Stellar SR6 Px and Gx lines–Safety complex device driver
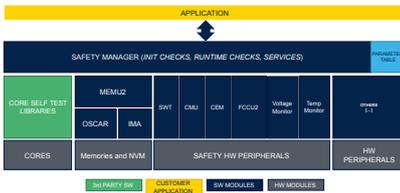
Product status link
SR6PG-CDDSTL

Product summary	
Stellar automotive MCU	**Safety CDD program**
SR6G6x, SR6G7x, SR6P3x, SR6P6x	SR6PGSFCD/A20

Features

- Designed for automotive applications
- Configurable. A single module can be configured in terms of:
  - Functionalities
  - Parameters
  - Paths to FCCU
- Complete. It implements:
  - Boot time checks
  - Runtime checks
  - Service check
- Modular
  - The safety library is organized into modules
  - Each module can be included or excluded depending on the safety target and safety needs
  - Core self-test library can be excluded in case of lock-step cores
- Certified
  - ISO 26262 ASIL-D
  - A-SPICE level 2

Description

Reliability and safety really matter considering the increasing complexity of automotive electronics and automated functions. Functional safety becomes essential to secure that both device hardware and software operate safely or bring the system into a safe mode in case of failure.

The Stellar MCU safety complex device driver (CDD) is a comprehensive software package designed for the Stellar family of 32-bit automotive microcontrollers. It has been rigorously developed according to an ISO 26262-compliant development process and helps developers achieve the required safety targets, up to the most rigorous ASIL-D level.

Stellar MCU safety CDD includes a safety kit for the microcontroller abstraction layer (MCAL) as well as core self-test programs that implement safety countermeasures to ensure compliance with MCU ASIL level requirements:

- Turn-key solution built starting from a sanctioned set of software mechanisms
- Configurable SEooC
- AUTOSAR compliant with dedicated configuration
- OS-Agnostic

Stellar MCU safety CDD embeds a core self-test that is a fault-graded software library delivered with a certified test coverage for each core unit (arithmetic-logic, data path, address calculation, interrupt handling, and control logic).

The embedded safety manual for Stellar MCUs guides the user through the mode of use to ensure that the solution complies with ISO 26262 requirements.

Developers can use ST's software service to validate the MCAL according to the safety concepts defined by the final users. ST safety pack software components are licensed products. Refer to local ST sales office to purchase the software program.

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For further information, contact your local STMicroelectronics sales office.

www.st.com

1 General information

Stellar SR6 devices embed the Arm® Cortex®-R52+ and Cortex®-M4 cores.

For information on the Arm® Cortex®-R52+ and Cortex®-M4 cores, refer to the technical reference manuals, available from the www.arm.com website.

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Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Feb-2026	1	Initial release.

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