



FCC ID: NOIDS-S133408  
Report No.: T190812W01-MF

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**IEEE C95.1 2005  
KDB 447498 D03  
47 C.F.R. Part 1, Subpart I, Section 1.1310  
47 C.F.R. Part 2, Subpart J, Section 2.1091**

## **RF EXPOSURE REPORT**

**For**

**13.3" Digital Signage**

**Model: S133408**

**Trade Name: SABLE**

*Issued to*

**Netronix Inc  
No 945, Boai St, Jubei, Taiwan**

*Issued by*

**Compliance Certification Services Inc.  
Wugu Laboratory  
No.11, Wugong 6th Rd., Wugu Dist.,  
New Taipei City 24891, Taiwan. (R.O.C.)  
Issue Date: November 22, 2019**

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
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### **Revision History**

| Rev. | Issue Date        | Revisions                        | Effect Page | Revised By   |
|------|-------------------|----------------------------------|-------------|--------------|
| 00   | October 28, 2019  | Initial Issue                    | ALL         | Allison Chen |
| 01   | November 22, 2019 | See the following Note Rev. (01) | P.6, P.8    | Allison Chen |

Rev (01):

1. Revised the section 3 and section 5.



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## 1. TEST RESULT CERTIFICATION

### We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

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

| APPLICABLE STANDARDS                                                                                                                                |                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| STANDARD                                                                                                                                            | TEST RESULT             |
| IEEE C95.1 2005<br>KDB 447498 D03<br>47 C.F.R. Part 1, Subpart I, Section 1.1310<br>47 C.F.R. Part 2, Subpart J, Section 2.1091                     | No non-compliance noted |
| Statements of Conformity                                                                                                                            |                         |
| Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty. |                         |

Approved by:

Reporter:

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Kevin Tsai  
Deputy Manager  
Compliance Certification Services Inc.

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Allison Chen  
Report coordinator  
Compliance Certification Services Inc.



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## 2. LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

### 3. EUT SPECIFICATION

|                                   |                                                                                                                                                                                                                                                                                                                                                                                    |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--|------------|-----------|------------|---------|--|--|--------------------|-----------|--------------|--------------------|-----------|-------------|--------------------------|-----------|-------------|
| EUT                               | 13.3" Digital Signage                                                                                                                                                                                                                                                                                                                                                              |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Model                             | S133408                                                                                                                                                                                                                                                                                                                                                                            |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Frequency band (Operating)        | <input checked="" type="checkbox"/> Bluetooth: 2402MHz-2480MHz<br><input checked="" type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462 MHz<br><input type="checkbox"/> 802.11n HT40: 2422MHz ~ 2452MHz<br><input type="checkbox"/> 802.11a/n HT20: 5180MHz ~ 5240MHz / 5745MHz ~ 5825MHz<br>802.11n HT40: 5190MHz ~ 5230MHz / 5755MHz ~ 5795MHz<br><input type="checkbox"/> Others |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Device category                   | <input type="checkbox"/> Portable (<20cm separation)<br><input checked="" type="checkbox"/> Mobile (>20cm separation)<br><input type="checkbox"/> Others                                                                                                                                                                                                                           |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Exposure classification           | <input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm²)<br><input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm²)                                                                                                                                                                                                                |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Antenna Specification             | Bluetooth :    Antenna Gain :    4.55 dBi    (Numeric gain 2.85)<br>2.4GHz:        Antenna Gain :    4.82 dBi    (Numeric gain 3.03)                                                                                                                                                                                                                                               |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Maximum Measurement Average Power | <table><tr><td>Bluetooth:</td><td>-0.62 dBm</td><td>(0.867 mW)</td></tr><tr><td>2.4GHz:</td><td></td><td></td></tr><tr><td>IEEE 802.11b Mode:</td><td>19.30 dBm</td><td>(85.114 mW)</td></tr><tr><td>IEEE 802.11g Mode:</td><td>13.92 dBm</td><td>(24.660 mW)</td></tr><tr><td>IEEE 802.11n HT 20 Mode:</td><td>13.83 dBm</td><td>(24.155 mW)</td></tr></table>                    |              |  | Bluetooth: | -0.62 dBm | (0.867 mW) | 2.4GHz: |  |  | IEEE 802.11b Mode: | 19.30 dBm | (85.114 mW)  | IEEE 802.11g Mode: | 13.92 dBm | (24.660 mW) | IEEE 802.11n HT 20 Mode: | 13.83 dBm | (24.155 mW) |
| Bluetooth:                        | -0.62 dBm                                                                                                                                                                                                                                                                                                                                                                          | (0.867 mW)   |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| 2.4GHz:                           |                                                                                                                                                                                                                                                                                                                                                                                    |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| IEEE 802.11b Mode:                | 19.30 dBm                                                                                                                                                                                                                                                                                                                                                                          | (85.114 mW)  |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| IEEE 802.11g Mode:                | 13.92 dBm                                                                                                                                                                                                                                                                                                                                                                          | (24.660 mW)  |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| IEEE 802.11n HT 20 Mode:          | 13.83 dBm                                                                                                                                                                                                                                                                                                                                                                          | (24.155 mW)  |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Maximum tune up power             | <table><tr><td>Bluetooth:</td><td>0.00 dBm</td><td>(1.000 mW)</td></tr><tr><td>2.4GHz:</td><td></td><td></td></tr><tr><td>IEEE 802.11b Mode:</td><td>20.00 dBm</td><td>(100.000 mW)</td></tr><tr><td>IEEE 802.11g Mode:</td><td>14.00 dBm</td><td>(25.119 mW)</td></tr><tr><td>IEEE 802.11n HT 20 Mode:</td><td>14.00 dBm</td><td>(25.119 mW)</td></tr></table>                    |              |  | Bluetooth: | 0.00 dBm  | (1.000 mW) | 2.4GHz: |  |  | IEEE 802.11b Mode: | 20.00 dBm | (100.000 mW) | IEEE 802.11g Mode: | 14.00 dBm | (25.119 mW) | IEEE 802.11n HT 20 Mode: | 14.00 dBm | (25.119 mW) |
| Bluetooth:                        | 0.00 dBm                                                                                                                                                                                                                                                                                                                                                                           | (1.000 mW)   |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| 2.4GHz:                           |                                                                                                                                                                                                                                                                                                                                                                                    |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| IEEE 802.11b Mode:                | 20.00 dBm                                                                                                                                                                                                                                                                                                                                                                          | (100.000 mW) |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| IEEE 802.11g Mode:                | 14.00 dBm                                                                                                                                                                                                                                                                                                                                                                          | (25.119 mW)  |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| IEEE 802.11n HT 20 Mode:          | 14.00 dBm                                                                                                                                                                                                                                                                                                                                                                          | (25.119 mW)  |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |
| Evaluation applied                | <input checked="" type="checkbox"/> MPE Evaluation*<br><input type="checkbox"/> SAR Evaluation<br><input type="checkbox"/> N/A                                                                                                                                                                                                                                                     |              |  |            |           |            |         |  |  |                    |           |              |                    |           |             |                          |           |             |

## 4. TEST RESULTS

**No non-compliance noted.**

### Calculation

Given  $E = \frac{\sqrt{30 \times P \times G}}{d}$  &  $S = \frac{E^2}{377}$

Where  $E$  = Field strength in Volts / meter

$P$  = Power in Watts

$G$  = Numeric antenna gain

$d$  = Distance in meters

$S$  = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \text{ Equation 1}$$

Where  $d$  = Distance in cm

$P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>



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## 5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using  $d = 20$  cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where  $P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>

### Bluetooth:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 0   | 2402      | 1      | 2.85        | 20     | 0.0006                                | 1              |

### WIFI 2.4G

#### IEEE 802.11b mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 11  | 2462      | 100    | 2.03        | 20     | 0.0404                                | 1              |

#### IEEE 802.11g mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 6   | 2437      | 25.119 | 2.03        | 20     | 0.0101                                | 1              |

#### IEEE 802.11n HT20 mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 6   | 2437      | 25.119 | 2.03        | 20     | 0.0101                                | 1              |

--End of Report--