FCC TEST REPORT

FCC ID: 2AZ97LH18

Product	:	Bus Validator
Model Name	:	E60
Brand	:	LENZ
Report No.	:	PTC24111411401E-FC04

Prepared for

Xiamen Lenz Communication Co.,Ltd

Unit 2001, No.365 Chengyi Street, Software Park 3, jimei District,Xiame, China

Prepared by

Precise Testing & Certification Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name	:	Xiamen Lenz Communication Co.,Ltd
Address	:	Unit 2001, No.365 Chengyi Street, Software Park 3, jimei District,Xiame, China
Manufacture's name	:	Xiamen Lenz Communication Co.,Ltd
Address	:	Unit 2001, No.365 Chengyi Street, Software Park 3, jimei District,Xiame, China
Product name	:	Bus Validator
Model name	:	E60
Test procedure	:	FCC CFR47 Part 1.1307(b)(1)
Test Date	:	Dec. 17, 2024 to Feb. 21, 2025
Date of Issue	:	Feb. 21, 2025
Test Result	:	PASS

This device described above has been tested by PTC, 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.

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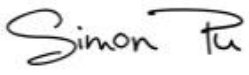
Test Engineer:

Jack zhou / Engineer

Technical Manager:



Simon Pu / Manager

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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	15.247 (i)	PASS
Remark:		
N/A: Not Applicable		

3 General Information

3.1 General Description of E.U.T.

Product Name	:	Bus Validator
Model Name	:	E60
Specification	:	802.11b/g/n HT20/HT40 802.11n HT20/HT40 E-UTRA Band 2 E-UTRA Band 5 E-UTRA Band 7 E-UTRA Band 38 E-UTRA Band 41
Operation Frequency	:	2412-2462MHz for 802.11b/g/ n(HT20) 2422-2452MHz for 802.11 n(HT40) E-UTRA Band 2: Tx:1850 MHZ-1910 MHz;Rx:1930 MHz-1990 MHZ E-UTRA Band 5: Tx: 824 MHz-849 MHz;Rx:869 MHz-894 MHZ E-UTRA Band 7: Tx:2500MHz-2570 MHz;Rx:2620 MHz-2690 MHz E-UTRA Band 38: Tx:2570MHz-2620 MHz;Rx:2570 MHz-2620 MHz E-UTRA Band 40: (Tx:2305MHz-2315MHz;Rx: 2305MHz-2315MHz & Tx:2350MHz-2360MHz;Rx:2350MHz-2360MHz) E-UTRA Band 41: Tx:2496 MHz-2690 MHz;Rx:2496 MHz-2690 MHZ NFC_13.56MHz
Number of Channel	:	11 channels for 802.11b/g/ n(HT20) 7 channels for 802.11n(HT40) 1 channel for NFC
Type of Modulation	:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n; ☒ QPSK ☒ 16QAM ☒ 64QAM(Downlink Only)(LTE) ASK for NFC
Antenna installation	:	FPC antenna NFC_FPCB Antenna
Antenna Gain	:	2.4G Wi-Fi: 5.23dBi E-UTRA Band 2: 1.27dBi E-UTRA Band 5: -0.95dBi E-UTRA Band 7: -0.26dBi E-UTRA Band 38: -0.26dBi E-UTRA Band 40: 0.65dBi E-UTRA Band 41: 0.29dBi NFC: 0dBi
Power supply	:	Voltage range: 9-36V Maximum load: <24W Without external devices: <12W
Hardware Version	:	N/A
Software Version	:	N/A

4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : KDB 447498 D01 General RF Exposure Guidance v06

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	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

4.3 MPE Calculation Method

E (V/m) = $\frac{\sqrt{30 \times P \times G}}{d}$ Power Density: Pd (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd = $\frac{30 \times P \times G}{377 \times d^2}$ θφ

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 RF Output power

Freq. (MHz)	Field strength(max)(dBuV/m)	ERP/ EIRP (max) (dBm)
13.56	59.72	-35.48
Note: EIRP=E-104.8+20logD, Where E is the electric field strength in dBμV/m. EIRP is the equivalent isotropically radiated power in dBm. d is the specified measurement distance in m. where D=3, EIRP=E-95.2.		

4.5 Test Result

Test Mode	Test Frequency(MHz)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Tune up tolerance (dBm)	Max Tune Up Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)	Result
11N40SISO	2452	3.33	17.22	17.22±1	66.3743	0.044028	1	Pass
E-UTRA Band 2	1907.5	1.34	18.25	18.25±1	84.1395	0.022425	1	Pass
E-UTRA Band 5	824.7	0.80	22.4	22.4±1	218.7762	0.034973	0.55	Pass
E-UTRA Band 7	2510	0.94	19.42	19.42±1	110.1539	0.020641	1	Pass
E-UTRA Band 38	2617.5	0.94	20.12	20.12±1	129.4196	0.024251	1	Pass
E-UTRA Band 40	2357.5	1.16	21.65	21.65±1	184.0772	0.042533	1	Pass
E-UTRA Band 41	2680	1.07	19.71	19.71±1	117.7606	0.025046	1	Pass
NFC	13.56	1.00	-35.48	-35.48±1	0.0004	0.000000	176.21	Pass

5 The max simultaneous transmission MPE.

2.4GWi-Fi MPE ratio	E-UTRA Band 5 MPE ratio	NFC MPE ratio	simultaneous MPE ratio	MPE Limits ratio	Test result
0.044028	0.063587	0.000000	0.107615	1	PASS

Note: The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

******THE END REPORT******