Bundesamt
für Sicherheit in der
Informationstechnik

# Assurance Continuity Maintenance Report

**BSI-DSZ-CC-0410-2007-MA-05**

**NXP Smart Card Controller P5CD080V0B, P5CN080V0B, P5CC080V0B, P5CC073V0B with specific IC Dedicated Software**

from

**NXP Semiconductors Germany GmbH**

Common Criteria Recognition Arrangement
for components up to EAL4

The IT product identified in this report was assessed according to the *Assurance Continuity: CCRA Requirements,* version 1.0, February 2004 and the developers 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-0410-2007.

The change to the certified product is at the level of documentation, new delivery form, additional customer option (reset behaviour) and additional testcenter, a change that has no effect on assurance. The TOE description of BSI-DSZ-CC-410-2007 remains unchanged.

Consideration of the nature of the change leads to the conclusion that it is classified as a minor change and that certificate maintenance is the correct path to continuity of assurance.

Therefore, the assurance as outlined in the Certification Report BSI-DSZ-CC-0410-2007 is maintained for this version of the product. Details can be found on the following pages.

This report is an addendum to the Certification Report BSI-DSZ-CC-0410-2007.

Bonn, 07 July 2009

Common Criteria

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# Assessment

The IT product identified in this report was assessed according to the *Assurance Continuity: CCRA Requirements* [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], the Security Target [4] and the Evaluation Technical Report [16].

The vendor for the NXP Smart Card Controller P5CD080V0B, P5CN080V0B, P5CC080V0B, and P5CC073V0B with specific IC Dedicated Software, NXP Semiconductors Germany GmbH, submitted an IAR [2] to the BSI for approval. The IAR is intended to satisfy the requirements outlined in the document Assurance Continuity: CCRA Requirements [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 NXP Smart Card Controller P5CD080V0B, P5CN080V0B, P5CC080V0B, P5CC073V0B with specific IC Dedicated Software was changed due to the following issues:

- Two new delivery forms are introduced:
  - X3: a special bonding for the module PDM 1.1 (for P5CD080V0B) is introduced.
  - XD: for the evaluated product P5CD080V0B and its configurations P5CN080V0B, P5CC080V0B and P5CC073V0B the module PCM 1.1-Pd is introduced. The difference between the evaluated package and the new package is a differnt color (the golden contacts are covered by an additional thin palladium layer).
- An additional customer option is introduced in order to offer a different reset behaviour. In case this option is chosen the LF sensor connected to the external clock pad is disabled while operating with internal system clock. The internal system clock is still monitored with internal sensors.
- An additional production site NXP Semiconductors Thailand (APB) is used for wafertest and -treatment:

| Site | Process |
|---|---|
| NXP Semiconductors Germany GmbH, Business Line Identification (BL ID), Georg-Heyken-Strasse 1, 21147 Hamburg, Germany | development center |
| NXP Semiconductors Germany GmbH, IC Manufacturing Operations - Test Center Hamburg (IMO TeCH), Stresemannallee 101, 22529 Hamburg, Germany | assembly, test, delivery |
| NXP Semiconductors (Thailand), 303 Chaengwattana Rd., Laksi Bangkok 10210, Thailand | assembly, test, delivery |
| NXP Semiconductors GmbH, Business Line Identification, Document Control Office, Mikron-Weg 1, 8101 Gratkorn, Austria | delivery |

| Site | Process |
|---|---|
| Systems on Silicon Manufacturing Co. Pte. Ltd. 8 (SSMC), 70 Pasir Ris Drive 1, Singapore 519527, Singapore | semiconductor factory |
| Photronics Singapore Pte. Ltd., 6 Loyang Way 2, Loyang Industrial Park, Singapore 507099, Singapore | mask shop |
| Photronics Semiconductors Mask Corp. (PSMC), 1F, No.2, Li-Hsin Rd., Science-Based Industrial Park, Hsin-Chu City Taiwan R.O.C. | mask shop |
| Chipbond Technology Corporation, No. 3, Li-Hsin Rd. V, Science Based Industrial Park, Hsin-Chu City, Taiwan R.O.C | wafer bumping |
| HID Global (former Sokymat GmbH), In den Weiden 4b, D-99099 Erfurt, Germany | inlay assembly |
| Aontec Teoranta, Paic Toinscail na Tulaigh, Balle na hAbhann, Co. Galway, Ireland | inlay assembly |

- A reassessment has been applied. The ETR for composition [17] and the ETR [16] were updated in this context.

In the context of these issues, the Order Entry Forms [8] to [11] and the Configuration List [6] have been updated. The version of the product remains unchanged. The change is not significant from the standpoint of security.

## Conclusion

The change to the certified product is at the level of documentation, new delivery form, dditional customer option (reset behaviour) and additional testcenter, a change that has no effect on assurance. Examination of the evidence indicates that the changes performed are limited to an update of the Configuration List, Test Specification and documentation.

The examination of the re-assessment indicates that the changes performed are limited to an update of the ETR for composition [17] and the ETR [16] done by the evaluation facility.

The Security Target [4], the Security Target Lite [5], the Configuration List [6] and additional evaluation documentation of the vendor NXP Semiconductors Germany GmbH [8] to [11] were editorially updated.

Therefore, BSI agrees that the assurance as outlined in the Certification Report [3] is maintained for this version of the product.

Additional Note: The strength of the cryptographic algorithms was not rated in the course of the product certification and this maintenance procedure (see BSIG Section 4, Para. 3, Clause 2). BSI notes, that cryptographic functions with a security level of 80 bits or lower can no longer be regarded as secure against attacks with high attack potential without considering the application context. Therefore, for these functions it shall be checked whether the related crypto operations are appropriate for the intended system.

Some further hints and guidelines can be derived from the 'Technische Richtlinie BSI TR-02102' (www.bsi.bund.de).

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

# References

[1] Common Criteria document CCIMB-2004-02-009 "Assurance Continuity: CCRA Requirements", version 1.0, February 2004

[2] Impact Analysis Report BSI-DSZ-CC-0410-2007-MA-05, Rev. 1.3, 2 July 2009, P5CD080/ P5CN080/ P5CC080/ P5CC073V0B, NXP Semiconductors Germany GmbH, (confidential document)

[3] Certification Report BSI-DSZ-CC-0410-2007 for NXP Secure Smart Card Controller P5CD080V0B, P5CN080V0B and P5CC080V0B each with specific IC Dedicated Software, Bundesamt für Sicherheit in der Informationstechnik, 5 July 2007

[4] Security Target, Revision 1.6, 25 February 2009, Evaluation of the NXP P5CD080/ P5CN080/ P5CC020/ P5CC073V0B Secure Smart Card Controller, NXP Semiconductors, Business Line Identification (confidential document)

[5] Security Target Lite, Revision 1.6, 25 February 2009, Evaluation of the NXP P5CD080/ P5CN080/ P5CC080/ P5CC073V0B Secure Smart Card Controller, NXP Semiconductors, Business Line Identification

[6] Configuration List of the NXP P5Cx012/02x/040/073/080/144 family of Secure Smart Card Controllers, Version 1.8, 12 March 2009, NXP Semiconductors, Business Line Identification

[7] Vulnerability Assessment, V1.0, 13 March 2007, BSI-DSZ-CC-404/410/411, Evaluation of the NXP Secure Smart Card Controllers P5Cx012/02x/040/ 073/080/144 V0B, NXP Semiconductors, Business Line Identification

[8] Order Entry Form, P5CD080, Release 4.0, 10 November 2008, NXP Semiconductors, Business Line Identification

[9] Order Entry Form, P5CC080, Release 4.0, 10 November 2008, NXP Semiconductors, Business Line Identification

[10] Order Entry Form, P5CN080, Release 4.0, 10 November 2008, NXP Semiconductors, Business Line Identification

[11] Order Entry Form, P5CC073, Release 4.0, 10 November 2008, NXP Semiconductors, Business Line Identification

[12] Assurance Continuity Maintenance Report BSI-DSZ-CC-0410-2007-MA-01, 6 July 2007, NXP Secure Smart Card Controller P5CC073V0B with specific IC Dedicated Software, BSI

[13] Assurance Continuity Maintenance Report BSI-DSZ-CC-0410-2007-MA-02, 30 April 2008, NXP Secure Smart Card Controller P5CD080V0B, P5CN080V0B, P5CC080V0B and P5CC073V0B with specific IC Dedicated Software, BSI

[14] Assurance Continuity Maintenance Report BSI-DSZ-CC-0410-2007-MA-03, 18 July 2008, NXP Secure Smart Card Controller P5CD080V0B, P5CN080V0B, P5CC080V0B and P5CC073V0B with additional delivery form MOB6 & Inlay, BSI

[15] Assurance Continuity Maintenance Report BSI-DSZ-CC-0410-2007-MA-04, 29 July 2008, NXP Secure Smart Card Controller P5CD080V0B, P5CC080V0B, P5CN080V0B and P5CC073V0B with specific IC Dedicated Software, BSI

[16] Evaluation Technical Report, BSI-DSZ-CC-0410, Version 1.2, 25 June 2009, NXP P5CD080V0B Secure Smart Card Controller, NXP Semiconductors, Business Line Identification (confidential document)

[17] Evaluation Technical Report for composition, BSI-DSZ-CC-0410, Version 1.2, 23 June 2009, NXP P5CD040V0B Secure Smart Card Controller, NXP Semiconductors, Business Line Identification (confidential document)