

TEST REPORT

Product Name : Pyxel Coding Pet
Model Number : EI-1130, PO# L0000003463, L0000002455
FCC ID : MJO-EI-1130

Prepared for : Educational Insights
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1. TEST RESULT CERTIFICATION

Applicant : Educational Insights
Address : 152 W Walnut Street, Suite 201, Gardena, California, 90248, United States
EUT : Pyxel Coding Pet
Model Name : EI-1130, PO# L0000003463, L0000002455
Trademark : N/A

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1093	PASS

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : December 30, 2022 to January 10, 2023

Prepared by :

Warren Deng

Warren Deng /Editor

Reviewer :

Tim Dong

Tim Dong /Supervisor

Approve & Authorized Signer :

Sam Lv

Sam Lv / Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2212300101E00102R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	Pyxel Coding Pet
Model Number:	EI-1130, PO# L0000003463, L0000002455 All the products are the same except the model number Here we selected EI-1130 for all the test
Sample:	2#
Device Type:	2.4G WIFI
Data Rate:	802.11b 802.11g 802.11n(20MHz channel bandwidth) 802.11n(40MHz channel bandwidth)
Modulation:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Operating Frequency Range(s) :	2412-2462MHz for 802.11b/g/n(HT20); 2422-2452MHz for 802.11n(HT40);
Number of Channels:	11 channels for 802.11b/g/n(HT20); 7 Channels for 802.11n(HT40);
Transmit Power Max:	14.91 dBm(0.03097W)
Antenna Gain:	3.76 dBi
Power supply:	DC 5V from USB, DC 3.7V from battery
Evaluation applied:	☒ MPE Evaluation ☐ SAR Evaluation

3. Test Requirement:

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)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π =3.1416

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

P_d 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.

4. Measurement Result

Antenna gain:
2.4G: 3.76 dBi

802.11b: Antenna A

Channel	Channel Freq. (MHz)	Measured power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune up power tolerance (mW)	Antenna Gain Numeric	Power Density at R=20cm (mW/cm2)	Power density Limits (mW/cm2)
1	2412	13.31	13±1	14	25.119	2.377	0.011878	1
6	2437	14.70	14±1	15	31.623	2.377	0.014953	1
11	2462	14.91	14±1	15	31.623	2.377	0.014953	1

802.11g: Antenna A

Channel	Channel Freq. (MHz)	Measured power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune up power tolerance (mW)	Antenna Gain Numeric	Power Density at R=20cm (mW/cm2)	Power density Limits (mW/cm2)
1	2412	13.19	13±1	14	25.119	2.377	0.011878	1
6	2437	14.37	14±1	15	31.623	2.377	0.014953	1
11	2462	14.54	14±1	15	31.623	2.377	0.014953	1

802.11n HT20: Antenna A

Channel	Channel Freq. (MHz)	Measured power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune up power tolerance (mW)	Antenna Gain Numeric	Power Density at R=20cm (mW/cm2)	Power density Limits (mW/cm2)
1	2412	12.09	12±1	13	19.953	2.377	0.009435	1
6	2437	13.36	13±1	14	25.119	2.377	0.011878	1
11	2462	13.55	13±1	14	25.119	2.377	0.011878	1

802.11n HT40 : Antenna A

Channel	Channel Freq. (MHz)	Measured power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune up power tolerance (mW)	Antenna Gain Numeric	Power Density at R=20cm (mW/cm2)	Power density Limits (mW/cm2)
3	2422	13.04	13±1	14	25.119	2.377	0.011878	1
6	2437	13.65	13±1	14	25.119	2.377	0.011878	1
9	2452	13.64	13±1	14	25.119	2.377	0.011878	1

According to KDB 447498, no stand-alone required for WIFI antenna, and no simultaneous SAR measurement is required.

*** End of Report ***