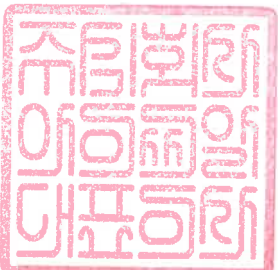




# 시험 성적서

## TEST REPORT

페이지(page) : ( 1 ) / ( 총(Total) 5 )

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                        |                                                                                                                                                                                                      |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>성적서 번호</b><br>Report No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                        | ICRT-TR-E202498-0A                                                                                                                                                                                   |  |
| <b>신청자</b><br>Client                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>기관명</b><br>Name                                     | Comosia Co.,Ltd                                                                                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>주 소</b><br>Address                                  | #504-1, Business Incubator, 545, Seobu-ro, Uijeongbu-si, Gyeonggi-do, 11618, Korea                                                                                                                   |  |
| <b>시험대상품목</b><br>Sample description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                        | BLE Module                                                                                                                                                                                           |  |
| <b>모델명</b><br>Type designation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                        | COMO-N832C                                                                                                                                                                                           |  |
| <b>정 격</b><br>Ratings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                        | DC 3.0 V                                                                                                                                                                                             |  |
| <b>시험장소</b><br>Place of test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                        | <input checked="" type="checkbox"/> 고정시험(Inside test) <input type="checkbox"/> 현장시험(Field test)<br>주소지(Address): 112, Hwanggeum 3-ro 7beon-gil, Hagun-ri, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea |  |
| <b>시험기간</b><br>Date of test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                        | 17. Sep. 2020 ~ 21. Sep. 2020                                                                                                                                                                        |  |
| <b>시험방법/항목</b><br>Test Method/Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                        | FCC rule §1.1310                                                                                                                                                                                     |  |
| <b>시험결과</b><br>Test Results                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                        | Refer to 3. Maximum Permissible Exposure                                                                                                                                                             |  |
| <b>확 인</b><br>Affirmation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>작성자</b><br>Tested by                                | <b>기술책임자</b><br>Technical Manager                                                                                                                                                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>성 명</b><br>Name      In- Jung, Kim      (Signature) | <b>성 명</b><br>Name      Hong-Kyu, Lee      (Signature)                                                                                                                                               |  |
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| <div style="text-align: center;"> <b>2020. 09. 25</b><br/> <b>주식회사 아이씨알 대표이사</b><br/>         The head of INTERNATIONAL CERTIFICATION REGISTRAR       </div> <div style="text-align: right;">  </div>                                                                                                                                                                                                                                 |                                                        |                                                                                                                                                                                                      |  |

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The authenticity of the test report can be checked on the G4B or ICR website.

경기도 김포시 양촌읍 황금3로7번길 112 / Tel: 02-6351-9001 ~ 6



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### Revision History

| Issued Report No.  | Issued Date | Revisions     | Effect Section |
|--------------------|-------------|---------------|----------------|
| ICRT-TR-E202498-0A | 25-Sep-2020 | Initial Issue | All            |
|                    |             |               |                |
|                    |             |               |                |



## 1. Applicant & Manufacturer & Test Laboratory Information

### 1.1 Applicant information

|                |                                                                                    |
|----------------|------------------------------------------------------------------------------------|
| Applicant      | Comosia Co.,Ltd                                                                    |
| Address        | #504-1, Business Incubator, 545, Seobu-ro, Uijeongbu-si, Gyeonggi-do, 11618, Korea |
| Contact Person | Junmo Kwon                                                                         |
| Telephone No.  | +82-070-7949-8907                                                                  |
| Fax No.        | +82 070-7949-8907                                                                  |
| E-mail         | como@comosia.com                                                                   |

### 1.2 Manufacturer Information

|              |                                                                                    |
|--------------|------------------------------------------------------------------------------------|
| Manufacturer | Comosia Co.,Ltd                                                                    |
| Address      | #504-1, Business Incubator, 545, Seobu-ro, Uijeongbu-si, Gyeonggi-do, 11618, Korea |

### 1.3 Test Laboratory Information

|                                   |                                                                                     |
|-----------------------------------|-------------------------------------------------------------------------------------|
| Conducted tests were performed at |                                                                                     |
| Laboratory                        | ICR Co., Ltd.                                                                       |
| Address                           | 112, Hwanggeum 3-ro 7beon-gil, Hagun-ri, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea |
| Telephone No.                     | +82-2-6351-9002                                                                     |
| Fax No.                           | +82-2-6351-9007                                                                     |
| RRA No.                           | KR0165                                                                              |
| KOLAS No.                         | KT652                                                                               |
| Test Firm Registration Number     | 490614                                                                              |



## 2. Equipment under Test(EUT) Information

### 2.1 General Information

|                       |                  |
|-----------------------|------------------|
| Product Name          | BLE Module       |
| Brand Name            | -                |
| Model Name            | COMO-N832C       |
| Additional Model Name | COMO-N832CA      |
| FCC ID                | 2AXON-COMO-N832C |
| Hardware Version      | 1.4              |
| Software Version      | 1.0              |
| Power Supply          | DC 3.0 V         |
| EUT Firmware Version  | 1.0              |
| Target Power          | 4.0              |
| EUT Serial Number     | Test 1           |

### 2.2 Additional Information

|                                              |                                                |                |
|----------------------------------------------|------------------------------------------------|----------------|
| Equipment Class                              | DTS-Digital Transmission System                |                |
| Device Type                                  | Stand-alone                                    |                |
| Operating Frequency                          | 2 402 MHz ~ 2 480 MHz                          |                |
| RF Output Power                              | Bluetooth LE (1 Mbps)                          | -2.89 dBm      |
|                                              | Bluetooth LE (2 Mbps)                          | -2.65 dBm      |
| Number of Channel                            | 40                                             |                |
| Modulation Type                              | GFSK                                           |                |
| Antenna Type                                 | Basic Model                                    | Dipole Antenna |
|                                              | Additional Model                               | Chip Antenna   |
| Antenna Gain                                 | Basic Model                                    | 4.97 dBi       |
|                                              | Additional Model                               | 1.90 dBi       |
| Antenna Operating Mode                       | Single Antenna Equipment with only one antenna |                |
| List of Each Oscillator or Crystal Frequency | 32 MHz / 32.768 kHz                            |                |

### 2.3 Mode of operation during the test

- The EUT is continuous transmission mode during the test with set at Low Channel, Middle Channel, and High Channel.  
To get a maximum radiated emission levels from the EUT, the EUT was moved throughout the XY, YZ, XZ planes.

### 2.4 Modifications of EUT

- None



## 2.5 Difference Configuration Statement

- The difference between the two EUT is only the configuration of antenna and antenna gain.  
There are more than one Configure, each one should be applied throughout the compliance test respectively, but the worst case (COMO-N832C) was recorded for the conduction and radiated items.



### 3. Maximum Permissible Exposure

#### 3.1 RF Exposure calculation

According to the FCC rule §1.1310 the limit for General Population/Uncontrolled exposure is 1 mW/cm<sup>2</sup> for the device operating 1 500 MHz ~ 100 000 MHz.

| Kind of EUT                 | SmartGolf Club                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Frequency Band    | <input type="checkbox"/> WLAN(802.11b/g/n(HT20)): 2 412 MHz ~ 2 462 MHz<br><input type="checkbox"/> WLAN(802.11n(HT40)): 2 422 MHz ~ 2 452 MHz<br><input type="checkbox"/> WLAN: 5 180 MHz ~ 5 320 MHz / 5 500 MHz ~ 5 700 MHz<br><input type="checkbox"/> WLAN: 5 745 MHz ~ 5 825 MHz<br><input checked="" type="checkbox"/> Bluetooth: 2 402 MHz ~ 2 480 MHz |
| Max. Output Power           | 1.57 dBm                                                                                                                                                                                                                                                                                                                                                       |
| Exposure Evaluation Applied | <input type="checkbox"/> MPE<br><input type="checkbox"/> SAR<br><input checked="" type="checkbox"/> N/A                                                                                                                                                                                                                                                        |

#### 3.2 Result

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW}) / (\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3$$

$$= (0.58/5) \times \sqrt{2.480} = 0.18$$

$$= (0.61/5) \times \sqrt{2.480} = 0.19$$

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement and excluded SAR Test.

| Operating Mode           | Frequency<br>(MHz) | Target Power<br>W / tolerance | Max tune up power |      | Separation<br>distance<br>(mm) | RF<br>exposure | Limit |
|--------------------------|--------------------|-------------------------------|-------------------|------|--------------------------------|----------------|-------|
|                          |                    | (dBm)                         | (dBm)             | (mW) |                                |                |       |
| Bluetooth LE<br>(1 Mbps) | 2 480              | -2.89 ± 0.5                   | -2.39             | 0.58 | 5.0                            | 0.18           | 3.00  |
| Bluetooth LE<br>(2 Mbps) | 2 480              | -2.65 ± 0.5                   | -2.15             | 0.61 | 5.0                            | 0.19           | 3.00  |

- END OF REPORT.