# Radio Frequency Exposure Evaluation Report

**FOR:**

KORE Wireless Inc.

Model Name:

iGlucose GM291-v2

Product Description:

Cellular Blood Glucose Meter

FCC ID: 2AHYZGM291CAT-M1

**Applied Rules and Standards:**
CFR 47 Part 2.1093
FCC KDB 447498 D01 General RF Exposure Guidance v06

**Test Report #:** EMC_KORET-019-19001_FCC_SAR_EX_Rev2

**DATE:** 2020-02-07

**A2LA Accredited**

**IC recognized # 3462B-1**

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## 1. Assessment

The following device meets the limits of general population uncontrolled exposure specified in CFR 47 Part 2.1093 according to SAR evaluation exclusion requirements specified in FCC regulation as listed in KDB 447498, as it has been evaluated against the standards mentioned above under this section.

**Responsible for the Report:**

| Date | Section | Name | Signature |
|---|---|---|---|
| 2020-02-07 | Compliance | Kris Lazarov (Sr. EMC Engineer) | Digitally signed by Kris Lazarov Date: 2020.02.07 14:35:04 -08'00' |

The test results of this test report relate exclusively to the test item specified in Section3.
CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM Inc. USA.

# 2. Administrative Data

## 2.1. Identification of the Testing Laboratory Issuing the Test Report

| | |
|---|---|
| **Company Name:** | CETECOM Inc. |
| **Department:** | Compliance |
| **Street Address:** | 411 Dixon Landing Road |
| **City/Zip Code** | Milpitas, CA 95035 |
| **Country** | USA |
| **Telephone:** | +1 (408) 586 6200 |
| **Fax:** | +1 (408) 586 6299 |
| **Compliance Manager:** | Cindy Li |
| **Responsible Project Manager:** | Rami Saman |

## 2.2. Identification of the Client / Manufacturer

| | |
|---|---|
| **Client's Name:** | KORE Wireless Inc. |
| **Street Address:** | 161 Protage Avenue, Suite 300 |
| **City/Zip Code** | Winnipeg, MB / R3B 2L6 |
| **Country** | Canada |

## 3. Equipment under Assessment

| | |
|---|---|
| **Model No:** | iGlucose GM291-v2 |
| **HW Version :** | 17006-1-REV-C1 |
| **SW Version :** | V1.5.0 |
| **FCC-ID:** | FCC ID: 2AHYZGM291CAT-M1 |
| **Minimum distance of antenna or radiating parts to user** | 5mm |
| **Operating Temperature Range:** | 10°C ~ 40°C |
| **Modes of Operation:** | LTE Cat-M |
| **Radios included in the device:** | ❖ LTE<br>• Module name: u-blox, SARA-R410-02B<br>CAT-M Antenna: <6dBi(based on OTA measurement) |
| **EUT Dimensions [mm]:** | • 104 × 49.8 × 16.5 |
| **Co-located Transmitters/ Antennas:** | ☐Yes ■ No |
| **Exposure Category:** | ☐ Occupational/ Controlled ■ General Population/ Uncontrolled |
| **Device Category:** | ☐Fixed Installation ☐Mobile<br>■ Portable ☐ Mixed Mobile and Portable |
| **EUT Diameter:** | ■ < 60 cm ☐ Other _____ |
| **Sample Revision** | ☐Prototype Unit; ■Production Unit; ☐Pre-Production |
| | |

# 4. FCC Exemption Limits for Routine Evaluation

## 4.1. FCC SAR test exclusions are set by KDB 447498 D01 General RF Exposure Guidance v06

KDB 447498 Section: 4.3.1. Standalone SAR test exclusion considerations

a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as *numeric thresholds* in step b) below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

# 5. Stand-Alone SAR Evaluation Exclusion

## 5.1. Justification for using the 5 mm Distance

The conservative distance of 5 mm is an estimate of how close a human body can be to the devise in its typical application.

## 5.2. SAR Exclusion Calculation Table

According to KDB 447498, SAR evaluation can be excluded if the following equation is satisfied:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR

| FCC Standalone Transmission SAR Exclusion Calculations | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Band** | **Frequency[GHz]** | **Max Output Power[mW]** | **Source Based Duty Cycle** | **Load based duty cycle based on Maximum payload** | **Distance [mm]** | **Safe distance only source based DC [mm]** | **Effective Time Average Max Power [mW]** | **P/D*SQRT(F) at ≤ 5mm** | **1-g ≤ 3.0** |
| LTE Band 2 | 1.85 | 302.00 | 1.00 | 0.036 | 5 | 136.92 | 10.87 | 2.96 | Pass |
| LTE Band 4 | 1.71 | 245.00 | 1.00 | 0.036 | 5 | 106.79 | 8.82 | 2.31 | Pass |
| LTE Band 12 | 0.699 | 269.00 | 1.00 | 0.036 | 5 | 74.97 | 9.68 | 1.62 | Pass |

- F: Frequency [GHz]
- P1: Max.Measured Output Power [mW]
- D: Distance [mm]
- SQRT(F): Square root(Frequency[GHz])
- Based on customer's declaration, "The resulting maximum duty cycle originating from our device is DC = 0.036"

## 6. Revision History

| Date | Report Name | Changes to report | Report prepared by |
|---|---|---|---|
| 2019-11-26 | EMC_KORET-019-19001_FCC_ISED_SAR_EX | Initial Version | Kevin Wang |
| 2020-01-09 | EMC_KORET-019-19001_FCC _SAR_EX_Rev1 | Update relevant data based on the load based duty cycle 0.036 declared by customer; Remove evaluation of ISED standard | Kevin Wang |
| 2020-02-07 | EMC_KORET-019-19001_FCC _SAR_EX_Rev2 | Change to Smart Meters own FCC ID as the certification strategy has changed from C2PC to module to new grant under Smart Meter | Kris Lazarov |