



Test report

467684-1TRFEMC

Date of issue: August 11, 2022

Applicant:

Fujitsu Network Communications, Inc.

Product:

Gen2 Tri Band RU for North America

Model:

G2_N71N29N26-RU

Variant(s):

None

Specifications:

- ◆ FCC 47 CFR Part 15, Subpart B – Verification

Lab and test locations

Company name	Nemko USA Inc.
Address	2210 Faraday Ave, Suite 150
City	Carlsbad
State	California
Postal code	92008
Country	USA
Telephone	+1 760 444 3500
Website	www.nemko.com
FCC Site Number	Test Firm Registration Number: 392943; Designation Number: US5058
ISED Test Site	2040B-3
Tested by	Lan Sayasane, EMC Test Engineer
Reviewed by	James Cunningham, EMC/MIL/WL Supervisor
Review date	August 11, 2022
Reviewer signature	

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Copyright notification

Nemko USA Inc. authorizes the applicant to reproduce this report provided it is reproduced in its entirety and for use by the company's employees only. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties.

Nemko USA Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

© Nemko USA Inc.

Table of Contents

Table of Contents	3
Section 1 Report summary	4
1.1 Test specifications	4
1.2 Exclusions	4
1.3 Statement of compliance	4
1.4 Test report revision history	4
Section 2 Summary of test results	5
2.1 Sample information	5
2.2 Testing period	5
2.3 Emissions test results	5
Section 3 Equipment under test (EUT) details	6
3.1 Disclaimer	6
3.2 Applicant	6
3.3 Manufacturer	6
3.4 EUT information	6
3.5 EUT exercise and monitoring details	6
3.6 EUT setup details	7
Section 4 Engineering considerations	8
4.1 Modifications incorporated in the EUT	8
4.2 Technical judgement	8
4.3 Deviations from laboratory test procedures	8
Section 5 Test conditions	9
5.1 Atmospheric conditions	9
5.2 Power supply range	9
Section 6 Measurement uncertainty	10
6.1 Uncertainty of measurement	10
Section 7 Terms and definitions	11
7.1 Product classification definitions	11
7.2 General definitions	11
Section 8 Testing data	12
8.1 Radiated emissions	12
8.2 Conducted emissions from AC mains ports	18
Section 9 EUT photos	22
9.1 External photos	22

Section 1 Report summary

1.1 Test specifications

FCC 47 CFR Part 15, Subpart B – Verification

Title 47: Telecommunication; Part 15—Radio Frequency Devices

1.2 Exclusions

None.

1.3 Statement of compliance

Testing was performed against all relevant requirements of the test standard(s).

Results obtained indicate that the product under test complies in full with the tested requirements.

The test results relate only to the item(s) tested.

See “Section 2 Summary of test results” for full details.

1.4 Test report revision history

Table 1.4-1: Test report revision history

Revision #	Issue Date	Details of changes made to test report
467684-1TRFEMC	11 August 2022	Original report issued

Section 2 Summary of test results

2.1 Sample information

Receipt date	15-Jul-22
Nemko sample ID number	467684

2.2 Testing period

Test start date	18-Jul-22
Test end date	21-Jul-22

2.3 Emissions test results

Table 2.3-1: FCC 47 CFR Part 15, Subpart B and ICES-003 Issue 7 results

Standard	Clause	Test description	Verdict
FCC 47 CFR Part 15, Subpart B	§15.109	Radiated emissions limits ¹	Pass
FCC 47 CFR Part 15, Subpart B	§15.107	Conducted emissions limits (AC mains) ¹	Pass ²

Notes: ¹ Product classification B
² The EUT is DC powered

Section 3 Equipment under test (EUT) details

3.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

3.2 Applicant

Company name	Fujitsu Network Communications, Inc.
Address	2801 Telecom Parkway
City	Richardson
State	TX
Postal/Zip code	75082
Country	USA

3.3 Manufacturer

Company name	Fujitsu Network Communications, Inc.
Address	2801 Telecom Parkway
City	Richardson
State	TX
Postal/Zip code	75082
Country	USA

3.4 EUT information

Product name	Gen2 Tri Band RU for North America
Model	G2_N71N29N26-RU
Variant(s)	None
Serial number	10003
Part number	TA08029-B214/01
Power requirements	DC 48V
Description/theory of operation	The radio unit (RU) is one of the components to configure the 5G RAN mobile communication system. The RU has three band frequencies: band n26, band n29 and band n71. Four antenna ports are shared across the frequency bands.
Operational frequencies	n26: 859 - 894 MHz; n29: 717 - 728 MHz; n71: 617 - 652 MHz
Software details	N/A

3.5 EUT exercise and monitoring details

EUT description of the methods used to exercise the EUT and all relevant ports:

- During Emissions, EUT was setup and power on standby mode for FCC Part 15B (Unintentional).

EUT setup/configuration rationale:

- The EUT setup in a configuration that was expected to produce the highest amplitude emissions relative to the limit and that satisfy normal operation/installation practice by the end user.
- The type and construction of cables used in the measurement set-up were consistent with normal or typical use. Cables with mitigation features (for example, screening, tighter/more twists per length, ferrite beads) have been noted below:
 - None
- The EUT was setup in a manner that was consistent with its typical arrangement and use. The measurement arrangement of the EUT, local ancillary equipment and associated cabling was representative of normal practice. Any deviations from typical arrangements have been noted below:
 - None

3.6 EUT setup details

Table 3.6-1: EUT sub assemblies

Description	Brand name	Model/Part number	Serial number	Rev.
Gen2 Tri Band RU	Fujitsu Network Communications, Inc.	G2_N71N29N26-RU/TA08029-B214/01	10003	--

Table 3.6-2: EUT interface ports

Description	Qty.
Port #A	1
Port #B	1
Port #C	1
Port #D	1
Fiber port	1
Ethernet port	2
DC 48V	1

Table 3.6-3: Support equipment

Description	Brand name	Model/Part number	Serial number	Rev.
DC Power Supply	Xantrex	XFR 60-46	B0001754	--
DC Power Supply	Hewlett Packard	E3614A	KR52401339	--
JIGS	Fujitsu	TA22452-B101	--	--
10/100 Network Switch	D-Link	DSS-16+/BSS16+A	F30N5B8001330	H1
Laptop	Fujitsu	LifeBook E Series	R7100055	--

Table 3.6-4: Inter-connection cables

Cable description	From	To	Length (m)
Ethernet	10/100 Network Switch	Laptop	2
Ethernet	10/100 Network Switch	JIGS	2
Ethernet	10/100 Network Switch	Gen 2 Dual Band RU	3
DC Power cable	DC Power Supply (Xantrex)	Gen 2 Dual Band RU	3
DC Power cable	DC Power Supply (HP)	JIGS	0.5
Fiber cable	JIGS	Gen 2 Dual Band RU	5

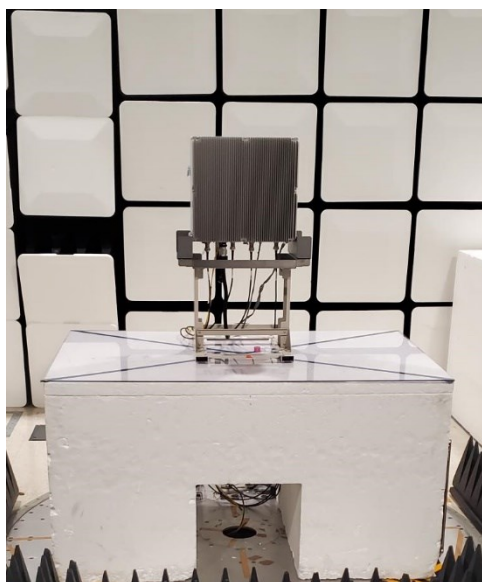


Figure 3.6-1: Test setup diagram

Section 4 Engineering considerations

4.1 Modifications incorporated in the EUT

None.

4.2 Technical judgement

None.

4.3 Deviations from laboratory test procedures

None.

Section 5 Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	86–106 kPa

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages $\pm 5\%$, for which the equipment was designed.

Section 6 Measurement uncertainty

6.1 Uncertainty of measurement

Nemko USA Inc. has calculated measurement uncertainty and is documented in EMC/MUC/001 "Uncertainty in EMC measurements." Measurement uncertainty was calculated using the methods described in CISPR 16-4-2 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics, and limit modelling – Measurement instrumentation uncertainty. The expression of Uncertainty in EMC testing. Measurement uncertainty calculations assume a coverage factor of K=2 with 95% certainty.

Table 6.1-1: Measurement uncertainty calculations

Measurement		U_{cispr} dB	U_{lab} dB
Conducted disturbance at AC mains and other port power using a V-AMN	9 kHz to 150 kHz	3.8	2.9
	150 kHz to 30 MHz	3.4	2.3
Conducted disturbance at telecommunication port using AAN	150 kHz to 30 MHz	5.0	4.3
Conducted disturbance at telecommunication port using CVP	150 kHz to 30 MHz	3.9	2.9
Conducted disturbance at telecommunication port using CP	150 kHz to 30 MHz	2.9	1.4
Conducted disturbance at telecommunication port using CP and CVP	150 kHz to 30 MHz	4.0	3.1
Radiated disturbance (electric field strength in a SAC)	30 MHz to 1 GHz	6.3	5.5
Radiated disturbance (electric field strength in a FAR)	1 GHz to 6 GHz	5.2	4.7
Radiated disturbance (electric field strength in a FAR)	6 GHz to 18 GHz	5.5	5.0

- Notes:
- Compliance assessment:
 - If U_{lab} is less than or equal to U_{cispr} then:
 - compliance is deemed to occur is no measured disturbance level exceeds the disturbance limit;
 - non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit
 - If U_{lab} is greater than U_{cispr} then:
 - compliance is deemed to occur is no measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cispr}})$, exceeds the disturbance limit;
 - non-compliance is deemed to occur if any measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cispr}})$, exceeds the disturbance limit

V-AMN: V type artificial mains network
 AAN: Asymmetric artificial network
 CP: Current probe
 CVP: Capacitive voltage probe
 SAC: Semi-anechoic chamber
 FAR: Fully anechoic room

Section 7 Terms and definitions

7.1 Product classification definitions

7.1.1 Title 47: Telecommunication – Part 15 – Radio Frequency devices, Subpart A – General

Class A digital device	A digital device that is marketed for use in a commercial, industrial, or business environment, exclusive of a device which is marketed for use by the general public or is intended to be used in the home.
Class B digital device	A digital device that is marketed for use in a residential environment notwithstanding use in commercial, business, and industrial environments. Examples of such devices include, but are not limited to, personal computers, calculators, and similar electronic devices that are marketed for use by the general public. Note: The responsible party may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B digital device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B digital device, regardless of its intended use.

7.1.2 ICES-003 – Equipment classification

Class B ITE	Limits of radio noise for ITE for residential operation.
Class A ITE	Limits of radio noise for ITE for non-residential operation.
Conditions	Only ITE intended strictly for non-residential use in commercial, industrial, or business environments, and whose design or other characteristics strongly preclude the possibility of its use in a residential environment, shall be permitted to comply with the less stringent Class A limits. All ITE that cannot meet the conditions for Class A operation shall comply with the Class B limits. The ITE shall comply with both the power line – conducted and the radiated emissions limits within the same Class, with no intermixing.

7.2 General definitions

7.2.1 Title 47: Telecommunication – Part 15-Radio Frequency devices, Subpart A – General

Digital device (Previously defined as a computing device)	An unintentional radiator (device or system) that generates and uses timing signals or pulses at a rate in excess of 9,000 pulses (cycles) per second and uses digital techniques; inclusive of telephone equipment that uses digital techniques or any device or system that generates and uses radio frequency energy for the purpose of performing data processing functions, such as electronic computations, operations, transformations, recording, filing, sorting, storage, retrieval, or transfer. A radio frequency device that is specifically subject to an emanation requirement in any other FCC Rule part or an intentional radiator subject to subpart C of this part that contains a digital device is not subject to the standards for digital devices, provided the digital device is used only to enable operation of the radio frequency device and the digital device does not control additional functions or capabilities. Note: Computer terminals and peripherals that are intended to be connected to a computer are digital devices.
---	--

7.2.2 ICES-003

Information technology equipment (including Digital Apparatus)	Information Technology Equipment (ITE) is defined as devices or systems that use digital techniques for purposes such as data processing and computation. ITE is any unintentional radiator (device or system) that generates and/or uses timing signals or pulses having a rate of at least 9 kHz and employs digital techniques for purposes such as computation, display, data processing and storage, and control.
--	--

Section 8 Testing data

8.1 Radiated emissions

8.1.1 References and limits

- FCC 47 CFR Part 15, Subpart B: §15.109
- ICES-003: §3.2.2
- Test method: ANSI C63.4-2014

Table 8.1-1: Requirements as per for radiated emissions for Class A

Facility	Frequency range [MHz]	Distance [m]	Measurement Detector type/ bandwidth	limits [dBµV/m]
FCC Part 15 Subpart B				
SAC	30–88	3	Quasi peak/120 kHz	49.5
	88–216			54.0
	216–960			56.9
	960–1000			60.0
FAR	>1000	3	Linear average/1 MHz Peak/1 MHz	60.0
				80.0
SAC	30–88	10	Quasi peak/120 kHz	39.0
	88–216			43.5
	216–960			46.4
	960–1000			49.5
ICES-003				
SAC	30–88	3	Quasi peak/120 kHz	50.0
	88–216			54.0
	216–230			56.9
	230–960			57.0
	960–1000			60.0
FAR	>1000	3	Linear average/1 MHz Peak/1 MHz	60.0
				80.0
SAC	30–88	10	Quasi peak/120 kHz	40.0
	88–216			43.5
	216–230			46.4
	230–960			47.0
	960–1000			49.5

Table 8.1-2: Requirements as per for radiated emissions for Class B

Facility	Frequency range [MHz]	Distance [m]	Measurement Detector type/ bandwidth	limits [dBµV/m]
FCC Part 15 Subpart B				
SAC	30–88	3	Quasi peak/120 kHz	40.0
	88–216			43.5
	216–960			46.0
	960–1000			54.0
FAR	>1000	3	Linear average/1 MHz Peak/1 MHz	54.0 74.0
SAC	30–88	10	Quasi peak/120 kHz	29.5
	88–216			33.1
	216–960			35.6
	960–1000			43.5
ICES-003				
SAC	30–88	3	Quasi peak/120 kHz	40.0
	88–216			43.5
	216–230			46.0
	230–960			47.0
	960–1000			54.0
FAR	>1000	3	Linear average/1 MHz Peak/1 MHz	54.0 74.0
SAC	30–88	10	Quasi peak/120 kHz	30.0
	88–216			33.1
	216–230			35.6
	230–960			37.0
	960–1000			43.5

Notes: Where there is a step in the applicable limit, the lower value was applied at the transition frequency.

8.1.2 Test summary

Verdict	Pass		
Test date	July 18, 2022	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1005.0 mbar
Test location	☐ 10m semi anechoic chamber ☒ 3m semi anechoic chamber ☐ Other:	Relative humidity	60 %

8.1.3 Notes

The spectral plots within this section have been corrected with all relevant transducer factors.

8.1.4 Setup details

Port under test	Enclosure port
EUT power input during test	DC 48V
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measuring distance	☐ 10m ☒ 3m ☐ Other:
Antenna height variation	1 – 4 m
Turn table position	0 – 360°
Measurement details	Preview measurements were performed with the receiver in continuous scan or sweep mode. Emissions detected within 6 dB or above limit (minimum of 6 frequencies) were maximized by rotating the EUT and adjusting the antenna height and polarization. At the position of maximum emission, the signal was measured with the appropriate detector against the corresponding limit and recorded as the final measurement.

Receiver/spectrum analyzer settings for frequencies below 1 GHz:

Resolution bandwidth	120 kHz
Detector mode	– Peak (Preview measurement) – Quasi-peak (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak preview measurement) – 5000 ms (Quasi-peak final measurement)

Receiver/spectrum analyzer settings for frequencies above 1 GHz:

Resolution bandwidth	1 MHz
Detector mode	Peak (Preview measurement) Peak and Average (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak preview measurement) – 5000 ms (Peak and Average final measurement)

Table 8.1-3: Radiated emissions equipment list

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
EMI Test Receiver	Rohde & Schwarz	ESU 40	E1121	1 year	31-May-2023
System Controller	Sunol Sciences	SC104V	E1191	NCR	NCR
Antenna, Bilog	Schaffner-Chase	CBL 6111D	1763	2 years	01-Apr-2024
Antenna, DRG Horn	ETS-Lindgren	3117-PA	E1139	2 years	19-Apr-2023

Notes: N/A – not applicable
 NCR – no calibration required
 VOU – verify on use

Table 8.1-4: Radiated emissions test software details

Manufacturer of Software	Details
Rohde & Schwarz	EMC 32 V10.60.15

Notes: None

8.1.5 Test data

Full Spectrum

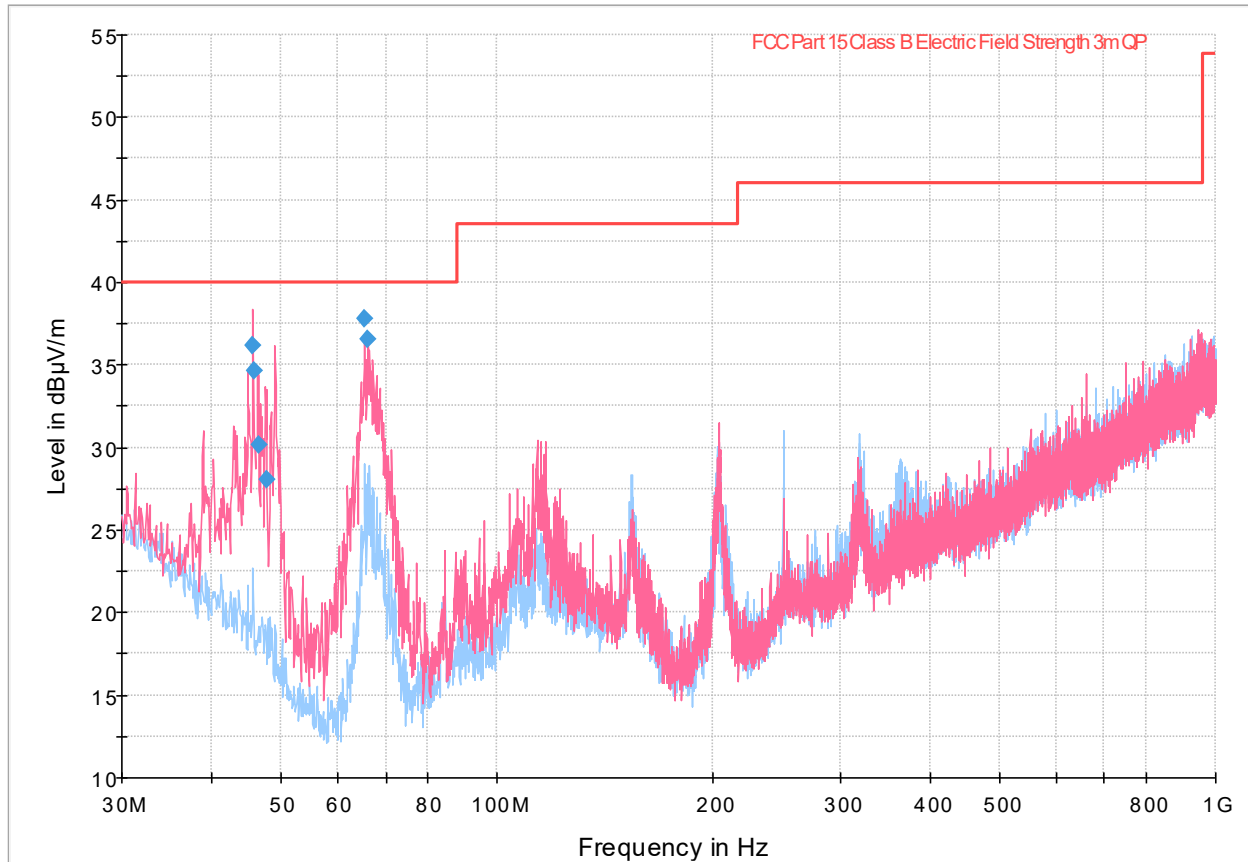


Figure 8.1-1: Radiated emissions spectral plot (30 MHz - 1 GHz)

Table 8.1-5: Radiated emissions results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.714000	36.13	40.00	3.87	5000.0	120.000	100.0	V	0.0	18.2
45.778000	34.65	40.00	5.35	5000.0	120.000	100.0	V	119.0	18.1
46.477000	30.12	40.00	9.88	5000.0	120.000	108.0	V	127.0	17.8
47.812000	28.05	40.00	11.95	5000.0	120.000	104.0	V	0.0	17.2
65.324000	37.76	40.00	2.24	5000.0	120.000	145.0	V	97.0	13.1
66.084000	36.60	40.00	3.40	5000.0	120.000	262.0	V	328.0	13.2

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

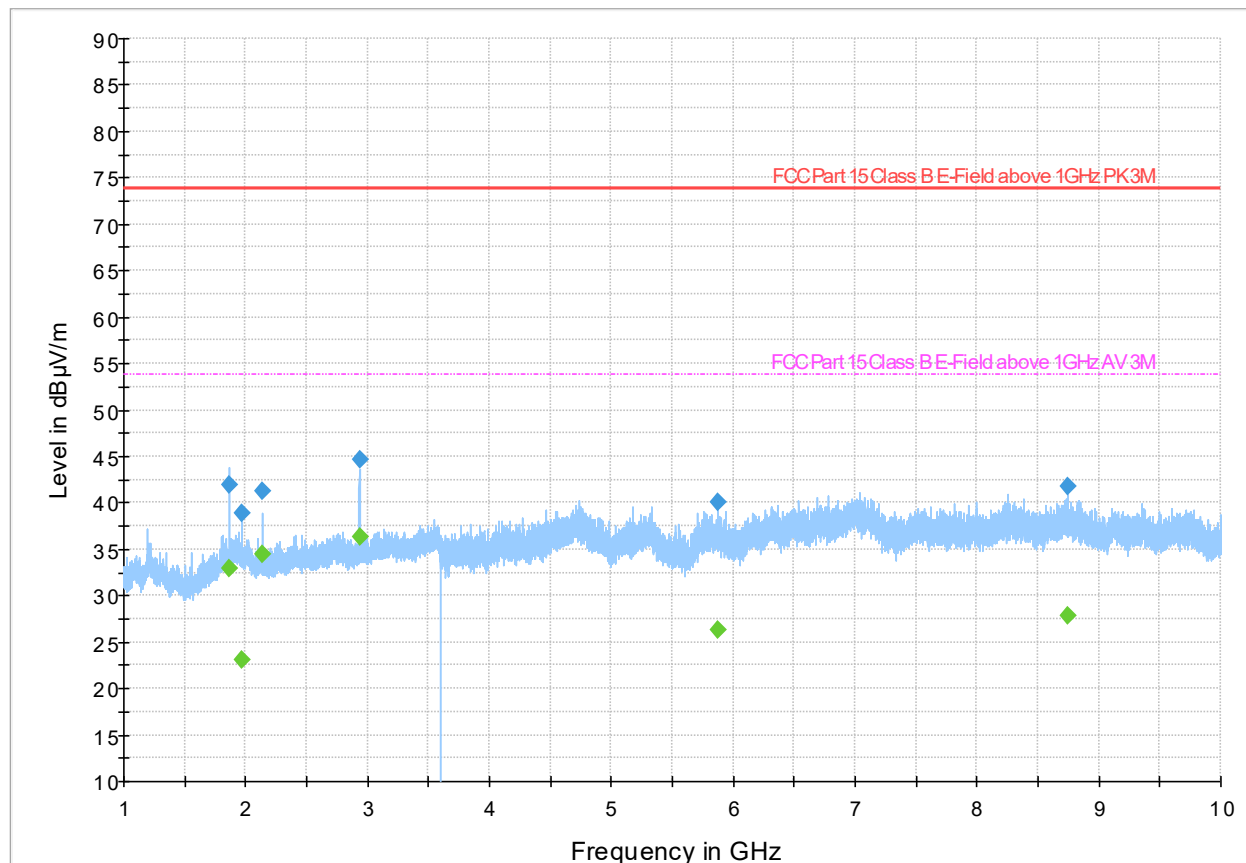


Figure 8.1-2: Radiated emissions spectral plot (1 GHz - 10 GHz)

Table 8.1-6: Radiated emissions results

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1866.700000	41.90	---	73.90	32.00	5000.0	1000.000	386.0	V	176.0	-10.9
1866.700000	---	32.88	53.90	21.02	5000.0	1000.000	386.0	V	176.0	-10.9
1964.500000	---	23.04	53.90	30.86	5000.0	1000.000	231.0	V	98.0	-10.7
1964.500000	38.87	---	73.90	35.03	5000.0	1000.000	231.0	V	98.0	-10.7
2133.400000	41.30	---	73.90	32.60	5000.0	1000.000	166.0	V	150.0	-11.3
2133.400000	---	34.44	53.90	19.46	5000.0	1000.000	166.0	V	150.0	-11.3
2933.600000	---	36.31	53.90	17.59	5000.0	1000.000	150.0	V	145.0	-8.3
2933.600000	44.66	---	73.90	29.24	5000.0	1000.000	150.0	V	145.0	-8.3
5880.100000	40.03	---	73.90	33.87	5000.0	1000.000	243.0	V	0.0	-0.7
5880.100000	---	26.26	53.90	27.64	5000.0	1000.000	243.0	V	0.0	-0.7
8748.700000	41.68	---	73.90	32.22	5000.0	1000.000	121.0	V	131.0	2.8
8748.700000	---	27.88	53.90	26.02	5000.0	1000.000	121.0	V	131.0	2.8

Notes: ¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.1.6 Setup photos

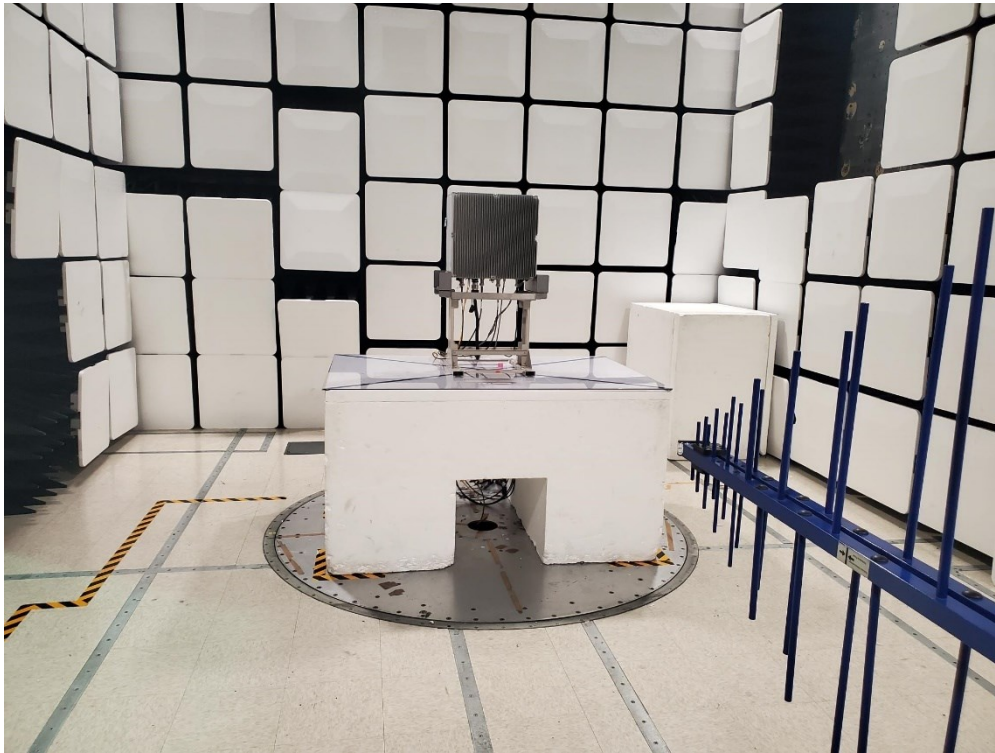


Figure 8.1-3: Radiated emissions setup photo – below 1 GHz

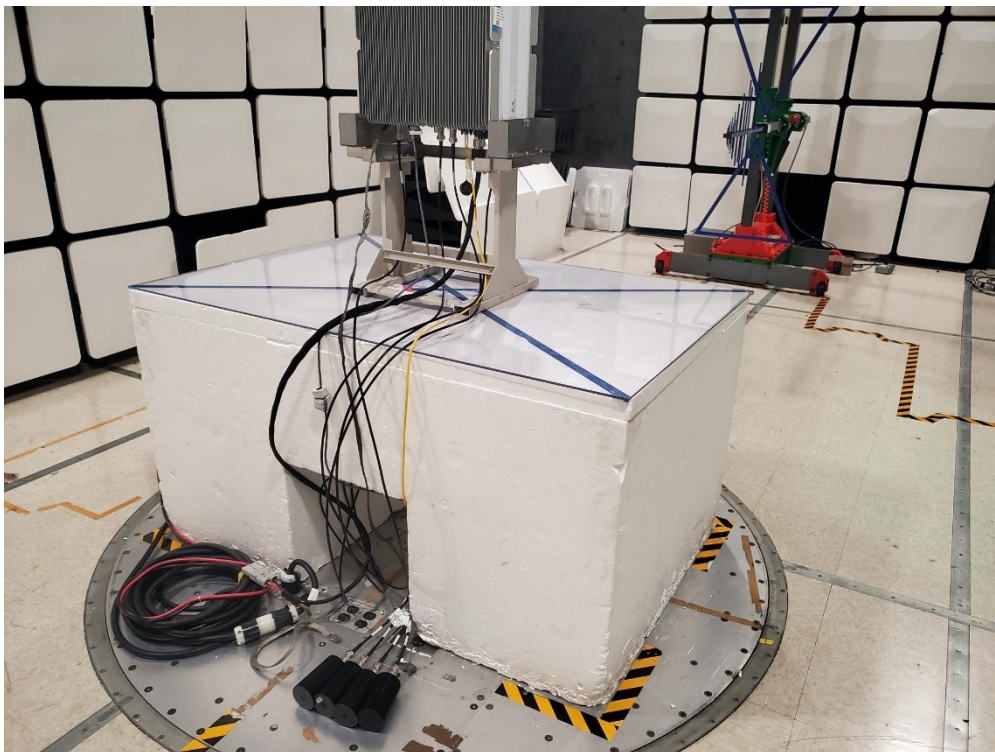


Figure 8.1-4: Radiated emissions setup photo – below 1 GHz

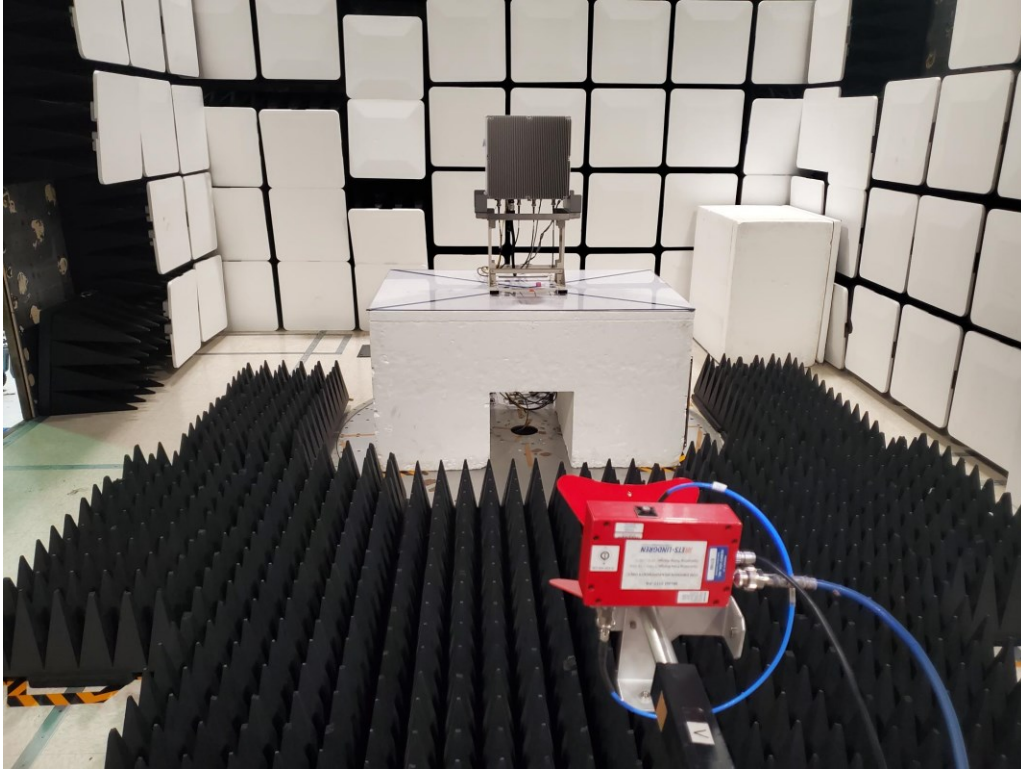


Figure 8.1-5: Radiated emissions setup photo – above 1 GHz

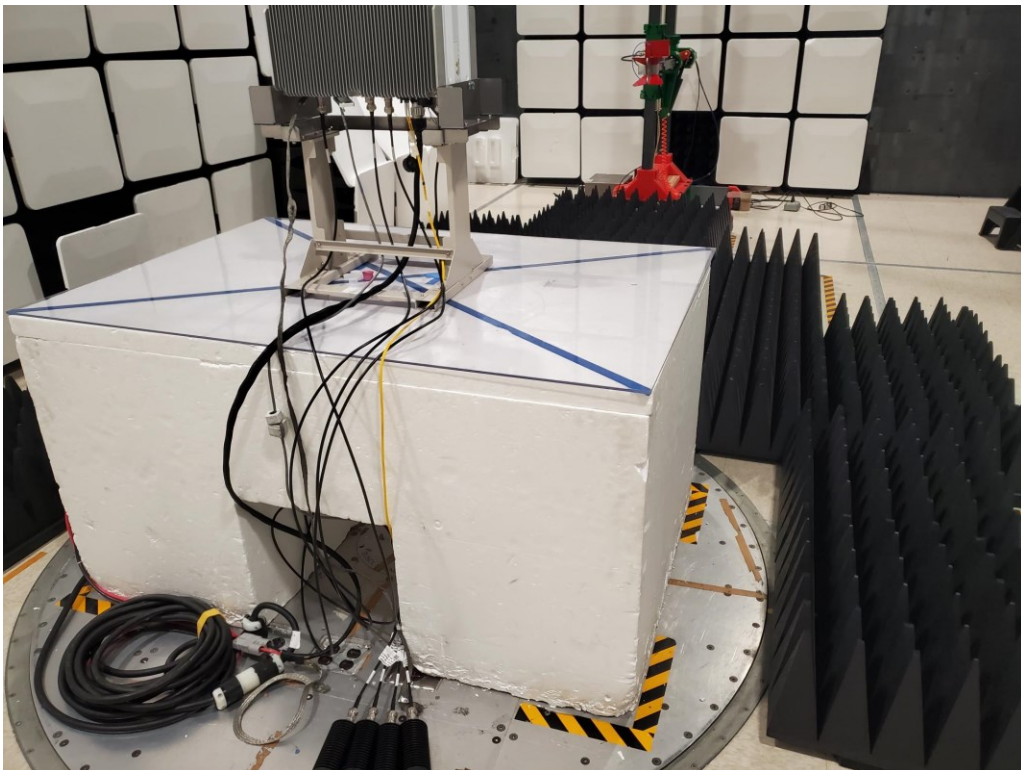


Figure 8.1-6: Radiated emissions setup photo – above 1 GHz

8.2 Conducted emissions from AC mains ports

8.2.1 References and limits

- FCC 47 CFR Part 15, Subpart B: §15.107
- ICES-003: §3.2.1
- Test method: ANSI C63.4-2014

Table 8.2-1: Requirements for conducted emissions from the AC mains power ports for Class A

Frequency range [MHz]	Measurement		Limits [dBμV]
	Coupling device	Detector type/ bandwidth	
0.15–0.5	AMN	Quasi peak/9 kHz	79.0
0.5–30			73.0
0.15–0.5	AMN	Average/9 kHz	66.0
0.5–30			60.0

Table 8.2-2: Requirements for conducted emissions from the AC mains power ports for Class B

Frequency range [MHz]	Measurement		Limits [dBμV]
	Coupling device	Detector type/ bandwidth	
0.15–0.5	AMN	Quasi peak/9 kHz	66.0–56.0
0.5–5			56.0
5–30			60.0
0.15–0.5	AMN	Average/9 kHz	56.0–46.0
0.5–5			46.0
5–30			50.0

Notes: The lower limit shall apply at the transition frequency.

8.2.2 Test summary

Verdict	Pass		
Test date	July 21, 2022	Temperature	21 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1004.0 mbar
Test location	☒ Ground plane ☐ Other:	Relative humidity	64 %

8.2.3 Notes

The spectral plots within this section have been corrected with all relevant transducer factors.

Equipment with a DC power port powered by a dedicated AC/DC power converter is considered to be AC mains powered equipment and tested with a power converter. Where the manufacturer provided the power converter, the supplied converter was used.

8.2.4 Setup details

Port under test – Coupling device	DC Power Supply Mains – Artificial Mains Network (AMN)
EUT power input during test	120V/60Hz
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measurement details	A preview measurement was generated with the receiver in continuous scan mode. Selected emissions were re-measured with the appropriate detector(s) against the correlating limit(s) and recorded as the final measurement.

Receiver settings:

Resolution bandwidth	9 kHz
Detector mode	– Peak and Average (Preview measurement) – Quasi-peak and Average (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak and Average preview measurement) – 5000 ms (Quasi-peak and Average final measurement)

Table 8.2-3: *Conducted emissions from AC mains port equipment list*

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
EMI Test Receiver	Rohde & Schwarz	ESCI 7	E1026	1 year	22-Mar-2023
Transient Limiter	Hewlett Packard	11947A	E1159	1 year	18-Feb-2023
Two Line V-Network	Rohde & Schwarz	ENV216	E1019	1 year	20-Sep-2022
LISN	Solar Electronics	9348-50-R-BNC	384	1 year	01-Sep-2022
DC Power Supply	Hewlett Packard	6554A	E1283	NCR	NCR

Notes: N/A – not applicable
 NCR – no calibration required
 VOU – verify on use

Table 8.2-4: *Conducted emissions from AC mains port test software details*

Manufacturer of Software	Details
Rohde & Schwarz	EMC 32 V10.60.15

Notes: None

8.2.5 Test data

Full Spectrum

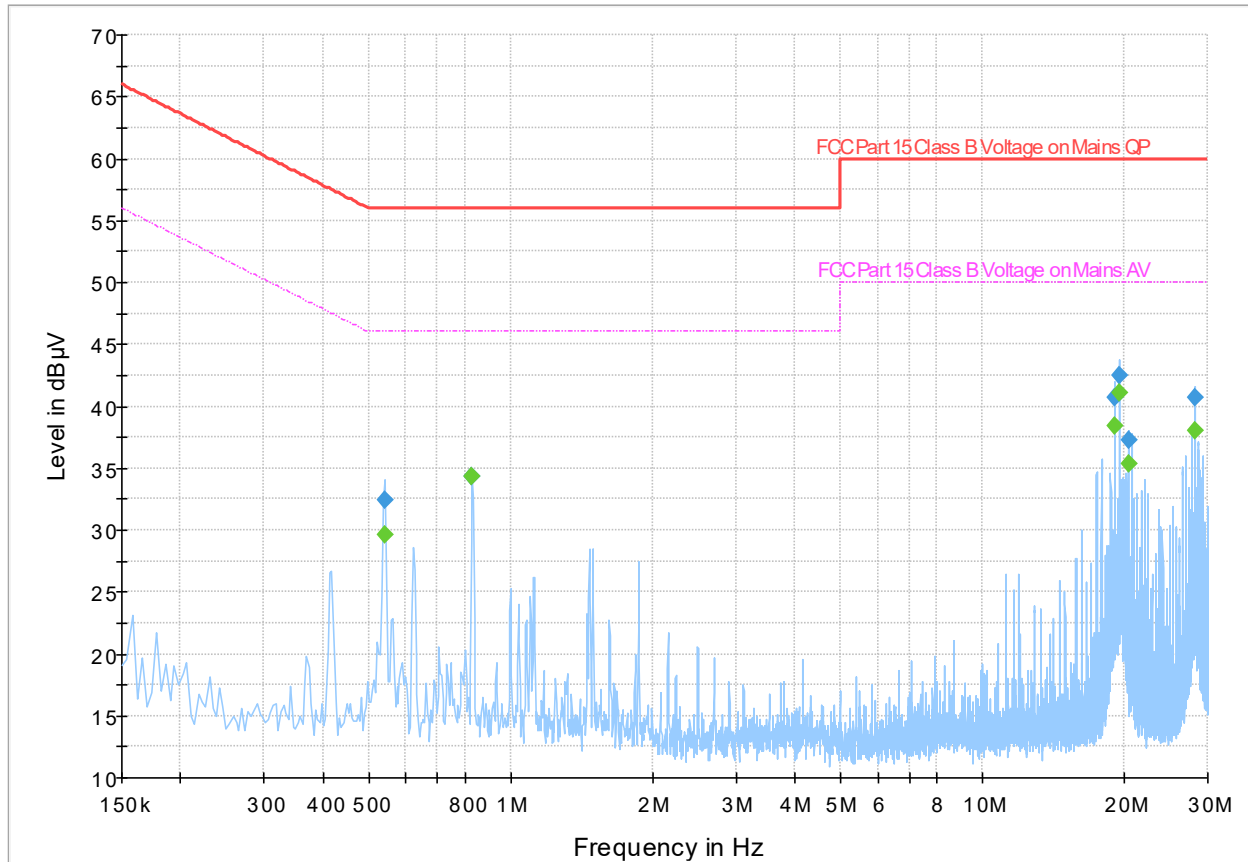


Figure 8.2-1: Conducted emissions at mains port spectral plot (150 kHz - 30 MHz)

Table 8.2-5: Conducted emissions at mains port results

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.542000	---	29.65	46.00	16.35	5000.0	9.000	L1	ON	19.4
0.542000	32.42	---	56.00	23.58	5000.0	9.000	L1	ON	19.4
0.830000	---	34.28	46.00	11.72	5000.0	9.000	L1	ON	19.4
0.830000	34.36	---	56.00	21.64	5000.0	9.000	L1	ON	19.4
19.102000	---	38.42	50.00	11.58	5000.0	9.000	L1	ON	20.2
19.102000	40.67	---	60.00	19.33	5000.0	9.000	L1	ON	20.2
19.522000	---	41.13	50.00	8.87	5000.0	9.000	L1	ON	20.2
19.522000	42.50	---	60.00	17.50	5000.0	9.000	L1	ON	20.2
20.350000	37.28	---	60.00	22.72	5000.0	9.000	N	ON	20.2
20.350000	---	35.29	50.00	14.71	5000.0	9.000	N	ON	20.2
28.246000	40.73	---	60.00	19.27	5000.0	9.000	L1	ON	20.0
28.246000	---	37.97	50.00	12.03	5000.0	9.000	L1	ON	20.0

Notes: ¹ Result (dBµV) = receiver analyzer value (dBµV) + correction factor (dB).
² Correction factors = LISN factor IL (dB) + cable loss (dB) + transient limiter (dB)
³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.2.6 Setup photos

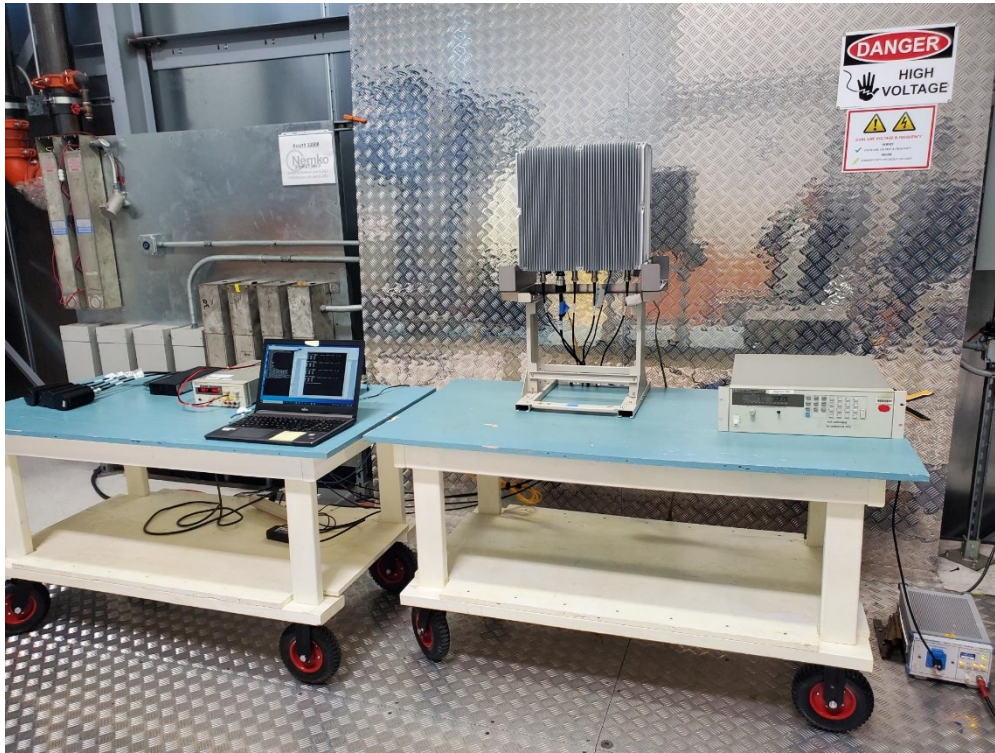


Figure 8.2-2: Conducted emissions from AC mains power ports setup photo



Figure 8.2-3: Conducted emissions – from AC mains power ports setup photo

Section 9 EUT photos

9.1 External photos

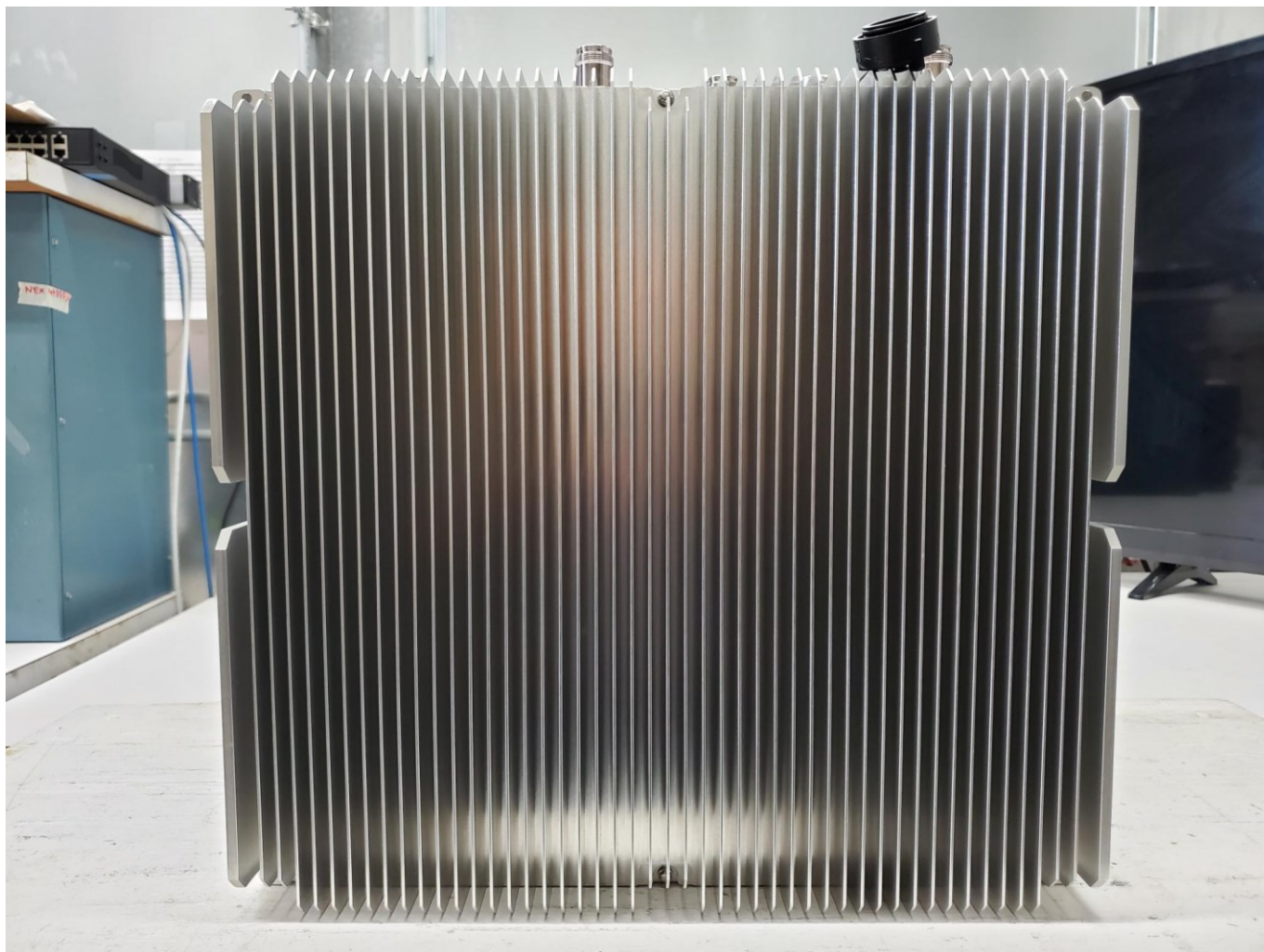


Figure 9.1-1: Front view photo

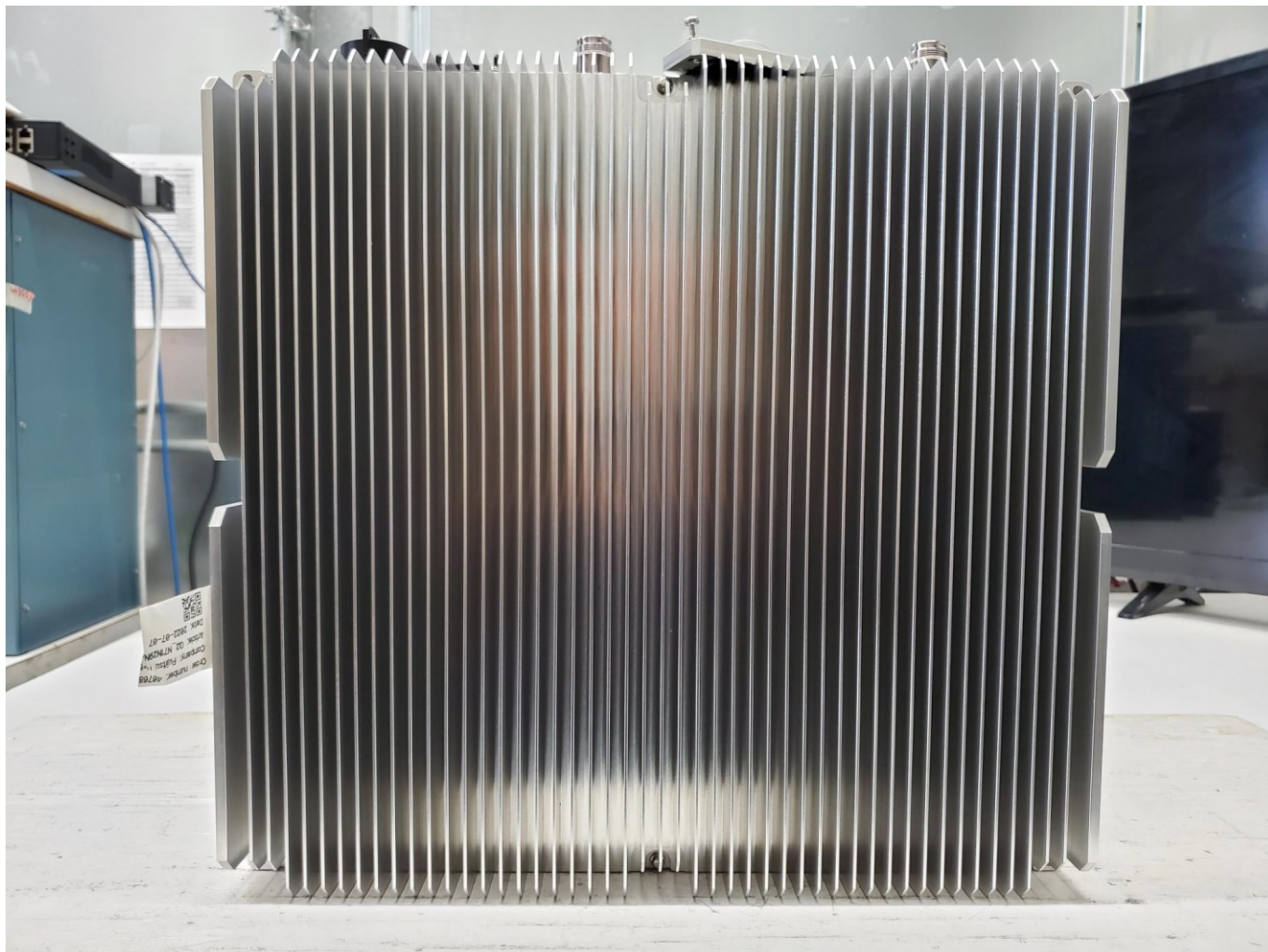


Figure 9.1-2: Rear view photo



Figure 9.1-3: Side view photo



Figure 9.1-4: Side view photo



Figure 9.1-5: Top view photo



Figure 9.1-6: Bottom view photo

End of test report