TEST REPORT

Product Name : Laser Engraving Machine
Model Number : Kiosk, K11
FCC ID : 2A5SG-KIOSK

Prepared for	:	Vastmind LLC
Address	:	2330 Paseo Del Prado, C303, Las Vegas, NV 89102
Prepared by	:	EMTEK (DONGGUAN) CO., LTD.
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Report Number	:	EDG2407300090E00102R
Date(s) of Tests	:	Jul 30, 2024 to Oct 22, 2024
Date of issue	:	Oct 23, 2024

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1. TEST RESULT CERTIFICATION

Applicant	:	Vastmind LLC
Address	:	2330 Paseo Del Prado, C303, Las Vegas, NV 89102
Manufacturer	:	Vastmind LLC
Address	:	2330 Paseo Del Prado, C303, Las Vegas, NV 89102
Factory	:	Vastmind LLC
Address	:	2330 Paseo Del Prado, C303, Las Vegas, NV 89102
EUT	:	Laser Engraving Machine
Model Name	:	Kiosk, K11
Trademark	:	**Genmitsu**

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
§ 15.247(i), § 2.1091	**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), § 2.1091.
The test results of this report relate only to the tested sample identified in this report

Date of Test : Jul 30, 2024 to Oct 22, 2024

Prepared by : Jessica Zhang /Editor

Reviewer : Warren Deng /Supervisor

Approved & Authorized Signer : Sam Lv / Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2407300090E00102R	/	Original Report

2. EUT Specification

Characteristics	Description
Product:	Laser Engraving Machine
Model Number:	Kiosk, K11 All products are identical except the model number.Here we selected Kiosk 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:	11.89 dBm(0.015453 W)
Antenna Gain:	2.80 dBi
Power supply:	DC 12V from adapter Adapter:Model:K651-1205000U/K651-1205000J INPUT:100-240V~50/60Hz 1.5A OUTPUT:12V/5000mA
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: Pd= (Pout*G)\ (4*pi*R2)

Where

Pd= Power density in mW/cm^2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1416

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

Pd the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the nd 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: 2.80 dBi

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2412	11B	11.73	12±1	13	19.953	2.80	1.91	0.0076	1
2437		11.44	11±1	12	15.849	2.80	1.91	0.0060	1
2462		11.89	12±1	13	19.953	2.80	1.91	0.0076	1
2412	11G	10.96	11±1	12	15.849	2.80	1.91	0.0060	1
2437		10.79	11±1	12	15.849	2.80	1.91	0.0060	1
2462		10.89	11±1	12	15.849	2.80	1.91	0.0060	1
2412	11N20SISO	10.88	11±1	12	15.849	2.80	1.91	0.0060	1
2437		10.7	11±1	12	15.849	2.80	1.91	0.0060	1
2462		11.06	11±1	12	15.849	2.80	1.91	0.0060	1
2422	11N40SISO	10.47	10±1	11	12.589	2.80	1.91	0.0048	1
2437		10.47	10±1	11	12.589	2.80	1.91	0.0048	1
2452		10.55	10±1	11	12.589	2.80	1.91	0.0048	1

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

*** End of Report ***