

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT  
INTENTIONAL RADIATOR CERTIFICATION TO  
FCC PART 15 SUBPART C REQUIREMENT**

*OF*

**Self Service Kiosk**

**MODEL No.: KMY8202F**

**Trade mark: KMY**

**FCC ID: P7W-KMY8202F**

**REPORT NO: ES120629189E1**

**ISSUE DATE: August 13, 2012**

*Prepared for*

**MERGE HEALTHCARE  
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*Prepared by*

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## VERIFICATION OF COMPLIANCE

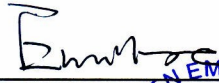
|                      |                                                                                                                                                             |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant:           | MERGE HEALTHCARE<br>200E. Randolph St., Suite 2400 Chicago, IL, 60601, USA                                                                                  |
| Manufacture:         | SZ KMY CO., LTD<br>Room A,B,C, 14th Floor (13A), Block B, XueSong Building, Terra 6th Road, CheGongMiao, Futian District, Shenzhen, P.R. China. Zip: 518040 |
| Product Description: | Self Service Kiosk                                                                                                                                          |
| Model Number:        | KMY8202F                                                                                                                                                    |
| Serial Number:       | N/A                                                                                                                                                         |
| File Number:         | ES120629189E1                                                                                                                                               |
| Date of Test:        | July 15, 2012 to August 10, 2012                                                                                                                            |

### We hereby certify that:

The above equipment was tested by SHENZHEN EMTEK Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009), the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part C.

The test results of this report relate only to the tested sample identified in this report.

Date of Test: July 15, 2012 to August 10, 2012

Prepared by:   
Emily Xie/Editor

Reviewer:   
Lesley Zhang/Supervisor

Approved & Authorized Signer:   
Lisa Wang/Manager

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## **1. GENERAL INFORMATION**

### **1.1 Product Description**

The MERGE HEALTHCARE Model: KMY8202F (referred to as the EUT in this report)  
The EUT is an short range, lower power, Self Service Kiosk designed as an Input Device.

A major technical descriptions of EUT is described as following:

- A). Operation Frequency: 125KHz one channel.
- B). Power Supply: DC 5V/2A with AC/DC Adaptor
- C). AC/DC Adaptor : Input: AC 120V/60Hz Output: DC 5V/2A

### **1.2 Related Submittal(s) / Grant (s)**

This submittal(s) (test report) is intended for FCC ID: P7W-KMY8202F filing to comply with Section 15.209 of the FCC Part 15, Subpart C Rules. The composite system (receiver) is compliance with Subpart B is authorized under a DoC procedure.

### **1.3 Test Methodology**

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2009). Radiated testing was performed at an antenna to EUT distance 3 meters.

### **1.4 Special Accessories**

Not available for this EUT intended for grant.

### **1.5 Equipment Modifications**

Not available for this EUT intended for grant.

## 1.6 Test Facility

Site Description  
EMC Lab.

: Accredited by CNAS, 2010.10.29  
The certificate is valid until 2013.10.28  
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)  
The Certificate Registration Number is L2291.

Accredited by TUV Rheinland Shenzhen 2010.5.25  
The Laboratory has been assessed according to the requirements ISO/IEC 17025.

Accredited by FCC, October 28, 2010  
The Certificate Registration Number is 406365.

Accredited by Industry Canada, March 5, 2010  
The Certificate Registration Number is 46405-4480.

Name of Firm  
Site Location

: SHENZHEN EMTEK Co., Ltd.  
: Bldg 69, Majialong Industry Zone,  
Nanshan District, Shenzhen, Guangdong, China

## 2. System Test Configuration

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2009 from the EUT measured in the **frequency range between 0.15 MHz and 30MHz** using **CISPR Quasi-Peak and average detector mode**.

#### 2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.

## 2.4 Limitation

### (1) Conducted Emission

According to section 15.207(a) Conducted Emission Limits is as following.

| Frequency range<br>MHz                                                                                                                                                              | Limits<br>dB(uV) |          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|
|                                                                                                                                                                                     | Quasi-peak       | Average  |
| 0.15 to 0.50                                                                                                                                                                        | 66 to 56         | 56 to 46 |
| 0.50 to 5                                                                                                                                                                           | 56               | 46       |
| 5 to 30                                                                                                                                                                             | 60               | 50       |
| <b>Note</b><br>1.The lower limit shall apply at the transition frequencies<br>2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. |                  |          |

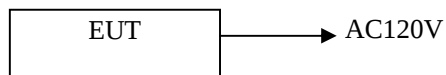
### (2) Radiated Emission

| Frequency<br>(MHz) | Field strength<br>$\mu\text{V/m}$ | Distance (m) |
|--------------------|-----------------------------------|--------------|
| 0.009-0.490        | 2400/F(KHz)                       | 300          |
| 0.490-1.705        | 24000/F(KHz)                      | 30           |
| 1.705-30           | 30                                | 30           |
| 30-88              | 100**                             | 3            |
| 88-216             | 150**                             | 3            |
| 216-960            | 200**                             | 3            |
| Above 960          | 500                               | 3            |

\*\* Except as provided in paragraph(g), Fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., Sections 15.231 and 15.241.

## 2.5 Configuration of Tested System

**Fig. 2-1 Configuration of Tested System**



### 3.Summary Of Test Results

| FCC Rules | Description Of Test | Result    |
|-----------|---------------------|-----------|
| §15.207   | Conducted Emission  | Compliant |
| §15.205   | Restricted bands    | Compliant |
| §15.209   | Radiated Emission   | Compliant |

### 4. Description of test modes

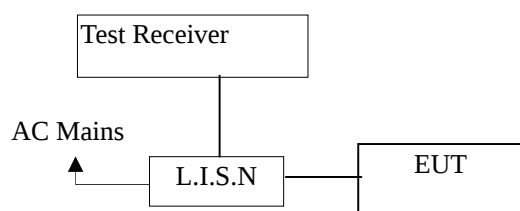
The EUT (Self Service Kiosk) has been tested under normal operating condition.  
The EUT stay in continuous transmitting mode. The Frequency 125KHz are chosen for testing.

## 5. Conducted Emissions Test

### 5.1 Measurement Procedure:

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

### 5.2 Test SET-UP (Block Diagram of Configuration)



### 5.3 Measurement Equipment Used:

| Conducted Emission Test Site # 4 |                 |              |               |            |            |
|----------------------------------|-----------------|--------------|---------------|------------|------------|
| EQUIPMENT TYPE                   | MFR             | MODEL NUMBER | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Test Receiver                    | Rohde & Schwarz | ESCS30       | 828985/018    | 05/29/2012 | 05/29/2013 |
| L.I.S.N                          | Rohde & Schwarz | ESH2-Z5      | 834549/005    | 05/29/2012 | 05/29/2013 |
| L.I.S.N                          | Rohde & Schwarz | ESH2-Z5      | 834549/005    | 05/29/2012 | 05/29/2013 |
| 50ΩCoaxial Switch                | Anritsu         | MP59B        | M20531        | 05/29/2012 | 05/29/2013 |

## 5.4 Measurement Result:

### PASS

|                     |                      |              |             |
|---------------------|----------------------|--------------|-------------|
| Date of Test:       | <u>July 18, 2012</u> | Temperature: | <u>22</u>   |
| Frequency Detector: | <u>0.15~30MHz</u>    | Humidity:    | <u>50%</u>  |
| Test Result:        | <u>PASS</u>          | Test Mode:   | <u>RFID</u> |

| Test Line | Frequency MHz | Emission Level QP dB(μV) | Emission Level AV dB(μV) | Limits QP dB(μV) | Limits AV dB(μV) | Margin QP dB(μV) | Margin AV dB(μV) |
|-----------|---------------|--------------------------|--------------------------|------------------|------------------|------------------|------------------|
| Neutral   | 0.150         | 49.50                    | 37.50                    | 66.00            | 56.00            | -16.50           | -18.50           |
|           | 0.195         | 47.50                    | 34.10                    | 63.82            | 53.82            | -16.32           | -19.72           |
|           | 0.345         | 42.00                    | 27.20                    | 59.08            | 49.08            | -17.08           | -21.88           |
|           | 0.982         | 45.61                    | 31.50                    | 56.00            | 46.00            | -10.39           | -14.50           |
|           | 1.523         | 44.61                    | 33.60                    | 56.00            | 46.00            | -11.39           | -12.40           |
|           | 5.635         | 45.61                    | 34.69                    | 60.00            | 50.00            | -14.39           | -15.31           |
| Line      | 0.152         | 53.00                    | 41.50                    | 65.87            | 55.87            | -12.87           | -14.37           |
|           | 0.250         | 53.30                    | 42.90                    | 61.76            | 51.76            | -8.46            | -8.86            |
|           | 0.335         | 47.90                    | 37.60                    | 59.33            | 49.33            | -11.43           | -11.73           |
|           | 0.952         | 43.63                    | 30.25                    | 56.00            | 46.00            | -12.37           | -15.75           |
|           | 1.560         | 45.62                    | 35.96                    | 56.00            | 46.00            | -10.38           | -10.04           |
|           | 5.621         | 46.24                    | 36.95                    | 60.00            | 50.00            | -13.76           | -13.05           |

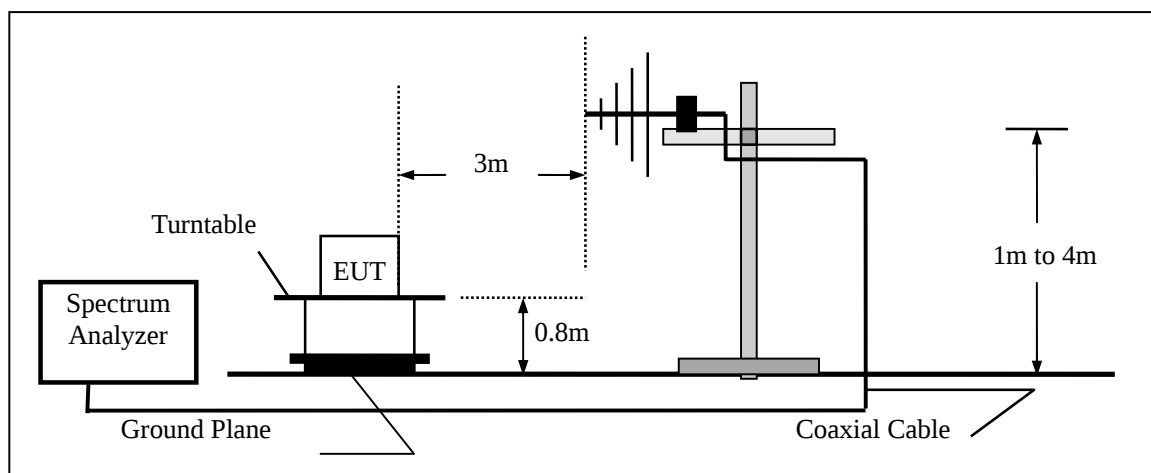
## **6. Radiated Emission Test**

### **6.1 Measurement Procedure**

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving loop antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

## 6.2 Test SET-UP (Block Diagram of Configuration)

### Radiated Emission Test Set-Up



## 6.3 Measurement Equipment Used:

| Open Area Test Site # 3 |                 |               |               |            |            |
|-------------------------|-----------------|---------------|---------------|------------|------------|
| EQUIPMENT TYPE          | MFR             | MODEL NUMBER  | SERIAL NUMBER | LAST CAL.  | CAL DUE.   |
| Spectrum Analyzer       | Rohde & Schwarz | FSEM30        | 849720/019    | 05/29/2012 | 05/29/2013 |
| Amplifier               | HP              | 8449B         | 3008A00277    | 05/29/2012 | 05/29/2013 |
| Loop Antenna            | HFRAE 5162      | ROHDE&SCHWARZ | 9507          | 05/29/2012 | 05/29/2013 |
| Horn Antenna            | Sunol Sciences  | DRH-118       | A052604       | 05/29/2012 | 05/29/2013 |
| EMI Test Receiver       | Rohde & Schwarz | ESCI          | 100028        | 05/29/2012 | 05/29/2013 |
| Amplifier               | HP              | HP8447E       | 1937A01046    | 05/29/2012 | 05/29/2013 |
| Broadband Antenna       | Sunol Sciences  | JB1           | A040904-2     | 05/29/2012 | 05/29/2013 |

## 6.4 Measurement Result

### A. Fundamental Radiated Emission Data

#### B.

|                        |                   |               |               |
|------------------------|-------------------|---------------|---------------|
| Operation Mode:        | Transmitting Mode | Test Date :   | July 15, 2012 |
| Test Item:             | Below 30MHz       | Temperature : | 24            |
| Fundamental Frequency: | 125KHz            | Humidity :    | 52 %          |
| Test Result:           | PASS              | Test By:      | Andy          |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level<br>(dBuV) | Limit 3m<br>(dBuV/m) | Margin<br>(dB) | Note    |
|----------------|-----------------|--------------------------|----------------------|----------------|---------|
| 0.126          | H               | 85.62                    | 105.8                | -20.18         | Average |
| 0.251          | H               | 76.25                    | 99.6                 | -23.35         | Average |
| 0.126          | V               | 83.63                    | 105.8                | -22.17         | Average |
| 0.252          | V               | 73.61                    | 99.6                 | -25.99         | Average |

#### Note:

Other harmonics emissions are lower than 20dB below the allowable limit.

## B. General Radiated Emission Data

|                        |                   |               |               |
|------------------------|-------------------|---------------|---------------|
| Operation Mode:        | Transmitting Mode | Test Date :   | July 15, 2012 |
| Test Item:             | 30M~1000MHz       | Temperature : | 24            |
| Fundamental Frequency: | 125KHz            | Humidity :    | 52%           |
| Test Result:           | PASS              | Test By:      | Andy          |

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level<br>(dBuV) | Limit 3m<br>(dBuV/m) | Margin<br>(dB) | Note |
|----------------|-----------------|--------------------------|----------------------|----------------|------|
| 61.51          | V               | 26.62                    | 40.00                | -13.38         | QP   |
| 92.61          | V               | 32.50                    | 43.50                | -11.00         | QP   |
| 186.67         | V               | 28.63                    | 43.50                | -14.87         | QP   |
| 447.25         | V               | 38.20                    | 46.00                | -7.80          | QP   |
| 567.68         | V               | 36.90                    | 46.00                | -9.10          | QP   |
| 782.72         | V               | 40.24                    | 46.00                | -5.76          | QP   |
| 59.62          | H               | 25.36                    | 40.00                | -14.64         | QP   |
| 107.60         | H               | 26.73                    | 43.50                | -16.77         | QP   |
| 340.51         | H               | 33.58                    | 46.00                | -12.42         | QP   |
| 563.69         | H               | 36.46                    | 46.00                | -9.54          | QP   |
| 789.94         | H               | 35.61                    | 46.00                | -10.39         | QP   |
| 856.95         | H               | 38.62                    | 46.00                | -7.38          | QP   |

Note: Emission Level= Reading Level+ Probe Factor +Cable Loss