



**SGS-CSTC Standards Technical Services  
(Shanghai) Co., Ltd.**

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Report No.: SHEM160600398304  
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**1 Cover Page**

***FCC MPE REPORT***

<b>Application No.:</b>	SHEM1606003983CR
<b>Applicant:</b>	Hangzhou Hikvision Digital Technology Co., Ltd.
<b>FCC ID:</b>	2AI3URMAG7
<b>Equipment Under Test (EUT):</b>	
<b>NOTE:</b> The following sample(s) submitted was/were identified on behalf of the client as	
<b>Product Name:</b>	Receiver
<b>Model No.(EUT):</b>	Mag7, Mag5, Mag3
<b>Standards:</b>	FCC Rules 47 CFR §2.1091
<b>Date of Receipt:</b>	2016-12-15
<b>Date of Test:</b>	2016-12-15 to 2017-2-7
<b>Date of Issue:</b>	2017-2-7
<b>Test Result:</b>	<b>Pass*</b>

\* In the configuration tested, the EUT complied with the standards specified above.



**Parlam Zhan**  
**E&E Section Manager**  
**SGS-CSTC (Shanghai) Co., Ltd.**

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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### 3 General Information

#### 3.1 Client Information

Applicant:	Huangshan Goldenland Electrics Inc.
Address of Applicant:	North Industrial Park, Huizhou District, Huangshan, Anhui Province, P.R. China
Manufacturer:	Huangshan Goldenland Electrics Inc.
Address of Manufacturer:	North Industrial Park, Huizhou District, Huangshan, Anhui Province, P.R. China
Factory:	Huangshan Goldenland Electrics Inc.
Address of Factory:	North Industrial Park, Huizhou District, Huangshan, Anhui Province, P.R. China

#### 3.2 General Description of E.U.T.

Product Description:	Mobile product with 915MHz transmitter
Test Voltage:	DC 11.1V li-on rechargeable battery

#### 3.3 Details of E.U.T.

Operation Frequency:	902.5MHz-927.5MHz
Modulation Technique:	FHSS(GFSK)
Number of Channel:	At least 50
Channel separation:	500kHz
Antenna Type	internal antenna(AC-Q915M02)

#### 3.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

No.588 West Jindu Road, Songjiang District, Shanghai, China.201612.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

### 3.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. Date of expiry: 2017-07-14.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2017-09-16.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1. Expiry Date: 2017-06-18.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-2221, G-830 respectively. Date of Expiry: 2017-11-16.

## 4 Test Standards and Limits

According to §1.1310 Radiofrequency radiation exposure limits:

The limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm <sup>2</sup> )	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

For **915MHz** device, the limit of worse case is 0.61mW/cm<sup>2</sup>

## 5 Measurement and Calculation

### 5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM160600398401.

Test Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Output Power (mW)
Low	19.5	0.5	<b>20.0</b>	<b>100</b>
Middle	19.26		19.72	94.1
High	18.83		19.33	85.7

## 5.2 MPE Calculation

According to the formula  $S = \frac{PG}{4R^2\pi}$ , we can calculate S which is MPE.

Note:

- 1)  $P$  (Watts) = Power Input to antenna =  $10^{\frac{dBm}{10}} / 1000$
- 2)  $G$  (Antenna gain in numeric) =  $10^{(Antenna\ gain\ in\ dBi / 10)}$
- 3)  $R$  = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 0.61mW/cm<sup>2</sup> for FCC

The Max Conducted Peak Output Power is 100mW in highest channel;

The best case gain of the antenna is 3Bi. logarithmic terms convert to numeric result is nearly 2

$$\text{So, } S = \frac{PG}{4R^2\pi} = 0.0397\text{mW/cm}^2 < 0.61\text{mW/cm}^2$$

## 6 EUT Constructional Details

Refer to the < Mag7 \_External Photos > & < Mag7 \_Internal Photos>.

**--End of the Report--**