Test Report on

Blues Wireless
Model: NOTE-WBNAW
SW Version: 5
HW Version: 5
PTCRB # 119755
SVN: 31

Test Report Reference: MUS_BLUES_2302_CON_Rev0

Date: 2023-08-25

Cert# 3699.02

Test Laboratory:
Bureau Veritas CPS Inc.
1293 Anvilwood Avenue
Sunnyvale, CA 94089
USA

Authorized Test Lab
Lab Code: **20131001- 00**

Table of Contents

1 Administrative Data

1.1 Project Information

Project Name	MUS_BLUES_2302
Responsible for Testing	Jenil Nathwani
Date of Report	2023-08-25
Testing Time Frame	2023-07-19 to 2023-07-21

1.2 Applicant Information

Company	Blues Wireless
Address	50 Harbor Street Manchester, MA 01944 United States
Contact Person	James Batson
Phone	+1 (339) 293 7956
Email	jbatson@blues.com

1.3 Test Laboratory Information

The following list shows all Locations and Test Resources involved in the generation of test results:

Bureau Veritas, USA, CA, Sunnyvale

Company Name	Bureau Veritas Consumer Products Services, Inc.
Address	1293 Anvilwood Avenue Sunnyvale, CA 94089 United States
Contact	Detlef van't Hof
Phone	+1 (949) 297 8071
Email	Detlef.vantHof@7Layers.com
Laboratory accreditation no.	A2LA 3699.02

List of Test Resources

ID	Name	Responsible	Accreditation Info
1	TP118 - COMPRION UT3 USIM Simulator	Benjamin Ho	A2LA 3699.02

1.4 Signature of responsible for testing

Jenil Nathwani

Jenil Nathwani

1.5 Signature of responsible for accreditation scope

Marco Orantes

Marco Orantes

1.6 Revision History

Report version control			
Version	**Release date**	**Change Description**	**Version validity**
Initial	2023-08-25	Initial Release	Valid

2 Test Object Data

2.1 Object Under Test (OUT) Description(s)

The following section lists all Objects Under Test (OUTs) involved during testing.

Object Under Test: NOTE-WBNAW

Type / Model	Blues Wireless Model: NOTE-WBNAW SW Version: 5 HW Version: 5 PTCRB # 119755 SVN: 31
Normal Temperature	23 °C
Normal Voltage	5 V

Manufacturer:

Company	Blues Wireless
Address	50 Harbor Street Manchester, MA 01944 United States
Contact Person	James Batson
Phone	+1 (339) 293 7956
Email	jbatson@blues.com

3 Results

3.1 General

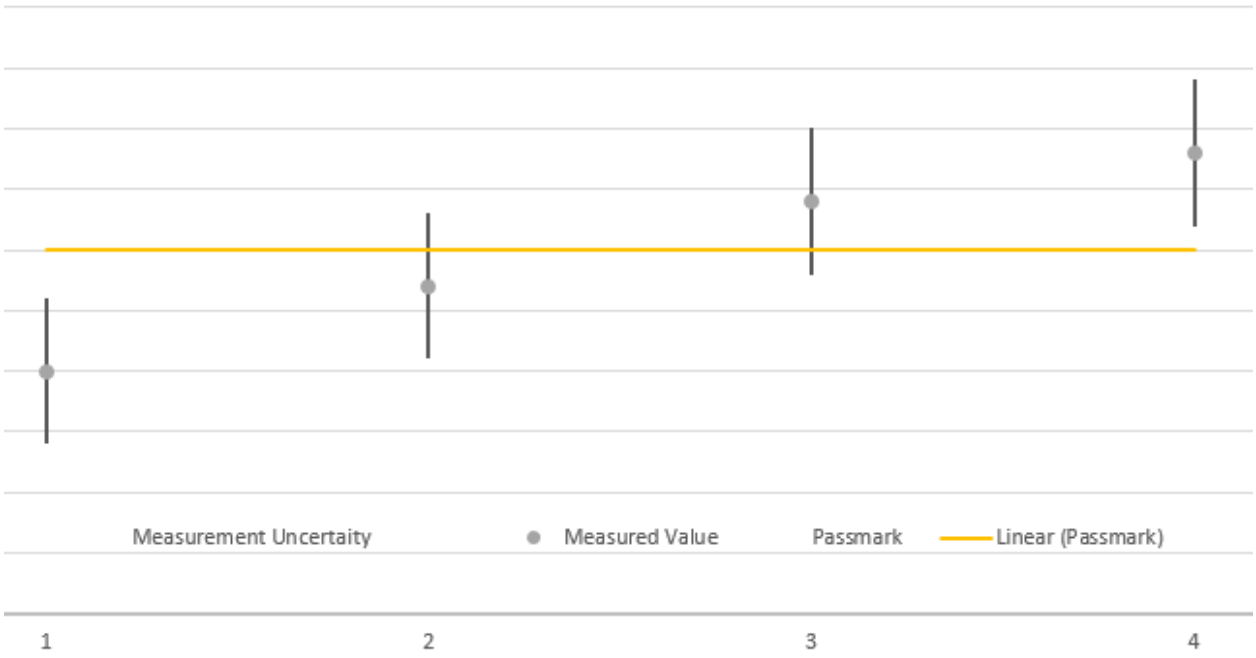
Documentation of tested devices	Available at the test laboratory.
Interpretation of the test results	The results of the inspection are described on the following pages, where 'Conformity' or 'Passed' means that the certification criteria were verified and that the tested device conforms to the applied standard. In cases where 'Declaration' is stated, the required documents are available in the manufacturer's product documentation. In cases where 'not applicable' is stated, the test case requirements are not relevant to the specific equipment implementation.
Notes	1. This report contains the abbreviated information content pertaining to services rendered. Supporting documentation not included herein is maintained and available at the test laboratory. 2. All tests are performed under environmental conditions within the requirements of the specifications. Environmental condition records are available at the test laboratory. 3. Test sample (NOTE-WBNAW) of this project received in good condition.
Project specific notes	This is a delta test report based on PTCRB modular approval guideline for a final product that integrates a Quectel EG91-NAXD Module which has been approved by PTCRB (Request# 116761) according to NAPRD.03 v6.11 with HW version: R1.0 and SW version: EG91NAXDGAR07A01M1G (SVN31) on March 23, 2023.

3.2 Measurement Uncertainties

Parameter	Uncertainty
Occupied channel Bandwidth	± 2%
Radiated Emissions	30 MHz – 1 GHz: ± 2.4 dB 180 MHz – 18 GHz: ± 2.6 dB
Spurious emissions, conducted	0.22 – 1.82 dB (*)
Transmitter tests, conducted	0.33 – 0.8 dB (*)
Receiver tests, conducted	0.22 – 1.027 dB (*)
Frequency error, conducted	< 15 Hz (*)
Phase error, conducted	≤02 °RMS EVM: ≤ 2.5%
Temperature	± 1.0 °C
Humidity	± 3%
DC and low frequency voltages	± 0.05%
Time	0.28 ms
Duty Cycle	± 5%

(*) Depending on the used test resource and the performed test case the uncertainty is in the given range. Detailed documentation is available at Bureau Veritas Consumer Products Services, Inc.

The measurement uncertainties for all parameters are calculated with an expansion factor (coverage factor) k = 1.96. This means, that the true value is in the corresponding interval with a probability of 95 %.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

3.3 Applicable Quality Policies

Quality Policy	Version	Expiration Date
NAPRD03	6.11	

3.4 Applicable Test Specification(s)

Test Specification	ETSI TS 102 230-1
Version	V14.1.0
Description	Smart Cards; UICC-Terminal interface; Physical, electrical and logical test specification (Release 14)

3.5 Result Statistics

Test Specification	Total	Result Verdict					Pass ratio
		Pass	Fail	Declaration	Blocked	Performed	
ETSI TS 102 230-1	28	28	0	0	0	0	100.00 %

Note: Pass, Declaration, Performed, Fail and Inconclusive results are regarded for the pass ratio calculation.
Pass, Performed and Declaration are summarized as Pass results. Fail and Inconclusive are summarized as Fail results. All are summarized as total count (Pass + Declaration + Performed + Fail + Inconclusive).
The pass ratio is calculated by the number of Pass results divided by the number of total results.
All other results like Error, Not Tested or Blocked are not regarded for the calculation.

3.6 Result Summary

3.6.1 Pass Results

Test Specification: ETSI TS 102 230-1

Test Case Name / Description Test Condition	Category	Verdict	Date	Test Res. ID	Sample/Setup
5.1.1 / Phase preceding Terminal power on					
	A	Passed	2023-07-19	TR 1	AA01
5.1.2.2 / Phase during UICC power on: 1,8 V - 3 V					
Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
5.1.3.2 / Phase during Terminal power off: 1,8 V - 3 V					
Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
5.1.5.3 / Reaction of 1,8 V technology Terminals on type recognition of 1,8 V technology UICCs					
Parameter = 1.8V-3V	A	Passed	2023-07-19	TR 1	AA01
5.1.5.4 / Reaction of 1,8 V technology Terminals on type recognition of 3V technology UICCs					
Parameter = 1.8V-3V	A	Passed	2023-07-19	TR 1	AA01
5.1.5.6.2 / Reaction of Terminals receiving no ATR, 1.8 V - 3 V					
	A	Passed	2023-07-19	TR 1	AA01
5.2.2.3 / Electrical tests on contact C1, Test 1: 1,8 V - 3 V					
Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
5.2.2.4 / Electrical tests on contact C1, Test 2: 1,8 V - 3 V					
Parameter = (1) 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (1) 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (2) 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (2) 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (3) 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (3) 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (4) 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (4) 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (5) 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (5) 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = (6) 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01

Parameter = (6) 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
5.2.3.2 / Electrical tests on contact C2: 1,8 V - 3 V					
Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
5.2.4.2 / Electrical tests on contact C3: 1,8 V - 3 V					
Parameter = 1.8V-3V (1.8V mode)	A	Passed	2023-07-19	TR 1	AA01
Parameter = 1.8V-3V (3V mode)	A	Passed	2023-07-19	TR 1	AA01
5.2.5.3 / Electrical tests on contact C7, Test 1: 1,8 V - 3 V					
Parameter = 1.8V-3V (1.8V mode)	B	Passed	2023-07-19	TR 1	AA01
Parameter = 1.8V-3V (3V mode)	B	Passed	2023-07-19	TR 1	AA01

4 Test Equipment Details

4.1 List of Test Equipment

The information shown below is valid for the testing time frame of this test report.

Test Resource 1: TP118 - COMPRION UT3 USIM Simulator
Description:

Single Devices of Test Resource TP118 - COMPRION UT3 USIM Simulator

Name	Serial Number	Manufacturer	
Analog Probe (UT3 APR) S/N 45175	45175	COMPRION GmbH	
Thermo-Hydrometer	200591895		
	Deactivation	*Start Date*	*End Date*
	Deactivated due to out-of-cal	2023-04-07	

Test System TP118 - COMPRION UT3 USIM Simulator of Test Resource TP118 - COMPRION UT3 USIM Simulator

Description: UT³ Platform s/n 40414
Manufacturer: COMPRION GmbH
Serial Number: 40414

Event	Execution Date	Next Execution
Calibration	2023-01	2024-01
Software Version	**Start Date**	**End Date**
UT3 DTC Version 8.5	2022-09-02	

Single Devices of Test System TP118 - COMPRION UT3 USIM Simulator

Name	Serial Number	Manufacturer
Analog Probe (UT3 APR) S/N 45175	45175	COMPRION GmbH
COMPRION UT3 SIM Simulator		COMPRION GmbH

5 Annex

5.1 Object Under Test (OUT) Features

Supported Features for Object Under Test: NOTE-WBNAW

Name	Short Description
3GPP TS 36.523-2	
A.4.1-1/1	E-UTRA FDD
A.4.3.1-1/2	eFDD2
A.4.3.1-1/4	eFDD4
A.4.3.1-1/5	eFDD5
A.4.3.1-1/12	eFDD12
A.4.3.1-1/13	eFDD13
A.4.3.1-1/25	eFDD25
A.4.3.1-1/26	eFDD26
ETSI TS 102 230-1	
A.1/3	Class A
A.1/4	Class B
A.1/5	Class C

5.2 Sample AA01

Sample Name: AA01	
Object Under Test	NOTE-WBNAW
Description	Sample_AA01
Hardware Version	5
Software Version	5

Parameter Name	Value
IMEI	869965067132559

APPENDIX A. EUT Set-up Photographs

Sample

End of Test Report