

RF EXPOSURE EVALUATION REPORT

FCC ID : LHJ-LNADVW
Equipment : LNADVW
Brand Name : Continental Automotive Systems
Model Name : LNADVW
Applicant : Continental Automotive Systems, Inc.
21440 W Lake Cook Rd., Deer Park, IL 60010, USA
Manufacturer : Continental Automotive Systems, Inc.
21440 W Lake Cook Rd., Deer Park, IL 60010, USA
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: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

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Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA483110	Rev. 01	Initial issue of report	Dec. 04, 2024

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	LNADVW
Brand Name	Continental Automotive Systems
Model Name	LNADVW
FCC ID	LHJ-LNADVW
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 17: 704 MHz ~ 716 MHz WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA LTE: QPSK, 16QAM WLAN: 802.11a/b/g/n HT20/HT40
HW Version	P7 +Wifi
SW Version	MODEM9x15_32.01

Host Information	
EUT Type	StrLnk2
Brand Name	Continental Automotive Systems
Model Name	LNADVW
HW Version	3824
SW Version	SOC_23.00.19_20240620
EUT Stage	Identical Prototype

Reviewed by: Jason Wang**Report Producer: Daisy Peng**

2. Maximum RF average output power among production units

Mode		Maximum Average power(dBm)
WCDMA	Band II	25.5
	Band V	25.5
LTE	Band 2	25
	Band 4	25
	Band 5	25
	Band 17	25
WLAN	2.4GHz	21
	5GHz	17.5

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/f ²)	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/f ²)	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 ERP (dBm)	Maximum ERP (W)	Maximum EIRP (dBm)	Maximum EIRP (W)	Maximum ERP Limit (W)	Maximum EIRP Limit (W)	Maximum PG (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
WCDMA Band 2	7.50	25.50	30.850	1.216	33.000	1.995		2.000	1995.262	0.397	1.000
WCDMA Band 5	5.50	25.50	28.850	0.767	31.000	1.259	7.000		1258.925	0.251	0.549
LTE Band 2	7.50	25.00	30.350	1.084	32.500	1.778		2.000	1778.279	0.354	1.000
LTE Band 4	5.00	25.00	27.850	0.610	30.000	1.000		1.000	1000.000	0.199	1.000
LTE Band 5	5.50	25.00	28.350	0.684	30.500	1.122	7.000		1122.018	0.223	0.549
LTE Band 17	5.50	25.00	28.350	0.684	30.500	1.122	3.000		1122.018	0.223	0.469

Conclusion:

Based on FCC 47 CFR §2.1901, the analysis concludes that this product when transmitting in standalone within a host device, is compliant with the FCC RF exposure requirements in mobile exposure condition, provided the conducted power and antenna gain do not exceed the limits for each given frequency band per wireless technology as follow table:

Device	Technology	Band	Maximum Conducted Power (dBm)	Standalone Maximum Antenna Gain (dBi)
LNADVW	UMTS	WCDMA Band 2	25.5	7.5
		WCDMA Band 5	25.5	5.5
	LTE	LTE Band 2	25.0	7.5
		LTE Band 4	25.0	5.0
		LTE Band 5	25.0	5.5
		LTE Band 17	25.0	5.5