



EN 18031-1:2024 Test Report

Report No.: STS2510138CY01

Issued for
Zhongshan Jucar Electronic Technology CO.,LTD

ROOM 701 ,NO.1 BUILDING,NO 23 WEST OF TONGJI ROAD,NANTOU
TOWN,ZHONGSHAN528427,GUANG DONG PROVINCE,CHINA

Product Name:	Special warning lamp
Brand Name:	Zhongshan Jucar Electronic Technology CO.,LTD
Model Name:	WL932
Series Model:	WL932 GPS
Test Standard:	EN 18031-1:2024

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TEST REPORT

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Common security requirements for radio equipment - Part 1: Internet connected radio equipment

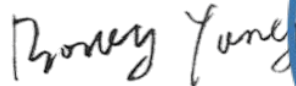
Report No.....: STS2510138CY01

Tested by (+ signature).....:



Aron Li

Approved by (+ signature).....:



(Technical Director)



Date of test.....: 2025-10-23

Date of issue.....: 2025-10-29

Test Result.....: PASS

Testing Laboratory.....: Shenzhen STS Test Services Co., Ltd.

Testing location/Address.....: 101, Building B, Zhueke Science Park, No. 180 Chongqing Road,
Zhancheng Sheng, Fuhai Sub-District, Bei'an District, Shenzhen,
Guangdong, China

Applicant.....: Zhongshan Jucar Electronic Technology CO.,LTD

Address.....: ROOM 701 ,NO.1 BUILDING,NO 23 WEST OF TONGJI ROAD,NANTOU
TOWN,ZHONGSHAN528427,GUANG DONG PROVINCE,CHINA

Manufacturer.....: Zhongshan Jucar Electronic Technology CO.,LTD

Manufacturer Address.....: ROOM 701 ,NO.1 BUILDING,NO 23 WEST OF TONGJI ROAD,NANTOU
TOWN,ZHONGSHAN528427,GUANG DONG PROVINCE,CHINA

Standards.....: EN 18031-1:2024

Test specification.....: Part 1: Internet connected radio equipment

Test item description.....: Special warning lamp

Trade Mark(s).....: N/A

Model/Type reference.....: WL932

Series Model(s).....: WL932 GPS

Serial Number.....:

Rating.....:

Human user interfaces.....:

Communication interfaces.....: LTE GPS

Local interfaces.....: LTE GPS

Firmware/software versions.....: V1.0

Hardware versions.....: V1.0

Equipment List

No.	Equipment	Company No.	Version	Manufacturer	Body No.	Lab	Management	Calib Date	Next Calib	Cycle	Report No.
1	Cyber Security Software	STS-C001	ITIV1.0	ITI	STS001	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
2	Laptop	STS-C002	Stealth 15 A13VE	MSI	K2301N0110 100	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
3	Cyber Security Software	STS-C003	STS-C001	Offensive Security	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
4	Wireshark	STS-C004	4.48	Wireshark Foundation	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
5	(OWASP Zed Attack Proxy) 2.13.0	STS-C005	2.15.0	OWASP	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
6	Nmap	STS-C006	7.95	Insecure.org	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
7	OpenVAS	STS-C007	11.0.3	Greenbone Networks	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
8	Aircrack-ng	STS-C008	1.7	Aircrack-ng Team	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
9	Ubertooth	STS-C009	2023-12-R1	Great Scott Gadgets	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
10	OpenSSL	STS-C010	3.2.4	OpenSSL Software Foundation	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
11	Hashcat	STS-C011	7.0.0	Hashcat Technologies GmbH	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
12	Burp Suite	STS-C012	2025.6.5	PortSwigger	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
13	Binwalk	STS-C013	3.1.0	ReFirmLabs	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.
14	Kismet	STS-C014	2024.0.0	Kismet Wireless	Embedded Software Plugin	serial_port_win Laboratory	Aron	N.C.R.	N.C.R.	N.C.R.	N.C.R.



Summary of Testing:

Tests performed:

The sample(s) tested complies with the requirements of EN 18031-1:2024

Test case verdicts

Test case does not apply to the test object..... : N/A
Test item does meet the requirement : P(ass)
Test case is not necessary as per standard : N/E
Test item does not meet the requirement : F(ail)

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Clause	Requirement - Test	Result - Remark	Verdict
6.1	[ACM] Access control mechanism		P(ass)
6.1.1	[ACM-1] Applicability of access control mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.1.2	[ACM-2] Appropriate access control mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.2	[AUM] Authentication mechanism		P(ass)
6.2.1	[AUM-1] Applicability of authentication mechanisms		P(ass)
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.2.1.1	[AUM-1-1] Requirement network interface		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.2.1.2	[AUM-1-2] Requirement user interface		P(ass)
	Conceptual Assessment		P(ass)

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Clause	Requirement - Test	Result - Remark	Verdict
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.2.2	[AUM-2] Appropriate authentication mechanisms		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.2.3	[AUM-3] Authenticator validation		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.2.4	[AUM-4] Changing authenticators		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.2.5	[AUM-5] Password strength		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.2.5.1	[AUM-5-1] Password strength (factory default)		N/A
	Conceptual Assessment		

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Clause	Requirement - Test	Result - Remark	Verdict
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.2.5.2	[AUM-5-2] Password strength (user-defined)		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.2.6	[AUM-6] Brute force protection		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.3	[SUM] Secure update mechanism		P(ass)
6.3.1	[SUM-1] Applicability of update mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.3.2	[SUM-2] Secure updates		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.3.3	[SUM-3] Automated updates		P(ass)

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Clause	Requirement - Test	Result - Remark	Verdict
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.4	[SSM] Secure storage mechanism		P(ass)
6.4.1	[SSM-1] Applicability of secure storage mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.4.2	[SSM-2] Appropriate integrity protection for secure storage mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.4.3	[SSM-3] Appropriate confidentiality protection for secure storage mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.5	[SCM] Secure communication mechanism		P(ass)
6.5.1	[SCM-1] Applicability of secure communication mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Functional Sufficiency Assessment		P(ass)
6.5.2	[SCM-2] Appropriate integrity and authenticity protection for secure communication mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.5.3	[SCM-3] Appropriate confidentiality protection for secure communication mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.5.4	[SCM-4] Appropriate replay protection for secure communication mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.6	[RLM] Resilience mechanism		N/A
6.6.1	[RLM-1] Applicability and appropriateness of resilience mechanisms		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.7.1	[NMM-1] Applicability and appropriateness of network monitoring mechanisms		N/A
	Conceptual Assessment		

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Clause	Requirement - Test	Result - Remark	Verdict
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.8.1	[TCM-1] Applicability of and appropriate traffic control mechanisms		N/A
	Conceptual Assessment		
	Functional Completeness Assessment		
	Functional Sufficiency Assessment		
6.9.1	[CCK-1] Appropriate CCKs		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.9.2	[CCK-2] CCK generation mechanisms		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.9.3	[CCK-3] Preventing static default values for preinstalled CCKs		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.10.1	[GEC-1] Up-to-date software and hardware with no publicly known exploitable vulnerabilities		P(ass)
	Conceptual Assessment		P(ass)

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Clause	Requirement - Test	Result - Remark	Verdict
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.10.2	[GEC-2] Limit exposure of services via related network interfaces		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.10.3	[GEC-3] Configuration of optional services and the related exposed network interfaces		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.10.4	[GEC-4] Documentation of exposed network interfaces and exposed services via network interfaces		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.10.5	[GEC-5] No unnecessary external interfaces		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.10.6	[GEC-6] Input validation		P(ass)
	Conceptual Assessment		P(ass)

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Clause	Requirement - Test	Result - Remark	Verdict
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)
6.11.1	[CRY-1] Best practice cryptography		P(ass)
	Conceptual Assessment		P(ass)
	Functional Completeness Assessment		N/A
	Functional Sufficiency Assessment		P(ass)

Annex I Test record

[ACM-1] Applicability of access control mechanisms

Test case ACM-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether access control mechanisms are implemented when they are required per ACM-1.
Prerequisites	<p>[E.Info.ACM-1.securityasset]: Description of each security asset that is accessible by entities, including:</p> <ul style="list-style-type: none"> - [E.Info.ACM-1.securityasset.Access]: possible entities' accesses to the security asset on the equipment; and - (if access control by the equipment is absent for public accessibility of the security asset is the equipment's intended functionality) [E.Info.ACM-1.securityasset.publicaccess]: Description of the equipment's intended functionality concerning the public accessibility of the security asset; and - (if access control by the equipment is absent because physical or logical measures in the equipment's targeted operational environment exist, that limit accessibility to authorized entities) [E.Info.ACM-1.securityasset.Environment]: Description of: <ul style="list-style-type: none"> - Physical or logical access control measures in the equipment's targeted operational environment; and - How entities are authenticated/authorized in the equipment's targeted operational environment; and - (if legal implications do not allow for access control mechanisms) <p>[E.Info.ACM-1.securityasset.Legal]: References to all corresponding paragraph(s) or passages in all relevant legal documents, including a description on how this is applicable for the equipment or affected asset; and</p> <ul style="list-style-type: none"> - (if access control mechanisms are claimed to be required for entities access to the security asset) <p>[E.Info.ACM-1.networkasset]: Description of each network asset that is accessible by entities, including:</p> <ul style="list-style-type: none"> - [E.Info.ACM-1.networkasset.Access]: possible entities' accesses to the network asset on the equipment; and - (if access control by the equipment is absent for public accessibility of the network asset is the equipment's intended functionality) [E.Info.ACM-1.networkasset.publicaccess]: Description of the equipment's intended functionality concerning the public accessibility of the network asset; and - (if access control by the equipment is absent because physical or logical measures in the equipment's targeted operational environment exist, that limit accessibility to authorized entities) [E.Info.ACM-1.networkasset.Environment]: Description of: <ul style="list-style-type: none"> - Physical or logical access control measures in the equipment's targeted operational environment; and - How entities are authenticated/authorized in the equipment's targeted operational environment; and - (if legal implications do not allow for access control mechanisms) <p>[E.Info.ACM-1.networkasset.Legal]: References to all corresponding paragraph(s) or passages in all relevant legal documents, including a description on how this is applicable for the equipment or affected asset; and</p> <ul style="list-style-type: none"> - (if access control mechanisms are claimed to be required for entities access to the network asset) [E.Info.ACM-1.networkasset.ACM]: Description of each access control mechanism that manages entities' access to the network asset.

Test case ACM-1 Conceptual assessment (Continued)

Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.ACM-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.ACM-1] ends with "FAIL"; and- The information provided in [E.Just.DT.ACM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.ACM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.ACM-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.ACM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.ACM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

**Test case ACM-1 Functional completeness assessment**

Objective	The purpose of the functional assessment is to verify that all the security assets and network assets that are accessible by entities, are documented in [E.Info.ACM-1.networkasset] or [E.Info.ACM-1.securityasset].
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.ACM-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.ACM-1] ends with "FAIL"; and- The information provided in [E.Just.DT.ACM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.ACM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.ACM-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.ACM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.ACM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case ACM-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether access control mechanisms are implemented when required per ACM-1.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.ACM-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.ACM-1] ends with "FAIL"; and- The information provided in [E.Just.DT.ACM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.ACM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.ACM-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.ACM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.ACM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case ACM-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Device Activation Key assessment: Functional Sufficiency test_key: ACM-1 timestamp: 2025-10-29T19-05-48 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: E.Info.ACM-1.SecurityAsset.Access Test Mode: Security Asset:Factory Reset Code timestamp: 2025-10-29T19-05-51 asset: Security Asset Test Mode: Network Asset:GPS Positioning Data timestamp: 2025-10-29T19-05-57 asset: Network Asset Test Mode: Network Asset:LTE Network Configuration timestamp: 2025-10-29T19-05-54
Test Verdict	P(ass)

[ACM-2] Appropriate access control mechanisms

Test case ACM-2 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether the access control mechanisms that are required per ACM-1 are implemented as required per ACM-2.
Prerequisites	<p>[E.Info.ACM-2.securityasset]: Description of each security asset for which ACM-1 requires access control mechanisms, including:</p> <ul style="list-style-type: none"> - [E.Info.ACM-2.securityasset.ACM]: Description of each access control mechanism required per ACM-1 that manages entities' access to the security asset and of how the mechanisms ensure that only authorized entities have access to the security asset based on the implementation category. <p>[E.Info.ACM-2.networkasset]: Description of each network asset for which ACM-1 requires access control mechanisms, including:</p> <ul style="list-style-type: none"> - [E.Info.ACM-2.networkasset.ACM]: Description of each access control mechanism required per ACM-1 that manages entities' access to the network asset and of how the mechanisms ensure that only authorized entities have access to the network asset based on the implementation category. <p>[E.Info.DT.ACM-2]: Description of the selected path through the decision tree in Figure 2 for each security asset documented in [E.Info.ACM-2.securityasset] and network asset documented in [E.Info.ACM-2.networkasset].</p> <p>[E.Just.DT.ACM-2]: Justification for the selected path through the decision tree documented in [E.Info.DT.ACM-2], with the following property:</p> <ul style="list-style-type: none"> - The justification for the decision [DT.ACM-2.DN-1] is based on [E.Info.ACM-2.networkasset.ACM] or [E.Info.ACM-2.securityasset.ACM]. <p>NOTE: A justification includes a description of the entities, their access rights on the respective security asset or network asset and means how the access control mechanisms ensure that only authorised access to the respective asset is granted.</p>
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - All paths through the decision tree documented in [E.Info.DT.ACM-2] end with "PASS"; and - The information provided in [E.Just.DT.ACM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.ACM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.ACM-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.ACM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.ACM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case ACM-2 Functional completeness assessment

Objective	Not necessary
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.ACM-2] end with "PASS"; and- The information provided in [E.Just.DT.ACM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.ACM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.ACM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.ACM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.ACM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case ACM-2 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether the access control mechanisms are implemented as required per ACM-2.
Prerequisites	NONE
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.ACM-2] end with "PASS"; and- The information provided in [E.Just.DT.ACM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.ACM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.ACM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.ACM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.ACM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case ACM-2 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Battery Authentication assessment: Functional Sufficiency test_key: ACM-2 timestamp: 2025-10-29T19-06-14 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Physical Switch Control timestamp: 2025-10-29T19-06-11 Test Mode: Network Asset:eSIM Credentials timestamp: 2025-10-29T19-06-16 asset: Network Asset Test Mode: Network Asset:Network Registration Status timestamp: 2025-10-29T19-06-19
Test Verdict	P(ass)

[AUM-1-1] Applicability of authentication mechanisms (Network interface)

Test case AUM-1-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether an authentication mechanism is implemented when it is required per AUM-1-1.
Prerequisites	<p>[E.Info.AUM-1-1.ACM]: Description of each access control mechanism required per ACM-1 for managing entities' access over network interfaces that allow to read confidential network function configuration or confidential security parameters; or modify sensitive network function configuration or sensitive security parameters; or use network functions or security functions, including:</p> <ul style="list-style-type: none"> - [E.Info.AUM-1-1.ACM.networkinterface]: Description of the network interfaces for the managed access; and - [E.Info.AUM-1-1.ACM.managedaccessnetworkasset]: Description of the managed access to network assets via network interfaces; and - [E.Info.AUM-1-1.ACM.managedaccesssecurityasset]: Description of the managed access to security assets via network interfaces; and - (if absence of authentication for access to network functions or network functions configuration via network interfaces is required for the equipment's intended functionality) <p>[E.Info.AUM-1-1.ACM.intendedfunctionality]: Description of - The unauthenticated accessible network functions or network functions configuration; and - The equipment's intended functionality; and - Its properties that require the absence of authentication for access to the network functions or network functions configuration; and</p> <ul style="list-style-type: none"> - (if authentication is absent for access via networks where access is limited to authorised entities) [E.Info.AUM-1-1.ACM.authorizedentity]: Description of the networks and the physical or logical measures in the equipment's targeted operational environment that limit access to authorized entities; and - (if authentication is required per AUM-1-1) <p>[E.Info.AUM-1-1.ACM.authorificationmechanism]: Description of the implemented authentication mechanisms.</p> <p>[E.Info.DT.AUM-1-1]:Description of the selected path through the decision tree in Figure 3 for each access control mechanism documented in [E.Info.AUM-1-1.ACM].</p> <p>[E.Just.DT.AUM-1-1]: Justification for the selected path through the decision tree documented in [E.Info.DT.AUM-1-1] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.AUM-1-1.DN-1] results in "NOT APPLICABLE") the justification for the decision [DT.AUM-1-1.DN-1] is based on [E.Info.AUM-1-1.ACM.intendedfunctionality]; and - (if a decision from [DT.AUM-1-1.DN-2] results in "NOT APPLICABLE") the justification for the decision [DT.AUM-1-1.DN-2] is based on [E.Info.AUM-1-1.ACM.authorizedentity]; and - The justification for the decision [DT.AUM-1-1.DN-3] is based on [E.Info.AUM-1-1.ACM].

Test case AUM-1-1 Conceptual assessment (Continued)

Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "FAIL"; and- The information provided in [E.Just.DT.AUM-1-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-1-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-1-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-1-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case AUM-1-1 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether there are access control mechanisms on the equipment for managing entities' access over network interfaces that allow to read confidential network function configuration or confidential security parameters; or modify sensitive network function configuration or sensitive security parameters; or use network functions or security functions that are not described in [E.Info.AUM-1-1.ACM].
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "FAIL"; and - The information provided in [E.Just.DT.AUM-1-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-1-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-1-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-1-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case AUM-1-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether the documented authentication mechanisms required per AUM-1-1 are implemented.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "FAIL"; and- The information provided in [E.Just.DT.AUM-1-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-1-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-1-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-1-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-1-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case AUM-1-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Device Usage Patterns assessment: Functional Sufficiency test_key: AUM-1-1 timestamp: 2025-10-29T19-06-35 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:User Operation Logs timestamp: 2025-10-29T19-06-33 asset: E.Info.ACM-1.SecurityAsset.Access Test Mode: Network Asset:Data Transmission Records timestamp: 2025-10-29T19-06-39 asset: Network Asset
Test Verdict	P(ass)

[AUM-1-2] Applicability of authentication mechanisms (User interface)

Test case AUM-1-2 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether an authentication mechanism is implemented when it is required per AUM-1-2.
Prerequisites	<p>[E.Info.AUM-1-2.ACM]: Description of each access control mechanism required per ACM-1 for managing entities' access over user interfaces that allow to read confidential network function configuration or confidential security parameters; or modify sensitive network function configuration or sensitive security parameters; or use network functions or security functions, including:</p> <ul style="list-style-type: none"> - [E.Info.AUM-1-2.ACM.userinterfaces]: A description of the user interfaces for the managed access; and - [E.Info.AUM-1-2.ACM.managedaccessnetworkasset]: Description of the managed access to network assets via user interfaces; and - [E.Info.AUM-1-2.ACM.managedaccesssecurityasset]: Description of the managed access to security assets via user interfaces; and - (if physical or logical measures in the targeted environment provide confidence in the correctness of an entity's claim) [E.Info.AUM-1-2.ACM.intendedenvironment]: Description of the physical or logical measures in the targeted environment; and - (if authentication is required per AUM-1-2) <p>[E.Info.AUM-1-2.ACM.authoriticationmechanism]: Description of the implemented authentication mechanisms; and</p> <ul style="list-style-type: none"> - (if authentication is absent for read only access to network functions or network functions configuration where access without authentication is needed to enable the intended equipment functionality) [E.Info.AUM-1-2.ACM.readonlyfunctionality]: Description of the equipment's intended functionality concerning the absence of authentication for read only access to affected assets via user interfaces; and - (if authentication is absent for read only access to network functions or network functions configuration where legal implications do not allow for authentication mechanisms) <p>[E.Info.AUM-1-2.ACM.readonlylegal]: References to all corresponding paragraph(s) or passages in all relevant legal documents, including a description on how this is applicable for the equipment or affected asset.</p> <p>[E.Info.DT.AUM-1-2]: Description of the selected path through the decision tree in Figure 4 for each access control mechanism documented in [E.Info.AUM-1-2.ACM].</p> <p>[E.Just.DT.AUM-1-2]: Justification for the path through the decision tree documented in [E.Info.DT.AUM-1-2] with the following properties:</p> <ul style="list-style-type: none"> - (if decision from [DT.AUM-1-2.DN-1] results in "NOT APPLICABLE) the justification for the decision [DT.AUM-1-2.DN-1] is based on [E.Info.AUM-1-2.ACM.intendedenvironment]; and - (if decision from [DT.AUM-1-2.DN-2] results in "NOT APPLICABLE) the justification for the decision [DT.AUM-1-2.DN-2] is based on [E.Info.AUM-1-2.ACM.readonlyfunctionality]; and - (if decision from [DT.AUM-1-2.DN-3] results in "NOT APPLICABLE) the justification for the decision [DT.AUM-1-2.DN-3] is based on [E.Info.AUM-1-2.ACM.readonlylegal]; and - - the justification for the decision [DT.AUM-1-2.DN-4] is based on [E.Info.AUM-1-2.ACM].

Test case AUM-1-2 Conceptual assessment (Continued)

Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "FAIL"; and- The information provided in [E.Just.DT.AUM-1-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-1-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-1-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-1-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case AUM-1-2 Functional completeness assessment

Objective	<p>The purpose of this assessment case is the functional assessment whether there are access control mechanisms on the equipment for managing entities' access over user interfaces that allow to read confidential network function configuration or confidential security parameters; or modify sensitive network function configuration or sensitive security parameters; or use network functions or security functions that are not described in [E.Info.AUM-1-2.ACM].</p>
Prerequisites	<p>The equipment is in an operational state.</p>
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "FAIL"; and - The information provided in [E.Just.DT.AUM-1-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-1-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-1-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-1-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	<p>N/A</p>
Test Verdict	<p>P(ass)</p>

Test case AUM-1-2 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether the documented authentication mechanisms required per AUM-1-2 are implemented.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "FAIL"; and- The information provided in [E.Just.DT.AUM-1-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-1-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-1-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-1-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-1-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case AUM-1-2 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Access Control Policies assessment: Functional Sufficiency test_key: AUM-1-2 timestamp: 2025-10-29T19-06-53 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:User Behavior Data timestamp: 2025-10-29T19-06-56 Test Mode: Network Asset:Communication Metadata timestamp: 2025-10-29T19-06-59 asset: Network Asset
Test Verdict	P(ass)

[AUM-2] Appropriate authentication mechanisms

Test case AUM-2 Conceptual assessment

Objective	<p>The purpose of this assessment case is the conceptual assessment whether the authentication mechanisms that are required per AUM-1-1 (network interface), AUM-1-2 (user interface) or AUM-1-3 (machine interface) are implemented as required per AUM-2.</p>
Prerequisites	<p>[E.Info.AUM-2.authoriticationmechanism]: Description of each authentication mechanism required per AUM-1-1 (network interface) or AUM-1-2 (user interface) including: - [E.Info.AUM-2.authoriticationmechanism.authoriticationmechanism]. Description of the authenticator. [E.Info.DT.AUM-2]: Description of the selected path through the decision tree in Figure 5 for each authentication mechanism that is documented in [E.Info.AUM-2.authoriticationmechanism]. [E.Just.DT.AUM-2]: Justification for the selected path through the decision tree documented in [E.Info.DT.AUM-2] with the following property: - The justification for the decision [DT.AUM-2.DN-1] is based on [E.Info.AUM-2.authoriticationmechanism.authoriticationmechanism].</p>
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - All paths through the decision tree documented in [E.Info.DT.AUM-2] end with "PASS"; and - The information provided in [E.Just.DT.AUM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-2].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.AUM-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-2].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise</p>
Conceptual Verdict	<p>N/A</p>

Test case AUM-2 Functional completeness assessment

Objective	Not necessary
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-2] end with "PASS"; and- The information provided in [E.Just.DT.AUM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise</p>
Assessment Summary	N/A
Test Verdict	N/A

**Test case AUM-2 Functional sufficiency assessment**

Objective	The purpose of this assessment case is the functional assessment whether the authentication mechanisms are implemented as required per AUM-2.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-2] end with "PASS"; and- The information provided in [E.Just.DT.AUM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise</p>
Assessment Summary	N/E
Test Verdict	N/A

[AUM-3] Authenticator validation

Test case AUM-3 Conceptual assessment

<p>Objective</p>	<p>The purpose of this assessment case is the conceptual assessment whether the authentication mechanisms validate all relevant properties of the authenticator as documented in [E.Info.AUM-3.AUM]. This assessment is conducted on each path to security assets and/or network assets required by AUM-1-1 or AUM-1-2.</p>
<p>Prerequisites</p>	<p>[E.Info.AUM-3.AUM]: Description of each authentication mechanism required per AUM-1-1 (network interface) or AUM-1-2 (user interface), including: - [E.Info.AUM-3.AUM.authoral]: Description how the validation of the authenticator is performed including its implementation category and the relevant properties; and - [E.Info.AUM-3.AUM.authorv]: Description of the available information about the authenticator in the operational environment of use. [E.Info.DT.AUM-3]: Description of the selected path through the decision tree in Figure 6 for each authentication mechanism that is documented in [E.Info.AUM-3.AUM]. [E.Just.DT.AUM-3]: Justification for the selected path through the decision tree documented in [E.Info.DT.AUM-3] with the following property: - The justification for the decision [DT.AUM-3.DN-1] is based on [E.Info.AUM-3.AUM.authoral] and [E.Info.AUM-3.AUM.authorv].</p>
<p>Assignment of verdict</p>	<p>The verdict PASS for the assessment case is assigned if: - All paths through the decision tree documented in [E.Info.DT.AUM-3] end with "PASS"; and - The information provided in [E.Just.DT.AUM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.AUM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
<p>Conceptual Verdict</p>	<p>N/A</p>

Test case AUM-3 Functional completeness assessment

Objective	Not necessary
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-3] end with "PASS"; and- The information provided in [E.Just.DT.AUM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-3]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-3] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-3]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	N/A

Test case AUM-3 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether authenticator validation is implemented as required per AUM-3.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-3] end with "PASS"; and- The information provided in [E.Just.DT.AUM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-3]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-3] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-3]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case AUM-3 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A

[AUM-4] Changing authenticators

Test case AUM-4 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether the authenticator used by the authentication mechanisms documented in [E.Info.AUM-4.AUM] can be changed.
Prerequisites	<p>[E.Info.AUM-4.AUM]: Description of each authentication mechanism required by AUM-1-1 (network interface) or AUM-1-2 (user interface), including:</p> <ul style="list-style-type: none"> - (if conflicting security goals do not allow for a change) [E.Info.AUM-4.AUM.confsecgoals]: Description of the conflicting security goals from the security concept of the equipment concerning the change of the authenticator.[E.Info.AUM-4.AUM.authorhange]: Description for each authentication mechanism documented in [E.Info.AUM-4.AUM] how the change of the authenticator is performed under consideration of the security concept of the equipment. <p>[E.Info.DT.AUM-4]: Description of the selected path through the decision tree in Figure 7 for each authenticator change functionality documented in [E.Info.AUM-4.AUM.authorhange].</p> <p>[E.Just.DT.AUM-4]: Justification for the selected path through the decision tree documented in [E.Info.DT.AUM-4] with the following properties:</p> <ul style="list-style-type: none"> - The justification for the decision [DT.AUM-4.DN-1] is based on [E.Info.AUM4.AUM.confsecgoals]; and the justification for the decision [DT.AUM-4.DN-2] is based on [E.Info.AUM4.AUM.authorhange].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.AUM-4] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.AUM-4] ends with "FAIL"; and - The information provided in [E.Just.DT.AUM-4] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-4]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.AUM-4] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-4] is not correct or missing for a path through the Decision tree documented in [E.Info.DT.AUM-4].
Conceptual Verdict	N/A

Test case AUM-4 Functional completeness assessment

Objective	Not necessary
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.AUM-4] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.AUM-4] ends with "FAIL"; and- The information provided in [E.Just.DT.AUM-4] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-4]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-4] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-4] is not correct or missing for a path through the Decision tree documented in [E.Info.DT.AUM-4].
Assessment Summary	N/A
Test Verdict	N/A

Test case AUM-4 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether authenticator changing is implemented as required per AUM-4.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.AUM-4] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.AUM-4] ends with "FAIL"; and- The information provided in [E.Just.DT.AUM-4] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-4]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-4] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-4] is not correct or missing for a path through the Decision tree documented in [E.Info.DT.AUM-4].



Test case AUM-4 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A

[AUM-5-1] Password strength (Factory default passwords)

Test case AUM-5-1 Conceptual assessment

<p>Objective</p>	<p>The purpose of this assessment case is the conceptual assessment whether the authentication mechanisms required by AUM-1-1 or AUM-1-2 are implemented as required per AUM-5-1.</p>
<p>Prerequisites</p>	<p>[E.Info.AUM-5-1.AUM]: Description of each authentication mechanism required per AUM-1-1 (network interface) or AUM-1-2 (user interface) that uses factory default passwords, including: - [E.Info.AUM-5-1.AUM.pwdproperty]: Description for each authentication mechanism's factory default password: - (if the implementation is based on [IC.AUM-5-1.uniquebestpractice]) of how uniqueness and best practice concerning password strengths is implemented for the password with regard to the underlying use case of the authentication; and - (if the implementation is based on [IC.AUM-5-1.enforcesettingfirstuse]) of how the change of the password is enforced on or before first use. [E.Info.DT.AUM-5-1]: Description of the selected path through the decision tree in Figure 8 for each authentication mechanism that is documented in [E.Info.AUM-5-1.AUM]. [E.Just.DT.AUM-5-1]: Justification for the selected path through the decision tree documented in [E.Info.DT.AUM-5-1] with the following properties: - the justification for the decisions [DT.AUM-5-1.DN-1], [DT.AUM-5-1.DN-2] and [DT.AUM-5-1.DN-3] are based on [E.Info.AUM-5-1.AUM.pwdproperty].</p>
<p>Assignment of verdict</p>	<p>The verdict PASS for the assessment case is assigned if: - All paths through the decision tree documented in [E.Info.DT.AUM-5-1] end with "PASS"; and - The information provided in [E.Just.DT.AUM-5-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-5-1].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.AUM-5-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-5-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-5-1].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
<p>Conceptual Verdict</p>	<p>N/A</p>

Test case AUM-5-1 Functional completeness assessment

Objective	Objective: Functional completeness assessment for AUM-5-1
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-5-1] end with "PASS"; and- The information provided in [E.Just.DT.AUM-5-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-5-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-5-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-5-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-5-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	N/A

Test case AUM-5-1 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for AUM-5-1
Prerequisites	The equipment is in the factory default state and not commissioned.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-5-1] end with "PASS"; and- The information provided in [E.Just.DT.AUM-5-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-5-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-5-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-5-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-5-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case AUM-5-1 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A

[AUM-5-2] Password strength (User-defined passwords)

Test case AUM-5-2 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether the authentication mechanisms required by AUM-1-1 or AUM-1-2 are implemented as required per AUM-5-2.
Prerequisites	<p>[E.Info.AUM-5-2.AUM]: Description of each authentication mechanism required per AUM-1-1 (network interface) or AUM-1-2 (user interface) that uses non-factory default passwords, including:</p> <ul style="list-style-type: none"> - [E.Info.AUM-5-2.AUM.pwdproperty]: Description for each authentication mechanism's non-factory default passwords: - (if the implementation is based on [IC.AUM-5-2.settingfirstuse]) of how the setting the passwords is enforced and the means to prevent logical network connection before setting the passwords; and - (if the implementation is based on [IC.AUM-5-2.definedauthenticity]) of how the definition of the passwords is restricted to authorized entities and the means to prevent their definition within a network where access is not limited to authorised entities; and - (if the implementation is based on [IC.AUM-5-2.equipmentgenerated]) of how best practice concerning passwords strengths is implemented with regard to the underlying use case of the authentication and the means to prevent their communication to unauthorized entities or within a network where access is not limited to authorised entities. <p>[E.Info.DT.AUM-5-2]: Description of the selected path through the decision tree in Figure 9 for each authentication mechanism that is documented in [E.Info.AUM-5-2.AUM].</p> <p>[E.Just.DT.AUM-5-2]: Justification for the selected path through the decision tree documented in [E.Info.DT.AUM-5-2] with the following property:</p> <ul style="list-style-type: none"> - the justification for the decisions [DT.AUM-5-2.DN-1], [DT.AUM-5-2.DN-2] and [DT.AUM-5-2.DN-3] are based on [E.Info.AUM-5-2.AUM.pwdproperty]
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - All paths through the decision tree documented in [E.Info.DT.AUM-5-2] end with "PASS"; and - The information provided in [E.Just.DT.AUM-5-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-5-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.AUM-5-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-5-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-5-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case AUM-5-2 Functional completeness assessment

Objective	Objective: Functional completeness assessment for AUM-5-2
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - All paths through the decision tree documented in [E.Info.DT.AUM-5-2] end with "PASS"; and - The information provided in [E.Just.DT.AUM-5-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-5-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.AUM-5-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-5-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-5-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	N/A

Test case AUM-5-2 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for AUM-5-2
Prerequisites	The equipment is in the factory default state and not commissioned.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-5-2] end with "PASS"; and- The information provided in [E.Just.DT.AUM-5-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-5-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-5-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-5-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-5-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case AUM-5-2 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A

[AUM-6] Brute force protection

Test case AUM-6 Conceptual assessment

<p>Objective</p>	<p>The purpose of this assessment case is the conceptual assessment whether the authentication mechanisms required by AUM-1-1 or AUM-1-2 have the capability as required by AUM-6.</p>
<p>Prerequisites</p>	<p>[E.Info.AUM-6.AUM]: Description of each authentication mechanism required per AUM-1-1 (network interface) or AUM-1-2 (user interface), including: - [E.Info.AUM-6.AUM.b/protection]: Description how the resilience against brute force attacks is ensured, considering the implementation categories. [E.Info.DT.AUM-6]: Description of the selected path through the decision tree in Figure 10 for each authentication mechanism that is documented in [E.Info.AUM-6.AUM]. [E.Just.DT.AUM-6]: Justification for the selected path through the decision tree documented in [E.Info.DT.AUM-6] with the following properties: - the justification for the decision [DT.AUM-6.DN-1] is based on [E.Info.AUM6.AUM.b/protection].</p>
<p>Assignment of verdict</p>	<p>The verdict PASS for the assessment case is assigned if: - All paths through the decision tree documented in [E.Info.DT.AUM-6] end with "PASS"; and - The information provided in [E.Just.DT.AUM-6] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-6].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.AUM-6] ends with "FAIL"; or - A justification provided in [E.Just.DT.AUM-6] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-6].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
<p>Conceptual Verdict</p>	<p>N/A</p>

Test case AUM-6 Functional completeness assessment

Objective	Not necessary
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-6] end with "PASS"; and- The information provided in [E.Just.DT.AUM-6] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-6]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-6] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-6] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-6]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	N/A

Test case AUM-6 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether brute force protection is implemented as required per AUM-6.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.AUM-6] end with "PASS"; and- The information provided in [E.Just.DT.AUM-6] are correct justifications for all paths through the decision tree documented in [E.Info.DT.AUM-6]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.AUM-6] ends with "FAIL"; or- A justification provided in [E.Just.DT.AUM-6] is not correct or missing for a path through the decision tree documented in [E.Info.DT.AUM-6]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case AUM-6 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A



[SUM-1] Applicability of update mechanisms

Test case SUM-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether an update mechanism is implemented when it is required per SUM-1.
Prerequisites	<p>[E.Info.SUM-1.partofsoftw]: Description of each parts of the software affecting the security assets and/or network assets including:</p> <ul style="list-style-type: none"> - (if the part of the software is not updatable for functional safety implications) <p>[E.Info.SUM1.partofsoftw.funcsaftyimp]: Description of: - The functional safety requirements and their source; and - The software's function relation to the functional safety requirements; and</p> <ul style="list-style-type: none"> - (if the part of the software is not updatable because it is immutable) <p>[E.Info.SUM1.partofsoftw.Immutable]: Description of the methods that ensure that the part of the software is immutable; and</p> <ul style="list-style-type: none"> - (if the part of the software is not updatable because alternative measures exist) <p>[E.Info.SUM1.partofsoftw.almeasures]: Description of: - The security assets and/or network assets the part of the software affects; and - The alternative measures that protect the affected security assets and/or network assets esp. In case of a publicly known exploitable vulnerability affecting the security assets and/or network assets; and - The expected life cycle of the equipment; and</p> <ul style="list-style-type: none"> - (if the part of the software is updatable) [E.Info.SUM-1.partofsoftw.SUM]: Description of the update mechanisms that can update the part of the software. NOTE The present document does not determine the granularity of the separation of the software into components. A suitable separation with respect to efforts in documentation considers the coverage of the parts of the software by certain update mechanisms. <p>[E.Info.DT.SUM-1]: Description of the selected path through the decision tree in Figure 11 for each part of the software documented in [E.Info.SUM-1.partofsoftw].</p> <p>[E.Just.DT.SUM-1]: Justification for the selected path through the decision tree documented in[E.Info.DT.SUM-1] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.SUM-1.DN-1] results in "NOT APPLICABLE") the justification for the decision [DT.SUM-1.DN-1] is based on [E.Info.SUM-1.partofsoftw.funcsaftyimp]; and - (if a decision from [DT.SUM-1.DN-2] results in "NOT APPLICABLE") the justification for the decision [DT.SUM-1.DN-2] is based on [E.Info.SUM-1.partofsoftw.Immutable]; and - (if a decision from [DT.SUM-1.DN-3] results in "NOT APPLICABLE") the justification for the decision [DT.SUM-1.DN-3] is based on [E.Info.SUM-1.partofsoftw.almeasures].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.SUM-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SUM-DT.SUM-1] ends with "FAIL"; and - The information provided in [E.Just.DT.SUM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SUM-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.SUM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case SUM-1 Functional completeness assessment

Objective	Not necessary
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.SUM-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SUM-DT.SUM-1] ends with "FAIL"; and - The information provided in [E.Just.DT.SUM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SUM-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.SUM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

**Test case SUM-1 Functional sufficiency assessment**

Objective	The purpose of this assessment case is the functional assessment whether update mechanisms are implemented as required per SUM-1.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.SUM-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.SUM-DT.SUM-1] ends with "FAIL"; and- The information provided in [E.Just.DT.SUM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SUM-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.SUM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SUM-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Bootloader Integrity assessment: Functional Sufficiency test_key: SUM-1 timestamp: 2025-10-29T19-08-12 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Firmware Signing Key timestamp: 2025-10-29T19-07-57 Test Mode: Network Asset:OTA Update Server timestamp: 2025-10-29T19-08-16 asset: Network Asset
Test Verdict	P(ass)

[SUM-2] Secure updates

Test case SUM-2 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether the update mechanisms as required per SUM-1 only install software as required per SUM-2.
Prerequisites	<p>[E.Info.SUM-2.SUM]: Description of each update mechanism that can update a part of the software documented in [E.Info.SUM-1.partofsoftw], including:</p> <ul style="list-style-type: none"> - (if the implementation is based on [IC.SUM-2.authinival.Sign]) [E.Info.SUM-2.SUM.Sign]: Description of the digital signature scheme used with a description of the underlying best practice cryptography as per [E.Info.CRY-1.Assets.Cryptography]; and - (if the implementation is based on [IC.SUM-2.authinival.secchan]) [E.Info.SUM2.SUM.secchan]: Description of the secure communication mechanism referring to [E.Info.SCM-1.SCM] with a description of the underlying best practice cryptography as per [E.Info.CRY-1.Assets.Cryptography]; and - (if the implementation is based on [IC.SUM-2.authinival.accontmech]) [E.Info.SUM2.SUM.accontmech]: Description of the access control mechanism referring to [E.Info.ACM2.securityasset.ACM] and of the hash function referring to [E.Info.CRY1.Assets.Cryptography]; and - (if the implementation is based on [IC.SUM-2.authinival.Generic]) [E.Info.SUM2.SUM.Generic]: Description of the methods used to validate the software's integrity and authenticity.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - All paths through the decision tree documented in [E.Info.DT.SUM-2] end with "PASS"; and - The information provided in [E.Just.DT.SUM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SUM-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.SUM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case SUM-2 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SUM-2
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.SUM-2] end with "PASS"; and- The information provided in [E.Just.DT.SUM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SUM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.SUM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SUM-2 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SUM-2
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.SUM-2] end with "PASS"; and- The information provided in [E.Just.DT.SUM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SUM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.SUM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SUM-2 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Firmware Hash Verification assessment: Functional Sufficiency test_key: SUM-2 timestamp: 2025-10-29T19-08-53 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Update Digital Certificate timestamp: 2025-10-29T19-09-06 Test Mode: Network Asset:Secure Update Channel timestamp: 2025-10-29T19-09-23 asset: Network Asset
Test Verdict	P(ass)

[SUM-3] Automated updates

Test case SUM-3 Conceptual assessment

Objective	<p>The purpose of this assessment case is to determine whether each update mechanism supports automated updates as documented in [E.Info.SUM-3.SUM.Automation] as required per SUM-3.</p>
Prerequisites	<p>[E.Info.SUM-3.SUM]: Description of each update mechanism required per SUM-1, including: - [E.Info.SUM-3.SUM.Automation]: Description of the means to automate the update mechanism. [E.Info.DT.SUM-3]: Description of the selected path through the decision tree in Figure 13 for each update mechanism documented in [E.Info.SUM-3.SUM]. [E.Just.DT.SUM-3]: Justification for the selected path through the decision tree documented in [E.Info.DT.SUM-3] with the following properties: - The justification for the decisions [DT.SUM-3.DN-1], [DT.SUM-3.DN-2] and [DT.SUM-3.DN-3] is based on [E.Info.SUM-3.SUM.Automation].</p>
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - All paths through the decision tree documented in [E.Info.DT.SUM-3] end with "PASS"; and - The information provided in [E.Just.DT.SUM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SUM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SUM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	<p>P(ass)</p>

Test case SUM-3 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SUM-3
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - All paths through the decision tree documented in [E.Info.DT.SUM-3] end with "PASS"; and - The information provided in [E.Just.DT.SUM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-3]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SUM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SUM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-3]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SUM-3 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SUM-3
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.SUM-3] end with "PASS"; and- The information provided in [E.Just.DT.SUM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SUM-3]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SUM-3] ends with "FAIL"; or- A justification provided in [E.Just.DT.SUM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SUM-3]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SUM-3 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Network Asset:Update Integrity Check assessment: Functional Sufficiency test_key: SUM-3 timestamp: 2025-10-29T19-09-40 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Network Asset Test Mode: Network Asset:Version Control System timestamp: 2025-10-29T19-09-43
Test Verdict	P(ass)

[SSM-1] Applicability of secure storage mechanisms

Test case SSM-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether secure storage mechanisms are implemented when it is required per SSM-1.
Prerequisites	<p>[E.Info. SSM-1.securityasset]: Description of each security asset persistently stored on the equipment, including for each of its persistent storage:</p> <ul style="list-style-type: none"> - (if a secure storage mechanism is claimed to be not required because physical or logical measures in the environment's target operational environment ensure that the stored security asset's accessibility is limited to authorized entities) [E.Info. SSM1.securityasset.Environment]: Description of: - Physical or logical measures in the equipment's targeted operational environment; and - How entities are authenticated/authorized in the equipment's targeted operational environment; and - (if the persistent storage is provided by a secure storage mechanism) [E.Info. SSM-1.securityasset.SSM]: Description of the secure storage mechanism. <p>[E.Info. SSM-1.networksset]: Description of each network asset persistently stored on the equipment, including for each of its persistent storage:</p> <ul style="list-style-type: none"> - (if a secure storage mechanism is claimed to be not required because physical or logical measures in the environment's target operational environment ensure that the stored network asset's accessibility is limited to authorized entities) [E.Info. SSM1.networksset.Environment]: Description of: - Physical or logical measures in the equipment's targeted operational environment; and - How entities are authenticated/authorized in the equipment's targeted operational environment; and - (if the persistent storage is claimed to be required by a secure storage mechanism) [E.Info. SSM-1.networksset.SSM]: Description of the secure storage mechanism. <p>[E.Info. DT. SSM-1]: Description of the selected path through the decision tree in Figure 14 for each security asset and network asset documented in [E.Info. SSM-1.securityasset] and [E.Info. SSM1.networksset].</p> <p>[E.Just.DT. SSM-1]: Justification for the selected path through the decision tree documented in [E.Info.DT. SSM-1] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT. SSM-1.DN-1] results in "NOT APPLICABLE") the justification for the decision [DT. SSM-1.DN-1] is based on [E.Info. SSM-1.securityasset.Environment] or [E.Info. SSM-1.networksset.Environment]; and - The justification for the decision [DT. SSM-1.DN-2] is based on [E.Info. SSM1.securityasset.SSM] or [E.Info. SSM-1.networksset.SSM].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.SSM-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SSM-1] ends with "FAIL"; and - The information provided in [E.Just.DT.SSM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SSM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SSM-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.SSM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SSM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case SSM-1 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SSM-1
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.SSM-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SSM-1] ends with "FAIL"; and - The information provided in [E.Just.DT.SSM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SSM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SSM-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.SSM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SSM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SSM-1 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SSM-1
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.SSM-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.SSM-1] ends with "FAIL"; and- The information provided in [E.Just.DT.SSM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SSM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SSM-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.SSM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SSM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SSM-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Device Identity Certificate assessment: Functional Sufficiency test_key: SSM-1 timestamp: 2025-10-29T19-10-20 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Secure Element Keys timestamp: 2025-10-29T19-10-23 Test Mode: Network Asset:LTE Encryption Keys timestamp: 2025-10-29T19-10-26 asset: Network Asset
Test Verdict	P(ass)

[SSM-2] Appropriate integrity protection

Test case SSM-2 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether secure storage mechanisms required by SSM-1 are implemented as required per SSM-2.
Prerequisites	<p>[E.Info.SSM-2.SSM]: Description of each secure storage mechanism, including</p> <ul style="list-style-type: none"> - [IC.SSM-2.SSM.Asset]: List of all security assets and network assets it stores persistently; and - (if the SSM implementation is based on [IC.SSM-2.digitalsignature]) <p>[E.Info.SSM2.SSM.digitalsignature]: Description of how integrity protection is realized using digital signature including: - A description of the digital signature mechanism and the cryptography for the security assets and network assets it stores persistently; and - A description of how the cryptographic secret used to derive the signature is provisioned onto or generated by the equipment; and</p> <ul style="list-style-type: none"> - (if the SSM implementation is based on [IC.SSM-2.accesscontrol]) <p>[E.Info.SSM2.SSM.accesscontrol]: Description of how integrity protection is realized using access control mechanisms, including: - A description of the access control mechanisms and the corresponding access rights for the security assets and network assets it stores persistently; and</p> <ul style="list-style-type: none"> - (if the SSM implementation is based on [IC.SSM-2.otprogrammable]) <p>[E.Info.SSM2.SSM.otprogrammable]: Description of how integrity protection is realized using one-time programmable memory, including: - A description of what type of one-time programmable memory is used for the security assets and network assets it stores persistently; and</p> <ul style="list-style-type: none"> - (if the SSM implementation is based on [IC.SSM-2.hardwareprotection]) <p>[E.Info.SSM2.SSM.hardwareprotection]: Description of how integrity protection is realized using hardware protection including: - A description of what hardware protection is used for the security assets and network assets it stores persistently; and</p> <ul style="list-style-type: none"> - (if the SSM implementation is based on [IC.SSM-2.Generic]) [E.Info.SSM-2.SSM.Generic]: Description of the integrity protection mechanism used to protect the security assets or network assets; and - (if it is claimed that the secure storage mechanism is compliant with recognised security standards or certification schemes) [IC.SSM-2.SSM.compliancevidence]: Provides evidence to the recognised security standard or certification schemes the secure storage mechanism complies to. <p>NOTE The information above may not always be available to the manufacturer when the secure storage mechanism provided by a supplier which will not disclose such information for security reasons while providing all necessary security instructions to use the secure storage mechanism.</p> <p>[E.Info.DT.SSM-2]: Description of the selected path through the decision tree in Figure 15 for each secure storage mechanism described in [E.Info.SSM-2.SSM].</p> <p>[E.Just.DT.SSM-2]: Justification for the selected path through the decision tree documented in [E.Info.DT.SSM-2] with the following properties:</p> <ul style="list-style-type: none"> - (if the implementation is based on [IC.SSM-2.digitalsignature]) the justification for the decision [DT.SSM-2.DN-1] is based on [E.Info.SSM-2.SSM.digitalsignature]; and - (if the implementation is based on [IC.SSM-2.accesscontrol]) the justification for the decision [DT.SSM-2.DN-1] is based on [E.Info.SSM-2.SSM.accesscontrol];

Test case SSM-2 Conceptual assessment (Continued)

Assignment of verdict	The verdict PASS for the assessment case is assigned if: - All paths through the decision tree documented in [E.Info.DT.SSM-2] end with "PASS"; and - The information provided in [E.Just.DT.SSM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SSM-2]. The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SSM-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.SSM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SSM-2]. The verdict NOT APPLICABLE for the assessment case is assigned otherwise.
Conceptual Verdict	P(ass)

Test case SSM-2 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SSM-2
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.SSM-2] end with "PASS"; and- The information provided in [E.Just.DT.SSM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SSM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SSM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.SSM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SSM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SSM-2 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SSM-2
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree documented in [E.Info.DT.SSM-2] end with "PASS"; and- The information provided in [E.Just.DT.SSM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SSM-2]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SSM-2] ends with "FAIL"; or- A justification provided in [E.Just.DT.SSM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SSM-2]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>

Test case SSM-2 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Cryptographic Seed Values assessment: Functional Sufficiency test_key: SSM-2 timestamp: 2025-10-29T19-11-01 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Key Derivation Functions timestamp: 2025-10-29T19-11-15 Test Mode: Network Asset:Secure Communication Context timestamp: 2025-10-29T19-11-31 asset: Network Asset
Test Verdict	P(ass)

[SSM-3] Appropriate confidentiality protection

Test case SSM-3 Conceptual assessment

<p>Objective</p>	<p>The purpose of this assessment case is the conceptual assessment whether secure storage mechanisms required by SSM-1 that persistently store confidential security parameters or confidential network function configuration are implemented as required per SSM-3.</p>
<p>Prerequisites</p>	<p>[E.Info.SSM-3.SSM]: Description of each secure storage mechanism that persistently stores confidential security parameter or confidential network function configuration, including: - [E.Info.SSM-3.SSM.Asset]: List of all confidential security parameter and confidential network function configuration it stores persistently; and - (if the SSM implementation is based on [IC.SSM-3.Encryption]) [E.Info.SSM3.SSM.Encryption]: Description of how secrecy is realized using encryption including: - The encryption mechanism and the cryptography that are used to protect the secrecy of the confidential security parameter and confidential network function configuration it stores persistently; and - How the secret used to encrypt the asset was provisioned or derived; and - (if the SSM implementation is based on [IC.SSM-3.accesscontrol]) [E.Info.SSM3.SSM.accesscontrol]: Description of how secrecy is realized using access control mechanisms including: - A description of the access control mechanisms including the corresponding access rights for the confidential security parameter and confidential network function configuration it stores persistently; and - (if the SSM implementation is based on [IC.SSM-3.hardwareprotection]) [E.Info.SSM3.SSM.hardwareprotection]: Description of how secrecy is realized using hardware protection including: - A description of what hardware protection is used for the confidential security parameter and confidential network function configuration it stores persistently; and - (if the SSM implementation is based on [IC.SSM-3.Generic]) [E.Info.SSM-3.SSM.Generic]: Description of the confidentiality protection mechanism used to protect the secrecy of confidential security parameters and confidential network function configuration it stores persistently; and - (if it is claimed that the secure storage mechanism is compliant with recognised security standards or certification schemes) [IC.SSM-3.SSM.complianceevidence]: Provides evidence to the recognised security standard or certification schemes the secure storage mechanism complies to.</p> <p>NOTE The information above may not always be available to the manufacturer when the secure storage mechanism provided by a supplier which will not disclose such information for security reasons while providing all necessary security instructions to use the secure storage mechanism.</p> <p>[E.Info.DT.SSM-3]: Description of the selected path through the decision tree in Figure 16 for each secure storage mechanism described in [E.Info.SSM-3.SSM]. [E.Just.DT.SSM-3]: Justification for the selected path through the decision tree documented in [E.Info.DT.SSM-3] with the following properties: - (if the implementation is based on [IC.SSM-3.Encryption]) the justification for the decision [DT.SSM-3.DN-1] is based on [E.Info.SSM-3.SSM.Encryption]; and - (if the implementation is based on [IC.SSM-3.accesscontrol]) the justification for the decision [DT.SSM-3.DN-1] is based on [E.Info.SSM-3.SSM.accesscontrol]; and - (if the implementation is based on [IC.SSM-3.hardwareprotection]) the justification for the decision [DT.SSM-3.DN-1] is based on [E.Info.SSM-3.SSM.hardwareprotection]; and - (if the implementation is based on [IC.SSM-3.Generic]) the justification for the decision [DT.SSM-3.DN-1] is based on [E.Info.SSM-3.SSM.Generic].</p>

Test case SSM-3 Conceptual assessment (Continued)

Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-3] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case SSM-3 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SSM-3
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-3] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SSM-3 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SSM-3
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-3] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SSM-3 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Session Tokens assessment: Functional Sufficiency test_key: SSM-3 timestamp: 2025-10-29T19-12-02 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Temporary Access Keys timestamp: 2025-10-29T19-12-34 Test Mode: Network Asset:Real-time Location Stream timestamp: 2025-10-29T19-12-50 asset: Network Asset
Test Verdict	P(ass)

[SCM-1] Applicability of secure communication mechanisms

Test case SCM-1 Conceptual assessment

<p>Objective</p>	<p>The purpose of this assessment case is the conceptual assessment whether secure communication mechanisms are implemented when it is required to protect the security assets documented in [E.Info.SCM-1.securityasset] or network assets documented in [E.Info.SCM-1.networkasset] when communicated over network interfaces as required per SCM-1.</p>
<p>Prerequisites</p>	<p>[E.Info.SCM-1.networkinterface]: Description of each network interface including:</p> <ul style="list-style-type: none"> - The description of the physical characteristics including: - (in case of a radio interface) [E.Info.SCM-1.networkinterface.Radio]: Technology used, the occupied radio spectrum, the transmission power used on the radio interface and the modes of operation that are implemented; or - (in case of a wired interface) [E.Info.SCM-1.networkinterface.Wired]: Electrical characteristics used on the wired interface and the modes of operation that are implemented; or - (in case of an optical interface) [E.Info.SCM-1.networkinterface.Optical]: Optical technology used on the interface and the modes of operation that are implemented; or - (in case of an acoustic interface) [E.Info.SCM-1.networkinterface.Acoustic]: Acoustic technology used on the interface and the modes of operation that are implemented; and - The description of the logical characteristics including: - [E.Info.SCM-1.networkinterface.Protocol]: Description of all communication protocols implemented on the interface documented in [E.Info.SCM-1.networkinterface.Radio], [E.Info.SCM-1.networkinterface.Wired], [E.Info.SCM-1.networkinterface.Optical] or [E.Info.SCM-1.networkinterface.Acoustic] and the modes of operation that are implemented, the version of the protocol and, if applicable, the SW library that is used for the implementation; and - The description of the configuration including - Applied configuration for the equipment and the available options to change the interface's physical or logical behaviour. <p>[E.Info.SCM-1.securityasset]: Description of each stored security asset that is communicated over network interfaces documented in [E.Info.SCM-1.networkinterface] and for which confidentiality, integrity or authenticity is needed in order to protect the equipment's network assets, including:</p> <ul style="list-style-type: none"> - (if a classification of the security assets is applicable) [E.Info.SCM-1.securityasset.Class]: Security asset classification (e.g. Root keys, master keys, wrapper keys or public keys) where security assets may be listed in groups as a single category if they are part of the same use case and the same security level; and - [E.Info.SCM-1.securityasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-1.networkinterface]; and - [E.Info.SCM-1.securityasset.networkinterface]: Network interface used for communication of the security asset (from [E.Info.SCM-1.networkinterface]); and - (if transfer is protected by physical and logical measures in the targeted environment) <p>[E.Info.SCM-1.securityasset.Environment]: Description of the physical or logical measures in the equipment's targeted operational environment that ensure that the assets are not exposed to unauthorised entities; and</p> <ul style="list-style-type: none"> - (if the assets are part of establishing or managing the connection) [E.Info.SCM-1.securityasset.addmeasures]: Description of the implemented additional measures to authenticate the connection or trust relation. <p>[E.Info.SCM-1.networkasset]: Description of each network asset that is communicated over network interfaces documented in [E.Info.SCM-1.networkinterface] and for which confidentiality, integrity or authenticity protection is needed, including</p> <ul style="list-style-type: none"> - (if a classification of the network assets is applicable) [E.Info.SCM-1.networkasset.Class]: Network asset classification (e.g., network configuration, sensitive network access parameters); network assets may be grouped listed as a single category if they are part of the same use case and the same security level; and - [E.Info.SCM-1.networkasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-1.networkinterface]; and - [E.Info.SCM-1.networkasset.netinterface]: Network interface used for communication of the network asset (from [E.Info.SCM-1.networkinterface]); and - (if transfer is protected by physical and logical measures in the targeted environment) <p>[E.Info.SCM-1.networkasset.Environment]: Description of the physical or logical measures in the equipment's targeted operational environment that ensures the assets are not exposed to unauthorised entities; and</p> <ul style="list-style-type: none"> - (if the assets are part of establishing or managing the connection) [E.Info.SCM-1.networkassets.addmeasures]: Description of the implemented additional measures to authenticate the connection or trust relation. <p>[E.Info.SCM-1.SCM]: Description of each secure communication mechanism that is used to communicate security assets documented in [E.Info.SCM-1.securityasset] and network assets documented in [E.Info.SCM-1.networkasset] over the network interfaces documented in [E.Info.SCM-1.networkinterface], including:</p> <ul style="list-style-type: none"> - [E.Info.SCM-1.SCM.Protocol]: Communication protocols where the mechanism is applied (from [E.Info.SCM-1.networkinterface.Protocol]); and - [E.Info.SCM-1.SCM.States]: Equipment states where the communication of security assets documented in [E.Info.SCM-1.securityasset] and network assets documented in [E.Info.SCM-1.networkasset] occurs; and - [E.Info.SCM-1.SCM.secojectives]: Security objectives considering the intended functionality of the equipment and the analysed threats and potentially successful attack scenarios (e.g., exposure of data, manipulation of data, unauthorised control of the equipment); and - (if the equipment supports establishment or management of a connection) [E.Info.SCM-1.SCM.Manage]: Details of the establishment or management procedure.[E.Info.DT.SCM-1]: Description of the selected path through the decision tree in Figure 17 for each of the relevant network interfaces documented in [E.Info.SCM-1.networkinterface]. <p>NOTE Multiple valid paths may need to be documented due to the classification of security assets or network assets and the equipment states documented in [E.Info.SCM-1.SCM.States].</p> <p>[E.Just.DT.SCM-1]: Justification for the selected path through the decision tree documented in [E.Info.DT.SCM-1] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.SCM-1.DN-2] results in "NOT APPLICABLE") the justification for the decision [DT.SCM-1.DN-2] is based on [E.Info.SCM-1.securityasset.Environment] and [E.Info.SCM-1.networkasset.Environment]; and - (if a decision from [DT.SCM-1.DN-3] results in "NOT APPLICABLE") the justification for the decision [DT.SCM-1.DN-3] is based on [E.Info.SCM-1.securityasset.addmeasures] and [E.Info.SCM-1.networksheets.addmeasures].

Test case SCM-1 Conceptual assessment (Continued)

<p>Assignment of verdict</p>	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.SCM-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-1] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SCM-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
<p>Conceptual Verdict</p>	<p>N/A</p>

Test case SCM-1 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SCM-1
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.SCM-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-1] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SCM-1] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SCM-1 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SCM-1
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.SCM-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.SCM-1] ends with "FAIL"; and- The information provided in [E.Just.DT.SCM-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SCM-1] ends with "FAIL"; or- A justification provided in [E.Just.DT.SCM-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SCM-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Device Unique ID assessment: Functional Sufficiency test_key: SCM-1 timestamp: 2025-10-29T19-13-03 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: E.Info.SCM-1.SecurityAsset.Class Test Mode: Security Asset:Manufacturer Certificate timestamp: 2025-10-29T19-13-06 asset: Security Asset Test Mode: Network Asset:DGT 3.0 API Credentials timestamp: 2025-10-29T19-13-08 asset: Network Asset
Test Verdict	P(ass)

[SCM-2] Appropriate integrity and authenticity protection

Test case SCM-2 Conceptual assessment

Objective	<p>The purpose of this assessment case is the conceptual assessment whether each secure communication mechanism of the equipment is protecting the integrity and authenticity of security assets and network assets as required per SCM-2.</p>
Prerequisites	<p>[E.Info.SCM-2.securityasset]: Description of each stored security asset that is communicated over network interfaces documented in [E.Info.SCM-2.networkinterface] and for which integrity or authenticity protection is needed in order to protect the equipment's network assets, including: - [E.Info.SCM-2.securityasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-2.networkinterface]. NOTE 1 The information of [E.Info.SCM-2.securityasset] is a subset of [E.Info.SCM-1.securityasset]. [E.Info.SCM-2.networkasset]: Description of each network asset that is communicated over network interfaces documented in [E.Info.SCM-2.networkinterface] and for which integrity or authenticity protection is needed, including: - [E.Info.SCM-2.networkasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-2.networkinterface]. NOTE 2 This information of [E.Info.SCM-2.networkasset] is a subset of [E.Info.SCM-1.networkasset]. - [E.Info.SCM-2.networkinterface]: Description of all network interfaces of the equipment, including - [E.Info.SCM-2.networkinterface.Protocol]: All communication protocols implemented and the modes of operation that are implemented, the version of the protocol and, if applicable, the SW library that is used for the implementation.</p> <p>[E.Info.SCM-2.SCM]: Description of each secure communication mechanism that is required per SCM-1 for the integrity and authenticity protection of communicated network assets documented in [E.Info.SCM-2.networksasset] or security assets documented in [E.Info.SCM-2.securityasset], including - [E.Info.SCM-2.SCM.Capabilities]: Description of the security mechanisms and cryptographic modes that are used to protect the integrity and authenticity of security assets documented in [E.Info.SCM-2.securityasset] or network assets documented in [E.Info.SCM-2.networksasset] while communicated over network interfaces security; and - (if the SCM implementation is based on [IC.SCM-2.manufsecret]) [E.Info.SCM-2.SCM.manufsecret]: Description of how the initial trust is achieved for integrity and authenticity protection and how it is implemented in the protocol documented in [E.Info.SCM-2.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-2.secchanexchange]) [E.Info.SCM-2.SCM.secchanexchange]: Description of how the second channel is realized and how the secret is used for integrity and authenticity protection and how it is implemented in the protocol documented in [E.Info.SCM-2.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-2.PKI-based]) [E.Info.SCM-2.SCM.PKI-based]: Description of how the PKI-certificates are validated and how this is implemented for integrity and authenticity protection in the protocol documented in [E.Info.SCM-2.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-2.thirdpartytrust]) [E.Info.SCM-2.SCM.thirdpartytrust]: Description of how the existing trust relation to a third party which confirms the authenticity of the secret is realized and how this is implemented for integrity and authenticity protection in the protocol documented in [E.Info.SCM-2.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-2.Generic]) [E.Info.SCM-2.SCM.Generic]: Description of how integrity and authenticity protection is realized in the protocol documented in [E.Info.SCM-2.networkinterface.Protocol]; and - (if available) [E.Info.SCM-2.SCM.impldetail]: Refer to versioned standards or specifications where the selected implementation category is defined and, if applicable, the SW library that is used for the implementation; and - [E.Info.SCM-2.SCM.CCK]: The description of the properties of the confidential cryptographic keys used for integrity and authenticity protection (see CRY-1); and - [E.Info.SCM-2.SCM.threatprotection]: The description on how the mechanism protects against the following security threats: - Spoofing; and - Tampering.</p> <p>[E.Info.DT.SCM-2]: Description of the selected path through the decision tree in Figure 18 for each secure communication mechanism documented in [E.Info.SCM-2.SCM].</p> <p>NOTE 3 Multiple valid paths might need documentation due to the classification of security assets or network assets and the equipment states documented in [E.Info.SCM-2.SCM].</p> <p>[E.Just.DT.SCM-2]: Justification for the selected path through the decision tree documented in [E.Info.DT.SCM-2] with the following property:</p> <ul style="list-style-type: none"> - The justification for the decision [DT.SCM-2.DN-1] is especially based on [E.Info.SCM-2.securityasset.Com], [E.Info.SCM-2.networkasset.Com], [E.Info.SCM-2.SCM.threatprotection] and [E.Info.SCM-2.SCM.Capabilities]; and - (if a decision from [DT.SCM-2.DN-2] results in "NOT APPLICABLE") the justification for the decision [DT.SCM-2.DN-2] is especially based on [E.Info.SCM-2.securityasset.Com], [E.Info.SCM-2.privacyasset.Com] and [E.Info.SCM-2.SCM.Capabilities].

Test case SCM-2 Conceptual assessment (Continued)

Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-2] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-2] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-2].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-2].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case SCM-2 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SCM-2
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-2] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-2] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-2].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-2].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SCM-2 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SCM-2
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-2] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-2] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-2] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-2].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-2] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-2] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-2].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SCM-2 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Hardware Security Module assessment: Functional Sufficiency test_key: SCM-2 timestamp: 2025-10-29T19-13-59 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Trusted Execution Environment timestamp: 2025-10-29T19-14-23 Test Mode: Network Asset:Emergency Service APIs timestamp: 2025-10-29T19-14-45 asset: Network Asset
Test Verdict	P(ass)

[SCM-3] Appropriate confidentiality protection

Test case SCM-3 Conceptual assessment

<p>Objective</p>	<p>The purpose of this assessment case is the conceptual assessment whether each secure communication mechanism of the equipment is protecting the confidentiality of network assets (documented in [E.Info.SCM-3.networksset]) and security assets (documented in [E.Info.SCM-3.securityasset]) while communicated as required per SCM-3.</p>
<p>Prerequisites</p>	<p>[E.Info.SCM-3.securityasset]: Description of each stored security asset that is communicated over network interfaces documented in [E.Info.SCM-3.networkinterface] and for which confidentiality is needed in order to protect the equipment's network assets, including: - [E.Info.SCM-3.securityasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-3.networkinterface]. NOTE 1 The information of [E.Info.SCM-3.securityasset] is a subset of [E.Info.SCM-1.securityasset].</p> <p>[E.Info.SCM-3.networkasset]: Description of all network assets that are communicated over network interfaces and for which confidentiality is needed, including - [E.Info.SCM-3.networkasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-3.networkinterface]. NOTE 2 The information of [E.Info.SCM-3.networkasset] is a subset of [E.Info.SCM-1.networksasset].</p> <p>[E.Info.SCM-3.networkinterface]: Description of all network interfaces of the equipment, including: - [E.Info.SCM-3.networkinterface.Protocol]: All communication protocols implemented and the modes of operation that are implemented, the version of the protocol and, if applicable, the SW library that is used for the implementation.</p> <p>[E.Info.SCM-3.SCM]: Description of each secure communication mechanism that is required per SCM-1 for confidentiality protection of network assets documented in [E.Info.SCM-3.networksasset] or security assets documented in [E.Info.SCM-3.securityasset], including: - [E.Info.SCM-3.SCM.Capabilities]: Description of the security mechanisms and cryptographic modes that are used to protect the confidentiality of security assets documented in [E.Info.SCM-3.securityasset] or network assets documented in [E.Info.SCM-3.networksasset] while communicated over network interfaces; and - (if the SCM implementation is based on [IC.SCM-3.messageenc]) [E.Info.SCM-3.messageenc]: Description of how the content-encryption key is generated and encrypted for confidentiality protection and how it is implemented in the protocol documented in [E.Info.SCM-3.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-3.channelenc]) [E.Info.SCM-3.channelenc]: Description of how the session key is generated and used for confidentiality protection and how it is implemented in the protocol documented in [E.Info.SCM-3.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-3.Generic]) [E.Info.SCM-3.Generic]: Description of how confidentiality protection is realized in the protocol documented in [E.Info.SCM-3.networkinterface.Protocol]; and - (if available) [E.Info.SCM-3.SCM.impldetail]: Refer to versioned standards or specifications where the selected implementation category is defined and, if applicable, the SW library that is used for the implementation; and - [E.Info.SCM-3.SCM.CCK]: The properties of the confidential cryptographic keys used for confidentiality protection (see CRY-1); and - [E.Info.SCM-3.SCM.threatprotection]: How the mechanism at least protects against the following security threats: - Information disclosure; and - Elevation of privilege</p> <p>[E.Info.DT.SCM-3]: Description of the selected path through the decision tree in Figure 19 for each secure communication mechanism documented in [E.Info.SCM-3.SCM]. NOTE 3 Multiple valid paths may need to be documented due to the classification of security assets or network assets and the equipment states documented in [E.Info.SCM-3.SCM].</p> <p>[E.Just.DT.SCM-3]: Justification for the selected path through the decision tree documented in [E.Info.DT.SCM-3] with the following properties:</p> <ul style="list-style-type: none"> - The justification for the decision [DT.SCM-3.DN-1] is especially based on [E.Info.SCM-3.securityasset.Com], [E.Info.SCM-3.networksasset.Com], [E.Info.SCM-3.SCM.threatprotection] and [E.Info.SCM-3.SCM.Capabilities]; and - (if a decision from [DT.SCM-3.DN-2] results in "NOT APPLICABLE") The justification for the decision [DT.SCM-3.DN-2] is especially based on [E.Info.SCM-3.securityasset.Com], [E.Info.SCM-3.networksasset.Com] and [E.Info.SCM-3.SCM.Capabilities].

Test case SCM-3 Conceptual assessment (Continued)

Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-3] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case SCM-3 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SCM-3
Prerequisites	
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-3] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SCM-3 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SCM-3
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-3] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-3] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-3] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-3] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-3].</p> <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SCM-3 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Runtime Integrity Measurements assessment: Functional Sufficiency test_key: SCM-3 timestamp: 2025-10-29T19-15-34 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Secure Storage Keys timestamp: 2025-10-29T19-15-50 Test Mode: Network Asset:Geolocation Service Tokens timestamp: 2025-10-29T19-16-00 asset: Network Asset
Test Verdict	P(ass)

[SCM-4] Appropriate replay protection

Test case SCM-4 Conceptual assessment

<p>Objective</p>	<p>The purpose of this assessment case is the conceptual assessment whether each secure communication mechanism of the equipment is protecting the communication of security assets and network assets communicated against replay attacks as required per SCM-4.</p>
<p>Prerequisites</p>	<p>[E.Info.SCM-4.securityasset]: Description of each stored security asset that is communicated over network interfaces documented in [E.Info.SCM-4.networkinterface] and for which replay protection is needed in order to protect the equipment's network assets, including: - [E.Info.SCM-4.securityasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-4.networkinterface]. NOTE 1 The information of [E.Info.SCM-4.securityasset] is a subset of [E.Info.SCM-1.securityasset].</p> <p>[E.Info.SCM-4.networkasset]: Description of each network asset that is communicated over network interfaces documented in [E.Info.SCM-4.networkinterface] and for which replay protection is needed, including: - [E.Info.SCM-4.networkasset.Com]: Description of the use case where the asset is communicated (e.g. Pairing with base station) over a network interface documented in [E.Info.SCM-4.networkinterface]. NOTE 2 The information of [E.Info.SCM-4.networkasset] is a subset of [E.Info.SCM-1.networkasset].</p> <p>[E.Info.SCM-4.networkinterface]: Description of each network interface of the equipment, including: - [E.Info.SCM-4.networkinterface.Protocol]: All communication protocols implemented and the modes of operation that are implemented, the version of the protocol and, if applicable, the SW library that is used for the implementation.</p> <p>[E.Info.SCM-4.SCM]: Description of each secure communication mechanism that is required per SCM-1 for replay protection of network assets documented in [E.Info.SCM-4.networkasset] or security assets documented in [E.Info.SCM-4.securityasset], including: - [E.Info.SCM-4.SCM.Capabilities]: Description of the security mechanisms and cryptographic modes that are used to avoid replay attacks on communication containing security assets documented in [E.Info.SCM-4.securityasset] or network assets documented in [E.Info.SCM-4.networkasset]; and - (if the SCM implementation is based on [IC.SCM-4.seqnumb]) [E.Info.SCM-4.SCM.seqnumb]: Description of how the sequence numbers are used and integrated in the message authentication code for replay protection and how it is implemented in the protocol documented in [E.Info.SCM-4.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-4.timestamp]) [E.Info.SCM-4.SCM.timestamp]: Description of how the time stamps are used and integrated in the message authentication code for replay protection and how it is implemented in the protocol documented in [E.Info.SCM-4.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-4.onetimeenckey]) [E.Info.SCM-4.SCM.onetimeenckey]: Description of how the one-time encryption key is generated and used for replay protection and how it is implemented in the protocol documented in [E.Info.SCM-4.networkinterface.Protocol]; and - (if the SCM implementation is based on [IC.SCM-4.Generic]) [E.Info.SCM-4.SCM.Generic]: Description of how replay protection is realized in the protocol documented in [E.Info.SCM-4.networkinterface.Protocol]; and - (if standards or specifications where the selected implementation category is defined are available) [E.Info.SCM-4.SCM.impldetail]: Reference to versioned standards or specifications where the selected implementation category is defined and, if applicable, the SW library that is used for the implementation; and - [E.Info.SCM-4.SCM.Repudiation]: Description of how the mechanism at least protects against the security threat "Repudiation".</p> <p>[E.Info.DT.SCM-4]: Description of the selected path through the decision tree in Figure 20 for each secure communication mechanism documented in [E.Info.SCM-4.SCM]. NOTE 3 Multiple valid paths may need to be documented due to the classification of security assets or network assets and the equipment states documented in [E.Info.SCM-4.SCM].</p> <p>[E.Just.DT.SCM-4]: Justification for the selected path through the decision tree documented in [E.Info.DT.SCM-4] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.SCM-4.DN-1] results in "NOT APPLICABLE") The justification for the decision [DT.SCM-4.DN-1] is based on [E.Info.SCM-4.securityasset.Com], [E.Info.SCM-4.networkasset.Com], [E.Info.SCM-4.SCM.Capabilities] and - (if a decision from [DT.SCM-4.DN-3] results in "NOT APPLICABLE") The justification for the decision [DT.SCM-4.DN-3] is especially based on [E.Info.SCM-4.securityasset.Com], [E.Info.SCM-4.networkasset.Com] and [E.Info.SCM-4.SCM.Capabilities].

Test case SCM-4 Conceptual assessment (Continued)

<p>Assignment of verdict</p>	<p>For each secure communication mechanism in [E.Info.SCM-4.SCM], and for each equipment state documented, check whether the path through the decision tree documented in [E.Info.DT.SCM-4] ends with "NOT APPLICABLE" or "PASS". For each path through the decision tree documented in [E.Info.DT.SCM-4], examine its justification documented in [E.Just.DT.SCM-4]. The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree documented in [E.Info.DT.SCM-4] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-4] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-4] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-4]. The verdict FAIL for the assessment case is assigned if: - A path through the decision tree documented in [E.Info.DT.SCM-4] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-4] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-4]. The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
<p>Conceptual Verdict</p>	<p>N/A</p>

Test case SCM-4 Functional completeness assessment

Objective	Objective: Functional completeness assessment for SCM-4
Prerequisites	
Assignment of verdict	<p>For each secure communication mechanism in [E.Info.SCM-4.SCM], and for each equipment state documented, check whether the path through the decision tree documented in [E.Info.DT.SCM-4] ends with "NOT APPLICABLE" or "PASS".</p> <p>For each path through the decision tree documented in [E.Info.DT.SCM-4], examine its justification documented in [E.Just.DT.SCM-4].</p> <p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.SCM-4] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.SCM-4] ends with "FAIL"; and - The information provided in [E.Just.DT.SCM-4] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-4]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - A path through the decision tree documented in [E.Info.DT.SCM-4] ends with "FAIL"; or - A justification provided in [E.Just.DT.SCM-4] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-4]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case SCM-4 Functional sufficiency assessment

Objective	Objective: Functional sufficiency assessment for SCM-4
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>For each secure communication mechanism in [E.Info.SCM-4.SCM], and for each equipment state documented, check whether the path through the decision tree documented in [E.Info.DT.SCM-4] ends with "NOT APPLICABLE" or "PASS".</p> <p>For each path through the decision tree documented in [E.Info.DT.SCM-4], examine its justification documented in [E.Just.DT.SCM-4].</p> <p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.SCM-4] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.SCM-4] ends with "FAIL"; and- The information provided in [E.Just.DT.SCM-4] are correct justifications for all paths through the decision tree documented in [E.Info.DT.SCM-4]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- A path through the decision tree documented in [E.Info.DT.SCM-4] ends with "FAIL"; or- A justification provided in [E.Just.DT.SCM-4] is not correct or missing for a path through the decision tree documented in [E.Info.DT.SCM-4]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case SCM-4 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Chain of Trust Certificates assessment: Functional Sufficiency test_key: SCM-4 timestamp: 2025-10-29T19-17-20 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Platform Root Key timestamp: 2025-10-29T19-18-19 Test Mode: Network Asset:Secure Boot Loader timestamp: 2025-10-29T19-18-02 asset: Network Asset
Test Verdict	P(ass)

[RLM-1] Applicability and appropriateness of resilience mechanisms

Test case RLM-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether resilience mechanisms are implemented as required per RLM-1.
Prerequisites	<p>[E.Info.RLM-1.NetworkInterface]: Description of each network interface.</p> <p>[E.Info.RLM-1.RLM]: Description of each resilience mechanism used for mitigating the effect of DoS Attacks on the network interfaces and returning the equipment to a defined state following the attack.</p> <p>[E.Info.DT.RLM-1]: Description of the selected path through the decision tree in Figure 21 for each network interface.</p> <p>[E.Just.DT.RLM-1]: Justification for the selected path through the decision tree including justifications for the decisions [DT.RLM-1.DN-1], [DT.RLM-1.DN-2] and [DT.RLM-1.DN-3] based on [E.Info.RLM-1.NetworkInterface] and [E.Info.RLM-1.RLM].</p>
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case RLM-1 Functional completeness assessment

Objective	The purpose of this assessment case is the functional validation whether the resilience mechanisms implemented mitigate the effects of DoS attacks on the network interfaces and that the equipment returns to a defined state after an attack with regard to completeness of documentation of network interfaces and the correctness of implementation.
Prerequisites	The equipment is in an operational state and each network interface documented in [E.Info.RLM-1.NetworkInterface] needs to either be enabled or configured so that each network interface can be tested. Where [E.Info.RLM-1.RLM] are used, documentation is provided that specifies information on what to configure/ the required configuration of the RLM to be able to test the implemented mechanisms.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	N/A

Test case RLM-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether the resilience mechanisms are implemented when required per RLM-1.
Prerequisites	The equipment is in an operational state and each network interface documented in [E.Info.RLM-1.networkinterface] is either enabled or configured.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.



Test case RLM-1 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A

[NMM-1] Applicability and appropriateness of network monitoring mechanisms

Test case NMM-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether a network monitoring mechanism is implemented in the network equipment as required per NMM-1.
Prerequisites	<p>[E.Info.NMM-1.NMM]: Description of the implemented monitoring mechanism(s) to monitor and analyse the traffic between networks which is processed via the network interfaces of the network equipment including:</p> <ul style="list-style-type: none"> - [E.Info.NMM-1.NMM.GTPFiltering]: Description how the network monitoring mechanisms are implemented based on the monitoring and filtering of GPRS Tunnelling Protocols messages; and - [E.Info.NMM-1.NMM.PacketFiltering]: Description how the network monitoring mechanisms are implemented based on the detection of specific internet protocol packets messages such as ICMP or ARP and their misuse to perform a DoS attack; and - [E.Info.NMM-1.NMM.NetworkEquipment]: Documented analysis, rationale and justification regarding the risks for the security assets and network assets which are processed, controlled or served by the network equipment between networks. <p>[E.Info.DT.NMM-1]: Description of the selected path through the decision tree in Figure 22 for each network monitoring mechanism.</p> <p>[E.Just.DT.NMM-1]: Justification for the selected path through the decision tree with the following properties:</p> <ul style="list-style-type: none"> - Justification for DT.NMM-1.DN-1 (if NOT APPLICABLE) based on [E.Info.NMM-1.NMM.NetworkEquipment]; and - Justification for DT.NMM-1.DN-2 based on [E.Info.NMM-1.NMM].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case NMM-1 Functional completeness assessment

Objective	Functional completeness assessment is not necessary in this clause since the network monitoring mechanism is always mandatory for network equipment.
Prerequisites	Functional completeness assessment not required (covered by sufficiency assessment)
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	N/A

Test case NMM-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional validation of the appropriateness of the Network Monitoring Mechanisms described.
Prerequisites	NONE
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree ends with "PASS"; and- No path ends with "FAIL"; and- All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none">- Any path ends with "FAIL"; or- Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>



Test case NMM-1 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A

[TCM-1] Applicability of and appropriate traffic control mechanisms

Test case TCM-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether a traffic control mechanism is implemented in the network equipment as required per TCM-1.
Prerequisites	<p>[E.Info.TCM-1.TCM]: Description of each traffic control mechanism implemented by the network equipment including:</p> <ul style="list-style-type: none"> - [E.Info.TCM-1.TCM.DatagramRules]: Description how the traffic control mechanisms are implemented based on monitoring the IP datagrams. - [E.Info.TCM-1.TCM.TrafficSeparation]: Description how the traffic control mechanisms are implemented based on the physical or logical separation of traffic belonging to different network domains. - [E.Info.TCM-1.TCM.NetworkEquipment]: Documented analysis, rationale and justification regarding the risk for the security assets and network assets which are processed, controlled or served by the network equipment between networks. <p>[E.Info.DT.TCM-1]: Description of the selected path through the decision tree in Figure 23 for each traffic control mechanism.</p> <p>[E.Just.DT.TCM-1]: Justification for the selected path through the decision tree with the following properties:</p> <ul style="list-style-type: none"> - Justification for DT.TCM-1.DN-1 (if NOT APPLICABLE) based on [E.Info.TCM-1.TCM.NetworkEquipment]; and - Justification for DT.TCM-1.DN-2 based on [E.Info.TCM-1.TCM].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case TCM-1 Functional completeness assessment

Objective	Functional completeness assessment is not necessary in this clause since the traffic control mechanism is always mandatory for network equipment.
Prerequisites	Functional completeness assessment not required (covered by sufficiency assessment)
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	N/A

Test case TCM-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional validation of the appropriateness of the Traffic Control Mechanisms described.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree ends with "PASS"; and- No path ends with "FAIL"; and- All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none">- Any path ends with "FAIL"; or- Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>



Test case TCM-1 Functional sufficiency assessment (Continued)

Assessment Summary	N/A
Test Verdict	N/A

[CCK-1] Appropriate CCKs

Test case CCK-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether confidential cryptographic keys are implemented as required per CCK-1.
Prerequisites	<p>[E.Info.CCK-1.CCK]: For each confidential cryptographic key (whether preinstalled or generated by the equipment during its use), describe:</p> <ul style="list-style-type: none"> - The cryptographic algorithm for the confidential cryptographic key and the key length of confidential cryptographic key's implementation; and - (if the confidential cryptographic key is solely used by a specific security mechanism, where a deviation is identified and justified under the terms of sections ACM or AUM or SCM or SUM or SSM) [E.Info.CCK-1.CCK.Deviation]: Reference to the corresponding justification and to the required information the justification is based on; and - [E.Info.CCK-1.CCK.SecurityStrength]: The security strength and the reference of the lookup tables used in the assessment. <p>[E.Info.DT.CCK-1]: Description of the selected path through the decision tree in Figure 24 for each confidential cryptographic key documented in [E.Info.CCK-1.CCK].</p> <p>[E.Just.DT.CCK-1]: Justification for each selected path through the decision tree documented in [E.Info.DT.CCK-1] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.CCK-1.DN-2] results in "NOT APPLICABLE") the justification for the decision [DT.CCK-1.DN-2] is based on [E.Info.CCK-1.CCK.Deviation]; and - the justification for the decision [DT.CCK-1.DN-1] is based on [E.Info.CCK-1.CCK] and [E.Info.CCK-1.CCK.SecurityStrength].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case CCK-1 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether the documentation of CCKs is complete.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

Test case CCK-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether the confidential cryptographic keys documented are implemented as documented.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.



Test case CCK-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset: AES-256 Encryption Keys assessment: Functional Sufficiency test_key: CCK-1 timestamp: 2025-10-29T19-18-52 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset: RSA-2048 Key Pair timestamp: 2025-10-29T19-19-03
Test Verdict	P(ass)

[CCK-2] CCK generation mechanisms

Test case CCK-2 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether all confidential cryptographic key generation mechanisms listed are as required per CCK-2.
Prerequisites	<p>[E.Info.CCK-2.Generation]: Description of each generation mechanism for confidential cryptographic keys, including the following details:</p> <ul style="list-style-type: none"> - [E.Info.CCK-2.Generation.CCK]: Specification of the confidential cryptographic keys the mechanism generates and whether their generation adheres to best practice cryptography; and - (if the generation mechanism for CCK relies on a random number source and is used for the generation of confidential cryptographic key that adhere to best practice cryptography) [E.Info.CCK-2.Generation.RNSource]: <ul style="list-style-type: none"> - specify the best practices followed by the random number source; and - explain why the random number source provides sufficient security strength; and - explain how the random number source is configured and initialised; and - if it is claimed that the CCK is compliant with recognised security standards or certification schemes, provide evidence to the recognised security standard or certification schemes the CCK complies to; and - (if the generation mechanism for CCK relies on a random number generator and is used for the generation of confidential cryptographic key that adhere to best practice cryptography) [E.Info.CCK-2.Generation.RNG]: <ul style="list-style-type: none"> - specify whether it is a deterministic or a non-deterministic random number generator; and - specify the best practices followed by the random number generator; and - specify why the random number generator provides sufficient security strength; and - explain how the random number generator is configured and initialised; and - if it is claimed that the CCK is compliant with recognised security standards or certification schemes, provide evidence to the recognised security standard or certification schemes the CCK complies to; and - (if the generation mechanism for CCK relies on a derivation mechanism/ establishment mechanism and is used for the generation of confidential cryptographic key that adhere to best practice cryptography) [E.Info.CCK-2.Generation.Implementation]: <ul style="list-style-type: none"> - specify the best practices followed by the derivation mechanism/ establishment mechanism; and - specify the key derivation/generation algorithm used for that; and - (if the generation mechanism generates confidential cryptographic keys used solely by a specific security mechanism, where a deviation from best practice cryptography is identified and justified under the terms of sections ACM or AUM or SCM or SUM or SSM) [E.Info.CCK-2.Generation.Deviation]: <ul style="list-style-type: none"> - reference the corresponding justification and to the required information the justification is based on. <p>[E.Info.DT.CCK-2]: Description of the selected path through the decision tree in Figure 25 for each generation mechanism for confidential cryptographic keys documented in [E.Info.CCK-2.Generation].</p> <p>[E.Just.DT.CCK-2]: Justification for the selected path through the decision tree documented in [E.Info.DT.CCK-2] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.CCK-2.DN-1] results in "NOT APPLICABLE") the justification for the decision [DT.CCK-2.DN-1] is based on [E.Info.CCK-2.Generation.Deviation]; and - the justification for the decision [DT.CCK-2.DN-2] is based on [E.Info.CCK-2.Generation].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case CCK-2 Functional completeness assessment

Objective	The purpose of this assessment case is to conceptually assess whether all generation mechanisms for confidential cryptographic keys on the equipment are documented.
Prerequisites	
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

Test case CCK-2 Functional sufficiency assessment

Objective	There is significant complexity surrounding the validation of cryptographic key generation mechanisms. No functional sufficiency assessment is provided.
Prerequisites	NONE
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.



Test case CCK-2 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Data Encryption Keys assessment: Functional Sufficiency test_key: CCK-2 timestamp: 2025-10-29T19-19-23 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Key Encryption Keys timestamp: 2025-10-29T19-19-19
Test Verdict	P(ass)

[CCK-3] Preventing static default values for preinstalled CCKs

Test case CCK-3 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether preinstalled confidential cryptographic keys are implemented as required per CCK-3.
Prerequisites	<p>[E.Info.CCK-3.CCK]: Description of each preinstalled confidential cryptographic key on the equipment, including:</p> <ul style="list-style-type: none"> - (if practical uniqueness of the confidential cryptographic key is claimed to be not required because it is only used for establishing initial trust relationships under conditions controlled by an authorized entity) [E.Info.CCK-3.CCK.Controlled]: Description of: <ul style="list-style-type: none"> - the initial trust relationship to be established by the confidential cryptographic key; and - the conditions controlled by an authorized entity; and - (if practical uniqueness of the confidential cryptographic key is claimed to be not required because it is a shared parameter required for the equipment's intended functionality) [E.Info.CCK-3.CCK.Shared]: Description of the equipment's functionalities that require the confidential cryptographic key being a shared parameter; and - (if the CCK is claimed to be practically unique per equipment) [E.Info.CCK-3.CCK.Unique]: Description of the methods that result in the CCK being practically unique per equipment. <p>[E.Info.DT.CCK-3]: Description of the selected path through the decision tree shown in Figure 26 for each preinstalled CCK documented in [E.Info.CCK-3.CCK].</p> <p>[E.Just.DT.CCK-3]: Justification for the selected path through the decision tree documented in [E.Info.DT.CCK-3] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.CCK-3.DN-2] results in "NOT APPLICABLE") the justification for the decision [DT.CCK-3.DN-2] is based on [E.Info.CCK-3.CCK.Controlled]; and - (if a decision from [DT.CCK-3.DN-3] results in "NOT APPLICABLE") the justification for the decision [DT.CCK-3.DN-3] is based on [E.Info.CCK-3.CCK.Shared]; and - the justification for the decision [DT.CCK-3.DN-1] is based on [E.Info.CCK-3.CCK.Unique].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case CCK-3 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether all preinstalled CCKs are documented.
Prerequisites	The equipment is in the factory default state.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

Test case CCK-3 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether preinstalled CCKs that are claimed to be practically unique per equipment are sufficiently independent from each other.
Prerequisites	Two instances of the equipment are in a factory default state.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.



Test case CCK-3 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Key Rotation Policies assessment: Functional Sufficiency test_key: CCK-3 timestamp: 2025-10-29T19-20-09 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Master Key Hierarchy timestamp: 2025-10-29T19-20-03
Test Verdict	P(ass)

[GEC-1] Up-to-date software and hardware with no publicly known exploitable vulnerabilities

Test case GEC-1 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether the hardware or software publicly known exploitable vulnerabilities present in the hardware and software of the equipment under test, in factory default state, are not able to affect security assets or network assets, if exploited as required per GEC-1.
Prerequisites	<p>[E.Info.GEC-1.SecurityAsset]: Description of each security asset. [E.Info.GEC-1.NetworkAsset]: Description of each network asset. [E.Info.GEC-1.SoftwareDocumentation]: Description of the software of the equipment, including their versions, that affect the security assets and the network assets. [E.Info.GEC-1.HardwareDocumentation]: Description of the hardware of the equipment that affect the security assets and the network assets. [E.Info.GEC-1.ListOfVulnerabilities]: Description of all publicly known exploitable vulnerabilities in the hardware and software that affect the security assets and the network assets including:</p> <ul style="list-style-type: none"> - [E.Info.GEC-1.ListOfVulnerabilities.Remediated]: The measures implemented to remediate the vulnerability; and - [E.Info.GEC-1.ListOfVulnerabilities.SpecificCondition]: The description of specific conditions in which the vulnerability cannot be exploited; and - [E.Info.GEC-1.ListOfVulnerabilities.Mitgated]: The description of the measures for the mitigation; and - [E.Info.GEC-1.ListOfVulnerabilities.Accepted]: The description of the acceptance of the vulnerability on a risk basis. <p>[E.Info.DT.GEC-1]: Description of the selected path through the decision tree in Figure 27 for each software and hardware where publicly known exploitable vulnerabilities exist. [E.Just.DT.GEC-1]: Justification for the selected path through the decision tree with the following properties:</p> <ul style="list-style-type: none"> - Justification for DT.GEC-1.DN-1 based on [E.Info.GEC-1.ListOfVulnerabilities]; - Justification for DT.GEC-1.DN-2 (if NOT APPLICABLE) based on [E.Info.GEC-1.ListOfVulnerabilities] and [E.Info.GEC-1.ListOfVulnerabilities.Remediated]; - Justification for DT.GEC-1.DN-3 (if NOT APPLICABLE) based on [E.Info.GEC-1.ListOfVulnerabilities.SpecificCondition]; - Justification for DT.GEC-1.DN-4 (if NOT APPLICABLE) based on [E.Info.GEC-1.ListOfVulnerabilities.Mitgated]; and - Justification for DT.GEC-1.DN-5 based on [E.Info.GEC-1.ListOfVulnerabilities.Accepted].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	N/A

Test case GEC-1 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment of the equipment under test to verify the completeness of the documentation: that the vulnerabilities present in the equipment which affect security assets or network assets are only those listed.
Prerequisites	The equipment is in an operational state. The date for the source of the vulnerabilities to be used in the assessment of the list of publicly known exploitable vulnerabilities is recent.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

Test case GEC-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment if the vulnerabilities present in the equipment which are listed are not able to affect security assets or network assets, if exploited.
Prerequisites	The equipment is in an operational state. The date for the source of the vulnerabilities to be used in the assessment of the list of publicly known exploitable vulnerabilities is recent.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.



Test case GEC-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Network Authentication Keys assessment: Functional Sufficiency test_key: GEC-1 timestamp: 2025-10-29T19-20-29 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Network Asset:Telefónica eSIM Profile timestamp: 2025-10-29T19-20-33 asset: Network Asset
Test Verdict	P(ass)

[GEC-2] Limit exposure of services via related network interfaces

Test case GEC-2 Conceptual assessment

Objective	<p>The purpose of this assessment case is the conceptual assessment whether each exposure of network interfaces and services (via network interfaces) which are affecting security assets or network assets in factory default state is restricted to the ones which are necessary for equipment setup or for the basic operation of the equipment as required per GEC-2.</p>
Prerequisites	<p>[E.Info.GEC-2.NetworkInterface.Exposure]: Description of each network interface and exposed service (via network interfaces) in factory default state of the equipment, including information if they are required for the basic operation or for the setup of the equipment or if they are optional. [E.Info.GEC-2.Setup]: Documentation how to setup the equipment. [E.Info.GEC-2.SecurityAsset]: Documentation of each security asset that is accessible via network interfaces. [E.Info.GEC-2.NetworkAsset]: Documentation of each network asset that is accessible via network interfaces. [E.Info.DT.GEC-2]: Description of the selected path through the decision tree in Figure 28 for each network interface and service (via network interfaces). [E.Just.DT.GEC-2]: Justification for each selected path through the decision tree with the following properties: - Justification for DT.GEC-2.DN-1 (if NOT APPLICABLE) based on [E.Info.GEC-2.NetworkInterface.Exposure]; and - Justification for DT.GEC-2.DN-2 (if NOT APPLICABLE) based on [E.Info.GEC-2.SecurityAsset] and [E.Info.GEC-2.NetworkAsset]; and - Justification for DT.GEC-2.DN-3 based on [E.Info.GEC-2.NetworkInterface.Exposure].</p>
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	<p>P(ass)</p>

Test case GEC-2 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether in the factory default state only network interfaces or exposed services (via network interfaces) which are required for setup or for the basic operation of the equipment are exposed.
Prerequisites	The equipment is in the factory default state and if available setup or another configuration did not take place until now. Physical network connections to check the exposure of services via network interfaces are established.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

**Test case GEC-2 Functional sufficiency assessment**

Objective	Not applicable
Prerequisites	NONE
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree ends with "PASS"; and- No path ends with "FAIL"; and- All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none">- Any path ends with "FAIL"; or- Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>



Test case GEC-2 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:GNSS Data Integrity assessment: Functional Sufficiency test_key: GEC-2 timestamp: 2025-10-29T19-21-08 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Network Asset:Location Service Configuration timestamp: 2025-10-29T19-20-48 asset: Network Asset
Test Verdict	P(ass)

[GEC-3] Configuration of optional services and the related exposed network interfaces

Test case GEC-3 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether each optional network interface and each exposed optional service (via network interfaces) which is part of the factory default state of the equipment is configurable, at least with the option to enable and disable the service as required per GEC-3.
Prerequisites	<p>[E.Info.GEC-3.NetworkInterface.Exposure]: Description of each network interface and exposed service (via network interfaces) in factory default state of the equipment, including information if there is an option for an authorized user to enable and disable the network interface or service.</p> <p>[E.Info.GEC-3.SecurityAsset]: Documentation of each security asset that is accessible via network interfaces.</p> <p>[E.Info.GEC-3.NetworkAsset]: Documentation of each network asset that is accessible via network interfaces.</p> <p>[E.Info.DT.GEC-3]: Description of the selected path through the decision tree in Figure 29 for each network interface and exposed optional service (via network interfaces).</p> <p>[E.Just.DT.GEC-3]: Justification for each selected path through the decision tree with the following properties:</p> <ul style="list-style-type: none"> - Justification for DT.GEC-3.DN-1 (if NOT APPLICABLE) based on [E.Info.GEC-3.SecurityAsset] and [E.Info.GEC-3.NetworkAsset]; and - Justification for DT.GEC-3.DN-2 based on [E.Info.GEC-3.NetworkInterface.Exposure].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case GEC-3 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether all optional network interfaces and exposed optional services (via network interfaces) which are part of the factory default state are configurable, at least with the option to enable and disable the service.
Prerequisites	The equipment is in an operational state and if available the setup is done. The necessary privileges are available for the configuration of the settings of the optional network interfaces or optional services (exposed via network interfaces).
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

Test case GEC-3 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether all optional network interfaces and optional services (via network interfaces) exposed which are part of the factory default state are configurable, at least with the option to enable and disable the service.
Prerequisites	The equipment is in an operational state and if available the setup is done. The necessary privileges are available for the configuration of the settings of the optional network interfaces or optional services (via network interfaces).
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.



Test case GEC-3 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Power Control Policies assessment: Functional Sufficiency test_key: GEC-3 timestamp: 2025-10-29T19-21-24 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Network Asset:Status Reporting System timestamp: 2025-10-29T19-21-30 asset: Network Asset
Test Verdict	P(ass)

[GEC-4] Documentation of exposed network interfaces and exposed services via network interfaces

Test case GEC-4 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether all network interfaces and services which are exposed via network interfaces and are delivered as part of the factory default state are described in the user documentation as required per GEC-4.
Prerequisites	<p>[E.Info.GEC-4.UserDoc.NetworkInterface.Exposure]: User documentation of each exposed network interface and exposed service (via network interfaces) in factory default state of the equipment.</p> <p>[E.Info.GEC-4.NetworkInterface.Exposure]: Description of each exposed network interface and exposed service (via network interfaces) in factory default state of the equipment.</p> <p>[E.Info.DT.GEC-4]: Description of the selected path through the decision tree in Figure 30 for each exposed network interface and exposed service (via network interfaces).</p> <p>[E.Just.DT.GEC-4]: Justification for each selected path through the decision tree with the following properties:</p> <ul style="list-style-type: none"> - Justification for DT.GEC-4.DN-1 (if NOT APPLICABLE) based on [E.Info.GEC-4.NetworkInterface.Exposure]; and - Justification for DT.GEC-4.DN-2 based on [E.Info.GEC-4.UserDoc.NetworkInterface.Exposure].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case GEC-4 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether the user documentation describes every network interface and exposed service (via network interfaces) which are delivered as part of the factory default state.
Prerequisites	The equipment is in a factory default state. Network connections to check the exposure of network interfaces and services (via network interfaces) are established.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

**Test case GEC-4 Functional sufficiency assessment**

Objective	None
Prerequisites	NONE
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree ends with "PASS"; and- No path ends with "FAIL"; and- All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none">- Any path ends with "FAIL"; or- Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>



Test case GEC-4 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Flash Pattern Algorithms assessment: Functional Sufficiency test_key: GEC-4 timestamp: 2025-10-29T19-21-46 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Network Asset:Visual Signal Configuration timestamp: 2025-10-29T19-21-49 asset: Network Asset
Test Verdict	P(ass)

[GEC-5] No unnecessary external interfaces

Test case GEC-5 Conceptual assessment

Objective	<p>The purpose of this assessment case is the conceptual assessment whether each exposure of physical external interfaces is restricted to the ones which are necessary for its intended functionality as required per GEC-5.</p>
Prerequisites	<p>[E.Info.GEC-5.PhysicalExternalInterface]: Description of each physical external interface including: - [E.Info.GEC-5.PhysicalExternalInterface.Purpose]: The purpose of the interface; and - [E.Info.GEC-5.PhysicalExternalInterface.Type]: Description of the interface type (e.g. USB-C). [E.Info.GEC-5.IntFunc]: Description of the intended functionality of the equipment. [E.Info.DT.GEC-5]: Description of the selected path through the decision tree in Figure 31 for each physical external interface. [E.Just.DT.GEC-5]: Justification for the selected path through the decision tree with the following property: - Justification for DT.GEC-5.DN-1 based on [E.Info.GEC-5.PhysicalExternalInterface].</p>
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if: - All paths through the decision tree end with "PASS"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	<p>P(ass)</p>

Test case GEC-5 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether only physical external interfaces are exposed, which are required for the intended functionality.
Prerequisites	The equipment is operational.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - All paths through the decision tree end with "PASS"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

**Test case GEC-5 Functional sufficiency assessment**

Objective	Not applicable
Prerequisites	NONE
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- All paths through the decision tree end with "PASS"; and- All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none">- Any path ends with "FAIL"; or- Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>



Test case GEC-5 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Magnetic Base Authentication assessment: Functional Sufficiency test_key: GEC-5 timestamp: 2025-10-29T19-22-00 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset:Physical Tamper Detection timestamp: 2025-10-29T19-22-03 Test Mode: Network Asset:Mounting Status Monitoring timestamp: 2025-10-29T19-22-06 asset: Network Asset
Test Verdict	P(ass)

[GEC-6] Input validation

Test case GEC-6 Conceptual assessment

Objective	The purpose of this assessment case is the conceptual assessment whether the input validation functionality of the equipment is applied to the external interfaces and provides appropriate protection of security assets and/or network assets against common attacks considering the intended functionality of the equipment as required per GEC-6.
Prerequisites	<p>[E.Info.GEC-6.ExternalInterface]: Description of each external interface including:</p> <ul style="list-style-type: none"> - [E.Info.GEC-6.ExternalInterface.Capabilities]: Description of any used APIs, protocols, input data types, file formats; and - [E.Info.GEC-6.ExternalInterface.Validation]: Description how the input for instance via checking syntactic and semantic correctness is validated. <p>[E.Info.GEC-6.SecurityAsset]: Description of each security asset that is potentially impacted via external interfaces.</p> <p>[E.Info.GEC-6.NetworkAsset]: Description of each network asset that is potentially impacted via external interfaces.</p> <p>[E.Info.DT.GEC-6]: Description of the selected path through the decision tree in Figure 32 for each of the external interfaces.</p> <p>[E.Just.DT.GEC-6]: Justification for the selected path through the decision tree with the following properties:</p> <ul style="list-style-type: none"> - Justification for DT.GEC-6.DN-1 (if NOT APPLICABLE) based on [E.Info.GEC-6.ExternalInterface] and [E.Info.GEC-6.ExternalInterface.Capabilities]; and - Justification for DT.GEC-6.DN-2 based on [E.Info.GEC-6.ExternalInterface], [E.Info.GEC-6.ExternalInterface.Validation] and [E.Info.GEC-6.ExternalInterface.Capabilities].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. <p>The verdict FAIL is assigned if:</p> <ul style="list-style-type: none"> - Any path ends with "FAIL"; or - Any justification is incorrect or missing. <p>The verdict NOT APPLICABLE is assigned otherwise.</p>
Conceptual Verdict	P(ass)

Test case GEC-6 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment of the external interfaces of the equipment and the related input mechanisms regarding the completeness of the documentation.
Prerequisites	The equipment is in an operational state and all external interfaces, which are part of the intended functionality, are either enabled or configurable to be enabled, so that each external interface can be tested. Where authentication is necessary to access an external interface, a means is provided to be able to test the interface.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.
Assessment Summary	N/A
Test Verdict	P(ass)

Test case GEC-6 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment of the techniques to verify the implementation of the documented techniques.
Prerequisites	The equipment is in an operational state and all external interfaces, which are part of the intended functionality, are either enabled or configurable to be enabled, so that each external interface can be tested. Where authentication is necessary to access an external interface, a means is provided to be able to test the interface.
Assignment of verdict	The verdict PASS for the assessment case is assigned if: - At least one path through the decision tree ends with "PASS"; and - No path ends with "FAIL"; and - All justifications are correct for all paths. The verdict FAIL is assigned if: - Any path ends with "FAIL"; or - Any justification is incorrect or missing. The verdict NOT APPLICABLE is assigned otherwise.



Test case GEC-6 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset:Environmental Sensors assessment: Functional Sufficiency test_key: GEC-6 timestamp: 2025-10-29T19-22-23 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Network Asset:Weather Condition Data timestamp: 2025-10-29T19-22-26 asset: Network Asset
Test Verdict	P(ass)

[CRY-1] Best practice cryptography

Test case CRY-1 Conceptual assessment

Objective	<p>The purpose of this assessment case is the conceptual assessment whether the implemented cryptography for protecting security asset or network assets is considered as best practice as required per CRY-1.</p>
Prerequisites	<p>[E.Info.CRY-1.Assets]: List of all security assets and network assets on the equipment protected by cryptography, including for each cryptography used for cryptographic protection:</p> <ul style="list-style-type: none"> - [E.Info.CRY-1.Assets.Cryptography]: Description of the cryptography used for cryptographic protection, including: <ul style="list-style-type: none"> - Description of each cryptographic protection goal; and - Evidence to justify that the cryptography is best practice for the cryptographic protection goals <p>Or;</p> <ul style="list-style-type: none"> - (if a deviation is identified and justified under the terms of sections ACM or AUM or SCM or SUM or SSM) [E.Info.CRY-1.Assets.Deviation]: Reference to the corresponding justification and to the required information the justification is based on. <p>NOTE 1 The documentation of a cryptographic protection goal includes the security objectives provided by cryptography.</p> <p>NOTE 2 Cryptography used for cryptographic protection can amongst others include cryptographic schemes, algorithms, constructors and primes.</p> <p>NOTE 3 Evidence to justify that the cryptography is best practice for the cryptographic protection goals can be based a reference catalogues, e.g., SOGIS Agreed Cryptographic Mechanisms (https://www.sogis.eu) [22], or other evidence, e.g., by cryptoanalysis.</p> <p>[E.Info.DT.CRY-1]:Description of the selected path through the decision tree in Figure 33 for each security asset and network asset described in [E.Info.CRY-1.Assets].</p> <p>[E.Just.DT.CRY-1]: Justification for each selected path through the decision tree documented in [E.Info.DT.CRY-1] with the following properties:</p> <ul style="list-style-type: none"> - (if a decision from [DT.CRY-1.DN-1] results in "NOT APPLICABLE") the justification for the decision [DT.CRY-1.DN-1] is based on [E.Info.CRY-1.Assets.Deviation]; and - the justification for the decision [DT.CRY-1.DN-2] is based on [E.Info.CRY-1.Assets.Cryptography].
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.CRY-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.CRY-1] ends with "FAIL"; and - The information provided in [E.Just.DT.CRY-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.CRY-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - all path through the decision tree documented in [E.Info.DT.CRY-1] ends with "FAIL"; or - a justification provided in [E.Just.DT.CRY-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.CRY-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Conceptual Verdict	<p>P(ass)</p>

Test case CRY-1 Functional completeness assessment

Objective	The purpose of this assessment case is the functional assessment whether the documentation in [E.Info.CRY-1.Assets.Cryptography] is complete.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - At least one path through the decision tree documented in [E.Info.DT.CRY-1] ends with "PASS"; and - No path through the decision tree documented in [E.Info.DT.CRY-1] ends with "FAIL"; and - The information provided in [E.Just.DT.CRY-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.CRY-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none"> - all path through the decision tree documented in [E.Info.DT.CRY-1] ends with "FAIL"; or - a justification provided in [E.Just.DT.CRY-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.CRY-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>
Assessment Summary	N/A
Test Verdict	P(ass)

Test case CRY-1 Functional sufficiency assessment

Objective	The purpose of this assessment case is the functional assessment whether the cryptography documentation in [E.Info.CRY-1.Assets.Cryptography] is implemented as it is documented.
Prerequisites	The equipment is in an operational state.
Assignment of verdict	<p>The verdict PASS for the assessment case is assigned if:</p> <ul style="list-style-type: none">- At least one path through the decision tree documented in [E.Info.DT.CRY-1] ends with "PASS"; and- No path through the decision tree documented in [E.Info.DT.CRY-1] ends with "FAIL"; and- The information provided in [E.Just.DT.CRY-1] are correct justifications for all paths through the decision tree documented in [E.Info.DT.CRY-1]. <p>The verdict FAIL for the assessment case is assigned if:</p> <ul style="list-style-type: none">- all path through the decision tree documented in [E.Info.DT.CRY-1] ends with "FAIL"; or- a justification provided in [E.Just.DT.CRY-1] is not correct or missing for a path through the decision tree documented in [E.Info.DT.CRY-1]. <p>The verdict NOT APPLICABLE for the assessment case is assigned otherwise.</p>



Test case CRY-1 Functional sufficiency assessment (Continued)

Assessment Summary	Test Mode: Security Asset: Crypto Library Config assessment: Functional Sufficiency test_key: CRY-1 timestamp: 2025-10-29T19-22-41 operator: Aron Li result: PASS test_steps: [{description: 1. Execute manual tests according to test mode}, {description: 2. Record test results for each step}, {description: 3. Verify implementation against requirements}, {description: Final assessment}] test_results: [{result: PASS}, {result: PASS}, {result: PASS}, {result: PASS}] asset: Security Asset Test Mode: Security Asset: TLS Certificate Store timestamp: 2025-10-29T19-22-39 asset: E.Info.ACM-2.SecurityAsset.ACM Test Mode: Network Asset: Secure Protocol Stack timestamp: 2025-10-29T19-22-45 asset: Network Asset
Test Verdict	P(ass)

Annex II Photo of product

Photo 1 - Overview

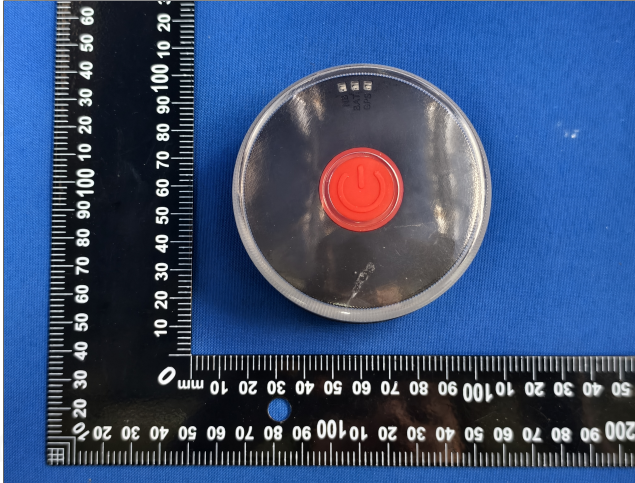


Photo 2 - Overview

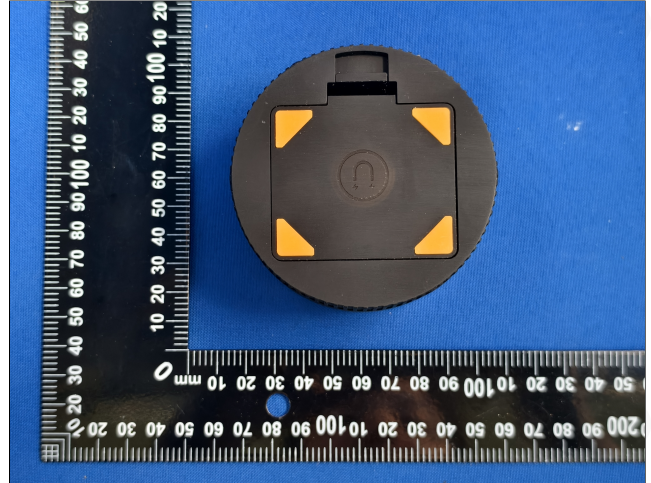


Photo 3 - Overview

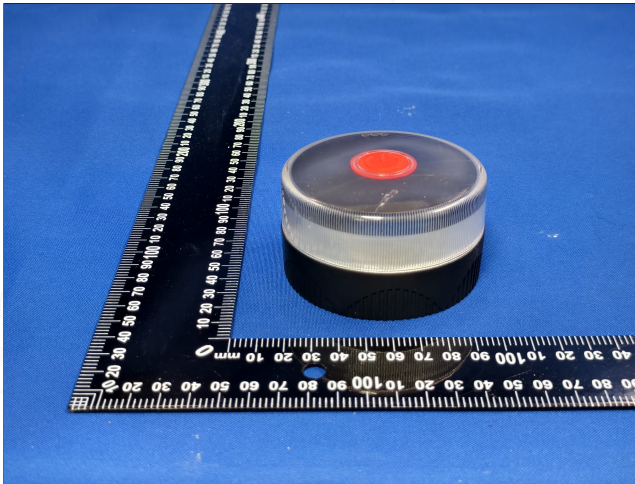
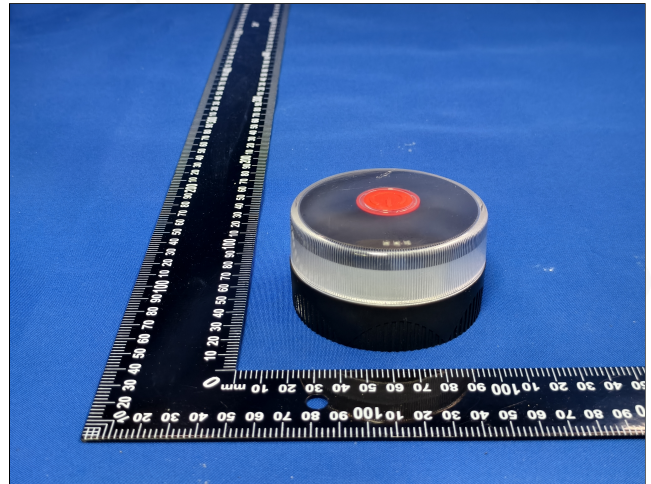


Photo 4 - Overview



--- End of Test Report ---