



**SmartWave**  
Technologies



## **User Manual**

**Bell iQ Total Solutions**  
**Revision 1.2**

**July 15, 2026**

## **NOTICE TO READERS**

This document contains proprietary  
information which is the property of

**SMART WAVE TECHNOLOGIES CORP.**

**CONFIDENTIAL**

Except for the right expressly granted in writing, this document may not,  
in whole or in part, be duplicated or disclosed without the prior written  
permission of Smart Wave Technologies Corp.

## TABLE OF CONTENTS

|                                |   |
|--------------------------------|---|
| TABLE OF CONTENTS .....        | 3 |
| Product Description .....      | 4 |
| Product installation .....     | 4 |
| Product operation.....         | 4 |
| Product Specification.....     | 5 |
| Electrical Specifications..... | 5 |
| Radio Information.....         | 5 |
| Antenna Information.....       | 5 |
| Regulatory Information .....   | 6 |

## PRODUCT DESCRIPTION

The Bell iQ Total Solutions is a family of rodent traps and bait station devices used to detect rodents and insects that have entered the units and timestamp when the event occurred. The product offerings include two bait stations (Pulse Rat iQ TOTAL V2 and Pulse Mouse iQ TOTAL V2) and trap-style stations (24/7 iQ TOTAL V2). The devices use a capacitive touch pad connected to a capacitive touch sensor IC configured with customized filtering to provide information to the controller, which in turn uses a proprietary filtering algorithm to isolate events and detections. This information is passed to a mobile phone app, via Bluetooth, which will upload the information to a cloud server. The device is also equipped with LoRaWAN capabilities to provide direct device-to-cloud connection through a configurable heartbeat interval.

## PRODUCT INSTALLATION

All Bell iQ Total Solutions products include a radio board installed in a plastic housing that is sonically welded to protect against installation environments and rodent exposure. An ER14505H battery must be connected to the radio board before the unit is installed in the plastic housing.

## PRODUCT OPERATION

Once powered, the device will advertise for 30 seconds before going to sleep. Tapping the sensor pad a few times will wake the device up and it will again advertise for 30 seconds before going back to sleep. This operation will happen for devices that are unregistered (Factory Mode).

For devices that are registered and installed in the field, the device will continually advertise every 1.5 seconds. A LoRaWAN heartbeat will also transmit periodically according to how the device is configured.

## PRODUCT SPECIFICATION

### Electrical Specifications

| Parameter         | Min   | Typical | Max | Unit |
|-------------------|-------|---------|-----|------|
| Operating Voltage | 2.4   | -       | 3.6 | VDC  |
| Operating Current | 0.035 | .05     | 125 | mA   |
| Sleep Current     | 9     | -       | 13  | uA   |

### Radio Information

#### BLE

|                                                  |                                                                                                                                                                                                |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category of Wideband Data Transmission equipment | <input type="checkbox"/> Frequency Hopping Spread Spectrum (FHSS) equipment<br><input checked="" type="checkbox"/> Other types of Wideband Data Transmission equipment ( e.g. DSS, OFDM, etc.) |
| Frequency Band                                   | 2400-2483.5 MHz                                                                                                                                                                                |
| Frequency Min (MHz)                              | 2402                                                                                                                                                                                           |
| Frequency Max (MHz)                              | 2480                                                                                                                                                                                           |
| Type of modulation                               | BLE (GFSK)                                                                                                                                                                                     |
| RF Output Impedance                              | 50 Ohm                                                                                                                                                                                         |

#### LoRaWAN

|                                                  |                                                                                                                                                                                                |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category of Wideband Data Transmission equipment | <input type="checkbox"/> Frequency Hopping Spread Spectrum (FHSS) equipment<br><input checked="" type="checkbox"/> Other types of Wideband Data Transmission equipment ( e.g. DSS, OFDM, etc.) |
| Frequency Band                                   | 863.0-870 MHz (EU); 915-928 MHz (ANZ); 902-928 MHz (US/CAN)                                                                                                                                    |
| Frequency Min (MHz)                              | 863.0 MHz (EU); 917 MHz (ANZ); 903 MHz (US/CAN)                                                                                                                                                |
| Frequency Max (MHz)                              | 870 MHz (EU); 926 MHz (ANZ); 914.9 MHz (US/CAN)                                                                                                                                                |
| Type of modulation                               | Chirp Spred Spectrum                                                                                                                                                                           |
| RF Output Impedance                              | 50 Ohm                                                                                                                                                                                         |

### Antenna Information

The device is equipped with a fixed  $\frac{1}{4}$  wave monopole, helical style antenna with a connector-style PCB-mount base, which is the only antenna intended and certified to be used on the device.

|                 |                             |
|-----------------|-----------------------------|
| Manufacturer    | Linx Technologies           |
| Type            | $\frac{1}{4}$ wave monopole |
| Model           | ANT-915-VENTH               |
| Frequency Range | 902-930 MHz                 |
| Peak Gain (dBi) | 0.9 dBi                     |

## REGULATORY INFORMATION

### CANADA

#### ISED Regulatory Statements

IC: 24934-B01004V2

PMN: Bell iQ Total Solutions

HVIN(s): Pulse Mouse iQ TOTAL V2, Pulse Rat iQ TOTAL V2, 24/7 iQ TOTAL V2

#### ISED non-interference disclaimer

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### RF Exposure statement

This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (7.9 inches) between the radiator and any part of your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations ISED CNR-102 établies pour un environnement non contrôlé. Une distance de séparation d'au moins 20 cm doivent être maintenue entre l'antenne de cet appareil et toutes les personnes. Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.

#### CAN ICES-3 (B)/NMB-3(B)

Regulatory information in the App can be accessed from the main screen (Dashboard) by performing the following steps:

- (1) Access the Site Menu (upper left corner of the App screen)
- (2) Select "About Us" from the Site Menu
- (3) Tap the button labeled "Regulatory"

## **USA**

### **FCC Regulator Statements**

**FCC: 2ASYW-B01004V2**

**Model number(s): Pulse Mouse iQ TOTAL V2, Pulse Rat iQ TOTAL V2 24/7 iQ TOTAL V2**

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

### **FCC Compliance Statement**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

### **RF Exposure Statement**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with minimum distance 20 cm (7.9 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

FCC ID: 2ASYW-B01004V2

IC: 24934-B01004V2

This is the Last Page of this Document