DEKRA

RF EXPOSURE EVALUATION DECLARATION

Product Name	5G NR Module
Brand Name	Bigleaf
Model No.	FA990A28
FCC ID	2BEG9EDGE8005G
Applicant´s Name / Address	Bigleaf Networks, Inc. 10565 SW Nimbus Ave Suite 110 Tigard, OR 97223 USA
Manufacturer's Name	Telit Communications S.p.A.
Test Method Requested, Standard	FCC CFR Title 47 Part 2.1091 Radiofrequency radiation exposure evaluation: mobile devices
Verdict Summary	IN COMPLIANCE
Documented By April Chen	
Tested by Will Chen	
Approved by Tim Sung	
Date of Receipt	2024/04/19
Date of Issue	2024/06/17
Report Version	V1.0

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Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.
In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

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General Conditions

1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
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5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	2024/06/17

1. General Information

1.1. EUT Description

Product Name	5G NR Module
Brand Name	Bigleaf
Model No.	FA990A28

Note: For more detailed information please refer to report No.: 2440551R-RFUSV24S-A.

1.2. Testing Location Information

USA	FCC Registration Number: TW0033
Canada	CAB Identifier Number: TW3023 / Company Number: 26930

Site Description	Accredited by TAF
	Accredited Number: 3023

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
	Linkou Laboratory
Address	No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C.
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone Number	+886-3-275-7255
Fax Number	+886-3-327-8031

2. RF Exposure Evaluation

2.1. Test Limit

(A) Test Limit for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time $\lvert E \rvert^2, \lvert H \rvert^2$ or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*($900/f^2$)	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Test Limit for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time $\lvert E \rvert^2, \lvert H \rvert^2$ or S (minutes)
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*($180/f^2$)	<30
30-300	27.5	0.073	0.2	<30
300-1500	-	-	f/1500	<30
1500-100,000	-	-	1.0	<30

Note: f = frequency in MHz; *Plane-wave equivalent power density

Power Density (S) is calculated by the following formula:

$$S = (P*G) / 4\pi R^2$$

where:

S = power density (in appropriate units, e.g. mW/ cm^2)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

π = 3.1416

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

2.2. Test Result of RF Exposure Evaluation

Band	Frequency (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Power Density (mW/cm^2)	Antenna Gain (dBi)	Duty cycle (%)	FCC MPE limit (mW/cm^2)	FCC EIRP/ERP limit (W)	Evaluation distance (cm)	Antenna gain to meet FCC MPE limit (dBi)	Antenna gain to meet FCC EIRP/ERP limit (dBi)	Maximum antenna gain to meet all the limits (dBi)	Maximum antenna gain allowed (dBi)
LTE B30	2305	20.98	125.31	0.050	2.999	100	1.000	0.25	20	16.00	2.999	2.999	2.999
5GNR n30	2305	20.99	125.60	0.050	2.989	100	1.000	0.25	20	16.00	2.989	2.989	2.989

Note:

1. The conducted output power is refer to report No.: 2440551R-RFUSV24S-A from the DEKRA.

2. Test results for other operating frequency bands please refer to the original module report.

3. The EUT perform testing with 2.87dBi antenna (Brand Name: TAOGLAS, Model No.: TG.31.8113).