SUREFLAP
Pets Tag
Model iBM001
SPECIFICATIONS

[CONFIDENTIAL]

Zeev K.

Ver 5

Version History:

1	Initial version
2	Company name and product model update
3	Battery parameters
4	Add FCC and IC warnings
5	Add e-Label – regulatory information

Contents

Company name Applicator and Manufacturer:
SureFlap Ltd

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Disposal of Products and used Batteries: This icon will indicate products that will be subject to the following legislation:
The Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE Directive) & The Battery Directive 2006/66/EC and Amendment 2013/56/EU places an obligation on households to dispose of the waste batteries and products that have reached the end of their life, in an environmentally responsible manner as this will reduce the impact the waste will have on the environment, therefore these cannot be placed in household waste bins and should be recycled at an appropriate recycling facility.
Further information on recycling can be found at: www.recycle-more.co.uk

FCC warning:

Model: iBM001 FCC ID:XO9-IBM001

Manufacturer: SureFlap Ltd.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) **This device may not cause harmful interference, and**
(2) **this device must accept any interference received, including interference that may cause undesired operation.**

The FCC Wants You to know

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

FCC Warning

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (SureFlap Ltd.) could void the user's authority to operate the equipment

Industry Canada Notice:

IC: 8906A-IBM001
- This Class B digital apparatus complies with Canadian ICES-003.
- Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

This device complies with Industry Canada ICES-003 licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The Product contains a lithium battery, please follow the below guidelines in relation to the battery:

i) Do not ingest battery, pierce, cut or disassemble the battery under any circumstances – doing so may lead to a chemical burn hazard.

ii) Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

iii) There is a risk of explosion if the battery is replaced by an incorrect type.
Always use good CR2032 3V Lithium battery from a reputable battery manufacturer to ensure the best performance.

iv) Please dispose of or recycle the battery properly.

1. Global system specifications

1.1 System components & TAG – Mobile - Cloud communication overview

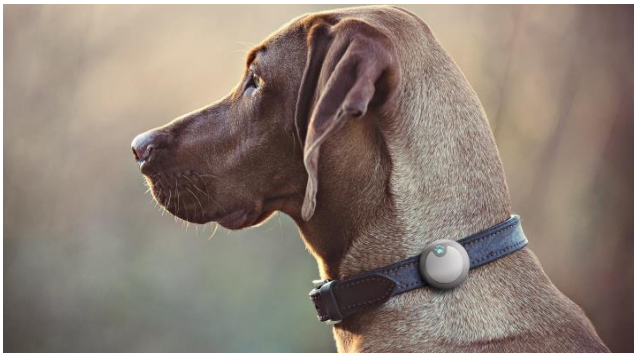
1) **Monitoring tag**
   A small electronic device, battery powered, which is comprised of a MCU (processing & connectivity) and a 3D accelerometer (sensor). The tag communicates with the mobile device via BLE interface. The tag will act as a BLE peripheral
2) **Cloud based application server**
   The application server shall reside in AWS cloud environment. It shall be responsible for running the business logic of the solution, such as the monitoring algorithms, historical information data base, configuration etc.
3) **Mobile device application (android/iOS)**
   The mobile device application has 3 main functionalities.
   - Mobile-tag interface:
     The mobile acts as the BLE central, it is responsible for all the communication with the tag. The mobile shall be able to configure, monitor and retrieve the data on the tag (e.g. sensors samples).
   - Cloud-mobile interface:
     When connected to the internet, the mobile shall communicate with server application (running in the cloud). The cloud server shall be able to retrieve the tag's related data from the mobile, as well as other indications regarding the tag's status.
   - User interface:
     The mobile application shall be used as the "front-end" of the system. The application shall allow the user to access the monitoring information, update the tag's FW and configure the system's settings.

2 Pets TAG Specifications

2.1 General description

Pets TAG is a unit mounted on Dog Collar, used to measure various dog parameters, processes and transmit them via BLE to phone and cloud.

Outdoor installation, sealed unit, powered from internal replaceable 3.0V battery.



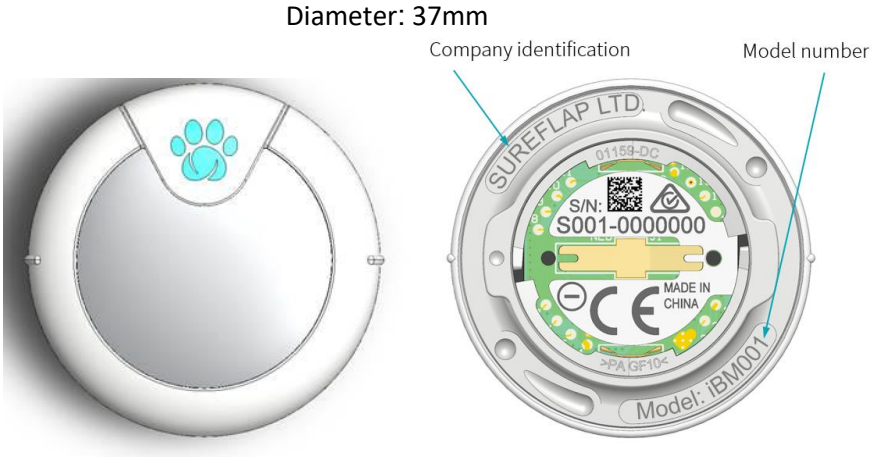
2.2 BLE Transceiver Parameters

RF Transceiver: NXP MKW41Z
https://www.nxp.com/docs/en/data-sheet/MKW41Z512.pdf

1) GHz Bluetooth Low Energy ver. 4.2 compliant supporting up to 2 simultaneous hardware connections
2) Operating frequencies:
    a. 2.4 GHz ISM band (2400-2483.5 MHz)
3) Modulations: GFSK BT = 0.3, 0.5, 0.7;FSK/MSK
4) Typical Receiver Sensitivity (BLE) = -95 dBm
5) Output power, 2 modes:
    a. 0dBm
    b. 10dBm MAX (via FEM*) including tune up tolerance

FEM - Low-Power Bluetooth® Low Energy Front-End Module for Range Extension Applications

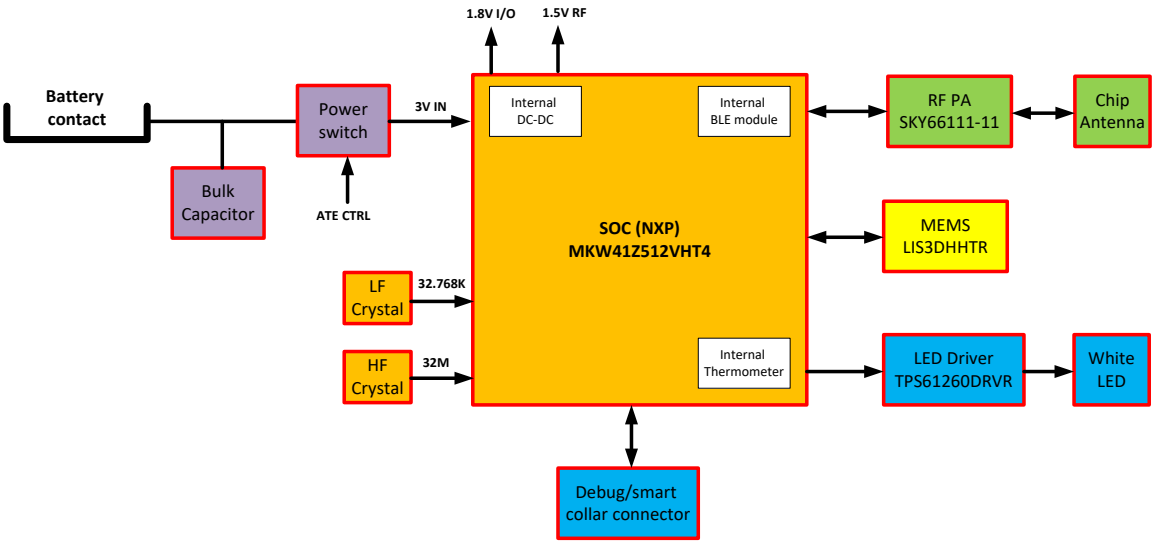
2.3 Mechanical dimensions



2.4 Power

Use CR2032 battery
Nominal Voltage: 3.0 Volts
Typical Capacity: 235 mAh (to 2.0 volts) (Rated at 15K ohms at 21°C).

2.5 Block diagram



3 Environmental Conditions

1) IP – required IP67.
2) Operational temperature -20°C to 50°C.
3) Storage
4) Transportation
5) Complies with ETS 300 019 -2-2 T2.3
6) Complies with ETS 300 019 -2-1 T 1.2

4 Pets TAG Installation instructions

It is important to correctly attach the tag to the Dog Collar in a secure manner in order to avoid them from turning or falling off.

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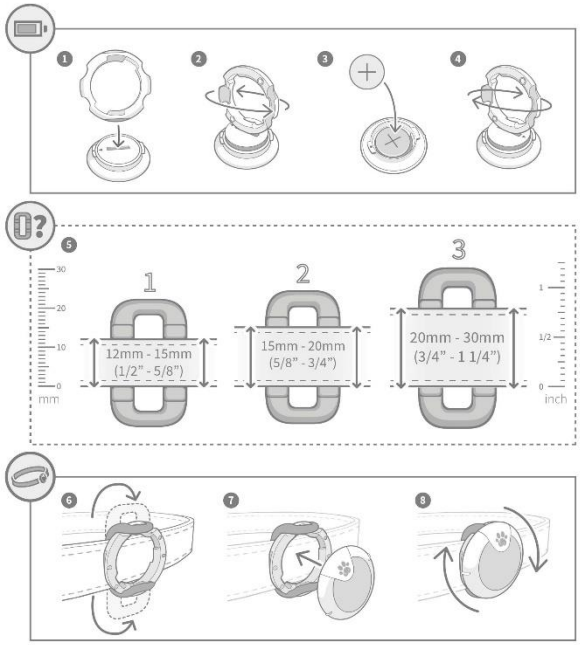

A properly mounted tag should look like this picture:

5 Pets TAG Regulatory information

e-Label

See regulation information on Pets TAG application program.

This program operates on Android and iOS smartphones and used to operate Pets TAG in aim to collect and review recorded data about pet's activity.

On main screen press **menu ≡** → Press **About** → Press **Regulatory Information**

Regulatory information screen