RF EXPOSURE EVALUATION REPORT

FCC ID	: 2BAJFSN-NB01P
Equipment	: Smart Node Control
Brand Name	: LEOTEK
Model Name	: SN-NB01 Plus
Applicant	: LEOTEK Electronics Corp. 1955 Lundy Ave, San Jose, CA 95131 , San Jose,California United States 95131
Manufacturer	: LEOTEK Electronics Corp. 1955 Lundy Ave, San Jose, CA 95131 , San Jose,California United States 95131
Standard	: 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA461129	Rev. 01	Initial issue of report	Sep. 20, 2024

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Smart Node Control
Brand Name	LEOTEK
Model Name	SN-NB01 Plus
FCC ID	2BAJFSN-NB01P
Wireless Technology and Frequency Range	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 26: 814 MHz ~ 849 MHz
Mode	LTE: QPSK, 16QAM
EUT Stage	Identical Prototype

Reviewed by: Jason Wang

Report Producer: Paula Chen

2. Maximum RF average output power among production units

Mode		Maximum Average power(dBm)
LTE(Cat-M1)	Band 2	21.0
	Band 4	21.0
	Band 5	20.0
	Band 12	20.0
	Band 13	20.0
	Band 26	20.0
LTE(NB-IOT)	Band 2	21.0
	Band 4	21.0
	Band 5	21.0
	Band 12	21.0
	Band 13	21.0
	Band 26	21.0

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

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/f2)	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/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band		Antenna Gain (dBi)	Maximum Power (dBm)	Maximum PG (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
Cat-M1	LTE Band 2	1.44	21.00	175.39	0.035	1.000
	LTE Band 4	1.44	21.00	175.39	0.035	1.000
	LTE Band 5	1.34	20.00	136.14	0.027	0.549
	LTE Band 12	1.34	20.00	136.14	0.027	0.466
	LTE Band 13	1.34	20.00	136.14	0.027	0.518
	LTE Band 26	1.34	20.00	136.14	0.027	0.543
NB-IOT	LTE Band 2	1.44	21.00	175.39	0.035	1.000
	LTE Band 4	1.44	21.00	175.39	0.035	1.000
	LTE Band 5	1.34	21.00	171.40	0.034	0.549
	LTE Band 12	1.34	21.00	171.40	0.034	0.466
	LTE Band 13	1.34	21.00	171.40	0.034	0.518
	LTE Band 26	1.34	21.00	171.40	0.034	0.543

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.