

Ultimems, Inc.

TEST REPORT

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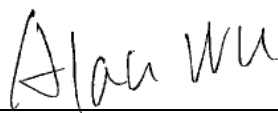
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TEST REPORT

Applicant:	Ultimems, Inc. 11F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan.
Product:	AnyBeam Laser Scanning Pico Projector
Model No.:	HD301M1-H2, HD301M1-H2-BLA, HD301M1-H2-DBR, HD301M1-H2-LBR, HD301M1-H2-GRA, HD301M1-H2-W, HD301M1-H2-R, HD301M1-H2-Y, HD301M1-H2-GRE, HD301M1-H2-BL
Brand Name:	AnyBeam
Test Method/ Standard:	EN 55032:2015 EN 61000-3-2: 2014 EN 61000-3-3: 2013 EN 55024: 2010+A1: 2015
Test By:	Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li, Shiang-Shan District, Hsinchu City, Taiwan



Prepared and Checked by:



Alan Wu
Engineer

Approved by:



Eric Lee
Supervisor

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Revision History

Report No.	Issue Date	Revision Summary
181100222TWN-001	Dec. 03, 2018	Original report

Table of Contents

1. General Information	5
1.1 Identification of the EUT	5
1.2 Additional information about the EUT	5
2. Test Summary	6
3. Test Specifications	7
3.1 Standards	7
3.2 Test Facility accreditation	7
3.3 Classification of MME	8
3.4 Performance criteria	8
3.5 Mode of operation during the test	9
3.6 Peripherals equipment	9
4. Conducted Emission Test	10
5. Radiated Emission Test	11
5.1.1 Test Procedure from 30 MHz to 1000 MHz	11
5.1.2 Test Equipment	12
5.1.3 Radiated Emission Limit	12
5.1.4 Radiated Emission Test Data from 30 MHz to 1000 MHz	13
5.2.1 Test Procedure above 1 GHz	15
5.2.2 Test Equipment	16
5.2.3 Radiated Emission Limit	16
5.2.4 Radiated Emission Test Data above 1 GHz	17
6. Harmonics Test	19
7. Voltage Fluctuations-Flicker Test	20
8. Electrostatic Discharge Immunity Test	21
8.1 Purpose	21
8.2 Test Set-Up	21
8.3 Test Specification	21
8.4 Test Equipment	21
8.5 Test Result	22
9. Radiated, Radio-Frequency, Electromagnetic Field Immunity Test	23
9.1 Purpose	23
9.2 Test Set-Up	23
9.3 Test Specification	23
9.4 Test Equipment	24
9.5 Generation of the Electromagnetic Field	24
9.6 Test Results	24

10. Electrical Fast Transient/Burst Immunity Test	25
11. Surge Immunity Test	26
12. Immunity to Conducted Disturbances, Inducted by Radio-Frequency Fields.....	27
13. Power Frequency Magnetic Field Immunity Test	28
13.1 Purpose.....	28
13.2 Test Set-Up.....	28
13.3 Test Condition.....	28
13.4 Test Equipment.	28
13.5 Test Result.....	29
14. Voltage Dips, Short Interruptions and Voltage Variations Immunity Test.....	30
Appendix A: Uncertainty	31
Appendix B1: External photo of EUT	32
Appendix B2: Internal photo of EUT	35
Appendix C1: Radiated Emission Test Set-up (Below 1 GHz).....	38
Appendix C2: Radiated Emission Test Set-up (Above 1 GHz)	39

1. General Information

1.1 Identification of the EUT

Product:	AnyBeam Laser Scanning Pico Projector
Model No.:	HD301M1-H2
Rated Power:	DC 5 V
Power Cord:	N/A
Sample receiving date:	Nov. 27, 2018
Sample condition:	Workable
Testing date:	Nov. 28, 2018 ~ Nov. 29, 2018

1.2 Additional information about the EUT

The customer confirmed the models listed are difference between as below:

Trade Name	Model Number	Different
AnyBeam	HD301M1-H2-BLA	Changes in appearance color and printing
	HD301M1-H2-DBR	
	HD301M1-H2-LBR	
	HD301M1-H2-GRA	
	HD301M1-H2-W	
	HD301M1-H2-R	
	HD301M1-H2-Y	
	HD301M1-H2-GRE	
	HD301M1-H2-BL	

For more detail features, please refer to user's Manual.

2. Test Summary

Emission			
Standard	Test Type	Result	Remarks
EN 55032:2015	Conducted Emission	N/A	N/A
	ISN	N/A	N/A
	Radiated Emission	PASS	Meet Class B Limit
EN 61000-3-2: 2014	Harmonic current Emissions	N/A	N/A
EN 61000-3-3: 2013	Voltage fluctuation & Flicker	N/A	N/A

Immunity EN 55024: 2010+A1: 2015				
Standard	Test Type	Performance Criteria	Result	
IEC 61000-4-2: 2008	ESD	Criterion B	PASS	Meets the requirements of Performance Criterion B
IEC 61000-4-3: 2010	RS	Criterion A	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-4: 2012	EFT	Criterion B	N/A	N/A
IEC 61000-4-5: 2014/ AMD1: 2017	Surge	Criterion B	N/A	N/A
IEC 61000-4-6: 2013	CS	Criterion A	N/A	N/A
IEC 61000-4-8: 2009	Magnetic Field test	Criterion A	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-11: 2004	Dip	1. >95% reduction- Criterion B 2. 30% reduction- Criterion C 3. >95% reduction- Criterion C	N/A	N/A

3. Test Specifications

3.1 Standards

EN 55032:2015 Electromagnetic compatibility of multimedia equipment - Emission requirements

EN 61000-3-2: 2014 Electromagnetic compatibility – Part 3. Limits. Section 2. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

EN 61000-3-3: 2013 Electromagnetic compatibility – Part 3. Limits. Section 3. Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current ≤ 16 A

EN 55024: 2010+A1: 2015 Information technology equipment — Immunity characteristics Limits and methods of measurement.

3.2 Test Facility accreditation

Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory is accredited in respect of laboratory and the accreditation criterion is ISO/IEC 17025: 2005.

Certification	Bureau	Code	Accreditation Criteria
Accreditation Certificate	TAF	0597	ISO/IEC 17025
	BSMI	SL2-IS-E-0024 SL2-IN-E-0024 SL2-A1-E-0024 SL2-R2-E-0024 SL2-R1-E-0024 SL2-L1-E-0024	ISO/IEC 17025
Site Filling Code :	FCC	93910	Test facility list & NSA Data
	IC	2042D-1, 2042D-2	Test facility list & NSA Data
	VCCI	R-1534 C-1618 T-1586 G-49	Test facility list & NSA Data

Note: Each certificate is within the valid calibration period.

3.3 Classification of MME

The MME equipment defines Class A equipment and Class B equipment associated with two types of end-use environment.

The Class B requirements for equipment are intended to offer adequate protection to broadcast services within the residential environment.

Equipment intended primarily for use in a residential environment shall meet the Class B limits. All other equipment shall comply with the Class A limits.

Broadcast receiver equipment is class B equipment.

3.4 Performance criteria

The performance criteria listed below are based on those regulated in the standard.

Criteria A:

During and after the test the EUT shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a minimum performance level specified by the manufacturer when the EUT is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the EUT if used as intended.

Criteria B:

After the test, the EUT shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the EUT is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the EUT if used as intended.

Criteria C:

During and after testing, a temporary loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls or cycling of the power to the EUT by the user in accordance with the manufacturer's instructions. Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

3.5 Mode of operation during the test

1. The EUT was setup typical condition.
2. The EUT could receive signal message from Notebook PC, and send the message to the wall.

3.6 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Description of Data Cable
Notebook PC	HP	HSTNN-Q96C	5CD8021S9J	1. Shielded HDMI cable1.5 meter 2. Shielded Micro USB to USB cable 1 meter
Headset	I coby	M-80	N/A	Non-shielded stereo cable 2 meter

4. Conducted Emission Test

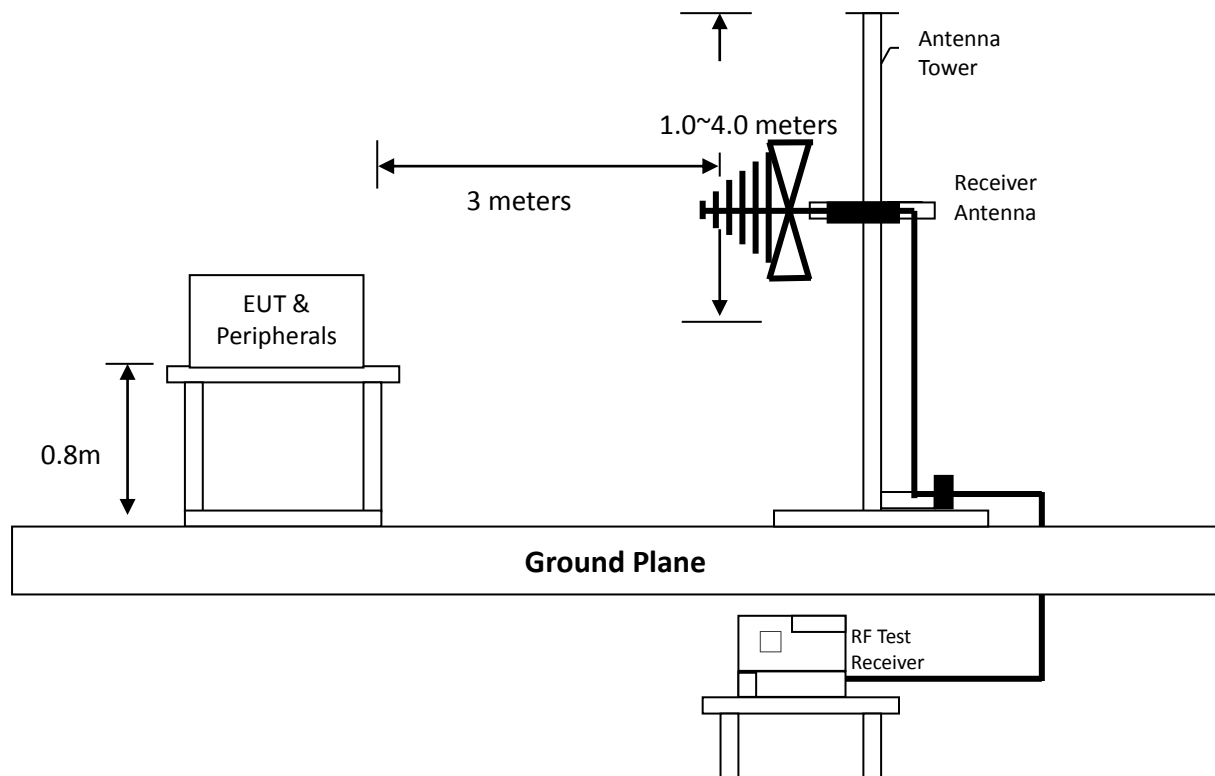
Since the EUT is not connected to AC source, therefore, the test can be waived.

5. Radiated Emission Test

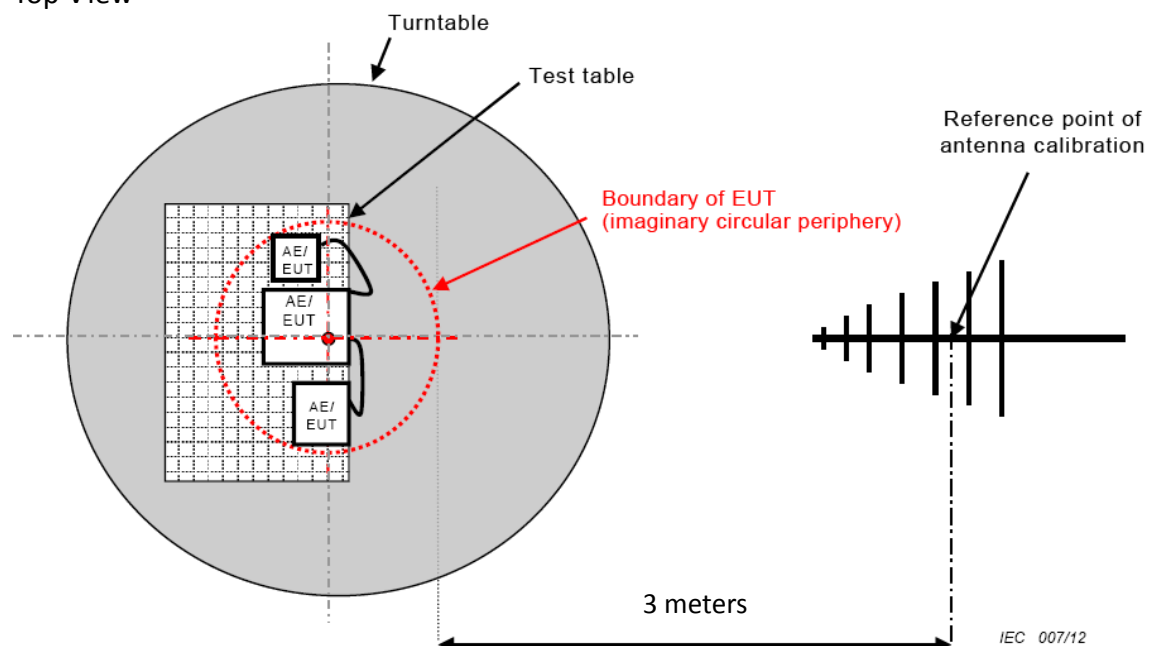
5.1.1 Test Procedure from 30 MHz to 1000 MHz

The figure below shows the test setup, which is utilized to make these measurements.

Side View



Top View



Radiated testing was performed at a 3 meters semi-anechoic chamber. The equipment under test were placed on a turntable top 0.8 meter above ground. The table was 360 degrees to determine the position of the highest radiation. EUT is set 3 meters from the EMI receiving antenna, which is mounted on a variable height mast. The antenna height is varied between one meter and four meters above ground to find the maximum value of the field strength. Both horizontal polarization and vertical polarization of the antenna was set to conduct the measurement.

The bandwidth was set on the EMI meter 120 kHz.

The levels are quasi peak value readings. The frequency spectrum from 30 MHz to 1000 MHz was investigated.

5.1.2 Test Equipment

Test Equipment/ Test site	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Receiver	R&S	ESU40	100381	2018/05/30	2019/05/29
Bi-log Hybrid Antenna	ETC	MCTD2786	BL13S03017	2018/05/22	2019/05/21
966-1(A) Cable	SUHNER	SMA / SUCOFLEX 104	29510614	2018/04/17	2019/04/16
966-1(B) Cable	JUNFLON	SMA / J12J100880-00	AUG-26-08-001	2018/04/17	2019/04/16
966-1_3m Semi-Anechoic Chamber	966_1	CEM-966_1	N/A	2018/03/05	2019/03/04
Test software	Audix	e3	4.20040112L	NCR	NCR

Note: No Calibration Required (NCR).

5.1.3 Radiated Emission Limit

Frequency (MHz)	Distance(m)	Class B Equipment (dBμV/m)
30~230	3	40
230~1000	3	47

Note:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the EUT to antenna.

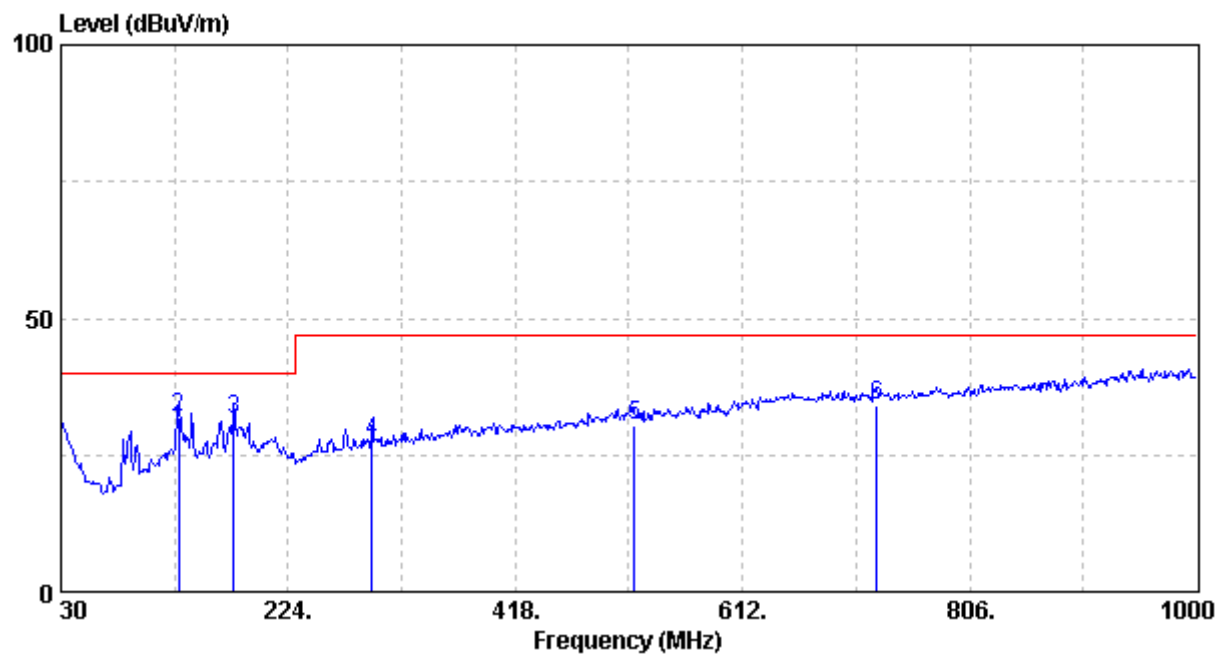
5.1.4 Radiated Emission Test Data from 30 MHz to 1000 MHz

Polarity:	Vertical			
Temperature:	24	°C	Model No.:	HD301M1-H2
Relative Humidity:	55	%	Test Date:	Nov. 28, 2018
Atmospheric Pressure:	1002	hPa	Remark:	N/A

Freq	Pol/Phase	Factor	Read Level	Level	Limit Line	Over Limit	Remark
MHz		dB	dBμV	dBμV/m	dBμV/m	dB	
30.000	VERTICAL	26.10	2.34	28.44	40.00	-11.56	QP
130.880	VERTICAL	18.65	13.08	31.72	40.00	-8.28	QP
177.440	VERTICAL	17.59	14.02	31.61	40.00	-8.39	QP
295.780	VERTICAL	22.08	5.31	27.38	47.00	-19.62	QP
519.850	VERTICAL	26.57	3.86	30.43	47.00	-16.57	QP
726.460	VERTICAL	29.43	4.73	34.15	47.00	-12.85	QP

Remark:

- Factor = Antenna Factor (dB/m) + Cable Loss (dB)
- Level (dBμV/m) = Factor (dB) + Read Level (dBμV)
- Over Limit (dB) = Level (dBμV/m) – Limit Line (dBμV/m)

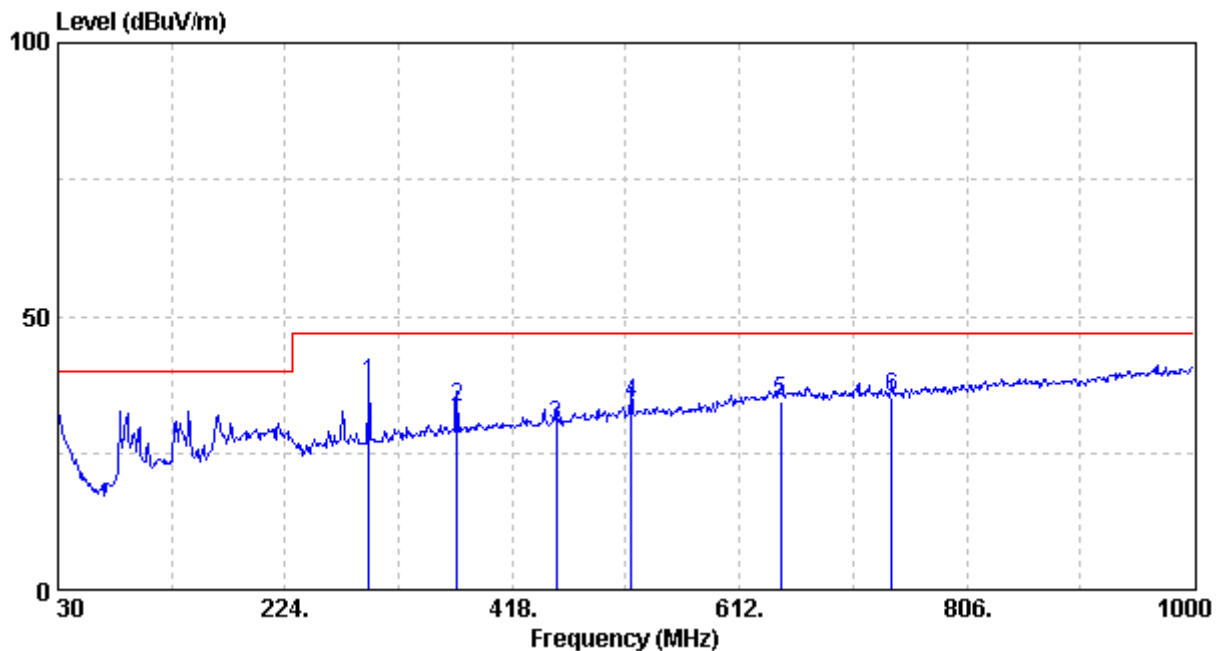


Polarity:	Horizontal			
Temperature:	24	°C	Model No.:	HD301M1-H2
Relative Humidity:	55	%	Test Date:	Nov. 28, 2018
Atmospheric Pressure:	1002	hPa	Remark:	N/A

Freq	Pol/Phase	Factor	Read Level	Level	Limit Line	Over Limit	Remark
MHz		dB	dBμV	dBμV/m	dBμV/m	dB	
295.780	HORIZONTAL	22.08	15.49	37.57	47.00	-9.43	QP
370.470	HORIZONTAL	23.96	9.32	33.28	47.00	-13.72	QP
455.830	HORIZONTAL	25.37	4.83	30.20	47.00	-16.80	QP
519.850	HORIZONTAL	26.57	7.37	33.94	47.00	-13.06	QP
646.920	HORIZONTAL	29.17	5.32	34.49	47.00	-12.51	QP
741.980	HORIZONTAL	29.49	5.57	35.06	47.00	-11.94	QP

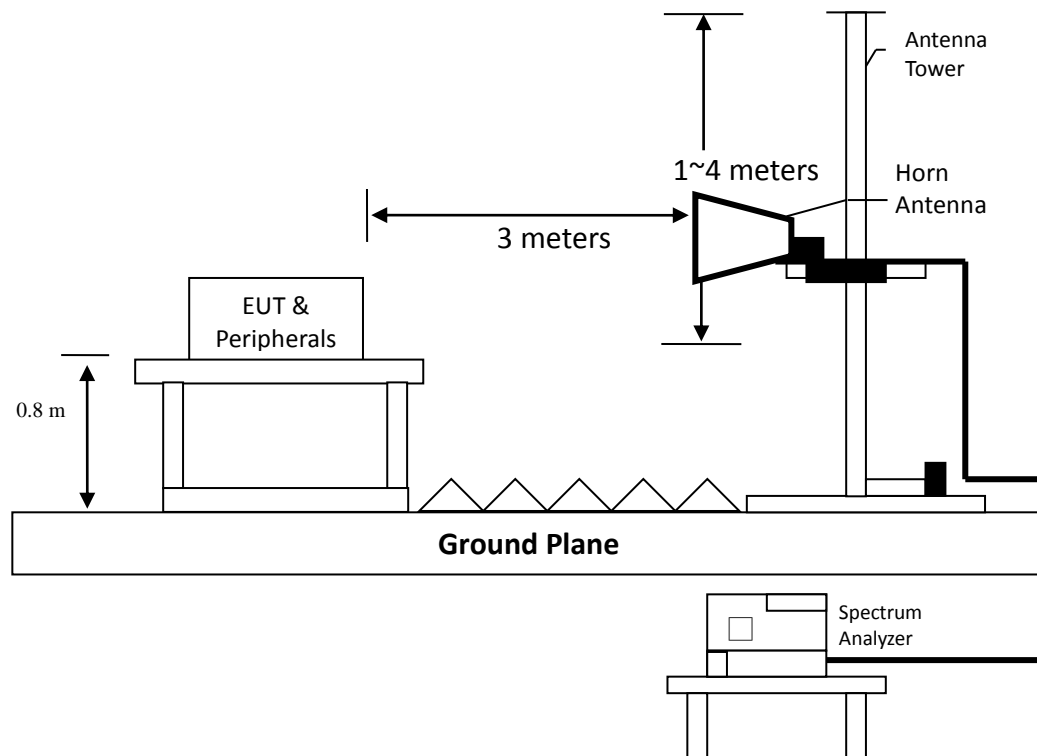
Remark:

1. Factor = Antenna Factor (dB/m) + Cable Loss (dB)
2. Level (dBμV/m) = Factor (dB) + Read Level (dBμV)
3. Over Limit (dB) = Level (dBμV/m) – Limit Line (dBμV/m)



5.2.1 Test Procedure above 1 GHz

The figure below shows the test setup, which is utilized to make these measurements.



Radiated testing was performed at a 3 meters semi-anechoic chamber. The equipment under test were placed on a turntable top 0.8 meter above ground. The table was 360 degrees to determine the position of the highest radiation. EUT is set 3 meters from the EMI receiving antenna, which is mounted on a variable height mast. The antenna height is varied between one meter and four meters above ground to find the maximum value of the field strength. Both horizontal polarization and vertical polarization of the antenna was set to conduct the measurement.

The bandwidth was set on the EMI meter 1 MHz.

The levels are peak and average value readings. The frequency spectrum above 1 GHz was investigated.

5.2.2 Test Equipment

Test Equipment/ Test site	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Receiver	R&S	ESU40	100381	2018/05/30	2019/05/29
Horn Antenna	EMCO	3115	9906-5822	2018/05/03	2019/05/02
Pre-Amplifier	AML	AML0120L3401	0419-114	2018/05/18	2019/05/17
966-1(A) Cable	SUHNER	SMA / SUCOFLEX 104	29510614	2018/04/17	2019/04/16
966-1(B) Cable	JUNFLON	SMA / J12J100880-00	AUG-26-08-001	2018/04/17	2019/04/16
966-1_3m Semi-Anechoic Chamber	966_1	CEM-966_1	N/A	2018/03/05	2019/03/04
Test software	Audix	e3	4.20040112L	NCR	NCR

Note: No Calibration Required (NCR).

5.2.3 Radiated Emission Limit

Frequency (GHz)	Distance (meter)	Class B Equipment	
		Average limit (dB μ V/m)	Peak limit (dB μ V/m)
1 ~ 3	3	50	70
3 ~ 6	3	54	74

Note: The lower limit applies at the transition frequency.

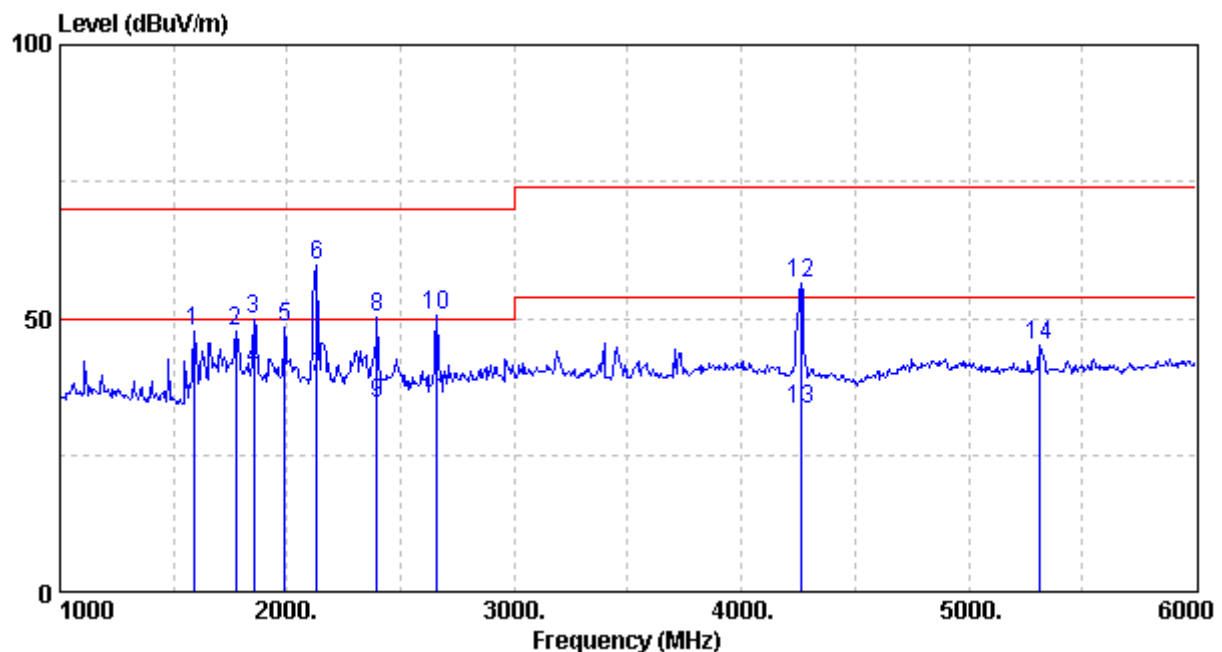
5.2.4 Radiated Emission Test Data above 1 GHz

Polarity:	Vertical			
Temperature:	24	°C	Model No.:	HD301M1-H2
Relative Humidity:	55	%	Test Date:	Nov. 28, 2018
Atmospheric Pressure:	1002	hPa	Remark:	N/A

Freq	Pol/Phase	Factor	Read Level	Level	Limit Line	Over Limit	Remark
MHz		dB	dBμV	dBμV/m	dBμV/m	dB	
1590.000	VERTICAL	-7.64	55.30	47.66	70.00	-22.34	
1775.000	VERTICAL	-6.34	53.93	47.59	70.00	-22.41	
1855.000	VERTICAL	-5.82	55.67	49.85	70.00	-20.15	
1855.000	VERTICAL	-5.82	46.40	40.58	50.00	-9.42	
1990.000	VERTICAL	-4.99	53.31	48.32	70.00	-21.68	
2130.000	VERTICAL	-4.72	64.40	59.68	70.00	-10.32	
2130.000	VERTICAL	-4.72	43.80	39.08	50.00	-10.92	
2395.000	VERTICAL	-4.44	54.62	50.18	70.00	-19.82	
2395.000	VERTICAL	-4.44	38.80	34.36	50.00	-15.64	
2655.000	VERTICAL	-3.78	54.32	50.54	70.00	-19.46	
2655.000	VERTICAL	-3.78	38.78	35.00	50.00	-15.00	
4260.000	VERTICAL	-0.79	57.14	56.35	74.00	-17.65	
4260.000	VERTICAL	-0.79	34.00	33.21	54.00	-20.79	
5315.000	VERTICAL	2.49	42.43	44.92	74.00	-29.08	

Remark:

1. Level (dBμV/m) = Factor (dB) + Read Level (dBμV)
2. Factor = Antenna Factor (dB/m) + Cable Loss (dB) – Amplifier Gain (dB)
(*The Amplifier Gain depended on measure equipment, see test equipment list.)
3. Over Limit (dB) = Level (dBμV/m) – Limit Line (dBμV/m)



Polarity:	Horizontal			
Temperature:	24	°C	Model No.:	HD301M1-H2
Relative Humidity:	55	%	Test Date:	Nov. 28, 2018
Atmospheric Pressure:	1002	hPa	Remark:	N/A

Freq MHz	Pol/Phase	Factor dB	Read Level	Level	Limit Line	Over Limit	Remark
			dBμV	dBμV/m	dBμV/m	dB	
1480.000	HORIZONTAL	-8.38	52.36	43.98	70.00	-26.02	
1630.000	HORIZONTAL	-7.38	49.79	42.41	70.00	-27.59	
2130.000	HORIZONTAL	-4.72	54.22	49.50	70.00	-20.50	
2130.000	HORIZONTAL	-4.72	39.10	34.38	50.00	-15.62	
2655.000	HORIZONTAL	-3.78	48.28	44.50	70.00	-25.50	
3985.000	HORIZONTAL	-0.62	46.77	46.15	74.00	-27.85	
4250.000	HORIZONTAL	-0.78	50.30	49.52	74.00	-24.48	
4895.000	HORIZONTAL	0.50	42.18	42.68	74.00	-31.32	

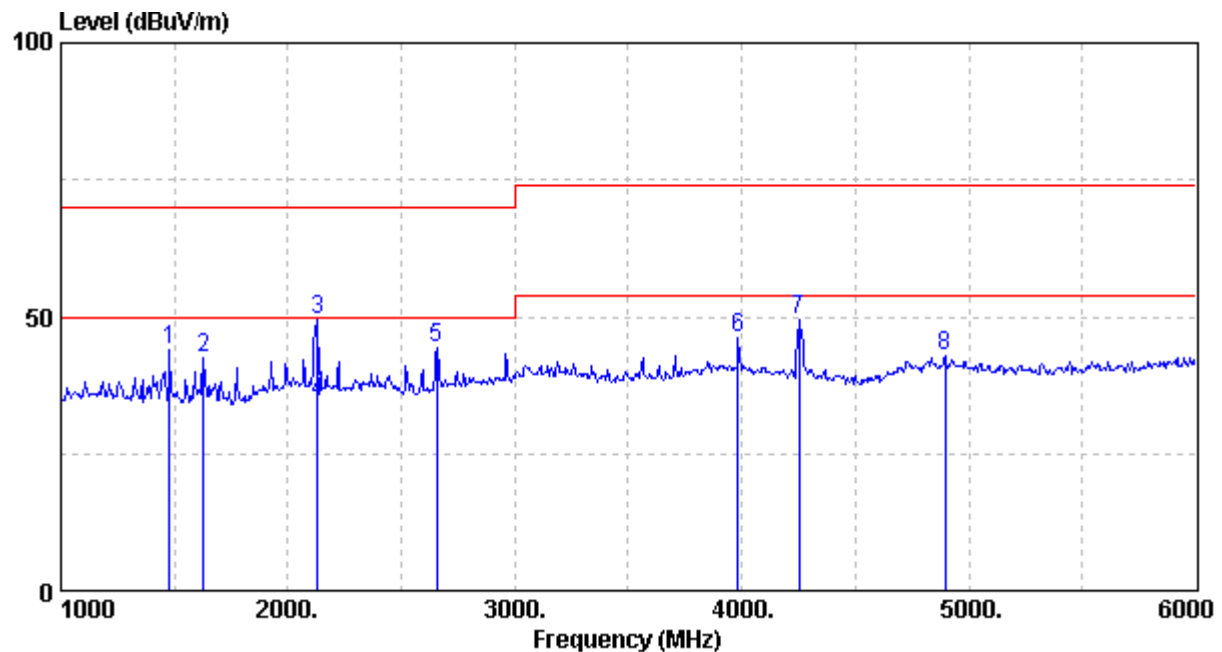
Remark:

1. Level (dBμV/m) = Factor (dB) + Read Level (dBμV)

2. Factor = Antenna Factor (dB/m) + Cable Loss (dB) – Amplifier Gain (dB)

(*The Amplifier Gain depended on measure equipment, see test equipment list.)

3. Over Limit (dB) = Level (dBμV/m) – Limit Line (dBμV/m)



6. Harmonics Test

Since the EUT is not connected to AC source, therefore, the test can be waived.

7. Voltage Fluctuations-Flicker Test

Since the EUT is not connected to AC source, therefore, the test can be waived.

8. Electrostatic Discharge Immunity Test

8.1 Purpose

The object of the test is to evaluate the ESD immunity performance of EUT.

8.2 Test Set-Up

A horizontal coupling plane (HCP) was placed on a non-metallic table 0.8 meter above a reference ground plane (RGP) and connected to it with a cable with two 470 k Ω resistors. The EUT was placed on an insulation sheet on the HCP and was operated according to the specified operating mode.

A vertical coupling plane (VCP) was connected to the RGP with a cable with two 470 k Ω resistors.

8.3 Test Specification

Test level:	Air discharge	-----	+/- 8 kV
	Contact discharge	-----	+/- 4 kV

Single discharge at 1 second interval positive discharge and negative discharge
The selected test points are listed in this table, the numbers refer to the figures attached.

8.4 Test Equipment

Test Equipment/ Test site	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
Electrostatic Discharge System	NoiseKen	ESS-2002	ESS0291088	2018/08/24	2019/08/23

Note: No Calibration Required (NCR).

8.5 Test Result

Temperature:	24	°C	Model No.:	HD301M1-H2
Relative Humidity:	54	%	Test Date:	Nov. 29, 2018
Atmospheric Pressure:	1002	hPa	Remark:	N/A

Point of Discharge	Applied Voltage (kV)	Number of Discharge	Test Result	Performance Criterion
Contact Test Point	±2	25	PASS	B
	±4	25	PASS	B
Air Test Point	±2	10	PASS	B
	±4	10	PASS	B
	±8	10	PASS	B
VCP (4 sides)	±2	25	PASS	A
	±4	25	PASS	A
HCP (4 sides)	±2	25	PASS	A
	±4	25	PASS	A

Description of Discharge Point

Contact Discharge <u>6</u> Test points		Air Discharge	
<input type="checkbox"/>	Metallic Screws	<input type="checkbox"/>	Plastic Screws
<input checked="" type="checkbox"/>	Metallic Case	<input checked="" type="checkbox"/>	Plastic Case (gap)
<input type="checkbox"/>	Metallic Connect ports	<input checked="" type="checkbox"/>	Plastic Connect ports
<input checked="" type="checkbox"/>	Metallic Junctions	<input checked="" type="checkbox"/>	Plastic Junctions
<input type="checkbox"/>	Others:	<input checked="" type="checkbox"/>	LED indicator
		<input type="checkbox"/>	Panel Board
		<input type="checkbox"/>	Others:

9. Radiated, Radio-Frequency, Electromagnetic Field Immunity Test

9.1 Purpose

This test method subjects the EUT to a power source of disturbance comprising electric and magnetic field, simulating those coming from intentional RF transmitters.

9.2 Test Set-Up

The EUT was placed on a non-metallic table 0.8 meter above the reference ground plane (RGP) and was operated according to its specified operating mode.

Ferrite tiles/absorbers were placed on the RGP between the EUT and the antenna to reduce the reflections from the RGP. The EUT and its cables were exposed for the electromagnetic field for 1.5meter vertically and 1.5m horizontally.

The distance between antenna and EUT is 3 meter.

9.3 Test Specification

Test level	Test field strength V/m	Modulation
1	1	1 kHz 80% AM
2	3	1 kHz 80% AM
3	10	1 kHz 80% AM
X	Special	1 kHz 80% AM

The frequency steps : 1 % , Log sweep

Dwell time : 3 sec

Frequency range : 80 MHz ~ 1 GHz

Test ports : Enclosure port

Test field strength : 3 V/m

9.4 Test Equipment

Test Equipment/ Test site	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
733 Compact Full Anechoic Chamber	Comtest	9708093	N/A	2018/09/11	2019/09/10
Signal Generator	R&S	SMB100A	102385	2018/03/08	2019/03/07
Field Meter	Narda	NBM-520	D-1426	2016/09/10	2019/09/09
Field Probe	Narda	EF0691	H-0199	2016/09/11	2019/09/10
Test software	Audix	i2	5.160923	NCR	NCR

Note: No Calibration Required (NCR).

9.5 Generation of the Electromagnetic Field

The electromagnetic field is generated from a computer controlled signal generator. The output power is amplified and then radiated from broadband log periodic antennas. For each sweep a pre-recorded empty chamber calibration file is used to establish the required field strength. When using these files the field strength inside an area of 1.5/1.0 meter x 1.5 meter is in accordance with the standard.

9.6 Test Results

Temperature:	24	°C	Model No.:	HD301M1-H2
Relative Humidity:	51	%	Test Date:	Nov. 28, 2018
Atmospheric Pressure:	1002	hPa	Remark:	N/A

Exposed Side: ☒ Front ☒ Left ☒ Rear ☒ Right

Frequency (MHz)	Antenna Polarization	Test Result	Performance Criterion
80 MHz to 1 GHz	Vertical	PASS	A
80 MHz to 1 GHz	Horizontal	PASS	A

10. Electrical Fast Transient/Burst Immunity Test

Since the EUT is not connected to AC source, therefore, the test can be waived.

11. Surge Immunity Test

Since the EUT is not connected to AC source, therefore, the test can be waived.

12. Immunity to Conducted Disturbances, Inducted by Radio-Frequency Fields

Since the EUT is not connected to AC source, therefore, the test can be waived.

13. Power Frequency Magnetic Field Immunity Test

13.1 Purpose

The measurement is for evaluating the performance of EUT, when subject to power frequency magnetic field disturbance.

13.2 Test Set-Up

The EUT was placed on a wooden table above a reference RGP with the coupling loop antenna arrange the EUT on the RGP.

13.3 Test Condition

Test levels for continuous field

Level	Magnetic field strength (A/m)
1	1
2	3
3	10
4	30
5	100
X ⁽¹⁾	Special
Note: 1. "x" is an open level. This level can be given in the product specification.	

Test levels for short duration: 1s to 3s

Level	Magnetic field strength (A/m)
1	n.a ⁽²⁾
2	n.a ⁽²⁾
3	n.a ⁽²⁾
4	300
5	1000
X ⁽¹⁾	Special
Note: 1. "x" is an open level. This level, as well the duration of the test, can be given in this product specification. 2. "n.a" = not applicable	

13.4 Test Equipment.

Test Equipment/ Test site	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
Magnetic test system	PMM	PMM1008	000J90601	2016/12/16	2018/12/15
Test software	PMM	PMM1008	1.19	NCR	NCR

Note: No Calibration Required (NCR).

13.5 Test Result

Temperature:	24	°C	Model No.:	HD301M1-H2
Relative Humidity:	52	%	Test Date:	Nov. 28, 2018
Atmospheric Pressure:	1002	hPa	Remark:	DC 5 V

Continuous Field					Short Duration				
Level	H.Field (A/m)	X	Y	Z	Level	H.Field (A/m)	X	Y	Z
		Performance Criterion					Performance Criterion		
1	1	A	A	A	1	N/A	-	-	-
2	3	-	-	-	2	N/A	-	-	-
3	10	-	-	-	3	N/A	-	-	-
4	30	-	-	-	4	300	-	-	-
5	100	-	-	-	5	1000	-	-	-
X	Special	-	-	-	X	Special	-	-	-

Note: “-” means not applicable

14. Voltage Dips, Short Interruptions and Voltage Variations Immunity Test

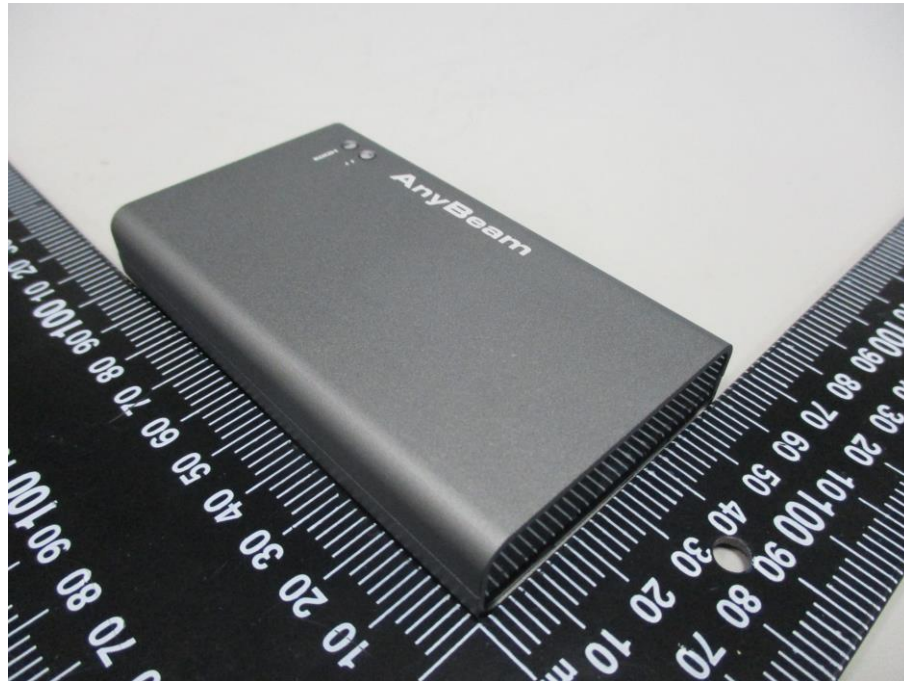
Since the EUT is not connected to AC source, therefore, the test can be waived.

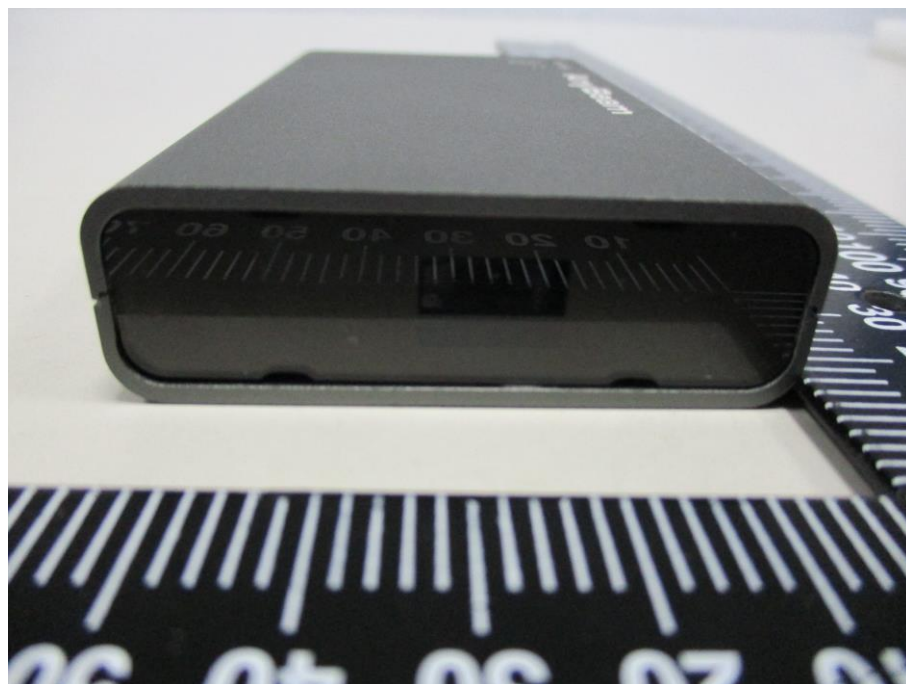
Appendix A: Uncertainty

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Item	Uncertainty
Conducted disturbance measurements at a mains port from 9 kHz to 30 MHz using a 50 Ω /50 μ H +5 Ω artificial mains network (AMN)	2.48 dB
Conducted disturbance measurements at a telecommunication port from 150 kHz to 30 MHz using an asymmetrical artificial network (AAN)	4.02 dB
Vertically polarized radiated disturbances from 30 MHz~1 GHz in an open area test site at a distance of 10 m	4.96 dB
Horizontally polarized radiated disturbances from 30 MHz~1 GHz in an open area test site at a distance of 10 m	4.95 dB
Vertically polarized radiated disturbances from 30 MHz~1 GHz in a semi-anechoic chamber at a distance of 3 m	5.14 dB
Horizontally polarized radiated disturbances from 30 MHz~1 GHz in a semi-anechoic chamber at a distance of 3 m	5.22 dB
Vertically polarized Radiated disturbances from 1 GHz~18 GHz in a semi-anechoic chamber at a distance of 3 m	3.64 dB
Horizontally polarized Radiated disturbances from 1 GHz~18 GHz in a semi-anechoic chamber at a distance of 3 m	3.64 dB
Radiated electromagnetic disturbances in the frequency range from 9kHz to 30MHz	2.90 dB
HARMONIC	0.15 %
FLICKER	0.10 %
ESD	3.83 %
RS	2.20 dB
EFT	8.50 %
SURGE	4.77 %
CS	0.76 dB
Mag.	1.00 %
DIP	1.60 %
Ring Wave	2.80 %

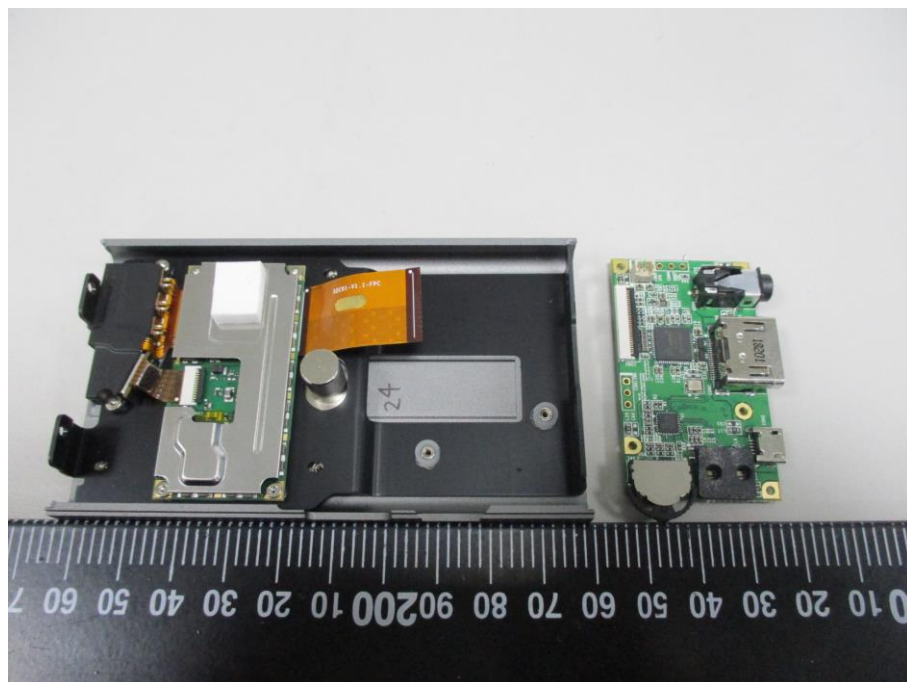
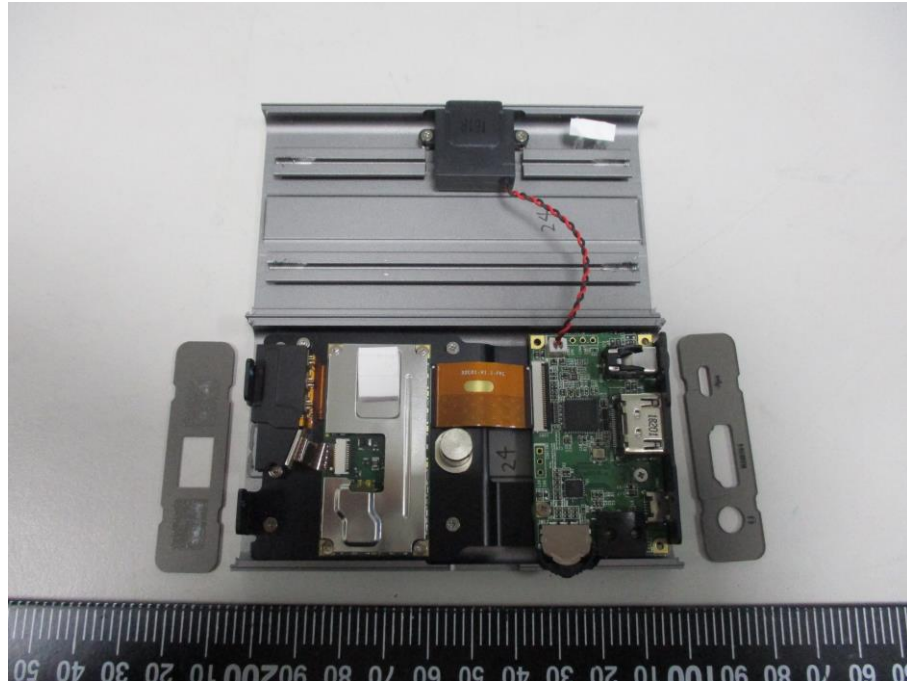
Appendix B1: External photo of EUT

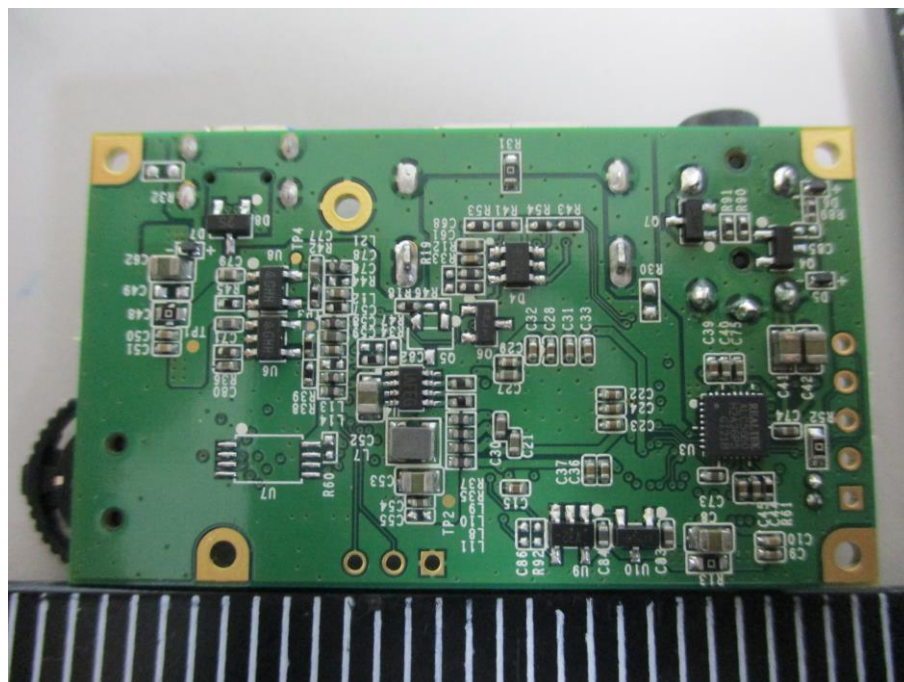
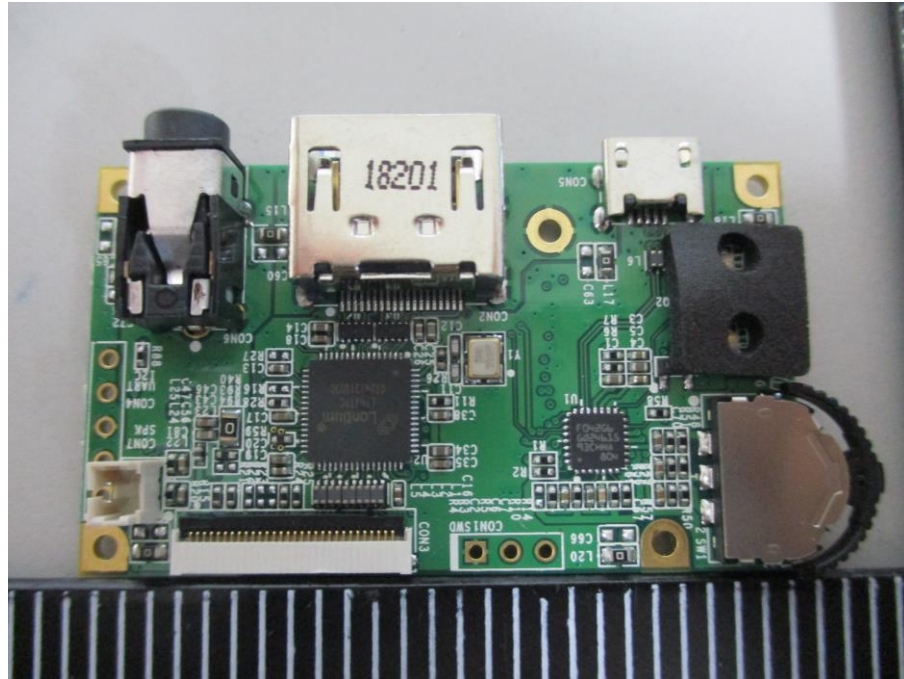




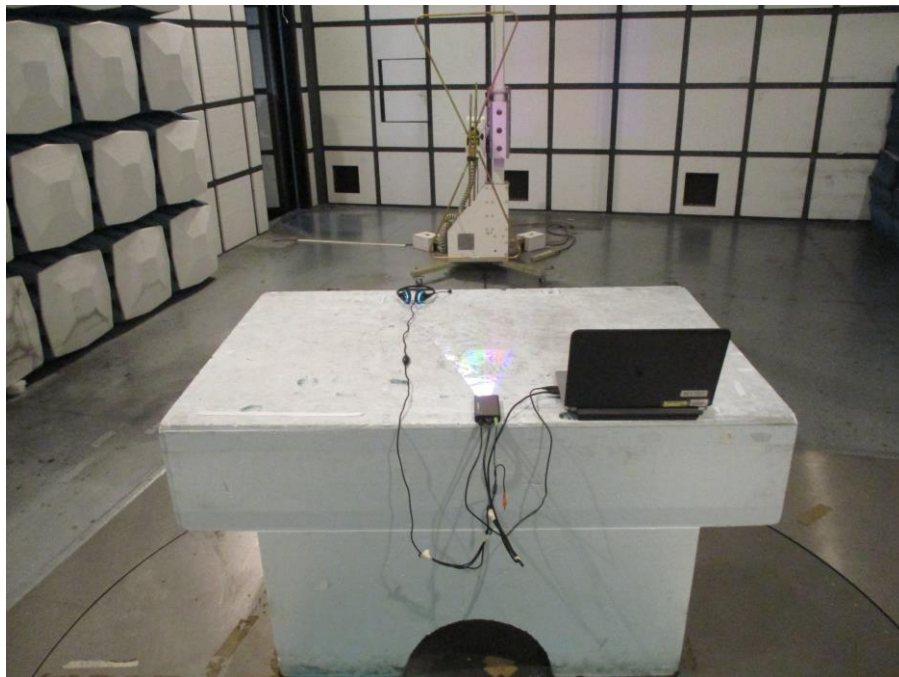
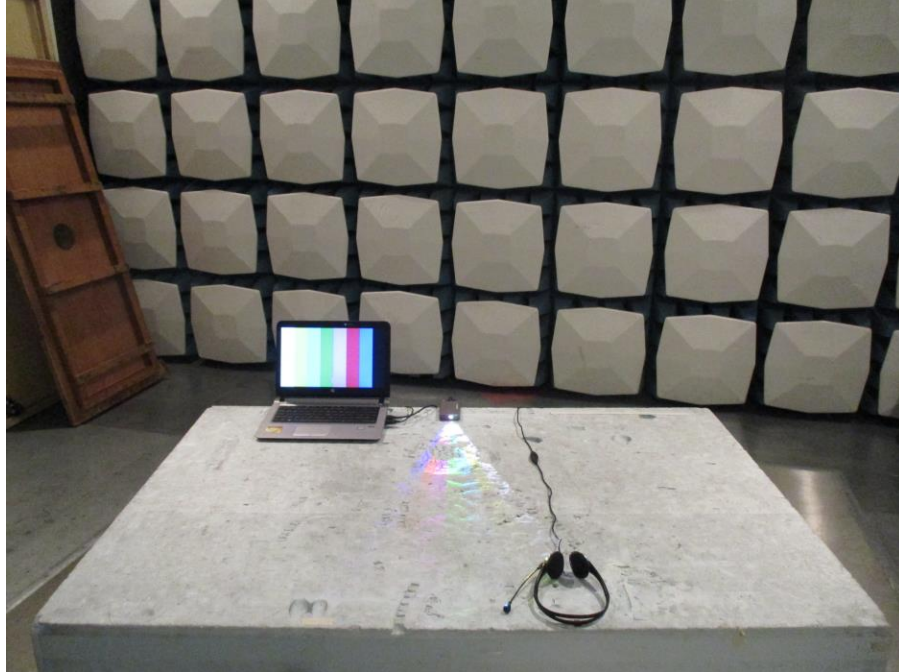


Appendix B2: Internal photo of EUT







Appendix C1: Radiated Emission Test Set-up (Below 1 GHz)

Appendix C2: Radiated Emission Test Set-up (Above 1 GHz)