LTA
Laboratory for Test & Approval Co.,Ltd.

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http://www.ltalab.com

Dates of Tests: October 28,2024
Test Report S/N: LR500112411C
Test Site : LTA CO., LTD.

CERTIFICATION OF COMPLIANCE

FCC ID. **2BLL7AIDEN**

APPLICANT **NearthLab**

Equipment Class	**:**	**Digital Transmission System (DTS)**
Manufacturing Description	**:**	**DRONE**
Manufacturer	**:**	**NearthLab**
Model name	**:**	**AiDEN**
Contains Modules FCC ID	**:**	**NS918PMDDL2450**
Test Device Serial No.:	**:**	**Identical prototype**
Rule Part(s)	**:**	**FCC Part 15.247 Subpart C ; ANSI C63.10 - 2013**
Frequency Range	**:**	**2402 ~ 2477 MHz**
		2407 ~ 2477 MHz
Max. Output Power	**:**	**1.0 W**
Data of issue	**:**	**November 11,2024**

This test report is issued under the authority of:

Ja-Beom Koo, Manager

The test was supervised by:

Eun-Hwan Jung, Test Engineer

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1. General information

1-1 Test Performed

Company name : LTA Co., Ltd.

Address : 243, Jubug-ri,Yangji-Myeon,Youngin-Si, Kyunggi-Do, Korea. 449-822

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Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

1-2 Accredited agencies

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

Agency	Country	Accreditation No.	Validity	Reference
RRA	KOREA	KR0049	-	EMC accredited Lab.
FCC	U.S.A	649054	2025-03-29	FCC CAB
VCCI	JAPAN	C-4948,	2026-09-10	VCCI registration
VCCI	JAPAN	T-2416,	2026-09-10	VCCI registration
VCCI	JAPAN	R-4483(10 m),	2026-10-15	VCCI registration
VCCI	JAPAN	G-847	2024-12-13	VCCI registration
IC	CANADA	5799A-1	2025-08-15	IC filing

2. Information about test item

2-1 Client & Manufacturer

Client Company name	:	NearthLab
Address	:	3F, BLDG AJ, 9, Jeongui-ro 8-gil, Songpa-gu, Seoul, Republic of Korea
Tel / Fax	:	TEL No : +82-2-6935-1574 / FAX No : -
Manufacturer		NearthLab
Address		3F, BLDG AJ, 9, Jeongui-ro 8-gil, Songpa-gu, Seoul, Republic of Korea
Tel / Fax		TEL No : +82-2-6935-1574 / FAX No : -

2-2 Equipment Under Test (EUT)

Model name	:	AiDEN
Serial number	:	Identical prototype
Date of receipt	:	September 19,2024
EUT condition	:	Pre-production, not damaged
Antenna type	:	PCB Antenna (Max Gain : 2.6 dBi)
Frequency Range	:	2402 ~ 2477 MHz 2407 ~ 2477 MHz
RF output power	:	1.0 W
Type of Modulation	:	COFDM
Power Source	:	DC 16.8 V

2-3 Ancillary Equipment

Equipment	Model No.	Serial No.	Manufacturer
-	-	-	-

3. Test Report

3.1 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status (note 1)
§ 1.1310 and §2.1091	RF EXPOSURE EVULATION	-	-	C

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

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3.2 RF EXPOSURE EVULATION

1.1 Limit

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength	Magnetic field Strength	Power density (mW/cm^2)	Averaging time
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

F = frequency in MHz

* = Plane-wave equivalent power density

1.2 MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

Power density at the specific separation:

$S = PG/(4R^2\pi)$ $S = (1000 * 1.82) / (4 * 20^2 * \pi)$ $S = 0.362\ mW/cm^2$	Where, S = Maximum power density (mW/cm^2) P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20 cm = limit for MPE)

1.3 MAXIMUM PERMISSIBLE EXPOSURE Prediction

- Calculated under the worst-case conditions of each mode.

(Measured power 30 dBm ± 0.5dB)

3-1. 2.4 GHz Mode

Max Peak output Power at antenna input terminal	30	dBm
Max Peak output Power at antenna input terminal	1000	mW
Prediction distance	50	mm
Prediction frequency	2,437	MHz
Antenna Gain(typical)	2.6	dBi
Antenna Gain(numeric)	1.82	-
Power density at prediction frequency(S)	0.362	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	0.181	mW/cm^2

SAR Test exclusion thresholds for 1500MHz to 6GHz at test separation distance > 50 mm = **Used**

{[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance − 50 mm)·10]} mW, for > 1500 MHz and ≤ 6 GHz

= [78] + ([50-50]*10) = 78 ≤ 96, for 1g SAR

Thus, SAR for this device is not required.