



RF EXPOSURE

REPORT

FOR

Product Name: Locomotive driving recorder

Model : FD-1

Series : FD-2, FD-3, FD-5

Trade Name : Global Eagle

Issued to

NAVSTAR ELECTRONICS CO., LTD.

**5F., -5 No. 16, LN. 609, SEC. 5, CHONGXIN Rd., SANCHONG Dist., NEW Taipei City
241, Taiwan**

Issued by

Global Certification Corp.

**No. 146, Sec. 2, Xiangzhang Rd., Xizhi Dist., New Taipei City 221,
Taiwan (R.O.C.)**

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Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
1.	3N0101	FR2-3N0101a	Oct.01, 2025	Original Report	Judy



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1. GENERAL INFORMATION

Applicant : NAVSTAR ELECTRONICS CO., LTD.

Address : 5F.,-5 No.16, LN.609, SEC.5, CHONGXIN Rd., SANCHONG Dist.,
NEW Taipei City 241, Taiwan

Manufacturer : NAVSTAR ELECTRONICS CO., LTD.

Address : 5F.,-5 No.16, LN.609, SEC.5, CHONGXIN Rd., SANCHONG Dist.,
NEW Taipei City 241, Taiwan

EUT : Dashcam

Model No. : FD-1

Series No. : FD-2, FD-3, FD-5

Trade Name : Global Eagle

Model Differences : The major electrical and mechanical constructions of series models are identical to the basic model, except different marketing purpose. The model, FD-1 is the testing sample, and the final test data are shown on this test report.

Is here with confirmed to comply with the requirements set out in the FCC Rules and Regulations. The said equipment has been tested and found compliance with the requirement of the relative standards .

Test Standard : FCC Title 47 Part 2.1091, KDB 447498 D01 V06

Tested By:

Approved by:

Jan.15.2024
Date



Alex Huang, Engineer

Oct.01.2025
Date



Adam Chou, Manager

Designation Number: TW1640



1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT Name : Locomotive driving recorder
Model : FD-1
FCC ID : 2BMUNFD-1
Power From ☒Inside ☒Outside
☒Adaptor ☒Battery ☐DC Power Source ☐Support Unit PC
Power Rating(Battery) : 5 Vdc
Power Rating(Adapter) : 12Vdc to 5Vdc
Operate Frequency : Refer to the channel list as described below
Basic Spec : ☐Bluetooth ☐Bluetooth LE ☒802.11b ☒802.11g ☒802.11n HT20/HT40
Operate Frequency : 2412 MHz ~ 2462 MHz
Number of Channels : 11
Step of Channel : ☒N/A ☐ _____ MHz
Modulation Type : ☒OFDM ☐FHSS ☒DSSS ☐CCK ☐GFSK
Antenna Quantity : 1Tx/1Rx
Antenna Type : FPC
Antenna gain : 2.05 dBi
EUT Received Date : Nov.07.2023
EUT Channel List :

Wifi type Channel	802.11b 、 802.11g 、 802.11 n20	802.11 n40
Low CH	2412MHz	2422MHz
Mid CH	2437MHz	2437MHz
High CH	3462MHz	2452MHz



2. GENERAL SAR TEST REDUCTION AND EXCLUSION GUIDANCE

2.1 The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

- $[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,²¹ where $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²²
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2.2 At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following

- $[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$, at 100 MHz to 1500 MHz
- $[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$ at > 1500 MHz and ≤ 6 GHz

2.3 At frequencies below 100 MHz, the following may be considered for SAR test exclusion

- The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f(\text{MHz}))]$ for test separation distances > 50 mm and < 200 mm
- The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm
- SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.



3. MPE CALCULATION METHOD

3.1 LIMIT

Limits for Maximum Permissible Exposure

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	< 6
1,500-100,000			5	< 6
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
300-1,500			f/1500	< 30
1,500-100,000			1.0	< 30

f = frequency in MHz. * = Plane-wave equivalent power density.

3.2. CACULATION METHOD

Calculation Method of RF Safety Distance:

$$S = PG/4\pi R^2 = EIRP/4\pi R^2$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

3.3. CALCULATED RESULT

Test Mode	Frequency (MHz)	Max Output Power (dbm)	Max Output Power (mW)	Power Density (mW / cm ²)	Limit of Power Density (mW / cm ²)
802.11b	2462	19.47	88.51	0.036	1

The calculated distance was 20 cm and the max output power test mode was choosed.

END