Certificate

Functional Safety

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No.: 968/FSP 1503.03/24

Product tested	General purpose microprocessor design including safety features	**Certificate holder**	ARM Ltd. 110 Fulbourn Road Cherry Hinton Cambridge CB1 9NJ United Kingdom
Type designation	ARM Cortex-R5 and Cortex-R5F Processor IP Cores. For certified versions see current Revision List.		
Codes and standards	IEC 61508 Parts 1-7:2010 ISO 26262-2:2018 ISO 26262-5:2018		ISO 26262-8:2018 ISO 26262-9:2018
Intended application	The ARM Cortex-R5 and Cortex-R5F Processor IP Cores comply with the requirements of IEC 61508 for SC 3 regarding the avoidance of systematic faults for a Compliant Item and comply with the requirements of ISO 26262 for ASIL D regarding the avoidance of systematic faults for a Safety-Element-out-of-Context (SEooC). Based on an exemplary configuration, ARM showed that the target values for the random hardware fault metrics according to ISO 26262-5, Clauses 8 and 9 for ASIL D can be met. As a result, the Cortex-R5 and Cortex-R5F Processor IP Cores can be used in safety-related applications up to SIL 3 according to IEC 61508 and up to ASIL D according to ISO 26262. IEC 61508-3 was taken into account in the evaluation of the development of the ARM Cortex-R5 and Cortex-R5F Processor IP Cores to the extent that it was considered reasonable due to the similarity between a hardware description language and a software programming language. Furthermore, ISO 26262-4 and ISO 26262-11 were used for supporting the assessment activities.		
Specific requirements	The requirements and constraints specified in the Cortex-R5 and Cortex-R5F Safety Manual must be observed by the user.		

The issue of this certificate is based upon an evaluation in accordance with the Certification Programs CERT FSP1 V3.0:2020, CERT FSP2 V3.0:2020 in their actual version, whose results are documented in Report No. 968/FSP 1503.02/24 dated 2024-05-03. This certificate is valid only for products, which are identical with the product tested. Issued by the certification body accredited by DAkkS according to DIN EN ISO/IEC 17065. The accreditation is only valid for the scope listed in the annex to the accreditation certificate D-ZE-11052-02-00.

Köln, 2024-07-17

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Certification Body Safety & Security for Automation & Grid

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TÜVRheinland® Precisely Right.

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