



## Cloud

Rust's ability to produce more secure software, that runs faster, completed in less time, has made it a favourite with hyper-scalers like Google, Meta and AWS.

### Examples:

- Firecracker from **AWS**
- buck2 from **Meta**
- Pingora from **Cloudflare**



## Personal Computing

Rust is increasingly finding its way into the chip that ensures that the system isn't impacted by malware. Rust is also found in shipping copies of Android, Windows 11, and in the Linux kernel.

### Examples:

- Pluton for **Microsoft Surface** devices
- Titan for **Google Chromebooks**



## Connected Devices

With a difficult combination of limited resources, connectivity, and access to personal data. Rust is often a good option to replace C, offering not only Safety, Performance and Productivity, but also cross-compatibility with desktop systems.

### Examples:

- **Samsung** SmartThings
- **Sonos** Voice Control.

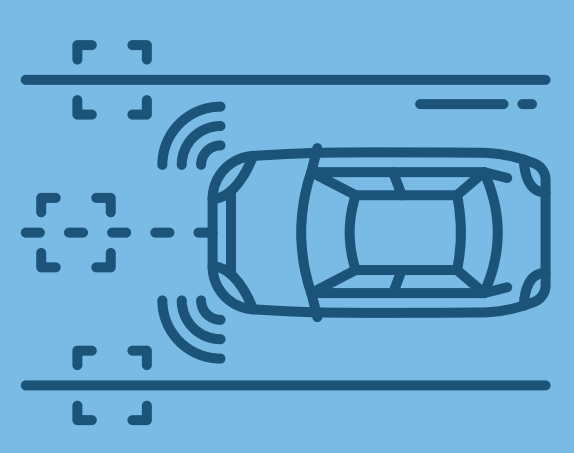


## Critical Systems

The first safety-critical certified products using firmware written in Rust are now making their way to market, built with Ferrocene from Ferrous Systems.

### Examples:

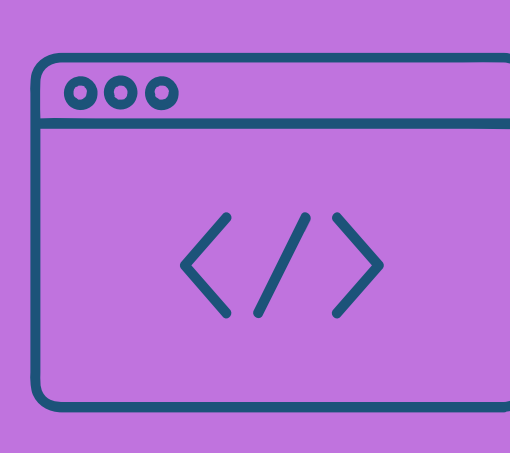
- **Sonair** ADAR module
- **Oxyprem** new-born oxygen monitor
- **Kite Shield** UWB safety system



## Automotive

Auto manufacturers and suppliers are working with Rust. **Volvo** took an early lead, shipping vehicles today with a low-power ECU written in Rust. **Renault** have also announced future vehicles will include components programmed in Rust.

**Elektrobit** and **Vector** are assisting too with AUTOSAR toolkits with Rust support.

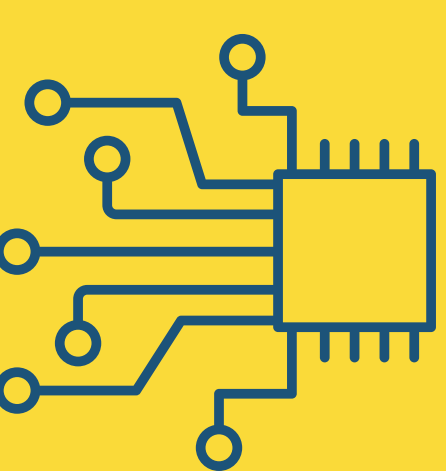


## Tool Vendors

A number of tool vendors have announced support for Rust within their products, indicating an appetite to invest in a growing market. Segger said "With first-class tool support, it has the potential to overtake C and C++".

### Examples:

- **Segger** Ozone
- **Lauterbach** TRACE32
- **TrustInSoft** Analyzer



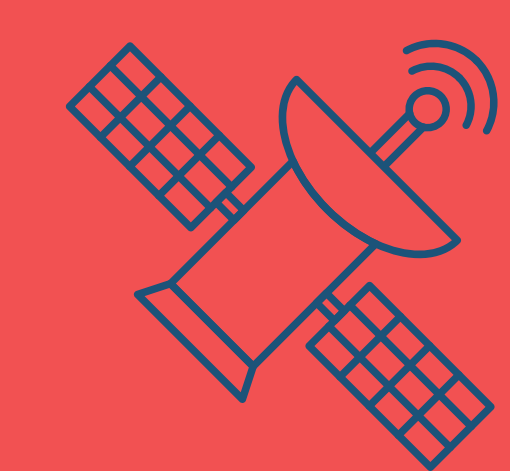
## Silicon Vendors

Both **ST Micro** and **Infineon** have made announcements about Rust support for their automotive-oriented SoCs, and the open-source community is supporting countless commercial and industrial micro-controllers, from many vendors. The **Rust Project's** Embedded Devices Working Group brings them all together, working from a common platform.



## Operating Systems

Rust has full [libstd] support for RTEMS, QNX Neutrino, VxWorks and others. Yet more are supported by building an OS-specific layer on top of the bare-metal [libcore], for example Zephyr, **Amazon** FreeRTOS or **Eclipse** ThreadX. There are also popular RTOSes written in Rust, including RTIC, embassy, Hubris and TockOS.



## Aerospace (academic)

We've seen papers from Stuttgart's **IRS**, **TU Berlin** and from **DLR**, all looking at the applicability of Rust for spaceflight applications, with positive results. **NASA** are running an IRAD looking at porting the Core Flight Software Executive to Rust, noting "this stuff is years away from being mainstream, but we think this is the direction things are going". We also see support for Rust on all popular space-flight architectures: **Arm**, PowerPC, RISC-V and SPARC.

