



# PikeOS, Rapita Verification Suite (RVS) and MACH<sup>178</sup>

## Developing certifiable Safety-critical Software for DO-178C, ISO 26262 and A(M)C 20-193

Together, we provide a streamlined path to developing and certifying Safety-critical software for DO-178C, ISO 26262 and other guidelines. Using PikeOS together with RVS and other Rapita solutions ensures reduced certification risk and time-to-market for both single core and multi-core software.

### Achieving Certification Objectives

Rapita's RVS software ensures efficient verification of PikeOS-hosted software to meet DO-178C and ISO 26262 objectives:

- Requirements-based functional testing
- Structural coverage analysis (up to and including MC/DC)
- Worst-case execution time analysis
- Data coupling & control coupling analysis

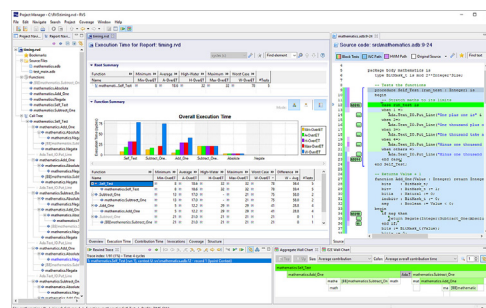
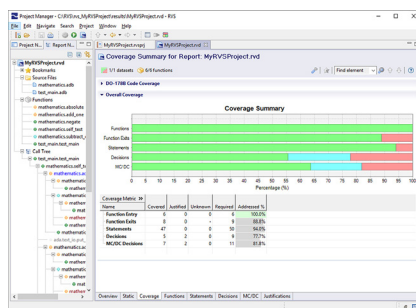
RVS is the tool of choice for verifying certified Safety-critical software by companies across the globe, and powers some of the evidence provided in the PikeOS DO-178C cert kits.

### Certifying Multi-Core Avionics

Rapita and SYSGO provide a complementary solution to support certifying multi-core Avionics for DO-178C in line with the additional objectives in AC 20-193 and AMC 20-193.

Your path to multi-core compliance:

- Plan multi-core certification and identify interference channels with MACH<sup>178</sup> Foundations
- Use PikeOS's interference mitigation strategies to mitigate multi-core interference channels
- Use MACH<sup>178</sup>, RapiDaemons and RVS tools to verify software WCET



## CUSTOMER ADDED VALUE

- Easily meet A(M)C 20-193 objectives for multi-core platforms using PikeOS and Rapita's dedicated toolchain
- Accelerate development cycles with integrated tooling and pre-qualified certification artifacts
- Combine PikeOS with RVS and MACH<sup>178</sup> to cover both the development and verification life cycle efficiently
- Trusted by leading Aerospace and Automotive organizations globally for certifiable software on single-core and multi-core systems
- Minimize certification and verification risks with proven solutions used in Safety-critical industries worldwide

**About Rapita Systems** - Established in 2004, Rapita Systems provides on-target software verification tools and services globally to the embedded aerospace and automotive electronics industries. Our solutions help to increase software quality, deliver evidence to meet safety and certification objectives and reduce project costs. Contact us at [info@rapitasystems.com](mailto:info@rapitasystems.com)

**About SYSGO** - Founded in 1991, SYSGO became a trusted advisor for Embedded Operating Systems and is the European leader in hypervisor-based OS technology offering worldwide product life cycle support. We are well positioned to meet customer needs in all industries and offer tailor-made solutions with highest expectations in Safety & Security. Contact us at [sales@sysgo.com](mailto:sales@sysgo.com)