Assurance Continuity Maintenance Report

BSI-DSZ-CC-1026-2017-MA-01

S3FV9VH 32-Bit RISC Microcontroller for Smart Card with specific IC Dedicated Software

from

Samsung Electronics

SOGIS
Recognition Agreement

The IT product identified in this report was assessed according to the procedures on Assurance Continuity [1] and the developer's Impact Analysis Report (IAR). The baseline for this assessment was the Certification Report, the Security Target and the Evaluation Technical Report of the product certified by the Federal Office for Information Security (BSI) under BSI-DSZ-CC-1026-2017.

The certified product itself did not change. The changes are related to an update of life cycle security aspects covered by updated audits and newest site certificates.

Consideration of the nature of the change leads to the conclusion that it is classified as an ALC re-evaluation and that certificate maintenance is the correct path to continuity of assurance.

The resistance to attacks has not been re-assessed in the course of this maintenance process. Therefore, the assurance statement as outlined in the Certification Report BSI-DSZ-CC-1026-2017 dated 8 December 2017 is of relevance and has to be considered when using the product. Details can be found on the following pages.

This report is an addendum to the Certification Report BSI-DSZ-CC-1026-2017.

Common Criteria

Common Criteria
Recognition Arrangement
recognition for components
up to EAL 2

Bonn, 14 December 2022

The Federal Office for Information Security

DAkkS
Deutsche
Akkreditierungsstelle
D-ZE-19615-01-00

Assessment

The IT product identified in this report was assessed according to the procedures on Assurance Continuity [1] and the Impact Analysis Report (IAR) [2]. The baseline for this assessment was the Certification Report of the certified product (Target of Evaluation, TOE) [3], its Security Target and the Evaluation Technical Report as outlined in [3].

The vendor for the S3FV9VH 32-Bit RISC Microcontroller for Smart Card with specific IC Dedicated Software, Samsung Electronics, submitted an IAR [2] to the BSI for approval. The IAR is intended to satisfy the requirements according to the procedures on Assurance Continuity [1]. In accordance with those requirements, the IAR describes (i) the changes made to the certified TOE, (ii) the evidence updated as a result of the changes and (iii) the security impact of the changes.

The changes are related to an update of life cycle security aspects. The ALC re-evaluation was performed by the ITSEF TUV Informationstechnik GmbH. The procedure led to an updated version of the Evaluation Technical Report (ETR) [5]. The ETR for Composition [6] was not renewed.

The Common Criteria assurance requirements for ALC are fulfilled as claimed in the Security Target [4]. The Security Target did not change.

The Common Criteria assurance requirements ALC – Life cycle support (i.e. ALC_CMC.5, ALC_CMS.5, ALC_DEL.1, ALC_DVS.2, ALC_LCD.1 and ALC_TAT.3) are fulfilled for the development and production sites of the TOE listed below:

Name of site	Address	Function
Development		
Hwasung Plant / DSR Building	Samsung Electronics. Co., Ltd , Hwasung, DSR building 1-1, Samsungjeonja-ro, Hwaseong-si, Gyeonggi-do, 18448 Republic of Korea. Hwasung, Tera Tower 452, Nongseo-Dong, Giheung-Gu, Yongin-City, Gyeong-gi-Do, Korea, Republic of Korea. Giheung Samsung-ro, Giheung-gu, Yongin-si, Gyeonggi-do, 17113 Republic of Korea	• Development, • IT (Server room), • Mask data preparation, • User Data ROM/FLASH flow processing, • Data backup, • External delivery: Documents and software/libraries and receiving of customer data (e.g. embedded software).
Production		
Samsung Giheung	Samsung Giheung & Hwaseong Factory (FAB 1, FAB 2, FAB 6, FAB S1), Hwaseong, DSR building 1-1, Samsungjeonja-ro, Hwaseong-si, Gyeonggi-do, 18448 Republic of Korea, Hwasung, MR2 Building San #16, Banwol-Dong, Hwaseong-si, Gyeonggi-	• Wafer fab, • Warehouse / Delivery.

	do 18448 Republic of Korea, Giheung, Samsung-ro, Giheung-gu, Yongin-si, Gyeonggi-do, 17113 Republic of Korea	
Samsung Onyang	Samsung Electronics. Co., Ltd. San #74, Buksoo-Ri, Baebang-Myun, Asan-City, Chungcheongnam-Do, 449-711, Korea	• Warehouse / Delivery, • Grinding, • Sawing, • Assembly, • Module testing.
Photronics	Photronics, Korea, Cheonan, Plant 493-3 Sungsung-Dong, Cheonan-City, Choongcheongnam, 330-300, Korea	• Mask house.
Hana Micron Asan	Hana Micron Co., Ltd. #95-1, Wonnam-Li, Umbong-Myeon, Asan-City, Choongcheongnam-Do, 449-711, Korea	• Grinding, • Sawing, • Assembly, • Module testing, • Coating.
Inesa Shanghai	Inesa Co., Ltd. No. 818 Jin Yu Road, Jin Qiao Export Processing Zone Pudong, Shanghai, China	• Grinding, • Sawing, • Assembly, • Warehouse / Delivery.
Eternal Shanghai	ETERNAL Co., Ltd. No.1755, Hong Mei South Road, Shanghai, China	• Sawing, • Assembly, • Warehouse / Delivery.
Doosan Tesna	Doosan TESNA Co., Ltd. No. 450-2 Mogok-Dong, Pyeungtaek-City, Gyeonggi, Korea	• Wafer testing, • Initialization, • Pre-personalization.
ASE Korea	ASE Korea Co., Ltd. Sanupdanjigil 76, Paju, Korea	• Grinding, • Sawing, • Assembly.
TOPPAN	Toppan Photomasks Korea Ltd. 91, Wonjeok-ro 290 beon-gil, Sindun-myeon, Icheon-Si, Gyeonggi-do 467-842, Korea	• Mask data processing, • Photomask production, • Internal shipment of photomasks.
SFA Semicon	SFA semicon Co. Ltd., 30, 2gongdan 7-gil, Seobuk-gu, Cheonan-si, Chung-cheongnam-do, South Korea	• Bumping, • Optical failure analysis and quality assurance, • Scrapping.
Amkor	ATK K4 & K5 – IC Assembly Services & related Data Center, ATK K4, located at 100, Amkor-ro, Buk-gu, Gwangju, Korea, ATK K5, located at 150, Songdomirae-ro, Yeonsu-gu, In-cheon, Korea	• IC assembly, • Assembly-related test services, • Warehousing and dispatch of finished wafers and packaged ICs, • Data storage.

Table 1: Relevant development/production sites

As a result of the partial ALC re-evaluation the sites are integrated per their updated site certificate and/or STARs.

The partial ALC re-evaluation also resulted in an updated STAR for ALC-Reuse for the following site:

- Doosan Tesna [7] completed a new on-site audit as described in the IAR [2].

The production site Inesa Shanghai was integrated via the STAR [8] from its site certification NSCIB-SS-210064_2 in the Dutch CC scheme.

The production site Eternal Shanghai was integrated via the STAR [9] from its site certification BOE-A-2022-9346 in the Spanish CC scheme.

Conclusion

The maintained change is at the level of life cycle security aspects. The ITSEF has audited sites and evaluated the described changes or integrated existing site certificates to provide an updated ETR [5] which has been approved by the Certification Body of BSI. The ETR for Composition [6] was not updated and remains as included in the Certification Report BSI-DSZ-CC-1026-2017 [3].

The resistance of the TOE to attacks has <u>not</u> been re-assessed in the course of this maintenance process. Therefore, the assurance statement as outlined in the Certification Report BSI-DSZ-CC-1026-2017 dated 08 December 2017 is of relevance and has to be considered when using the product.

Obligations and notes for the usage of the product:

All aspects of assumptions, threats and policies as outlined in the Security Target not covered by the TOE itself need to be fulfilled by the operational environment of the TOE.

The customer or user of the product shall consider the results of the certification within his system risk management process. In order for the evolution of attack methods and techniques to be covered, he should define the period of time until a re-assessment for the TOE is required and thus requested from the sponsor of the certificate.

Some security measures are partly implemented in the hardware and require additional configuration or control or measures to be implemented by the IC Dedicated Support Software or Embedded Software.

For this reason the TOE includes guidance documentation which contains guidelines for the developer of the IC Dedicated Support Software and Embedded Software on how to securely use the microcontroller chip and which measures have to be implemented in the software in order to fulfil the security requirements of the Security Target of the TOE.

In the course of the evaluation of the composite product or system it must be examined if the required measures have been correct and effectively implemented by the software. Additionally, the evaluation of the composite product or system must also consider the evaluation results as outlined in the document ETR for composite evaluation [8].

According to the scheme rules, evaluation results outlined in the document ETR for composite evaluation as listed above can usually be used for composite evaluations building on top, as long as the document ETR for composite evaluation is not older than

eighteen months[1] and an attack assumed to be not feasible within the scope of these evaluations has not been performed successfully.

Additional Note: The strength of the cryptographic algorithms was not rated in the course of the product certification and this maintenance procedure (see BSIG[2] Section 9, Para. 4, Clause 2).

For details on results of the evaluation of cryptographic aspects refer to the Certification Report [3] chapter 9.2.

This report is an addendum to the Certification Report [3].

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1   In this case the eighteen month time frame is related to the date of the initial version [9] of the Evaluation Technical Report for Composite Evaluation as the updates made afterwards are not related to updates of AVA evaluation tasks.

2   Act on the Federal Office for Information Security (BSI-Gesetz - BSIG) of 14 August 2009, Bundesgesetzblatt I p. 2821

References

[1]   Common Criteria document "Assurance Continuity: CCRA Requirements", version 2.2, 30 September 2021

       Common Criteria document "Assurance Continuity: SOG-IS Requirements", version 1.0, November 2019

[2]   Common Criteria Information Technology Security Evaluation, Site IAR KIOWA2, Version 1.3, 09.05.2022, Samsung Electronics (confidential document)

[3]   Certification Report BSI-DSZ-CC-1026-2017 for S3FV9VH 32-Bit RISC Microcontroller for Smart Card with specific IC Dedicated Software from Samsung Electronics, 08. December 2017, Bundesamt für Sicherheit in der Informationstechnik

[4]   Security Target Lite BSI-DSZ-CC-1026-2017-MA-01, Security Target Lite Samsung S3FV9VH 32-bit RISC Microcontroller for Smart Card with specific IC Dedicated Software, Version 1.1, 2017-08-31, Samsung Electronics (sanitised public document)

[5]   Evaluation Technical Report S3FV9VH Revision 0, BSI-DSZ-CC-1026-2017-MA-01, Version 1, 2022-09-07, Evaluation Technical Report Summary (ETR SUMMARY), TÜV Informationstechnik GmbH, (confidential document)

[6]   Evaluation Technical for Composite Evaluation (ETR COMP) for the S3FV9VH Revision 0, version 2, 2017-09-29, TÜV Informationstechnik GmbH. (confidential document)

[7]   Site Technical Audit Report (STAR) TESNA Co., Ltd., Pyeongtaek, Version 1, 2022-08-26, TUV Informationstechnik GmbH

[8]   Site Technical Audit Report (STAR) – INESA Shanghai, Version 2.0, 2021-08-13, Brightsight BV

[9]   Site Technical Audit Report (STAR) Eternal Packaging Centre Shanghai, Version M0, 2022-04-08, Applus