

REM-EMIESS23F550ADK-02Av1

This report cancels and replaces the test report N° REM-EMIESS23F550ADK-02Av0

MPE test report

According to the standard:

CFR 47 FCC PART 15

Equipment under test:

Novaterm® BOX 921 MHz

FCC ID: 2BEZD-NBOXV04

Company:

BERKEM DEVELOPPEMENT

Distribution: Mr BOUTIN

(Company: BERKEM DEVELOPPEMENT)

Number of pages: 6 with 1 appendix

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval	
			Name and Function	Visa
1	3-Mar-25	1, 2, 3, 4	M. DUMESNIL, Radio Laboratory Manager	

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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.

Information in italics are declared by the manufacturer/customer and are under his responsibility

DESIGNATION OF PRODUCT: *Novaterm® BOX 921 MHz*

Serial number (S/N): *22-222-22B*

Reference / model (P/N): *NBOX.921.1.5.24*

Software version: *0.0.0*

MANUFACTURER: *BERKEM DEVELOPPEMENT*

COMPANY CERTIFYING THE PRODUCT:

Company: *BERKEM DEVELOPPEMENT*

Address: *20, RUE JEAN DUVERT
33290
BLANQUEFORT
FRANCE*

RESPONSIBLE: *Mr BOUTIN*

COMPANY SUBMITTING THE PRODUCT:

Company: *BERKEM DEVELOPPEMENT*

Address: *20, RUE JEAN DUVERT
33290
BLANQUEFORT
FRANCE*

Responsible: *Mr BOUTIN*

Person present during the tests: *Mr KAMAL Ibrahim – (The first day)*

DATE(S) OF TEST: *From 9-Jan-24 to 11-Jan-24 and 7-Feb-24 to 14-Feb-24*

TESTING LOCATION: *EMITECH ANGERS laboratory at JUIGNE SUR LOIRE (49) FRANCE*

*FCC Accredited under US-EU MRA Designation Number: FR0009
Test Firm Registration Number: 873677*

TESTED BY: *B. VOVARD*

VISA:

WRITTEN BY: *B. VOVARD*



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REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	15-Feb-24	/	Creation
1	03-Mar-25	1, 2, 3, 4	Update following a change in the product's marketing name

1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: **Novaterm® BOX 921 MHz**, in accordance with normative reference.

The equipment under test integrates:

- SRD Monofrequency transceiver operational in the band (902MHz – 928MHz),
- GSM / LTE-M / NBloT radio module already certified (FCCID: XMR201910BG95M3).

The host device of certified module(s) shall be properly labeled to identify the module(s) within.

2. PRODUCT DESCRIPTION

Class: B

Utilization: Residential

SRD Part :

Antenna type and gain: 0.01 dBi / integral antenna

Operating frequency range: From 902 MHz to 928 MHz

Number of channels: 1

Channel spacing: Not concerned

Modulation: GFSK2

GSM / LTE-M / NBloT Parts :

Antenna type and gain: Maximum gain of 3.3 dBi / integral SMD antenna (TE Connectivity 2108783-2)

Operating frequency range: From 824 MHz to 849 MHz (GSM 850)
From 1850 MHz to 1910 MHz (PCS 1900)

From 1850 MHz to 1910 MHz (LTE-M and NBloT Band 2)
From 1710 MHz to 1755 MHz (LTE-M and NBloT Band 4)
From 824 MHz to 849 MHz (LTE-M and NBloT Band 5)
From 699 MHz to 716 MHz (LTE-M and NBloT Band 12)
From 777 MHz to 787 MHz (LTE-M and NBloT Band 13)
From 1850 MHz to 1915 MHz (LTE-M and NBloT Band 25)
From 824 MHz to 849 MHz (Only LTE-M Band 26)
From 1710 MHz to 1780 MHz (LTE-M and NBloT Band 66)
From 663 MHz to 698 MHz (Only NBloT Band 71)
From 698 MHz to 716 MHz (LTE-M and NBloT Band 85)

Power source: 5 Vdc by adapter at 120 Vac 60 Hz

Power level, frequency range and channels characteristics are not user adjustable.
The details pictures of the product and the circuit boards are joined with this file.

3. NORMATIVE REFERENCE

The standards and testing methods related throughout this report are those listed below.
They are applied on the whole test report even though the extensions (version, date and amendment) are not repeated.

CFR 47 (2023) Radio Frequency Devices

ANSI C63.10 2013
Procedures for Compliance Testing of Unlicensed Wireless Devices.

4. RF EXPOSURE**Maximum Permissive Exemption according paragraph 1.1310(d)(2) of CFR 47 FCC Part 15**

Maximum measured power = 94.5 dB μ V/m = 0.00939W at 921 MHz

with $P = (E \times d)^2 / (30 \times G_p)$ with $d = 10$ m and $G_p = 1$

$$PSD = EIRP / (4 \times \pi \times R^2)$$

$$\Rightarrow 9.397 / (4 \times \pi \times (20 \text{ cm})^2) = 0.00187042 \text{ mW/cm}^2 \text{ (limit = 0.614 mW/cm}^2\text{)}$$

The equipment fulfils the requirements on power density for general population/uncontrolled exposure and therefore fulfils the requirements of 47 CFR §1.1310.