

# TEST REPORT

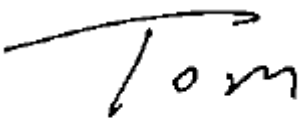
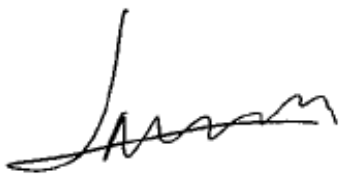
Applicant	SAMEWIN TOYS FACTORY
Address	CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA

Manufacturer or Supplier	SAMEWIN TOYS FACTORY	
Address	CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA	
Product	Toys Series	
Brand Name	N/A	
Model	997	
Additional Models & Model Difference	832, 833, 835, 839, 811, 813, 815, etc., see items 2.1	
Date of tests	Mar. 18, 2020 ~ Mar. 27, 2020	

The submitted sample of the above equipment has been tested according to the requirements of the following standards:

- ☒ EN 55014-1:2017
- ☒ EN 55014-2:2015

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Tom Chen Project Engineer / EMC Department	Approved by Madison Luo Assistant Manager / EMC Department
	

Date: Apr. 07, 2020

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

## Table of Contents

RELEASE CONTROL RECORD .....	3
1 GENERAL INFORMATION .....	4
1.1 GENERAL DESCRIPTION OF EUT .....	4
1.2 DESCRIPTION OF TEST MODES .....	5
1.3 SUMMARY OF TEST RESULTS .....	5
2 EMISSION TEST .....	6
2.1 RADIATED EMISSION MEASUREMENT .....	6
2.1.1 TEST INSTRUMENTS .....	6
2.1.2 TEST RESULTS .....	7
3 IMMUNITY TEST .....	9
3.1 GENERAL PERFORMANCE CRITERIA DESCRIPTION .....	9
3.1.1 ELECTROSTATIC DISCHARGE IMMUNITY TEST (ESD) .....	10
3.1.2 TEST SPECIFICATION .....	10
3.1.3 TEST INSTRUMENTS .....	10
3.1.4 TEST RESULTS .....	11
4 PHOTOGRAPHS OF THE TEST CONFIGURATION .....	15
5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB .....	16



Test Report No.: CE200318N017

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
CE200318N017	Original release	Apr. 07, 2020

## 1 GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	Toys Series
<b>MODEL NO.</b>	997
<b>ADDITIONAL MODELS</b>	832, 833, 835, 839, 811, 813, 815, 816, 818, 965, 967, 968, 981, 983, 985, 992, 993, 995, 1888, 2888, 3888, 3888-1, 3888A, 3888A-1, 3888B, 3888B-1, 3888C, 3888C-1, 3888D, 3888D-1, 917, 5888, 6888, 7888, 8888, 9888, 511, 911, 757, 787, 831, 837, 881, 883, 885, 886, 928, 961, 962, 963, 991, R2, R11, R12, R13, R14, R15, R16, R17, R18, R19, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, OWI-962, OWI-997, OWI-995, OWI-993, OWI-992, OWI-981, OWI-983, OWI-985
<b>THE HIGHEST OPERATING FREQUENCY</b>	Below 15MHz
<b>TOY GROUP</b>	Category B
<b>GROUP / CATEGORY</b>	Category III
<b>POWER SUPPLY</b>	Car: DC 6V(1.5V*AAA*4) From Battery Remote control: DC 3V(1.5V*AA*2) From Battery

#### NOTES:

1. For the test results, the EUT had been tested with all conditions. But only the worst case was showed in test report.
2. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
3. Please refer to the EUT photo document (Reference No.: 200318N017) for detailed product photo.
4. Additional models (see about table) are identical with the test model 997 except the appearance and model number for marketing purpose



## 1.2 DESCRIPTION OF TEST MODES

The EUT were tested under the **Normal working** mode for all tests.

## 1.3 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

EMISSION			
Standard	Test Type	Result	Remark
EN 55014-1:2017	Radiated Test (30MHz~1GHz)	PASS	Meets Limits Minimum passing margin is -3.20 dB at 681.550 MHz

IMMUNITY EN 55014-2			
Standard	Test Type	Result	Remark
IEC 61000-4-2:2008 ED. 2.0	Electrostatic discharge immunity test	PASS	Meets the requirements of Performance Criterion A

NOTE: The EN 55014-1:2017, EN 55014-2:2015 Version required by client.

## 2 EMISSION TEST

### 2.1 RADIATED EMISSION MEASUREMENT

#### 2.1.1 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESU26	100005	May 20,19	May 19, 20
EMI Test Receiver	Rohde&Schwarz	ESR7	101564	Mar. 18,20	Mar. 17,21
Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-555	Nov. 24, 19	Nov. 23, 20
Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-554	Dec. 01, 19	Nov. 30, 20
Preamplifier	EMCI	EMC1135	980378	Mar. 15,20	Mar. 14,21
Preamplifier	EMCI	EMC1135	980423	Mar. 15,20	Mar. 14,21
10m Semi-anechoic Chamber	CHANGLING	21.4m*12.1m*8.8m	NSEMC006	Oct. 19,19	Oct. 18,20
Test Software	ADT	ADT_Radiated_V8.7.07	N/A	N/A	N/A

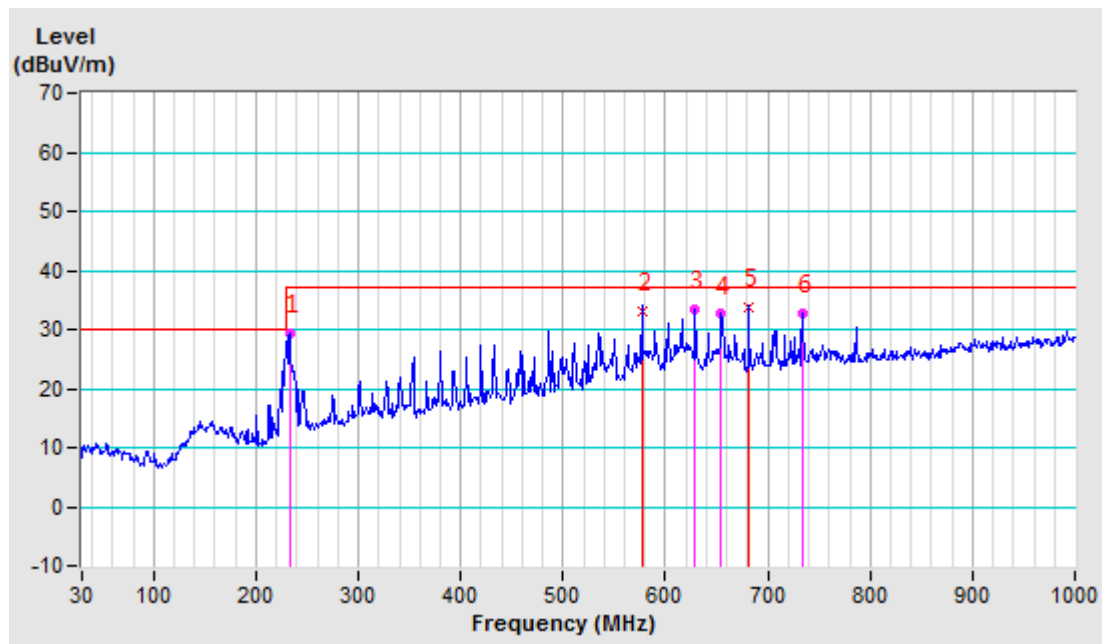
- NOTES:**
1. The test was performed in 10m Chamber.
  2. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
  3. Negative sign (–) in the margin column signify levels below the limit.
  4. Frequency range scanned: 30MHz to 1000MHz.
  5. Only emissions significantly above equipment noise floor are reported.
  6. Uncertainty:  $\pm 3.99\text{dB}$  at a level of confidence of 95%.
  7. The calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.



## 2.1.2 TEST RESULTS

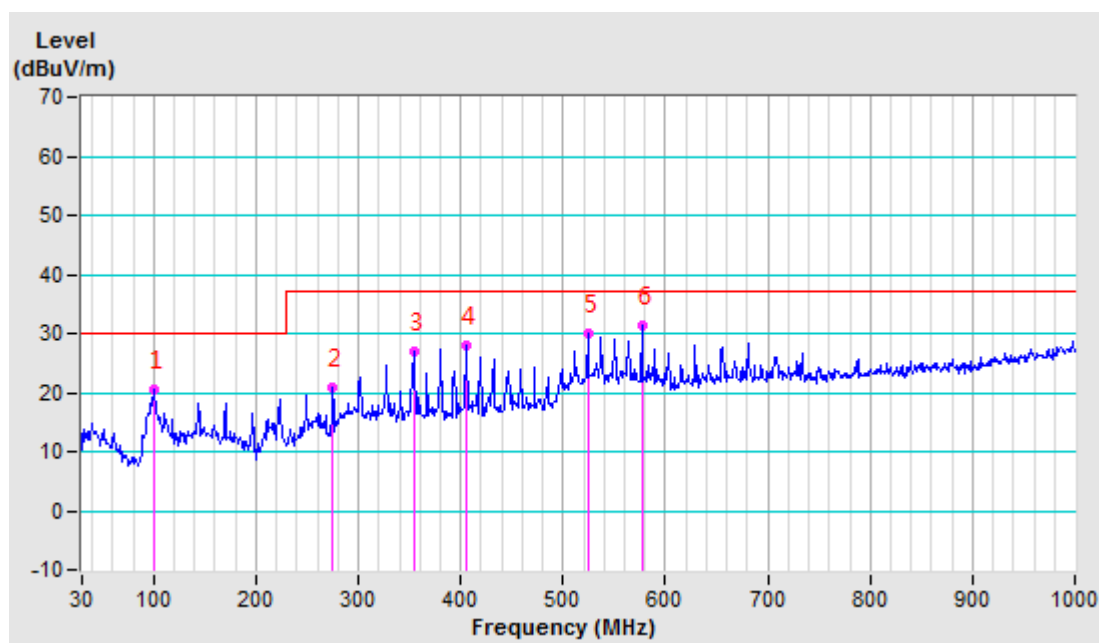
TEST MODE	Normal working	FREQUENCY RANGE	30-1000 MHz
TEST VOLTAGE	Car: DC 6V From Battery Remote control: DC 3V From Battery	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 53% RH	TESTED BY: Vincent	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	233.094	-17.44	46.81	29.37	37.00	-7.63	400	43
2	576.710	-7.65	40.85	33.20	37.00	-3.80	200	33
3	628.854	-6.20	39.75	33.55	37.00	-3.45	200	123
4	654.438	-5.77	38.32	32.55	37.00	-4.45	200	147
5	681.550	-5.61	39.41	33.80	37.00	-3.20	400	323
6	733.493	-4.30	37.00	32.70	37.00	-4.30	400	129



<b>TEST MODE</b>	Normal working	<b>FREQUENCY RANGE</b>	30-1000 MHz
<b>TEST VOLTAGE</b>	Car: DC 6V From Battery Remote control: DC 3V From Battery	<b>DETECTOR FUNCTION &amp; BANDWIDTH</b>	Quasi-Peak, 120kHz
<b>ENVIRONMENTAL CONDITIONS</b>	26 deg. C, 53% RH	<b>TESTED BY:</b>	Vincent

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	99.747	-20.38	41.01	20.63	30.00	-9.37	100	126
2	275.228	-15.97	36.84	20.87	37.00	-16.13	100	209
3	353.802	-12.96	39.83	26.87	37.00	-10.13	100	90
4	406.233	-11.99	40.02	28.03	37.00	-8.97	100	339
5	524.046	-9.08	39.02	29.94	37.00	-7.06	300	206
6	576.719	-8.05	39.38	31.33	37.00	-5.67	300	220







### 3 IMMUNITY TEST

#### 3.1 GENERAL PERFORMANCE CRITERIA DESCRIPTION

<b>CRITERION A</b>	The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
<b>CRITERION B</b>	The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
<b>CRITERION C</b>	Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.



### 3.1.1 ELECTROSTATIC DISCHARGE IMMUNITY TEST (ESD)

### 3.1.2 TEST SPECIFICATION

<b>Basic Standard:</b>	IEC 61000-4-2
<b>Discharge Impedance:</b>	330 ohm / 150 pF
<b>Discharge Voltage:</b>	Air Discharge : 8 kV (Direct) Contact Discharge : 4 kV (Direct and Indirect)
<b>Polarity:</b>	Positive & Negative
<b>Number of Discharge:</b>	20 times at each test point
<b>Discharge Mode:</b>	Single Discharge
<b>Discharge Period:</b>	1 second

### 3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
ESD Generator	TESEQ	NSG 437	279	Mar. 12,21	Mar. 12,21
Test Software	TESEQ	V03.03	N/A	N/A	N/A
ESD Generator	EM TEST	Dito	V1211112265	Nov. 30,19	Nov. 29,20
Test Software	EM TEST	V 2.31	N/A	N/A	N/A

- NOTES:** 1. The test was performed in ESD Room.  
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.



### 3.1.4 TEST RESULTS

<b>TEST MODE</b>	Normal working	<b>TEST VOLTAGE</b>	Car: DC 6V From Battery Remote control: DC 3V From Battery
<b>ENVIRONMENTAL CONDITIONS</b>	23.6deg. C, 57.3% RH, 101.2KPa	<b>TESTED BY:</b> Dragon	

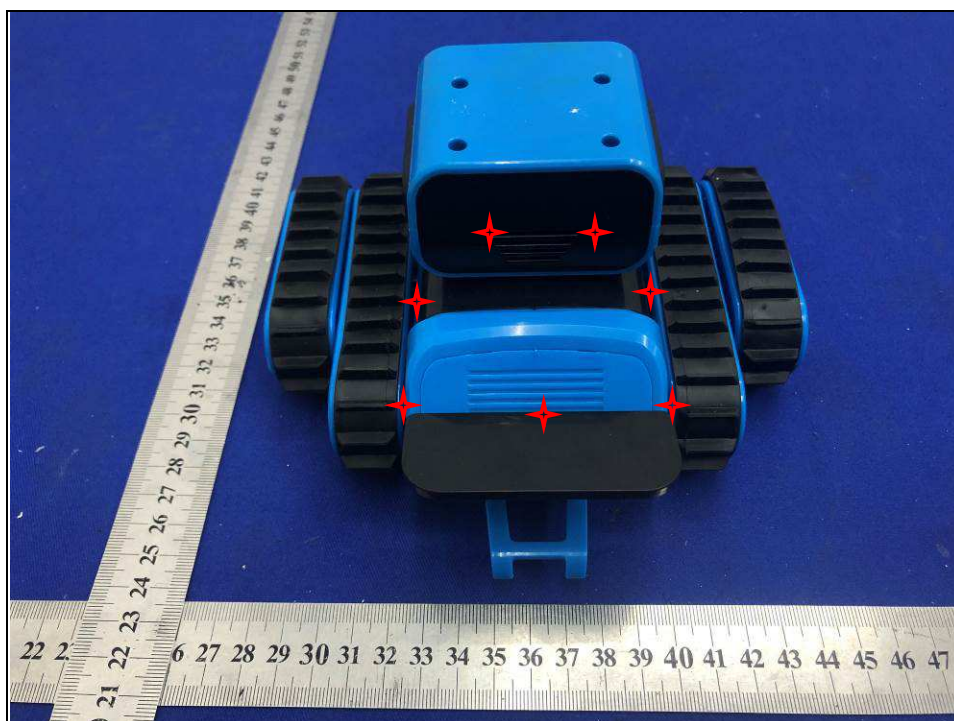
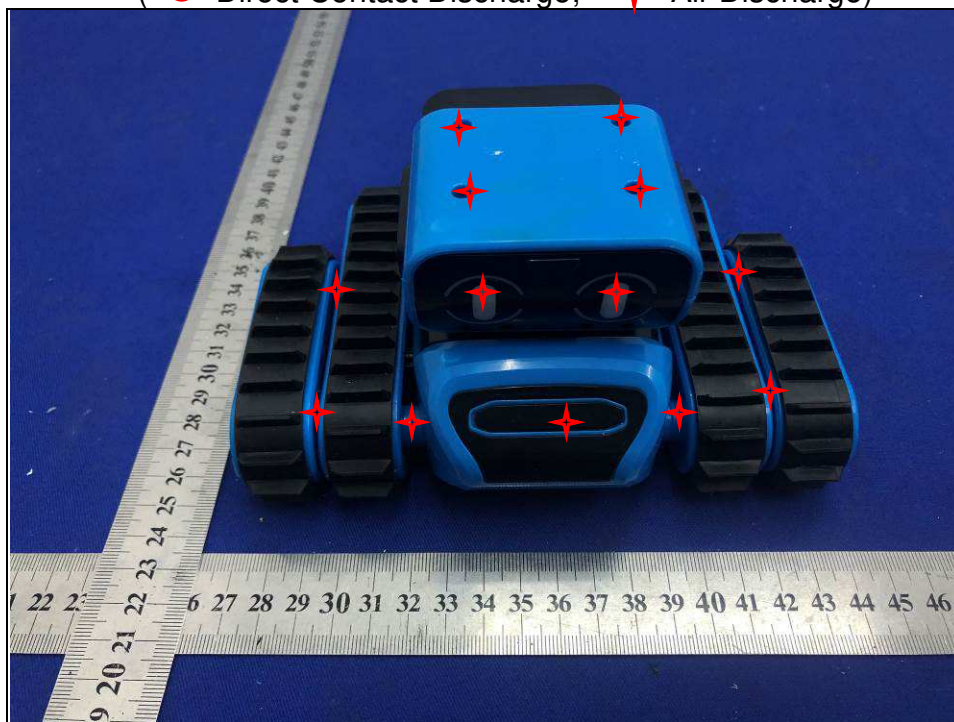
Direct Discharge Application				
Test Level (kV)	Polarity	Test Point	Test Result of Contact Discharge	Test Result of Air Discharge
4	+/-	All Metal Parts	A	N/A
8	+/-	All Non-metal Parts	N/A	A

Indirect Discharge Application				
Discharge Level (kV)	Polarity	Test Point	Test Result of HCP	Test Result of VCP
4	+/-	HCP	A	N/A
4	+/-	VCP	N/A	A

**NOTE:** A: There was no change compared with initial operation during the test.

### ESD TEST POINT

( ○ - Direct Contact Discharge; ✦ - Air Discharge)

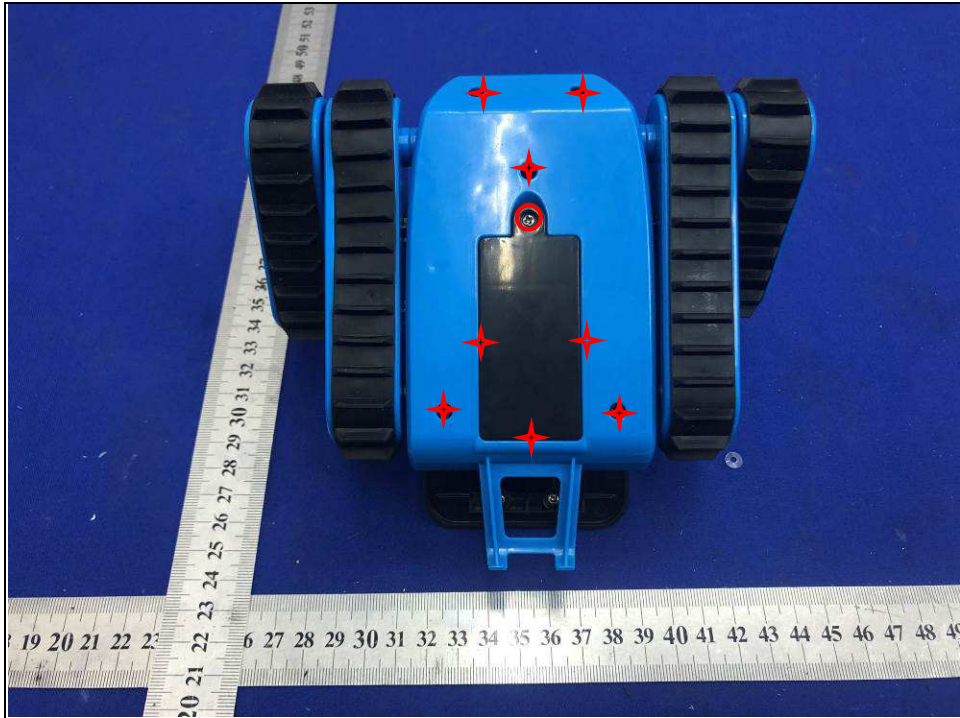






BUREAU  
VERITAS

Test Report No.: CE200318N017





BUREAU  
VERITAS

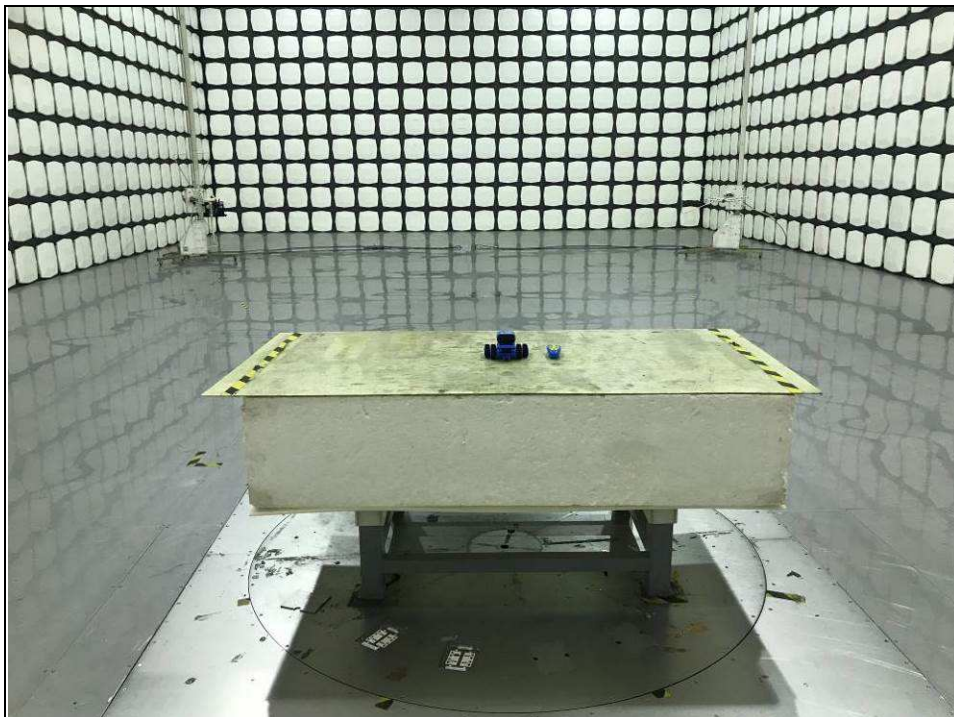
Test Report No.: CE200318N017





## 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

RADIATED EMISSION TEST



ESD TEST





Test Report No.: CE200318N017

## **5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No any modifications were made to the EUT by the lab during the test.

**---END---**