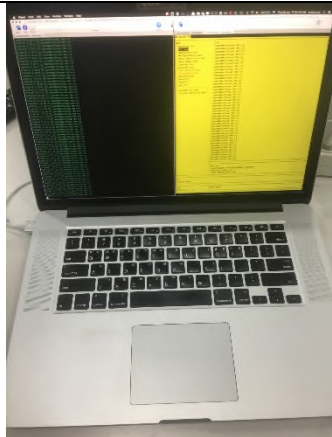




<b>Prüfbericht-Nr.:</b> <i>Test Report No.:</i>	<b>50272416-001</b>	<b>Auftrags-Nr.:</b> <i>Order No.:</i>	156006836	Seite 1 von 9 <i>Page 1 of 9</i>
<b>Kunden-Referenz-Nr.:</b> <i>Client Reference No.:</i>	622279	<b>Auftragsdatum:</b> <i>Order date:</i>	2019-07-12	
<b>Auftraggeber:</b> <i>Client:</i>	Gridwiz Co., Ltd. 25, Sanun-ro 208beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do,13460, Korea			
<b>Prüfgegenstand:</b> <i>Test item:</i>	2.0b / VEN / PULL			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type No.:</i>	GWDRMS-10000			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	OpenADR Certification Testing			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	OpenADR 2.0b Certification Test Specification v1.1.3			
<b>Wareneingangsdatum:</b> <i>Date of receipt:</i>	18.Jun.2019			
<b>Prüfmuster-Nr.:</b> <i>Test sample No.:</i>	A000957436-001			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	18.Jun.2019 ~20.Jun.2019			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	TÜV Rheinland Korea Ltd.			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	TÜV Rheinland Korea Ltd.			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	<b>Pass</b>			
<b>geprüft von / tested by:</b>		<b>kontrolliert von / reviewed by:</b>		
				
21.Jun.2019 Young-Ju Yoon/Proj.Engineer		24.Jun.2019 GwangHyeon Ryu /Proj.Manager		
<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>	<b>Unterschrift</b> <i>Signature</i>	<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>
				<b>Unterschrift</b> <i>Signature</i>
<b>Sonstiges / Other:</b>				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
<p>* Legende: 1 = sehr gut      2 = gut      3 = befriedigend      4 = ausreichend      5 = mangelhaft  P(ass) = entspricht o.g. Prüfgrundlage(n)      F(ail) = entspricht nicht o.g. Prüfgrundlage(n)      N/A = nicht anwendbar      N/T = nicht getestet  <i>Legend: 1 = very good      2 = good      3 = satisfactory      4 = sufficient      5 = poor</i>  P(ass) = passed a.m. test specification(s)      F(ail) = failed a.m. test specification(s)      N/A = not applicable      N/T = not tested</p>				
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht a uszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b>  <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not per mitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>				

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## 1. General Product Information

### 1.1 General SUT Information

Order number: 156006836  
Hardware version: N/A  
Firmware version: v1.0

### 1.2 General EUT Description

Equipment under test: see page 1

### 1.3 Type of Product

Product type: VEN  
OpenADR profile: 2.0b  
Mode: Pull  
Transport: Simple HTTP  
Security: Standard

## 2. Testing Laboratory

Company name: TÜV Rheinland Korea Ltd.

Address: 2F, Young City, N-Tower, 25, Mullaero 28-gil, Yeongdeungpo-gu  
Seoul, #07298, Rep. of Korea

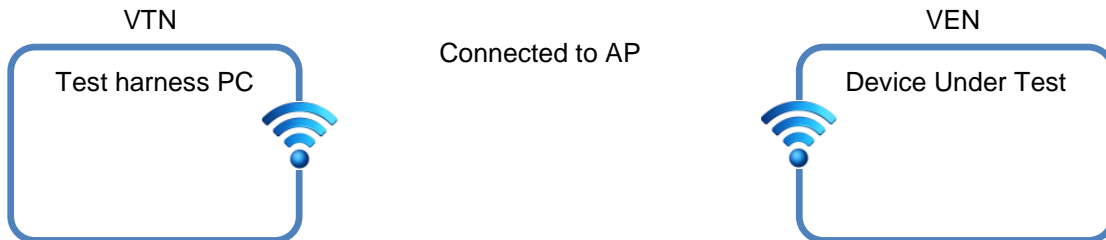
### 2.1 Test Equipment

GTEM	Instrument	Manufacturer	Model Number	Version/Errata
1806727	Test tool	QualityLogic	OpenADR2.0bCertTest	1.1.3

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## 2.2 Test Setup



## 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	N1_0010_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_110416_496.txt</a>
2	N1_0015_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_110557_153.txt</a>
3	N1_0020_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_160436_790.txt</a>
4	N1_0025_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_160735_791.txt</a>
5	N1_0030_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_110726_355.txt</a>
6	N1_0040_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_111230_215.txt</a>
7	N1_0050_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_111416_370.txt</a>
8	N1_0060_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_161458_993.txt</a>
9	N1_0065_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_111655_580.txt</a>
10	N1_0070_TH_VTN_1	Jun / 18 / 2019	PASS	<a href="#">View Log TraceLog_061819_111808_677.txt</a>
11	N1_0080_TH_VTN_1	Jun / 18 / 2019	NA	<a href="#">View Log TraceLog_061819_110903_626.txt</a>

#### 4.1.2 EiOpt Service

No.	Test Cass	Date	Result	Log
1	P1_2010_TH_VTN_1	Tue / Jun / 2019	PASS	<a href="#">View Log TraceLog_061819_112051_301.txt</a>
2	P1_2015_TH_VTN_1	Tue / Jun / 2019	PASS	<a href="#">View Log TraceLog_061819_112149_933.txt</a>
3	P1_2020_TH_VTN_1	Tue / Jun / 2019	PASS	<a href="#">View Log TraceLog_061819_112235_036.txt</a>
4	P1_2030_TH_VTN_1	Tue / Jun / 2019	PASS	<a href="#">View Log TraceLog_061819_112500_476.txt</a>
5	P1_2040_TH_VTN_1	Tue / Jun / 2019	PASS	<a href="#">View Log TraceLog_061819_112553_319.txt</a>
6	P1_2050_TH_VTN_1	Tue / Jun / 2019	PASS	<a href="#">View Log TraceLog_061819_112712_335.txt</a>

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#### 4.1.3 EiReport Service

No.	Test Cass	Date	Result	Log
1	R1_3010_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_105705_206.txt
2	R1_3020_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_105823_849.txt
3	R1_3025_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_110109_528.txt
4	R1_3027_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_110329_052.txt
5	R1_3030_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_110924_054.txt
6	R1_3040_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_111519_599.txt
7	R1_3045_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_111741_803.txt
8	R1_3150_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_111916_438.txt
9	R1_3160_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_112126_623.txt
10	R1_3170_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_112529_063.txt
11	R1_3180_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_112817_505.txt
12	R1_3190_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_112937_525.txt

#### 4.1.4 EiEvent Service

No.	Test Cass	Date	Result	Log
1	E1_1010_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132012_260.txt
2	E1_1020_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132100_336.txt
3	E1_1025_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132147_590.txt
4	E1_1027_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132300_688.txt
5	E1_1030_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132354_820.txt
6	E1_1040_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132516_016.txt
7	E1_1050_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132648_464.txt
8	E1_1055_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_132747_055.txt
9	E1_1060_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_133634_801.txt
10	E1_1065_TH_VTN_1	Jun / 18 / 2019	NA	View Log TraceLog_061819_133739_515.txt
11	E1_1070_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_133752_531.txt
12	E1_1080_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_133855_954.txt
13	E1_1090_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_133932_664.txt

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#### 4.1.5 EiEvent Ported A Profile

No.	Test Cass	Date	Result	Log
1	A_E1_0020_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_134405_401.txt
2	A_E1_0040_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_134549_617.txt
3	A_E1_0060_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_134839_003.txt
4	A_E1_0070_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_135052_515.txt
5	A_E1_0082_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_135202_270.txt
6	A_E1_0086_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_135310_061.txt
7	A_E1_0090_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_135541_730.txt
8	A_E1_0092_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_135816_035.txt
9	A_E1_0094_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_140117_852.txt
10	A_E1_0096_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_140212_408.txt
11	A_E1_0098_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_140409_932.txt
12	A_E1_0100_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_140559_387.txt
13	A_E1_0102_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_140710_487.txt
14	A_E1_0104_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_140859_587.txt
15	A_E1_0110_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_141012_630.txt
16	A_E1_0130_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_141105_076.txt
17	A_E1_0180_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_141221_099.txt
18	A_E1_0190_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_141457_070.txt
19	A_E1_0200_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_142001_137.txt
20	A_E1_0210_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_142134_759.txt
21	A_E1_0220_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_142423_935.txt
22	A_E1_0230_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_142625_210.txt
23	A_E1_0240_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_142914_302.txt
24	A_E1_0250_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_143152_171.txt
25	A_E1_0260_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_143505_772.txt
26	A_E1_0262_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_144715_775.txt
27	A_E1_0267_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_145910_771.txt
28	A_E1_0268_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_152011_537.txt
29	A_E1_0270_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_153055_182.txt
30	A_E1_0280_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_153331_433.txt
31	A_E1_0285_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_153547_930.txt
32	A_E1_0300_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_153649_897.txt
33	A_E1_0310_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_153838_966.txt
34	A_E1_0340_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_154020_549.txt
35	A_E1_0345_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_154124_725.txt
36	A_E1_0360_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_154242_313.txt
37	A_E1_0370_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_154400_836.txt
38	A_E1_0390_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_154646_857.txt
39	A_E1_0392_TH_VTN_1	Jun / 18 / 2019	PASS	View Log TraceLog_061819_154807_737.txt

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#### 4.1.6 General Tests

No.	Test Cass	Date	Result	Log
1	G1_4005_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_104913_033.txt
2	G1_4007_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_105104_819.txt
3	G1_4011_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_061819_162528_320.txt
4	G1_4012_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_061819_162627_751.txt
5	G1_4015_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_104027_127.txt
6	G1_4030_TH_VTN_1	Jun / 20 / 2019	PASS	View Log TraceLog_062019_104210_254.txt



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## Appendix A: Remarks and References

Log files for the executed test cases are provided in the electronic format.

List of all executed tests with links to the log files is located in the "logfile.xml" which could be opened in any web-browser.

## Appendix B: Photos

**Photo 1: Test harness PC**



**Photo 2: Test Device**

