



TEST REPORT

of the accredited test laboratory

TÜV Nr.: 2024-AT-TC-EEE-1-EX-0-000042-EMV-002

about
the following EMC - test/- research

Applicant: AVILOO GmbH
IZ NÖ-Süd, Straße 16, Objekt 69/5
Austria; 2355 Wiener Neudorf

Product: AVILOO-BOX V1.6.0

Serial Number: AB-22-02-000023

Standard: CISPR 32:2015; EN 55032:2015+A11:2020; ANSI C63.4-
2014 ; ANSI C63.4a-2017 ; 47 CFR Part 15 Subpart B (eCFR
14.02.2024)

TÜV AUSTRIA GMBH
Test laboratory for EMC

Ing. Andreas Malek

**examined by / Testing
Laboratory
TÜV AUSTRIA GMBH**



17.12.2024

Ing. Michael Emminger

**approved by / Testing
Laboratory
TÜV AUSTRIA GMBH**

A publication of this test report is only permitted literally.
Copying or reproduction of partial sections needs a written permission of
TÜV AUSTRIA GMBH.

The results of this test report only refer to the provided equipment.

Contents

	Designation	page
1.	Applicant	3
2.	Description of EUT	4
3.	Standards / Final result	5
4.	Test results	6-10
5	Equipment Calibration	11
Appendix	Designation	pages
1	Test equipment used	5
2	Photodocumentation	17

1. Applicant

Company: AVILOO GmbH

Department: ---

Address: IZ NÖ-Süd, Straße 16, Objekt 69/5
Austria; 2355 Wiener Neudorf

Contact person: Mr. Wolfgang Schöner-Gustenau

EUT received on: 14.02.2024

Tests were performed on: 14. and 15.02.2024

2. Description of EUT

EUT:	AVILOO-BOX V1.6.0 Firmware Version v4.3.0 IMEI of the incorporated Modem Device: 860195055121856
Serial Number:	AB-22-02-000023
Manufacturer:	AVILOO GmbH IZ NÖ-Süd, Straße 16, Objekt 69/5 Austria; 2355 Wiener Neudorf
Description:	AVILOO GmbH provided the following configuration for the measurements: Prototype with companion device for receiving CAN-Bus messages
Operating mode:	The measurements were carried out at the following running states: continuously operating LTE and CAN-Bus
Technical data EUT:	Rated voltage: 12/24V Rated current: <1A Rated frequency: DC Mains voltage during the tests: 24V DC
Climatic conditions in the emc laboratory:	Relative humidity: 23% Temperature: 24°C

Date:
10.12.2024

3. Standards / Final result

Name	Title	Deviation	Result
CISPR 32: 2015 EN 55032:2015 +A11:2020	Electromagnetic compatibility of multimedia equipment - Emission requirements	The transmit frequency was excluded from evaluation.	OK
ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	none	OK
ANSI C63.4a-2017	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz Amendment 1: Test Site Validation	none	OK
47 CFR Part 15 Subpart B (eCFR 14.02.2024)	Radio Frequency Devices Subpart B – Unintentional Radiators	none	OK
Result: Opinions and interpretation of testing laboratory OK EUT passed NOK EUT failed			

4. Test results

4. 1.) Radiated emission

Limits Class B according to CISPR 32 (3 m measuring distance)
Identical to the limits in CISPR Pub. 22 (alternative method in FCC 15.109 (g))

Frequency range	Quasi Peak	
30 - 230 MHz	39,6 dBµV/m	
230 - 1000 MHz	46,6 dBµV/m	
Frequeny range	Peak	Average
1 – 3 GHz	70 dBµV/m	50 dBµV/m
3 – 6 GHz	74 dBµV/m	54 dBµV/m

Measuring apparatus parameters 30 to 1000 MHz

Parameter	Preview measurement	Final measurement	Parameter	Preview measurement	Final measurement
Start frequency	30 MHz	30 MHz	Detector	Quasi Peak	Quasi Peak
Stop frequency	1000 MHz	1000 MHz	Measuring time	1 s	1 s
Stepsize	30 kHz	30 kHz	RF-attenuation	0dB	0dB
IF- Bandwidth	120 kHz	120 kHz	Preamplifier	20 dB	20 dB

Measuring apparatus parameters 1 GHz to 6 GHz

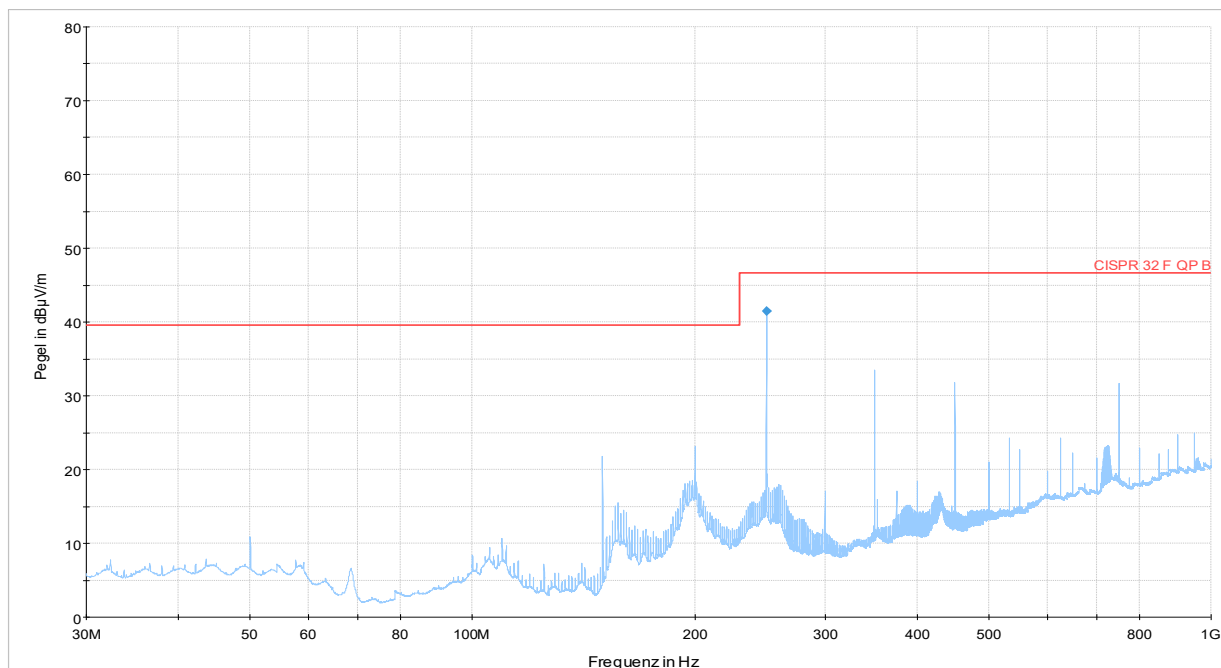
Parameter	Preview measurement	Final measurement	Parameter	Preview measurement	Final measurement
Start frequency	1 GHz	1 GHz	Detector	Max Peak / Average	Max Peak / Average
Stop frequency	6 GHz	6 GHz	Measuring time	100 ms	100 ms
Stepsize	250 kHz	250 kHz	RF-attenuation	0dB	0dB
IF- Bandwidth	1 MHz	1 MHz	Preamplifier	20 dB	20 dB

Measurement uncertainty

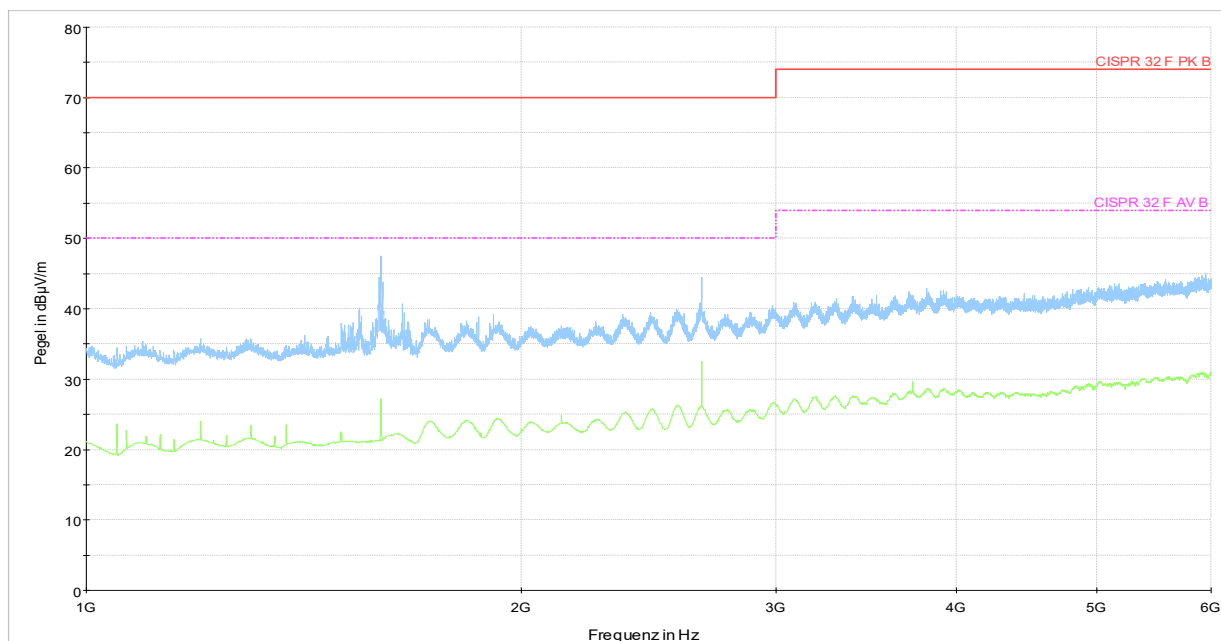
30-200 MHz horizontal: Expanded uncertainty $U_c = 4,06$ dB (Uncertainty budget = 5,06 dB)
30-200 MHz vertical: Expanded uncertainty $U_c = 4,19$ dB (Uncertainty budget = 5,17 dB)
0,2-1 GHz horizontal: Expanded uncertainty $U_c = 4,43$ dB (Uncertainty budget = 5,45 dB)
0,2-1 GHz vertical: Expanded uncertainty $U_c = 5,64$ dB (Uncertainty budget = 6,48 dB)
1-6 GHz: Expanded uncertainty $U_c = 4,40$ dB (Uncertainty budget = 5,17 dB)

Test result

4. 1.1.) Grafical representation of the test result – LTE Idle mode



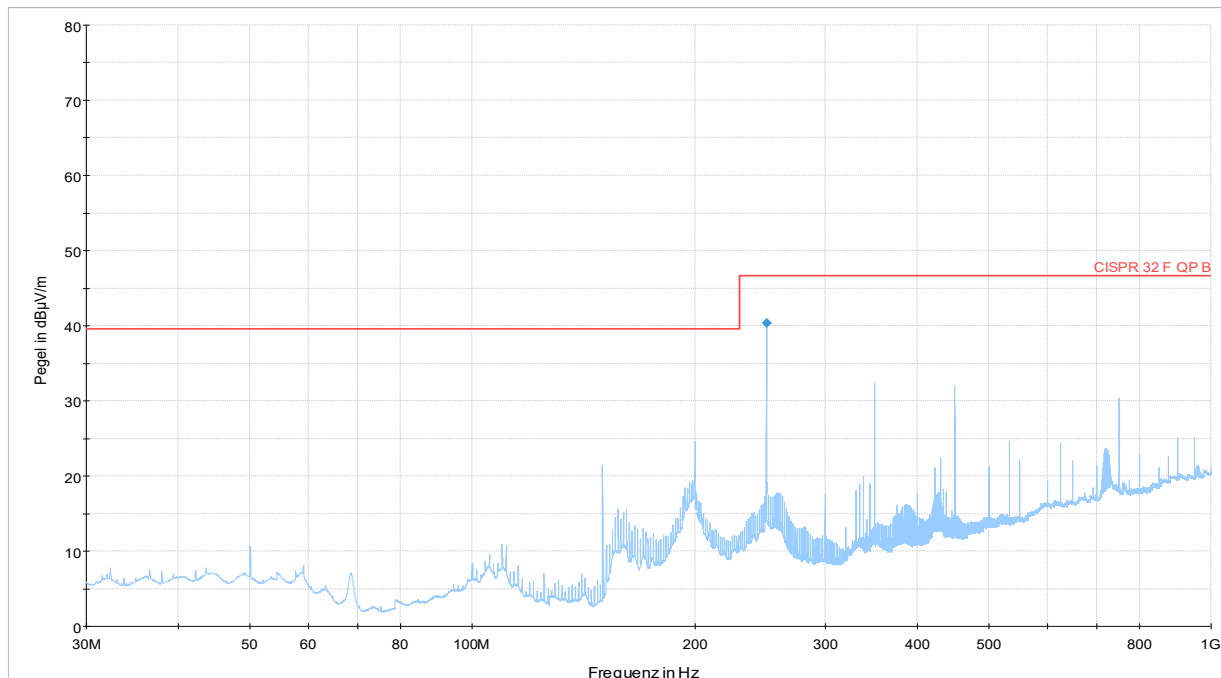
— Preview Result 1-QPK — CISPR 32 F QP B ◆ Final_Result QPK



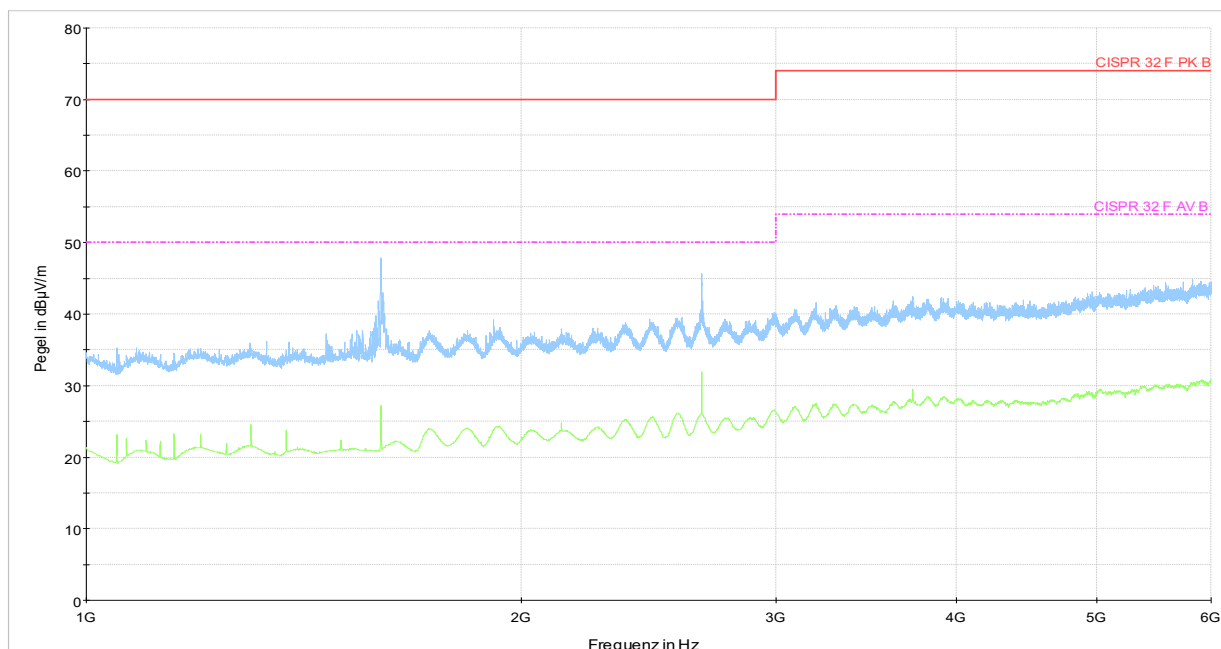
— Preview Result 2-AVG — Preview Result 1-PK+ — CISPR 32 F PK B ◆ Final_Result PK+ ◆ Final_Result AVG
- - - CISPR 32 F AV B

Above limits are identical to the limits in CISPR Pub. 22 (alternative method in FCC 15.109 (g))

4. 1.2.) Grafical representation of the test result – WCDMA Idle mode



Preview Result 1-QPK CISPR 32 F QP B Final_Result QPK



Preview Result 2-AVG Preview Result 1-PK+ CISPR 32 F PK B CISPR 32 F AV B Final_Result PK+ Final_Result AVG

Above limits are identical to the limits in CISPR Pub. 22 (alternative method in FCC 15.109 (g))

4. 1.3.) Measurement with QP-Detector (30 MHz - 1000 MHz)

Frequency [MHz]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Polarization	Azimuth [degrees]	Mode
249,99	41,42	46,6	5,18	104	V	2	LTE idle
249,99	40,35	46,6	6,25	100	V	-10	WCDMA idle

4. 1.4.) Measurement with Peak-Detector (1 GHz – 6 GHz)

Due to the large margin to the limit, no final measurement was performed.

4. 1.5.) Measurement with Average-Detector (1 GHz – 6 GHz)

Due to the large margin to the limit, no final measurement was performed.

5. Equipment Calibration

Equipment ID	Model	Serial Number	Date of Last Calibration	Calibration Interval (in years)
NT-100	Anechoic Chamber with 3m measurement distance	n/a	4.1.2024	1
NT-110/1	MA4000 - Antenna mast 1 - 4 m height	MA4000/389/30081112/L	n/a	n/a
NT-111/1	DS - Turntable 0 - 400 ° Azimuth	n/a	n/a	n/a
NT-112/1	CO3000 Controller Mast+Turntable	3891112	n/a	n/a
NT-131/1	VULB 9163 Trilog Antenna 30 – 3000 MHz	9609-4647	20.11.2023	2
NT-139	R&S HF 906 - Horn Antenna 1 - 18 GHz (emission)	100094	16.05.2023	2
NT-207/1	ESR – Test receiver 20 Hz – 26,5 GHz	101374	14.11.2023	1
NT-216	RubiSource T&M Timing reference	139	15.11.2023	2
NT-337/1	BBV9718C Preamplifier 1 GHz – 18 GHz	00112	9.11.2023	1
NT-520/1	EMC32 Version 10.60.20 Test software	n/a	n/a	n/a
NT-551	Coaxial Cable	n/a	1.2.2024	1

Appendix 1

Test equipment used

☒	Anechoic Chamber with 3m measurement distance	NT-100	☐	Ant. tripod for EN61000-4-3 Model TP1000A	NT-156
☐	Stripline according to ISO 11452-5	NT-108	☐	Power quality analyzer Fluke 1760 (complete set)	NT-160 - NT-173
☒	MA4000 - Antenna mast 1 - 4 m height	NT-110/1			
☒	DS - Turntable 0 - 400 ° Azimuth	NT-111/1	☐	ESCI - Test receiver 9 kHz - 7 GHz	NT-203/1
☒	CO3000 Controller Mast+Turntable	NT-112/1	☒	ESR – Test receiver 20 Hz – 26,5 GHz	NT-207/1
☐	HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz	NT-121	☐	Digital Radio Tester CMW500	NT-208/1
☐	FMZB1513 - Loop Antenna 9 kHz - 30 MHz	NT-122/1	☐	Noise-gen., ITU-R 559-2 20 Hz – 20 kHz	NT-209
☐	HFH-Z6 - Rod Antenna 9 kHz - 30 MHz	NT-123	☐	CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz	NT-210
☐	Dipole Antenna VHA9103 30 - 300 MHz	NT-124/1a	☐	3271 - Spectrum analyzer 100 Hz - 26,5 GHz	NT-211
☐	Dipole Antenna UHA9105 300 - 1000 MHz	NT-124/1b	☐	Digital Radio Tester Aeroflex 3920	NT-212/1
☐	3115 - Horn Antenna 1 - 18 GHz (immunity)	NT-125	☐	Mixer M28HW 26,5 GHz - 40 GHz	NT-214
☐	3116 - Horn Antenna 18 - 40 GHz	NT-126	☒	RubiSource T&M Timing reference	NT-216
☐	SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz	NT-127	☐	Radiocommunicationanalyzer SWR 1180 MD	NT-217
☐	AT-1080 - Log. Per. Antenna 80 - 1000 MHz	NT-128	☐	Mixer FS-Z60 40 GHz – 60 GHz	NT-218/1
☐	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-129	☐	Mixer FS-Z90 60 GHz – 90 GHz	NT-219/1
☐	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-130	☐	GDS-2504 Digital scope	P-W/OS03
☐	3146 - Log. Per. Antenna 200 – 1000 MHz	NT-131	☐	TPS 2014 Digital scope	NT-222
☒	VULB 9163 Trilog Antenna 30 – 3000 MHz	NT-131/1	☐	Artificial Ear according to IEC 60318	NT-224
☐	Loop Antenna H-Field	NT-132	☐	1 kHz Sound calibrator	NT-225
☐	Horn Antenna 500 MHz - 2900 MHz	NT-133	☐	SRM-3006 Spectrumalyzer	NT-233/1a
☐	Horn Antenna 500 MHz - 6000 MHz	NT-133/1	☐	E-field probe SRM 75 MHz – 3 GHz	NT-234
☐	Log. per. Antenna 800 MHz - 2500 MHz	NT-134	☐	Field Meter NBM-500 incl. E- and H-Field probes	NT-240a-e
☐	Log. per. Antenna 800 MHz - 2500 MHz	NT-135	☐	Magnetometer HP-01	NT-241/1
☐	BiConiLog Antenna 26 MHz – 2000 MHz	NT-137	☐	EFA-3 H-field- / E-field probe	NT-243
☐	Conical Dipol Antenna PCD8250	NT-138	☐	EHP-50F H-field- / E-field probe	NT-243/1
☒	HF 906 - Horn Antenna 1 - 18 GHz (emission)	NT-139	☐	Field Meter EMR-200 100 kHz – 3 GHz	NT-244
☐	HZ-1 Antenna tripod	NT-150	☐	E-field probe 100 kHz – 3 GHz	NT-245
☐	BN 1500 Antenna tripod	NT-151	☐	H-field probe 300 kHz – 30 MHz	NT-246

Competence Center:
Electrical & Enviromental

Test report number:
2024-AT-TC-EEE-1-EX-0-000042-EMV-002

Page: 1 of 5

Date: 17.12.2024

Appendix 1 (continued)

Test equipment used

☐ E-field probe 3 MHz – 18 GHz	NT-247	☐ Prana N-MT 500 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332/1
☐ H-field probe 27 MHz – 1 GHz	NT-248	☐ BBA150 RF-Amplifier 1 GHz - 6 GHz	NT-333/1
☐ ELT-400 1 Hz – 400 kHz	NT-249	☐ APA01 – RF-Amplifier 0,5 GHz – 2,5 GHz	NT-334
☐ MDS 21 - Absorbing clamp 30 - 1000 MHz	NT-250	☐ Preamplifier 1 GHz - 4 GHz	NT-335
☐ CDN EMCL-35 EM Injection clamp	NT-251/1	☐ Preamplifier for GPS MKU 152 A	NT-336
☐ FCC-203I-DCN Ferrite decoupling network	NT-252	☒ Preamplifier 1 GHz – 18 GHz	NT-337/1
☐ PR50 Current Probe	NT-253	☐ DC Block 10 MHz – 18 GHz Model 8048	NT-338
☐ i310s Current Probe	NT-254/1	☐ 2-97201 Electronic load	NT-341
☐ Fluke 87 V True RMS Multimeter	NT-260	☐ TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-344
☐ Model 2000 Digital Multimeter	NT-261	☐ TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-345
☐ Fluke 87 V Digital Multimeter	NT-262/1	☐ VDS 200 Mobil-impuls-generator	NT-350
☐ ESH2-Z5-U1 Artificial mains network 4x25A	NT-300	☐ LD 200 Mobil-impuls-generator	NT-351
☐ ESH3-Z5-U1 Artificial mains network 2x10A	NT-301	☐ MPG 200 Mobil-Impuls-Generators	NT-352
☐ ESH3-Z6-U1 Artificial mains network 1x100A	NT-302	☐ EFT 200 Mobil-impuls-generator	NT-353
☐ ESH3-Z6-U1 Artificial mains network 1x100A	NT-302a	☐ AN 200 S1 Artificial Network	NT-354
☐ EZ10 T-Artificial Network	NT-305	☐ FP-EFT 32M 3 ph. Coupling filter (Burst)	NT-400/1
☐ SMA100A - Signal generator 9 kHz - 6 GHz	NT-310/1	☐ PHE 4500 - Mains impedance network	NT-401
☐ RefRad Reference generator	NT-312	☐ IP 6.2 Coupling filter for data lines (Surge)	NT-403
☐ SMP 02 Signal generator 10 MHz - 20 GHz	NT-313	☐ TK 9421 High Power Volt. Probe 150 kHz - 30 MHz	NT-409
☐ 40 MHz Arbitrary Generator TGA1241	NT-315	☐ ESH2-Z3 - Probe 9 kHz - 30 MHz	NT-410
☐ Artificial mains network NSLK 8127-PLC	NT-316	☐ CN-EFT1000 - Capacitive clamp (Burst)	NT-411/1
☐ PSURGE 4.1 Surge generator	NT-324	☐ Highpass-Filter 100 MHz – 3 GHz	NT-412
☐ IMU4000 Immunity test system	NT-325/1a-e	☐ Highpass-Filter 600 MHz – 4 GHz	NT-413
☐ VCS 500-M6 Surge-Generator	NT-326	☐ Highpass-Filter 1250 MHz – 4 GHz	NT-414
☐ Oscillatory Wave Simulator incl. Coupling networks	NT-328a+b+c	☐ Highpass-Filter 1800 MHz – 16 GHz	NT-415
☐ BTA-250 - RF-Amplifier 9 kHz - 220 MHz / 250 W	NT-330		

Competence Center:
Electrical & Environmental

Test report number:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 2 of 5

Date: 17.12.2024

Appendix 1 (continued)

Test equipment used

☐	RF-Attenuator 10 dB DC – 18 GHz / 50 W	NT-417/1	☐	95242-1 – Current probe 1 MHz – 400 MHz	NT-468
☐	RF-Attenuator 6 dB DC – 18 GHz / 50 W	NT-418	☐	94106-1L-1 – Current probe 100 kHz – 450 MHz	NT-471
☐	RF-Attenuator 3 dB DC – 18 GHz / 50 W	NT-419	☐	WHKX12-2700-3000-18000 3 GHz Highpass filter	NT-472
☐	RF-Attenuator 20 dB DC - 1000 MHz / 25 W	NT-421	☐	WHKX10-3870-4500-18000 4,5 GHz Highpass filter	NT-473
☐	RF-Attenuator 30 dB DC - 1000 MHz / 1 W	NT-423	☐	CDN S9 USB3.0 Coupling decoupling network	NT-474
☐	RF-Attenuator 30 dB	NT-424	☐	CDN S2 XLR3-1 Coupling decoupling network	NT-475
☐	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-425	☐	CDN S8 RJ45 Coupling decoupling network	NT-476
☐	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-426	☐	GA 1240 Power amplifier according to EN 61000-4-16	NT-480
☐	RF-Attenuator 6 dB	NT-428	☐	Coupling networks according to EN 61000-4-16	NT-481 - NT-483
☐	RF-Attenuator 0 dB - 81 dB	NT-429	☐	Van der Hoofden Test Head	NT-484
☐	WRU 27 - Band blocking 27 MHz	NT-430	☐	WRCJV12-5820-5850-5950-5980 5,9 GHz Band Reject Filter	NT-490
☐	WHJ450C9 AA - High pass 450 MHz	NT-431	☐	WHKX10-5670-6300-18000 6 GHz Highpass filter	NT-491
☐	WHJ250C9 AA - High pass 250 MHz	NT-432	☐	WHK12-935-1000-7000 1 GHz Highpass filter	NT-492
☐	RF-Load 150 W	NT-433	☐	EMC Video/Audiosystem	NT-511/1
☐	Impedance transducer 1:4 ; 1:9 ; 1:16	NT-435	☒	EMC32 Version 10.60.20 Test software	NT-520/1
☐	RF-Attenuator DC – 18 GHz 6 dB	NT-436	☐	SRM-TS Version 1.3 software for SRM-3000	NT-522
☐	RF-Attenuator DC – 18 GHz 6 dB	NT-437	☐	SRM-TS Version 1.3.1 software for SRM-3006	NT-522/1
☐	RF-Attenuator DC – 18 GHz 10 dB	NT-438	☐	Spitzenberger und Spies Test software V4.1	NT-525
☐	RF-Attenuator DC – 18 GHz 20 dB	NT-439	☐	Vertical coupling plane (ESD)	NT-531
☐	ESH3-Z2 - Pulse limiter 9 kHz - 30 MHz	NT-441	☐	Test cable #4 for EN 61000-4-6	NT-553
☐	Power Divider 6 dB/1 W/50 Ohm	NT-443	☐	Test cable #3 for conducted emission	NT-554
☐	Directional coupler 0,1 MHz – 70 MHz	NT-444	☐	Test cable #5+#6 ESD-cable (2x470k)	NT-555 + NT-556
☐	Directional coupler 0,1 MHz – 70 MHz	NT-445	☐	Test cable #8 Sucoflex 104EA	NT-559
☐	Tube imitations according to EN 55015	NT-450	☐	Test cable #9 (for outdoor measurements)	NT-580
☐	FCC-801-M3-16A Coupling decoupling network	NT-458	☐	Test cable #10 (for outdoor measurements)	NT-581
☐	FCC-801-M2-50A Coupling decoupling network	NT-459	☐	Test cable #13 Sucoflex 104PE	NT-584
☐	FCC-801-M5-25 Coupling decoupling network	NT-460	☐	Test cable #21 for SRM-3000	NT-592
☐	FCC-801-T4 Coupling decoupling network	NT-463	☐	Shield chamber	NT-600
☐	FCC-801-C1 Coupling decoupling network	NT-464	☐	Climatic chamber	M-1200
☐	SW 9605 - Current probe 150 kHz – 30 MHz	NT-465/1			

Competence Center:
Electrical & Environmental

Test report number:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 3 of 5

Date: 17.12.2024

Appendix 1 (continued)

Test equipment used

☐	Anechoic Chamber 3 m / 5 m measuring distance	EMV-100	☐	HF- Amplifier 9 kHz-225 MHz BBL200	EMV-300/1
☐	Turntabel 6 m diameter	EMV-101	☐	HF- Amplifier 80 -1000 MHz BBA150	EMV-301
☐	Antenna mast + controller	EMV-102+ EMV-103	☐	HF- Amplifier 0,8 - 6 GHz BBA150	EMV-302
☐	EMC Video/Audiosystem	EMV-104	☐	High Power Ant. 20-200 MHz HPBA-2510	EMV-303/1
☐	EMC Software EMC32 Version 11.7	EMV-105	☐	High Power Ant. 20-200 MHz S12018-21	EMV-303/2
☐	Hornantenna 1 – 18 GHz HF 907	EMV-110	☐	Log.per Antenna 80-2700 MHz STLP 9128 E special	EMV-304
☐	Antennapre.amp. 1 – 18 GHz BBV 9718 D	EMV-111/1	☐	Log.per Antenna 0,7 – 9 GHz STLP9149	EMV-305
☐	Trilog Antenna 30-3000 MHz VULB9163	EMV-112	☐	HF- Amplifier 9 kHz-250 MHz BBA150 (low noise)	EMV-306
☐	Monopol 9 kHz – 30 MHz VAMP 9243	EMV-113	☐	ISO11451-2 TLS 10 kHz – 30 MHz	EMV-307
☐	Antennapre.amp 18 – 40 GHz BBV 9721	EMV-114	☐	Load Dump Generator LD 200N	EMV-350
☐	Hornantenna 200 – 2000 MHz AH-220	EMV-115	☐	Ultra Compact Symulator UCS 200N100	EMV-351
☐	DC Artificial Network PVDC 8300	EMV-150	☐	Automotive Power fail module PFM 200N100.1	EMV-352
☐	AC Artificial Network NNLK 8121 RC	EMV-151	☐	Voltage Drop Symulator VDS 200Q100	EMV-353
☐	AC Artificial Network NNLK 140	EMV- 153a-d	☐	Arb. Generator AutoWave	EMV-354
☐	EMI Receiver ESW44	EMV-200/1	☐	Ultra Compact Symulator UCS 500N7	EMV-355
☐	Signalgenerator 9 kHz – 40 GHz N5173B	EMV-201	☐	Coupling decoupling network CNI 503B7 / 32 A	EMV-356
☐	GPS Frequency normal B-88	EMV-202	☐	Coupling decoupling network CNI 503B7 / 63 A	EMV-357
☐	DC Power supply N5745A	EMV-203	☐	Telecom Surge Generator TSurge 7	EMV-358
☐	Spektrum Analyzator FSV40	EMV-205	☐	Coupling decoupling network CNI 508N2	EMV-359
☐	Thd Multimeter Model 2015	EMV-206	☐	Coupling decoupling network CNV 504N2.2	EMV-360
☐	Poweramplifier PAS15000	EMV- 207/abc	☐	Immunity generator NSG4060/NSG4060-1	EMV-361
☐	Inrush Current Source	EMV- 208/abc	☐	Coupling network CDND M316-2	EMV-362
☐	Arb.-generator Sycore	EMV-209	☐	Coupling network CT419-5	EMV-363
☐	Harmonics/Flicker analyzer ARS 16/3	EMV-210	☐	ESD Generator NSG 437	EMV-364
☐	Power Supply Regatron AC	EMV-214	☐	Pulse Limiter VTSD 9561-F BNC	EMV-405
☐	Power Supply Regatron DC	EMV-215	☐	Transient emission BSM200N40+BS200N100	EMV- 450+451
☐	Harmonics/Flicker analyser Zimmer	EMV-216	☐	Cap. Coupling Clamp HFK	EMV-455
☐	Flicker Impedanz Newtons4th 753	EMV-218	☐	Mag. Field System MS100N+MC26100+MC2630	EMV- 456-458
☐	Comemso	EMV-219			

Competence Center:
Electrical & Enviromental

Test report number:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 4 of 5

Date: 17.12.2024

Appendix 1 (continued)

Test equipment used

Competence Center:
Electrical & Enviromental

Test report number:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 5 of 5

Date: 17.12.2024

☐	Coupling network CDN M2-100A	EMV-459
☐	Coupling network CDN M3-32A	EMV-460
☐	Coupling network CDN M5-100A	EMV-461
☐	Current Clamp CIP 9136A	EMV-462
☐	DC Artificial Network HV-AN 150	EMV-464+465
☐	Coupling Clamp EM 101	EMV-466
☐	Decoupling Clamp FTC 101	EMV-467
☐	Power attenuator 10 dB / 250 Watt	EMV-469/2
☐	HV AMN NNHV 8123 800A	EMV-472
☐	HV AMN NNHV 8123 800A	EMV-473

Appendix 2 Photodocumentation

Division:
Industry & Energy

Description: External view #1

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 1 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

Division:
Industry & Energy

Description: External view #2

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 2 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

Division:
Industry & Energy

Description: External view #3

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 3 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

Division:
Industry & Energy

Description: External view #4

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 4 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

Division:
Industry & Energy

Description: Label

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 5 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

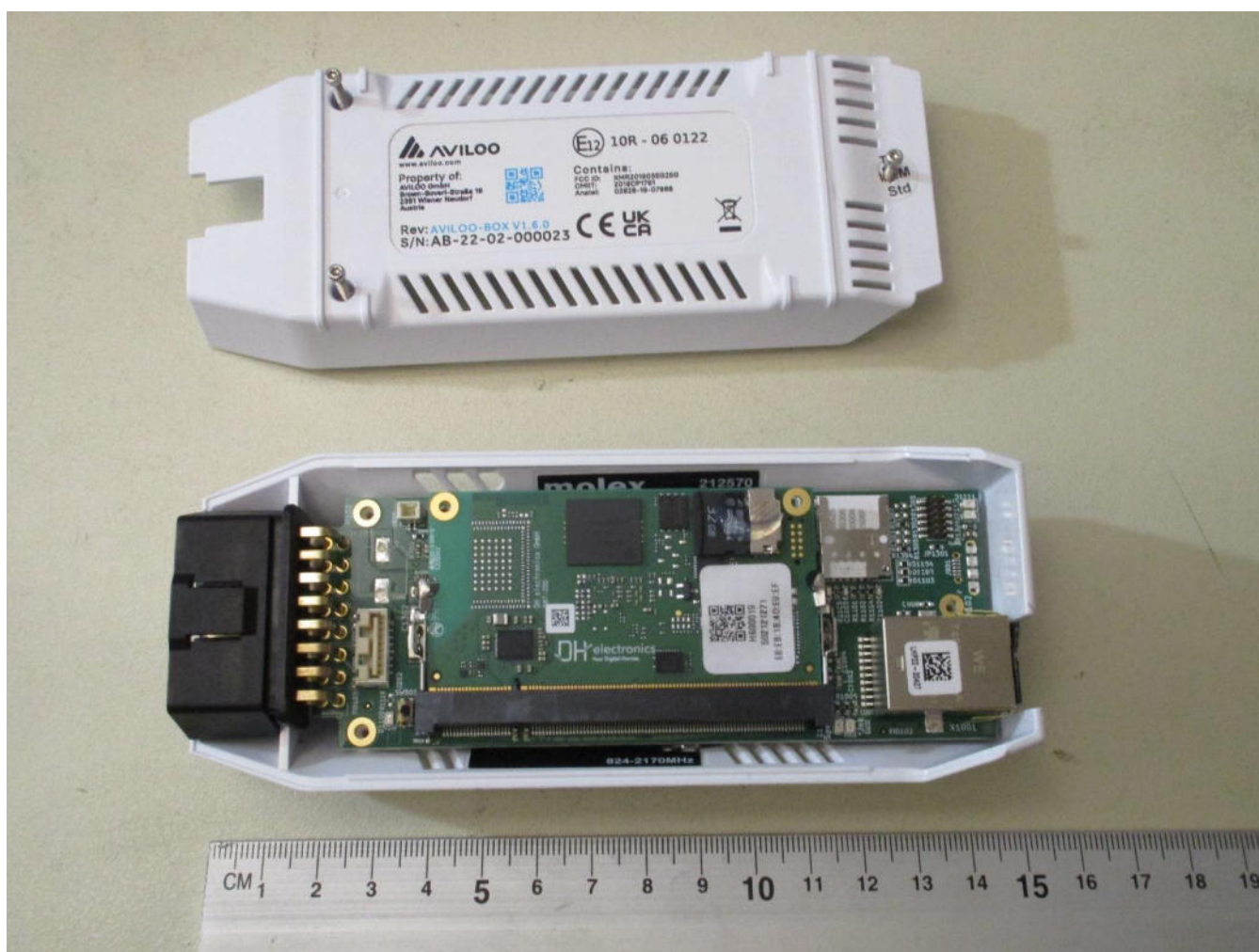
Division:
Industry & Energy

Description: Case opened

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 6 of 17

Date: 17.12.2024



Appendix 2

Photodocumentation

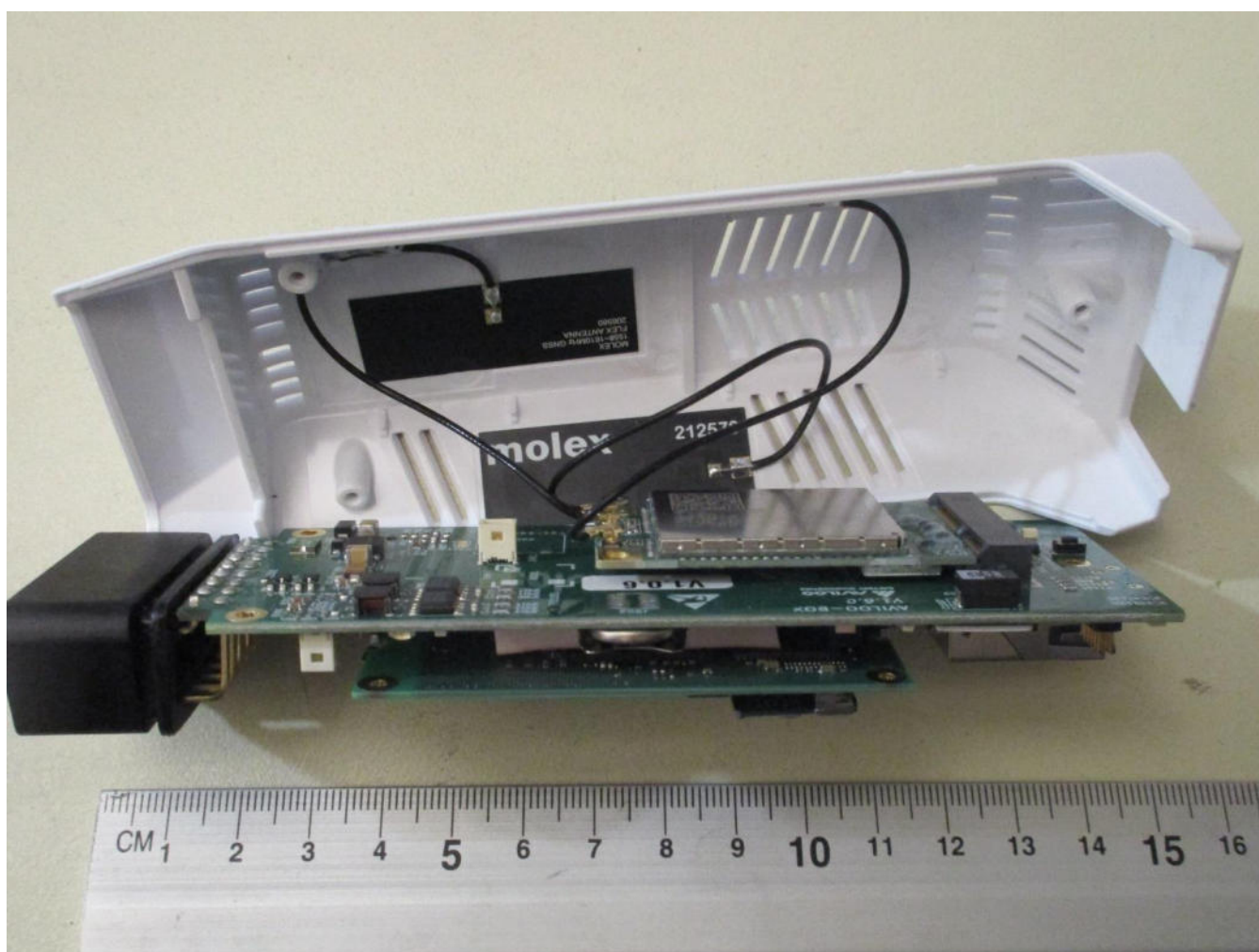
Division:
Industry & Energy

Description: Internal view #1

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 7 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

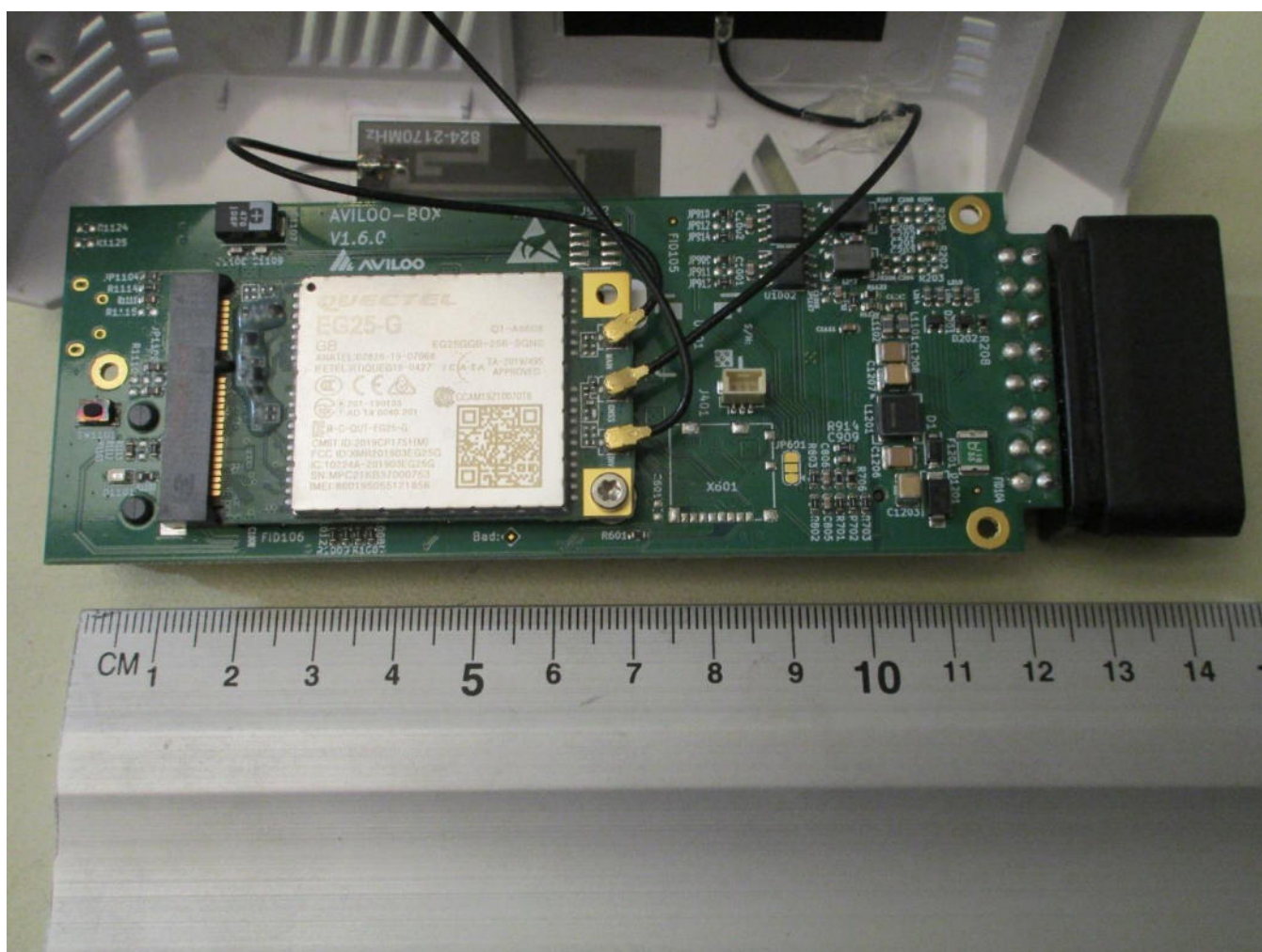
Division:
Industry & Energy

Description: Internal view #2

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 8 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

Division:
Industry & Energy

Description: Internal view #3

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 9 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

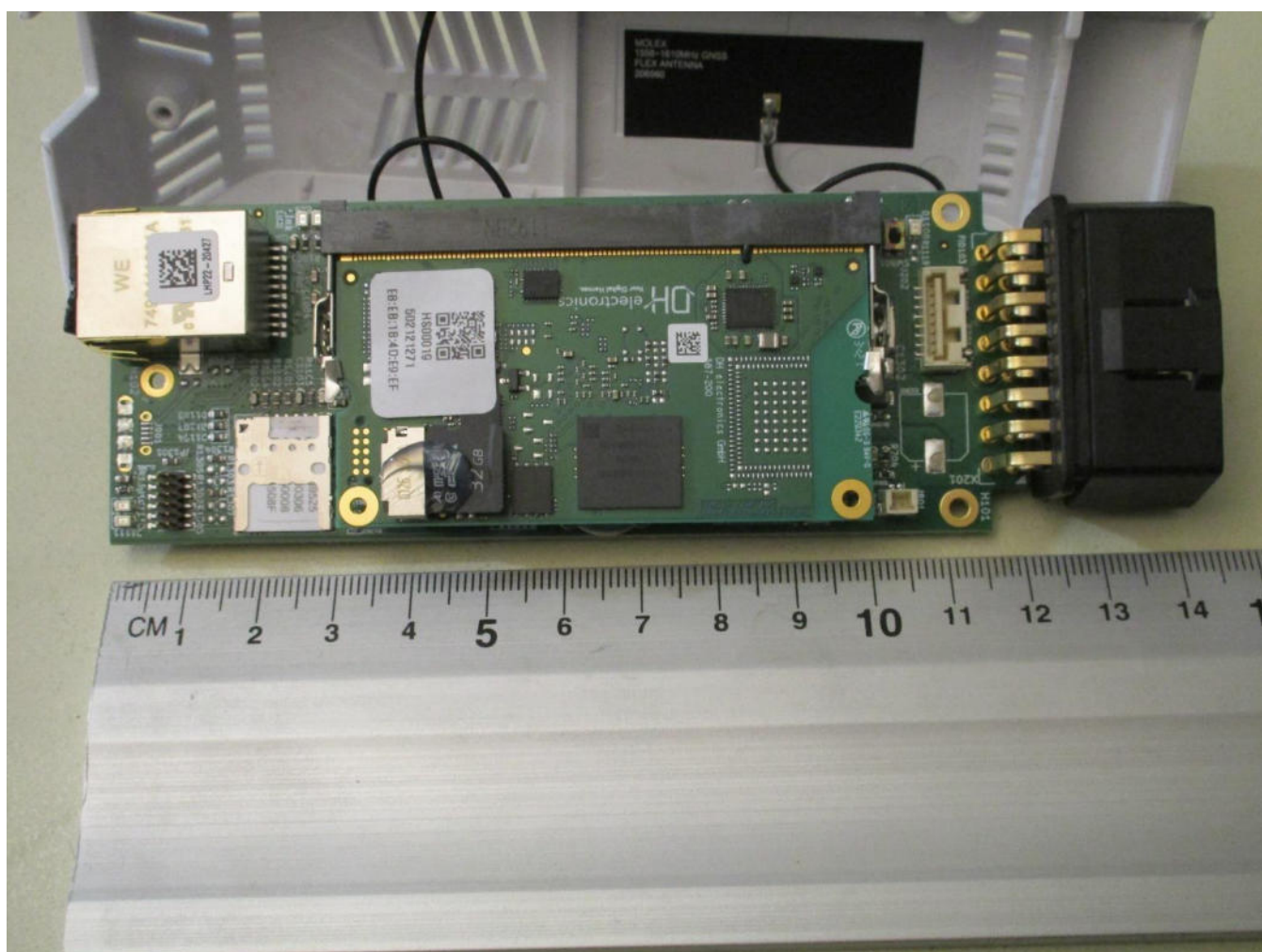
Division:
Industry & Energy

Description: Internal view #4

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 10 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

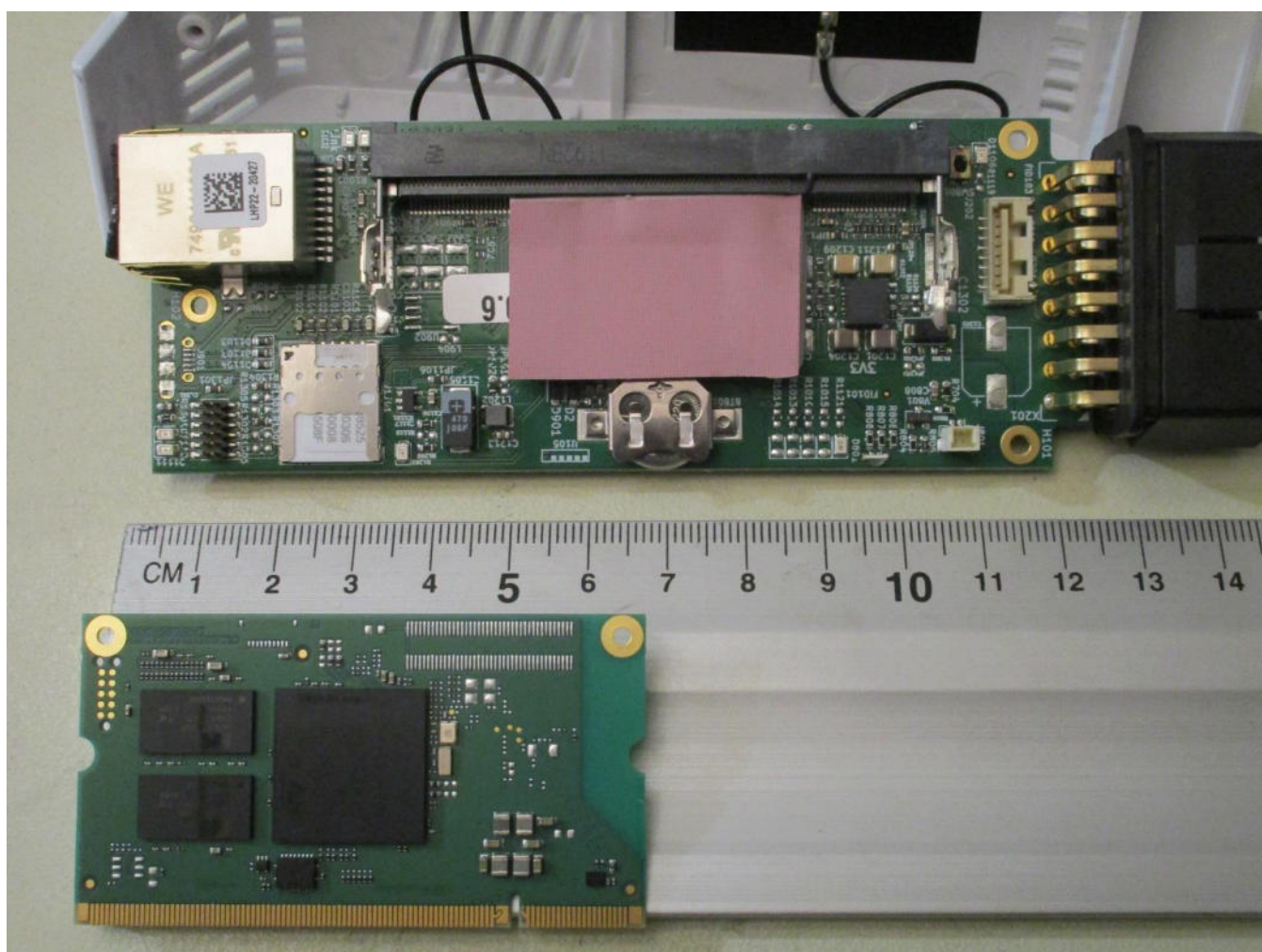
Division:
Industry & Energy

Description: Internal view #5

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 11 of 17

Date: 17.12.2024



Appendix 2 Photodocumentation

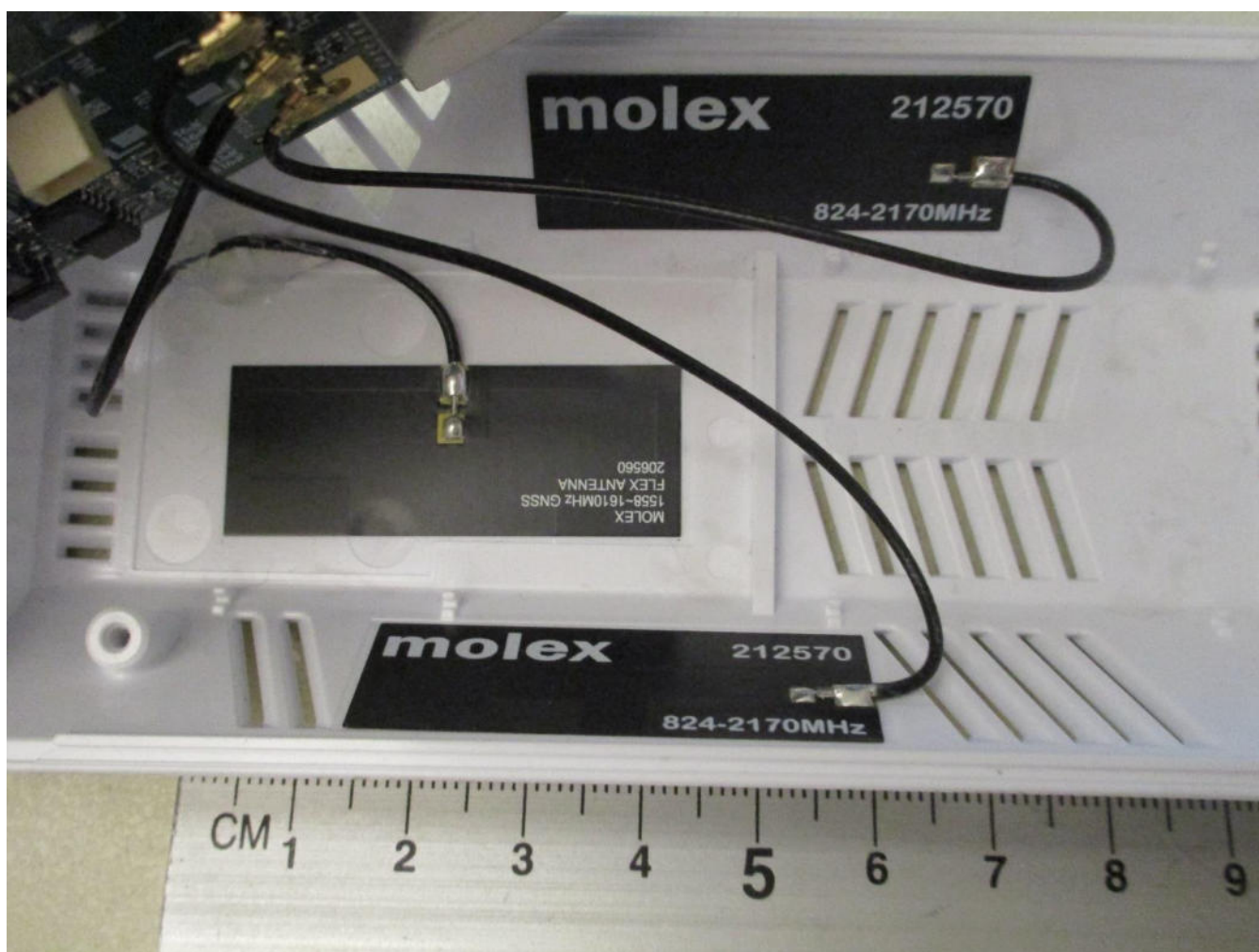
Division:
Industry & Energy

Description: Internal view #6

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 12 of 17

Date: 17.12.2024



Appendix 2

Photodocumentation

Description: R&S Test SIM

Division:
Industry & Energy

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 13 of 17

Date: 17.12.2024



Appendix 2

Photodocumentation

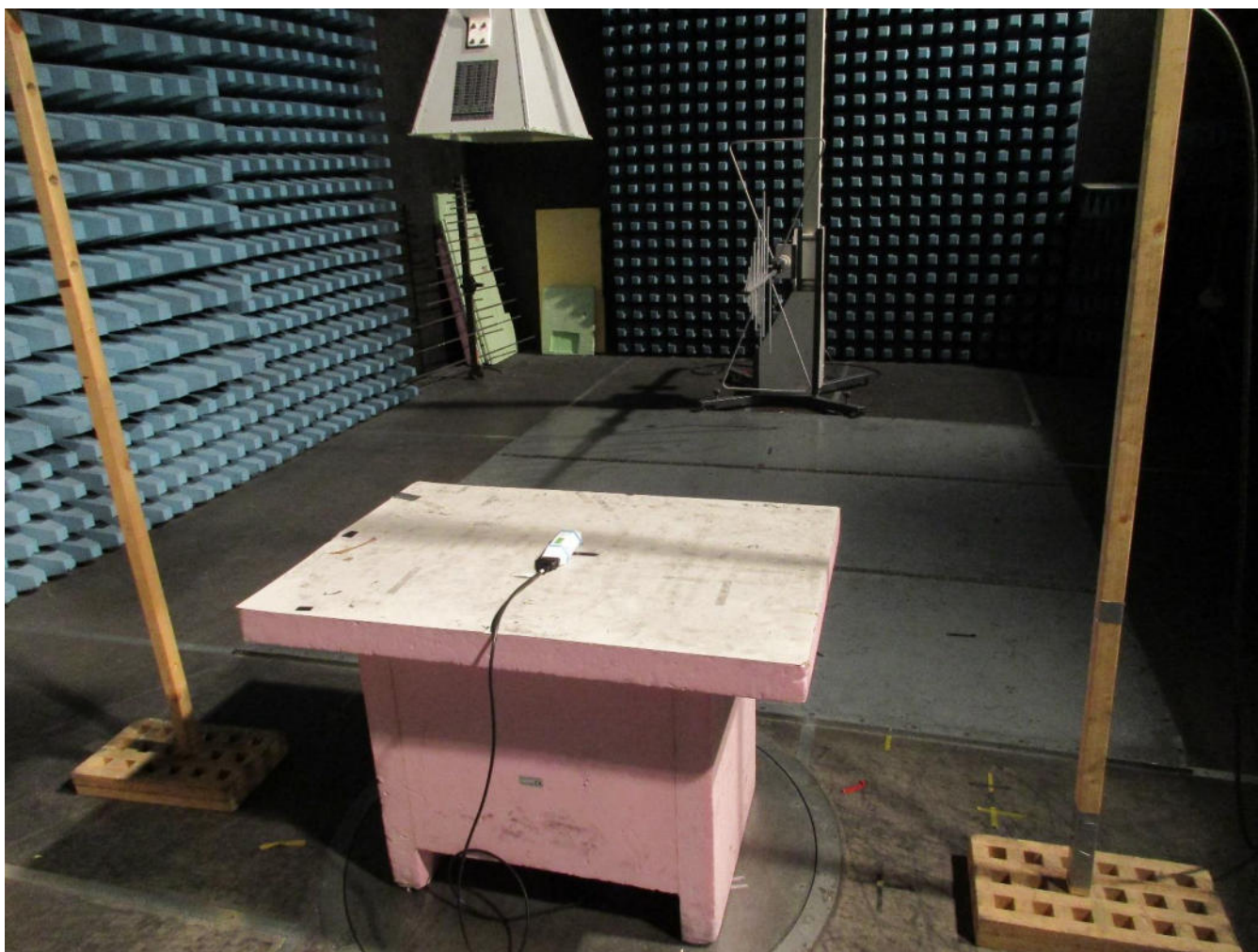
Division:
Industry & Energy

Description: Test setup 30 MHz - 1 GHz view #1

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 14 of 17

Date: 17.12.2024



Appendix 2

Photodocumentation

Division:
Industry & Energy

Description: Test setup 30 MHz - 1 GHz view #2

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 15 of 17

Date: 17.12.2024



Appendix 2

Photodocumentation

Division:
Industry & Energy

Description: Test setup above 1 GHz view #1

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 16 of 17

Date: 17.12.2024



Appendix 2

Photodocumentation

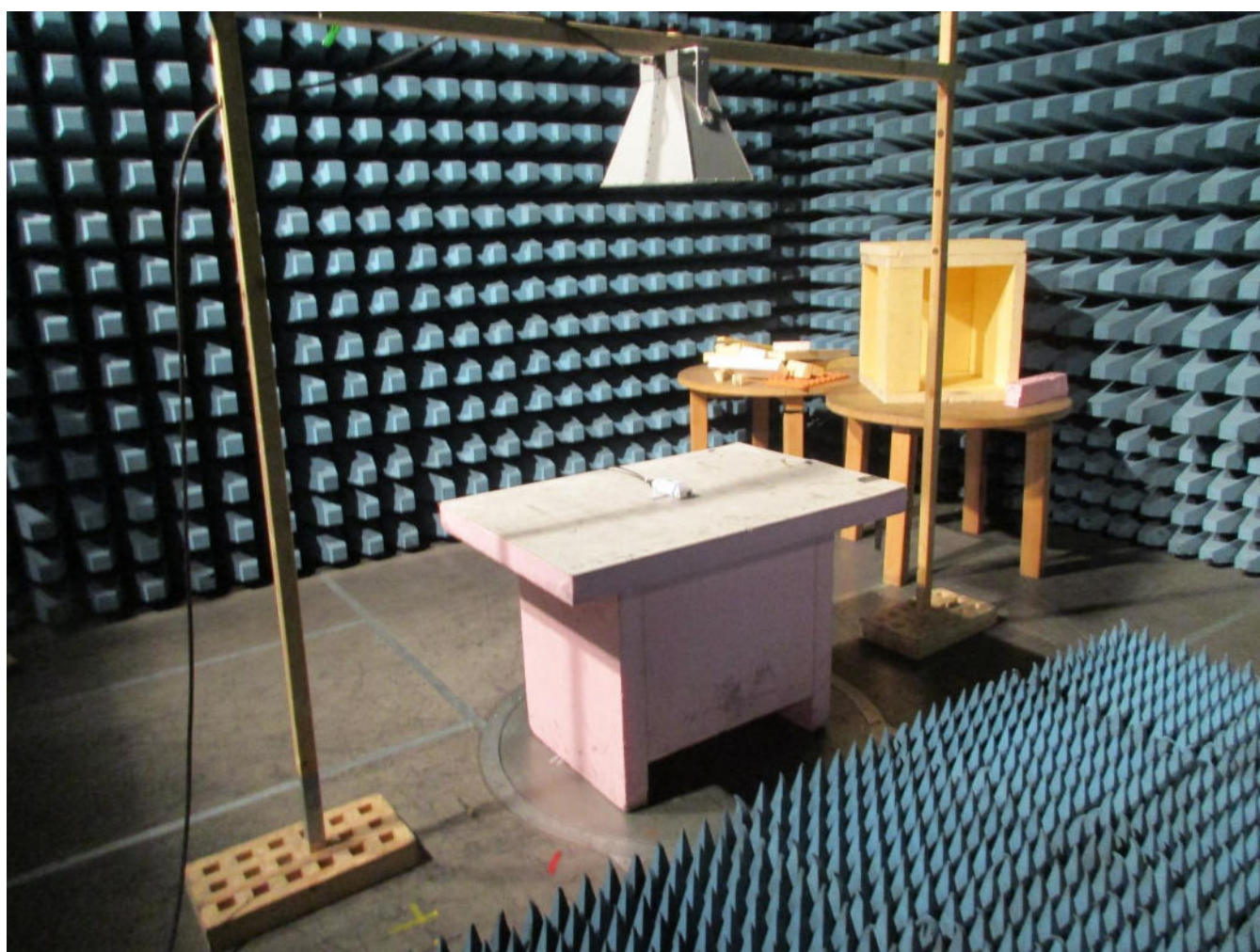
Division:
Industry & Energy

Description: Test setup above 1 GHz view #2

Test report reference:
2024-AT-TC-EEE-1-EX-0-
000042-EMV-002

Page: 17 of 17

Date: 17.12.2024



--- END OF TEST REPORT ---

