



Radio Frequency Exposure Evaluation Report

FOR: Livongo Health Inc.

Model Name: BG300

Product Description: Read Blood Glucose (BG) and transmit to cloud based applications for storage and interpretation. Store and report BG readings to user.

FCC ID: 2AA92LV02062

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

Test Report #: SAR_EX_KORET-017-18001_FCC_REV_1

DATE: 06/26/2018



A2LA Accredited

IC recognized #
3462B-2

CETECOM Inc.

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1. Assessment

The following device was evaluated against the limits for 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.

The device meets the requirements for SAR exclusion as stipulated by the above given FCC/ISED rules and PAG number: 449002.

Responsible for Testing Laboratory:

06/26/2018	Compliance	James Donnellan (Lab Manager)	
Date	Section	Name	Signature

Responsible for the Report:

06/26/2018	Compliance	Issa Ghanma (EMC Engineer)	
Date	Section	Name	Signature

The test results of this test report relate exclusively to the test item specified in Section 3.

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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:	James Donnellan
Responsible Project Manager:	Cathy Palacios

2.2. Identification of the Client

Applicant's Name:	Livongo Health Inc.
Street Address:	15 W. Evelyn Ave, Suite 150
City/Zip Code	Mountain View, CA 94041
Country	USA

2.3. Identification of the Manufacturer

Applicant's Name:	Same as applicant
Street Address:	-----
City/Zip Code	-----
Country	-----



3. Equipment under Assessment

Marketing name:	Livongo Meter		
S/N:	BG3001816200078		
Hardware Version:	C		
Software Version:	2.4		
Module Name:	Telit 910C1-NA		
Module Number:	LE910C1N501T0A1		
Module FCC ID:	RI7LE910C1NA		
Max. documented values from the modular grant:	Band	Frequency range (MHz)	Output Power (Watts)
	GSM 850	824.0 – 849.0	2.228435
	GSM 1900	1850.0 – 1910.0	0.986279
	WCDMA II	1850.0 – 1910.0	0.238232
	WCDMA IV	1710.0 – 1755.0	0.285102
	WCDMA V	824.0 – 849.0	0.229615
	LTE 2	1850.0 – 1910.0	0.231
	LTE 4	1710.0 – 1755.0	0.273
	LTE 12	699.0 – 716.0	0.215
Minimum distance of antenna or radiating parts to user	5mm		
Operating Voltage Range:	Low 4.75 V / Nominal 5 V / High 5.25 V		
Operating Temperature Range:	Low 5 °C – High 45°C		
Other Radios included in the device:	-----		
EUT Dimensions (cm) :	9.6 (L) X 5.7 (W) X 1.77		
Weight (grams) :	~75		
Co-located Transmitters/ Antennas:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Exposure Category:	<input type="checkbox"/> Occupational/ Controlled <input checked="" type="checkbox"/> General Population/ Uncontrolled		



Device Category	<input type="checkbox"/> Fixed Installation <input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Mixed Mobile and Portable
EUT Diameter	<input checked="" type="checkbox"/> < 60 cm <input type="checkbox"/> Other _____
Sample Revision	<input type="checkbox"/> Prototype Unit; <input checked="" type="checkbox"/> Production Unit; <input type="checkbox"/> 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR, 30 where}$$

- 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

- According to the client's SAR Test Exclusion Justification:
 The worst case Duty Factor can be calculated as:
 $(20 \text{ second connection setup} + 0.453 \text{ second Tx}) / (2 \text{ hours} * 3600 \text{ seconds/hour}) = 0.0028$
- According to KDB 447498, SAR evaluation can be excluded if the following equation is satisfied:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

FCC Standalone Transmission SAR Exclusion Calculations					
Frequency [GHz]	Max. Output Power [mW]	Distance [mm]	P/D*SQRT(F) at 5mm	Corrected duty factor	≤ 3.0
0.8488	2228.435	5	410.61	1.15	Yes
1.88	986.279	5	270.46	0.76	Yes
1.8524	238.232	5	64.85	0.18	Yes
1.7326	285.102	5	75.05	0.21	Yes
0.8264	229.615	5	41.75	0.12	Yes
1.8507	231	5	62.85	0.18	Yes
1.71	273	5	71.40	0.20	Yes
0.7145	215	5	36.35	0.10	Yes

- F: Frequency.
- P: Max. Output Power [mW].
- D: Distance.
- X: Min Distance to pass.
- SQRT(F): Square root(Frequency)

6. Revision History

Date	Report Name	Changes to report	Report prepared by
06/22/2018	SAR_EX_KORET-017-18001_FCC	Initial Version	Issa Ghanma
06/26/2018	SAR_EX_KORET-017-18001_FCC_REV_1	Correct FCC ID	Issa Ghanma