

Architecture

STM32G474RCTx safety-coprocessor software architecture, independent monitoring, and inter-MCU interface.

Document ID	OV-SW-COPROC-ARCH
Version	0.1
Date	2026-08-08
Status	draft
Applies to	openvvvf-control-module, software-target-safety-coprocessor
Product line	openvvvf
Normative references	OV-SAF-HARA-CORE, OV-SW-MAINMCU-ARCH, OV-CA-SWM-INDEX

Placeholder / Under Revision - This page is incomplete or out of date and will be revised.

1. Architecture

PLACEHOLDER

- This document will define the safety-coprocessor software architecture once the dual-MCU design is finalized. The old SWAD explicitly excluded this content.

1.1. Planned sections

1. Role and independence from main MCU
2. Watchdog and challenge/response monitoring
3. Independent sensor acquisition
4. 1oo2 gate-drive power kill
5. Inter-MCU communication and fault reporting
6. FRAM fault logging
7. Firmware update and validation strategy
8. ASIL decomposition rationale