Test report issued under the responsibility of:
EMITECH MONTPELLIER laboratory
MRA US-EU Designation Number: FR0006
Canadian CAB Identifier: FR0003

RF EXPOSURE TEST REPORT

KDB 447498 D01 V06
RSS-102 - Issue 5, March 2015

Company ..... :	**STID**
Address..... :	20 Parc d'activités des Pradeaux 13850 GREASQUE FRANCE

Test item description. ..... :	**RFID reader**
Trade Mark. ..... :	Spectre Nano
Manufacturer..... :	STID
Model/Type reference..... :	SNA / SNA-R52
FCC ID..... :	OVNSNA
IC. ..... :	10520A-SNA
Ratings..... :	10Vdc to 36Vdc

Testing Laboratory ..... :	**EMITECH MONTPELLIER laboratory**
Address..... :	145 rue de Massacan 34740 VENDARGUES FRANCE

Report Reference No..... :	**RE-EVE-21G105-1A**
Test procedure. ..... :	FCC IC Certification
Diffusion..... :	Mr Nicolas SOGOYAN
Applicant's name. ..... :	STID
Date of issue..... :	June 15, 2023
Total number of pages..... :	11
Revision. ..... :	0
Compiled by..... :	Célien FOUGEROLLE
Approved by (+ signature). ..... :	Olivier HEYER (Laboratory Manager)

Duplication of this test report is only permitted for an integral photographic facsimile. It includes the number of pages referenced here above. This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of the whole manufactured products of the tested sample.

REPORT INDEX:

REVISION HISTORY:

Revision	Date	Modified pages	Modifications
0	June 15, 2023	/	Creation

1. GENERAL INFORMATIONS

This document submits the results of Radio tests performed on the equipment **SNA-R52** (denominated hereafter E.U.T.: equipment under test) according to document(s) listed in §2 of this test report.

TESTING PROCEDURE AND TESTING LOCATION:

Testing Location ..... :	EMITECH MONTPELLIER laboratory
Address. ..... :	145 rue de Massacan 34740 VENDARGUES FRANCE
Test procedure. ..... :	FCC IC Certification
Tested by ..... :	Alexis TOUZET, Célien FOUGEROLLE and Morgan PATEY
Test supervisor ..... :	N/A
Date of receipt of test item ..... :	N/A
Date (s) of performance of tests ..... :	Between october, the 15th of 2021 to June the 30th of 2022

APPLICANT'S GENERAL INFORMATIONS:

Company name ..... :	STID
Company address. ..... :	20 Parc d'activités des Pradeaux 13850 GREASQUE FRANCE
Person(s) present during the tests. ..... :	Mr SOGOYAN Nicolas
Responsible. ..... :	Mr SOGOYAN Nicolas

GENERAL REMARKS:

The information in italics is declared by the manufacturer and is under his responsibility
The test results presented in this report relate only to the object tested.
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.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report the decimal separator is point.

POSSIBLE TEST CASE VERDICTS:

Test case does not apply to the test object.:	N/A
Test case not performed..... :	N/P
Test object does meet the requirement..... :	P (Pass)
Test object does not meet the requirement. ..... :	F (Fail)

DEFINITIONS AND ABBREVIATIONS:

E.U.T.	Equipment Under Test	AE	Ancillary Equipment	Pk	Peak detector
RBW	Resolution BandWidth	VBW	Video BandWidth	QP	Quasi-peak detector
OATS	Open Area Test Site	FAR	Full Anechoic Room	Av	Average detector
VP	Vertical Polarization	HP	Horizontal Polarization	RMS	Root Mean Square
RF	Radio Frequency	N.T.R	Nothing To Report	N/C	Not Communicated

2. REFERENCE DOCUMENT(S)

NORMATIVE REFERENCES:
The following referenced documents are necessary for the application of the present test report. **FCC 47 CFR PART 15** Code of federal regulations – Title 47 telecommunication Part 15- Radio frequency devices **KDB 447498 D01 v06** RF exposure procedures and equipment authorization policies for mobile and portable devices. **RSS-102 - Issue 5, March 2018** Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands) **RR-EVE-21G105-2A Ed.0 and RR-EVE-21G105-3A Ed.0** Radio Test Report Emitech. Although the product standard uses obsolete technical standards, the latest versions of standards achievable by the laboratory will be used for testing.
INFORMATIVE REFERENCES:
The following referenced documents are not necessary for the application of the present test report but they assist the user with regard to a particular subject area.

3. EQUIPMENT TECHNICAL DESCRIPTION

3.1. Test Conditions

Test item description.	:	RFID reader
Model/Type reference	:	SNA / SNA-R52
FCC ID	:	OVNSNA
IC.	:	10520A-SNA
Trade Mark.	:	Spectre Nano
Serial number (S/N).	:	S21411112
Part number (P/N).	:	Not communicated
Software version.	:	*Not communicated*
Firmware version.	:	*I01 et V08P*
Type of sample.	:	Pre-serial
Function(s).	:	RFID reader
Manufacturer name.	:	STID
Address.	:	20 Parc d'activités des Pradeaux 13850 GREASQUE FRANCE

General product information:

N/A

3.2. EUT Marking plate

3.3. EUT General view

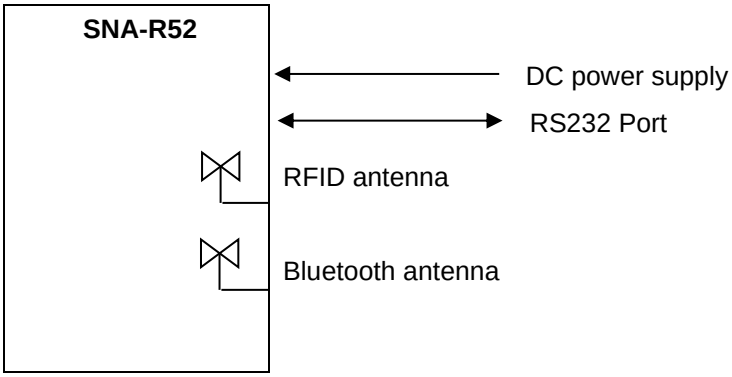
3.4. EUT Mechanical and Electrical Design

Power supply.	:	*12Vdc*
Power supply range.	:	*10Vdc to 36Vdc*
Power type.	:	*DC power supply*
Power (W).	:	*<15*
Nominal current (A).	:	*0.9*
Dimensions (L x W x H) (m).	:	*0.23*0.185*0.035*
Weight (kg).	:	*1.25*
Temperature range (°C).	:	*-30 / +60*
Ground bounding strap.	:	*No*

Comments:

N/A

3.5. EUT Input/Output ports



PORT	NAME	TYPE	LENGTH	CABLE TYPE	COMMENTS
0	Main frame	N/E	N/A	Plastic	N/A
1	DC power supply	DC	N/C	Shielded	12Vdc
2	RS232 Port	I/O	N/C	Shielded	N/A
3	RFID antenna	N/A	N/A	N/A	N/A
3	Bluetooth antenna	N/A	N/A	N/A	N/A

AC/DC ..... : AC/DC Converter port

AC ..... : Alternative current port

DC ..... : Direct current port

I/O ..... : Input or Output port

TP ..... : Telecommunication port

RF ..... : Radio frequency port

N/E ..... : Non Electrical port

3.6. Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

PRODUCT TYPE	MANUFACTURER	MODEL	N°EMITECH / COMMENTS
Laptop	Dell	Latitudfe 5510	Used to set EUT in test mode through RS232 port
AC/DC adaptor	Mean Well	GE40I12P1J	Used as power supply for AC power-line conducted emissions measurments

(AE) LAPTOP

(AE) AC/DC ADAPTOR

3.7. EUT Radio Specifications

3.7.1 RFID UHF

a) General Informations
According to manufacturer's declarations : EUT type..... : *Transceiver* Technology ..... : *RFID UHF* Environmental profile..... : *Data transmissions* Temperature range..... : *-30°C / +60°C* Antenna type ..... : *Integrated* Antenna Gain..... : *2 dBi* **Comments:** *N/A*
b) Transmitter Parameters (Tx)
Frequency bands..... : *902MHz to 928MHz* RF Power..... : *Not communicated* Number of channels / Separation..... : *50 cchannels / 500kHz* Modulation type ..... : *ASK* Duty cycle ..... : *Not communicated* Tested frequency..... : *Low channel : 902.75MHz* *Mid channel : 915.25MHz* *High channel : 927.25MHz*
c) Receiver Parameters (Rx)
Frequency bands..... : *902MHz to 928MHz* Bandwidth..... : *Not communicated*

3.7.2 BLE

a) GENERAL INFORMATIONS

According to manufacturer's declarations :

EUT type..... : *Transceiver*
Technology ..... : *Bluetooth Low Energy*
Environmental profile..... : *Data transmissions*
Temperature range..... : *-30°C / +60°C*
Antenna type ..... : *Integrated*
Antenna Gain..... : *0.6 dBi*

Comments:

EUT includes an RF module already certified, see appropriates tests report for full testing results

FCC ID: *2AAQS-ISP130301*

IC: *11306A-ISP130301*

b) TRANSMITTER PARAMETERS (TX)

Frequency bands..... : *2400MHz to 2483.5MHz*
RF Power..... : *Not communicated*
Number of channels / Separation..... : *Not communicated*
Modulation type ..... : *GFSK*
Duty cycle ..... : *Not communicated*
Tested frequency..... : *Low channel : 2402MHz*
Mid channel : 2426MHz
High channel : 2480MHz

c) RECEIVER PARAMETERS (RX)

Frequency bands..... : *2400MHz to 2483.5MHz*
Bandwidth..... : *Not communicated*

4. RF EXPOSURE

4.1. RFID UHF

Maximum EIRP = 27.1 dBm (512.86 mW) at 915.25 MHz (see Radio test report referenced in §2)

For USA
In accordance with KDB 447498 D01 General RF Exposure Guidance v06 and OET Bulletin 65:
PSD= EIRP/(4*π*R2)= 512.86/(4*π*(20 cm)²)= 0.102 mW/cm²
Limit= 0.61 mW/cm²

For Canada
In accordance with RSS-102, Issue 5, Section 2.5.2., as EIRP is lower than 1.385 W at 915.25 MHz, RF human exposure measurement is not necessary for ISED for a distance > 20 cm.

4.2. BLE

Maximum EIRP = -12.55 dBm (0.055 mW) at 2426 MHz (see Radio test report referenced in §2)

For USA
In accordance with KDB 447498 D01 General RF Exposure Guidance v06 and OET Bulletin 65:
PSD= EIRP/(4*π*R2)= 0.055/(4*π*(20 cm)²)= 0.00001 mW/cm²
Limit= 1 mW/cm²

For Canada
In accordance with RSS-102, Issue 5, Section 2.5.1., as EIRP is lower than 4.13 mW at 2426 MHz, SAR exemption for ISED can be considered for a distance ≤ 5cm.

End of test report