3rd International VDI Conference

Automotive Data Communication

June 23 and 24, 2026, Stuttgart

- Centralized SDV Platform
- In-Vehicle Networking Evolution
- Security in In-Vehicle-Networks
- Wireless technologies and 6G
- AI and Automation in Vehicle Development

+ International Best Practices
+ Keynotes

Meet international Experts from:

BMW · BOSCH · CLAAS · ETHERNOVIA · HUAWEI · infineon · intech an Infosys company · iSLA 国际星闪无线超连通联盟 International SparkLink Alliance · JOHN DEERE · Mercedes-Benz · Microsoft · NXP · RENESAS · rti · S&P Global Mobility · ST life.augmented · technica engineering Member of KPIT Group · VECTOR · YFORE

An event organized by VDI Wissensforum GmbH
www.vdi-international.com/ 01K0137026

About us

The Association of German Engineers (VDI) is one of the largest technical-scientific associations in Europe. Throughout the years, the VDI has successfully expanded its activities nationally and internationally to foster and impart knowledge about technology related issues. As a financially independent, politically unaffiliated and non-profit organization the VDI is recognized as the key representative of engineers both within the profession and in public.

Supporting Experts

Oliver Bettgens, Head of Networking Technologies, CARIAD SE
Carsten Demuth, Global Key Account Manager | Sales Account Development, ST Microelectronics GmbH
Prof. Dr. Andreas Grzemba, Vice President Research and Knowledge Transfer, Deggendorf Insitute of Technology
Mario Maul, Expert Architecture & Networks Vehicle Engineering Electronics, EDAG Engineering GmbH
Dr. Karlheinz Morgenroth, Chief Architect Electronics Development, LEONI Bordnetz-Systeme GmbH
Marcelino Varas, Manager Product Management, Vector Informatik GmbH

Reasons to attend

Meet the relevant experts in automotive data communication

Learn about the different technical approaches within industry

Network with technical experts & decision makers from OEMs and major suppliers

Prepare for two days full of insights, contacts & discussions

Discuss current developments in one of Automotive's most important field

Upcoming Events

VDI Conference
Fast Defence - Industrialization of Defence
July 15–16, 2026 in Dusseldorf

Tuesday, June 23, 2026 — 1st day

08:45 Registration & welcome coffee

09:45 Welcome and opening address

I. SDV & E/E architectures

10:00 Efficiency in the realm of SDVs: how chipmakers help

Keynote

- Centralized SDV architectures shift E/E functions into SoCs
- Chipmakers must enable transparency, not proprietary lock-in
- Efficiency depends on platforms, tools, and ecosystems

Frédéric Ameye, Head of Software Architecture, Renesas Electronics

10:30 From self-talks to long-distance calls: how do HPCs communicate in a vehicle?

- HPCs: the brains of modern vehicles
- Zonal ECUs: transparent gateways or smart mediators?
- The edge: indispensable mechatronic servants (off the shelf?)
- Connectivity: A car's window to the outside world

Alexander Haliulin, Senior Product Management Engineer, Vector Informatik

11:00 Networking & coffee break

11:30 Electronics hardware for software-defined vehicles

- What hardware is needed for SDVs?
- Description with examples of different business models being adopted by OEMs
- Pursuing a Multi-energy propulsion strategy longer than expected: impact on OEM E/E roadmaps

Dr. Richard Dixon, Senior Principal Analyst and Associate Director, E/E & Semiconductor, S&P Global Mobility

12:00 Applying the 'Free Rider Principle' to Zonal Architectures

- How cameras become an enabler for Zonal Architectures in vehicles
- Why zonal architectures lag in adoption
- Standardized RCP as an enabler
- From powerful SOA nodes to pragmatic gateways
- High-data sensors as a turning point

Max Turner, Automotive Network Architect, Ethernovia

12:30 Lunch

14:00 System architecture design for agricultural machinery - Cross industry talk

Cross Industry Talk

- The unique agricultural problem space for system design
- Insights of todays agricultural E/E architectures
- Trends, challenges and concepts for next generation E/E architecture approaches

Cornelius Butzkamm, E/E Architecture, CLAAS E-Systems

II. Networking technologies

14:30 CAN XL & FD – Ready for the SDV!

- Exploration of the 3 key features for layer 2 communication (MAC-layer) in an SDV
- Why CAN XL fulfills the necessary SDV features
- CAN FD limitations today and the solution that is under specification at CiA

Dr. Arthur Mutter, Expert, Robert Bosch

15:00 The CAN XL Physical Layer Challenges

- CAN XL: higher payloads, up to 20 Mbit/s, transceiver compatibility
- Physical layer design: eye diagrams, topologies, validation
- Bitrate limits and MCU–transceiver interface requirements

Magnus-Maria Hell, System Engineer In Vehicle Network, Infineon Technologies

15:30 Networking & coffee break

16:15 Advancing 10BASE-T1S: Modular Testing Insights, Challenges and Contributions to Standardization

- Interoperability testing using 10BASE-T1S from component testing to system testing
- Practical approach for a modular test setup that can be adapted for different PHY designs
- Benefit for standardization work

Leila Jürgensen, Technical Head of Automotive Ethernet Department, in-tech &
Jonas Lendzion Schultz II, Expert In-vehicle Network Communications, BMW

16:45 Combining DDS with TSN for Real-Time Deterministic Communication

- DDS + TSN create a deterministic real-time communication backbone
- Prevents traffic interference in complex distributed systems
- Flexible integration options for system architects

Marc Bajet, Staff Application Engineer, RTI

17:15 OA TC18 RCP with IEEE 1722 - A Deployment Perspective

- RCP enables centralized software with simple edge nodes
- Unified control and AV streaming via RCP & AVB
- Production-ready AVB stacks and mature IEEE 1722 ecosystem
- IEEE 1722 ensures OEM deployment flexibility
- Multicast IEEE 1722 streams improve bandwidth and efficiency

Karthik Sivaramakrishnan, Ethernet Product Marketing, NXP Netherlands,
Co-Author: Adriaan Niess, Robert Bosch

17:45 End of conference day one

Get-together

At the end of the first conference day we kindly invite you to use the relaxed and informal atmosphere for in-depth conversations with other participants and speakers.

08:25 Welcome

III. Security in In-Vehicle Networks

08:30 Security inside MCUs with Ethernet Ring and Virtualization

- Fulfillment of strict security requirements by MCUs for data protection and prevention of unauthorized access
- Comparison of Hardware-based and Software-based security solutions
- Optimization of protection through selection of appropriate hardware and software features according to application-specific requirements
- Hardware security module (HSM) vs. TrustZone

Jan Pistulka, Marketing Manager, Automotive MCU, ST Microelectronics

09:00 Optimizing MKA for Shared-Medium Secure Communications

- Excessive latency and unpredictability of IEEE 802.1X/MKA startup for automotive shared-medium links under strict timing budgets
- Practical MKA configuration and protocol optimizations for predictable worst-case time-to-key-agreement, robust to resets and losses
- Evaluation via RTaW Pegase models, focusing on worst-case startup behavior
- Actionable configuration guidelines and identification of remaining gaps for production deployments

Jonathan Ndop, Engineering Cyber Security and Safety/Doctoral Researcher, Robert Bosch

09:30 Automotive Building Blocks of Cybersecurity - Then, Now, and Beyond the Connected Car Revolution

- Evolution of the requirements on Security within car networks
- Security requirements of modern SDV (especially UN R155 and UN R156)
- Security controls for modern SDV
- Inventory of current state-of-the-art security controls in context to security needs for modern SDV

Dr. Sven Plaga, Staff Product Security Engineer, Rivian and Volkswagen Group Technologies

10:00 Networking & coffee break

IV. AI & Tooling in Vehicle Development

10:45 Complex Systems – System Modeling with Generative AI

- Describing complex systems in natural language is hard, so what about using a structured language approach
- Example workflow using SysML 2.0 and Generative AI

Georg Doll, CTO Automotive & Mobility, Microsoft Deutschland

Keynote

11:15 Intelligently Controlling Vehicle Functions via Onboard Vehicle APIs and a Model Context Protocol-based AI Architecture

- Managing vehicle functions with AI
- Leveraging LLMs for intuitive in-car interaction
- AI-driven service architecture for vehicle control
- Integrating LLMs with in-vehicle APIs via MCP and automotive ethernet

Philipp Enke, R&D Engineer, Co-Author: **Dr. Julian Müller**, R&D Engineer, both: Mercedes-Benz

11:45 FLYNC: Accelerator for SDV network configuration

- Vehicle development is bottlenecked by slow, manual configuration
- Fragmented configuration formats create complexity
- Lack of end-to-end automation limits scalability
- FLYNC is a new project to solve this with modern technology

Keynote

Iago Alvarez, Lead Engineer, Co-Author: **Dr. Lars Völker**, Technical Fellow, both: Technica Engineering

12:15 Lunch

13:15 A Walk through the Short-Range Wireless Technology SparkLink and its Adoption in Automotive

- Introduction to the Short-Range Wireless Communications Technology SparkLink (a.k.a. NearLink).
- Technology Ecosystem: International SparkLink Wireless Short-Range Communication Alliance (iSLA).
- Automotive Application (in Production): Digital Car Key based on SparkLink.

Dr.-Ing. Francesc Fons, Chief Researcher, Huawei Technologies Duesseldorf & **Yinchao Xia**, Product Director Europe, YFORE Technology Germany

13:45 Exploring the benefits of 6G for Edge Computing in Smart Agriculture

- Enhancement of Smart Agriculture by including the computing power of modern vehicle ECUs as extended data center
- Dynamic scheduling of offloaded tasks based on connectivity estimation for each path's quality of service
- Extent lifecycle of deprecated agricultural vehicles by enabling state-of-the-art features
- Reducing the demand of herbicides, fertilizers and water via Precision Farming

Simon Gimpel, Virtual Engineering, Fraunhofer IESE, Co-Author: **Marcus Reutemann**, Engineering Manager GNSS & COMS, John Deere

14:15 Closing Remarks

14:30 End of conference

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Jasmin Habel
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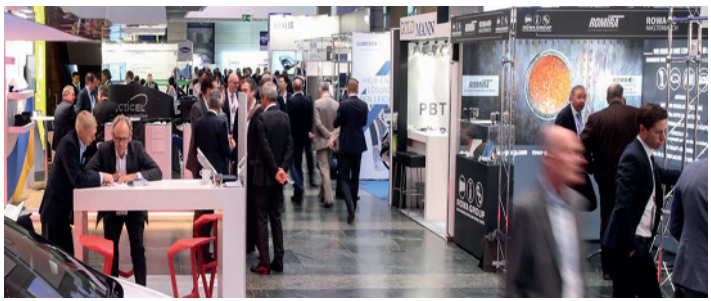

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Become a speaker at our international VDI Automotive Conferences. Make yourself known in the industry and discuss best practice examples with other international experts. We are looking for speakers on: Future E/E-Architecture, AI & Software Defined Vehicle, Security, Automated Driving and Connected Off-Highway Machines.
Please submit your topic to:

Nicolas Regiani
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Conference venue
Mövenpick Hotel Stuttgart Airport
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70629 Stuttgart, Germany
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You will find more hotels close to the venue at www.vdi-wissensforum.de/hrs

Hotel room reservation:
A limited number of rooms have been reserved for the benefit of the conference participants at the Mövenpick Hotel Stuttgart Airport until 23 of March 2026.
Please refer to "VDI Conference". For more hotels: www.vdi-wissensforum.de/hrs

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Registration

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VDI

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