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RF EXPOSURE TEST REPORT

KDB 447498 D01 V06
RSS-102 - Issue 6, December 2023**Company**: **STID**
Address.....: 20 PA DES PRADEAUX
13850 GREASQUE
FRANCE**Test item description**: **RFID radio module included in UHF RFID middle range reader**
Trade Mark: Spectre Nano Access
Manufacturer.....: STID
Model/Type reference.....: MUF / MUF included in SNA-W5X
FCC ID.....: OVNMF
IC: 10520A-MUF
Ratings.....: 9 VDC to 36 VDC**Testing Laboratory**: **EMITECH MONTPELLIER laboratory**
Address.....: 145 rue de Massacan
34740 VENDARGUES
FRANCE**Report Reference No**: **RE-EVE-24D574-8A**
Test procedure: FCC IC Certification
Diffusion.....: Mr BOALLAL
Applicant's name: STID
Date of issue.....: April 10, 2026
Total number of pages.....: 12
Revision: 0
Compiled by.....: Morgan PATEY
Approved by (+ signature): Olivier HEYER (Deputy 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.*

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REVISION HISTORY:

Revision	Date	Modified pages	Modifications
0	April 10, 2026	/	Creation

1. GENERAL INFORMATIONS

This document submits the results of Radio tests performed on the equipment **HF RFID middle range reader SNA-W5X** (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.....		Morgan PATEY			
Test supervisor.....		None			
Date of receipt of test item		N/A			
Date (s) of performance of tests.....		From April the 6 th of 2025 to January the 26 th of 2026			
APPLICANT'S GENERAL INFORMATIONS:					
Company name		STID			
Company address.		20 PARC D'ACTIVITES DES PRADEAUX 13850 GREASQUE FRANCE			
Person(s) present during the tests.		No representative for company attended the tests.			
Responsible.....		Mr BOALLAL			
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
FSOATS	Free Space 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
SAC	Semi Anechoic Chamber				

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 6, December 2023

Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)

RR-EVE-24D574-5A and RR-EVE-24D574-7A

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 radio module included in UHF RFID middle range reader
Model/Type reference..... :	MUF / MUF included in SNA-W5X
Trade Mark. :	Spectre Nano Access
Serial number (S/N)..... :	Not communicated
Part number (P/N). :	Not communicated
Software version..... :	<i>Not communicated</i>
Firmware version..... :	SA281A01
Type of sample. :	Pre-serial
Function(s)..... :	UHF RFID reader
Manufacturer name. :	STID
Address. :	20 PARC D'ACTIVITES DES PRADEAUX 13850 GREASQUE FRANCE

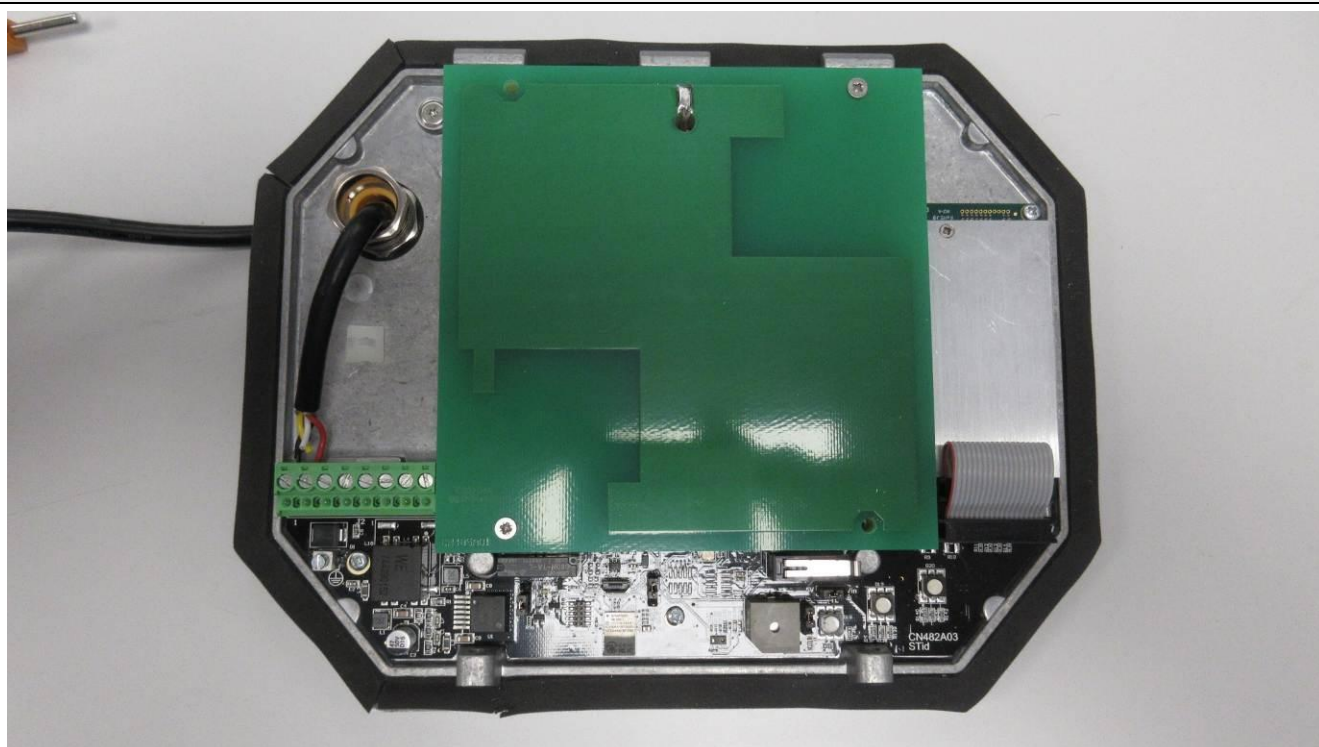
General product information:

N/A

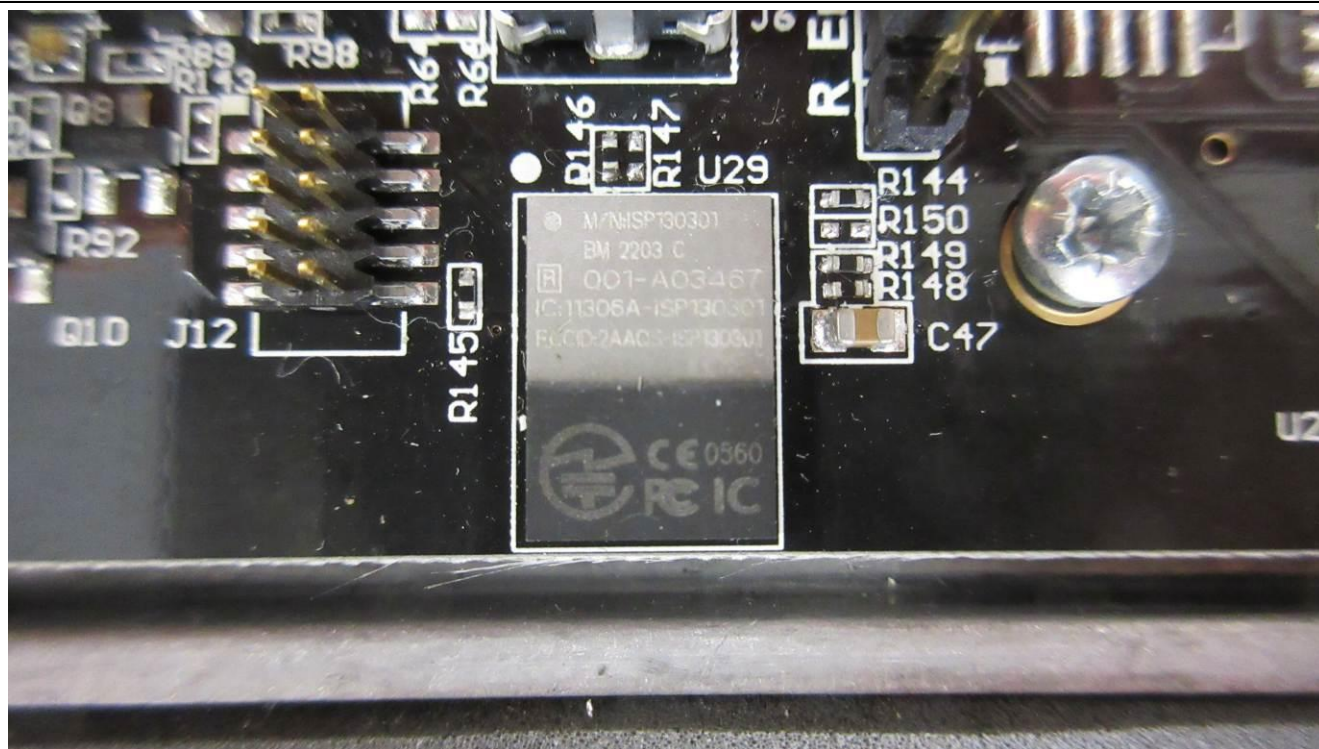
3.2. E.U.T. General view



3.3. E.U.T. Internal view & Electronic board



3.4. E.U.T. BLE module



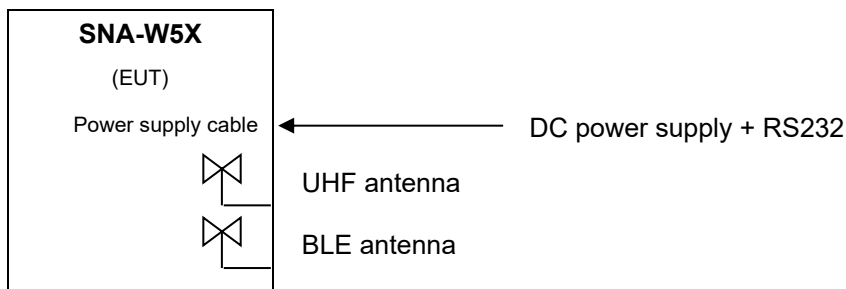
3.5. E.U.T. Mechanical and Electrical Design

Power supply.....	: 12 VDC
Power supply range.....	: 9 VDC to 36 VDC
Power type.....	: DC
Power (W).....	: <i>Not communicated</i>
Nominal current (A).	: 0.45
Dimensions (L x W x H) (m).	: 0.230 x 0.183 x 0.035
Weight (kg).	: <1.5kg
Temperature range (°C).	: -25 to +60
Ground bounding strap.....	: No

Comments:

N/A

3.6. E.U.T. Input/Output ports



PORT	NAME	TYPE	LENGTH	CABLE TYPE	COMMENTS
0	Main frame	N/E	N/A	Metallic	N/A
1	DC power supply + RS232	DC	> 3m	Shielded	12 VDC + RS232
2	UHF antenna	RF	N/A	N/A	868 MHz
3	BLE antenna	RF	N/A	N/A	2.4 GHz

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

3.7. Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

PRODUCT TYPE	MANUFACTURER	MODEL	N°EMITECH / COMMENTS
Laptop	XPS	Not communicated	Used to set EUT operation modes through RS232
AC/DC block	MEAN WELL	GE40I12-P1J	Used as EUT's power supply for AC main conducted measurement

LAPTOP (AE)



AC/DC BLOCK (AE)



3.8. EUT Radio Specifications

a) GENERAL INFORMATIONS	
According to manufacturer's declarations :	
EUT type.....	Transceiver
Technology	RFID UHF + BLE
Environmental profile.....	Data transmissions
Temperature range.....	-25°C to +60°C
Antenna type	Integrated
Antenna Gain.....	1.70 (RFID UHF)
Comments:	
<i>EUT includes a BLE RF module already certified, see appropriate tests report for full testing results.</i>	
FCC ID: 2AAQS-ISP130301	
IC: 2AAQS-ISP130301	
b) TRANSMITTER PARAMETERS (Tx)	
Frequency bands.....	BLE: 2400 MHz to 2483.5 MHz RFID UHF: 902 MHz to 928 MHz
RF Power.....	BLE: < 10dBm RFID UHF: 30 dBm (1 W)
Number of channels / Separation.....	BLE: 40 channels / 2 MHz RFID UHF: 50 / 500 kHz
Modulation type	BLE: GFSK. RFID UHF: AM
Duty cycle	Not communicated
Tested frequency.....	BLE: 2402 MHz (Low channel) 2426 MHz (Mid channel) 2480 MHz (High channel) RFID UHF: 902.75 MHz (low channel) to 927.25 MHz (high channel)
c) RECEIVER PARAMETERS (Rx)	
Frequency bands.....	BLE: 2400 MHz to 2483.5 MHz RFID UHF: 902 MHz to 928 MHz

4. RF EXPOSURE

4.1. RFID UHF

Maximum EIRP = 28.50 dBm (708 mW) at 927.25 MHz (see Radio and Antenna Gain Pattern test reports referenced in §2).

Then maximum ERP = 432 mW

For USA

In accordance with KDB 447498 D04 Appendix B.3 and FCC Part 2.1091:

$$ERP_{20cm}(mW) = \begin{cases} 2040f & \text{for } 0.3GHz \leq f < 1.5GHz \\ 3060 & \text{for } 1.5GHz \leq f \leq 6GHz \end{cases}$$

Thanks to test report in §2 of this document :

Configuration	Frequency (MHz)	Max EIRP (dBm)	Max ERP (W)	Limit (W)
RFID Tx max	927.25	28.50	0.43	1.85

It is then not necessary to carry out other specific measures to assess human exposure to radiofrequencies when the product is used more than **20 cm** from the human body.

For Canada

In accordance with RSS-102, Issue 6, Section 6.6., the maximum EIRP must be lower than $1,31 \times 10^{-2} f^{0,6834}$

Thanks to test report in §2 of this document :

Configuration	Frequency (MHz)	Max EIRP (dBm)	Max EIRP (W)	Limit (W)
RFID Tx max	927.25	28.50	0.71	1.40

It is then not necessary to carry out measures to assess human exposure to radiofrequencies when the product is used more than **20 cm** from the human body.

4.2. BLE

Maximum EIRP = -12.71 dBm (0.05 mW) at 2402 MHz (see Radio test report referenced in §2)
Then maximum ERP = 0.03 mW

For USA

In accordance with KDB 447498 D04 Appendix B.3 and FCC Part 2.1091:

$$ERP_{20cm}(mW) = \begin{cases} 2040f & \text{for } 0.3GHz \leq f < 1.5GHz \\ 3060 & \text{for } 1.5GHz \leq f \leq 6GHz \end{cases}$$

Thanks to test report in §2 of this document :

Configuration	Frequency (MHz)	Max EIRP (dBm)	Max ERP (W)	Limit (W)
BLE Tx max	2402.00	-12.71	0.00	3.06

It is then not necessary to carry out other specific measures to assess human exposure to radiofrequencies when the product is used more than **20 cm** from the human body.

For Canada

In accordance with RSS-102, Issue 6, Section 6.6., the maximum EIRP must be lower than $1,31 \times 10^{-2} f^{0,6834}$

Thanks to test report in §2 of this document :

Configuration	Frequency (MHz)	Max EIRP (dBm)	Max EIRP (W)	Limit (W)
BLE Tx max	2402.00	-12.71	0.00	2.68

It is then not necessary to carry out measures to assess human exposure to radiofrequencies when the product is used more than **20 cm** from the human body.

4.3. Conclusion

It is then not necessary to carry out measures to assess human exposure to radiofrequencies when the product is used more than **20 cm** from the human body.

●●● End of report ●●●