

FCC PART 96.47 CBSD-EUD TEST
REPORT

Applicant: Telit Communications S.p.A.
Via Stazione di Prosecco 5/b 34010 Sgonico - Trieste

Product Name: LN920A12-WW / LN920A6-WW

Brand Name: Telit

Model No.: LN920A12-WW / LN920A6-WW

Model Difference: 1. Internal Component is different between two model.
2. Capability is different between two model.

Report Number: ER/2021/A0029-01

FCC ID RI7LN920

Issue Date: March 16, 2022

Date of Test: October 6, 2021~October 14, 2021

Date of EUT Received: October 6, 2021

Approved By

Blue Yang

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.26-2015 and the energy emitted by the sample EUT comply with FCC rule part 2, 96.47.

The results of this report relate only to the sample identified in this report.

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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
ER/2021/A0029-01	00	Inserting section 1.2 to address model difference.	March 16, 2022	Susan Lin	

Note:

- 1、The remark "" indicates modification of the report upon requests from certification body.
- 2、Variant information of model numbers is provided by the applicant, test results of this report are applicable to the sample EUT(s) received and are assessed as identical in hardware and firmware to each other.
- 3、Please note that the report ER/2021/A0029-01 will replace the previous ER/2021/A0029 as the new version and ER/2021/A0029 is ineffective anymore from now on.

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1. GENERAL PRODUCT INFORMATION

1.1. Product Description

Product Name:	LN920A12-WW / LN920A6-WW
Brand Name:	Telit
Model No.:	LN920A12-WW / LN920A6-WW
Model Difference:	1. Internal Component is different between two model. 2. Capability is different between two model.
Hardware Version:	1.0
Firmware Version:	LN920A12-WW: M0L.000001 / LN920A6-WW : M0L.010001
EUT Series No.:	35417570001280
Power Supply:	3.3Vdc
Test Software (Name/Version):	N/A

1.2. Model difference

- The mobile data modem chip on U200 between two models are pin for pin compatible with identical internal circuits.
- The **LN920A6-WW** uses MOBILE DATA MODEM SDX12-2 with CAT12 features disabled by a fuse bit with different FVIN.
- The **LN920A12-WW** is tested as the representative sample with the most modem capabilities.

Model	FVIN	Component on U200	Modem Capability
LN920A12-WW	M0L.000001	MOBILE DATA MO-DEM SDX12-0	LTE, 4 × 4 MIMO, CA 60 MHz DL 256QAM DL, CA 40 MHz UL, 64 QAM UL,
LN920A6-WW	M0L.010001	MOBILE DATA MO-DEM SDX12-2	LTE, 4 × 4 MIMO, CA 40 MHz DL, 64 QAM DL, CA 20 MHz UL, 16 QAM UL

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1.3. Antenna Designation

Antenna Type	Antenna Model No.
Dipole	WE14-S3-2
Note: Transmission frequencies in this test report are only available by the above antenna(s).	

Type	Modulation	Frequency (MHz)	Peak Antenna Gain (dBi)
Dipole	LTE-Band 42/43/48	3550 ~ 3700	1

Note: Antenna information is provided by the applicant.

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1.4. Operation Frequencies

LTE Band	BW (MHz)	Operation Frequency (MHz)		
42/43/48	5	3552.5	-	3697.5
	10	3555.0	-	3695.0
	15	3557.5	-	3692.5
	20	3560.0	-	3690.0

LTE band 42/43 is covered by LTE band 48 because it is a subset of Band 48 and they have same output power.

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1.5. Maximum ERP/EIRP

LTE Band	BW	Modulation	ERP / EIRP (dBm/10MHz)		(W)	99%	Type of Emission
48	5	QPSK	22.78	EIRP	0.190	4.4904	4M49G7D
		16QAM	22.01	EIRP	0.159	4.4826	4M48D7W
		64QAM	20.79	EIRP	0.120	4.4964	4M50D7W
48	10	QPSK	22.68	EIRP	0.185	8.9618	8M96G7D
		16QAM	22.02	EIRP	0.159	8.9433	8M94D7W
		64QAM	20.80	EIRP	0.120	8.9568	8M96D7W
48	15	QPSK	22.82	EIRP	0.191	13.4270	13M4G7D
		16QAM	22.05	EIRP	0.160	13.4420	13M4D7W
		64QAM	20.81	EIRP	0.121	13.4230	13M4D7W
48	20	QPSK	22.87	EIRP	0.194	17.8840	17M9G7D
		16QAM	22.06	EIRP	0.161	17.8850	17M9D7W
		64QAM	20.74	EIRP	0.119	17.8830	17M9D7W

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1.6. Test Methodology of Applied Standards

FCC Part 96.47

FCC KDB 940660 D01 Part 96 CBRS Eqpt V02

1.7. Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan.	SAC 1	TW0027	TW3702
		SAC 3		
		Conduction 1		
		Conducted 1		
		Conducted 2		
		Conducted 3		
		Conducted 4		
		Conducted 5		
		Conducted 6		
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C	TW0028	
		SAC C		
		SAC D		
		SAC G		
		Conducted A		
		Conducted B		
		Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		

Note: Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

1.8. Special Accessories

No special accessories were used during testing.

1.9. Equipment Modifications

There was no modifications incorporated into the EUT.

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2. SUMMARY OF TEST RESULTS

2.1. Summary of test results

FCC Rules	Description Of Test	Result
§96.47(a) (1)	End User Device additional requirements	Compliant

Note

1. All test data is leveraged from test report ER/2021/A0029.

2.2. Reporting statements of conformity

The conformity statement in this report is based solely on the test results, measurement uncertainty is excluded.

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3. MEASUREMENT

3.1. End User Device additional requirements

FCC Part 96.47

(a) End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.

(1) An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

3.2. Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

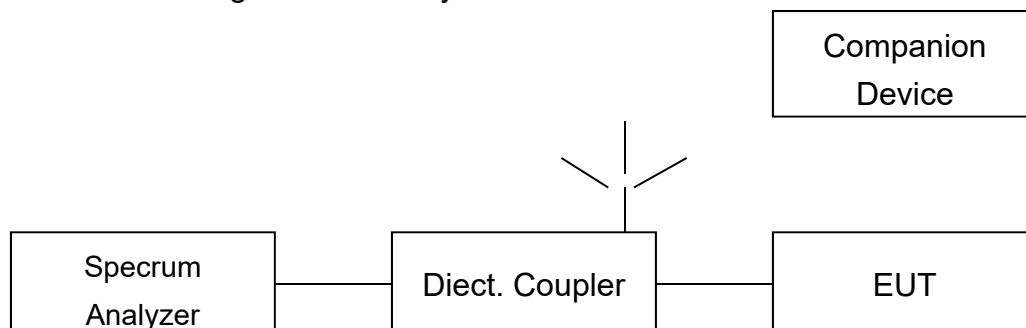
1. Setup with frequency 3560MHz and power level 22dBm/MHz
2. Enable AP service from EPC management
3. Check EUD Tx Frequency and power
4. Disable AP service from EPC management
 - a. Check EUD stops transmission within 10seconds.
5. Setup with 3690MHz & power level 3dBm/MHz
6. Enable AP service from EPC management
7. Check EUD Tx Frequency and power
8. Disable AP service from EPC management
 - a. Check EUD stops transmission within 10seconds.

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3.3. Test Configuration of Equipment Under Test:

Connection Diagram of Test System



The EUT is an End User Device (EUD) which was connected to a certified Gentek CBSD (FCC ID: MXF-WLTGFC105 and qualified by WInnForum) as the companion device to show compliance with Part 96.47 requirement.

3.4. Measurement Equipment Used

Conducted Emission Test Site: Conducted 5					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY59071406	06/16/2021	06/15/2022
DC Power Supply	Gwinstek	SPS-3610	GEV856757	10/12/2021	10/11/2022
Attenuator	KEYSIGHT	8494B	TH60073121	12/16/2020	12/15/2021
Attenuator	KEYSIGHT	8496B	TH60073123	12/16/2020	12/15/2021
DC Block	Mini-Circuits	BLK-18-S+	4	12/16/2020	12/15/2021
Power Divider	RF-LAMBAD	RFLT2W1G18G	11-JSPF412-020	12/16/2020	12/15/2021
2WayDivider	Woken	0120A02056002D	DSU7AMW9S3	12/16/2020	12/15/2021
AP	PC i-	FXG-05TX	N/A	N/A	N/A
CBSD	Gentek	WLTGFC-105	SN: N/A FCC ID:MXF-WLTGFC105	N/A	N/A
EPC	Gentek	CSB-3230A-GT1	1412902099	N/A	N/A
Notebook	Lenovo	T440P	PC-089AH5	N/A	N/A

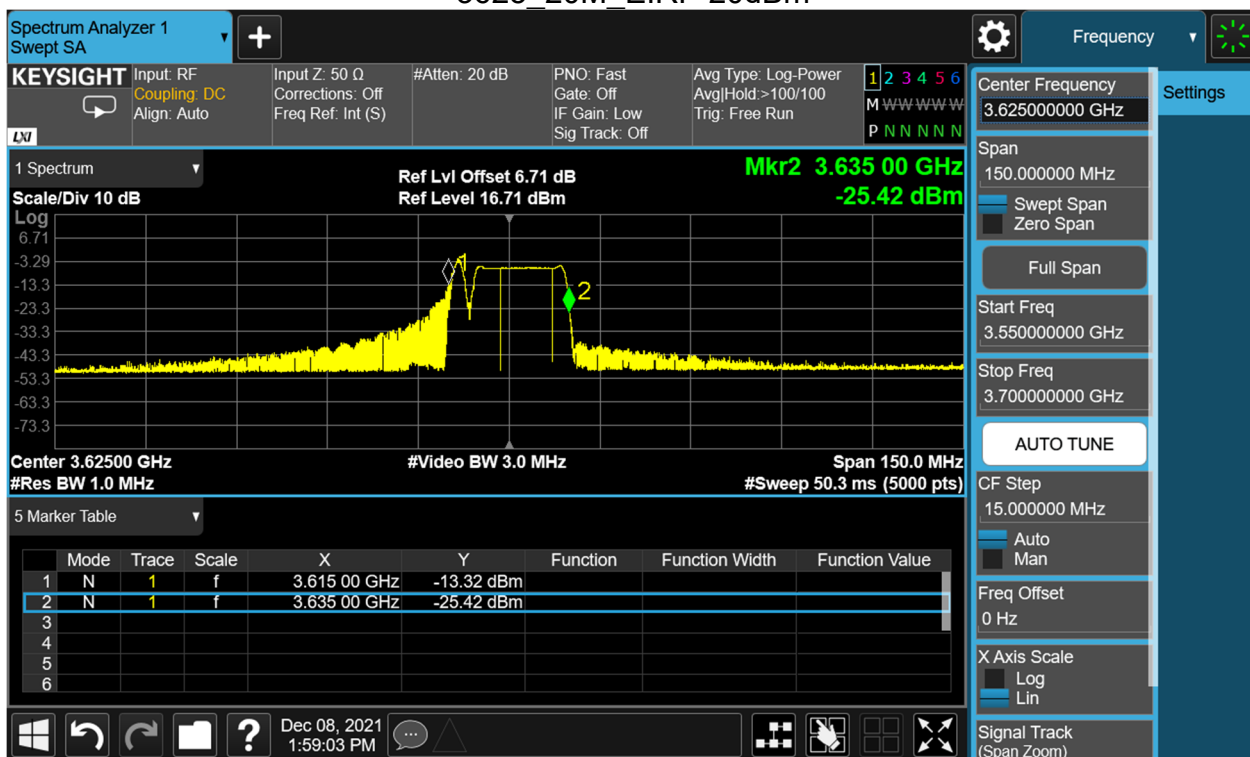
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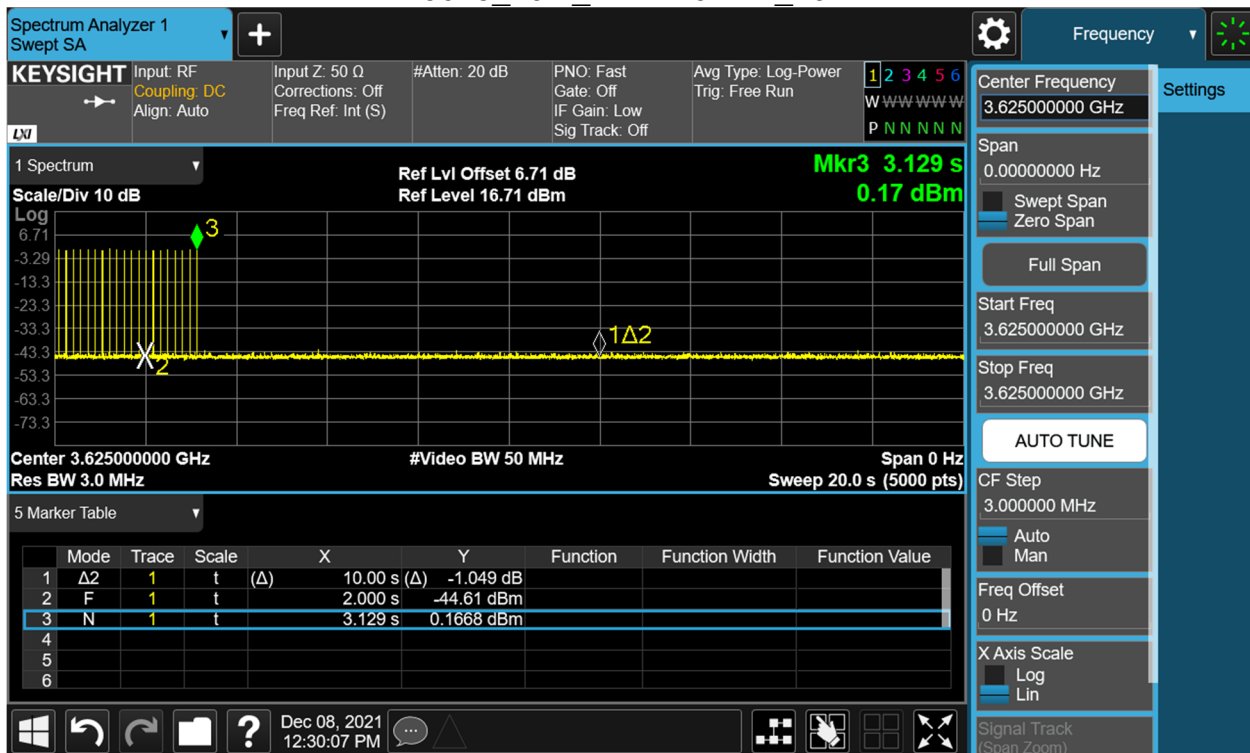
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3.5. Measurement Result

3625_20M_EIRP 20dBm



3625_20M_EIRP 20dBm_10s

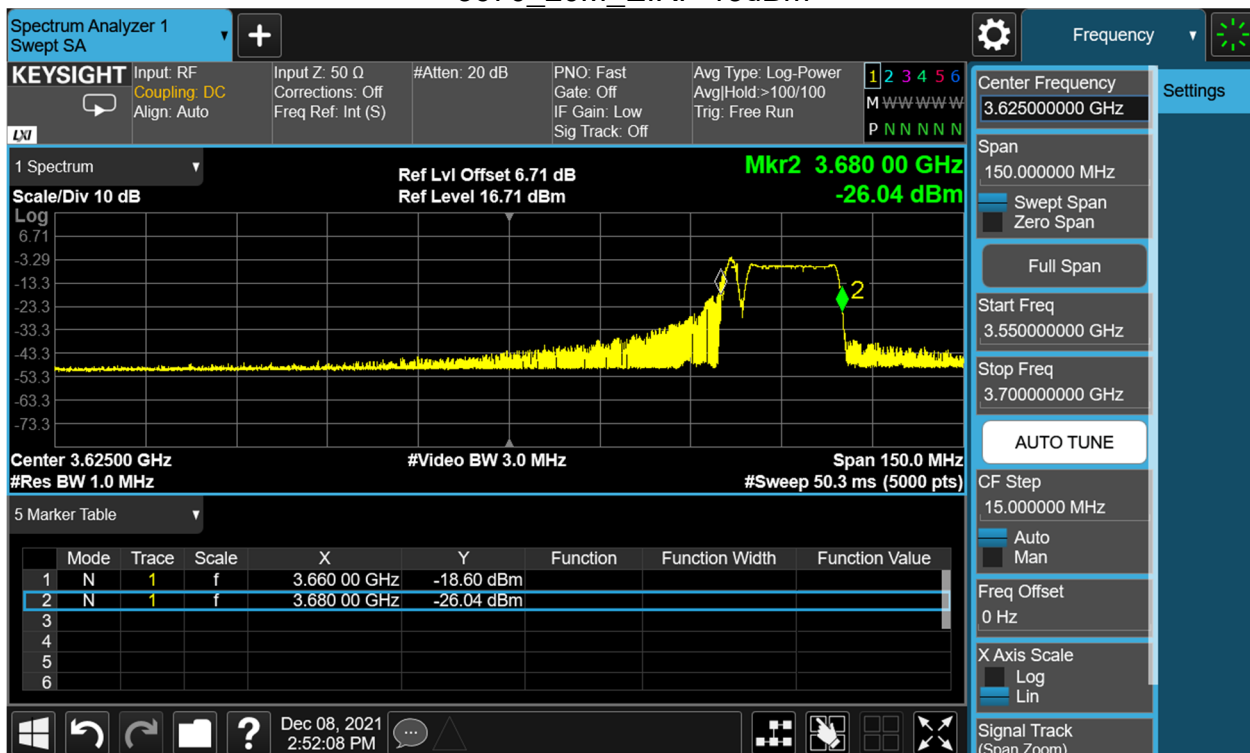


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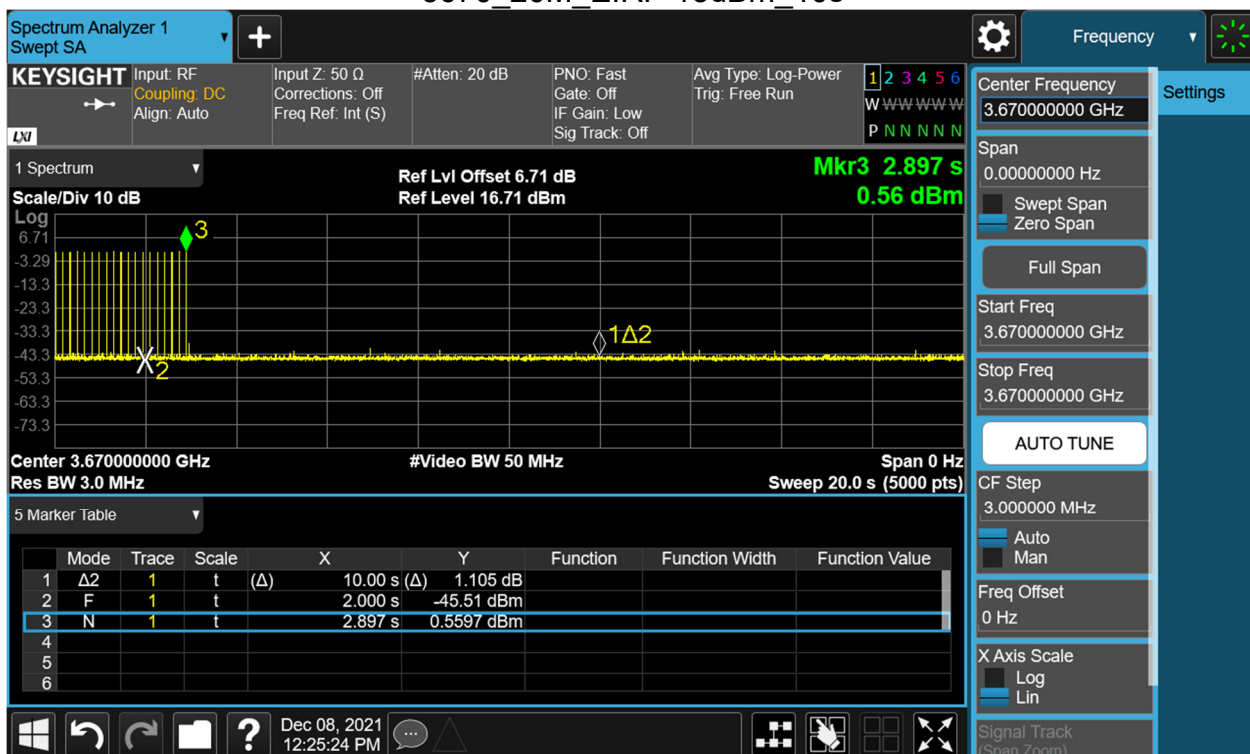
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3670_20M_EIRP 13dBm



3670_20M_EIRP 13dBm_10s



~ End of Report ~

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