



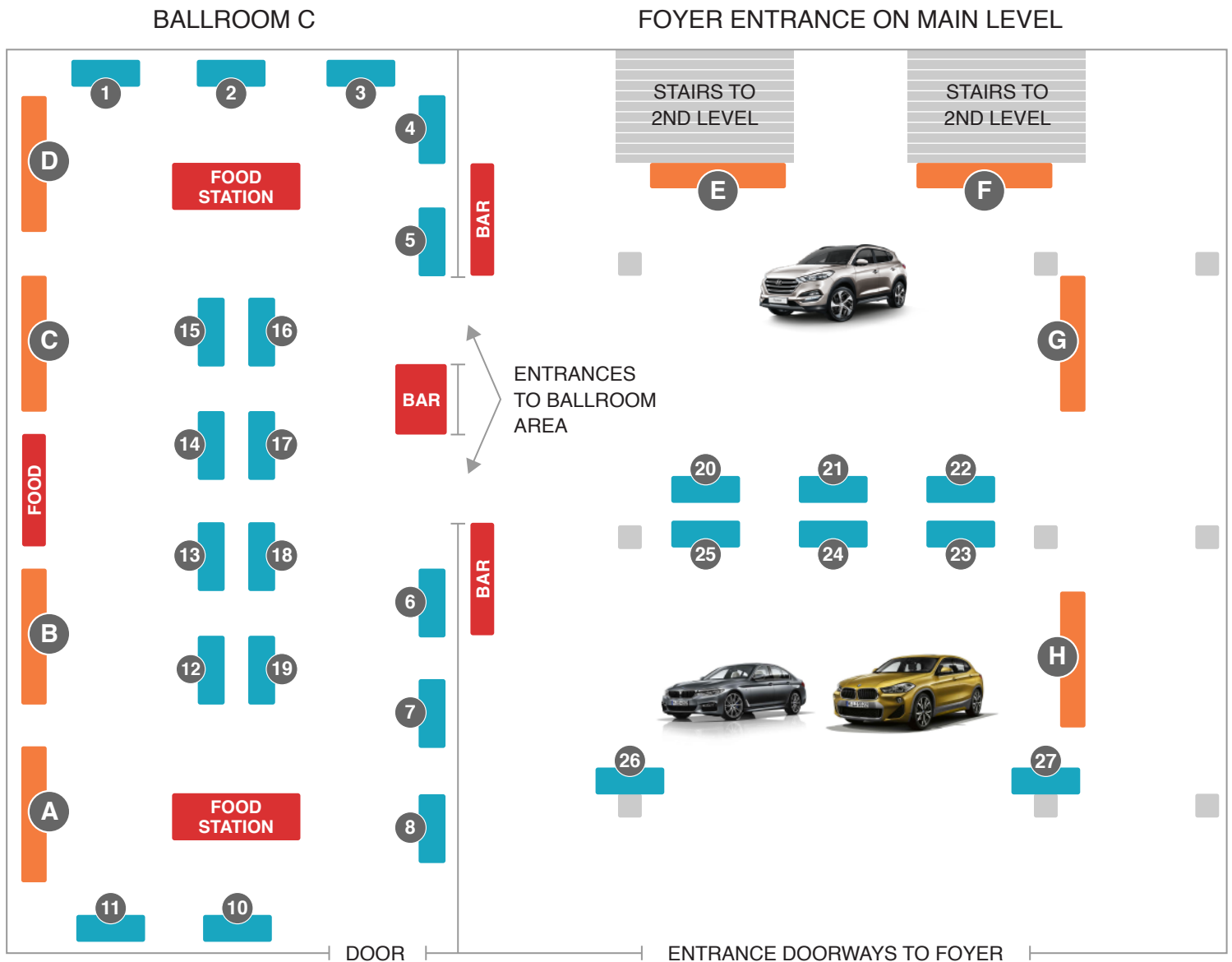
ALL MEMBER MEETING & OPEN COMMUNITY DAYS

MUNICH | 2018



Where Automotive Trends and Open Technology Meet

GENIVI Munich All Member Meeting Showcase Map



Leveraging a Global Automotive Community

GENIVI has become a community where ecosystems outside of the automotive industry can meet and tap into our global automaker and supplier network. An example of this "ecosystem-level" collaboration is a new "radio 2.0" project that the National Association of Broadcasters (NAB) have brought to GENIVI for consideration. GENIVI also has worked on smart home, smart cities, and advanced mobility ecosystems to jointly explore solutions that integrate the vehicle into the increasingly connected world.

A Mentor Automotive DIAMOND SPONSOR

1. Consolidation of Infotainment and Driver Information systems

This demonstration uses two GENIVI compatible Linux operating systems, hosted on Intel ApolloLake hardware. The system uses an automotive-grade Hypervisor to share the resources of the hardware and achieve high-resolution graphics performance for a driver information system, and infotainment center-stack. The solution is scalable and provides an in-vehicle cockpit solution for autonomous and semi-autonomous vehicles



2. Audio Bus Monitoring

This demonstration includes the latest Audio Bus non-intrusive monitoring solution from Mentor, based on Analog Devices A2B technology. A2B allows conventional in-vehicle cables to be replaced with light-weight twisted-pair unshielded cabling. The entire system is GENIVI compatible, and offers a valuable audio technology extension to Infotainment and Noise-Cancellation technology

3. ASIL B Digital Cluster Architecture

This demonstration includes an embedded-safety architecture that allows complex graphics to be combined in a single display with safety-certifiable ASIL B graphics, in a digital cluster application. The hardware is a Jacinto-6 automotive hardware reference platform, developed by Mentor, and used to help OEM and Tier 1 companies reduce development time for production applications

4. Autonomous Driving

This demonstration shows the TASS PreScan solution being used to validate Autonomous Driving algorithms, part of Mentor's DRS360 Autonomous Driving development project. The sensor fusion solution is adaptable to support multiple sensor inputs, and provides a scalable development platform up to Level 5 Autonomous Driving.

B Luxoft PLATINUM SPONSOR

AUTOMOTIVE REFERENCE PLATFORM – ZERO LIMITS, ENDLESS OPPORTUNITIES, ONE PLATFORM

This demonstrator is a modular development and prototyping platform for infotainment and ADAS systems, offering interchangeable SoC modules and extensive customization and expandability by leveraging the on-board FPGAs and high-speed expansion slots. The Intel ARP places no restrictions on the platform you want to build. Fully supported by Luxoft's GENIVI-compliant PELUX Reference Platform, the ARP offers an unprecedented pixel-to-silicon prototyping platform for tomorrow's Digital Cockpits. The demo will consist of the ARP board running UI on the PELUX Reference Platform with Qt Automotive.



C initive SILVER SPONSOR

An iNtENCE branded HMI solution shows a simple setup which allows us to demonstrate a brute force attack on a keyless car entry system, it's detection and theft prevention.



D Wind River GOLD SPONSOR

Helix Chassis Suitcase Demo

The suitcase demo showcases the Wind River Helix Chassis software framework for the connected car. It is designed to highlight both the consumer experience and how vehicle systems function. Inside the car, the demo addresses everything within the consolidated cockpit from the instrument cluster, the IVI system and gateways that connect your vehicle to the cloud. The Helix Chassis software framework allows for flexibility and interoperability for the auto maker to define their own experience while reducing costs and accelerating the development of production solutions. The suitcase demo also features over-the-air update capability that is integrated into the suitcase's compute platform.



E Arkamys SILVER SPONSOR

As a leader in automotive sound enhancement solutions, ARKAMYS works to help OEMs achieve the best in-vehicle user experience & perceived audio quality through a suite of embedded audio software, tuning tools and sound-tuning support.

ARKAMYS consistently increases its global automotive footprint and local presence to infotainment ecosystem in France, Germany, Japan, Korea, China and US. As of 2018, 43 million vehicles, 20 OEMs brands, and 15 radio Tier1 suppliers have been supported by ARKAMYS SoundStage products and services.



As silver sponsor for Genivi AMM Munich 2018, Arkamys presents an in-vehicle demonstrator to introduce its latest audio software technology: Sound Stage Advanced. This solution is specifically for mid/high radio and navigation infotainment system through modular and scalable audio software features. Sound Stage Advanced is GENIVI aligned, ready and optimized for Renesas R-Car platform, anticipates car OEMS' needs and guarantees easy going technical integration.

Book your in-vehicle audio demonstration with the team now contact@arkamys.com

F Harman GOLD SPONSOR

HARMAN Ignite Platform is a complete, end-to-end cloud platform which enables connectivity, device management, application enablement, analytics and managed services capabilities. It allows automakers, dealers and service providers to introduce, easily deploy and manage new cloud applications and services while meeting the safety, convenience, information, and entertainment needs of customers around the world.



HARMAN Remote Vehicle Updating Service (OTA) enables automakers and Tier-1 suppliers to adapt to an evolving market landscape by securely managing all in-vehicle software components, including firmware, applications, configurations, settings and maps on head units, TCUs (Telematics Control Units) and ECUs (Electronic Control Units); anywhere and at any time – whether on the production line, at dealer lots or on car owners' driveways.

HARMAN Automated UI Development Suite assists in the creation of connected, multi-screen, adaptive and secure In-Vehicle Infotainment (IVI) systems. It addresses the Consumer need to have the same type of connectivity that is provided on their mobile devices in their vehicles as well. This tool allows an integrated experience across all the screens in the vehicle.

G Renesas GOLD SPONSOR

As the world's leading automotive semiconductor company, Renesas enjoys a wealth of experience across all automaker requirements: quality, safety, and security. Now in our third generation SoC, we offer solutions from single digit pricing to triple digit performance. Renesas silicon is in nearly all production vehicles worldwide as we ship nearly 1B microcontrollers and SoCs every year. At least 120M R-Car SoCs are on the road for infotainment, a significant portion of which are running Linux.



At the GENIVI Showcase in Munich, you can experience the latest implementations featuring vehicle domains interactions based on different R-Car reference boards affordable to developers of all kinds but also several others R-Car based demonstrations from technology partners:

- Hypervisor-Based Cloud services Enablement thanks to Open-source Xen Virtualization Solution using R-Car H3
- Integrated automotive virtualization with RTOS and Linux running applications transparently with a standard HMI
- Edge and Cloud computing - Predictive-Safety Drive Solution based on R-Car Gen3 GENIVI Compliant BSP and Amazon Web Service
- R-Car M3 Sound enhancement solution embedded in a vehicle
- GENIVI Compliant BSP approved to version 13.0 specification fully supporting Yocto Project and all GENIVI components targeted for production
- Latest support for Android Oreo based on our Open Automotive Alliance membership and robust OSS support

Please request a meeting in our private suite to see several firsts including NDA developments building on our substantial contributions to GENIVI and the Open

H LG Electronics SILVER SPONSOR

- LGE would like to show Graphics/Media sharing and interaction between IVI-driver and IVI-passenger.
- It's the good example of what GENIVI Domain Integration Project is dealing with.
- In order to realize these use-cases, we're using surface sharing and media sharing techniques.
- Regarding graphics sharing, the surface of navigation itself will be shared from IVI-driver to IVI-passenger. Also, the shared surface of IVI-passenger can deliver touch event back to IVI-driver.
- For media sharing, IVI-driver will realtime-stream media to IVI-passenger and control playback of the media.
- One more interesting demo item is BMW Ramses solution. You can see how it can work well on the LGE's GENIVI-compliant platform and hear about our



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A Siemens Business

PLATINUM SPONSOR



GOLD SPONSORS



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1 Available

2 NXP

The NXP IVI Platform is a system solution intended to help Auto Tier1's accelerate their time to market when developing an IVI product by providing all the major blocks (HW and SW) of such a product. It integrates an i.MX 8X Application processor with complementary NXP Portfolio Automotive products – Radio Tuners & Audio Processing, Class-D Amplifier, PMIC. It offers out of the box for i.MX 8X the low-level SW Components (bootloader, kernel and drivers) plus Middleware that significantly relies of HW acceleration to achieve required functional and performance.



3 Perseus

Perseus will be showing two demos. One is showing Perseus hypervisor supporting Linux OS and number of RTOS where RTOS can be launched dynamically and running comfortably without affecting Linux performance. The second video is displaying connected car user scenarios and Perseus solutions value to customers.



4 GoKid

GoKid—the complete carpool solution for schools, teams and active families—will be showcasing its new development adapted for in-car infotainment systems. Developed specifically for the Bosch mySPIN platform, GoKid is working with partners to launch this in cars spring 2018.



5 Bosch

Demo 1: on an already launched OE product based on GENIVI technology

Demo 2: on an convergence product (cluster plus IVI) and an holistic HMI approach



6 Altia

Demo 1: Altia will showcase a single Renesas R-Car H3 board running dual displays – Future Glow cluster HMI demo (1920x720) and Future Glow IVI demo (1024x768). The cluster demo utilizes OpenGL ES 2.0 and includes Altia Design 12.0 Advanced 3D capabilities alongside 2D content. Complex glow and masking effects are employed, as well. The IVI demo also uses OpenGL ES 2.0 and demonstrates Altia's dynamic list capability.



Demo 2: Altia will demonstrate our Turbo3D cluster HMI demo (1920x720) on the NXP i.MX 8. This Altia cluster demo utilizes an OpenGL ES 2.0 graphics pipeline to deliver Advanced 3D capabilities available for Altia Design 12.0, while featuring Altia's capability to seamlessly integrate 2D and 3D content in a single GUI design.

7 DiSTI

DiSTI will be showcasing their Award Winning GL Studio UI Tool as well as several High Definition, High Performance and Safety Critical UI demonstrations: The GL Studio HD EV Safety Cluster running on the Renesas R-Car H3 with YOCTO Linux, the GL Studio HD Cluster running on Intel Apollo Lake MRB with Green Hills INTEGRITY, and the GL Studio Heads Up Display running on TeleChips with YOCTO Linux.



8 ecog

The EcoG IoT solution has the technology to enable profits over the entire charger lifetime with additional shared revenue streams in EV Charging. Whether you are manufacturing high performance chargers (HPCs), are an operator for HPC or are a site-owner on which premises an HPC is or will be installed, we offer you digital services that generate value beyond the pure charging process. We provide the platform to differentiate your HPC business with value added service.



9 Available

10 Telemotive AG

Telemotive AG will be showing in the showcase:



- Current Data Logger Portfolio
- TTA – Telemotive Test Automation
- TIC – Telemotive Intelligent Charging

11 Available

12 GENIVI (GDP)

GDP target system and development environment.



13 AllGoSystems

AllGo will demonstrate their Distributed Media Engine at Genivi, Munich,

1. AllGo RACE Distributed Media Engine
 - Solution to stream media contents to RSE / BYODs (both iOS and Android devices)
 - Support browsing and playback control from RSE / BYOD
 - Individual Streaming of HD Contents to RSE / BYOD
 - Synchronous Streaming of same content to all devices with perfect Audio / Video Sync.
 - Integrates with any underlying Media Engine.
2. AllGo RACE MME
 - Browsing and Playback from all media devices (iAP1 / iAP2 / Android / USB / SD)
3. AllGo Apple CarPlay SDK (WiFi/ Ethernet)
4. AllGo Android Auto Projection (WiFi/ Ethernet)
5. Baidu CarLife
6. SmartDeviceLink (SDL)



14 Obigo

OBIGO would like to demonstrate the OBIGO Automotive Platform which consists of the four main components; Connected Vehicle App Framework, Connected Vehicle Web App SDK, Vehicle API Framework, and Vehicle Cloud App Center. Additionally, the Automotive Grade Browser(AGB) will be showing the latest Blink engine based browser, and the Developer Portal Site will be presented how to support 3rd party operation including QA, legacy system, customer support, SDK delivery, supporting documents, and Q&A.



15 OpenSynergy

Title: Safe Linux Instrument Cluster:

OpenSynergy has teamed with automotive UI leader Rightware to present a new safety feature for instrument cluster running on OpenSynergy's COQOS SDK. The architecture is based on OpenSynergy's COQOS Hypervisor technology and includes the new instrument cluster guard mechanism.



This new approach has been realized by integrating Rightware's the 3D instrument cluster into a virtualized Linux guest in one of the VMs created by COQOS Hypervisor. Some elements of the instrument cluster are safety-critical and require qualification up to ASIL-B, such as tell tale warnings for failure of airbags, brakes, etc. OpenSynergy has integrated a Linux subsystem in a second VM on COQOS Hypervisor. It is used to render all graphical elements for the instrument cluster, including the safety-critical tell tales. An RTOS subsystem also running in a separate VM is used to verify the safety-critical subset of the graphical elements. In case of any software failure in the VM running the instrument cluster, the guard mechanism would activate near-immediate recovery of the instrument cluster.

16 Tuxera

Demo 1: Tuxera Ultra Fast Boot

Tuxera is showcasing cold boot optimizations on Automotive Grade Linux demo platform in a very interactive way. Tuxera's Ultra Fast Boot service leverages from our expertise in file systems as well as Linux in general.

Demo 2: TFFS vs open source file system

Tuxera is showcasing the Tuxera Flash File System (TFFS) which is specifically optimized for internal flash storage and designed in cooperation with the leading flash memory vendors. TFFS reduces memory wear-out and significantly increases flash memory lifetime while maintaining industry-leading performance and fail-safe/power-safe operation.

Demo 3: Drift demo

In collaboration with Renesas, Western Digital (SanDisk), Arm and DiSTI, Tuxera is showcasing a Proof of Concept EDR for the future Autonomous Vehicles. Tuxera Flash File System (TFFS) is being used as the main file system to write huge amount of data coming from several sources (e.g. video, sensors).



17 Igalia

Igalia innovates in multiple specific areas to deliver the best Open Source technologies and solutions to its customers. We focus on client-side web technologies including WebKit, WPE and Chromium/Blink, JavaScript engines, optimization of graphical pipelines, Multimedia, the Linux kernel, Accessibility and more.



Our expertise and specialization in relevant domains comes from our work on a wide set of platforms and software distributions. From embedded Linux to Android and from desktop to embedded, our work and contributions are present in almost anything running on top of a Linux kernel. Our demos will showcase includes:

1. WPE (upstream WebKit port optimized for embedded) running on a Raspberry Pi 2
2. Chromium on Wayland support on the Renesas R-Car M3 board

18 Access Company

ACCESS Twine™ for Car

ACCESS Twine™ for Car (Twine4Car) is a flexible multimedia content service for automotive OEMs. It is made to bridge the gap between the automotive and the content industries and increases the safety, the comfort and the flexibility in content consumption for drivers and passengers.



19 Telechips

Telechips Premium Cockpit System

TCC8021(Dolphin, CA7 Q) runs Display Audio System and run Around View Monitoring(AVM) system solution with 4ch VGA cameras. TCC8971 covers Full Digital Instrument Cluster with 1920x720 color LCD 60fps.



All-in-one IVI

- Connectivity (Wireless CarPlay, Abalta Weblink, SDL)
- SDR (AM/FM, DAB, DRM, HDR)
- T-Sound
- Bluetooth
- MCU function
- WiFi RSDB
- USB Playback (Music, Movie)
- AVM (720 x 480, 60fps)

Full Digital Instrument Cluster

- 1920x720 60fps, fast booting (under 2 sec)
- Rich HMI (by Reakosys)

20 GitHub

Software is the new Fuel - Applying GitHub's Development, Collaboration and Deployment Practices in the Automotive Industry



- Learn why more than 25 million developers and 75,000 companies trust GitHub with their software projects.
- See how automotive initiatives like the Genivi Alliance develop software using the GitHub Flow
- Find out how to attract and sustain developers, reuse code and foster collaboration across teams
- Explore how continuous integration and deployment technologies can easily be

21 ArcherMind Technologies

ArcherMind next generation smart cockpit solution:



- ArcherMind next generation smart cockpit solution based on QNX Hypervisor that supports Intel Apollo Lake, Qualcomm 820A hardware platform, it can provide high-performance computing, realistic graphic display with ultra HD 4K video performance.
- This solution uses QNX Hypervisor operating system virtualization technology, supports QNX, Linux, Android and other guest operating systems,
- enabling multiple guest operating systems to share access to key devices such as GPU, Audio, Ethernet, Storage, etc..
- With inter-guest communication through TCP/IP and share memory, the navigation video on IVI can be projected on the clusters display, which brings a safer driving experience.
- And, Qt based HMI framework provides a more aesthetically pleasing and smooth HMI solution.

22 FASTR.org

FASTR will utilize this table to educate GENIVI members on the FASTR vision and mission, provide access to collateral and assets that will be part of the technical presentations on April 19th, and use the opportunity to dialog with interested parties on potential security topics that would be of interest in 2018-2019



23 KREG (Table 1)

CDL:

The component Car Data Logger is responsible for collecting, storing car related data, and providing the data to other GENIVI compliance components and off-board servers. CDL is started from an idea that if we could collect, store, and provide car related data, it would make a very valuable service to auto-makers, users, and other GENIVI compliance components. The CDL team is currently working on a PoC for the Abstract component. The purpose of this PoC is to demonstrate the functionality of CDL in an integrated system in collaboration with various GENIVI Components. CDL team demonstrated at last AMM examples using GENIVI Component such as GENIVI Vehicle Simulator, VSS, VSI, RVI, CommonAPI. CDL team will show how to use Vehicle Data with Web Platform using CANDevStudio and VISS (W3C).



24 itemis AG

itemis is an internationally established software consultancy with focus on the development of tools and model-based software. At the GENIVI AMM showcase event, itemis will present tools which are highly relevant for today's IVI development:



- Security Analyst is a software tool for analyzing the security properties of systems in the automotive development process based on universal security standards. It helps analysing and avoiding security breaches in IVI systems.
- Franca is a well-established tool for definition and analysis of software interfaces; via CommonAPI it supports C++ code generation for D-Bus, SOME/IP and WAMP/REST.
- Yakindu Statechart Tools provides an integrated modelling environment for the specification and development of reactive, event-driven systems based on the concept of state machines.
- Yakindu Traceability is a configurable tool for traceability management as required by standards like ISO 26262 and Automotive SPICE.

25 Green Hills

Green Hills Software and Renesas are collaborating at the GENIVI All Members Meeting on an automotive electronics demonstration showcasing the trusted consolidation of multiple eCockpit functions.

The combination of safety-certified INTEGRITY® RTOS with INTEGRITY Multivisor virtualization and the R-Car H3 automotive processor provides a trusted foundation for system designers to build a single scalable platform hosting guest operating systems while concurrently running one or more safety-critical applications.



- Safely combine Linux, Android or other operating systems with safety-critical instruments cluster/HUD
- Freedom from interference is assured by the INTEGRITY RTOS separation architecture – independently certified to the highest levels of safety and security in the world.
- INTEGRITY Multivisor hosts Linux and 3D infotainment applications using Weston/Wayland compositor
- INTEGRITY runs protected ASIL-critical Instrument cluster and HUD telltales
- Shared GPU and OpenGL ES 3.1 between INTEGRITY cluster and Linux infotainment
- Scalable fast boot
- Real-time video camera shows high performance and reliability inside the cluster display
- R-Car H3 Salvator-X development board features Quad Cortex-A57, IMG GX6650 GPU and multiple display controllers

26 BMW Vehicle #1

BMW M550d xDrive Limousine
Showcase of the display cluster predecessor for Ramses distributes rendering



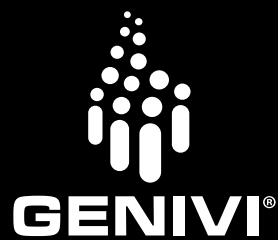
27 BMW Vehicle #2

BMW X2 xDrive 20d
Linux based GENIVI based Head Unit for Infotainment use cases



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If your organization is interested in participating in future GENIVI Demonstration Showcases and Network Events, please contact GENIVI marketing at MikeNunnery@comcast.net for specific details.