User Manual

WakeCap Anchor

WakeCap Technologies, Inc

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Trademarks

Document information

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Revision History:

Date	Description
18-Dec-19	First Draft.

Device Specifications

Dimensions: 43 mm x 43mm x 43mm

Weight: 35g

Battery Type: 15 AH Alkaline battery with reverse polarity protection.

Battery Life: 3 years in typical use case.

Motion Sensor: 3-axis accelerometer.

Environmental Sensor: Temperature, barometer, humidity.

Radio Frequency: 2.4GHz ISM band.

Operating Temperature: -20 to -60 deg C

Protection: IP67, UV resistant.

Operation Description:

WakeCap Anchor uses highly integrated Nordic nRF52832 SoC. This chip includes all the radio components including the antenna port and the 32-bit microcontroller to run the stack.

In normal operation when power is applied to the board by two D-size alkaline batteries, the stack initializes and based on its configuration it searches for neighbours and sends sensor data for processing to the gateway device via the mesh network. There is no external

ground connection, the ground is only that of the printed circuit board. The current is supplied by two 1.5V primary cell in series. The Mesh divided the band into 40 channels with bandwidth of 1MHz each and channel spacing of 2MHz.

The antenna is SMA pig tail type connected via Hirose U.FL connector to the board.

Frequency range: 2402-2480MHz

Modulation type: GFSK.

Crystals used on board: 32MHz

Mounting: Screwed on the wall or optional pole mount kit.

Getting started

The Anchor is sealed device that is IP67 protected

Each device is configured from the factory with a unique ID and has a unique label for identification.

The device is mounted on various location using the mounting holes provided.

On the app assign the anchor to a location using latitude and longitude.

| 10000089 | 17 minutes ago | L17 | 55.2714909628503 , 25.1936654959285 |

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.

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.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the use's authority to operate the equipment

The device has been evaluated to meet general RF exposure requirement.