Reference: 2024-1-INF-4589- v1
Target: Limitada al expediente
Date: 05.08.2025

Created by: I003
Revised by: CALIDAD
Approved by: TECNICO

CERTIFICATION REPORT

Dossier #	**2024-1**
TOE	**Entrust Signature Activation Module, version 1.1.1**
Applicant	**B81188047 - Entrust EU, S.L.**
References	

[EXT-8879] 2023-12-22_2024-01_Entrust_SAM_Certification_Request

[EXT-9577] 2025-05-08_2024-01_ETR_v1.1 (1/2)

[EXT-9578] 2025-05-08_2024-01_ETR_v1.1 (2/2)

Certification report of the product Entrust Signature Activation Module, version 1.1.1, as requested in [EXT-8879] dated 22/12/2023, and evaluated by DEKRA Testing and Certification S.A.U., as detailed in the Evaluation Technical Report [EXT-9577] y [EXT-9578] received on 08/05/2025.

CONTENTS

EXECUTIVE SUMMARY

This document constitutes the Certification Report for the certification file of the product Entrust Signature Activation Module, version 1.1.1.

Entrust Signature Activation Module (SAM) is part of the architecture of a Trustworthy System Supporting Server Signing (TW4S). It integrates with a Server Signing Application (SSA) product to provide remote signing/sealing functionality to client applications via APIs or services operated by a TSP (Trust Service Provider).

Entrust Signature Activation Module is a software component that interacts with the Cryptographic Module (CM) to implement a Signature Activation Module (SAM) according to the European Standard [CEN EN 419 241-2].

Developer/manufacturer: Entrust EU, S.L.

Sponsor: Entrust EU, S.L..

Certification Body: Centro Criptológico Nacional (CCN) del Centro Nacional de Inteligencia (CNI).

ITSEF: Nombre Laboratorio.

Protection Profile: Trustworthy Systems Supporting Server Signing Part 2: Protection Profile for QSCD for Server Signing Protection Profile, version 0.16.

Evaluation Level: Common Criteria 2022 Revision 1 EAL4 + ALC_FLR.2 + AVA_VAN.5.

Evaluation end date: 02/06/2025

Expiration Date[1]: 31/07/2030

All the assurance components required by the evaluation level EAL4 (augmented with ALC_FLR.2 + AVA_VAN.5) have been assigned a “PASS” verdict. Consequently, the laboratory DEKRA Testing and Certification S.A.U. assigns the “PASS” VERDICT to the whole evaluation due all the evaluator actions are satisfied for the EAL4 + ALC_FLR.2 + AVA_VAN.5, as defined by the Common Criteria 2022 Revision 1 and the CEM 2022 Revision 1.

Considering the obtained evidence during the instruction of the certification request of the product Entrust Signature Activation Module, version 1.1.1, a positive resolution is proposed.

[1] This date refers to the expiration date of the certificate recognition within the scope of the mutual recognition arrangements signed by this Certification Body.

TOE SUMMARY

Entrust Signature Activation Module is a software component that interacts with the Cryptographic Module (CM) to implement a Signature Activation Module (SAM) according to the European Standard [CEN EN 419 241-2]. The main objective of the Entrust Signature Activation Module component is to ensure the signer the sole control of their signing keys, which is carried out authorizing the signature operation. The SAM activates the signing key within a CM, handling a Signature Activation Protocol (SAP) which requires that Signature Activation Data (SAD) be provided at the local environment. The SAD binds together the signer authentication with the signing key and the data to be signed. The SAM component uses the SAD in order to guarantee with a high level of confidence (SCAL 2) that the signing keys are used under sole control of the signer.

SCAL 2 also requires the signing keys and the software of the SAM are protected by a tamper protected environment. Entrust Signature Activation Module component uses a dedicated tamper protected environment according to the requirements of [CEN EN 419 241-2] standard.

Entrust Signature Activation Module has been designed and conforms to the European Standard [CEN EN 419 241-2] which is aimed to meet (together with the CM) the requirements of a QSCD as specified in Regulation (EU) No 910/2014 [eIDAS].

The major security features of the TOE are the following:

- Identification and authentication of TOE users.
- Secure creation of TOE users.
- Signer Key Pair generation and deletion.
- Supply DTBS/R.
- Signing/Sealing.
- Secure Audit.
- Secure communication between the TOE and the SSA.

SECURITY ASSURANCE REQUIREMENTS

The product was evaluated with all the evidence required to fulfil the evaluation level EAL4 and the evidence required by the additional component ALC_FLR.2 + AVA_VAN.5, according to Common Criteria 2022 Revision 1.

ASSURANCE CLASS	ASSURANCE COMPONENT
ASE	ASE_CCL.1
	ASE_ECD.1
	ASE_INT.1
	ASE_OBJ.2

	ASE_REQ.2
	ASE_SPD.1
	ASE.TSS.1
ADV	ADV_ARC.1
	ADV_FSP.4
	ADV_IMP.1
	ADV_TDS.3
AGD	AGD_OPE.1
	AGD_PRE.1
ALC	ALC_CMC.4
	ALC_CMS.4
	ALC_DEL.1
	ALC_DVS.1
	ALC_LCD.1
	ALC_TAT.1
	ALC_FLR.2
ATE	ATE_COV.2
	ATE_DPT.1
	ATE_FUN.1
	ATE_IND.2
AVA	AVA_VAN.5

SECURITY FUNCTIONAL REQUIREMENTS

The product security functionality satisfies the following functional requirements, according to the Common Criteria 2022 Revision 1:

SECURITY FUNCTIONAL REQUIREMENTS
FAU_GEN.1
FAU_GEN.2
FCS_CKM.1/RSA
FCS_CKM.1/EC based DSA

FCS_CKM.1/AES
FCS_CKM.3
FCS_CKM.6
FCS_COP.1/Digital signature generation and verification
FCS_COP.1/Encryption and decryption
FCS_COP.1.1/Message digest
FCS_COP1.1/Message authentication
FCS_RNG.1
FIA_UID.2
FIA_UAU.1
FIA_UAU.5/Signer
FIA_UAU.5/Privileged User
FIA_ATD.1
FIA_USB.1
FDP_ACC.1/Privileged User Creation
FDP_ACF.1/Privileged User Creation
FDP_ACC.1/Signer Creation
FDP_ACF.1/Signer Creation
FDP_ACC.1/Signer Maintenance
FDP_ACF. 1/ Signer Maintenance
FDP_ACC.1/Signer Key Pair Generation
FDP_ACF.1/Signer Key Pair Generation
FDP_ACC.1/Signer Key Pair Deletion
FDP_ACF.1/Signer Key Pair Deletion
FDP_ACC.1/Supply DTBS/R
FDP_ACF.1/Supply DTBS/R
FDP_ACC.1/Signing
FDP_ACF.1/Signing
FDP_ACC.1/TOE Maintenance
FDP_ACF.1/TOE Maintenance
FDP_ETC.2/Signer
FDP_IFC.1/Signer

FDP_IFF.1/Signer
FDP_ITC.2/Signer
FDP_ETC.2/Privileged User
FDP_IFC.1/Privileged User
FDP_IFF.1/Privileged User
FDP_ITC.2/Privileged User
FDP_UCT.1
FDP_UIT.1
FMT_SMF.1
FMT_SMR.2
FMT_MSA.1/ Signer
FMT_MSA.1/Privileged User
FMT_MSA.2
FMT_MSA.3/ Signer
FMT_MSA.3/Privileged User
FMT_MTD.1
FPT_PHP.1
FPT_PHP.3
FPT_RPL.1
FPT_STM.1
FPT_TDC.1
FTP_TRP.1/SSA
FTP_TRP.1/SIC
FTP_ITC.1/CM

IDENTIFICATION

Product: Entrust Signature Activation Module, version 1.1.1

Security Target: Security Target – Entrust Signature Activation Module, version 1.1.1 (version 2.1).

Protection Profile: Trustworthy Systems Supporting Server Signing Part 2: Protection Profile for QSCD for Server Signing Protection Profile, version 0.16.

Evaluation Level: Common Criteria 2022 Revision 1 EAL4 + ALC_FLR.2 + AVA_VAN.5.

SECURITY POLICIES

The use of the product Entrust Signature Activation Module, version 1.1.1 shall implement a set of security policies assuring the fulfilment of different standards and security demands.

The detail of these policies is documented in the Security Target, section 3.5 ("Organizational Security Policies").

ASSUMPTIONS AND OPERATIONAL ENVIRONMENT

The following assumptions are constraints to the conditions used to assure the security properties and functionalities compiled by the security target. These assumptions have been applied during the evaluation in order to determine if the identified vulnerabilities can be exploited.

In order to assure the secure use of the TOE, it is necessary to start from these assumptions for its operational environment. If this is not possible and any of them could not be assumed, it would not be possible to assure the secure operation of the TOE.

The detail of these assumptions is documented in the Security Target, section 3.3 ("Secure Usage Assumptions").

CLARIFICATIONS ON NON-COVERED THREATS

The following threats do not suppose a risk for the product Entrust Signature Activation Module, version 1.1.1, although the agents implementing attacks have the attack potential according to the High of EAL4 + ALC_FLR.2 + AVA_VAN.5 and always fulfilling the usage assumptions and the proper security policies satisfaction.

For any other threat not included in this list, the evaluation results of the product security properties and the associated certificate, do not guarantee any resistance.

The threats covered by the security properties of the TOE are those defined in the Security Target, section 3.4 ("Threats").

OPERATIONAL ENVIRONMENT FUNCTIONALITY

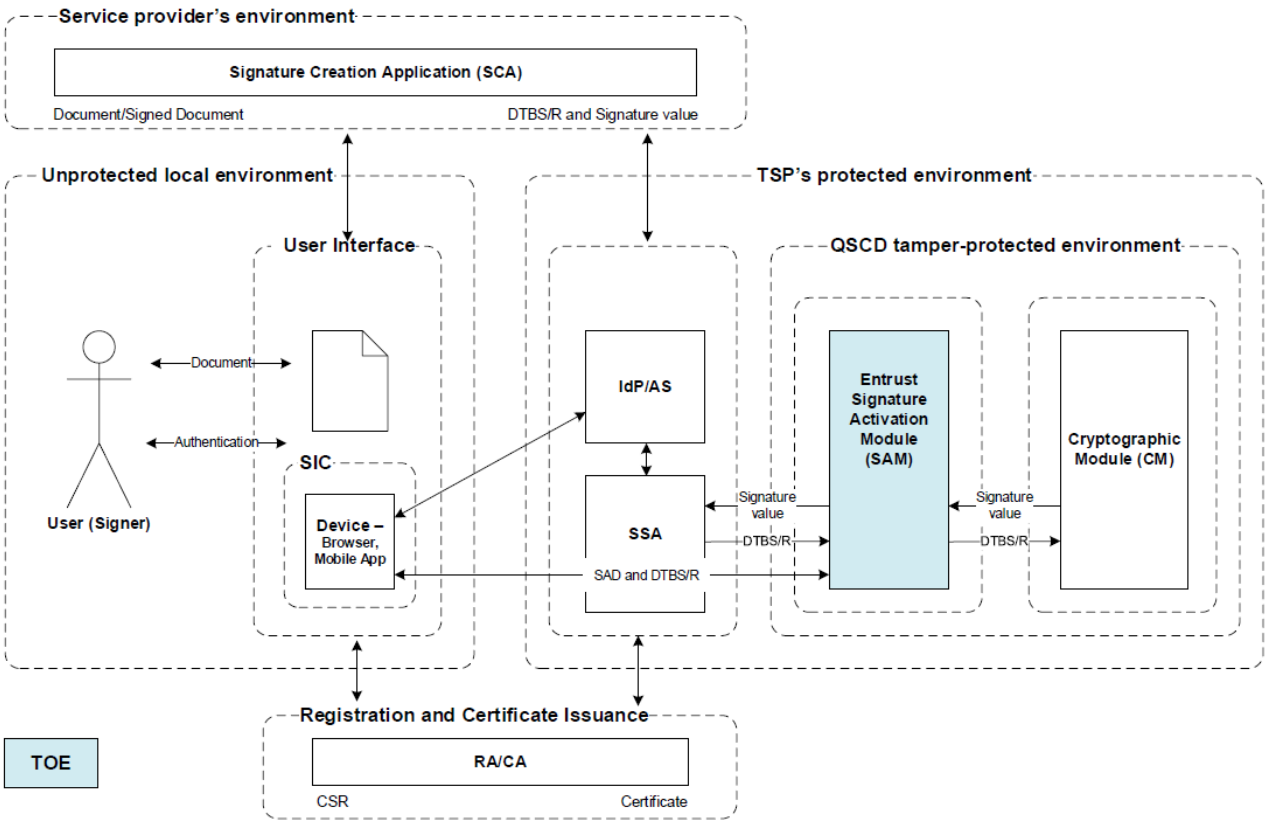
The product requires the cooperation from its operational environment to fulfil some of the objectives of the defined security problem.

The security objectives declared for the TOE operational environment are those defined in the Protection Profile and they are documented in the Security Target, section 4.2 ("Security Objectives for the Operational Environment").

ARCHITECTURE

LOGICAL ARCHITECTURE

The Entrust Signature Activation Module software component is the TOE, and it implements the Signature Activation Protocol (SAP) to obtain user Signature Activation Data (SAD). The TOE uses the SAD from the signer to activate the corresponding signing key for use in a Cryptographic Module (CM). The TOE uses a Cryptographic Module certified according to the Protection Profile [CEN EN 419 221-5], as mandates the standard [CEN EN 419 241-2].



PHYSICAL ARCHITECTURE

The TOE is a software composed of several components that is supplied in the file Entrust SAM 1.1.1.zip.

File	SHA-256
Entrust SAM 1.1.1.zip	573B68C5D9C385303C196E8F91F860E4CFC8299007D48DACA11AAD2156B259C5

This file has the following resources necessary to provide the functionality indicated in the Logical scope of the TOE section:

- Folder “bin”. Binary files in format ELF 64-bit LSB executable, x86-64 GNU/Linux, with the software component Entrust Signature Activation Module, the server component which provides the API (sam file) and the tool which provides the administration procedures (admin file).
- Folder “doc”. Documentation files in which the installation, configuration and operation of the software component are described. The TOE documentation is distributed in two languages: Spanish (folder “es”) and English (folder “en”). Inside these folders is folder “ENTRUST_SAM”, where there are several HTML resources corresponding to documentation referenced as ENTRUST_SAM and version 1.1.1.

DOCUMENTS

The product includes the following documents that shall be distributed and made available together to the users of the evaluated version.

All the documents and guides are distributed in the Entrust SAM 1.0.3.zip:

- Folder “doc”. Documentation files in which the installation, configuration and operation of the software component are described. The TOE documentation is distributed in two languages: Spanish (folder “es”) and English (folder “en”). Inside these folders is folder “ENTRUST_SAM”, where there are several HTML resources corresponding to documentation referenced as ENTRUST_SAM and version 1.1.1.

PRODUCT TESTING

The developer has executed tests for all the TSFIs. All the tests have been performed by the developer in its premises, with a satisfactory result.

During the evaluation process it has been verified each unit test checking that the security functionality that covers has been identified and that the kind of test is appropriate to the function that is intended to test.

All the tests have been developed using the testing scenario appropriate to the established architecture in the security target. It has also been checked that the obtained results during the tests fit or correspond to the previously estimated results.

To verify the results of the developer tests, the evaluator has repeated all the developer functional tests in the developer premises in the testing platform implemented in the evaluation facility.

In addition, the lab has devised a test for each of the TSFIs of the product verifying that the obtained results are consistent with the results obtained by the developer.

It has been checked that the obtained results conform to the expected results and in the cases where a deviation in respect to the expected results was present, the evaluator has confirmed that this variation neither represents any security problem nor a decrease in the functional capacity of the product.

PENETRATION TESTING

The evaluator has performed an installation and configuration of the TOE and its operational environment following the steps included in the installation and operation manuals. The TOE does NOT present exploitable vulnerabilities under the environment defined in the Security Target [ST].

All identified vulnerabilities can be considered closed if the TOE is installed and operated according to the Security Target [ST] and related documentation. The overall test result is that no deviations were found between the expected and the actual test results considering that environment.

No attack scenario with the attack potential “High” has been successful in the TOE’s operational environment as defined in the Security Target [ST] when all measures required by the developer are applied.

EVALUATED CONFIGURATION

The TOE configuration used to execute the independent testing plan is consistent with the evaluated configuration according to Security Target [ST] and the installation and operation manual provided in the “doc” folder in Entrust SAM 1.1.1.zip.

The evaluated configuration includes the HSM nCipher nShield 5c within the operational environment of the TOE. Any other configuration obtained by using a different HSM model falls out of the scope of this certification report.

EVALUATION RESULTS

The product Entrust Signature Activation Module, version 1.1.1 has been evaluated against the Security Target Security Target – Entrust Signature Activation Module, version 1.1.1 (version 2.1).

All the assurance components required by the evaluation level EAL4 + ALC_FLR.2 + AVA_VAN.5 have been assigned a “PASS” verdict. Consequently, the laboratory DEKRA Testing and Certification S.A.U. assigns the “**PASS**” **VERDICT** to the whole evaluation due all the evaluator actions are satisfied for the evaluation level EAL4 + ALC_FLR.2 + AVA_VAN.5, as defined by the Common Criteria 2022 Revision 1 and the CEM 2022 Revision 1.

COMMENTS & RECOMMENDATIONS FROM THE EVALUATION TEAM

Next, recommendations regarding the secure usage of the TOE are provided. These have been collected along the evaluation process and are detailed to be considered when using the product.

- The user guidance must be read and understood in order to operate the TOE in an adequate manner according to the Security Target.
- The fulfilment of the assumptions indicated in the security target is a key point as it implies TOE environment configurations that leave some potential vulnerabilities out of the scope.

CERTIFIER RECOMMENDATIONS

Considering the obtained evidence during the instruction of the certification request of the product Entrust Signature Activation Module, version 1.1.1, a positive resolution is proposed.

Additionally, it must be noted that:

1. According to the JIL agreement adopted in the plenary meeting held on 22nd May 2024, the SFRs FPT_PHP.1 and FPT_PHP.3 included in the Trustworthy Systems Supporting Server Signing Part 2: Protection Profile for QSCD for Server Signing Protection Profile, (version 0.16), have not been considered during this evaluation.
2. The evaluated configuration includes the HSM nCipher nShield 5c within the operational environment of the TOE. Any other configuration obtained by using a different HSM model falls out of the scope of this certification report.

GLOSSARY

CCN	Centro Criptológico Nacional
CNI	Centro Nacional de Inteligencia
EAL	Evaluation Assurance Level
ETR	Evaluation Technical Report
OC	Organismo de Certificación
TOE	Target Of Evaluation

BIBLIOGRAPHY

The following standards and documents have been used for the evaluation of the product:

[CC_P1] Common Criteria for Information Technology Security Evaluation, Part 1: Introduction and general model, November 2022, CC:2022, Revision 1

[CC_P2] Common Criteria for Information Technology Security Evaluation, Part 2: Security functional components, November 2022, CC:2022, Revision 1

[CC_P3] Common Criteria for Information Technology Security Evaluation, Part 3: Security assurance components, November 2022, CC:2022, Revision 1

[CC_P4] Common Criteria for Information Technology Security Evaluation, Part 4: Framework for the specification of evaluation methods and activities, November 2022, CC:2022, Revision 1

[CC_P5] Common Criteria for Information Technology Security Evaluation, Part 5: Pre-defined packages of security requirements, November 2022, CC:2022, Revision 1

[CEM] Common Methodology for Information Technology Security Evaluation, Evaluation methodology, November 2022, CC:2022, Revision 1

[ST] Security Target – Entrust Signature Activation Module, version 1.1.1 (version 2.1)

SECURITY TARGET / SECURITY TARGET LITE (IF APPLICABLE)

Along with this certification report, the complete security target of the evaluation is available in the Certification Body:

- Security Target – Entrust Signature Activation Module, version 1.1.1 (version 2.1).

RECOGNITION AGREEMENTS

In order to avoid multiple certifications of the same product in different countries a mutual recognition of IT security certificates - as far as such certificates are based on ITSEC or CC - under certain conditions was agreed.

European Recognition of ITSEC/CC – Certificates (SOGIS-MRA)

The SOGIS-Mutual Recognition Agreement (SOGIS-MRA) Version 3 became effective in April 2010. It defines the recognition of certificates for IT-Products at a basic recognition level and, in addition, at higher recognition levels for IT-Products related to certain SOGIS Technical Domains only.

The basic recognition level includes Common Criteria (CC) Evaluation Assurance Levels EAL 1 to EAL 4 and ITSEC Evaluation Assurance Levels E1 to E3 (basic). For "Smartcards and similar devices" a SOGIS Technical Domain is in place. For "HW Devices with Security Boxes" a SOGIS Technical Domains is in place, too. In addition, certificates issued for Protection Profiles based on Common Criteria are part of the recognition agreement.

The new agreement has been signed by the national bodies of Austria, Finland, France, Germany, Italy, The Netherlands, Norway, Spain, Sweden and the United Kingdom. The current list of signatory nations and approved certification schemes, details on recognition, and the history of the agreement can be seen on the website at https://www.sogis.eu.

The SOGIS-MRA logo printed on the certificate indicates that it is recognised under the terms of this agreement by the nations listed above.

The certificate of this TOE is recognized under SOGIS-MRA for all assurance components selected.

International Recognition of CC – Certificates (CCRA)

The international arrangement on the mutual recognition of certificates based on the CC (Common Criteria Recognition Arrangement, CCRA-2014) has been ratified on 08 September 2014. It covers CC certificates based on collaborative Protection Profiles (cPP) (exact use), CC certificates based on assurance components up to and including EAL 2 or the assurance family Flaw Remediation (ALC_FLR) and CC certificates for Protection Profiles and for collaborative Protection Profiles (cPP).

The CCRA-2014 replaces the old CCRA signed in May 2000 (CCRA-2000). Certificates based on CCRA-2000, issued before 08 September 2014 are still under recognition according to the rules of CCRA-2000. For on 08 September 2014 ongoing certification procedures and for Assurance Continuity (maintenance and re-certification) of old certificates a transition period on the recognition of

certificates according to the rules of CCRA-2000 (i.e. assurance components up to and including EAL 4 or the assurance family Flaw Remediation (ALC_FLR)) is defined until 08 September 2017.

As of September 2014 the signatories of the new CCRA-2014 are government representatives from the following nations: Australia, Austria, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Israel, Italy, Japan, Malaysia, The Netherlands, New Zealand, Norway, Pakistan, Republic of Korea, Singapore, Spain, Sweden, Turkey, United Kingdom, and the United States.

The current list of signatory nations and approved certification schemes can be seen on the website: http://www.commoncriteriaportal.org.

The Common Criteria Recognition Arrangement logo printed on the certificate indicates that this certification is recognised under the terms of this agreement by the nations listed above.

The certificate of this TOE is recognized under CCRA for all assurance components up to EAL2 and ALC_FLR.