TrustCB B.V.

Site Security Certification Report

Mask Operation of Semiconductor Manufacturing International (Shanghai)

Sponsor:	***NXP Semiconductor Germany GmbH*** **Beiersdorfstraße 12** **22529 Hamburg** **Germany**
Site Operator:	***Semiconductor Manufacturing International Corporation*** **NO.18 Zhangjiang Road, Pilot Free Trade Zone** **Shanghai 201203** **P.R. China**
Evaluation facility:	***SGS Brightsight B.V.*** **Brassersplein 2** **2612 CT Delft** **The Netherlands**
Report number:	**NSCIB-SS-2300068-01-CR**
Report version:	**1**
Project number:	NSCIB-**2300068-01**
Author(s):	**Brian Smithson**
Date:	**28 August 2023**
Number of pages:	**9**
Number of appendices:	**0**

Reproduction of this report is authorised only if the report is reproduced in its entirety.

CONTENTS

Foreword

The Netherlands Scheme for Certification in the Area of IT Security (NSCIB) provides a third-party evaluation and certification service for determining the trustworthiness of Information Technology (IT) security products. Under this NSCIB, TrustCB B.V. has the task of issuing certificates for IT security products, as well as for protection profiles and sites.

Part of the procedure is the technical examination (evaluation) of the product, protection profile or site according to the Common Criteria assessment guidelines published by the NSCIB. Evaluations are performed by an IT Security Evaluation Facility (ITSEF) under the oversight of the NSCIB Certification Body, which is operated by TrustCB B.V. in cooperation with the Ministry of the Interior and Kingdom Relations.

An ITSEF in the Netherlands is a commercial facility that has been licensed by TrustCB B.V. to perform Common Criteria evaluations; a significant requirement for such a licence is accreditation to the requirements of ISO Standard 17025 “General requirements for the accreditation of calibration and testing laboratories”.

By awarding a Common Criteria certificate, TrustCB B.V. asserts that the product or site complies with the security requirements specified in the associated (site) security target, or that the protection profile (PP) complies with the requirements for PP evaluation specified in the Common Criteria for Information Security Evaluation. A (site) security target is a requirements specification document that defines the scope of the evaluation activities.

The consumer should review the (site) security target or protection profile, in addition to this certification report, to gain an understanding of any assumptions made during the evaluation, the IT product's intended environment, its security requirements, and the level of confidence (i.e., the evaluation assurance level) that the product or site satisfies the security requirements stated in the (site) security target.

Reproduction of this report is authorised only if the report is reproduced in its entirety.

Recognition of the Certificate

At the time of publication, the Common Criteria Recognition Arrangement (CCRA) and the SOG-IS Mutual Recognition Agreement (SOG-IS MRA) do not cover the recognition of Site Certificates. The site-security evaluation process, however, followed all the rules of these agreements and used the agreed supporting document for site certification *[CCDB]*. Therefore, the results of this evaluation and certification procedure can be reused by any scheme in subsequent product evaluations and certification procedures that make use of the certified site.

Presence of the CCRA and SOG-IS logos on this certificate would indicate that the certificate is issued in accordance with the provisions of the CCRA and the SOG-IS MRA and is recognised by the participating nations. The CCRA and the SOG-IS MRA do not cover site certification, however, so these logos are not present on this certificate.

1 Executive Summary

This Certification Report states the outcome of the Common Criteria security evaluation of the Mask Operation of Semiconductor Manufacturing International (Shanghai). The sponsor of the evaluation and certification is NXP Semiconductor Germany GmbH located in Hamburg, Germany and the operator of the site is Semiconductor Manufacturing International Corporation.

The evaluated site is: Mask Operation of Semiconductor Manufacturing International (Shanghai).

The site is used by NXP Semiconductor Germany GmbH to participate in the production and testing of hardware for secure IC hardware products. To perform its activities, the site uses the Semiconductor Manufacturing International Corporation provided remote IT-infrastructure and local IT equipment (workstations, router, VPN) and works according to the Semiconductor Manufacturing International Corporation defined processes.

The site is used for mask production, and its scope includes related security areas.

The site activities could be related to Phase 3 of the seven phases of the Lifecycle Model as defined in *[PP]*.

The site has been evaluated by SGS Brightsight B.V. located in Delft, The Netherlands. The evaluation was completed on 28 August 2023 with the approval of the ETR. The certification procedure has been conducted in accordance with the provisions of the Netherlands Scheme for Certification in the Area of IT Security *[NSCIB]*.

The scope of the evaluation is defined by the Site Security Target *[SST]*, which identifies assumptions made during the evaluation and the level of confidence (evaluation assurance level) the site is intended to satisfy for product evaluations. Users of this site certification are advised to verify that their own use of, and interaction with, the site is consistent with the Site Security Target, and to give due consideration to the comments, observations and recommendations in this certification report.

The results documented in the Evaluation Technical Report *[ETR]*[1] and *[STAR]*[2] for this site provide sufficient evidence that this site meets the EAL6 assurance components ALC_CMC.5, ALC_CMS.5, ALC_DVS.2 (at AVA_VAN.5 level), and ALC_LCD.1.

The evaluation was conducted using the Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5 *[CEM]* and the Supporting Document Guidance: CCDB-2007-11-001 Site Certification, October 2007, Version 1.0, Revision 1 *[CCDB]*, for conformance to the Common Criteria for Information Technology Security Evaluation, Version 3.1, Revision 5 *[CC]*.

TrustCB B.V., as the NSCIB Certification Body, declares that the evaluation meets all the conditions of the Common Criteria and that the site certificate will be included on the NSCIB Certificates list. Note that the certification results apply only to the specific site, used in the manner defined in the *[SST-Lite].*

[1] The Evaluation Technical Report contains information proprietary to the developer and/or the evaluator, and is not available for public review.

[2] The Site Technical Audit Report contains information necessary to an evaluation lab and certification body for the reuse of the site audit report in a TOE evaluation.

2 Certification Results

2.1 *Site Identification*

The Target of Evaluation (TOE) for this evaluation is the Mask Operation of Semiconductor Manufacturing International (Shanghai) located in Shanghai, P.R. China.

2.2 *Scope: Physical*

This site certification considers a campus location occupied only by Semiconductor Manufacturing International Corporation.

The external boundary of the campus is guarded by electronic fence and there are five main entrances. The areas in scope are in six buildings: SO1, SO3, SO8, Fab-3B, 9B and CW4. The relevant activities taking place in those buildings is limited to:

- The building SO1 includes several areas in scope. The IT Server Room (room 01114), Security Control Center #1 (room 01017A) and Finished-Good Warehouse (FGWH) are located at the first floor. The IT critical operation room (room 06063) is located at the sixth floor.
- The building SO3 includes the Security Control Center #2 (room 04136) which is located at the first floor, the Mask Operation Office which is located at the sixth floor and IT server room(room 0337) which is located at third floor.
- The building SO8 includes Security Control Center #3 (room 1034) which is on the first floor.
- The Fab-3B building includes the Mask Operation Fab facility, located at the first floor. This is the area mainly for mask production.
- The scrapping of masks takes place in the room F9117-B which is on the first floor of the building 9B.
- The Scrap Warehouse (room W4205) is located at the second floor of the CW4 building.

2.3 *Scope: Logical*

The site is used for mask production, and provides the following services and/or processes:

- Encrypted/Decrypted GDS data management
- Security mask manufacturing
- Security mask warehousing and dispatch
- Security mask service (mask remount/recheck, mask repair if be required by Fab)
- Mask scrap management/destruction

For smartcard products, these activities could be related to Phase 3 of the seven phases of the Lifecycle Model in *[PP]*.

Within that phase, the site is involved in:

- ALC_DVS to control access to the assets (at AVA_VAN.5 level)
- ALC_CMC/CMS to handle the site internal documentation and TOE development-related configuration items
- ALC_LCD as part of TOE development and testing

This site does not have a direct role in ALC_DEL or ALC_TAT and therefore those activities in an associated TOE evaluation are not impacted by the operations of this site.

2.4 *Evaluation Approach*

The evaluation is a new evaluation of a previous-evaluated site (NSCIB-SS-21-0276583).

In the evaluation all evaluator actions, including an in-person site visit, have been performed. For assessment of the ALC_DVS aspects, the Minimum Site Security Requirements *[MSSR]* have been used.

2.5 Evaluation Results

The evaluation lab documented its evaluation results in the *[ETR]*[3], which references other evaluator documents. To support reuse of the site evaluation activities a derived document *[STAR]*[4] was provided and approved. This document provides details of the site evaluation that must be considered when this site is used in a product evaluation.

The evaluation lab concluded that the site meets the assurance requirements listed in the *[SST]* as assessed in accordance with *[CC], [CEM]* and *[CCDB]*.

2.6 Comments/Recommendations

The Site Security Target *[SST]* contains necessary information about the usage of the site. During a product evaluation, the evidence for fulfilment of the Assumptions listed in the *[SST]* shall be examined by the evaluator of the product when reusing the results of this site evaluation.

[3] The Evaluation Technical Report contains information proprietary to the developer and/or the evaluator, and is not available for public review.

[4] The Site Technical Audit Report contains information necessary to an evaluation lab and certification body for the reuse of the site audit report in a TOE evaluation.

3 Site Security Target

The Site Security Target of Mask Operation of Semiconductor Manufacturing International (Shanghai) Corporation for Tulips, QR-ISMG-SC-2005, v6, 18 July 2023 *[SST]* is included here by reference.

Please note that for the need of publication a public version *[SST-lite]* has been created and verified according to *[ST-SAN]*.

4 Definitions

This list of acronyms and definitions contains elements that are not already defined by the CC or CEM:

IT	Information Technology
ITSEF	IT Security Evaluation Facility
JIL	Joint Interpretation Library
MSSR	Minimum Site Security Requirements
NSCIB	Netherlands Scheme for Certification in the area of IT Security
TOE	Target of Evaluation

5 Bibliography

This section lists all referenced documentation used as source material in the compilation of this report.

[CC] Common Criteria for Information Technology Security Evaluation, Parts I, II and III, Version 3.1 Revision 5, April 2017

[CCDB] Supporting Document Guidance: CCDB-2007-11-001 Site Certification, October 2007, Version 1.0, Revision 1

[CEM] Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5, April 2017

[ETR] Evaluation Technical Report Site Audit “SMIC Shanghai”, 23-RPT-597, v2.0, 23 August 2023

[MSSR] Joint Interpretation Library, Minimum Site Security Requirements, Version 3.0, February 2020

[NSCIB] Netherlands Scheme for Certification in the Area of IT Security, Version 2.6, 02 August 2022

[PP] Security IC Platform Protection Profile with Augmentation Packages, BSI-CC-PP-0084-2014, Revision 1.0, 13 January 2014

[SST] Site Security Target of Mask Operation of Semiconductor Manufacturing International (Shanghai) Corporation for Tulips, QR-ISMG-SC-2005, v6, 18 July 2023

[SST-lite] Site Security Target Lite of Mask Operation of Semiconductor Manufacturing International (Shanghai) Corporation for Tulips, QR-ISMG-SC-2006, v6, 18 July 2023

[ST-SAN] ST sanitising for publication, CC Supporting Document CCDB-2006-04-004, April 2006

[STAR] Site Technical Audit Report - NXP SMIC Shanghai, 23-RPT-598, v2.0, 23 August 2023

(This is the end of this report.)