Site Security Target Lite NXP Chandler

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Revision	Description	Author	Approval - Date
1.0	Final Release after Comments	Gordon Caffrey	01 Oct 2018

Approvers

Sequence	Role	Name
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Approval	Security Manager	David Case

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1. Document Introduction

1.1 Reference

Title: Site Security Target Lite NXP Chandler

Version: 1.0

Date: 10/1/2018

Company: NXP Semiconductors

Name of site: NXP Semiconductors 1300 N. Alma School Rd., Chandler, AZ 85224, USA

EAL: SARs taken from EAL6

1.2 Version History

Version	Date	Comment
V1.0	01 October 2018	Final Release

2. SST Introduction

1 The chapters 1 to 7 of this document is based upon the Eurosmart Site Security Target Template [1] with adaptions such that it fits the site (i.e. development site, testing of software, no production, no direct delivery to customers of the user of the site).

This Site Security Target is intended to be used by NXP Semiconductors Business Unit Security and Connectivity (BU S&C).

* Note that the site of this Site Security Target also belongs to NXP BU S&C.

2.1 SST Reference

2 Title Site Security Target Lite NXP Chandler

3 Version 1.0

2.2 Site Reference

4 The site belongs to NXP Semiconductors and is located at:

NXP Semiconductors
1300 N. Alma School Rd., Chandler, AZ 85224, USA

2.3 Site Description

5 The site is contained in Buildings which are a dedicated NXP site with all secure areas controlled by NXP.

6 The RED HS (High Security) area consist of a secure test area with supporting functions and a secure design area which are exclusively occupied by NXP with restricted need to know access controlled by NXP for authorize personnel only. The site also has YELLOW areas which conform to well-defined NXP security levels.

7 The NXP Chandler Test adopts advanced technology to provide the optimal combination of processes for the test of secure IC's. The site provides the services and/or processes covered in the scope of the site evaluation process as follows.

- Encrypted/Decrypted Test program data management
- Security wafer Test
- System Box
- Security wafer management
- Warehouse wafer scrap
- Secure Shipment

8 Within the secure areas, only authorized members of the test team are entitled to access sensitive information i.e. test programs, confidential documentation, Wafers, etc.

9 The NXP Chandler Design area provides the optimal combination of processes for secure IC's development both Hardware and Software. The Master IT audit in Hamburg cover the implementation and services for the HS/RS networks.

- Encrypted/Decrypted Test program data management
- Security wafer Test
- System Box
- Security wafer management
- Warehouse wafer scrap
- Secure Shipment
- Development and testing* of software for secure integrated circuits.
- Development of IC Hardware Design secure integrated circuits

10 The activities are: Security IC Embedded Software Development (Phase 1), IC Embedded Software and Testing (Phase 1), IC Design (Phase 2), IC Manufacturing (Phase 3), IC Dedicated Software and Testing (Phase 1) as defined in 'Security IC Platform Protection Profile' (PP-0035) and 'Security IC Platform Protection Profile with Augmentation Packages' (PP-0084)

11 To perform these activities the site uses the NXP BU S&C provided and manage the IT-infrastructure. Locally available IT equipment like workstations or VPN routers are also provided and managed by NXP BU S&C directly. The site works according to NXP BU S&C processes.

12 The activities (and areas where they are performed) are:

Activity	Area
Encrypted/Decrypted Test Program data management Secure Wafer Test System Box	NXP Secure Test Area IC Dedicated Software and Testing (Phase 1)
Security wafer management Secure wafer scrap management Secure Warehouse wafer shipment	NXP Secure Warehouse Area IC Manufacturing (Phase 3)
Development and testing* of software for secure integrated circuits. Also development of IC Hardware Design secure integrated circuits	NXP Secure Design Area IC Design (Phase 2)

13 The typical Life Cycle model for Smart Cards usually comprises the following phases, which are all under evaluation on this site:

- Development,
- Delivery,
- Production,
- Preparation,
- Operation,

14 The operation comprises of the design, test and personalisation of secure IC's.

15 Delivery comprises of the reception and shipment of secure wafers for the test of secure IC's and also the delivery of secure IC's to and from NXP Semiconductors.

3. Conformance Claim

16 This SST is conformant with Common Criteria Version 3.1:

- Common Criteria for Information Technology Security Evaluation, Part 1: Introduction and General Model; Version 3.1, Revision 4, September 2012, [2]

- Common Criteria for information Technology Security Evaluation, Part 3: Security Assurance Requirements; Version 3.1, 4, September 2012, [3]

17 For the evaluation, the following methodology will be used:

- Common Methodology for Information Security Evaluation (CEM), Evaluation Methodology; Version 3.1, 4, September 2012, [4]

- Minimum Site Security Requirement V1.1 June 2013 [10]

18 This SST is CC Part 3 conformant.

19 There are no extended components required for this SST for the NXP Chandler Test Site.

20 The evaluation of the site comprises the following assurance components:

- ALC_CMC.5,
- ALC_CMS.5,
- ALC_DVS.2,
- ALC_LCD.1,
- ALC_TAT.3.

21 The assurance level chosen for the SST is compliant to the Security IC Platform Protection Profile [5] and is therefore suitable for the evaluation of software and Hardware design for Security ICs.

22 The chosen assurance components are derived from the assurance level EAL6 of the assurance class "Life-cycle Support". For the assessment of the security measures attackers with a high attack potential are assumed. Therefore this site supports potentially augmented product evaluations up to EAL6.

4. Security Problem Definition

23 The Security Problem Definition comprises security problems derived from threats against the assets handled by the site.

24 Where necessary the items in this section have been re-worked to fit the site

4.1 Assets

25 The following section describes the assets handled at the site.

Development data: The site has access to (and optionally copies thereof) electronic development data (specifications, guidance documentation, design data, graphic file, test programs, etc.) in relation to developed TOEs. Both the integrity and the confidentiality of these electronic documents must be protected.

Manufacturing tools: To perform these test activities the site uses tools such as testers, probers, probe card, test programs and associated data (such as test data). The integrity of these tools (running on local or remote development computers) must be protected.

Physical security objects: The site has physical security objects (printed documents, engineering samples, wafers, probe cards, etc.) in relation to the TOEs. Both the integrity and the confidentiality of these must be protected.

4.2 Threats

T.Smart-Theft: An attacker tries to access sensitive areas of the site for manipulation or theft of assets (1) In this case manufacturing data with the intention to violate confidentiality and possibly integrity (2) Physical security objects in the form of printed documentation, wafers, Masks or engineering samples (3) Manufacturing Tools in the form of IT infrastructure hardware. The attacker has sufficient time to investigate the site outside the controlled boundary. For the attack the use of standard equipment for burglary is considered.

T.Rugged-Theft: An attacker with specialized equipment for burglary, who may be paid to perform the attack, tries to access sensitive areas and manipulate or steal assets (1) In this case manufacturing data with the intention to violate confidentiality and possibly integrity (2) Physical security objects in the form of printed documentation wafers, Masks or engineering samples (3) Manufacturing Tools in the form of IT infrastructure hardware.

T.Computer-Net: A possibly paid hacker with substantial expertise using standard equipment attempts to remotely access sensitive network segments to get access to (1) manufacturing data with the intention to violate confidentiality and possibly integrity or (2) manufacturing systems with the intention to modify the manufacturing process.

T.Unauthorised-Staff: Employees or subcontractors not authorized to get access to assets by violating (1) In this case manufacturing data with the intention to violate confidentiality and possibly integrity (2) Physical security objects in the form of printed documentation wafers, Masks or engineering samples (3) Manufacturing Tools in the form of IT infrastructure hardware or manufacturing systems.

T.Staff-Collusion: An attacker tries to get access to assets by getting support from one employee through extortion or bribery. (1) In this case manufacturing data with the intention to violate confidentiality and possibly integrity (2) Physical security objects in the form of printed documentation wafers, Masks or engineering samples (3) Manufacturing Tools in the form of IT infrastructure hardware or manufacturing systems.

T.Attack-Transport: An attacker tries to get access to shipped physical security objects when shipped in or out of the site with the intention to compromise confidentiality and/or integrity of the product design data, customer and/or consumer data like code and data (including personalisation data and/or keys) stored in the ROM and/or EEPROM or classified product documentation.

4.3 Organizational Security Policies

P.Config_IT-env: The site uses software on manufacturing servers and testers in addition to configuration management systems for file versioning and problem tracking. For file versioning unique repositories shall be used to support proper management of multiple products and the site internal procedures and helps meet the objective of (O.Config_IT-env). The team members are instructed to use only project related IT equipment provided by NXP with the provided tools.

P.LifeCycle-Doc: The site uses life cycle documentation that describes:

(1) Description of configuration management systems and their usage;
(2) A configuration items list;

(3) Site security;
(4) The manufacturing process;
(5) The manufacturing tools.
These help meet the objective of O.Lifecycle-Doc

P.Config_Activities: The activities of the site shall be performed in accordance with the life cycle documentation (P.Config_IT-env) and helps meet the objective of (O.Network-separation) using the IT-environment (O.Config_Activities).

P.Product-Transport: Technical and organizational measures shall ensure the correct labeling of the product. A controlled internal shipment shall be applied. The transport supports traceability up to the acceptor. If applicable or required this policy shall include measures for packing if required to protect the product during transport.

The internal transport covers the shipment of produced wafers as well as the shipment of wafers either for rework or for final scrapping.

P.Reception-Control: The reception activities of the site shall be performed in accordance with the life cycle documentation. The combination of physical partitioning between the different access control levels together with technical and organisational security measures allows a sufficient separation of employees to enforce the “need to know” principle. All assets will be identified and moved immediately to the correct security level.

P.Zero-Balance: The site ensures that all sensitive items (security relevant parts of the TOEs of different clients) are separated and traced on a device basis. For each handover, either an automated or an organizational “two-employees-acknowledgement” (four-eyes principle) is applied for functional and defect assets. As per the released production process the defect assets are either destroyed at the site or sent back to the NXP BU. or customer and/or consumer (depending on the production-setup). The sent back procedures, whether to the NXP BU or to the customer, are controlled through internal compliance policies and procedures.

P.Transfer-Data: Any data in electronic form (e.g. product specifications, test programs, test program specifications, release information etc.) that is classified as sensitive or higher security level by the client is encrypted to ensure confidentiality of the data. In addition, measures are used to control the integrity of the data after the transfer.

4.4 Assumptions

A.Inherit-secure-IT: The local IT test equipment is connected to a secure remote IT-Infrastructure through a secure (encrypted) network connection. The test equipment, the remote secure IT-infrastructure and the secure connection to it will satisfy all relevant ALC requirements and are provided and managed by NXP.

A.Product-Test: Besides the physical material, the wafer test process needs to get the ROM/Flash code as well as the Fabkey/Trust provisioning information. Moreover, the test program is needed.

A.Shipment: To enable the site to realize shipment such that assurance of integrity is assured throughout transport of physical security objects NXP will manage the shipment method as described in the life cycle documentation.

A. Scrap: NXP are responsible for the secure disposal of scrap from Chandler. Currently all product will be returned to Hamburg for destruction.

5. Security Objectives

26 The Security Objectives are related to physical, technical, and organizational security measures, the configuration management as well as the internal shipment and/or the external delivery.

O.Config_IT-env: The site uses software on manufacturing servers and testers in addition to configuration management systems for file versioning and problem tracking. For file versioning unique repositories are used to support proper management of multiple products and the site internal procedures.

O.LifeCycle-Doc: The site uses life cycle documentation that describes:

(1) Description of configuration management systems and their usage;
(2) A configuration items list;
(3) Site security;
(4) The manufacturing process;
(5) The manufacturing tools.
(6) CM_Plan

O.Config_Activities: The activities of the site are performed in accordance with the life cycle documentation (O.Config_IT-env) using the IT-environment (O.LifeCycle-Doc).

O.Physical-Access: The combination of physical partitioning between the different access control levels together with technical and organisational security measures allows a sufficient separation of employees to enforce the “need to know” principle. The access control shall support the limitation for the access to these areas including the identification and rejection of unauthorised people. The access control measures ensure that only registered employees can access restricted areas. Assets are handled in restricted areas only.

O.Security-Control: Assigned personnel of the site operate the systems for access control. Technical security measures like motion sensors and similar kind of sensors support the enforcement of the access control. NXP personnel are also responsible for registering and ensuring escort of visitors, contractors and suppliers.

O.Alarm-Response: The technical and organisational security measures ensure that an alarm is generated before an unauthorised person gets access to any asset. After the alarm is triggered the unauthorised person still has to overcome further security measures. The reaction time of the employees and/or guards is short enough to prevent a successful attack.

O.Internal-Monitor: The site performs security management meetings at least every six months. The security management meetings are used to review security incidences, to verify that maintenance measures are applied and to reconsider the assessment of risks and security measures. Furthermore, an internal audit is performed every year to control the application of the security measures.

O.Maintain-Security: Technical security measures are maintained regularly to ensure correct operation. The logging of sensitive systems is checked regularly. This comprises the access control system to ensure that only authorised employees have access to sensitive areas as well as computer/network systems to ensure that they are configured as required to ensure the protection of the networks and computer systems.

O.Network-separation: The (plain-text) development network of the site exists within the secured areas of the site only. It is connected only to:

(1) The encryption equipment employs encrypted VPNs to the secure network provided by the NXP;

(2) The development workstations provided by the NXP;

(3) Additional equipment (e.g. a printer) approved by the NXP.

O.Logical-Operation: Development computers enforce that every user authenticates using a password and has a unique user ID.

O.Control-Scrap: The site has measures in place to either securely destroy assets (e.g. paper shredder) or return them to NXP for destruction.

O.Staff-Engagement: All employees who have access to assets are checked regarding security concerns and have to sign a non-disclosure agreement. Furthermore, all employees are trained and qualified for their job. All contractors and visitors must be escorted by a trained employee at all times.

O.Internal-Shipment: The recipient of finished wafers are identified by the assigned address. An appropriate internal shipment procedure is applied for both configuration items. The address for shipment can only be changed by a controlled process. The packaging is part of the defined process and applied as agreed with the client. The forwarder supports the tracing of configuration items during internal shipment. For every sensitive configuration item, the protection measures against manipulation are defined.

O.Reception-Control: Upon reception of wafers an immediate incoming inspection is per-formed. The inspection comprises the received

amount of wafers and the identification and assignment of the product to a related internal production process.

O.Transfer-Data: Sensitive electronic configuration items (data or documents in electronic form) are protected with cryptographic algorithms to ensure confidentiality and integrity. The associated keys must be assigned to individuals to ensure that only authorized employees are able to extract the sensitive electronic configuration item. The keys are exchanged based on secure measures and they are sufficiently protected.

O.Zero-Balance: The site ensures that all wafers (intended TOE of different clients) are separated and traced on a wafer. Automated control and/or two employees acknowledgement during hand over is applied for functional and defective wafers. According to the agreed production flow the defect wafers are either destroyed at the site or sent to the client.

O.Product-Transport: Technical and organizational measures shall ensure the correct labeling of the product. A controlled internal shipment shall be applied. The transport supports traceability up to the acceptor. All transportation will meet NXP security requirement with anti-tamper measures in place where required.

The internal transport covers the shipment of produced wafers as well as the shipment of wafers either for rework or for final scrapping.

5.1 Security Objectives Rationale

27 The SST includes a Security Objective Rationale with two parts. The first part includes the tracing which shows how the threats and OSPs are covered by the Security Objectives. The second part includes a justification that shows that all threats and OSPs are effectively addressed by the Security Objectives (see column “Rationale” of table 1)

28 Note that the assumptions of the SST cannot be used to cover any threat or OSP of the site. They are seen as pre-conditions fulfilled either by the site providing the sensitive configuration items or by the site receiving the sensitive configuration items. Therefore, they do not contribute to the security of the site under evaluation.

Threat and OSP	Security Objective(s)	Rationale

T.Smart-Theft	O.Lifecycle-Doc O.Physical-Access O.Control-Scrap O.Security-Control O.Alarm-Response O.Internal-Monitor O.Maintain-Security O.Config_Activities O.Zero-Balance O.Reception-Control O.Production-Transport	O.Lifecycle-Doc ensure that procedures are documented which assist in preventing Theft. O.Physical-Access ensures that the Secure Room is physically partitioned off, so that a burglar cannot just walk in. O.Control-Scrap ensures that scrap material cannot be accessed by an authorized party O.Security-Control ensures that an attacker will be detected when trying to reach the assets through the Secure Room O.Alarm-Response supports O.Physical_Access and O.Security_Control by ensuring that a response will be given to the alarm systems and that this response is quick enough to prevent access to the assets. O.Internal-Monitor and O.Maintain-Security ensure that the above is managed and maintained. O.Config_Activities activities of the site are performed in accordance with the life cycle documentation. O.Zero-Balance and O.Reception-Control ensures that all items are traced and accounted for. O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Smart_Theft and OSP P.Zero-Balance

T.Rugged-Theft	O.Lifecycle-Doc O.Physical-Access O.Control-Scrap O.Security-Control O.Alarm-Response O.Internal-Monitor O.Maintain-Security O.Config_Activities O.Zero-Balance O.Reception-Control O.Production-Transport	O.Lifecycle-Doc ensure that procedures are documented which assist in preventing Theft. O.Physical-Access ensures that the Secure Room is physically partitioned off, so that a burglar cannot just walk in. O.Control-Scrap ensures that scrap material cannot be accessed by an authorized party O.Security-Control ensures that an attacker will be detected when trying to reach the assets through the Secure Room O.Alarm-Response supports O.Physical_Access and O.Security_Control by ensuring that a response will be given to the alarm systems and that this response is quick enough to prevent access to the assets. O.Internal-Monitor and O.Maintain-Security ensure that the above is managed and maintained. O.Config_Activities activities of the site are performed in accordance with the life cycle documentation. O.Zero-Balance and O.Reception-Control ensures that all items are traced and accounted for. O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Rugged_Theft and OSP P.Zero-Balance

T.Computer-Net	O.Config_IT-env O.Reception-Control O.Lifecycle-Doc O.Network-separation O.Physical-Access O.Logical-Operation O.Internal-Monitor O.Maintain-Security O.Control-Scrap O.Staff-Engagement O.Config_Activities O.Transfer-Data O.Production-Transport	O.Config_IT-env assigns unique numbers to the internal procedures and guidance. This helps enforce segregation of duties and the need to know principals. O.Reception-Control ensures that all items are traced and accounted for. O.Lifecycle-Doc ensure that procedures are documented which assist in preventing Unauthorised Staff access. O.Network-separation ensures that the development network is not connected to anything that an attacker could use to set up a remote connection O.Physical-Access ensures that all communication between the Secure Room and the Business Unit is done through encryption equipment (provided by the Business Unit). The attacker can therefore neither: • Listen in on or manipulate the network connection between the Secure Room and the Business Unit • Penetrate the Secure Room management stations through this connection The attacker also cannot use other networks that lead into the Secure Room as O.Physical-Access also ensures that all such connections are not connected to the encryption equipment. In addition, O.Logical-Operation ensures that all computer systems used to manage the Business Unit network are kept up to date (software updates, security patches, virus and spyware protection) O.Internal-Monitor and O.Maintain-Security ensure that the above is managed and maintained. O.Control-Scrap ensures that scrap material cannot be accessed by an authorized party O.Config_Activities activities of the site are performed in accordance with the life cycle documentation.

		O.Staff-Engagement ensures that all staff is aware of its reponsibilities (signing NDAs, and being trained). O.Transfer-Data ensures the integrity of the secure delivery of data O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Computer-Net and OSP P.Transfer-Data.

T.Unauthorised-Staff	O.Physical-Access O.Security-Control O.Reception-Control O.Alarm-Response O.Internal-Monitor O.Maintain-Security O.Config_IT-env O.Logical-Operation O.Control-Scrap O.Config_Activities O.Network-separation O.Lifecycle-Doc O.Staff-Engagement O.Zero-Balance O.Transfer-Data O.Production-Transport	O.Security_Control ensures that all unauthorised people who have a legitimate need to visit the Secure Room are always accompanied. O.Reception-Control ensures that all items are traced and accounted for. O.Physical-Access, O.Security-Control and O.Alarm-Response ensures that the unauthrised people cannot circumvent this (see the rationale for T.Smart-Theft for more details on this) O.Internal-Monitor and O.Maintain-Security ensure that the above is managed and maintained. O.Config_IT-env assigns unique numbers to the internal procedures and guidance. This helps enforce segregation of duties and the need to know principals. O.Control-Scrap ensures that scrap material cannot be accessed by an authorized party O.Config_Activities activities of the site are performed in accordance with the life cycle documentation. O.Network-separation ensures that that access can only be gained to networks on a need to know basis In addition, O.Logical-Operation ensures that all computer systems used to manage the Business Unit network are kept up to date (software updates, security patches, virus and spyware protection) O.Lifecycle-Doc ensure that procedures are documented which assist in preventing Unauthorised Staff access. O.Staff-Engagement ensures that all staff is aware of its reponsibilities (signing NDAs, and being trained). O.Zero-Balance ensures that all items are traced and accounted for. O.Transfer-Data ensures the integrity of the secure delivery of data O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Unauthorised-Staff.

T.Staff-Collusion	O.Internal-Monitor O.Maintain-Security O.Staff-Engagement O.Config_IT-env O.Control-Scrap O.Config_Activities O.Lifecycle-Doc O.Zero-Balance O.Transfer-Data O.Physical-Access O.Production-Transport	O.Staff-Engagement ensures that all staff is aware of its reponsibilities (signing NDAs, and being trained). O.Internal-Monitor and O.Maintain-Security ensure that the above is managed and maintained. O.Config_IT-env assigns unique numbers to the internal procedures and guidance. This helps enforce segregation of duties and the need to know principals. O.Control-Scrap ensures that scrap material cannot be accessed by an authorized party O.Config_Activities activities of the site are performed in accordance with the life cycle documentation. O.Lifecycle-Doc ensure that procedures are documented which assist in preventing Unauthorised Staff access. O.Zero-Balance ensures that all items are traced and accounted for. O.Transfer-Data ensures the integrity of the secure delivery of data O.Physical-Access ensures that all communication between the Secure Room and the Business Unit is done through encryption equipment (provided by the Business Unit). The attacker can therefore neither: • Listen in on or manipulate the network connection between the Secure Room and the Business Unit • Penetrate the Secure Room management stations through this connection The attacker also cannot use other networks that lead into the Secure Room as O.Physical-Access also ensures that all such connections are not connected to the encryption equipment. O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Staff-Collusion.

T.Attack-Transport	O.Transfer-Data O.Internal-Shipment O.Zero-Balance O.Internal-Monitor O.Maintain-Security O.Lifecycle-Doc O.Reception-Control O.Production-Transport	O.Transfer-Data ensures the integrity of the secure delivery of data O.Internal-Shipment ensure the traceability and security of wafers during shipment. O.Zero-Balance and O.Reception-Control ensures that all items are traced and accounted for. O.Internal-Monitor and O.Maintain-Security ensure that the above is managed and maintained. O.Lifecycle-Doc ensure that procedures are documented which assist in preventing Unauthorised Staff access. O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Attack-Transport and OSP P.Zero-Balance
P.Config_IT-env	O.Config_IT-env O.Transfer-Data:	The Security Objective directly enforces the OSP. O.Config_IT-env assigns unique numbers to the internal procedures and guidance. O.Transfer-Data ensures the integrity of the secure delivery of data As the site processes no other configuration items, this is sufficient to meet P.Config_IT-env and OSP P.Transfer-Data

P.Config_Activities	O.Config_Activities O.Network-separation O.Transfer-Data O.Physical-Access	The Security Objective directly enforces the OSP. O.Config_Activities activities of the site are performed in accordance with the life cycle documentation. O.Network-separation ensures that that access can only be gained to networks on a need to know basis O.Transfer-Data ensures the integrity of the secure delivery of data. O.Physical-Access ensures that all communication between the Secure Room and the Business Unit is done through encryption equipment (provided by the Business Unit). The attacker can therefore neither: • Listen in on or manipulate the network connection between the Secure Room and the Business Unit • Penetrate the Secure Room management stations through this connection The attacker also cannot use other networks that lead into the Secure Room as O.Physical-Access also ensures that all such connections are not connected to the encryption equipment. The services and processes provided by the site are described in the internal procedures and guidance. As these are kept under CM (see the rationale above), this is sufficient to meet P.Config_Activities.
P.LifeCycle-doc	O.LifeCycle-doc	The Security Objective directly enforces the OSP. This ensures life cycle documentation that describes configuration management systems, Site security, development process and tools providing a CM_Plan is sufficient to meet P.LifeCycle-doc.
P.Product-Transport	O.Internal-Shipment O.Reception-Control O.Production-Transport	The Security Objective directly enforces the OSP. O.Internal-Shipment and 0.Reception-Control ensure the traceability and security of wafers during shipment. O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. These measures are sufficient to meet the requirements of P.Product-Transport

P.Zero-Balance	O.Physical-Access O.Security-Control O.Reception-Control O.Internal-Monitor O.Maintain-Security O.Control-Scrap O.Zero-Balance O.Production-Transport	O.Security_Control ensures that all unauthorised people who have a legitimate need to visit the Secure Room are always accompanied. O.Reception-Control ensures that all items are traced and accounted for. O.Physical-Access, O.Security-Control and O.Internal-Monitor and O.Maintain-Security ensure that the above is managed and maintained. O.Control-Scrap ensures that scrap material cannot be accessed by an authorized party O.Zero-Balance and O.Reception-Control ensures that all items are traced and accounted for. O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Unauthorised-Staff.
P.Transfer-Data	O.Config_IT-env O.Network-separation O.Logical-Operation O.Config_Activities O.Transfer-Data O.Production-Transport	O.Config_IT-env assigns unique numbers to the internal procedures and guidance. This helps enforce segregation of duties and the need to know principals. O.Network-separation ensures that the development network is not connected to anything that an attacker could use to set up a remote connection In addition, O.Logical-Operation ensures that all computer systems used to manage the Business Unit network are kept up to date (software updates, security patches, virus and spyware protection) O.Config_Activities activities of the site are performed in accordance with the life cycle documentation. O.Transfer-Data ensures the integrity of the secure delivery of data O.Production-Transport ensures the secure delivery of product through anti-tamper transportation. Together, these objectives will therefore counter T.Computer-Net and OSP P.Transfer-Data.

P.Reception-Control	O.Internal-Shipment O.Reception-Control	The Security Objective directly enforces the OSP. O.Internal-Shipment and 0.Reception-Control ensure the traceability and security of wafers during shipment. These measures are sufficient to meet the requirements of P.Reception-Control

Table 1 Threats and OSP - Security Objectives Rationale

6. Extended Assurance Components Definition

29 No extended components are defined in this Site Security Target.

7. Security Assurance Requirements

30 NXP Chandler Test using this Site Security Target requires a TOE evaluation up to evaluation assurance level EAL6, potentially claiming conformance with the Eurosmart Protection Profile [5].

31 The Security Assurance Requirements are chosen from the class ALC (Life-cycle support) as defined in [3]:

- CM capabilities (ALC_CMC.5)
- CM scope (ALC_CMS.5)
- Development Security (ALC_DVS.2)
- Life-cycle definition (ALC_LCD.1)
- Tools and techniques (ALC_TAT.3)

32 Because hierarchically higher components are used in this SST the Security Assurance Requirements listed above fulfil the requirements of:

- [10] 'Minimum Site Security Requirements'

- [5] Eurosmart Protection Profile.

7.1 Application Notes and Refinements

33 The description of the site certification process [6] includes specific application notes. The main item is that a product that is considered as intended TOE is not available during the evaluation. Since the term "TOE" is not applicable in the Site Security Target, the associated processes for the handling of products, or "intended TOEs" are in the scope of this Site Security Target and are described in this document. These processes are subject of the evaluation of the site.

7.1.1 CM Capabilities (ALC_CMC.5)

34 Refer to subsection 'Application Notes for Site Certification' in [6] 5.1 'Application Notes for ALC_CMC'.

7.1.2 CM Scope (ALC_CMS.5)

35 Refer to subsection 'Application Notes for Site Certification' in [6] 5.2 'Application Notes for ALC_CMS'.

7.1.3 Development Security (ALC_DVS.2)

36 Refer to subsection 'Application Notes for Site Certification' in [6] 5.4 'Application Notes for ALC_DVS'.

7.1.4 Life-cycle Definition (ALC_LCD.1)

37 Refer to subsection 'Application Notes for Site Certification' in [6] 5.6 'Application Notes for ALC_LCD'.

38 Refer to '*Application Note 26'* in 6.2.1.2 'Refinements regarding Development Security (ALC_DVS)' in the Eurosmart PP [5].

39 Refer to subsection *'Refinement'* in 6.2.1.2 'Refinements regarding Development Security (ALC_DVS)' in the Eurosmart PP [5].

40 Refer to subsection "C Excerpts from the Criteria in Security assurance components (chapter 7)" in [12] Security IC Platform Protection Profile (BSI-CC-PP-0084-2014), Version 1.0, Eurosmart, 2014.

7.1.5 Tools and Techniques (ALC_TAT.3)

41 Refer to subsection 'Application Notes for Site Certification' in [6] 5.7 'Application Notes for ALC_TAT'.

7.2 Security Requirements Rationale

7.2.1 Security Requirements Rationale - Dependencies

42 The dependencies for the assurance requirements are as follows:

- ALC_CMC.5: ALC_CMS.1, ALC_DVS.2, ALC_LCD.1
- ALC_CMS.5: None
- ALC_DVS.2: None
- ALC_LCD.1: None
- ALC_TAT.3: ADV_IMP.1

43 Some of the dependencies are not (completely) fulfilled:

- ALC_LCD.1 is only partially fulfilled as the site does not represent the entire development environment. This is in-line with and further explained in [6] 5.1 'Application Notes for ALC_CMC'.

- ADV_IMP.1 is not fulfilled as there is no specific TOE. This is in-line with and further explained in [6] 5.7 'Application Notes for ALC_TAT'.

7.2.2 Security Requirements Rationale – Mapping

SAR	Security Objective	Rationale
ALC_CMC.5.1C: The CM documentation shall show that a process is in place to ensure an appropriate and consistent labeling.	O.Config_IT-env O.LifeCycle-Doc O.Config_Activities	Appropriate and consistent labelling is ensured through the application (O.Config_Activities) of the CM-Plan (O.LifeCycle-Doc) and the use of the configuration management systems (O.Config_IT-env).
ALC_CMC.5.2C: The CM documentation shall describe the method used to uniquely identify the configuration items.	O.LifeCycle-Doc	The method used to uniquely identify the configuration items is described in the CM-Plan (O.LifeCycle-Doc).
ALC_CMC.5.3C: The CM documentation shall justify that the acceptance procedures provide for an adequate and appropriate review of changes to all configuration items.	O.LifeCycle-Doc	The adequate and appropriate acceptance procedures for configuration items are described in the CM-Plan (O.LifeCycle-Doc).
ALC_CMC.5.4C: The CM system shall uniquely identify all configuration items.	O.Config_IT-env O.LifeCycle-Doc O.Config_Activities	Unique identification of all CIs is realized by performing the CM activities (O.Config_Activities) in accordance with the CM-Plan (O.LifeCycle-Doc) using the Configuration management systems (O.Config_IT-env)
ALC_CMC.5.5C: The CM system shall provide automated measures such that only authorized changes are made to the configuration items.	O.Config_IT-env O.LifeCycle-Doc O.Config_Activities	The configuration management systems (O.Config_IT-Env) used (O.Config_Activities) according to the CM-Plan (O.LifeCycle-Doc) enforces automated measures such that only authorized changes are made to the configuration items
ALC_CMC.5.6C: The CM system shall support the production of the product by automated means.	O.Config_IT-env O.LifeCycle-Doc O.Config_Activities	The software on the development computers (O.Config_IT-env) supports automated production of products when used (O.Config_Activities) in accordance with the CM-Plan (O.LifeCycle-Doc)

SAR	Security Objective	Rationale
ALC_CMC.5.7C: The CM system shall ensure that the person responsible for accepting a configuration item into CM is not the person who developed it.	O.LifeCycle-Doc O.Config_Activities	As described in the CM-Plan (O.LifeCycle-Doc) the activities performed (O.Config_Activities) are such that the person responsible for accepting a configuration item into CM is not the person who developed it.
ALC_CMC.5.8C: The CM system shall clearly identify the configuration items that comprise the TSF.	O.Config_IT-env O.LifeCycle-Doc	The CM-Plan (O.LifeCycle-Doc) identifies the configuration items that comprise the TSF possibly supported by the configuration management system (O.Config_IT-env)
ALC_CMC.5.9C: The CM system shall support the audit of all changes to the TOE by automated means, including the originator, date, and time in the audit trail.	O.Config_IT-env O.LifeCycle-Doc	As described in the CM_Plan (O.LifeCycle-Doc) the configuration management systems (O.Config_IT-env) are configured such that an audit trail (showing originator, date and time) is automatically generated.
ALC_CMC.5.10C: The CM system shall provide an automated means to identify all other configuration items that are affected by the change of a given configuration item.	O.Config_IT-env O.LifeCycle-Doc	As described in the CM_Plan (O.LifeCycle-Doc) the configurations management system and software installed on the development workstations and servers (O.Config_IT-env) provide automated means to identify all other configuration items that are affected by the change of a given configuration item.
ALC_CMC.5.11C: The CM system shall be able to identify the version of the implementation representation from which the TOE is generated.	O.Config_IT-env O.LifeCycle-Doc	As described in the CM_Plan (O.LifeCycle-Doc) the configurations management system (O.Config_IT-env) identifies the version of the implementation representation from which the TOE is generated through baselines.
ALC_CMC.5.12C: The CM documentation shall include a CM plan.	O.LifeCycle-Doc	The life cycle documentation (O.LifeCycle-Doc) includes a CM-Plan.
ALC_CMC.5.13C: The CM plan shall describe	O.LifeCycle-Doc	The life cycle documentation (O.LifeCycle-Doc) describes how

SAR	Security Objective	Rationale
how the CM system is used for the development of the TOE.		the CM system is used for the development of the product.
ALC_CMC.5.14C: The CM plan shall describe the procedures used to accept modified or newly created configuration items as part of the TOE	O.LifeCycle-Doc	The acceptance procedures for modified or newly created configuration items are described in the CM-Plan (O.LifeCycle-Doc).
ALC_CMC.5.15C: The evidence shall demonstrate that all configuration items are being maintained under the CM system.	O.LifeCycle-Doc	All configuration items are listed in the CI-list (O.LifeCycle-Doc)
ALC_CMC.5.16C: The evidence shall demonstrate that all configuration items have been and are being maintained under the CM system.	O.Config_IT-env O.LifeCycle-Doc	The CI-list (O.LifeCycle-Doc) is generated from the configuration management systems (O.Config_IT-env)

Table 2 Rationale for ALC_CMC.5

SAR	Security Objective	Rationale
ALC_CMS.5.1C: The configuration list includes the following: the TOE itself; the evaluation evidence required by the SARs in the ST; the parts that comprise the TOE; the implementation representation; security flaws; and development	O.LifeCycle-Doc	The life cycle documentation (O.LifeCycle-Doc) includes a CM-Plan and a CI-List with the items required by ALC_CMS.5.1C

SAR	Security Objective	Rationale
tools and related information. The CM documentation shall include a CM plan.		
ALC_CMS.5.2C: The configuration list shall uniquely identify the configuration items.	O.LifeCycle-Doc	The CI-List (O.LifeCycle-Doc) uniquely identifies the configurations items as described in the CM-Plan (O.LifeCycle-Doc).
ALC_CMS.5.3C: For each configuration item, the configuration list shall indicate the developer/subcontractor of the item.	O.LifeCycle-Doc	The CI-List (O.LifeCycle-Doc) indicates the developer/subcontractor for each configuration items as described in the CM-Plan (O.LifeCycle-Doc).

Table 3 Rationale for ALC_CMS.5

SAR	Security Objective	Rationale
ALC_DVS.2.1C: The development security documentation shall describe all the physical, procedural, personnel, and other security measures that are necessary to protect the confidentiality and integrity of the TOE design and implementation in its development environment.	O.LifeCycle-Doc O.Physical-Access O.Security-Control O.Alarm-Response O.Internal-Monitor O.Maintain-Security O.Network-separation O.Logical-Operation O.Control-Scrap O.Staff-Engagement	The development security documentation (O.LifeCycle-Doc) describes the physical (O.Physical-Access, O.Security-Control, O.Alarm-Response), procedural (O.Internal-Monitor, O.Maintain-Security, O.Control-Scrap), personnel (O.Staff-Engagement), and other (O.Network-separation, O.Logical-Operation) security measures that are necessary to protect the confidentiality and integrity of the TOE design and

SAR	Security Objective	Rationale
		implementation in its development environment.
ALC_DVS.2.2C: The development security documentation shall justify that the security measures provide the necessary level of protection to maintain the confidentiality and integrity of the TOE.	O.LifeCycle-Doc	The development security documentation (O.LifeCycle-Doc) justifies the security measures provide the necessary level of protection to maintain the confidentiality and integrity of the TOE.
ALC_DVS.2.3C: The evidence shall justify that the security measures provide the necessary level of protection to maintain the confidentiality and integrity of the TOE.	O.LifeCycle-Doc O.Physical-Access O.Security-Control O.Alarm-Response O.Internal-Monitor O.Maintain-Security O.Network-separation O.Logical-Operation O.Control-Scrap O.Staff-Engagement	The development security documentation (O.LifeCycle-Doc) describes the physical (O.Physical-Access, O.Security-Control, O.Alarm-Response), procedural (O.Internal-Monitor, O.Maintain-Security, O.Control-Scrap), personnel (O.Staff-Engagement), and other (O.Network-separation, O.Logical-Operation) security measures that are necessary to protect the confidentiality and integrity of the TOE design and implementation in its development environment.

Table 4 Rationale for ALC_DVS.2

SAR	Security Objective	Rationale
ALC_LCD.1.1C: The life-cycle definition documentation shall describe the model used to develop and maintain the TOE.	O.LifeCycle-Doc	The model used to develop the TOE is described in the life cycle documentation (O.LifeCycle-Doc)
ALC_LCD.1.2C: The life-cycle model shall provide for the necessary control over the development and maintenance of the TOE.	O.LifeCycle-Doc	The life cycle model as described in the life cycle documentation (O.LifeCycle-Doc) provides for the necessary control over the development and maintenance of the TOE.

Table 5 Rationale for ALC_LCD.1

SAR	Security Objective	Rationale
ALC_TAT.3.1C: Each development tool used for implementation shall be well-defined.	O.LifeCycle-Doc	The life cycle documentation (O.LifeCycle-Doc) shows that the development tools used for implementation are well-defined.
ALC_TAT.3.2.C: The documentation of each development tool shall unambiguously define the meaning of all statements as well as all conventions and directives used in the implementation.	O.LifeCycle-Doc	The life cycle documentation (O.LifeCycle-Doc) together with the documentation of the development tools unambiguously defines the meaning of all statements as well as all conventions and directives used in the implementation.
ALC_TAT.3.3C: The documentation of each development tool shall unambiguously define	O.LifeCycle-Doc	The life cycle documentation (O.LifeCycle-Doc) together with the documentation of the

SAR	Security Objective	Rationale
the meaning of all implementation-dependent options.		development tools unambiguously defines the meaning of all implementation-dependent options.

Table 6 Rationale for ALC_TAT.3

8. Site Summary Specification

8.1 Preconditions required by the Site

44 NXP Chandler provides wafer services to test wafers. In order to perform the aforementioned services, NXP requires to fulfil the following preconditions. The following paragraphs describe preconditions of NXP.

45 For the setup and control of the production test process, NXP is required to provide the appropriate specification and relative production information. Specific requirements for classified design data must also be defined and uniquely identified including the identification of encrypted test programs.

46 For the shipment of security product, the recipient of the finished wafers are identified by the address of the respective site. The packing of finished wafers and preparation of the shipment adhere to the standard procedure of the site, unless the specific requirement from NXP. NXP is responsible for delivery and transfer of the finished wafers, comprising the selection of the forwarder and the provision of data for the verification of the transport order.

47 NXP must perform the appropriate functional testing of the finished wafer. The testing of the finished wafer at the site is restricted to the testing of the process control modules that are added on the wafer.

48 The site activities are performed using an IT infrastructure consisting of workstations, servers manufacturing tools and configuration management systems. All of these are provided, configured and maintained by the NXP.

49 The IT infrastructure consists of local and remote equipment connected using an encrypted connection. NXP provides, configures and maintains the local workstations and router (used for the encrypted connection) and all remote equipment such that they are secure. The workstations are configured such that any assets are contained within encrypted containers.

50 In case of necessary updates to the life cycle documentation NXP will co-ordinate, communicate and deliver.

51 To enable the site to realize shipment such that assurance of integrity is assured throughout transport of physical security objects NXP will manage the shipment method.

52 The site follows the development processes of NXP. Applicable policies and processes are documented and available.

53 In case the site is unable to securely destroy certain physical assets, the assets will be securely stored and shipped to NXP Hamburg for destruction.

54 To define the participation of the site in the development while maintaining quality, for each product NXP will manage the activities to be performed, the specifications of the input for the site and the acceptance of the results.

8.2 Services of the Site

55 The site ensures a reproducible test process within the limits defined for the released wafer test process. Therefore, relevant parameters are controlled during the test process. This is subject of the configuration management.

56 Functional testing must be performed before the intended TOE can be delivered to the consumer. The site hosts a System Box to assist with this service which is verified during the NXP Hamburg audit. The functional testing is performed at the site, the wafers are delivered to the functional testing site of the related security product.

57 The site participates in the design and development of secure Hardware/ software for secure integrated circuits. The IT secure networks are audited as part of the Master IT audits.

8.3 Security Assurance Rationale

8.3.1 CM capabilities (ALC_CMC.5)

- Configuration Management is described in [7], [8] and [12].
- For full detail and evidences please view Section 7.2.2

8.3.2 CM scope (ALC_CMS.5)

- Configuration Management is described in [7], [8] and [12].
- For full detail and evidences please view Section 7.2.2

8.3.3 Development Security (ALC_DVS.2)

- Development Security is described in [8].
- For full detail and evidences please view Section 7.2.2

8.3.4 Life-cycle definition (ALC_LCD.1)

- Life-cycle definition is described in [7] and [8].

- For full detail and evidences please view Section 7.2.2

8.3.5 Tools and techniques (ALC_TAT.3)

- Tools and techniques is described in [8].

- For full detail and evidences please view Section 7.2.2

8.4 Objectives Rationale

58 The following rationale provides a justification that shows that all threats and OSP are effectively addressed by the Security Objectives.

8.4.1 O.Config_IT-env

59 The configuration of the IT environment is designed in such way to ensure segregation of duties and the need to know principals. These measures address T.Computer-Net, T.Staff-Collusion and T.Unauthorized-Staff. Also addresses the OSP P.Config-IT-env and P.Transfer-Data.

8.4.2 O.Physical-Access

The physical access is supported by O.Security-Control that includes the maintenance of the access control and the control of visitors. The physical security measures are supported by O.Alarm-Response providing an alarm system.

Thereby the threats T.Smart-Theft, T.Rugged-Theft can be prevented. The physical security measures together with the security measure provided by O.Security-Control enforce the recording of all actions. Thereby also T.Computer-Net, T.Staff-Collusion and T.Unauthorized-Staff is addressed. Also addresses the OSP P.Config-Activities as well as P.Zero-Balance..

8.4.3 O.Security-Control

60 During off hours the guard patrol the internal of the building and the alarm system is used to monitor the site with a dedicated off-site monitoring station. The CCTV system supports these measures because it is always enabled and monitored 24/7. The security control is further supported by O.Physical-Access requiring different level of access control for the access to security product during operation as well as during off-hours.

61 This addresses the threats T.Smart-Theft and T.Rugged-Theft. Supported by O.Maintain- Security and O.Physical-Access also an internal attacker triggers the security measures implemented by O.Security-Control. Therefore also the Threat T.Unauthorized-Staff is addressed as well as the OSP's P.Zero-Balance.

8.4.4 O.Alarm-Response

62 During working hours the employees monitor the alarm system. The alarm system is connected to a control center that is manned 24 hours. During off-hours additional guard patrol supports the alarm system. O.Physical-Access requires certain time to overcome the different level of access control. The response time of the guard and the physical resistance match to provide an effective alarm response.

63 This addresses the threats T.Smart-Theft, T.Rugged-Theft and T.Unauthorised-Staff

8.4.5 O.Internal-Monitor

64 Regular security management meetings are implemented to monitor security incidences as well as changes or updates of security relevant systems and processes. This comprises of all security events, security relevant systems, CCTV and access control. Major changes of security systems and security procedures are reviewed in general management systems review meetings (2x per year). Upon introduction of a new process a formal review and release for mass production is made before being generally introduced.

65 The security relevant systems enforcing or supporting O.Physical-Access, O.Security-Control and O.Logical-Access are checked and maintained regularly by the suppliers. In addition the configuration is updated as required either by employees (for the access control system) of the supplier. Logging files are checked at least monthly for technical problems and specific maintenance requests.

66 This addresses T.Smart-Theft, T.Rugged-Theft, T.Computer-Net, T.Unauthorised-Staff, T.Staff-Collusion and T.Attack-Transport as well as the OSP's P.Zero-Balance.

67

8.4.6 O.Logical-Operation

68 All logical protection measures are maintained and updated as required, at least once a month. Critical items such as virus scanners are updated daily. The backup is sufficiently protected and is only accessible for the administration.

69 This addresses the threats T.Computer-Net and T.Unauthorised-Staff and P.Transfer-Data.

8.4.7 O.Staff-Engagement

70 All employees are interviewed before hiring. They must sign an NDA and a code of conduct for the use of NXP equipment before they start working in the company. The formal training and qualification includes security relevant subjects and the principles of handling and storage of security products. The

security objectives O.Physical-Access, O.Logical- Access and O.Config-Items support the engagement of the staff.

71 This addresses the threats T.Computer-Net, T.Staff-Collusion and T.Unauthorised-Staff

8.4.8 O.Control-Scrap

72 Scarp may exist in a number of forms on this site printed secure objects, test samples or redundant hardware/movable media. Hardware and samples scrap is returned to NXP head office for controlled secure destruction. Transport and actual destruction of security products is done under supervision of a qualified employee in collaboration with the destructor. Sensitive information and information storage media are collected internally in a safe location and destroyed in a supervised and documented process. All documentation destroyed on site is by means of a Level 5 security shredder.

73 Supported by O.Physical-Access and O.Staff-engagement this addresses the threats T.Unauthorised-Staff, T.Computer-Net, T.Smart-Theft, T.Rugged-Theft and T.Staff-Collusion as well as the OSP's P.Zero-Balance.

74

8.4.9 O.Config_Activities

75 All product configuration information is stored in the database on the NXP secure network. The information stored is covering process specifications, acceptance test instructions and specifications, and test programs. Products are identified by unique customer part IDs with are linked to the unique ID numbers of the associated configuration items.

76 This is addressing the threat T.Rugged-Theft, T.Computer-Net, T.Staff-Collusion, T.Unauthorised-Staff, T.Smart-Theft and the OSP P.Config-Activities and P.Transfer-Data.

8.4.10 O.Network_Separation

77 The internal network is separated from the internet with a firewall. The internal network is further separated into subnetworks by internal firewalls. These firewalls allow only authorized information exchange between the internal subnetworks. Each user is logging into the system with his personalised user name and password. The objective is supported by O.Internal-Monitor based on the checks of the logging regarding security relevant events.

78 The individual accounts are addressing T.Computer-Net. All network configuration is stored in the database of the NXP secure network. Supported by O.Config-IT-env this addresses the threats T.Unauthorised-Staff and the OSP P.Config-Activity and P.Transfer-Data.

8.4.11 O.Maintain_Security

79 The security measures are maintained regularly to ensure correct operation. The logging of sensitive systems is checked regularly. This comprises the access control system to ensure that only authorised employees have access to sensitive areas as well as computer/network systems to ensure that they are configured as required to ensure the protection of the networks and computer systems

80 These security measures are necessary to prevent the threats T.Smart-Theft, T.Rugged-Theft, T.Computer-Net, T.Unautorised-Staff, T.Staff-Collusion and T.Attack-Transport as well as the OSP's P.Zero-Balance.

8.4.12 O.LifeCycle_doc

81 The security of the site is maintained according to the sites security documentation covering all physical and logical measures to ensure the security of the site.

82 These security measures are necessary to prevent the threats T.Smart-Theft, T.Rugged-Theft, T.Computer-Net, T.Unautorised-Staff, T.Staff-Collusion and T.Attack-Transport. Also addressing the OSP P.Lifecycle-Doc

8.4.13 O.Internal-Shipment

83 The recipient of a production lot is linked to production system and can be modified by authorized users. Packing procedures are documented in the product configuration. This includes specific requirement of the client. This security objective is supported by O.Staff-Engagement and O.Config-Items.

The threat T.Attack-Transport and the OSP P.Product-Transport and P.Reception-Control are addressed by the internal shipment.

8.4.14 O.Reception-Control

84 At reception each configuration item including security products are identified by the shipping documents, labels and information in the system supported by O.Config-Items. Inspection at reception is counting the amount of boxes and checking the shipping list if applicable. Thereby only correctly identified wafers are accepted for production.

85 These security measures are necessary to prevent the threats T.Smart-Theft, T.Rugged-Theft, T.Computer-Net, T.Unauthorised-Staff T.Attack-Transport and OSP's P.Product-Transport, P.Zero-Balance and P.Reception-Control are addressed by the reception control.

8.4.15 O.Transfer-Data

86 The integrity of the data transfer from/to the site, specifically test data is ensured by appropriate secure measures.

87 Supported by O.Logical-Access and O.Staff-Engagement this addresses the threats T.Staff-Collusion, T.Computer-Net, T.Unauthorised-Staff and T.Attack-

Transport as well as the OSP's P.Config_IT-env and P.Config-Activities as well as the OSP's P.Transfer-Data.

8.4.16 O.Zero-Balance

88 Products are uniquely identified throughout the whole process. For each hand over, either an automated or an organizational "two-employees-acknowledgement" (four-eyes principle) is applied for functional and defect assets. Scrap is following the good products through the whole production process. At every process step the registration of functional and scrap products is updated. Before a production order is closed a zero balance calculation is documenting the history of functional and scrap parts of this order. This security objective is sup-ported by O.Physical-Access, O.Config-Items and O.Staff-Engagement.

89 This addresses the threats T.Smart-Theft, T.Rugged-Theft, T.Unauthorised-Staff, T.Staff-Collusion and T.Attack-Transport as well as the OSP's P.Zero-Balance.

8.4.17 O.Production-Transport

90 Technical and organizational measures shall ensure the correct labeling of the product. A controlled internal shipment shall be applied. The transport supports traceability up to the acceptor. If applicable or required this policy shall include measures for packing if required to protect the product during transport.

91 The internal transport covers the shipment of produced wafers as well as the shipment of wafers either for rework or for final scrapping. This security objective is sup-ported by O.Physical-Access, O.Config-Items and O.Staff-Engagement.

92 This addresses the threats T.Smart-Theft, T.Rugged-Theft, T.Computer-Net, T.Unauthorised-Staff, T.Staff-Collusion and T.Attack-Transport as well as the OSP's P.Zero-Balance, P.Transfer-Data and P.Product-Transport.

9. References

9.1 Literature

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[2] Common Criteria, "Common Criteria for Information Technology Security Evaluations, Part 1: Introduction and General Model; Version 3.1, Revision 4," September 2012.

[3] Common Criteria, "Common Criteria for Information Technology Security Evaluation, Part3: Security Assurance Requirements; Version 3.1, Revision 4," September 2012.

[4] Common Criteria, "Common Methodology for Information Technology Security Evaluation (CEM), Evaluation Methodology; Version 3.1, Revision 4," September 2012.

[5] "Security IC Platform Protection Profile Version 1.0," Eurosmart, 15.06.2007.

[6] Common Criteria, "Supporting Document, Site Certification, Version 1.0, Revision 1, CCDB-2007-11-001," October 2007.

[10] Minimum Site Security Requirement V1. 2

[11] Security IC Platform Protection Profile with Augmented Packages (BSI-CC-PP-0084-2014), Version 1.0, Eurosmart, 2014.

9.2 List of Abbreviations

CC	Common Criteria
EAL	Evaluation Assurance Level
IC	Integrated Circuit
IP	Intellectual Property
IT	Information Technology
OSP	Organizational Security Policy
PP	Protection Profile
SAR	Security Assurance Requirement
SST	Site Security Target
ST	Security Target
TOE	Target of Evaluation