



What role for chipmakers?

Automotive Open-Source Summit 2026 | Starnberg

`frederic.ameye.vz@renesas.com`

Do we want more
Open-Source ?
(also applies to Open
Standards)



Have we figured out
how to deal with safety
and cyber regulations?



We love reinventing the wheel.

Tech Industry figured it out early

- Not only the benefits of open sourcing
- But also *energizing communities* around a product
- Being *SW product-minded* in general
- Also technologies for mission-critical systems
 - Hypervisor
 - Containers
 - Memory safety
 - Distributed systems
 - Confidential Computing
 - ...

Typical well-known example:

Who's doing non-Android/AOSP infotainment
nowadays?

Why?

Building around good developer experience, open ecosystems.

Also.

Never let one vendor own your stack.

Broadcom buys VMware.
Cloud vendors migrate to Xen.

That's why we built Renesas Whitebox platform

- Xen as reference hypervisor
 - Including common work with AMD and EPAM on ASIL D qualification
 - Upstreaming as default strategy (incl. Renesas HW-backed FuSa isolation)
- Zephyr and TockOS as reference Cortex-R52 RTOS and Secure Enclave
 - Including roadmaps for ASIL D qualification
 - Based on OSS Long Term Support versions
 - With standardised HW-crypto acceleration HALs

What sustainability model ?

Safety-qualified product shall be the same as the OpenSource product.
You only pay for the right to use it commercially and get the stamped paperwork.

Cf: Ferrocene



joins Rust Foundation as Silver member

Why joining Rust Foundation?

- Someone has to fund volunteer work that powers our digital world
- Notably when we start talking about supply chain security
- FuSa Working Group
- Embedded HAL contributions (eg. crypto, AI)
- Better debugging (notably on Cortex-R52 cores with affordable probes)

DEBUGGING IN THE FIELD

Engineering

Can we get a Lauterbach?

Management

We have a debugger at home.



~/firmware

```
// the debugger at home
```

```
printf("here\n"); █
```

Why joining Rust Foundation?

- Again, it's about bridging worlds : *Tech vs Legacy industry*
 - Somewhat it already started in infotainment
 - So what's next? ;-)
- Bringing a « smart creative » culture where tech geeks wants to work in
- Reliability and contract-based programming *at scale + machine-enforceable*

« That's IoT stuff... will never land in a vehicle. Not Automotive-grade.
Das ist kein deutsche Wertarbeit. »

Someone, somewhere, in some committee



Stay tuned

- AAOs SDV runtime integration in Zephyr
 - With Zenoh and zerocopy backends, and SDV runtime compatibility
 - While maintaining access control and Quality of Service using Renesas HW features for FFI (*what if* you had TSN-like capabilities for shm?)
- An open standard for Level3+ cloud emulation containers, using Renesas Fast Simulator (based on QEMU, KVM and Arm64+GPU cloud instances)
 - Emulate the full chip, interoperable with competitors for full E/E architecture emulation, ADAS resimulation, cockpit integration and 1-Click onboarding
 - Based on interoperable Veeva ChipLab platform

Our devices should be as
hackable as Arduinos.

Complexity is no excuse
for opacity.



Thank you.

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