



<b>Test report no.:</b> <i>Prüfbericht-Nr.:</i>	KR235LUJ 001	<b>Order no.:</b> <i>Auftrags-Nr.:</i>	156155412 10	<b>Page 1 of 10</b> <i>Seite 1 von 10</i>
<b>Client reference no.:</b> <i>Kunden-Referenz-Nr.:</i>	2503850	<b>Order date:</b> <i>Auftragsdatum:</i>	2023-05-04	
<b>Client:</b> <i>Auftraggeber:</i>	NuriFlex Co., Ltd NURI BLD, 16 Sapyeong-daero, Seocho-gu, Seoul, Korea			
<b>Test item:</b> <i>Prüfgegenstand:</i>	Smart home grid			
<b>Identification / Type no.:</b> <i>Bezeichnung / Typ-Nr.:</i>	NPEXs			
<b>Order content:</b> <i>Auftrags-Inhalt:</i>	Open ADR			
<b>Test specification:</b> <i>Prüfgrundlage:</i>	OpenADR 2 0b Test Specification v1.1.6			
<b>Date of sample receipt:</b> <i>Wareneingangsdatum:</i>	2023-06-15			
<b>Test sample no.:</b> <i>Prüfmuster-Nr.:</i>	A003498441-001			
<b>Testing period:</b> <i>Prüfzeitraum:</i>	2023-06-15 ~ 2023-06-20			
<b>Place of testing:</b> <i>Ort der Prüfung:</i>	TUV Rheinland Korea Ltd. Seoul			
<b>Testing laboratory:</b> <i>Prüflaboratorium:</i>	TUV Rheinland Korea Ltd.			
<b>Test result*:</b> <i>Prüfergebnis*:</i>	Pass			
<b>tested by:</b> <i>geprüft von:</i>		<b>authorized by:</b> <i>genehmigt von:</i>		
<b>Date:</b> 2023-06-21 <i>Datum:</i>	YoungJu Yoon	<b>Issue date:</b> 2023-06-21 <i>Ausstellungsdatum:</i>	Gwang-Hyeon Ryu	
<b>Position / Stellung</b>	Expert/Sachverständige(r)	<b>Position / Stellung</b>	Expert/Sachverständige(r)	
<b>Other:</b> <i>Sonstiges:</i>				
<b>Condition of the test item at delivery:</b> <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>	Test item complete and undamaged Prüfmuster vollständig und unbeschädigt			
<b>* Legend:</b>	P(ass) = passed a.m. test specification(s)    F(ail) = failed a.m. test specification(s)    N/A = not applicable    N/T = not tested			
<b>* Legende:</b>	P(ass) = entspricht o.g. Prüfgrundlage(n)    F(ail) = entspricht nicht o.g. Prüfgrundlage(n)    N/A = nicht anwendbar    N/T = nicht getestet			
<p><i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p> <p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p>				

<p><b>1</b></p>	<p>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system.</p> <p>Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</p> <p><i>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.</i></p> <p><i>Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</i></p>
<p><b>2</b></p>	<p>As contractually agreed, this document has been signed digitally only. TÜV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TÜV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.</p> <p><i>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben.</i></p>
<p><b>3</b></p>	<p>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</p> <p><i>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</i></p>
<p><b>4</b></p>	<p>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the “Zero Guard Band Rule” and “Simple Acceptance” in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</p> <p><i>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</i></p>
<p><b>5</b></p>	

<b>Revisions</b>		
<b>Report No.</b>	<b>Issue date</b>	<b>Change / Remarks</b>
KR235LUJ 001	2023-06-21	initial test report

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# 1. Testing Laboratory

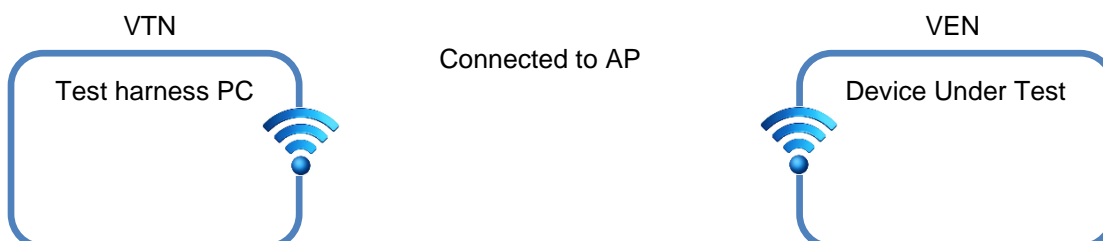
## 1.1 ATL information

<b>NAME:</b>	TÜV RHEINLAND KOREA LTD.
<b>Address</b>	2F, N-Tower, Semicolon Mullaee, 25, Mullaee-ro 28-gil, Yeongdeungpo-gu, Seoul, 07298, Rep. of Korea
<b>City:</b>	Seoul
<b>Postal code:</b>	07298
<b>Country:</b>	South Korea
<b>Telephone:</b>	+82 2 860 9860
<b>Fax:</b>	+82 2 860 9861
<b>URL:</b>	<a href="http://www.kor.tuv.com">http://www.kor.tuv.com</a>
<b>E-mail:</b>	Info@kor.tuv.com

## 1.2 Test Equipment

GTEM	Instrument	Manufacturer	Model Number	Version/Errata
G1824530	Test tool	QualityLogic	OpenADR2.0bCertTest	1.1.6

## 1.3 Test Setup



## 2. General Product Information

### 2.1 Client information

<b>NAME:</b>	NuriFlex Co., Ltd
<b>Address:</b>	NURI BLD, 16 Sapyeong-daero, Seocho-gu, Seoul, Korea
<b>Telephone:</b>	+82 10 2770 9265
<b>Contact person:</b>	Joon-Oh Kim
<b>e-mail:</b>	kjo@nuriflex.co.kr

### 2.2 DUT information

<b>PRODUCT NAME:</b>	NPEXs
<b>HW version:</b>	1.0.0
<b>SW version:</b>	1.0.0
<b>Product type:</b>	VEN
<b>OpenADR profile:</b>	2.0b
<b>Test Mode:</b>	Push
<b>Transport:</b>	XMPP
<b>Security:</b>	Standard

## 3. Information about Test Results

### 3.1 General

#### Documentation of tested devices and results:

The complete set of measurement results is stored at the TÜV Rheinland Korea Ltd. test laboratory and is available on demand.

#### Interpretation of test results:

The results of the inspection are described on the following pages. "Pass" in the summary list of this test report means the performed tests according to the test specification were verified and that the tested device is conformant to the specifications.

## 4. Test Results

### 4.1 VEN Pull Tests

#### 4.1.1 EiRegisterParty Service

No.	Test Cass	Date	Result	Log
1	N0_5010_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_123231_295.txt
2	N0_5015_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_133006_771.txt
3	N0_5020_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_124832_270.txt
4	N0_5025_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_131601_913.txt
5	N0_5030_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_131823_004.txt
6	N0_5040_TH_VTN	Jun / 15 /2023	PASS	View Log TraceLog_061523_133114_793.txt
7	N0_5050_TH_VTN	Jun / 15 /2023	PASS	View Log TraceLog_061523_132412_727.txt
8	N0_5060_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_132611_738.txt
9	N0_5065_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_132810_289.txt
10	N0_5070_TH_VTN_1	Jun / 19 /2023	PASS	View Log TraceLog_061923_095744_489.txt
11	N0_5080_TH_VTN_1	Jun / 15 /2023	PASS	View Log TraceLog_061523_132031_394.txt

#### 4.2.2 EiOpt Service

No.	Test Cass	Date	Result	Log
1	P0_7010_TH_VTN_1	Jun /15 / 2023	PASS	View Log TraceLog_061523_134543_882.txt
2	P0_7015_TH_VTN_1	Jun /15 / 2023	PASS	View Log TraceLog_061523_134628_648.txt
3	P0_7020_TH_VTN_1	Jun /15 / 2023	PASS	View Log TraceLog_061523_135714_984.txt
4	P0_7030_TH_VTN_1	Jun /15 / 2023	PASS	View Log TraceLog_061523_135915_120.txt
5	P0_7040_TH_VTN_1	Jun /15 / 2023	PASS	View Log TraceLog_061523_140424_558.txt
6	P0_7050_TH_VTN_1	Jun /15 / 2023	NA	View Log TraceLog_061523_140556_359.txt

#### 4.2.3 EiReport Service

No.	Test Cass	Date	Result	Log
1	R0_8010_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_142339_684.txt
2	R0_8020_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_142517_192.txt
3	R0_8025_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_142837_121.txt
4	R0_8027_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_143148_672.txt
5	R0_8030_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_143613_257.txt
6	R0_8040_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_143904_361.txt
7	R0_8045_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_144234_349.txt
8	R0_8050_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_144351_868.txt
9	R0_8060_TH_VTN_1	Jun / 15 / 2023	PASS	View Log TraceLog_061523_144506_457.txt

10	R0_8070_TH_VTN_1	Jun / 15 / 2023	PASS	View Log TraceLog_061523_144631_473.txt
11	R0_8080_TH_VTN_1	Jun / 15 / 2023	PASS	View Log TraceLog_061523_144727_538.txt
12	R0_8090_TH_VTN_1	Jun / 15 / 2023	PASS	View Log TraceLog_061523_144940_877.txt
13	R0_8100_TH_VTN_1	Jun / 15 / 2023	PASS	View Log TraceLog_061523_145535_805.txt
14	R0_8120_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_145737_023.txt
15	R0_8130_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_145947_041.txt
16	R0_8150_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_150159_980.txt
17	R0_8160_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_150404_450.txt
18	R0_8170_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_151025_409.txt
19	R0_8180_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_151408_157.txt
20	R0_8190_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_154815_645.txt

#### 4.2.4 EiEvent Service

No.	Test Cass	Date	Result	Log
1	E0_6010_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_152700_360.txt
2	E0_6020_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_152826_431.txt
3	E0_6025_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_152937_653.txt
4	E0_6027_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_153102_608.txt
5	E0_6030_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_153354_630.txt
6	E0_6040_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_153504_138.txt
7	E0_6050_TH_VTN_1	Jun / 15 / 2023	PASS	View Log TraceLog_061523_153625_211.txt
8	E0_6055_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_153743_302.txt
9	E0_6060_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_153850_969.txt
10	E0_6065_TH_VTN	Jun / 15 / 2023	NA	View Log TraceLog_061523_154010_383.txt
11	E0_6070_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_154133_916.txt
12	E0_6080_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_154504_931.txt
13	E0_6090_TH_VTN	Jun / 15 / 2023	PASS	View Log TraceLog_061523_154638_158.txt

#### 4.2.5 EiEvent Ported A Profile

No.	Test Cass	Date	Result	Log
1	A_E0_0020_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_100147_742.txt
2	A_E0_0040_TH_VTN	Jun / 19 / 2023	PASS	View Log TraceLog_061923_100344_220.txt
3	A_E0_0060_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_100451_274.txt
4	A_E0_0070_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_100808_947.txt
5	A_E0_0082_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_101006_110.txt
6	A_E0_0086_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_101122_101.txt
7	A_E0_0090_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_101237_823.txt
8	A_E0_0092_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_101704_015.txt
9	A_E0_0094_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_101844_813.txt
10	A_E0_0096_TH_VTN	Jun / 19 / 2023	PASS	View Log TraceLog_061923_102027_560.txt



11	A_E0_0098_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_102214_490.txt
12	A_E0_0100_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_102358_378.txt
13	A_E0_0102_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_102528_111.txt
14	A_E0_0104_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_102640_029.txt
15	A_E0_0110_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_102756_369.txt
16	A_E0_0130_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_102853_206.txt
17	A_E0_0180_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_103427_050.txt
18	A_E0_0185_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_103745_400.txt
19	A_E0_0190_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_104041_808.txt
20	A_E0_0200_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_104324_489.txt
21	A_E0_0210_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_132215_700.txt
22	A_E0_0220_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_132909_833.txt
23	A_E0_0230_TH_VTN	Jun / 20 / 2023	PASS	View Log TraceLog_062023_133735_697.txt
24	A_E0_0240_TH_VTN	Jun / 20 / 2023	PASS	View Log TraceLog_062023_134718_074.txt
25	A_E0_0250_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_135040_518.txt
26	A_E0_0260_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_140121_141.txt
27	A_E0_0262_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_140828_863.txt
28	A_E0_0267_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_144619_527.txt
29	A_E0_0268_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_145651_490.txt
30	A_E0_0270_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_151311_337.txt
31	A_E0_0280_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_155312_537.txt
32	A_E0_0285_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_104428_766.txt
33	A_E0_0300_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_104549_343.txt
34	A_E0_0310_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_104642_535.txt
35	A_E0_0340_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_104812_077.txt
36	A_E0_0345_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_104952_775.txt
37	A_E0_0360_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_105058_588.txt
38	A_E0_0370_TH_VTN_1	Jun / 20 / 2023	PASS	View Log TraceLog_062023_155704_531.txt
39	A_E0_0390_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_105216_704.txt
40	A_E0_0392_TH_VTN_1	Jun / 19 / 2023	PASS	View Log TraceLog_061923_105321_283.txt

#### 4.2.6 General Tests

No.	Test Cass	Date	Result	Log
1	G0_9005_TH_VTN	Jun / 19 / 2023	PASS	View Log TraceLog_061923_105619_861.txt
2	G0_9010_TH_VTN	Jun / 19 / 2023	PASS	View Log TraceLog_061923_105839_754.txt
3	G0_9030_TH_VTN	Jun / 19 / 2023	PASS	View Log TraceLog_061923_110033_039.txt

