MPE Test Report

Report No.: MTi20031913-5E2

Date of issue: May 11, 2021

Applicant: NLU Products, LLC dba BGZ brands

Product name: Portable Over-Door Camera

Model(s): 5801-00T, 5801-001, 5801-002, 5801-003, 5801-004, 5801-005, 5801-006, 5801-007, 5801-008, 5801- 009, 5801- 00P, 5801-00A, 5801-00V

FCC ID: 2ALQR-CTT5801

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Instructions

1. The report shall not be partially reproduced without the written consent of the laboratory;
2. The test results of this report are only responsible for the samples submitted;
3. This report is invalid without the seal and signature of the laboratory;
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5. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

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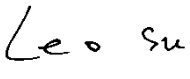
TEST RESULT CERTIFICATION

Applicant's name.....	NLU Products, LLC dba BGZ brands
Address.....	2801 N Thanksgiving Way #300, Lehi, UT 84043, U.S.A.
Manufacturer's Name	CTT Co., Ltd
Address.....	Building 2 of Industril park No 197 Xinhua Blvd Tongqiao town Zhongkai High-teck zone Huizhou, Guangdong, China
Product description	
Product name.....	Portable Over-Door Camera
Trademark	BodyGuardz
Model Name	5801-00T
Serial Model	5801-001, 5801-002, 5801-003, 5801-004, 5801-005, 5801-006, 5801-007, 5801-008, 5801- 009, 5801- 00P, 5801-00A, 5801-00V
Standards.....	N/A
Test procedure	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests..... :	Jan. 05, 2021 ~ Jan. 22, 2021
Test Result..... :	Pass

This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Testing Engineer : 

(Danny Xu)

Technical Manager : 

(Leo Su)

Authorized Signatory : 

(Tom Xue)

1 RF EXPOSURE EVALUATION

According to FCC 1.1310: 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)

1.1 Limits for Maximum Permissible Exposure (MPE)

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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

MPE Calculation Method

Friis transmission formula: $Pd= (Pout*G)\ (4*pi*R^2)$

Where

Pd= Power density in mW/cm2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

R= distance between observation point and center of the radiator in cm(20cm)

Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

1.2 Measurement Result

WIFI:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

802.11n HT40: 2422-2452MHz,

Power density limited: 1mW/ cm^2

Antenna Type: Wifi Antenna: FPC Antenna;
WIFI antenna gain: 1.7dBi

R=20cm

mW=10^(dBm/10)

antenna gain Numeric=10^(dBi/10)= 10^(1.7/10)=1.48

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	Numeric		
		Ant A	Ant A	Ant A	Ant A	Ant A	Ant A	
2412	802.11b	12.63	13±1	14	25.118864	1.48	0.00740	1
2437		13.30	13±1	14	25.118864	1.48	0.00740	1
2462		12.79	13±1	14	25.118864	1.48	0.00740	1
2412	802.11g	10.61	11±1	12	15.848932	1.48	0.00467	1
2437		11.35	11±1	12	15.848932	1.48	0.00467	1
2462		10.86	11±1	12	15.848932	1.48	0.00467	1
2412	802.11n H20	10.49	11±1	12	15.848932	1.48	0.00467	1
2437		11.42	11±1	12	15.848932	1.48	0.00467	1
2462		10.80	11±1	12	15.848932	1.48	0.00467	1
2422	802.11n H40	12.52	12±1	13	19.952623	1.48	0.00587	1
2437		12.67	12±1	13	19.952623	1.48	0.00587	1
2452		12.60	12±1	13	19.952623	1.48	0.00587	1

Conclusion:

For the max result: 0.0074≤ 1.0 for 1g SAR, No SAR is required.

----END OF REPORT----