RF Exposure Evaluation Report

Product	:	Mini PC
Trade mark	:	CHUWI
Model/Type reference	:	CoreBox Pro
Serial Number	:	N/A
Report Number	:	EED32M80125705
FCC ID	:	2AHLZ-COREBOXPRO
Date of Issue	:	Jan. 11, 2021
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 1.1310 KDB447498D01v06
Test result	:	PASS

Prepared for:

CHUWI TECHNOLOGY (ShenZhen) CO., LIMITED
2 Floor Building 3 LiJinCheng Industrial park
the east of Gongye road LongHua, Shenzhen, China

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

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Ware Xin

Reviewed by: Aaron Ma
Aaron Ma

David Wang
David Wang

Date: Jan. 11, 2021

Check No: 4437141220

2 Version

Version No.	Date	Description
00	Jan. 11, 2021	Original

3 Contents

4 General Information

4.1 Client Information

Applicant:	CHUWI TECHNOLOGY (ShenZhen) CO., LIMITED
Address of Applicant:	2 Floor Building 3 LiJinCheng Industrial park the east of Gongye road LongHua, Shenzhen, China
Manufacturer:	CHUWI TECHNOLOGY (ShenZhen) CO., LIMITED
Address of Manufacturer:	2 Floor Building 3 LiJinCheng Industrial park the east of Gongye road LongHua, Shenzhen, China
Factory:	ILIFE Technology Co.,Ltd
Address of Factory:	3rd Floor,Bld3; 4-5rd,Bld6 ,LiJinCheng Industrial Park,The East of Gong Ye Road,LongHua ,ShenZhen, Guangdong Province,China

4.2 General Description of EUT

Product Name:	Mini PC
Test Model No.:	CoreBox Pro
Trade Mark:	CHUWI
EUT Supports Radios application	BT 4.2 Dual mode, 2402-2480MHz 2.4G WiFi, 802.11b/g/n(20MHz)/n(40MHz), 2412-2462MHz 5G WiFi, 802.11a/n(HT20)/n(HT40)/ac(HT20)/ac(HT40)/ac(HT80) 5G WiFi, 5150-5250MHz; 5725-5850MHz

4.3 Product Specification subjective to this standard

Frequency Range:	BT 4.2 Dual mode, 2402-2480MHz 2.4G WiFi, 802.11b/g/n(20MHz)/n(40MHz), 2412-2462MHz 5G WiFi, 802.11a/n(HT20)/n(HT40)/ac(HT20)/ac(HT40)/ac(HT80) 5G WiFi, 5150-5250MHz; 5725-5850MHz
Antenna Type:	FPC antenna
Antenna gain:	Gain: Antenna 1 :1.5dBi; Antenna 2: 1.5 dBi
Sample Type:	mobile production
Firmware version of the sample:	N/A
Hardware version of the sample:	N/A
Power Supply:	DC 19V
Conducted Peak Output Power:	17.12dBm
	The Conducted Peak Output Power data refer to the report EED32M80125701, EED32M80125702, EED32M80125703, EED32M80125704
Sample Received Date:	Dec. 15, 2020
Sample tested Date:	Dec. 15, 2020 to Jan.08, 2021
The tested sample(s) and the sample information are provided by the client.	

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 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 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

A rough estimation of the expected exposure in power flux density on a given point can be made with the following equation:

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

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

EIRP = P*G

The antenna of the product, under normal use condition is at least 20 cm away from the body of the user. Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. Therefore, the S of the device is calculated with R=20cm, and if it is below the limits, then we can conclude the device complies with the rules.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

Antenna Gain: 1.5 dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power(dBm)	Gain (dBi)	EIRP* (dBm)	EIRP (mW)	R (cm)	S (mW/cm^2)	Limit (mW/cm^2)	Result
Highest	5785	17.12	1.50	18.62	72.78	20	0.014	1.0	Pass

Note: Refer to report No. EED32M80125701, EED32M80125702, EED32M80125703, EED32M800125704 for EUT test Max Conducted Peak Output Power value.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M80125701 for EUT external and internal photos.

*** End of Report ***