FEDERATE

FEDERATE Building Block (BB) repository on GitHub now offers monthly releases!

FEDERATE is pleased to announce that, starting in **January 2026,** the Building Block (BB) Repository on GitHub has introduced **monthly releases.** Each release compiles all activities from the previous month and generates an updated output.xlsx file that provides a consolidated, flat-table overview of the repository content.

The **FEDERATE Building Block (BB) Repository** on GitHub (**https://github.com/CSA-FEDERATE/Proposed-BuildingBlocks**) has grown substantially in recent months. It has become the go to resource for discovering **open-source Software-Defined Vehicle (SDV) building blocks.** The repository hosts structured descriptions of building blocks essential for developing, operating, and evolving SDVs.

All building block descriptions are provided as **Markdown (MD) files,** offering clear information about each BB, including its purpose, associated repository, maturity, requirements, and dependencies. A comprehensive **Wiki** complements these descriptions by offering definitions, templates, conventions, and guidance for contributing SDV-related ideas and technical components.

Since going online in mid 2024, the repository has expanded to **more than 150 building blocks** at the time of this Newsletter's publication—and continues to grow steadily. Its structure has been carefully designed to help developers efficiently locate the right BB. Following the ontology detailed in the Wiki, the structure covers:

- **In vehicle software (SC)** – further divided into layers 1 to 3 to reflect the high-level SDV architecture
- **Cloud software (C*)**
- **Engineering tools (E*)**
- **Support components (S)**

For users who prefer a simpler, flat overview of all building blocks, the generated **Excel file (output.xlsx),** included in every monthly release, offers an easy alternative for browsing and filtering the complete list.

A key point to highlight: **the repository does not host source code.** Instead, the FEDERATE repository acts as an **index** of building blocks, providing structured descriptions and linking to the respective source repositories hosted elsewhere in the open-source ecosystem.

Global momentum accelerates for open automotive software collaboration

Open source collaboration on automotive software is going truly global: On January 7 at CES, Eclipse SDV hosted an Executive Breakfast joined the Association of the Automotive Industry (VDA), convening 32 senior leaders from automotive organisations across the global value chain. Their shared objective was to join the **Memorandum of Understanding (MoU)** announced in June last year, which at the time included just 11 companies, predominantly from Germany. The mission of the MoU remains the same: to create an open and collaborative ecosystem that enables the development of core vehicle software up to 30% faster, more efficiently, and with enhanced security. This is achieved by jointly developing open source components that can be reused across the automotive industry, with the potential to reduce overall development effort by as much as 40%. Central to this effort is the Eclipse S-CORE project, which released its 0.5 beta shortly ahead of CES. In a nutshell, **Eclipse S-CORE** has the goal to provide a shared, safety-aligned middleware platform for high-performance ECUs.

This expansion of the collaboration agreement for the next generation of software-defined mobility represents a major milestone – not only in scale, but also in diversity. Electronics and hardware leaders such as Infineon, Qualcomm, and Schaeffler are now participating alongside consulting and services firms including Accenture and Capgemini, as well as OEMs such as Stellantis and Traton. The resulting ecosystem is truly global, spanning multiple continents and countries, from South Korea (LG Electronics) to France (Michelin) and California (Qualcomm).

New MoU signatories: 42dot, Accenture, AVL, Capgemini, Coretura, Cummins, ECARX, Elektrobit, Infineon, LEAR, LG Electronics, Michelin, MOBIS, QNX, Qualcomm, Red Hat, Schaeffler, Traton, Stellantis, T-Systems, Useblocks

Founding companies: Aumovio, BMW, Bosch, ETAS, Forvia, Mercedes-Benz, Qorix, Valeo, Vector, Volkswagen, ZF.

1st ECAVA Working Group meeting

On Friday, February 6th, the first ECAVA Working Group meeting was held in Brussels.

This inaugural session opened with a review of the current landscape of European level collaborations, followed by an impulse session exploring opportunities to jointly advance a European Autonomous Driving (AD) software stack.

Participants then focused their work on two central themes:

• Technical governance and coordination of ongoing activities
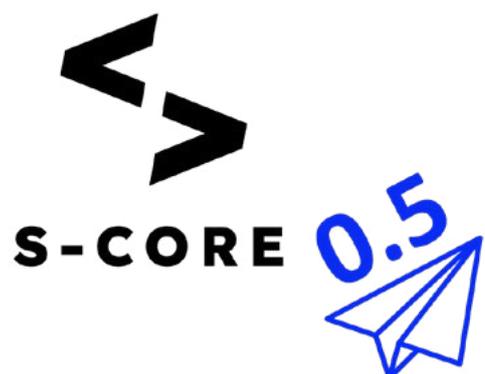
• Collaboration toward a European AD software stack

To ensure greater efficiency for the working group, a dedicated core team will be established and led by the soon to be elected co chairs.

Details on this organization will be shared during the next ECAVA Steering Committee meeting in mid March.

Eclipse S-CORE 0.5

The Eclipse **S-CORE v0.5-beta** release, published on December 19, 2025, marks the second major milestone for the Eclipse Safe Open Vehicle Core platform and builds on the earlier alpha version by bringing together the core modules, reference integrations, and essential infrastructure needed to build and run example applications like the scramble demo across multiple target images. Designed as an early beta for experimentation and feedback, this version focuses on improving platform stability, performance, and usability while acknowledging that features remain incomplete and may change as development progresses. Key enhancements include the introduction of static code analysis using CodeQL with MISRA C++ 2023, automated execution of unit tests in the reference integration workflow, and automatic publishing of unit test coverage results for components. The release also updates the build toolchain with a combined qcc and gcc setup, improves documentation and process descriptions, adds clang-tidy integration to the Bazel infrastructure, and extends platform functionality with a logging daemon. It integrates updated versions of foundational modules such as baselibs, communication (with expanded Rust API support and code quality tooling), persistency, orchestrator, and others, alongside infrastructure modules like process description, tooling, and testing frameworks, solidifying Eclipse S-CORE's evolving foundation for open, safety-oriented automotive software development. **Read the full release notes.**

FEDERATE unites the SDV Community at EFECS 2025 in Malta

From 3 – 4 December 2025, the European Forum for Electronic Components and Systems (EFECS 2025) in St Julian's, Malta served as a vibrant hub for Europe's electronic components and systems (ECS) community and FEDERATE was at the heart of it. Under the event's overarching theme "Accelerate Innovation: Building European Competitiveness", industry leaders, policymakers, researchers and associations gathered to explore ways to strengthen Europe's role across semiconductor and digital value chains.

At the core of FEDERATE's presence was Booth 23 in the project exhibition area, where the team showcased how the initiative is helping shape SDVoF ecosystem in Europe. Visitors learned how FEDERATE maps the evolving SDV landscape, aligns stakeholders from across the mobility and digital technology sectors, and coordinates strategic research and innovation efforts to advance SDV development throughout the value chain.

FEDERATE delivered a project talk as part of the official exhibition programme, highlighting three key contributions of the initiative:

• Connecting communities across mobility, semiconductor, open-source and digital infrastructure domains.

• Developing a shared vision with a roadmap and foundational building blocks for SDV in Europe.

• Supporting collaborative endeavours, including the European Connected and Autonomous Vehicle Alliance (ECAVA) and SDVoF-focused research and innovation projects.

Throughout both days, the FEDERATE booth became a lively meeting point for automotive OEMs, Tier-1 suppliers, semiconductor firms, open-source foundations, research consortia and public authorities focused on SDV innovation. Conversations spanned topics such as open and interoperable software stacks, safety and security challenges, standardisation needs, as well as aligning SDV developments with the ambitions of the European Chips Act and broader mobility policy goals.

EFECS 2025 clearly confirmed that **software-defined vehicles are central to the future of Europe's electronic systems ecosystem -** and that cross-project collaboration and strategic coordination are essential for continued progress.

Photos from the event: https://federate-sdv.eu/dissemination/#DisseminationPhotos

The Open Community for Automotive 2026 is a key collocated event within the Eclipse Foundation's flagship open source conference Open Community Experience (OCX), taking place 21–23 April 2026 in Brussels, Belgium. OCX 2026 brings together developers, innovators, industry leaders, and researchers from around the world for three days of collaboration, idea exchange, and community building across multiple domains of open source technology. Among the five specialised tracks – Tooling, AI, Compliance, Research, and the Main OCX program – the automotive track is dedicated to exploring open innovation in mobility and software-defined vehicles (SDVs), reflecting how modern automotive software is rapidly evolving through open collaboration. Attendees will have the opportunity to engage in high-impact presentations, technical deep dives, and discussions focused on the latest advancements in SDV architectures, open automotive software stacks, toolchains, programming frameworks, and cross-industry collaboration models that are shaping the future of mobility technologies. This event is designed to foster connections among professionals driving open source automotive innovation, offering a forum to share practical insights, best practices, and forward-looking strategies that accelerate the adoption of open, safe, and interoperable automotive solutions.

Visitors are invited to meet FEDERATE at OCX26 at its dedicated booth to explore its latest developments and engage with the project team!

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