


RF Exposure Evaluation Report

Applicant: Baicells Technologies Co., Ltd.
Address of Applicant: 9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Equipment Under Test (EUT)
Product Name: LTE Indoor CPE
Model No.: EG3015M-M30-HP-EUD, EG3015M-M11-HP-EUD
Trade mark: Baicells
FCC ID: 2AG323015MM30HPEUD
Applicable standards: FCC CFR Title 47 Part 2 (§2.1091)
Date of sample receipt: 17 Oct., 2022
Date of Test: 18 Oct., to 13 Nov., 2022
Date of report issue: 22 Nov., 2022
Test Result: PASS

Tested by: Mike Ou **Date:** 22 Nov., 2022
Reviewed by: Wenwen Zhang **Date:** 22 Nov., 2022
Approved by: Manager **Date:** 22 Nov., 2022



This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	14 Nov., 2022	Original
01	22 Nov., 2022	Updated page 2.

Remark:
This report was amended on FCC ID: 2AG32EG3015MM30HP. The original report: JYTSZ-R12-2201515, issued by JianYan Testing Group Shenzhen Co., Ltd. The EG3015M-M30-HP-EUD and the original model were identical inside, the electrical circuit design, layout, components used and internal wiring, the differences between them as below: the software for EG3015M-M30-HP-EUD reduces the output power of LTE Band 48, update the model. So reevaluate the LTE Band 48.

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3 General Information

3.1 Client Information

Applicant:	Baicells Technologies Co., Ltd.
Address:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Manufacturer	Baicells Technologies Co., Ltd.
Address:	9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China

3.2 General Description of E.U.T.

Product Name:	LTE Indoor CPE
Model No.:	EG3015M-M30-HP-EUD, EG3015M-M11-HP-EUD
Operation Frequency:	2.4G Wi-Fi: 802.11b/g/n/ax-20MHz: 2412MHz~2462MHz 802.11n/ax-40MHz: 2422MHz~2452MHz 5G Wi-Fi UNII-1: 5150MHz~5250MHz UNII-3: 5725MHz~5850MHz LTE Band 41: 2496MHz~2690MHz LTE Band 48: 3550MHz~3700MHz
Modulation technology:	Wi-Fi: 802.11b: DSSS, 802.11a/g/n/ac/ax: OFDM LTE: Uplink: QPSK, 16QAM, 64QAM Downlink: QPSK, 16QAM, 64QAM
Antenna Type:	Internal Antenna
Antenna gain:	2.4G WiFi: 2.5dBi, 5G WiFi: 2.5dBi LTE: Band 41 3.5 dBi, Band 48 5.5 dBi
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Operating Modes

Operating mode	Detail description
2.4G WIFI mode	Keep the EUT in continuously transmitting in 2.4G WIFI mode
5G WIFI mode	Keep the EUT in continuously transmitting in 5G WIFI mode
LTE Band 41 mode	Keep the EUT in continuously transmitting in LTE Band 41 mode
LTE Band 48 mode	Keep the EUT in continuously transmitting in LTE Band 48 mode

3.4 Additions to, deviations, or exclusions from the method

No

3.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

3.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

4 Technical Requirements Specification

4.1 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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) Limits for General Population/Uncontrolled Exposure				
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

4.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

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

R = distance to the centre of radiation of the antenna

4.3 Result

Frequency (MHz)	Maximum Output power (dBm)	Maximum Output power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm ²)	Limits for General Population/ Uncontrolled Exposure (mW/cm ²)
2.4G Wi-Fi							
2462	20.94	124.17	2.5	1.78	20.00	0.04	1.0
5.2G Wi-Fi							
5180	20.61	115.08	2.5	1.78	20.00	0.04	1.0
5.8G Wi-Fi							
5745	20.74	118.58	2.5	1.78	20.00	0.04	1.0
LTE Band 41							
2498.5	29.35	860.99	3.5	2.24	20.00	0.38	1.0
LTE Band 48							
3555.0	19.79	95.28	5.5	3.55	20.00	0.07	1.0

Note: 2.4G Wi-Fi, 5G Wi-Fi and LTE Band 41 Maximum Output power are refer for the report: JYTSZ-R12-2201515 (FCC ID: 2AG32EG3015MM30HP) which is issued by JianYan Testing Group Shenzhen Co., Ltd.

Simultaneous Transmission Evaluation:

Mode	Result (mW/cm ²)	Result Ratio	Total Ratio	Simultaneous Transmission Ratio Limit
2.4G Wi-Fi	0.04	0.04	0.42	1.0
LTE Band 41	0.38	0.38		

Note: Just the worst case mode was shown in report.

4.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

-----End of report-----