FCC Part 1 Subpart I
FCC Part 2 Subpart J

RF EXPOSURE REPORT

FOR

WIRELESS COMMUNICATION SYSTEM MODULE

MODEL NAME: NINA-B3 SERIES (NINA-B302)

FCC ID: XPYNINAB30

REPORT NUMBER: 13714278- E1V1

ISSUE DATE: 6/15/2021

Prepared for
U-BLOX AG
ZUERCHERSTRASSE 68
THALWIL, CH-8800, SWITZERLAND

Prepared by
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ACCREDITED
CERT #0751.05

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	6/15/2021	Original issue	--

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: **U-BLOX AG**
ZUERCHERSTRASSE 68
THALWIL, CH-8800, SWITZERLAND

EUT DESCRIPTION: **WIRELESS COMMUNICATION SYSTEM MODULE**

MODEL NAME: **NINA-B3 SERIES (NINA-B302)**

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 1 SUBPART I & PART 2 SUBPART J	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

DAVE WEAVER
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UL Verification Services Inc.

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UL Verification Services Inc.

2. TEST METHODOLOGY

SAR test exclusion in accordance with KDB 447498 D01 General RF Exposure Guidance v06

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

3. REFERENCES

Output power, Duty cycle and Antenna gain data is excerpted from the applicable test reports or client declarations.

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	208313
☐	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	208313
☐	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	208313

5. EUT DESCRIPTION

The EUT is a BLE module. The user to antenna separation distance is 0mm.

6. OUTPUT POWER

The maximum declared conducted average output power is 8dBm (6.3mW).

7. STANDALONE SAR TEST EXCLUSION CONSIDERATIONS

7.1. FCC

SAR test exclusion in accordance with KDB 447498.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]·[√f(GHz)] ≤ 3.0, for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

This test exclusion is applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances > 50 mm are determined by:

1. {[Power allowed at numeric threshold for 50 mm)] + [(test separation distance – 50 mm)·(f(MHz)/150)]} mW, for 100 MHz to 1500 MHz
    - $f_{(MHz)}$ is the RF channel transmit frequency in MHz
2. {[Power allowed at numeric threshold for 50 mm)] + [(test separation distance – 50 mm)·10]} mW, for > 1500 MHz and ≤ 6 GHz

SAR Exclusion Calculation Table for Portable Devices (separation distance < 50mm)

Antenna	Tx	Frequency (MHz)	Avg Output power		Separation distances (mm)	Threshold Value
			dBm	mW		
Main	BLE	2480	8.00	6.00	5	1.9

Conclusion:

The computed value is < 3 therefore the device qualifies for Standalone SAR test exclusion.

END OF TEST REPORT