RF MPE REPORT

Report No.:	20240417G06830X-W5
Product Name:	SOLIS GO Kiosk
Model No.:	CYD-016S, CYD-012S, CYD-008S
FCC ID:	2A9UP-SOL24KIOSK
Applicant:	SIMO Holdings Inc.
Address:	PO.Box PO.Box 309, Ugland House, GrandCayman, KY1-1104, Cayman Islands
Dates of Testing:	04/23/2024 - 05/22/2024
Issued by:	CCIC Southern Testing Co., Ltd.
Lab Location:	Electronic Testing Building, No. 43 Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China. **Tel**：86 755 26627338 **E-Mail**：manager@ccic-set.com

Test Report

Product.....:	SOLIS GO Kiosk
Brand Name.....:	N/A
Trade Name .....:	SIMO
Applicant.....:	SIMO Holdings Inc.
Applicant Address.....:	PO.Box PO.Box 309, Ugland House, GrandCayman, KY1-1104, Cayman Islands
Manufacturer.....:	SIMO Holdings Inc.
Manufacturer Address.....:	PO.Box PO.Box 309, Ugland House, GrandCayman, KY1-1104, Cayman Islands
Test Standards.....:	47 CFR Part 2.1091
Test Result.....:	Pass

Tested by .....: Chuiwang Zhang 2024.05.22

Chuiwang Zhang, Test Engineer

Reviewed by.....: Sun Jiaohui 2024.05.22

Sun Jiaohui, Senior Engineer

Approved by.....: Chris You 2024.05.22

Chris You, Manager

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Change History		
Issue	Date	Reason for change
1.0	2024.05.22	First edition

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	SOLIS GO Kiosk	
EUT supports Radios application	GSM 850/1900 WCDMA Band 2/4/5 LTE Band 2/4/5/7/12/25/26/41 2.4G WIFI	
Frequency Range(Tx)	GSM 850: 824MHz~849MHz GSM 1900: 1850MHz~1910MHz	
	WCDMA 850: 824MHz~849MHz WCDMA 1700: 1710MHz~1755MHz WCDMA 1900: 1850MHz~1910MHz	
	LTE Band 2: 1850MHz~1910MHz LTE Band 4: 1710MHz~1755MHz LTE Band 5: 824MHz~849MHz LTE Band 7: 2500MHz~2570MHz LTE Band 12: 699MHz~716MHz LTE Band 25: 1850MHz~1915MHz LTE Band 26: 814MHz~849MHz LTE Band 41: 2496MHz~2690MHz	
	2.4G WIFI: 2.412GHz ~ 2.462GHz	
Bandwidth	GSM 850/1900:	200kHz
	WCDMA B2/4/5:	5MHz
	LTE Band 2/4/25:	1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz
	LTE Band 5/12:	1.4MHz/3MHz/5MHz/10MHz
	LTE Band 26(Part90):	1.4MHz/3MHz/5MHz/10MHz
	LTE Band 26(Part22):	1.4MHz/3MHz/5MHz/10MHz/15MHz
	LTE Band 7/41:	5MHz/10MHz/15MHz/20MHz
	2.4G WIFI:	802.11b/g/n-HT20: 20MHz 802.11n-HT40: 40MHz
Modulation Type	GSM	GPRS: GMSK EDGE: GMSK/8PSK
	WCDMA	WCDMA: QPSK(Uplink) HSDPA: QPSK(Uplink) HSUPA: QPSK(Uplink)
	LTE	QPSK/16QAM/64QAM(downlink only)
	2.4G WIFI	DSSS (802.11b), OFDM (802.11g/n)

Antenna gain	GSM 850: -1.88 dBi PCS: 1900: 1.93 dBi	WCDMA 850: -1.88 dBi WCDMA 1700: 0.52 dBi WCDMA 1900: 1.93 dBi
	LTE Band 2: 1.93dBi LTE Band 4: 0.52dBi LTE Band 5: -1.88dBi LTE Band 7: 3.87dBi	LTE Band 12: -3.18dBi LTE Band 25: 1.93dBi LTE Band 26: -1.88dBi LTE Band 41: 3.87dBi
	2.4G WIFI: 3.03dBi	
Antenna Type	Internal Antenna	

Note 1: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.

Note 2: TModel difference: All models covered in this report are identical except for the Number of charging ports and the model name.
Details see below table:
The model CYD-016S with 16 charging ports and powered with 120W power.
The model CYD-012S with 12 charging ports and powered with 120W power.
The model CYD-008S with 8 charging ports and powered with 60W power.

1.2. EUT Description

EUT has been tested according to the following standards.

No.	Identity	Document Title
1	47 CFR Part 1	Practice and Procedure
2	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
3	KDB 447498 D01 General RF Exposure Guidance v06	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
4	OET Bulletin 65 Edition 97-01	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

1.3. Laboratory Facilities

FCC-Registration No.: CN1283

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

ISED Registration: 11185A

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025.

CAB number: CN0064

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

1.4. Laboratory Location

Company Name:	CCIC Southern Testing Co., Ltd.
Address:	Electronic Testing Building, No. 43 Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China

2. Technical Requirements Specification in CFR Title 47 Part 2.1091

2.1. Exposure Limits

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).

Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	< 6
3.0-30	1824/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
(ii) 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
Note: f = frequency in MHz. * = Plane-wave equivalent power density.				

2.2. Predication of MPE limit at a given distance

Refer to formulas on page 19 of OET Bulletin 65, Edition 97-01.

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm^2)

P = power input to the antenna (in appropriate units, e.g., mW)

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 (appropriate units, e.g., cm)

2.3. Evaluation Results

Worst-Case mode Conducted Output Power Results for 2.4G WLAN

Band	Mode	Frequency (MHz)	Maximum Output Power (dBm)	Max Tune up power (dBm)	Max Tune up power (mW)
2.4G WIFI	802.11b	2437	17.44	17±1	63.10

Worst-Case mode Conducted Output Power Results for WWAN

Band	Frequency (MHz)	Maximum Output power(dBm)	Max Tune up power (dBm)	Max Tune up power (mW)
GSM 850	836.6	32.53	32±1	1995.26
GSM 1900	1850.2	29.66	29±1	1000.00
WCDMA 850	826.4	23.86	23±1	251.19
WCDMA 1700	1712.4	23.82	23±1	251.19
WCDMA 1900	1852.4	23.88	23±1	251.19
LTE Band 2	1880.0	24.64	24±1	316.23
LTE Band 4	1732.5	24.91	24±1	316.23
LTE Band 5	847.5	23.57	23±1	251.19
LTE Band 7	2560.0	23.87	23±1	251.19
LTE Band 12	707.5	24.30	24±1	316.23
LTE Band 25	1907.5	24.12	24±1	316.23
LTE Band 26(Part 90)	819.0	23.90	23±1	251.19
LTE Band 26(Part 22)	836.5	23.84	23±1	251.19
LTE Band 41	2593.0	23.91	23±1	251.19

Calculation results: Worst-Case mode

Band	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm2)	Power Density (mW/cm2)	Ratio
2.4G WIFI	3.03	2.01	20	0.025	1.00	**0.025**
GSM 850	-1.88	0.65	20	0.257	0.56	**0.462**
GSM 1900	1.93	1.56	20	0.310	1.00	0.310
WCDMA 850	-1.88	0.65	20	0.032	0.55	0.059
WCDMA 1700	0.52	1.13	20	0.056	1.00	0.056
WCDMA 1900	1.93	1.56	20	0.078	1.00	0.078
LTE Band 2	1.93	1.56	20	0.098	1.00	0.098
LTE Band 4	0.52	1.13	20	0.071	1.00	0.071
LTE Band 5	-1.88	0.65	20	0.032	0.57	0.057
LTE Band 7	3.87	2.44	20	0.122	1.00	0.122
LTE Band 12	-3.18	0.48	20	0.030	0.47	0.064
LTE Band 25	1.93	1.56	20	0.098	1.00	0.098
LTE Band 26(Part 90)	-1.88	0.65	20	0.032	0.55	0.059
LTE Band 26(Part 22)	-1.88	0.65	20	0.032	0.56	0.058
LTE Band 41	3.87	2.44	20	0.122	1.00	0.122

Simultaneous Transmission Calculation (Worst-case mode)

No.	Transmitter Combinations	Scenario Supported or not
1	WWAN + 2.4G WLAN	Yes

Max Simultaneous Transmission Calculation (Worst-case mode)

No.	Worst Mode	MPE Ratio	Limit	Results
1	GSM 1900 + 2.4G WIFI	0.487	≤ 1.0	Pass

Note: MPE Ratio = 0.025 + 0.462 = 0.147.

2.4. Conclusion

According to the KDB 447498 D01 General RF Exposure Guidance v06 section 7.2 determine the device is exclusion from SAR test.

** END OF REPORT **