


TEST REPORT

no.: 250500207/EMC

Test name : Electromagnetic compatibility tests**Test subject – by RA** : Cellular Communication User Equipment (UE) radio and ancillary equipment**Product name** : Smart IoT Telemetry Unit**Marking – type / model** : VADTel AIoTU5**Manufacturer** : V.A.D. Technical Engineering and Investment, s. r. o.
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Slovak Republic**Applicant** : V.A.D. Technical Engineering and Investment, s. r. o.
Konventná 6
811 03 Bratislava
Slovak Republic**Order no.** : 250500207**Testing location** : Testing laboratory TSÚ Piešťany
Krajinská cesta 2929/9
921 01 Piešťany
Slovak Republic**Test – procedure method** : see chapter 2**Date of test performance** : 01.10.2025 – 02.10.2025**Date of issue** : 28.10.2025**Distribution** : Copy no.1 – manufacturer
Copy no.2 – TSÚ **TECHNICKÝ SKÚŠOBNÝ
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-213-
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1 GENERAL INFORMATION

EMC emissions and immunity tests were performed on the equipment under test (EUT) in the testing laboratory of Technický skúšobný ústav Piešťany, a. s., Piešťany, Slovak Republic, accredited by the SNAS.

All tests were conducted in an environment which ensured that the measurable influence or interference (background noise) not generated by EUT, was below the threshold limits defined in the standards.

2 TEST METHODS AND CONDITIONS

Test methods used	: MPS 01/5.10 Measurement of electromagnetic compatibility
Standards	: EN 301 489-1 V2.2.3 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility EN 301 489-52 V1.3.1 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment; Harmonised Standard for ElectroMagnetic Compatibility
Place of testing	: <input checked="" type="checkbox"/> EMC testing laboratory TSÚ Piešťany, a. s. <input type="checkbox"/> Laboratory Pobedim TSÚ Piešťany, a. s. <input type="checkbox"/> on-site:
Place and date of sample delivery	: Samples delivered to TSÚ Piešťany, a. s. on 25.09.2025 and recorded under the registration number 250500207/213/1-2.
Test procedure deviations	: Without test procedure deviation.
Tests conditions and results	: <i>see chapters 3, 4, 7, 8</i>

2.1 Environmental conditions

Temperature	: 19 - 21 °C
Relative humidity	: 36 - 37 %
Atmospheric pressure	: 1024 - 1028 hPa

3 SUMMARY OF TESTS AND TEST RESULTS

Possible test case verdicts:

- test not applicable.....: N/A
- test not required by manufacturer.....: N/R
- test object does meet the requirement.....: PASS
- test object does not meet the requirement.....: FAIL

The tests were performed in accordance with the requirements of standard EN 301 489-52 V1.3.1, referenced in EN 301 489-1 V2.2.3. Basic standards referenced by EN 301 489-1 V2.2.3 as follows:

Harmonized Standard ETSI EN 301 489-52				
Classification of EUT: Cellular Communication User Equipment (UE) radio and ancillary equipment				
Emissions				
Clause no. of EN 301 489-1	Test description	Referenced standard	Test result	Condition
8.2	Enclosure of ancillary equipment measured on a stand-alone basis	EN 55032	PASS	Class B Only applicable to ancillary equipment not incorporated in the radio equipment and intended to be measured on a stand-alone basis.
8.3	DC power input/output ports	EN 55032	N/A (Note1)	Only where equipment has DC power input and/or output ports with a cable length greater than 3 m or from a vehicle power supply
8.4	AC mains power input/output ports	EN 55032	N/A (Note1)	Class B Equipment intended primarily for use in a residential environment shall meet the Class B limits
8.5	Harmonic current emission (AC mains input port)	EN 61000-3-2 EN 61000-3-12	N/A (Note1)	EN 61000-3-2 Class A Equipment with input current ≤ 16 A per phase
8.6	Voltage fluctuations and flicker (AC mains input ports)	EN 61000-3-3 EN 61000-3-11	N/A (Note1)	EN 61000-3-3 Equipment with input current ≤ 16 A per phase
8.7	Wired network ports	EN 55032	N/A (Note3)	Only where equipment has wired network ports
Immunity				
Clause no. of EN 301 489-1	Test description	Referenced standard	Test result	Condition
9.2	Radio frequency electromagnetic field (80 MHz to 6 000 MHz)	EN 61000-4-3	PASS	---
9.3	Electrostatic discharge	EN 61000-4-2	PASS	---
9.4	Fast transients common mode	EN 61000-4-4	N/A (Note1)	---
9.5	Radio frequency common mode	EN 61000-4-6	N/A (Note1)	---
9.6	Transients and surges in the vehicular environment	ISO 7637-2	N/A (Note2)	Only where equipment is connected to vehicle power supply
9.7	Voltage dips and interruptions	EN 6000-4-11	N/A (Note1)	---
9.8	Surges, line to line and line to ground	EN 61000-4-5	N/A (Note1)	---
Note 1: The EUT is powered from the internal battery. Note 2: The EUT is not intended for vehicular environment. Note 3: The EUT has no wired network ports, external antenna ports, PLC ports.				

4 EQUIPMENT UNDER TEST

4.1 Description of EUT

Prototype:	<input type="checkbox"/>
Production version:	<input checked="" type="checkbox"/>
Manufacturer:	V.A.D. Technical Engineering and Investment, s. r. o. Konventná 6 811 03 Bratislava Slovak Republic
Product name:	Smart IoT Telemetry Unit
Model:	VADTel AIoTU5
Serial number:	868064075763810, 868064075712510
Number of test samples:	2 pcs.
Description:	Intelligent IoT telemetric module targeted for remote monitoring of utility meters with data transmission via GSM/GPRS networks.
Product type explanatory notes:	Contains on-board magnetic field sensors, count of detected field changes are reported into the cloud (remote server).
Tested sample description:	- powered by internal li-ion battery 3.7 V DC - operational frequency bands: GSM850, EGSM900, DCS1800, PCS1900 - integral antenna: GSM 900: -1.0 dBi, GSM 1800: 3.0 dBi. - max TX power: GSM 900: 33.48 dBm; GSM 1800: 30.61 dBm
Deviations from the Basic EMC standards:	none

4.2 Software and firmware

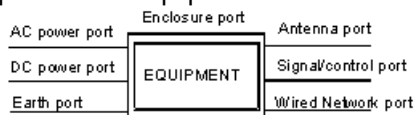
The EUTs were delivered in the configuration typical for their intended use.

4.3 Test modes

The EUT was powered from internal battery. The EUT was delivered in fixed, non-configurable configuration. The EUT was operated with the most unfavourable setting with regards to results of EMC tests.

4.4 Input / output ports

Any connection point on an equipment intended for connection of cables to or from that equipment is considered as a port:



List of EUT ports:

- none

4.5 RF exclusion bands

The frequencies on which the EUT is intended to operate shall be excluded from the conducted and radiated RF emission and immunity tests.

The exclusion bands according to EN 301 489-1, EN 301 489-52 apply to the EUT.

The full version of the document is available upon official request.