Website: www.cblueasia.com
Tel: +86-755-23059481
Email: marketing@cblueasia.com

FCC RF Exposure

Applicant	:	KINDOO LLP
Address	:	7-2070 Harvey Ave., Unit #163, Kelowna, British Columbia, N/A V1Y 8P8 Canada
Product Name	:	Access control
Brand Mark	:	KINDOO
Model	:	KIN S W01
Series model	:	N/A
FCC ID	:	2A7TP-KINSW01
Report Number	:	BLA-EMC-202502-A1402
Date of Receipt	:	Feb. 12, 2025
Date of Test	:	Feb. 12, 2025 to Feb. 21, 2025
Test Standard	:	47 CFR Part 15, Part1.1307 47 CFR Part 15, Part2.1093 KDB447498D04 General RF Exposure Guidance v01
Test Result	:	Pass

Compiled by: Mark Chen **Review by:** Sweets **Approved by:** Blue Zheng

Issued Date: Feb. 24, 2025

BlueAsia of Technical Services(Shenzhen) Co.,Ltd.

Address: Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China

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Revise Record

Version No.	Date	Description
01	Feb. 24, 2025	Original

1 General information

1.1 General information

Applicant	KINDOO LLP
Address	7-2070 Harvey Ave., Unit #163, Kelowna, British Columbia, N/A V1Y 8P8 Canada
Manufacturer	KINDOO LLP
Address	7-2070 Harvey Ave., Unit #163, Kelowna, British Columbia, N/A V1Y 8P8 Canada
Factory	KINDOO LLP
Address	7-2070 Harvey Ave., Unit #163, Kelowna, British Columbia, N/A V1Y 8P8 Canada

1.2 General description of EUT

Product name	Access control
Model no.	KIN S W01
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK
Number of Channels:	40
Antenna Type:	Internal antenna
Antenna Gain:	3.7dBi (Provided by customer)
Power supply:	DC 6V
Hardware Version	1.0
Software Version	1.0

2 RF Exposure Compliance Requirement

2.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.2 Limits

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\,\text{cm}}(d/20\,\text{cm})^{x} & d \le 20\,\text{cm} \\ ERP_{20\,\text{cm}} & 20\,\text{cm} < d \le 40\,\text{cm} \end{cases} \quad \text{(B.2)}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)									
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\,\text{GHz} \le f < 1.5\,\text{GHz} \\ 3060 & 1.5\,\text{GHz} \le f \le 6\,\text{GHz} \end{cases} \quad \text{(B.1)}$$

2.3 Result

EIRP = pt x gt = (E X d)2/30

Where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m,

d = measurement distance in meters (m)

Spot = (EXd)2/30 x gt
Separation distance= 20cm

Ant gain = 3.7dBi

For BLE 1M(Worst):

Max Output power = -2.255dBm @ 2402MHz
ERP = -2.255dBm+3.7dBi-2.15=-0.705dBm=0.85mW< 3060 mW
it's deemed to fulfil the RF exposure requirement.

----END OF REPORT----