



## ***User Manual v19.1.1***

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# Badge

Intelligent Observation (IO) Badges are carried by users. The Badges interact with IO Beacons to collect data and understand user behavior.

Usually, the Badges are clipped to an ID or attached to a lanyard, resting at mid-chest level.



## How It Works

User behavior is monitored based on when and how long a user's Badge detects specific Beacons. When a user triggers an event, such as a non-compliant hand hygiene event, the event is saved to the badge's memory containing information such as time, location, and other devices involved. This data remains on the Badge until it is offloaded to an internet connected edge device (another Beacon) in range of the Badge.

## Wireless Communication

Badges are able to interact with Beacons using NFMI and Bluetooth communication. Badges are also able to interact with other Badges using a protocol similar to Bluetooth. Badges have a buzzer that can be turned on or off for real-time user feedback.

## Power

Badges are battery powered, and typically last 12 months before needing new batteries.

## Specifications

<b>Features at a glance</b>	
Dimensions (LxWxH)	6 cm x 3 cm x 2 cm
Battery life	12 months
Wireless Communication	125 kHz, 2.4 GHz
User Feedback	Buzzer

<b>Device Name</b>	Badge
<b>Model</b>	Revision B
<b>Manufacturer</b>	Intelligent Observation, Inc 1111 Brickell Bay Dr 11th Floor Miami, FL 33133 305-925-9595

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 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.

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

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.

# Beacon

Intelligent Observation (IO) Beacons are installed into a facility to interact with user Badges. Primarily, Beacons broadcast important locations to Badges in order to determine user behavior.

There are four (4) different types of Beacons, each with their own specific function.

## Beacon Types

### Soap Beacon

Mounted near soap dispensers to help determine if the user is washing their hands for a full 20 seconds. This Beacon is battery powered and motion activated. The LED turns on when activated.



### ABHR Beacon

Mounted near alcohol based hand rub stations to help determine if the user has used the hand rub. This Beacon is battery powered. The LED blinks every 12 seconds.

### Bed Beacon

Mounted at the head of a hospital bed about 5' from the ground, centered, to help determine if the user is in close contact with a patient. The LED blinks every 12 seconds.

### Comms Beacon

Mounted in locations where users linger, such as a Nurse's station, office entrance, or exit bottleneck, in order to properly function as an edge device. When a user Badge enters within range of the Beacon, data from the badge is offloaded via Bluetooth to the Beacon. Then, the Beacon uploads that data via WiFi to the internet (or to a private network, if requested). This Beacon has WiFi capability and is motion activated. The LED turns on when activated.

## Specifications

<b>Features at a glance</b>	
Dimensions (LxWxH)	13 cm x 18 cm x 3.5 cm
Battery life	12 months
Wireless Communication	125kHz, 2.4 GHz

<b>Device Name</b>	Beacon
<b>Model</b>	Revision C
<b>Manufacturer</b>	Intelligent Observation, Inc 1111 Brickell Bay Dr 11th Floor Miami, FL 33133 305-925-9595

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In order to comply with FCC RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.