

## EMC TEST REPORT

### Title 47 CFR Part 15B, ISED ICES-003 Issue 7

<b>Report Reference No</b>	G0M-2204-1420-EF0115B-V01
<b>Testing Laboratory</b>	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    A2LA - Registration number: 1983.01 (ISED) ISED wireless device testing laboratory: CN 3470A DAkkS - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
<b>Applicant</b>	Hella Aglaia Mobile Vision GmbH
Address	Ullsteinstraße 140 12109 Berlin GERMANY
<b>Test Specification</b> Standard(s)	Title 47 CFR Part 15 Subpart B ISED ICES-Gen Issue 1 ; Amendment 1 (February 2021) ISED ICES-003 Issue 7 ANSI C63.4:2014+A1:2017
Non-Standard Test Method	None
<b>Equipment under Test (EUT):</b>	
Product Description	Advanced People Sensor; 90 mm lens distance; with IO connector
Model(s)	JH403
Additional Model(s)	None
Brand Name(s)	APS-90-LITE
Hardware Version(s)	JH403
Software Version(s)	2.2.0
FCC-ID	2ASWU-PS9
IC	./.
<b>Test Result</b>	<b>PASSED</b>

<b>Possible test case verdicts:</b>	
required by standard but not tested	N/T
not required by standard	N/R
required by standard but not appl. to test object	N/A
test object does meet the requirement	P(PASS)
test object does not meet the requirement	F(FAIL)
<b>Testing:</b>	
Date of receipt of test item	2022-05-06
<b>Report:</b>	
Compiled by	Jens Degenhardt
Tested by (+ signature) (Responsible for Test)	Jens Degenhardt 
Tested by (+ signature) (Responsible for Test)	Stephan Liebich 
Approved by (+ signature) (EMC Test Technician)	Matthias Handrik 
Date of Issue	2022-06-30
Total number of pages	35
<b>General Remarks:</b>	
<p><b>The test results presented in this report relate only to the object tested.</b></p> <p><b>The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.</b></p> <p><b>This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.</b></p>	
<b>Additional Comments:</b>	
	

**ABBREVIATIONS AND ACRONYMS**

<b>Acronyms</b>	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
T <sub>NOM</sub>	Nominal operating temperature
V <sub>NOM</sub>	Nominal supply voltage

## VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2022-06-30	Initial Release	-

**REPORT INDEX**

<b>1</b>	<b>Equipment (Test Item) Under Test.....</b>	<b>6</b>
1.1	Equipment Ports.....	7
1.2	Equipment Photos - Internal.....	8
1.3	Equipment Photos - External.....	9
1.4	Support Equipment.....	13
1.5	Operational Modes.....	13
1.6	EUT Configuration.....	13
1.7	Sample emission level calculation.....	14
<b>2</b>	<b>Result Summary.....</b>	<b>15</b>
2.1	Test Conditions and Results - Radiated emissions acc. to ANSI C63.4.....	16
2.2	Test Conditions and Results - Conducted emissions acc. to ANSI C63.4.....	27
<b>3</b>	<b>Measurement Uncertainty .....</b>	<b>35</b>

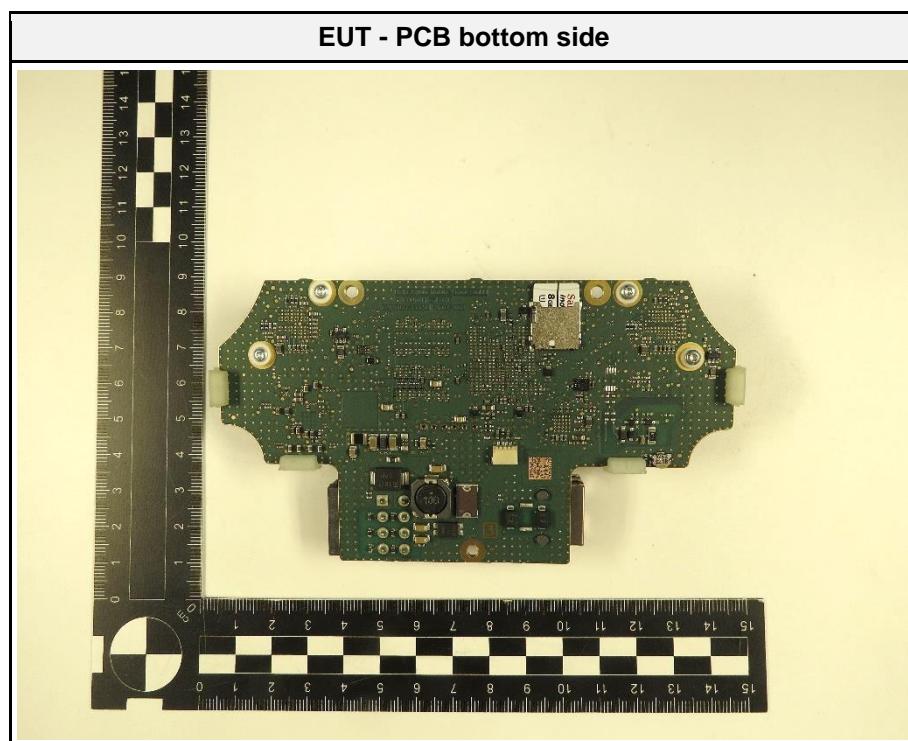
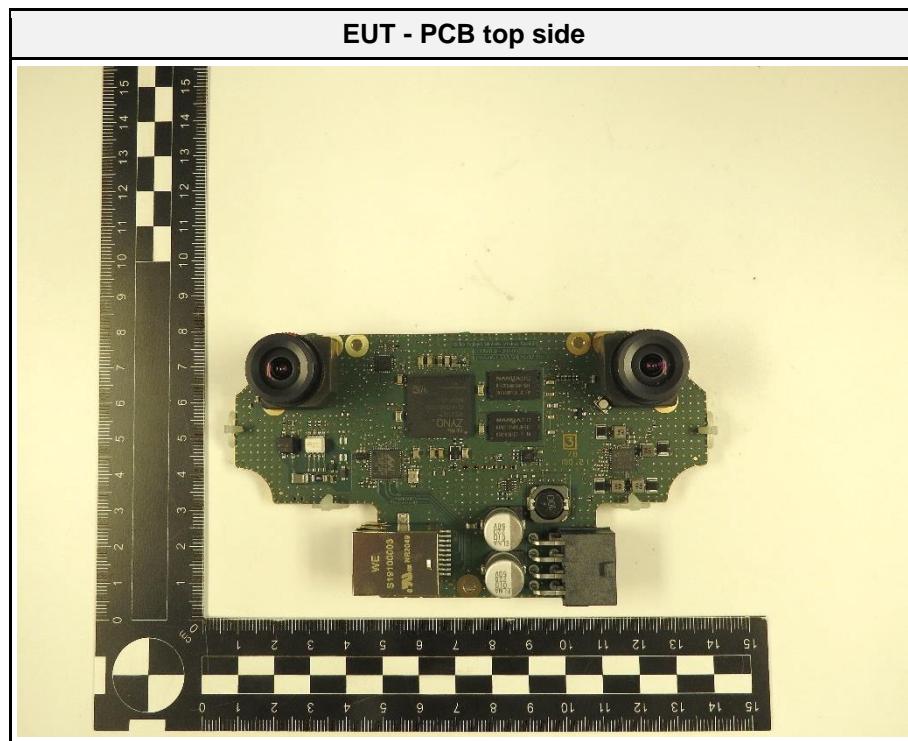
## 1 Equipment (Test Item) Under Test

Description	Advanced People Sensor; 90 mm lens distance; with IO connector		
Intended Use	Highly dynamic stereoscopic 3D people counting camera with on-board computing		
Model	JH403		
Additional Model(s)	None		
Brand Name(s)	APS-90-LITE		
Hardware Version(s)	JH403		
Software Version(s)	2.2.0		
Number of tested samples	1		
Sample Identification	EUT #	Sample-ID	Serial Number
	JH403	39817	01393601
EUT Dimensions [cm]	13.5 x 8.0 x 3.2		
FCC-ID	2ASWU-PS9		
IC	./.		
Class	Class B		
Equipment type	Table top		
Highest internal frequency [MHz]	666		
Protective Earth	n.a.		
Supply Voltage	V <sub>NOM</sub>	24 VDC	
Manufacturer	Hella Aglaia Mobile Vision GmbH Ullsteinstraße 140 12109 Berlin GERMANY		

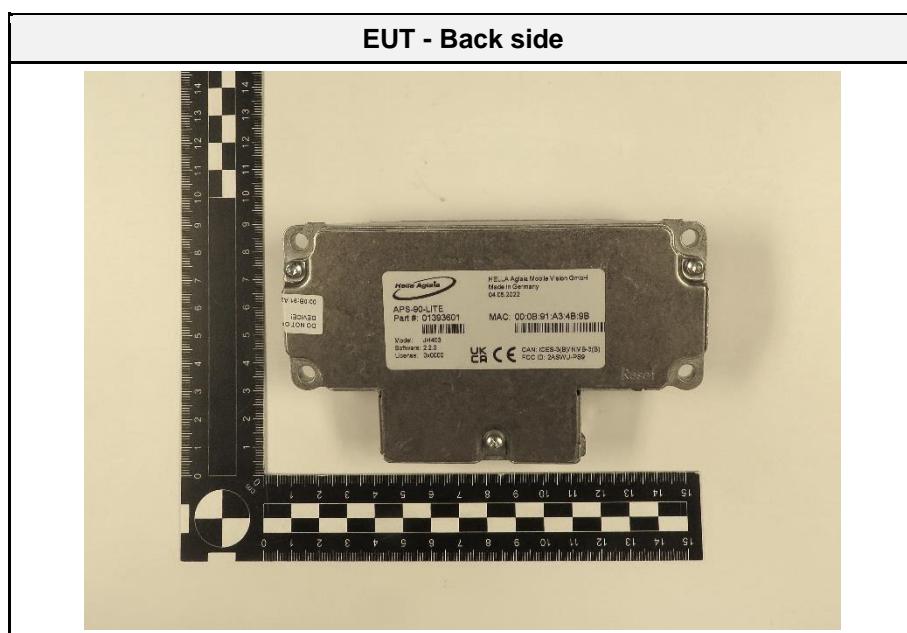
## 1.1 Equipment Ports

Name	Type	Attributes	Comment
Multi purpose connector	DC / IO	Count: 1 Cable length [m]: <3 Direction: IO Service only: No Shielded: Yes	1: DC Mains 2: IO
Ethernet port	TP	Count: 1 Cable length [m]: 100 Direction: IO Service only: No Shielded: Yes	-
Description:			
DC	DC power input/output port		
IO	Input/Output port		
TP	Telecommunication port		

## 1.2 Equipment Photos - Internal



### 1.3 Equipment Photos - External



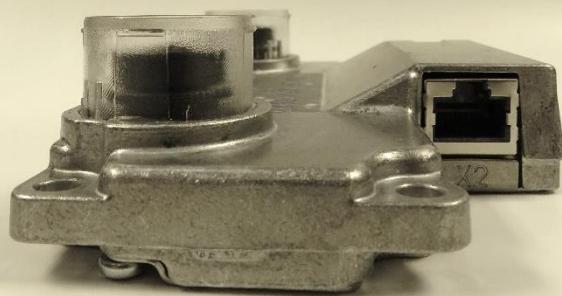
**EUT- Top side**



**EUT- Bottom side**

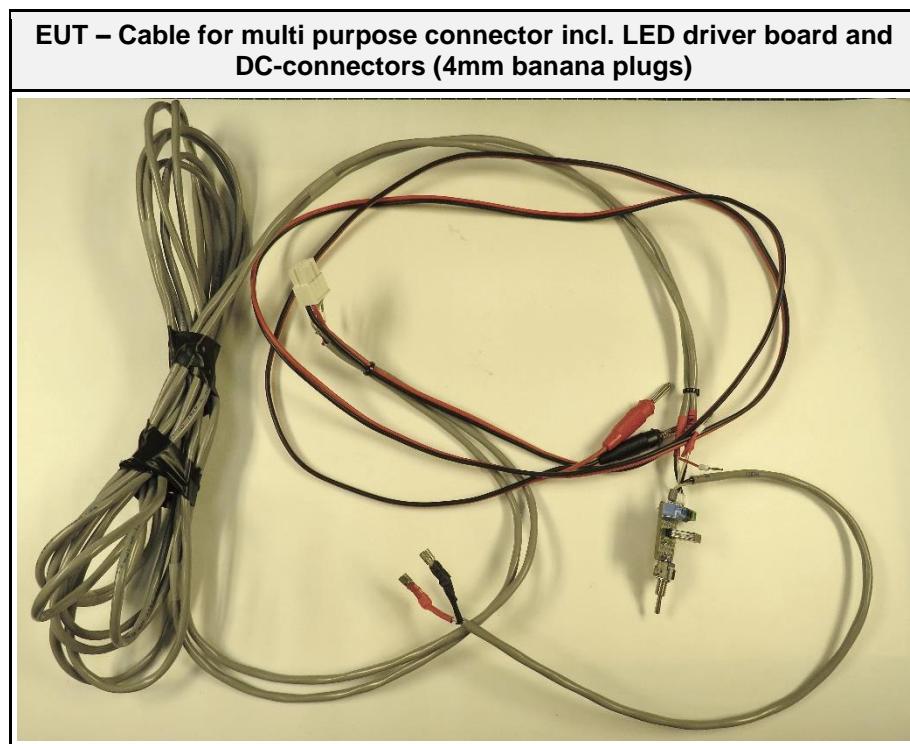


**EUT- Left side**



**EUT- Right side**





#### 1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Laptop	HP	Elite book	Customer equipment
AE	Battery	EnerSys Genesis	NP7-12 12V, 7.0Ah	Supply for LED driver board
CBL /MON	Multi-IO test cable with LED driver board	Hella Aglaia Mobile Vision GmbH	n.a.	DC-Mains connectors, IO-lines, monitoring LED
AE	AC/DC-adapter	HN Electronic Components GmbH & Co KG	HNP60-UNIL6	Used for conducted emission testing (Configuration 2); Eurofins equipment, no dedicated adapter
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
MON	Monitoring Equipment			
CBL	Connecting Cable			
Comment:				

#### 1.5 Operational Modes

Mode #	Description
1	EUT active and transmitting data to laptop
Comment:	

#### 1.6 EUT Configuration

Configuration #	Description
1	EUT powered by Chroma 61604 power supply (24 V DC)
2	EUT powered by non-dedicated AC/DC-adapter (see support equipment)
Comment: --	

## 1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyser in dB $\mu$ V. Any external preamplifiers used are taken into account through internal analyser settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyser. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyser (dB}\mu\text{V)} + \text{A.F. (dB/m)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dB $\mu$ V/m). The FCC limits are given in units of  $\mu$ V/m. The following formula is used to convert the units of  $\mu$ V/m to dB $\mu$ V/m:

$$\text{Limit (dB}\mu\text{V/m)} = 20 * \log (\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading + AF	= Net Reading	:	Net reading - FCC limit	= Margin
+21.5 dB $\mu$ V + 26 dB/m	= 47.5 dB $\mu$ V/m	:	47.5 dB $\mu$ V/m - 57.0 dB $\mu$ V/m	= -9.5 dB

## 2 Result Summary

Title 47 CFR Part 15B, ISED ICES-003 Issue 7				
Reference	Requirement	Reference Method	Result	Remarks
Emission				
FCC 15.109 ICES-003, 3.2.2	Radiated emissions	ANSI C63.4:2014 +A1:2017	PASS	-
FCC 15.107 ICES-003, 3.2.1	AC power line conducted emissions	ANSI C63.4:2014 +A1:2017	PASS	-
Comment:				

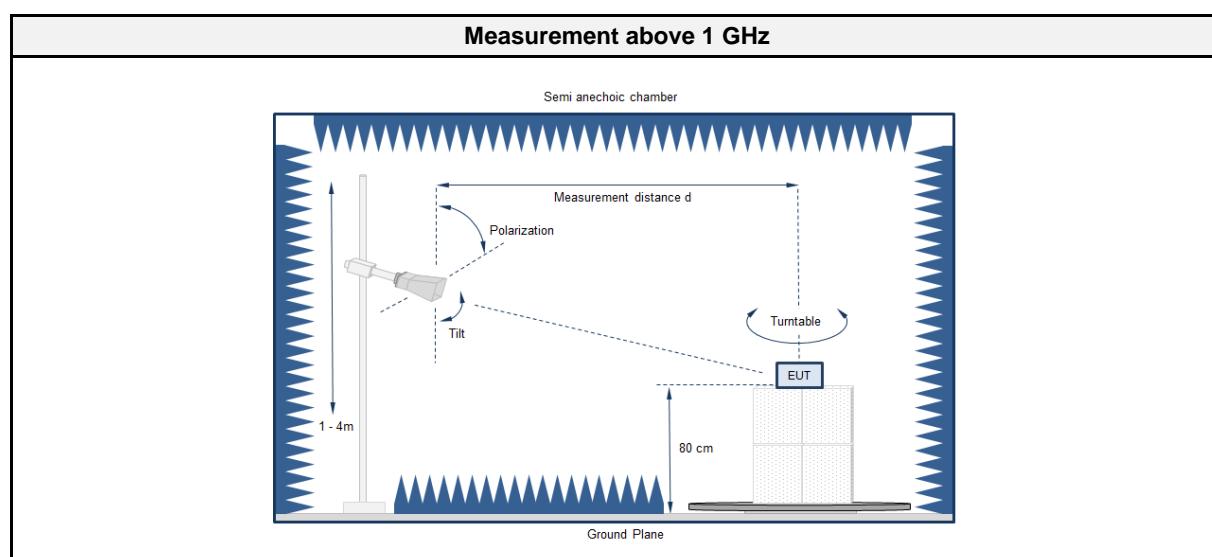
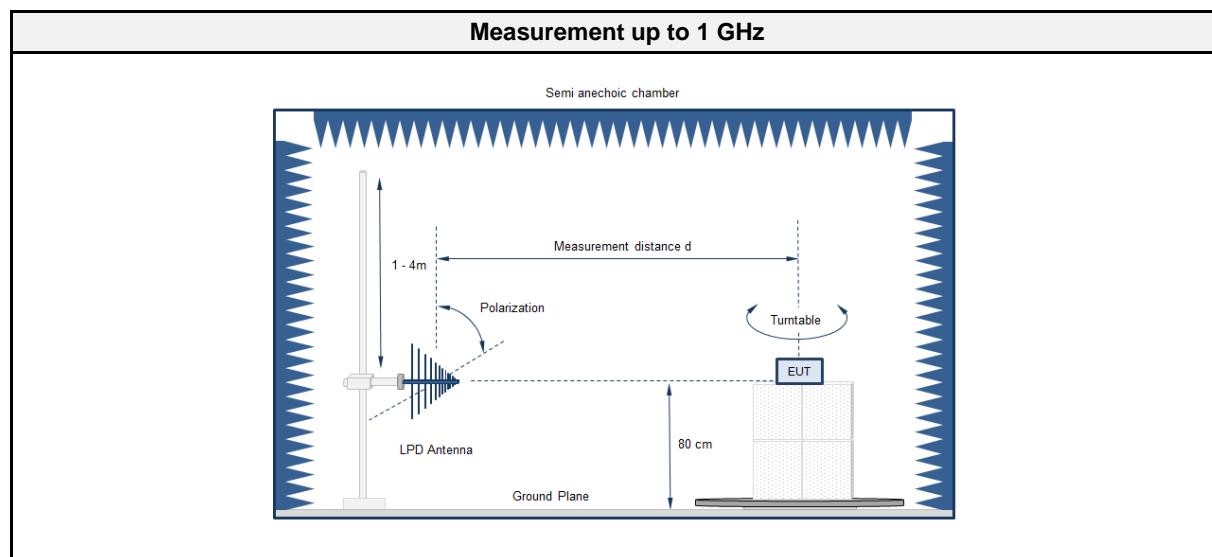
Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

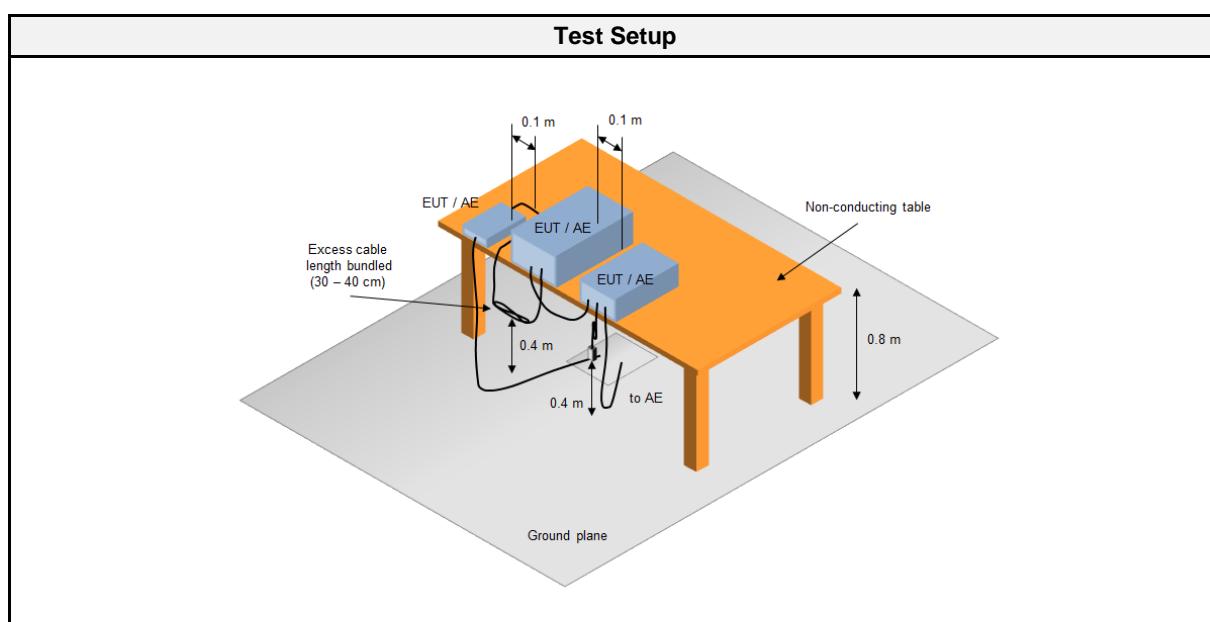
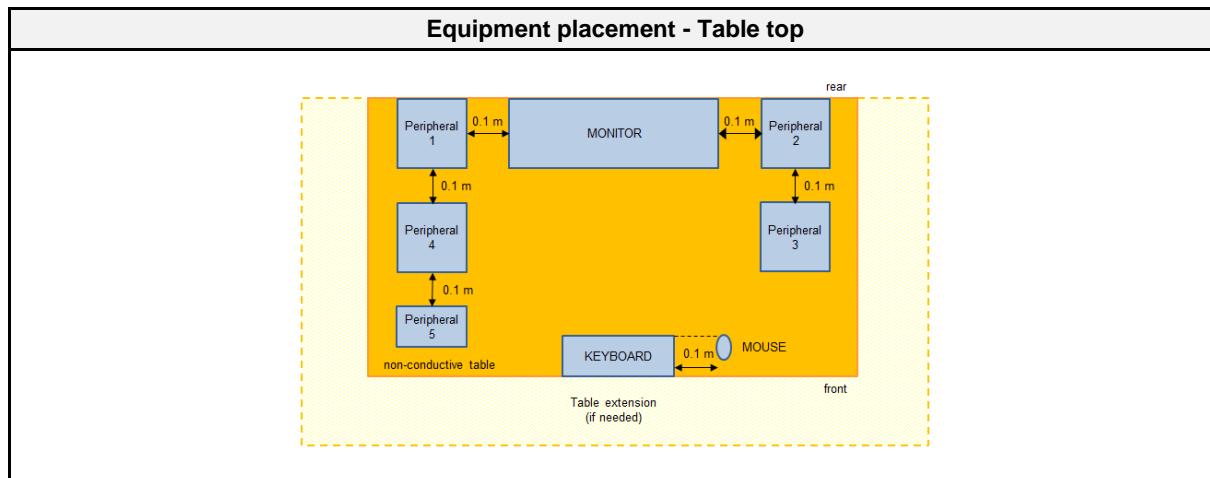
## 2.1 Test Conditions and Results - Radiated emissions acc. to ANSI C63.4

### 2.1.1 Information

Test Information	
Reference	FCC 15.109, ICES-003, 3.2.2
Reference method	ANSI C63.4:2014+A1:2017 Section 8
Equipment class	Class B
Equipment type	Table top
Highest internal frequency [MHz]	666
Measurement range	30 MHz to 10 GHz
Temperature [°C]	18 ±3
Humidity [%]	44 ±3
Operator	Jens Degenhardt supervised by Stephan Liebich
Date	2022-05-06

### 2.1.2 Setup





### 2.1.3 Equipment

Test Software					
Description	Manufacturer	Name		Version	
EMC Software	DARE Instruments	Radimation		2020.1.8	

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic chamber (NSA)	Frankonia	AC1	EF00062	2021-02	2024-02
Anechoic chamber (SVSWR)	Frankonia	AC 1	EF01011	2019-06	2022-06
Programmable AC Source	Chroma ATE Inc.	61604	EF01068	2021-07	2022-07
EMI Test Receiver	Keysight	N9038A-526/WXP	EF01070	2021-07	2022-07
Biconical Antenna	R&S	HK 116	EF00030	2021-05	2024-05
LPD Antenna	R&S	HL 223	EF00187	2019-05	2022-05
Horn Antenna	Schwarzbeck	BBHA9120D	EF00018	2019-10	2022-10
Temperature/Humidity Sensor	Embedded Data Systems, LLC.	OW-ENV-THR	EF01122	2021-03	2022-05

#### 2.1.4 Procedure

<b>Exploratory measurement</b>
<ol style="list-style-type: none"> <li>1. The EUT was placed on a non-conductive table at a height of 0.8m.</li> <li>2. The EUT and support equipment, if needed, were set up to simulate typical usage.</li> <li>3. Cables, of type and length specified by the manufacturer, were connected to at least one port of each type and were terminated by a device or simulating load of actual usage.</li> <li>4. The antenna was placed at a distance of 3 or 10 m.</li> <li>5. The received signal was monitored at the measurement receiver.</li> <li>6. This procedure has to be performed in both antenna polarizations, horizontal and vertical.</li> <li>7. The arrangement of the equipment with the maximum emission level is shown on the setup picture at item 2.1.2</li> </ol>

<b>Final measurement</b>
<ol style="list-style-type: none"> <li>1. The EUT was placed on a 0.8 m non-conductive table at a 3 m distance from the receive antenna. The antenna output was connected to the measurement receiver.</li> <li>2. A biconical antenna was used for the frequency range 30 – 200 MHz, a logarithmic periodical antenna was used for the frequency range from 200 – 1000 MHz. Above one 1 GHz a Double Ridged Broadband Horn antenna was used. The antenna was placed on an adjustable height antenna mast.</li> <li>3. The EUT and cable arrangement were based on the exploratory measurement results.</li> <li>4. Emissions were maximized at each frequency by rotating the EUT and adjusting the receive antenna height and polarization. The maximum values were recorded.</li> <li>5. The test data of the worst-case conditions were recorded and shown on the next pages.</li> </ol>

#### 2.1.5 Limits

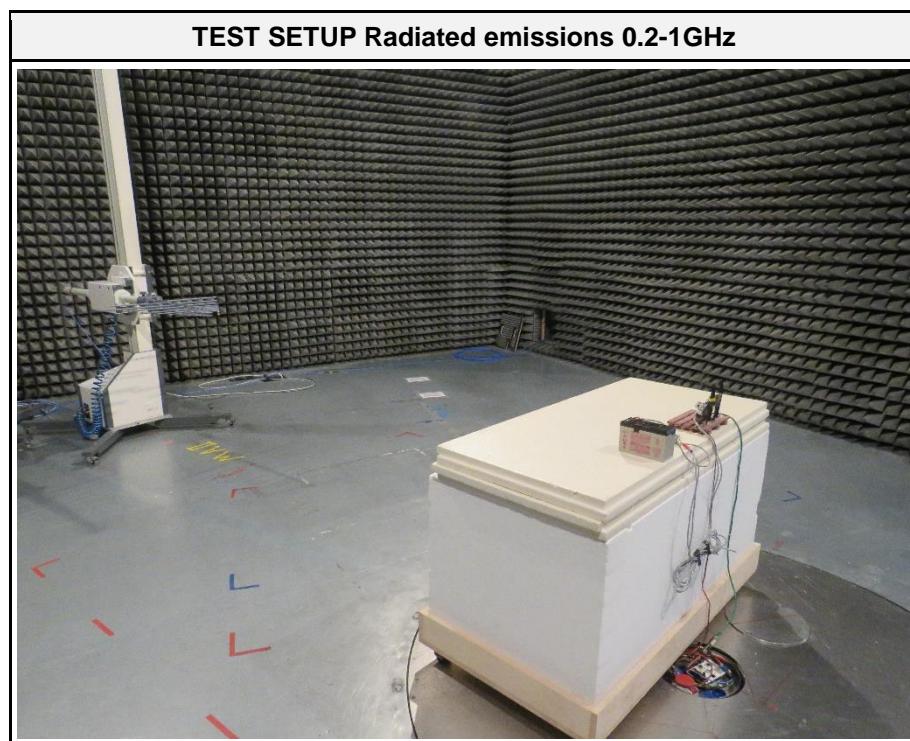
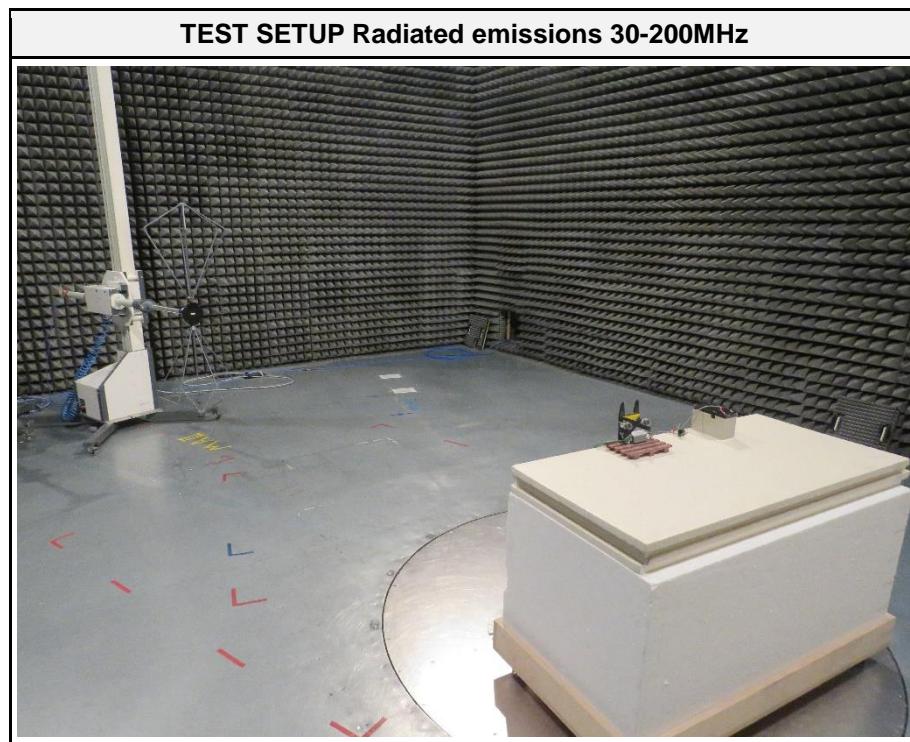
<b>Class B @ 3 m</b>		
Frequency [MHz]	Detector	Limit [dB $\mu$ V/m]
30 - 88	Quasi-peak	40
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46
960 - 1000	Quasi-peak	54
> 1000	Peak Average	74 54

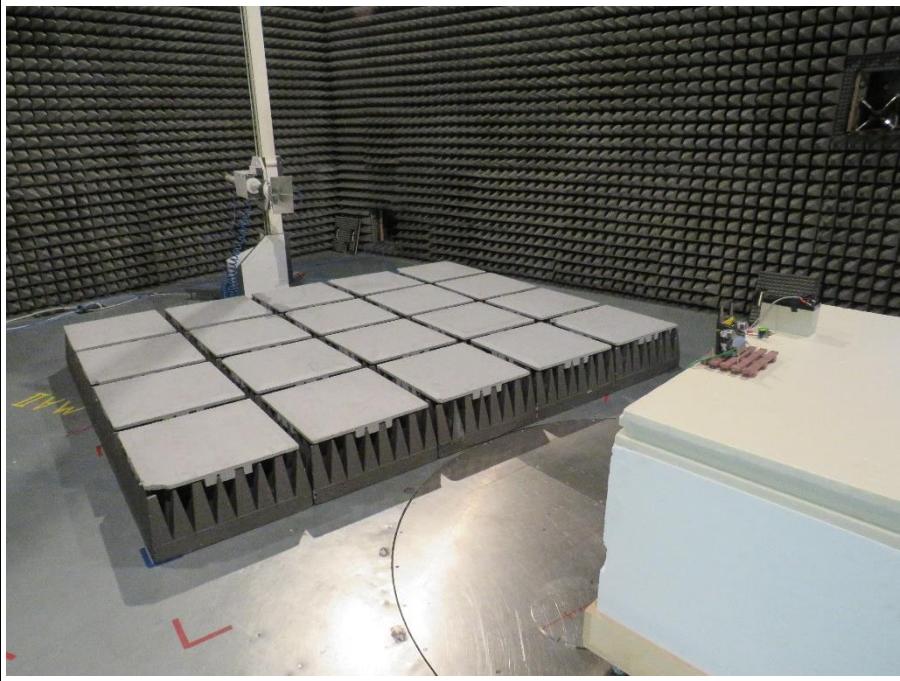
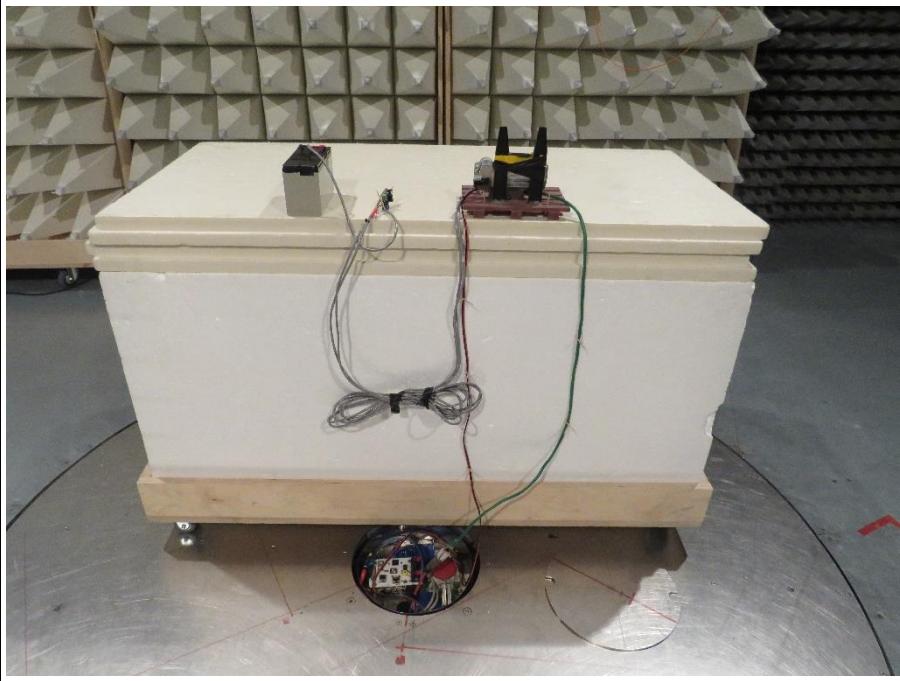
<b>Class A @ 10 m</b>		
Frequency [MHz]	Detector	Limit [dB $\mu$ V/m]
30 - 88	Quasi-peak	39
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46.5
960 - 1000	Quasi-peak	49.5
> 1000	Peak Average	69.5 49.5

#### 2.1.6 Results

<b>Test Results</b>			
Operational mode	EUT Configuration	Verdict	Remark
1	1	PASS	-

2.1.7 Setup Photos

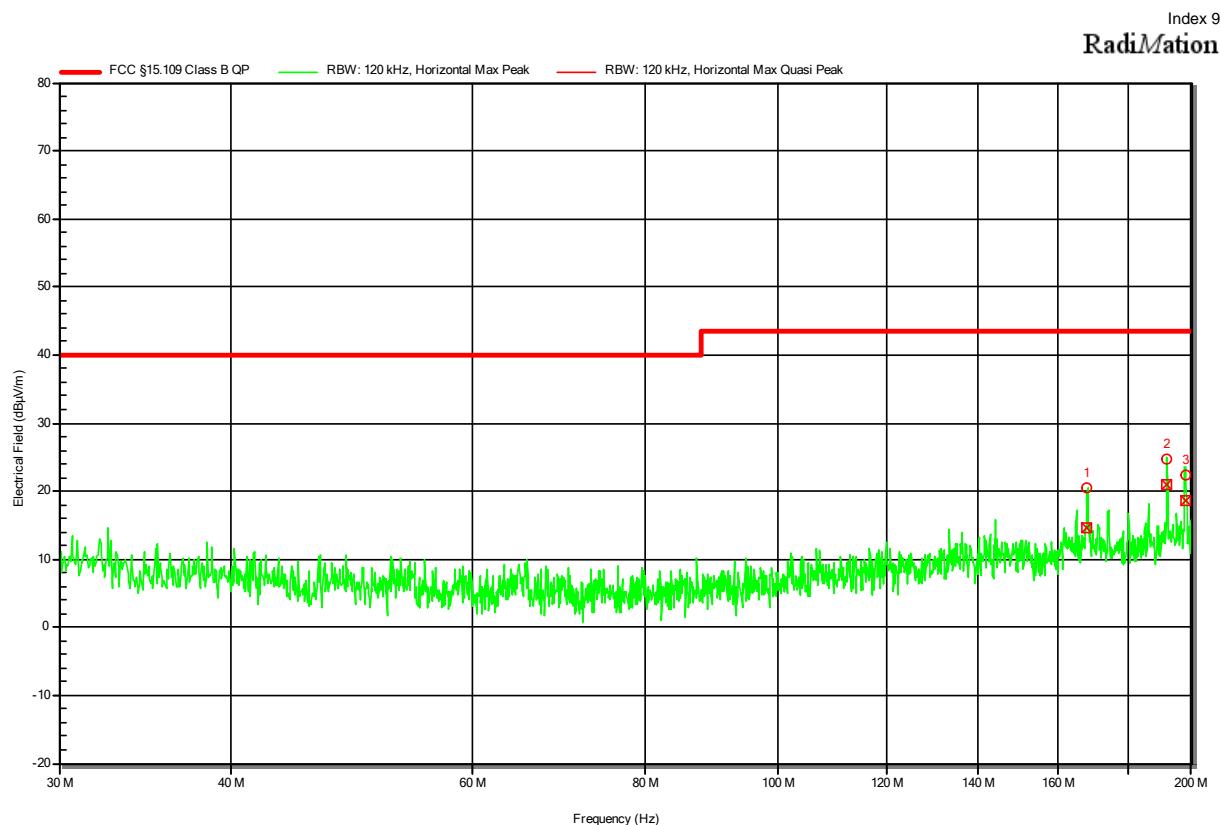


**TEST SETUP Radiated emissions 1-10GHz****TEST SETUP Radiated emissions 1-10GHz - Turntable setup**

### 2.1.8 Records

#### Radiated emissions according to FCC part 15B

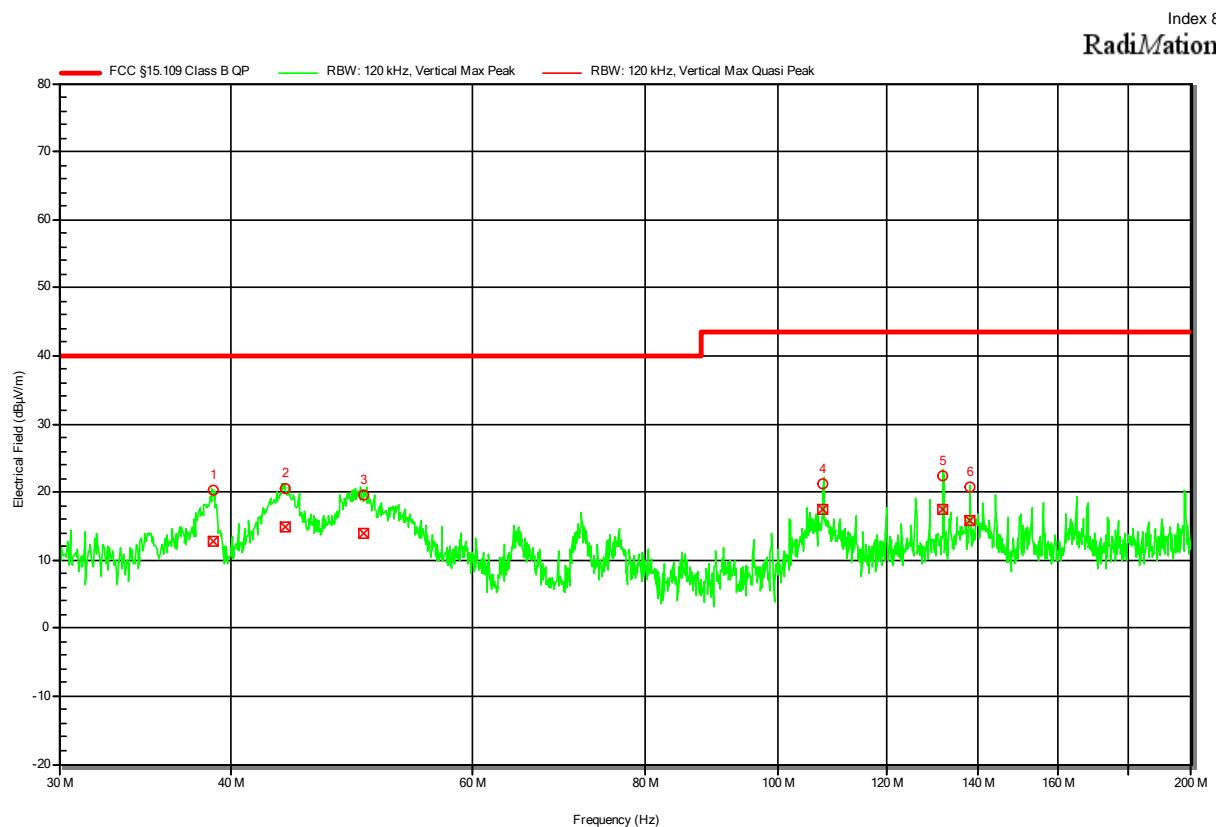
Project Number: G0M-2204-1420  
 Applicant: Hella Aglaia Mobile Vision GmbH  
 Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
 Model: JH403  
 Test Sample ID: 39817  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-05-06  
 Operating Conditions: ambient temperature: 18 °Celsius  
 power input: 24 V DC  
 Antenna: Rohde & Schwarz HK 116, Horizontal  
 Measurement Distance: 3m  
 Operational Mode: Mode 1  
 EUT Configuration: Configuration 1  
 Note 1: --



Peak Number	Frequency	Quasi-Peak	Quasi-Peak	Quasi-Peak	Quasi-Peak	Quasi-Peak	Angle	Height
1	168.022 MHz	14.52 dBµV/m	43.52 dBµV/m	-29 dB	Pass	160 degrees	1 m	
2	191.947 MHz	21.07 dBµV/m	43.52 dBµV/m	-22.46 dB	Pass	160 degrees	1 m	
3	197.9 MHz	18.55 dBµV/m	43.52 dBµV/m	-24.97 dB	Pass	160 degrees	1 m	

**Radiated emissions  
according to FCC part 15B**

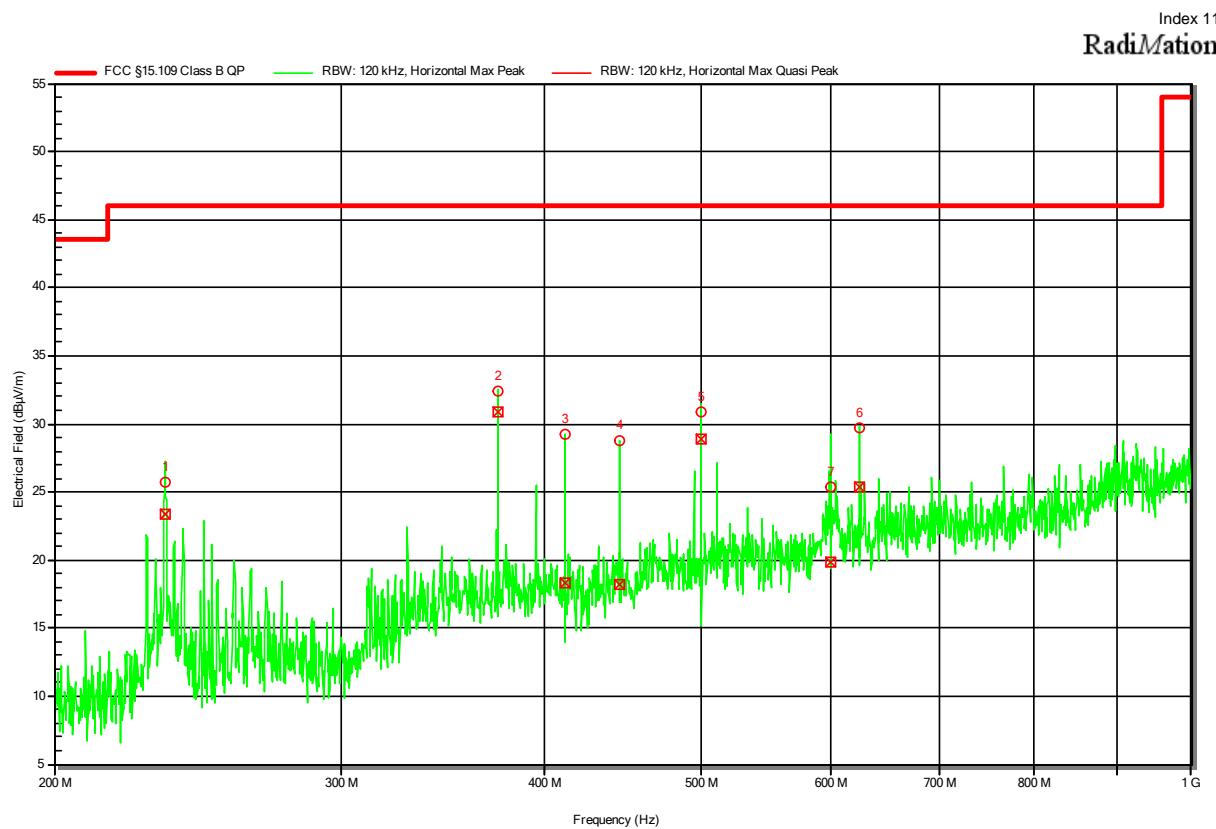
Project Number: G0M-2204-1420  
 Applicant: Hella Aglaia Mobile Vision GmbH  
 Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
 Model: JH403  
 Test Sample ID: 39817  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-05-06  
 Operating Conditions: ambient temperature: 18 °Celsius  
 power input: 24 V DC  
 Antenna: Rohde & Schwarz HK 116, Vertical  
 Measurement Distance: 3m  
 Operational Mode: Mode 1  
 EUT Configuration: Configuration 1  
 Note 1: --



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	38.851 MHz	12.77 dB $\mu$ V/m	40 dB $\mu$ V/m	-27.23 dB	Pass	160 degrees	1 m
2	43.778 MHz	14.93 dB $\mu$ V/m	40 dB $\mu$ V/m	-25.07 dB	Pass	160 degrees	1 m
3	50 MHz	13.87 dB $\mu$ V/m	40 dB $\mu$ V/m	-26.13 dB	Pass	160 degrees	1 m
4	107.967 MHz	17.44 dB $\mu$ V/m	43.52 dB $\mu$ V/m	-26.08 dB	Pass	160 degrees	1 m
5	131.898 MHz	17.42 dB $\mu$ V/m	43.52 dB $\mu$ V/m	-26.1 dB	Pass	160 degrees	1 m
6	137.965 MHz	15.76 dB $\mu$ V/m	43.52 dB $\mu$ V/m	-27.77 dB	Pass	160 degrees	1 m

**Radiated emissions  
according to FCC part 15B**

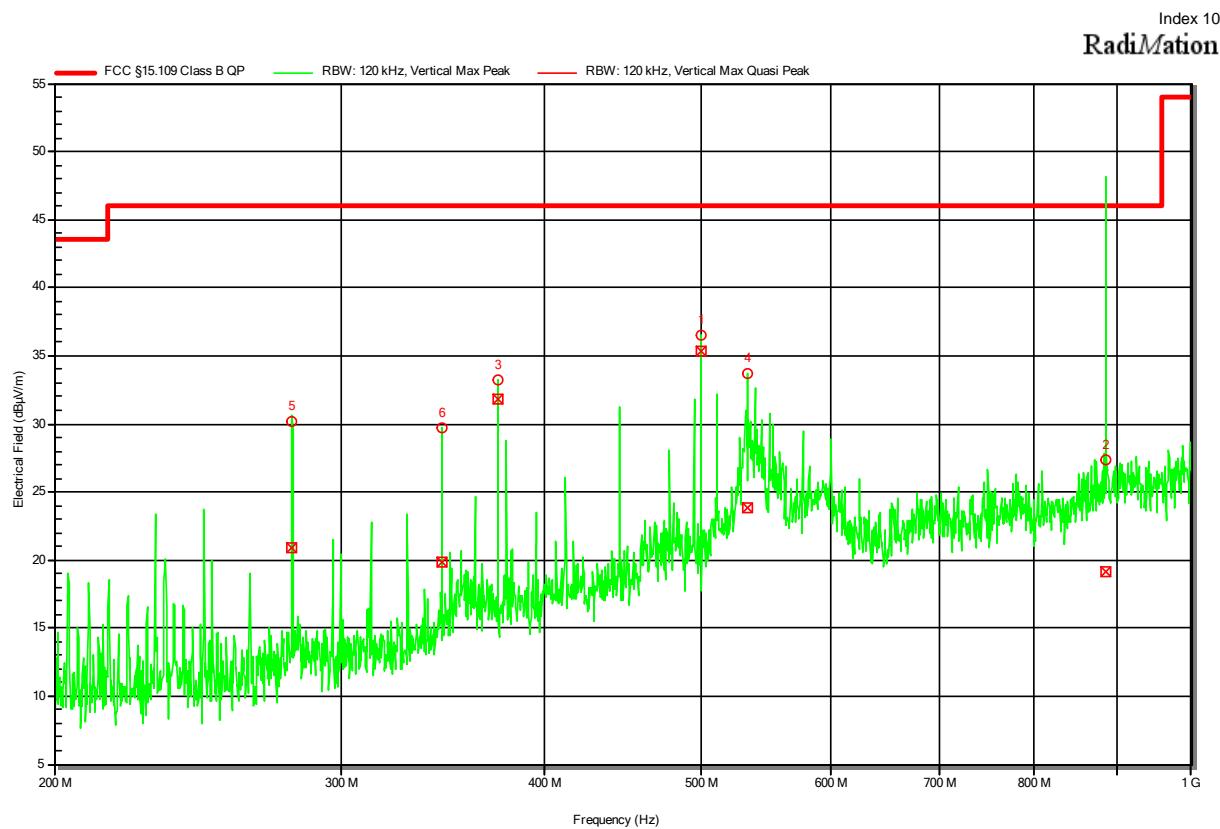
Project Number: G0M-2204-1420  
 Applicant: Hella Aglaia Mobile Vision GmbH  
 Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
 Model: JH403  
 Test Sample ID: 39817  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-05-06  
 Operating Conditions: ambient temperature: 20 °Celsius  
 power input: 24 V DC  
 Antenna: Rohde & Schwarz HL 223, Horizontal  
 Measurement Distance: 3m  
 Operational Mode: Mode 1  
 EUT Configuration: Configuration 1  
 Note 1: --



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	233.961 MHz	23.31 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-22.71 dB	Pass	-60 degrees	1.5 m
2	374.988 MHz	30.87 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-15.15 dB	Pass	-60 degrees	1.5 m
3	412.045 MHz	18.33 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-27.69 dB	Pass	-60 degrees	1.5 m
4	444.998 MHz	18.26 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-27.76 dB	Pass	-60 degrees	1.5 m
5	499.989 MHz	28.9 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-17.12 dB	Pass	-60 degrees	1.5 m
6	624.985 MHz	25.35 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-20.67 dB	Pass	-60 degrees	1.5 m
7	600 MHz	19.9 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-26.12 dB	Pass	-60 degrees	1.5 m

**Radiated emissions  
according to FCC part 15B**

Project Number: G0M-2204-1420  
 Applicant: Hella Aglaia Mobile Vision GmbH  
 Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
 Model: JH403  
 Test Sample ID: 39817  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-05-06  
 Operating Conditions: ambient temperature: 20 °Celsius  
 power input: 24 V DC  
 Antenna: Rohde & Schwarz HL 223, Vertical  
 Measurement Distance: 3m  
 Operational Mode: Mode 1  
 EUT Configuration: Configuration 1  
 Note 1: --

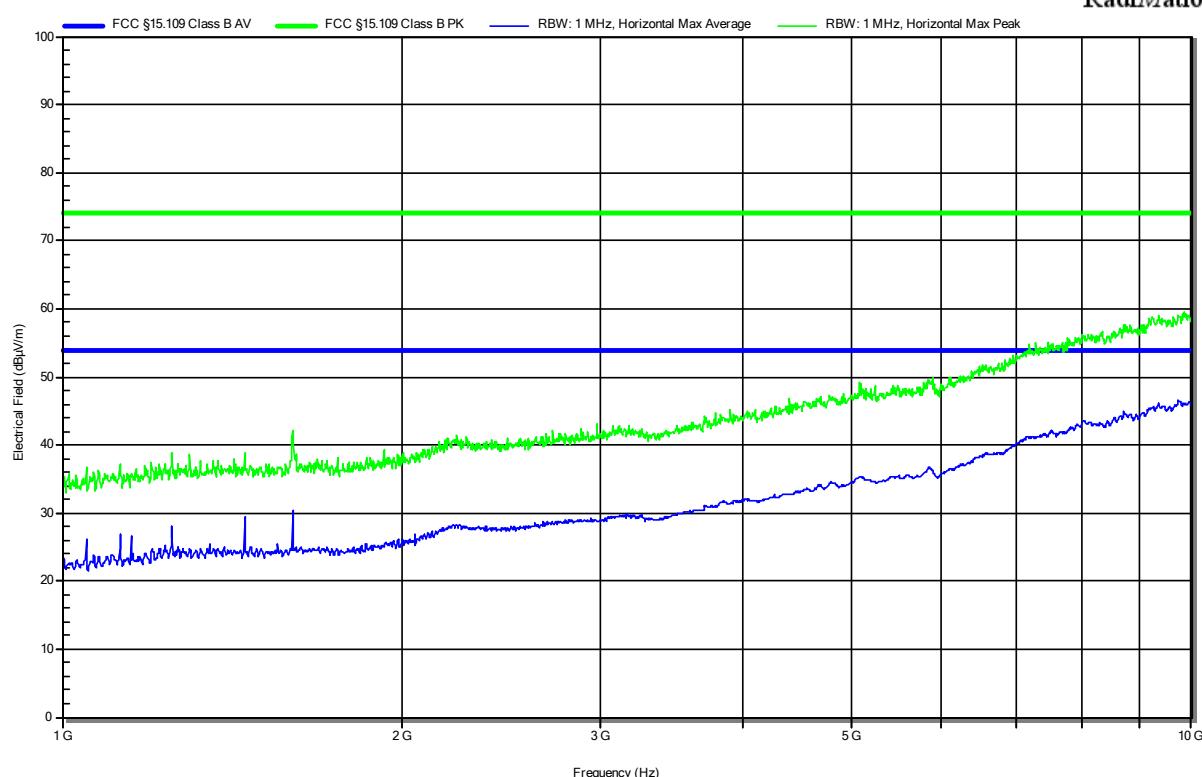


Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	499.989 MHz	35.31 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-10.71 dB	Pass	-20 degrees	1 m
2	885.895 MHz	19.1 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-26.92 dB	Pass	-20 degrees	1 m
3	374.994 MHz	31.85 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-14.17 dB	Pass	-20 degrees	1 m
4	533.356 MHz	23.86 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-22.16 dB	Pass	-20 degrees	1 m
5	280.168 MHz	20.87 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-25.15 dB	Pass	-20 degrees	1 m
6	346.104 MHz	19.83 dB $\mu$ V/m	46.02 dB $\mu$ V/m	-26.19 dB	Pass	-20 degrees	1 m

**Radiated emissions  
according to FCC part 15B**

Project Number: G0M-2204-1420  
Applicant: Hella Aglaia Mobile Vision GmbH  
Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
Model: JH403  
Test Sample ID: 39817  
Test Site: Eurofins Product Service GmbH  
Operator: Mr. Degenhardt  
Test Date: 2022-05-06  
Operating Conditions: ambient temperature: 18 °Celsius  
power input: 24 V DC  
Antenna: Schwarzbeck BBHA 9120D, Horizontal  
Measurement Distance: 3m  
Operational Mode: Mode 1  
EUT Configuration: Configuration 1  
Note 1: Turntable at 40°, antenna height 1.8m

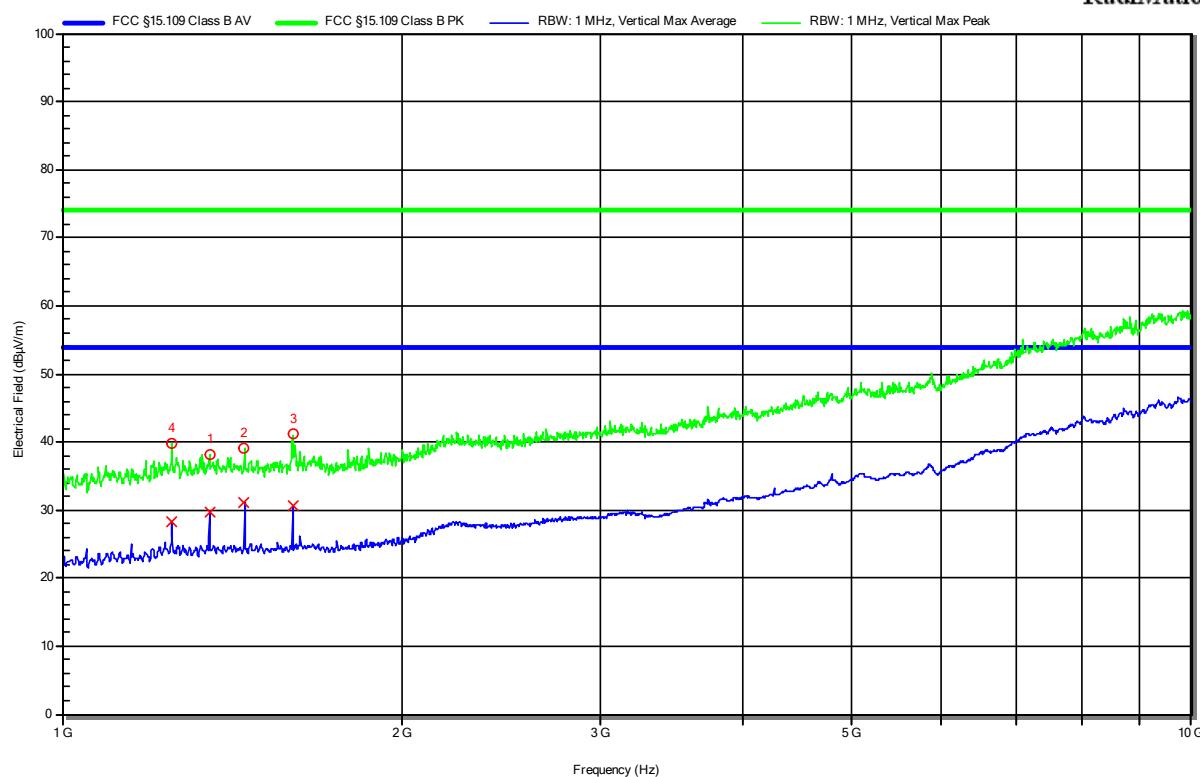
Index 4

**RadiMat**

**Radiated emissions  
according to FCC part 15B**

Project Number: G0M-2204-1420  
 Applicant: Hella Aglaia Mobile Vision GmbH  
 Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
 Model: JH403  
 Test Sample ID: 39817  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-05-06  
 Operating Conditions: ambient temperature: 18 °Celsius  
 power input: 24 V DC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement Distance: 3m  
 Operational Mode: Mode 1  
 EUT Configuration: Configuration 1  
 Note 1: --

Index 7

**RadiMat**


Peak Number	Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Angle	Height
1	1.35 GHz	38.17 dB $\mu$ V/m	73.98 dB $\mu$ V/m	-35.81 dB	Pass	180 degrees	1.7 m
2	1.45 GHz	39.01 dB $\mu$ V/m	73.98 dB $\mu$ V/m	-34.97 dB	Pass	180 degrees	1.7 m
3	1.6 GHz	41.09 dB $\mu$ V/m	73.98 dB $\mu$ V/m	-32.89 dB	Pass	180 degrees	1.7 m
4	1.25 GHz	39.7 dB $\mu$ V/m	73.98 dB $\mu$ V/m	-34.28 dB	Pass	180 degrees	1.7 m

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	1.35 GHz	29.77 dB $\mu$ V/m	53.98 dB $\mu$ V/m	-24.21 dB	Pass	180 degrees	1.7 m
2	1.45 GHz	31.09 dB $\mu$ V/m	53.98 dB $\mu$ V/m	-22.89 dB	Pass	180 degrees	1.7 m
3	1.6 GHz	30.57 dB $\mu$ V/m	53.98 dB $\mu$ V/m	-23.41 dB	Pass	180 degrees	1.7 m
4	1.25 GHz	28.37 dB $\mu$ V/m	53.98 dB $\mu$ V/m	-25.61 dB	Pass	180 degrees	1.7 m

Test Report No.: G0M-2204-1420-EF0115B-V01

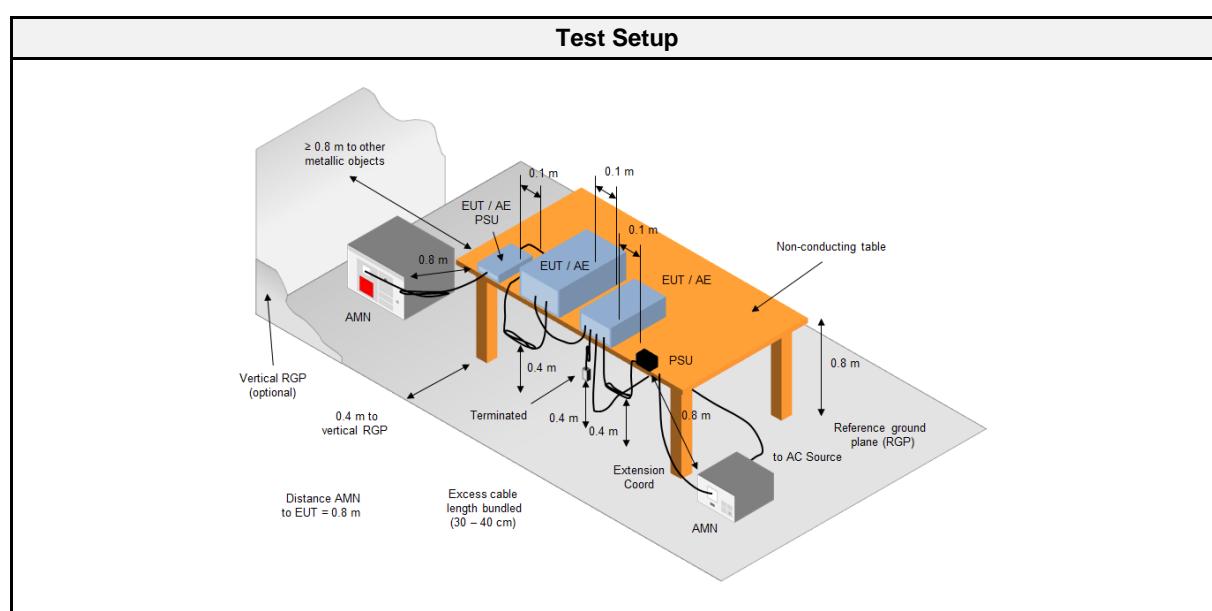
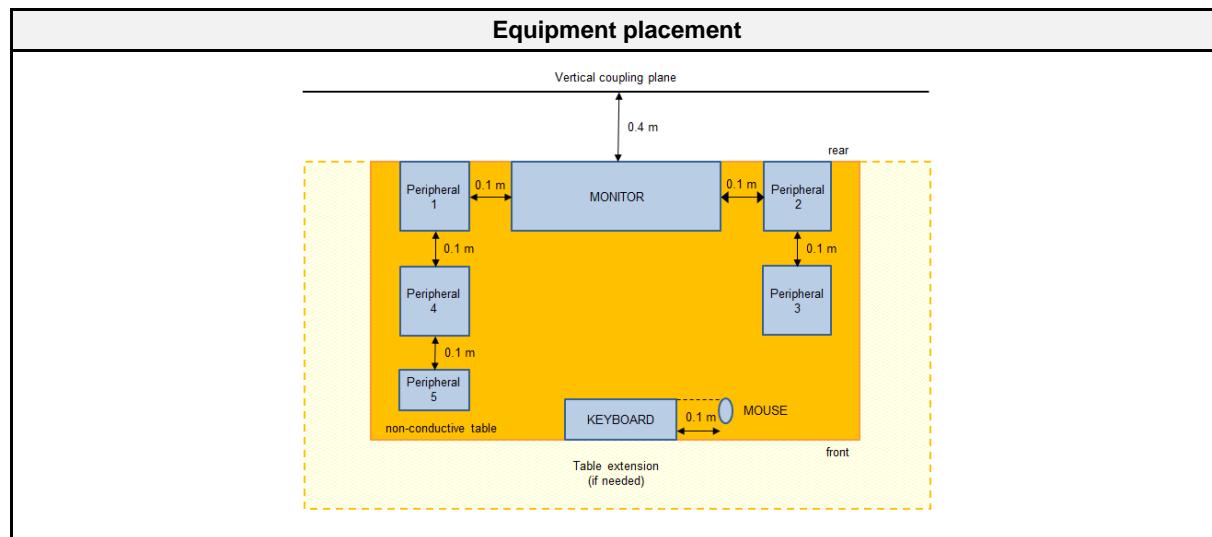
 Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## 2.2 Test Conditions and Results - Conducted emissions acc. to ANSI C63.4

### 2.2.1 Information

Test Information	
Reference	FCC 15.107, ICES-003, 3.2.1
Reference method	ANSI C63.4:2014+A1:2017 Section 12
Measurement range	150 kHz to 30 MHz
Equipment class	Class B
Equipment type	Table top
Temperature [°C]	20 ±3
Humidity [%]	40 ±3
Operator	Jens Degenhardt supervised by Stephan Liebich
Date	2022-05-06

### 2.2.2 Setup



### 2.2.3 Equipment

<b>Test Software</b>			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	Radimation	2020.1.8

<b>Test Equipment</b>					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	Schwarzbeck	NSLK 8127	EF01592	2021-07	2022-07
EMI Test Receiver	R&S	ESR 7	EF00943	2021-08	2022-08
Temperature/Humidity Sensor	Embedded Data Systems, LLC.	OW-ENV-THR	EF01122	2021-03	2022-05

### 2.2.4 Procedure

<b>Exploratory measurement</b>
<ol style="list-style-type: none"> <li>1. The EUT was placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)</li> <li>2. The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.</li> <li>3. The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).</li> <li>4. The LISN measurement port was connected to a measurement receiver</li> <li>5. I/O cables were bundled not longer than 0.4 m</li> <li>6. Measurement was performed in the frequency range 0.15 – 30MHz on each current-carrying conductor</li> <li>7. To maximize the emissions the cable positions were manipulated</li> <li>8. The worst configuration of EUT and cables is shown on a test setup picture at item 2.2.2</li> </ol>

<b>Final measurement</b>
<ol style="list-style-type: none"> <li>1. The EUT was placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)</li> <li>2. The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.</li> <li>3. The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).</li> <li>4. The LISN measurement port was connected to a measurement receiver</li> <li>5. The EUT and cable arrangement were based on the exploratory measurement results</li> <li>6. The test data of the worst-case conditions were recorded and shown on the next pages</li> </ol>

### 2.2.5 Limits

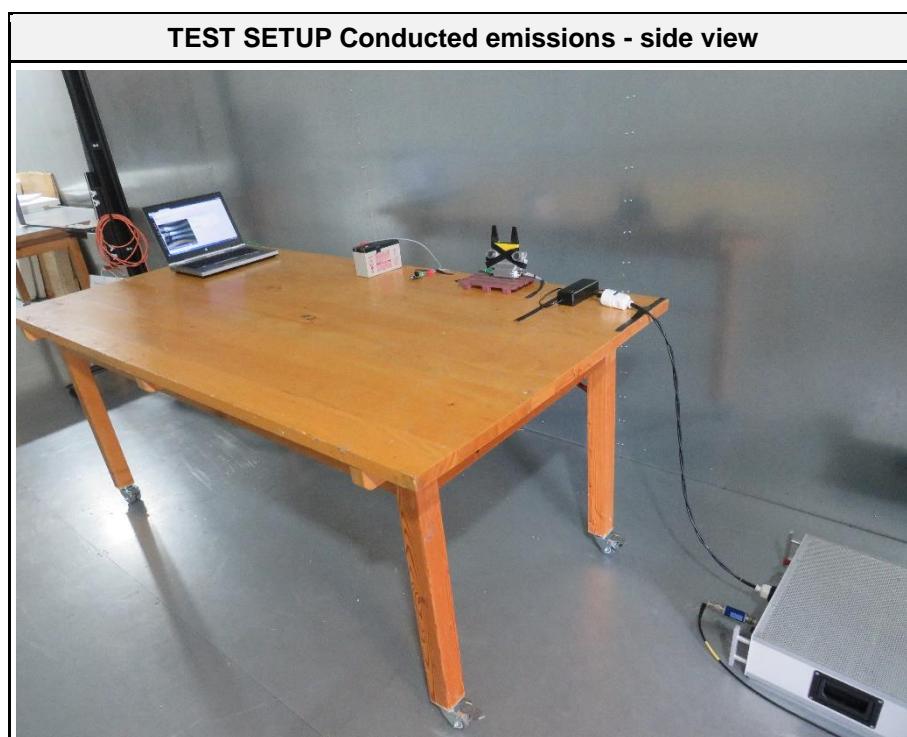
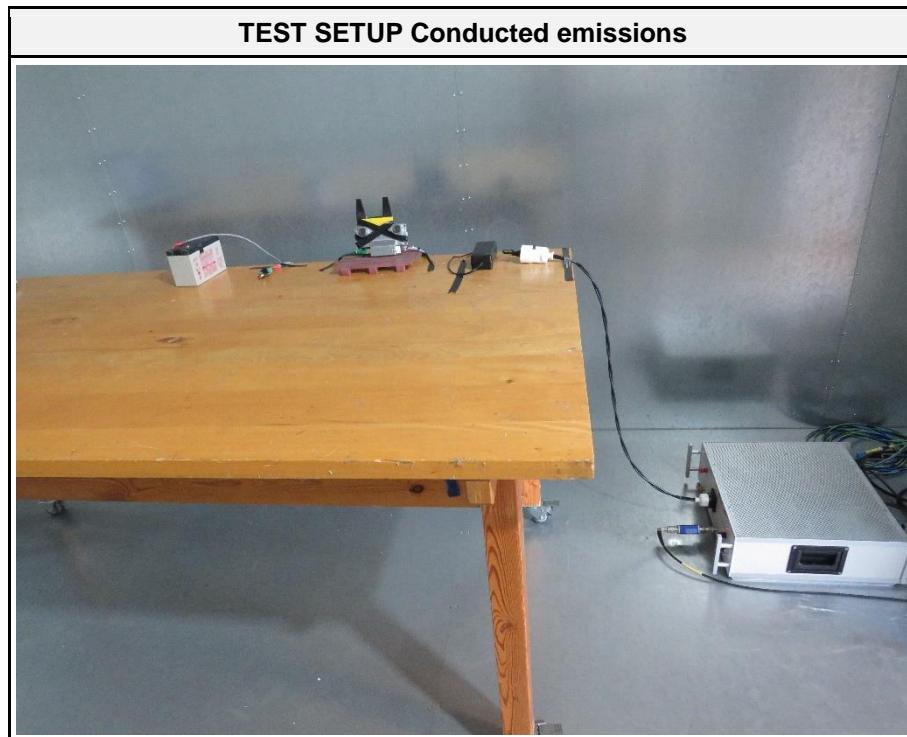
<b>Class B</b>		
Frequency [MHz]	Quasi-peak Limit [dB $\mu$ V]	Average Limit [dB $\mu$ V]
0.15 - 0.5	66 - 56 *	56 - 46 *
0.5 - 5	56	46
5 - 30	60	50

\* Decreases with the logarithm of the frequency

## 2.2.6 Results

AC power line conducted emissions					
Port	Coupling	Operational mode	EUT Configuration	Verdict	Remark
Multi purpose connector	AMN	1	2	PASS	1: DC Mains via AC/DC-adapter specified in 1.4

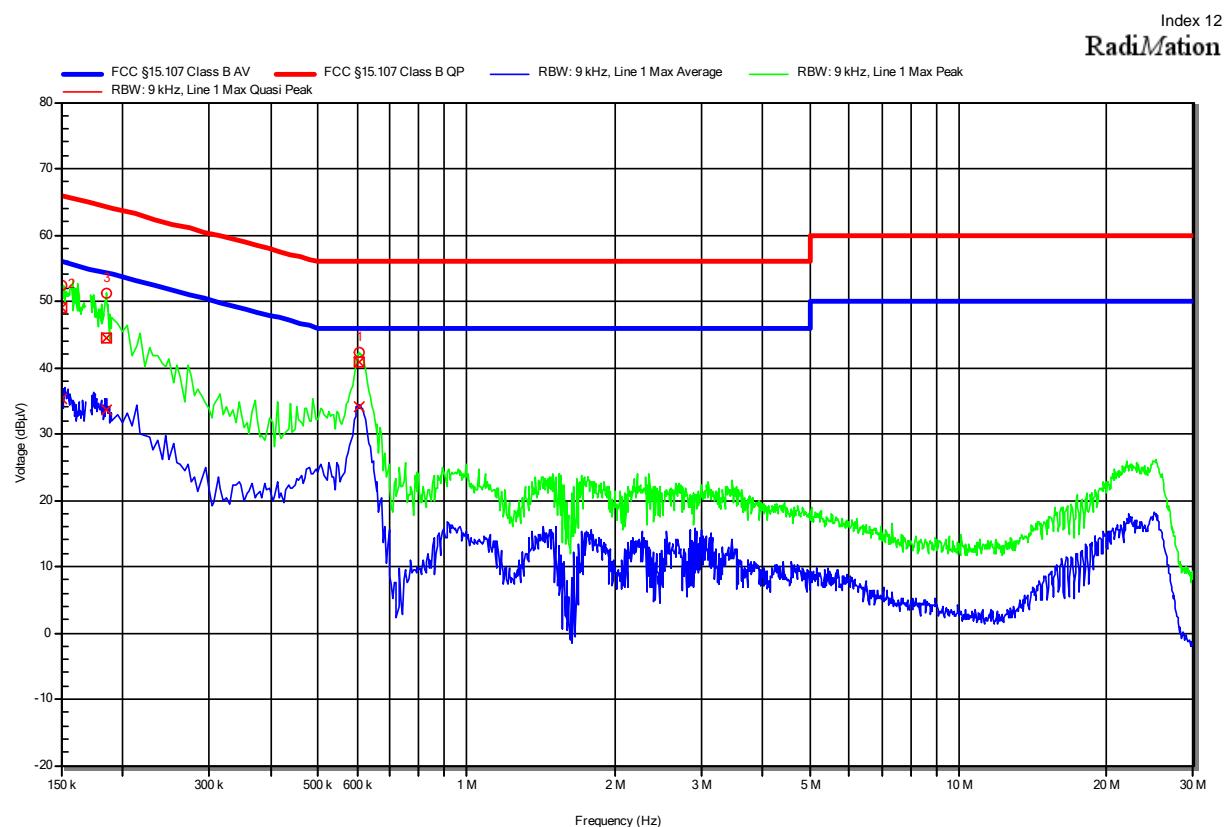
## 2.2.7 Setup Photos



## 2.2.8 Records

### Conducted emissions at the mains power port according to FCC part 15B

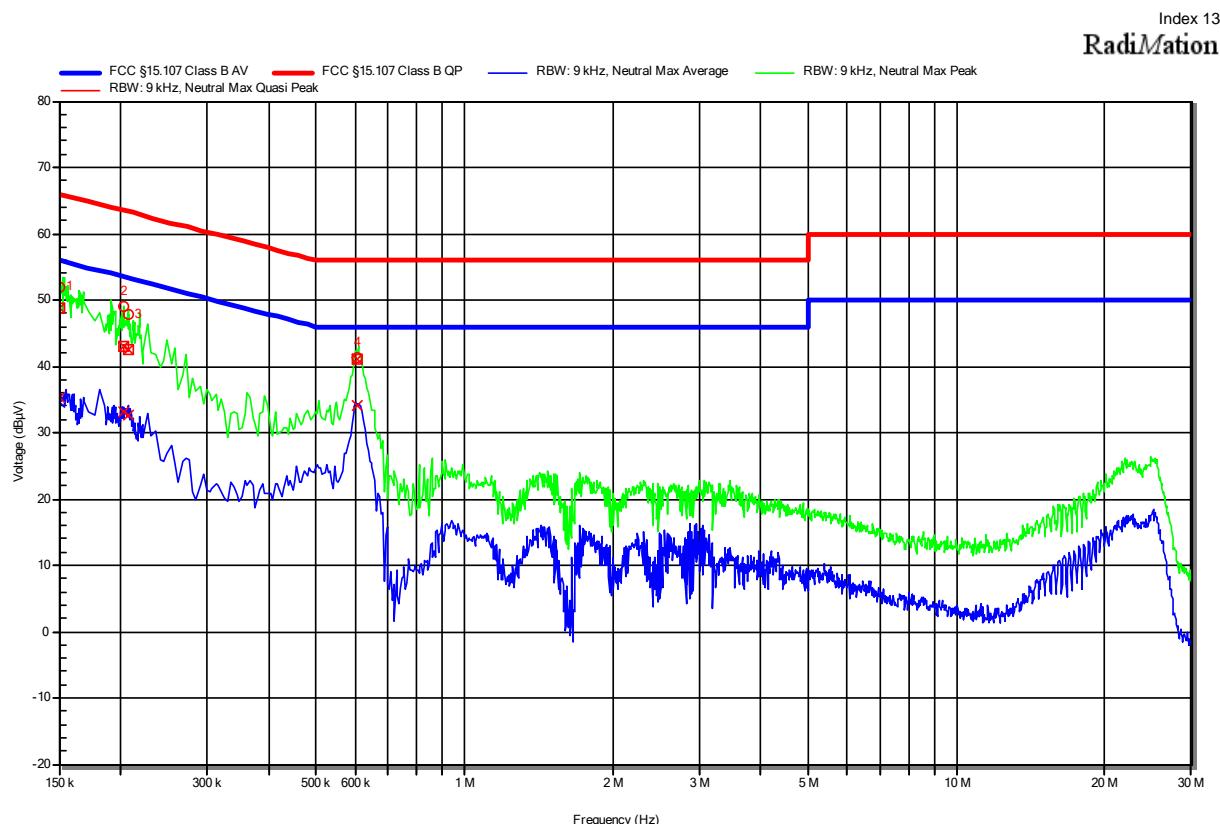
Project Number: G0M-2204-1420  
 Applicant: Hella Aglaia Mobile Vision GmbH  
 Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
 Model: JH403  
 Test Sample ID: 39817  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-05-06  
 Operating Conditions: ambient temperature: 20 °Celsius  
 power input: 120V AC / 60Hz  
 LISN: Schwarzbeck NSLK 8127 RC L  
 Operational Mode: Mode 1  
 EUT Configuration: Configuration 1  
 Applied to Port: AC Mains  
 Note 1: --



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	604.5 kHz	40.85 dB $\mu$ V	56 dB $\mu$ V	-15.15 dB	Pass	Line 1
2	150 kHz	49.05 dB $\mu$ V	66 dB $\mu$ V	-16.95 dB	Pass	Line 1
3	185.1 kHz	44.37 dB $\mu$ V	64.25 dB $\mu$ V	-19.88 dB	Pass	Line 1
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	604.5 kHz	34.03 dB $\mu$ V	46 dB $\mu$ V	-11.97 dB	Pass	Line 1
2	150 kHz	35.25 dB $\mu$ V	56 dB $\mu$ V	-20.75 dB	Pass	Line 1
3	185.1 kHz	33.66 dB $\mu$ V	54.25 dB $\mu$ V	-20.59 dB	Pass	Line 1

**Conducted emissions at the mains power port  
according to FCC part 15B**

Project Number: G0M-2204-1420  
 Applicant: Hella Aglaia Mobile Vision GmbH  
 Model Description: Advanced People Sensor; 90 mm lens distance; with IO connector  
 Model: JH403  
 Test Sample ID: 39817  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-05-06  
 Operating Conditions: ambient temperature: 20 °Celsius  
 power input: 120V AC / 60Hz  
 LISN: Schwarzbeck NSLK 8127 RC N  
 Operational Mode: Mode 1  
 EUT Configuration: Configuration 1  
 Applied to Port: AC Mains  
 Note 1: --



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	150.45 kHz	48.82 dB $\mu$ V	65.98 dB $\mu$ V	-17.15 dB	Pass	Neutral
2	203.1 kHz	43.09 dB $\mu$ V	63.48 dB $\mu$ V	-20.39 dB	Pass	Neutral
3	208.05 kHz	42.49 dB $\mu$ V	63.28 dB $\mu$ V	-20.79 dB	Pass	Neutral
4	604.5 kHz	40.97 dB $\mu$ V	56 dB $\mu$ V	-15.03 dB	Pass	Neutral

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	150.45 kHz	35.4 dB $\mu$ V	55.98 dB $\mu$ V	-20.58 dB	Pass	Neutral
2	203.1 kHz	33.2 dB $\mu$ V	53.48 dB $\mu$ V	-20.28 dB	Pass	Neutral
3	208.05 kHz	32.74 dB $\mu$ V	53.28 dB $\mu$ V	-20.54 dB	Pass	Neutral
4	604.5 kHz	34.15 dB $\mu$ V	46 dB $\mu$ V	-11.85 dB	Pass	Neutral

### 3 Measurement Uncertainty

All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2.

Test Name	Measurement Uncertainty
Conducted emissions at the mains power port	150kHz to 30MHz, 3.35dB
Radiated Emission	30MHz to 200MHz @ 3m, 5.1dB 200MHz to 1GHz @ 3m, 5.3dB >1GHz to 10GHz @3m, 5.95dB