

FCC and Industry Canada Testing of the
 SureFlap Ltd
 Universal Handheld Microchip Reader,
 Model: HRxyyy**
 In accordance with FCC 47 CFR Part 15B and
 ICES-003



Product Service

Choose certainty.
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FCC ID: XO9 - HRUNI
 IC: 8906A - HRUNI

COMMERCIAL-IN-CONFIDENCE

Date: December 2017
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RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Project Management	Natalie Bennett	13 December 2017	
Authorised Signatory	Matthew Russell	13 December 2017	

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service document control rules.

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15B and ICES-003. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Graeme Lawler	13 December 2017	

FCC Accreditation 90987 Octagon House, Fareham Test Laboratory
 Industry Canada Accreditation IC2932B-1 Octagon House, Fareham Test Laboratory

EXECUTIVE SUMMARY

A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15B: 2016 and ICES-003: 2016.

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	13 December 2017

Table 1

1.2 Introduction

Applicant	SureFlap Ltd
Manufacturer	SureFlap Ltd
Model Number(s)	HRxyyy** (** represent the colour variation of the product.)
Serial Number(s)	Not Serialised (75940672-TSR0011)
Hardware Version(s)	01075-FG_01
Software Version(s)	22.22
Number of Samples Tested	2
Test Specification/Issue/Date	FCC 47 CFR Part 15B: 2016 ICES-003: 2016
Order Number	PO2210
Date	25-October-2017
Date of Receipt of EUT	27-October-2017
Start of Test	28-October-2017
Finish of Test	28-October-2017
Name of Engineer(s)	Graeme Lawler
Related Document(s)	ANSI C63.4 (2014)



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1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15B and ICES-003 is shown below.

Section	Specification Clause		Test Description	Result	Comments/Base Standard
	Part 15B	ICES-003			
Configuration: Idle					
2.1	15.109	6.2	Radiated Emissions	Pass	ANSI C63.4

Table 2



1.4 Declaration of Build Status

MAIN EUT	
MANUFACTURING DESCRIPTION	Universal Handheld Microchip Reader
MANUFACTURER	Sureflap Ltd
MODEL NAME/NUMBER	UNIVERSAL HANDHELD READER
PART NUMBER	HRxyyy** ** to allow for different brand options
SERIAL NUMBER	
HARDWARE VERSION	01075-FG_01
SOFTWARE VERSION	22.22
TRANSMITTER FREQUENCY OPERATING RANGE (MHz)	0.125MHz and 0.134MHz
RECEIVER FREQUENCY OPERATING RANGE (MHz)	0.125MHz and 0.134MHz
COUNTRY OF ORIGIN	UK
INTERMEDIATE FREQUENCIES	N/A
EMISSION DESIGNATOR(S): (i.e. G1D, GXW)	N/A
MODULATION TYPES: (i.e. GMSK, QPSK)	AM
HIGHEST INTERNALLY GENERATED FREQUENCY	32 MHz
OUTPUT POWER (W or dBm)	
FCC ID	XO9 - HRUNI
INDUSTRY CANADA ID	8906A - HRUNI
TECHNICAL DESCRIPTION (a brief description of the intended use and operation)	Handheld Reader for reading RFID microchip implants in animals
BATTERY/POWER SUPPLY	
MANUFACTURING DESCRIPTION	NOT SUPPLIED WITH PRODUCT
MANUFACTURER	
TYPE	
PART NUMBER	
VOLTAGE	
COUNTRY OF ORIGIN	
MODULES (if applicable)	
MANUFACTURING DESCRIPTION	N/A
MANUFACTURER	
TYPE	
POWER	
FCC ID	
COUNTRY OF ORIGIN	
INDUSTRY CANADA ID	
EMISSION DESIGNATOR	
DHSS/FHSS/COMBINED OR OTHER	
ANCILLARIES (if applicable)	
MANUFACTURING DESCRIPTION	
MANUFACTURER	
TYPE	
PART NUMBER	
SERIAL NUMBER	
COUNTRY OF ORIGIN	

I hereby declare that the information supplied is correct and complete.

Name: Chris Cowdery
 Date: 25/10/2017

Position held: Head of Embedded Systems



1.5 Product Information

1.5.1 Technical Description

Handheld Reader for reading RFID microchip implants in animals.

1.6 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.7 EUT Modification Record

The table below details modifications made to the EUT during the test programme.
The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Serial Number: Not Serialised (75940672-TSR0011)			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 3

1.8 Test Location

TÜV SÜD Product Service conducted the following tests at our Fareham Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration: Idle		
Radiated Emissions	Graeme Lawler	UKAS

Table 4

Office Address:

Octagon House
Concorde Way
Segensworth North
Fareham
Hampshire
PO15 5RL
United Kingdom



2 Test Details

2.1 Radiated Emissions

2.1.1 Specification Reference

FCC 47 CFR Part 15B, Clause 15.109
ICES-003, Clause 6.2

2.1.2 Equipment Under Test and Modification State

HRxyyy**, S/N: Not Serialised (75940672-TSR0011) - Modification State 0

2.1.3 Date of Test

28-October-2017

2.1.4 Test Method

This test was performed in accordance with ANSI C63.4, clause 5.4.

2.1.5 Environmental Conditions

Ambient Temperature 20.4 °C
Relative Humidity 53.0 %

2.1.6 Test Results

Idle

Highest frequency generated or used within the EUT: 32 MHz
Upper frequency test limit: 1 GHz

Frequency (MHz)	QP Level (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dBuV/m)	Angle(Deg)	Height(m)	Polarity
30.692	30.1	40.0	-9.9	325	1.00	Vertical
287.995	35.7	46.0	-10.3	205	1.18	Horizontal
288.011	37.1	46.0	-8.9	243	1.00	Vertical
351.992	32.4	46.0	-13.6	221	1.00	Horizontal
352.020	36.2	46.0	-9.8	250	1.00	Vertical
416.016	31.0	46.0	-15.0	316	1.00	Horizontal
416.023	33.3	46.0	-12.7	187	1.00	Vertical
480.014	35.7	46.0	-10.3	279	1.00	Horizontal
480.021	37.5	46.0	-8.5	239	1.00	Vertical
960.000	33.9	46.0	-12.1	148	1.00	Vertical

Table 5 - 30 MHz to 1 GHz

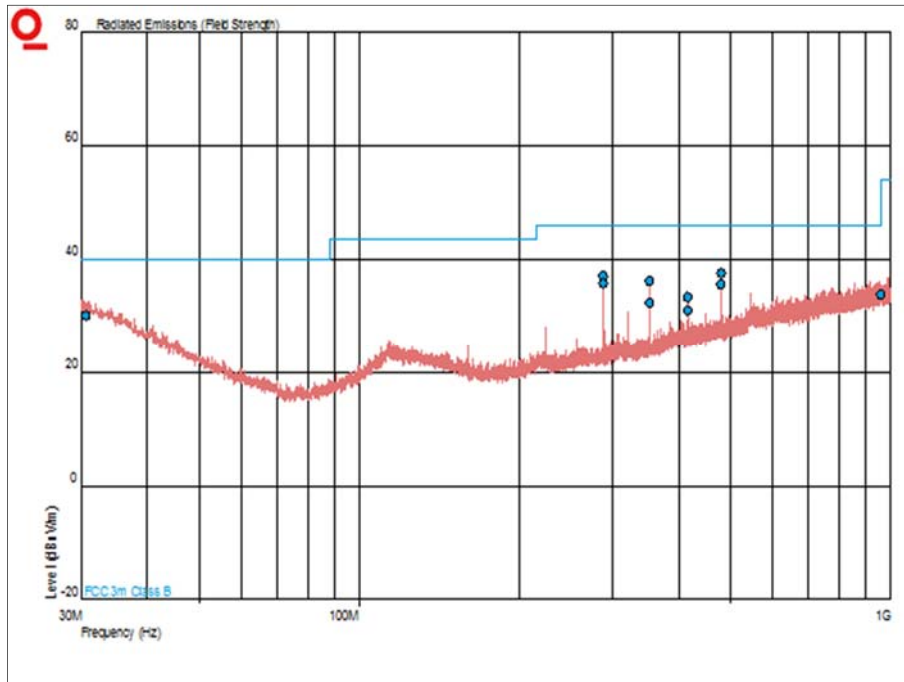


Figure 1 - 30 MHz to 1 GHz - Horizontal and Vertical

FCC 47 CFR Part 15, Limit Clause 15.109

Frequency of Emission (MHz)	Field Strength ($\mu\text{V}/\text{m}$)
30 to 88	100.0
88 to 216	150.0
216 to 960	200.0
Above 960	500.0

ICES-003, Limit Clause 6.2

Frequency of Emission (MHz)	Quasi-Peak (dB $\mu\text{V}/\text{m}$)
30 to 88	40.0
88 to 216	43.5
216 to 960	46.0
960 to 1000	54.0

Frequency of Emission (MHz)	Field Strength (dB $\mu\text{V}/\text{m}$)	
	Linear Average Detector	Peak Detector
Above 1000	54.0	74.0



2.1.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Antenna (Bilog)	Schaffner	CBL6143	287	24	18-Apr-2018
Pre-Amplifier	Phase One	PS04-0086	1533	12	31-Jul-2018
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Cable (N-N, 8m)	Rhophase	NPS-2302-8000-NPS	3248	12	02-May-2018
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	12-Nov-2017
Tilt Antenna Mast	maturo GmbH	TAM 4.0-P	3916	-	TU
Mast Controller	maturo GmbH	NCD	3917	-	TU
Hygropalm Temperature and Humidity Meter	Rotronic	HP21	4410	12	04-May-2018
Cable (Yellow, Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	6	04-Nov-2017
Cable (Rx, SMAm-SMAm 0.5m)	Scott Cables	SLSLL18-SMSM-00.50M	4528	6	03-Feb-2017

Table 6

TU - Traceability Unscheduled



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3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB

Table 7