonomous driving technologies. This requires high GPU computing performance that can also handle AI applications. At the same time, the system must be able to withstand the harsh environment of a vehicle's trunk. Furthermore, data encryption is essential as it plays a critical role in ensuring security.

InoNet's Mayflower-B17-LiQuid in the fourth-generation server, in combination with the QuickTray-v3, provides a state-of-the-art solution for data acquisition and datalogging in demanding test applications. The liquid-cooled Mayflower-B17-LiQuid hardware platform ensures reliable data processing through the integration of network cards, frame grabbers and bus measurement cards. The QuickTray-v3 is a powerful storage device, enabling impressive data write rates and encrypted datalogging. In addition, hot-plugging facilitates the exchange of multiple QuickTrays and data transfer to the (HIL) evaluation station. Find out more at InoNet's booth. **BOOTH 6326**



## Up to 200Gbps of reliable data capture

### Klas

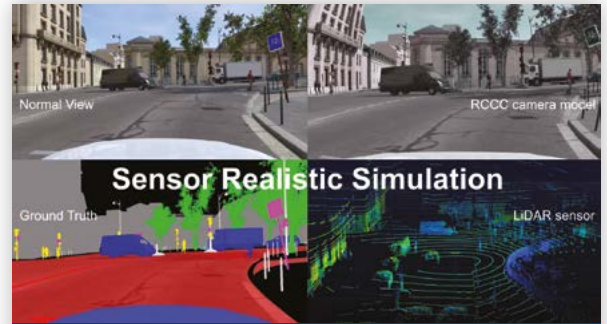
Klas, an edge technology company with 30 years' experience in delivering rugged hardware and software solutions, addresses the automotive challenge of capturing vast amounts of data. Klas datalogging solutions deliver up to 200Gbps (25GBs) of reliable data capture that is pre-processed, filtered and stored for optimal use in the validation of ADAS and autonomous driving (AD) capabilities.

With vision systems playing a critical role in safer traveling experiences, there is a growing focus on the accuracy of the technology. The onus is now on the OEMs and partners to validate their vision systems as part of a wider development

environment, which includes the cloud.

Klas's datalogging solutions allow automotive developers to capture hundreds of terabytes of sensor data that are easily transferred to the cloud. Furthermore, the company delivers the flexibility to evolve to the next generation of vehicle and vision system network architectures and protocols, without the need for major redevelopment of existing toolchains.

At ADAS & Autonomous Vehicle Technology Expo Europe, Klas will showcase its latest generation of datalogging solutions, including in-vehicle storage to extend the life of existing toolchains, alongside garage data offload stations for faster transfer to the cloud. **BOOTH 6628**



## Simulation platform for autonomous vehicles

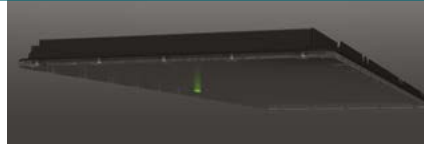
### Claytex

Claytex will be demonstrating its AVSandbox at the expo. AVSandbox enables the creation of a precise digital twin of an operating environment, with deterministic, high-fidelity modeling based on dynamic vehicle parameters, physics-based sensors and multiple lighting and weather conditions, safely accelerating the AV development process. It also offers extensive reporting and data tracking to ensure full regulatory compliance in all applications.

The simulation platform creates a hyper-realistic simulation environment within which to test, develop and refine the performance characteristics, functionality and safety attributes of autonomous vehicles. Regardless of the application, it enables users to create unique scenarios, with high-resolution true-to-life graphics and precise rendering of the actual operating environment, mapped with submillimeter accuracy.

AVSandbox is designed for automotive OEMs and end user organizations that need to develop and deploy autonomous vehicles or advanced driver assistance systems. It is suitable for all transportation applications, ranging from passenger vehicles, robotaxis and last-mile commercial vehicles to airside and portside baggage and cargo handling systems. **BOOTH 6200**

## All-weather, precise AV localization from ground-penetrating radar



### GPR

Ground Positioning Radar (GPR) is working to redefine the boundaries of autonomous vehicle (AV) precision, using subterranean data to enable seamless and safe navigation across industries. GPR technology penetrates the ground, capturing unique data regardless of above-ground conditions and challenges. Inclement weather, compromised line-of-sight, roads with poor or no lane marking, weak GPS signals and difficult road terrain no longer affect the uptime and availability of AV navigation.

In Stuttgart, GPR will present its WaveSense localization solution. Comprising three integral components – the GroundSense sensor, NavSense localization software and MapSense mapping suite – WaveSense is reportedly the epitome of all-weather, all-environments mapping and positioning.

With over two decades of expertise in the autonomous vehicle landscape, GPR remains at the forefront of innovation. Its solutions not only meet current needs but also anticipate the dynamic demands of tomorrow's environments, making GPR technology the trusted choice for forward-thinking industries.

BOOTH 6606

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## CONFERENCE SPEAKER SPOTLIGHT

ALI NOURI

SENIOR SYSTEM SAFETY ENGINEER IN AUTONOMOUS DRIVING, VOLVO CARS

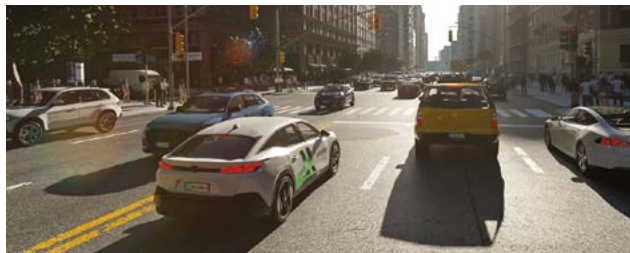


DAY 1  
TUESDAY,  
JUNE 4

Leashing AI: on challenges and solutions in AV safety assurance

The safe behavior of autonomous vehicles needs to be ensured before they can be deployed on public roads and then maintained safely throughout the operational phase. During his presentation, Nouri will discuss current autonomous vehicle safety assurance and SafetyOps approaches; explain the challenges of moving toward rapid SafetyOps, exemplified by system theoretic process analysis (STPA); and explore how generative AI and large language models could offer a potential solution.

Please visit the website to see the latest conference program and speaker details



## Cutting-edge software tools for autonomous driving development

### aiMotive

aiMotive will reveal its cutting-edge, in-house-developed software tooling products, aiSim and aiData, at the expo. Launched in January 2024, the latest generation of aiMotive's simulator, aiSim 5, integrates state-of-the-art automotive general intelligence, offering unparalleled realism and scenario diversity. From multicamera perception to real-time responsiveness, aiSim 5 sets a new standard for virtual testing.

aiData provides AI-powered data annotation and searchability for massive data sets, reducing weeks of manual work to just hours. The company's innovative tool not only enhances efficiency but also introduces AI-driven text- and image-based searchability, revolutionizing how companies leverage their data for training algorithms. Visit the aiMotive booth to find out more.

BOOTH 6627

## Ground-truth data pipelines for sensor fusion

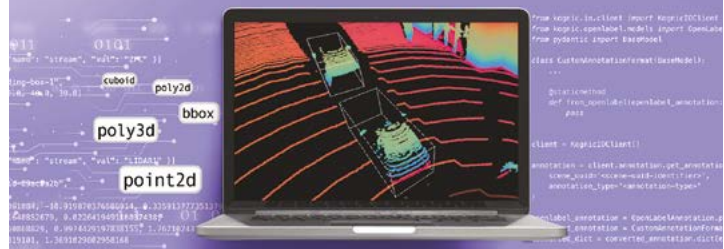
### Kognic

Kognic is a leader in data set management, enabling global enterprises to assemble efficient ground-truth data pipelines for sensor fusion.

The Kognic Platform has become a core software solution in the fields of advanced driving assistance systems and autonomous driving and is used by technology leaders – such as Qualcomm, Bosch, Continental, Kodiak and Zenseact – that create ADAS/AD systems that power global OEMs such as BMW, Ford and Volvo Cars.

Supported by its industry-leading annotation engine, Kognic offers critical tooling such as multisensor fusion, data exploration, pre-annotations and performance analytics that have been proved in many ADAS/AD deployments. Find out more about Kognic's solution at its booth in Stuttgart.

BOOTH 6618



# Tomorrow today



Ralf Sauer, vice president of marketing and communications at **IPG Automotive**, explains that the company will be in Stuttgart to help customers take their real-world testing into the virtual world

## » Please can you describe your company.

As a global leader in virtual test-driving technology, IPG Automotive develops innovative simulation solutions for vehicle development. Designed for seamless use, our software and hardware products can be applied throughout the entire development process, from proof of concept to validation and release. Our virtual prototyping technology facilitates the automotive systems engineering approach, allowing users to develop, test and validate new systems in a complete virtual vehicle.

We are experts in the field of virtual development methods for application areas including autonomous vehicles, ADAS, powertrain and vehicle dynamics, and we are committed to providing excellent service to master the growing complexity in these domains and support the 'shift left' strategies of our customers.

By taking real test driving into the virtual world as a complement to on-road testing, our company contributes significantly to technical progress and helps shape the mobility of tomorrow, like, for example, software-defined vehicles (SDV).

## What will you present at the expo this June?

We will present numerous ADAS and AV applications in combination with the CarMaker product family, demonstrating how virtual test driving is enabled along the complete development process from SIL to HIL to VIL. Simulation scaling allows for the generation of enormous amounts of test kilometers, identification of critical edge cases and training of complex AI algorithms. In this regard, possibilities for scenario generation and variation as well as the latest advances for OpenSCENARIO and OpenDRIVE are presented. In addition, we will showcase cross-domain simulation solutions for the entire



**“OUR SOLUTIONS ARE USED BY NUMEROUS WELL-KNOWN OEMs AND TIER 1s IN GERMANY, EUROPE AND WORLDWIDE”**



event chain, from perception and trajectory planning to actuation.

Another focal point will be sensor technology, mapping all the way from an ideal sensor model to a highly detailed and real-time-capable RSI sensor simulation of radar, camera, lidar and ultrasonic sensors. Autonomous driving functions in commercial vehicles as well as V2X simulation solutions are other important topics.

We will also present VIRTO, a virtual vehicle development tool suite that offers easy access to virtual test driving and simplifies vehicle development. As a superordinate data and workflow management platform, VIRTO consists of various apps that can be seamlessly connected to third-party tools and thus integrated into existing vehicle development processes. Thus, we are pursuing the goal of making simulation accessible for everyone, even across company borders.

Our solutions are used by numerous well-known OEMs and Tier 1s in Germany, Europe and worldwide, and are an integral part of a wide range of development processes.

## How are you helping to develop better C-V2X solutions?

Connected vehicles exchange information with each other, with the infrastructure of their environment and with other road users, summarized under the generic term cellular vehicle-to-everything communication (C-V2X). Combining a C-V2X testing solution with the simulation of virtual vehicle prototypes in CarMaker enables developers to test and validate vehicle communication using real scenarios in a purely virtual or lab environment.

This helps minimize expensive and time-consuming field tests while maximizing their efficiency. In our CarMaker open integration and test platform, realistic virtual scenarios can be generated in which various types of road users can interact with each other. For this, the driving function under test can be connected with a C-V2X solution in the virtual vehicle prototype. The complete test automation reduces complexity and ensures that results are reproducible even for critical time and safety requirements.

## Who do you hope to meet in Stuttgart?

We hope to have many interesting discussions with visitors, customers and partners from the Stuttgart area but also of course from around the world, as the ADAS & Autonomous Vehicle Technology Expo attracts experts globally. As the topic of ADAS and AV is very diverse and complex, we are keen to gain further valuable insights into current challenges in the daily practice of the automotive industry and understand the needs/requirements of the automotive markets. We are always excited when our solutions can help to close specific gaps in the vehicle development process and thus contribute to optimized and sustainable vehicle development and increased safety of autonomous vehicles. <



**VISIT IPG AUTOMOTIVE ON BOOTH 6304**



## New ethernet modules for datalogging and HIL

Xylon

Xylon will showcase the entire product line-up of its new Ethernet I/O modules for the Xylon Quattro datalogger and HIL system at the expo. The new line-up caters to customers' autonomous driving and ADAS testing and validation needs, and includes a 4-Ch 1000Base-T module, a 4-Ch 100Base-T1/1000BASE-T1 module and a 2-Ch 10GBase-T SFP+ module with support for 10GBase-T and 10GBase-T1 SFP+ transceivers.

Xylon's ethernet modules support PTP/gPTP time synchronization (master and slave) and include a hardware-based ethernet TAP (bridge support) with low-latency bypass, which eliminates costly external switches. Combined with video modules for up to 16 video cameras and more than 40 legacy interfaces, the new ethernet modules turn the Xylon Quattro into a datalogging and HIL system capable of connecting all sensors – even in the world's most advanced autonomous driving systems.

Thanks to the powerful programmable FPGA chips for accelerated computing and dedicated Intel Core 11<sup>th</sup>-generation Tiger Lake processors, local network traffic can be processed during the datalogging process. This enables the implementation of third-party data processing libraries and support for industry-standard features such as GigE Vision reference cameras, video compression, TAPI datalogging, lidar data visualization, XCP, etc.  
**BOOTH 6310**



## Software-defined vehicles: validation by simulation

dSpace

Software-defined vehicles (SDV) are transforming the automotive industry, offering more flexibility, efficiency and adaptability than ever. The electric architecture of an SDV is fundamentally different from that of a conventional vehicle. SDVs consist of at least one high-performance computer (HPC) and multiple zonal controllers. A vehicle operating system (middleware) separates their application layer from the hardware layer.

For decades, dSpace has been a leading company in the field of simulation and validation, providing the right tools for all new technological achievements. Now, vehicle manufacturers can rely on dSpace expertise in the development of SDVs.

For example, with VEOS the company provides a PC-based software-in-the-loop (SIL) simulation platform with which heterogeneous systems under test (SUT), models and tools can be integrated into one simulation. With high-performance computing (HPC) combined with the strong capabilities of VEOS to simulate zonal and edge controllers, complex systems including all types of controllers of current and future E/E architectures can be simulated in the cloud. Find out more at the company's booth at the expo.  
**BOOTH 6526**

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## Data-driven development and validation

Reply

In response to the huge requirement for data and scenario complexity, a paradigm shift is needed, leaving behind the traditional code-centric approach in favor of what is known as data-driven development.

Reply offers strategic guidance in crafting a data-driven cycle to support customers with their AI-powered vehicles: synthetic data generation, standardization (ASAM), automated flow from testing to pipeline orchestration and data mining, coverage-driven verification through scenario-based testing.

A live demo related to 'in-cabin monitoring system' functionality will be shown at the expo, to share Reply's AI data-driven framework.  
**BOOTH 6028**

### CONFERENCE SPEAKER SPOTLIGHT

**TOBIAS TRAUB**

**FUNCTIONAL SAFETY EXPERT, BOSCH**

**JONAS STÜBLE**

**SYSTEM ARCHITECT, BOSCH**



Technical regulations and recommendations do not yet fully account for the safety-related availability of power supply systems. Specifically, the application of ISO 26262 on the power supply of autonomous vehicles is troublesome. Concurrently, engineers have gathered to write a recommendation (VDA 450) that facilitates the application of safe electrical power supply to other systems with safety-related availability, like autonomous vehicles. This presentation highlights the framework of the VDA 450 recommendation and its principles that comply with ISO 26262 and help to ensure safe power supply for autonomous vehicles.

**DAY 1 TUESDAY, JUNE 4**

**Recommendation for a common understanding of ISO 26262 regarding AVs**

Please visit the website to see the latest conference program and speaker details



**CONFERENCE  
 SPEAKER  
 SPOTLIGHT**



**CHING-YI CHEN**

**TECHNICAL CONSULTANT,  
 SMART MOBILITY  
 LIVING LAB, TRL**

**DAY 1  
 TUESDAY,  
 JUNE 4**

**CAV in-use  
 monitoring metrics  
 development**

This presentation will focus on developing comprehensive safety metrics for real-time monitoring of connected and automated vehicles (CAVs).

This monitoring ensures the operational safety of CAV systems and infrastructure in automated driving, remote operation and advanced driver assistance system (ADAS) use cases. These metrics align with international safety assurance frameworks and standards for global relevance. Emphasis will be on detailed assessment methodologies to evaluate vehicle system and infrastructure performance. This critical approach feeds into the validation and verification of CAV safety arguments, facilitating safe and secure deployment.

Please visit the website to see the latest conference program and speaker details



**ADAS and AD engineering services**

**AUL List**

At this year's expo, AVL will present its engineering services tailored to validate ADAS and AD functions in next-generation vehicles, including virtual testing solutions for EMC, radar and steering. With its scenario-based testing approach, AVL is paving the way to virtual homologation in projects beyond L2 and L3. Complemented by road testing solutions, AVL provides deep insights into the toolchain essential for development and certification.

From ensuring safety and regulatory compliance to enhancing sensor technology and infrastructure development, the journey toward ADAS and AD is full of obstacles. With this in mind, AVL offers robust solutions and test facilities for safety testing and NCAP certification. AVL ZalaZone in Hungary is the proving ground for Euro NCAP testing and provides an up-to-date test catalog with all specified NCAP ADAS scenarios. Visitors to the company's booth can discuss AVL's variety of testing possibilities face to face.

**BOOTH 6510**

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**270,000+  
 scenarios for ADS  
 testing,  
 validation and  
 certification**

**WMG, University of Warwick  
 and Deepen AI**

The Safety Pool Scenario Database contains more than 270,000 scenarios for automated driving system (ADS) testing, validation and certification. Powered by WMG, University of Warwick and Deepen AI, Safety Pool envisions that the safety of every ADS can be

transparently tested, validated and certified through common processes and infrastructures shared across industry, researchers, academia and policymakers internationally. Serving the needs of multiple user 'personas', Safety Pool provides an independent database of scenarios, driven by the philosophy that the safety of automated driving should be pre-competitive.

With more than 150 organizations signed up, Safety Pool will be used by regulators in the UK for type approval of ADS. It also leads the research and fosters the development of common description languages, standards and media that enable a meaningful exchange

of technical information and artifacts across stakeholders worldwide.

At this year's expo, the team will showcase Safety Pool's latest features, including ODD definition-based searching, creating scenarios and scenario tagging for easy searching. Some advanced functions will also be demonstrated, such as accessing scenarios using API.

Safety Pool Studio - the new Safety Pool asset - will also be launched at the expo. It will give power to users to create scenarios in a simple yet extremely intuitive manner. All the scenarios created can be exported to SDL, OpenScenario, OpenDrive and Flex1889. By launching this platform, the developers hope to close the skill gap for capturing complicated road scenes.

**BOOTH 6142**



## Positioning and perception sensors

### Asensing

Asensing will exhibit its latest sensor products and high-precision positioning units at this year's show. Visitors to the Asensing booth can expect to see multiple choices of integrated navigation systems (P-box), GNSS and inertial measurement unit modules. They can also find out more about the A2 lidar, which was specifically created for ADAS and autonomous driving, robotics and machinery, among other applications.

Founded in 2014, the tech firm, based in Guangzhou, China, is already a market leader in high-precision positioning solutions for autonomous vehicles.

Asensing's products have been installed on 80 car models from more than 30 OEMs worldwide, including popular new-energy brands such as Li Auto, Nio, XPeng, Geely, Chery and Zeekr.

BOOTH 6334



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### CONFERENCE SPEAKER SPOTLIGHT



**RENÉ SPAAN**

**EU SMART MOBILITY PROJECT  
LEADER, CITY OF HELMOND  
(NETHERLANDS)**

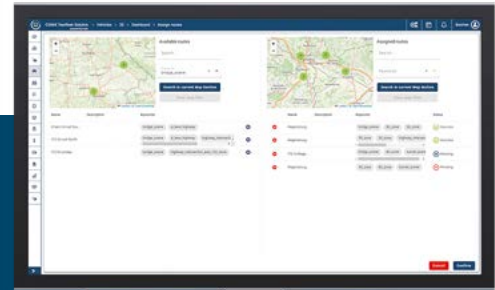
In its dedication to road safety, the City of Helmond actively participates in international projects related to intelligent speed adaptation (ISA) to address speeding concerns, both real and perceived. ISA, recognized for preventing 20% of fatal accidents, notifies drivers of speed limits for compliance. Spaan will examine ISA readiness in medium-size cities, emphasizing data validation for a seamless user experience. During the readiness assessment for ISA-equipped cars, Helmond observed inaccuracies in speed advice due to unvalidated digital maps lacking verified speed limits. As part of the project, a validation and feedback loop was established between the road authority and the

Dutch national access point to optimize the national digital maps of speed limits, usable by third parties.

**DAY 2,  
WEDNESDAY,  
JUNE 5**

**Optimizing ISA  
experience: city data  
validation strategies to  
improve the quality of  
digital maps with  
speed limits**

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## Test data collection, processing and validation

### b-plus

b-plus will showcase its extensive range of products for collecting, processing and validating test data at the expo, including hardware developments and the latest software solutions demonstrated in the MAX technology carrier. Software highlights include AVETO.dps recording software and CONiX data processing and management solutions for autonomous driving measurement technology.

AVETO.dps can process and record data at more than 100Gbps. It combines the reliability of a classic datalogger with the flexibility of an open platform, supporting various data sources and formats including PCAPNG and MDF4. The solution ensures system stability, efficient resource management and precise time stamping via the XTSS time synchronization service.

CONiX enables high-quality, precisely annotated data for machine learning models. In addition, the CONiX management solution for measurement setups in a test vehicle enables remote data management using only one software. There is no more need for test drives with full storage: detailed route information is transmitted directly from the project manager to the test driver, along with perfect campaign plans for the easy management of test fleets.

Together, AVETO.dps and CONiX redefine data handling in autonomous driving, enhancing data quality, accelerating development and optimizing costs to position companies at the forefront of innovation.

BOOTH 6126



# Deep dive



Peter Sunna, VP of product at Kognic, explains how its Embeddings feature enables customers to more quickly explore data sets, identify clusters and highlight outliers

## » Please can you tell us about your company.

Kognic is the leader in data set management that enables global enterprises to assemble efficient ground-truth data pipelines for sensor fusion. The Kognic Platform has become the core software solution in the fields of advanced driving assistance systems and autonomous driving. It is currently being used by technology leaders such as Qualcomm, Bosch, Continental, Kodiak and Zenseact, which provide ADAS/AD systems that power global OEMs such as BMW, Ford and Volvo Cars. Supported by our industry-leading annotation engine, Kognic has critical tooling such as multisensor fusion, data exploration, pre-annotations and performance analytics that have been proved in many ADAS/AD deployments.



## What will you be highlighting at the show?

Data exploration plays a crucial role in developing accurate machine learning algorithms. For all of us in the ADAS industry, we need to make it easier to

navigate these complex data sets and gain a better understanding of which objects, scenes and sensors have an outsized impact on model performance.

We'll dive into the power of latent space visualization with embeddings. Embeddings represent complex objects in a computer-friendly format, enabling similarity searches and analysis of 2D representations. By using embeddings, engineers can more quickly explore their data sets, identify clusters and highlight outliers to improve their models.

We'll also discuss pre-annotations at the event, and how they are best used to drive more efficient data pipeline workflows.

**“THROUGH EMBEDDINGS, KOGNIC HELPS VISUALIZE THESE PROBLEMATIC CLUSTERS TO ACCELERATE DATA SET OPTIMIZATION”**

## Can you give a specific example of how both products can help model training for ADAS/AU?

In a first implementation for a customer, who is concurrently developing a deep learning ML model, enabling the exploration of latent space via embeddings allowed them to discover things about their sensor network and to find issues they didn't previously know about. One example was optimization of how they handle objects behind windows or inside buildings. Through embeddings, Kognic helps visualize these problematic clusters to accelerate data set optimization.

In another customer application, focused on cuboids, using pre-annotation reduced average annotation time by up to 62% compared with fully annotating from scratch. The automation provided suggested positions for objects using dashed cuboids, enabling faster labeling. Although there was a slight reduction in the quality of annotations, with annotators putting less effort into identifying missed objects, the overall precision remained high. As just one example of the variety of shapes pre-annotations can be applied to, cuboid pre-annotations have great potential for accelerating the correction process for 3D cuboids, especially in highway scenes.

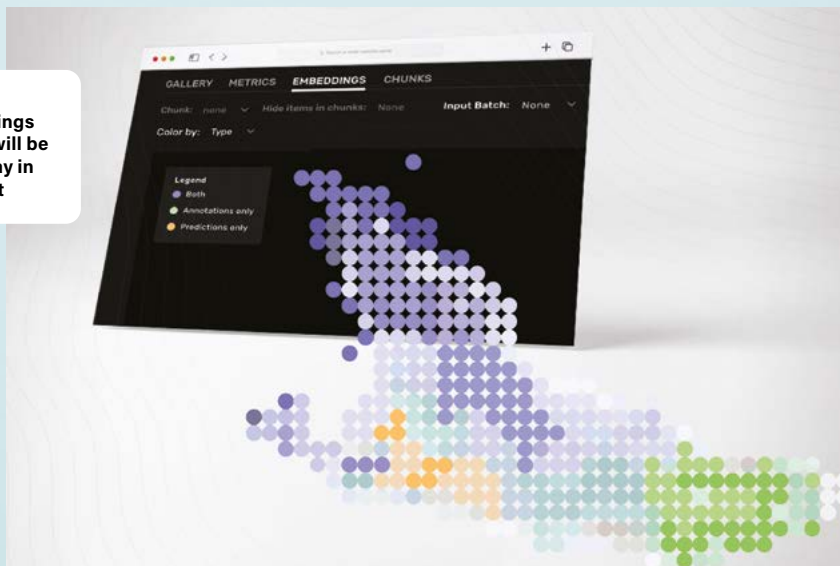
## Who do you hope to meet in Stuttgart?

Kognic is excited to meet more teams who are responsible for planning, developing and productizing ADAS/AD solutions across all OEM and supplier segments. It takes a cohesive end-to-end effort to get it right, on time and on budget. We'll share what we see that works and listen to what ongoing



**VISIT KOGNIC ON BOOTH 6618** (and new) challenges are out there. <

**Kognic's Embeddings feature will be on display in Stuttgart**



## Accelerating perception development via novel data generation

neurocat

neurocat, a Berlin-based startup, offers the autonomous vehicle industry Augmentation as a Service. This innovative service is designed to meet the pressing needs of perception component developers by providing customized data augmentation that can rapidly adapt to diverse environmental conditions and regulatory requirements. Data augmentation enables companies to enhance their original data sets to reflect a wide range of conditions within their operational design domain (ODD), which is crucial for training machine learning models efficiently and effectively. This process is challenging due to the need for data to be visually realistic, statistically representative and scalable. neurocat simplifies this with its Aidkit software, offering a blend of scalability and customization. The service involves a discovery phase to understand client requirements, a design phase using Aidkit for augmentation creation and a delivery phase ensuring quality and suitability. This approach not only addresses the challenge of acquiring relevant training data but also ensures that machine learning models perform optimally in their targeted ODD, showcasing neurocat's value

in providing high-quality, customized data augmentation solutions. Find out more at the company's booth.  
**BOOTH 6724**



### CONFERENCE SPEAKER SPOTLIGHT



**DR CLARA MARINA MARTÍNEZ**

**ENGINEER, ADAS VIRTUAL DEVELOPMENT, PORSCHE ENGINEERING SERVICES**

The race to release next-generation ADAS is slow and expensive. Complex ADAS functions are developed using theoretical sensor specifications and can only be tested in late project stages. Porsche Engineering has accelerated the time to vehicle testing of its ADAS algorithms by means of its JUPITER vehicles. JUPITER is a fully scalable rapid prototyping platform for ADAS that enables early close-to-series testing. It integrates state-of-the-art ADAS algorithms, is equipped with high-performance ASIL-D middleware and scalable data exchange and is interoperable and real-time capable. Martínez will present the sensor benchmark use case as a teaser of the plethora of possibilities that JUPITER offers.

**DAY 2  
 WEDNESDAY,  
 JUNE 5**

**Rapid SW and HW prototyping for automated driving: sensor and function benchmarking with the JUPITER platform**

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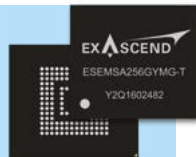
## Driving innovation: automotive storage solutions

Exascend

Exascend will reveal cutting-edge automotive storage solutions at the expo, including PCIe and SATA SSDs, memory cards and managed NAND eMMC and BGA SSD solutions. Engineered for automotive and industrial environments, the company's offerings provide compact, vibration-resistant storage with excellent reliability.

Among Exascend's highlights is the EM500 series eMMC, compliant with JEDEC e.MMC 5.1 standards and backward compatible with v4.41/v4.5/v5.0. Leveraging High Speed 400 (HS400) DDR mode, it ensures rapid data transfer speeds even in challenging conditions, with a wide operating temperature range from -40°C to +105°C. With sequential read speeds of up to 295MBps and sequential write speeds of up to 210MBps, it offers exceptional performance across various densities ranging from 4GB to 256GB. Advanced technologies such as LDPC-based ECC, power loss protection, wear leveling and IOPS optimization ensure data integrity and longevity, making it an ideal choice for automotive storage applications.

**BOOTH 6320**



## Maximum flexibility in automotive imaging

Solectrix

Solectrix will be displaying its expanded comprehensive SXIVE image processing ecosystem. The new SXIVE Calibration SDK enables correction of the incoming image regarding color, lens distortion and lens shading to produce a flawless picture. Thanks to its user-friendly interface, the complex calibration process becomes a one-click operation. Combined with the SoftISP SDK that is the heart of the SXIVE rapid imaging prototyping system, the new SDK ensures compatibility with a vast array of image sensors and offers several options to accelerate image processing, from AMD SoCs to Nvidia Jetson, RTX, CUDA and TensorRT.

The proFRAME video grabber and playback system is ideal for image acquisition in a SXIVE setup or a wide range of other imaging applications. The system's modular approach with detachable camera adapters keeps proFRAME ready for the latest in automotive technology, offering support for an ever-growing list of interfaces. It has kept up with generational updates for GMSL (currently supporting GMSL1, 2 and 3) and FPD-Link (III and IV). The latest adapters add support for MIPI CSI-2 and Sony's GVIF3 standard, establishing proFRAME as a futureproof choice for ADAS and AD validation systems. Base boards are available in PCIe and CompactPCI Serial format.  
**BOOTH 6626**



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