Calian Agriculture Ltd.

RF Exposure Exhibit

SCOPE OF WORK
EMC TESTING – Binsense Live Remote, Model: BRU-106103-RU_V3

REPORT NUMBER
106033026MPK-012

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Non-Specific Radio Report Shell Rev. December 2017 MPK

RF Exposure Exhibit
(Mobile Devices)

Report Number: 106033026MPK-012
Project Number: G106033026, G106562063

Report Issue Date: February 13, 2025
Report Revision Date: May 5, 2026

Testing performed on the
Binsense Live Remote
Model Tested: BRU-106103-RU_V3

FCC ID: 2AUTY-106103RU-V3
IC: 27173-106103RUV3
HVIN: RUV3

to

47CFR 2.1091
RSS-102 Issue 5

for

Calian Agriculture Ltd.

Tested by:
Intertek
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Client:
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Report prepared by:

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Report reviewed by:

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Report No. 106033026MPK-012	
Equipment Under Test:	Binsense Live Remote
Model Number:	BRU-106103-RU_V3/ SN:1F0265776
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Applicable Regulation:	47CFR 2.1091 RSS-102 Issue 5

We attest to the accuracy of this report:

Arjun Mukherjea
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Aaron Chang
EMC Team Leader

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1.0 RF Exposure Summary

Test	Reference FCC	Reference Industry Canada	Result
Radio frequency Radiation Exposure Evaluation	47 CFR§2.1091	RSS-102 Issue 5	Complies

2.0 RF Exposure Limits

In this document, we evaluate the RF Exposure to human body due the intentional transmission from the transmitter (EUT). The limits for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 and RSS-102 are followed.

2.1 FCC Limits

According to FCC 1.1310 table 1: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
0.3 – 3.0	614	1.63	*100	6
3.0 – 30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300 - 1500	…	…	F/300	6
1500 - 100,000	…	…	5	6
(B)Limits For General Population / Uncontrolled Exposure				
0.3 – 1.34	614	1.63	*100	30
1.34 – 30	824/f	2.19/f	$*180/f^2$	30
30 – 300	27.5	0.073	0.2	30
300 - 1500	…	…	F/1500	30
1500 - 100,000	…	…	1.0	30

F = Frequency in MHz

* = plane wave equivalent density

2.2 Industry Canada Limits

According to RSS-102, Industry Canada has adopted the SAR and RF field strength limits established in Health Canada's RF exposure guideline, Safety Code 6.

Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
0.003-10	83	90	-	Instantaneous*
0.1-10	-	0.73/ ƒ	-	6**
1.1-10	87/ $ƒ^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	58.07/ $ƒ^{0.25}$	0.1540/ $ƒ^{0.25}$	8.944/ ƒ0.5	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 $ƒ^{0.3417}$	0.008335 $ƒ^{0.3417}$	0.02619 $ƒ^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ $ƒ^{1.2}$
150000-300000	0.158 $ƒ^{0.5}$	4.21 x 10-4 $ƒ^{0.5}$	6.67 x 10^{-5} ƒ	616000/$ƒ^{1.2}$

Note: ƒ is frequency in MHz.
* Based on nerve stimulation (NS).
** Based on specific absorption rate (SAR).

3.0 Test Results

3.1 Classification

Radio is installed inside a mobile host device. The antenna of the product, under normal use condition, is at least 20 cm away from the body of the user and accessible to the end user. Warning statement to the user for keeping at least 20 cm or more separation distance with the antenna should be included in user's manual.

3.2 EIRP calculations

The table in the Binsense Live Remote, Model: BRU-106103-RU_V3 consists of one radio: 2.4GHz Zigbee.

3.3 Maximum RF Power

Specification of Radios on the BRU-106103-RU_V3	
Type	Zigbee
Frequency Range	2405 – 2470 MHz
Antenna 1 Rated RF Output Power	20.02 dBm
Antenna 2 Rated RF Output Power	18.45 dBm
Internal Antenna 1 Gain	1.5 dBi
Internal Antenna 2 Gain	2 dBi

[1]As provided by the client. Intertek takes no responsibility for the accuracy of this information.

3.4 RF Exposure Calculation

3.4.1 RF Exposure calculation for 2.4GHz range

FCC

Antenna 1

Radio	Frequency Range (MHz)	EIRP[1] (dBm)	EIRP[1] (mW)	Power Density (mW/cm^2) @20 cm	FCC Limit (mW/cm^2)
Zigbee	2405 - 2470	21.52	141.906	0.02823	1

Antenna 2

Radio	Frequency Range (MHz)	EIRP[1] (dBm)	EIRP[1] (mW)	Power Density (mW/cm^2) @20 cm	FCC Limit (mW/cm^2)
Zigbee	2405 - 2470	20.45	110.917	0.02207	1

RSS

Antenna 1

Radio	Frequency Range (MHz)	EIRP[1] (dBm)	EIRP[1] (mW)	Power Density (W/m^2) @20 cm	RSS Limit (W/m^2)
Zigbee	2405 - 2470	21.52	141.906	0.28231	5.469

Antenna 2

Radio	Frequency Range (MHz)	EIRP[1] (dBm)	EIRP[1] (mW)	Power Density (W/m^2) @20 cm	RSS Limit (W/m^2)
Zigbee	2405 - 2470	20.45	110.917	0.22066	5.469

4.0 Variant Models

Not applicable.

5.0 Document History

Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
0 / G106033026	AM	AC	February 13, 2025	Original Document
1 / G106562063	AM	AC	May 5, 2026	Performed a technical review of report to ensure standard is up to date.

Appendix A: Power Density Calculation

The Power Density can be calculated using the formula

$$S = EIRP/ 4\pi D^2$$

Where: S is Power Density in mW/cm^2
D is the distance from the antenna in cm.

END OF TEST REPORT