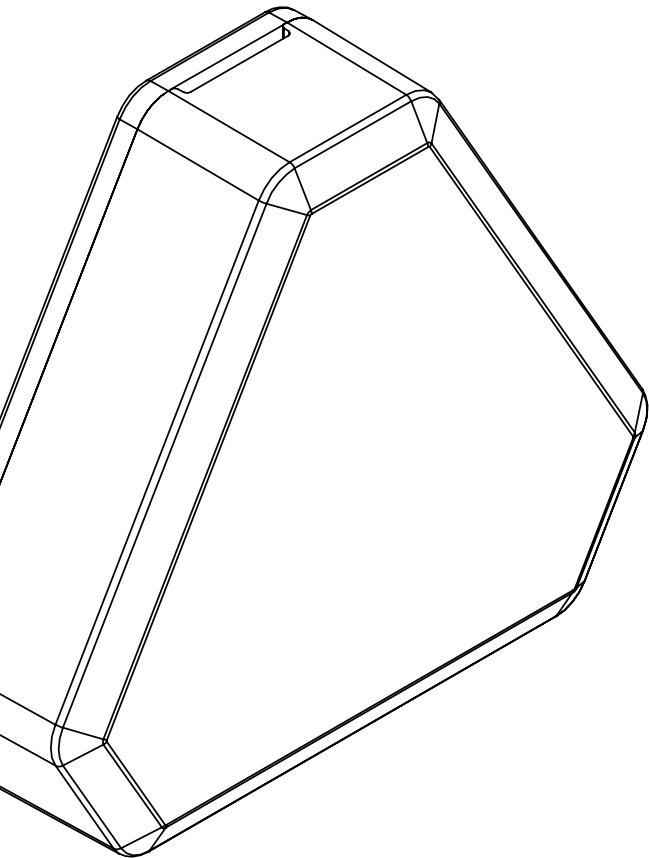


**COMARCH**  
beacon

|             |    |
|-------------|----|
| User manual | 3  |
| Warranty    | 11 |





# User manual

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## 1. General information:

- a. Product name: Comarch beacon
- b. Model: CB001
- c. Product web page: [www.beacon.comarch.com](http://www.beacon.comarch.com)
- d. Manufacturer:  
Comarch SA  
al. Jana Pawla II 39A, 31-864 Krakow, Poland
- e. Licensor:  
Comarch Technologies Sp. z o.o.  
al. Jana Pawla II 39A, 31-864 Krakow, Poland
- f. Copyright © 2015 Comarch Technologies Sp. z o.o.
- g. The device is not a dual-use item.
- h. Patent pending

## 2. Notes:

- a. Package content:
  - I. Comarch beacon device, 1 or 3 pcs.
  - II. User manual
  - III. Tape mounting pads Micro-suction , 1 or 3 pcs. (optional)



ATTENTION: Electronic version of technical specification and additional documents regarding Comarch beacon device can be downloaded from web page: [www.beacon.comarch.com/ON](http://www.beacon.comarch.com/ON)



WARNING: The package and its content is not a toy and can not be made available to children. Keep it out of children.

b. Product incorporates:

**COMARCH**  
Technologies

I. Proprietary technology developed by Comarch Technologies.



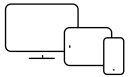
II. Strict standards to ensure high quality of mobile communication.



III. Security module eliminating threat of signal eavesdropping or impersonation.



IV. The possibility of wireless software updates.



V. Solutions for collaboration with a wide range of Comarch products.



VI. Lithium battery.



VII. Temperature and accelerometer sensors.

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### 3. Instruction icons



WARNING – situations that could cause user's injury.



CAUTION – situations that could cause damage of the device.



ATTENTION – tips and additional information.

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### 4. Copyright

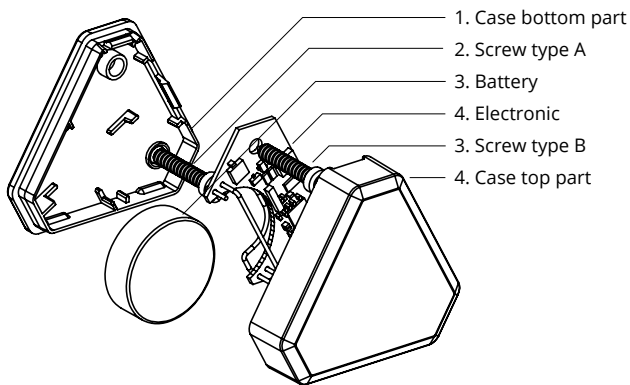
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This manual is protected under international copyright law. No part of the manual may be reproduced, distributed, or transmitted in any form or by any means without written permission of the Comarch Technologies Sp. z o. o.

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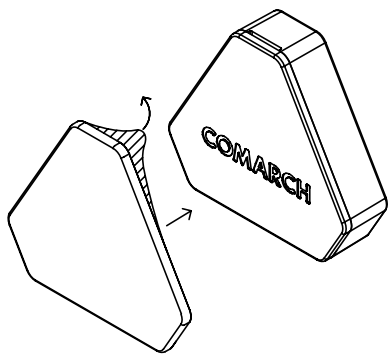
### 5. Trademarks

- a. Comarch is registered trademark of Comarch SA.
- b. Comarch beacon and Comarch beacon logo are registered trademarks of Comarch Technologies Sp. z o. o.
- c. Comarch Technologies and Comarch Technologies logo are registered trademarks of Comarch Technologies Sp. z o. o.
- d. Bluetooth®, Bluetooth® logo and Bluetooth Smart® are registered trademarks of Bluetooth SIG, Inc.
- e. Wi-Fi® and Wi-Fi® logo are registered trademarks of Wi-Fi Alliance.
- f. iBeacon® and iBeacon® logo are registered trademarks of Apple, Inc., registered in U.S.
- g. Android, Google , Google Play , Android logo, Google, Google Play are registered trademarks of Google, Inc.
- h. All other trademarks and copyrights are the property of their respective owners.

### Mounting using screws



### Mounting using Micro-Suction tap



## 6. Introduction

- Dimensions: equilateral triangle with a 5 cm long side with cut-off tops, height 1.4 cm
- Weight: 20g
- Mounting types  
Recommended types of mounting: UVA tape, Micro-Suction tape pads or screws (accessories are optional).



**CAUTION:** Be cautious when opening beacon casing. Electronics is shock sensitive.



**ATTENTION:** For holes drilling use a drill of appropriate type and thickness. Recommended screws:

- Screw A: length 30mm, thread diameter: 3.5mm, head diameter: 7mm, head type: conical.
- Screw B: length 30mm, thread diameter: 3.5mm, head diameter: 7mm, head type: cylindrical.



**ATTENTION:** Do not overtighten the screws since it may cause the plastic casing cracking.

## 7. First time usage

- If the device is turned off (see description on the package):
  - Open the beacon casing.



**WARNING:** Do not open casing using your fingers, since this could injure your nails.

- Remove the battery isolator film.
  - Close the beacon casing.  
Beacon is active now.
- If the device is turned on (see description on the package), beacon is already active.

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## 8. Compatible smartphone OS

- a. Android version 4.3 (API level 18) and up
- b. Apple iOS version 7 and up



ATTENTION: Devices with Bluetooth 4.0 working on iOS and Android can work with Comarch beacon.

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## 9. Maintenance

- a. Battery replacement
  - I. Open the beacon casing.



WARNING: Do not open casing using your fingers, since this could injure your nails.



CAUTION: Be cautious when opening casing. Electronics is shock sensitive.

- II. Carefully remove the electronics and battery.
- III. Put a new battery in place.



ATTENTION: Do not dispose the battery with the household waste. Dispose the battery in accordance with section 10 b.



CAUTION: Be careful when inserting the battery! Make sure the battery contacts are clean. Sometimes, even an invisible film from your oily finger tips, may prevent proper contact.



Never hold any cells in the center but at the sides only. You may use either a clean cloth to clean off a light layer of oxidation or a pencil eraser to remove heavier deposits from the cells polarity surfaces. Make sure you also clean the contact points (battery clip wires) on the beacon. It is recommended to use cotton gloves for battery installation.

IV. Insert the electronics into casing and close beacon cover.

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## 10. Regulations

- a. CE

This product meets the requirements specified by the following standards:

- R&TTE 99/CE/05 (ETSI EN 300 328 V1.8.1)
- ETSI EN 301 489-1 V1.9.2
- ETSI EN 301 489-17 V2.2.1 (2012-09)
- EN 60950-1:2006+A11:2009+A1:2010+A12:2011 A2:2013



- b. Disposal of waste electrical and electronic equipment (for the countries which apply the waste segregation system).

At the end of use, this product can not be disposed with the household waste. For more information, please contact the local community waste collection point or contact the dealer or supplier.



- c. RoHS

This product meets the requirements of the directive: Restriction of Hazardous Substances (2002/95/EC).

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## 11. Technical specification

- a. Battery

Lithium battery CR2477 3V (nominally),  
Manufacturer: Renata,  
Capacity: 950mAh.  
Battery is replaceable.

- b. Radio specification

- Bluetooth 4.1 Low Energy
- device class 1
- range up to 100m (open space)
- maximum transmitter power: 8 dBm (default setting: -1.3 dBm)

- receiver sensitivity: -92.5 dBm
- frequency range: 2.4 GHz to 2.4835 GHz
- peak antenna gain: 0.5 dBi
- average antenna gain: -0.5 dBi

c. Recommended operating conditions

| Operating condition | Minimum | Maximum | Unit |
|---------------------|---------|---------|------|
| Temperature         | 0       | 85      | °C   |
| Humidity            | 20      | 90      | %    |
| Battery voltage     | 1.8     | 3.6     | V    |

d. Absolute maximum ratings

| Rating              | Minimum | Maximum | Unit |
|---------------------|---------|---------|------|
| Storage temperature | -40     | 85      | °C   |
| Battery voltage     | -       | 3.6     | V    |

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## 12. Disclaimer

- a. The manufacturer is not liable for any damage resulting from the incorrect use of the device, contrary to its intended purpose or the information contained in the user manual.
- b. The manufacturer is not responsible for products provided by third parties and delivers them in the form of as-is and does not explicitly guarantee that they will be useable.

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## Warranty

The manufacturer gives the buyer of Comarch beacon device a warranty that device is free from defects in workmanship and material, while not guarantee uninterrupted and free from any fault working of the beacon device. The warranty is granted for a period of 12 months from the date of purchase of the device from the manufacturer or an authorized distributor. The warranty is given one time and cannot be extended.

Warranty does not cover devices which:

- a) have been modified or altered, or
- b) have not been used or stored in accordance with user manual, or
- c) have not been used in accordance with the law, or
- d) shows signs other than those arising from daily use.

**Using the beacon may also be subject to restrictions under the provisions of the law.**

To the extent permitted by the law applicable to the area where the beacon device was obtained from authorized distributor or manufacturer:

- a) above guarantee is only valid warranty and in lieu of all other express or implied, warranties or conditions of satisfactory quality, merchantability and usefulness for a particular purpose,
- b) manufacturer is not responsible under the warranty for physical and legal defects,
- c) manufacturer liability does not cover liability for loss of data,

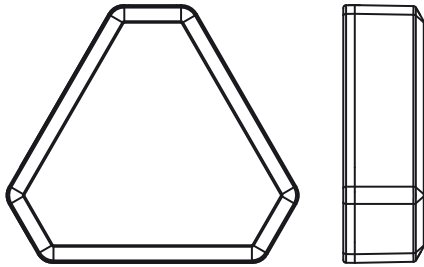
- d) manufacturer liability for any damages during usage of the beacon device is limited to the damage caused due to intentional fault,
- e) the amount of compensation is limited only to actual losses and does not include lost profits or benefits.

If the buyer is a consumer, the above provisions do not exclude or restrict liability warranty, except in cases where such exclusion or limitation is permitted under the provisions of applicable law..

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**Document version**

User manual: version 1.0



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[www.beacon.comarch.com](http://www.beacon.comarch.com)

[www.technologies.comarch.com](http://www.technologies.comarch.com)

Federal Communications Commission (FCC)

Statement (USA)

FCC PART 15 STATEMENTS FOR USER'S MANUAL

**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 UNDESIRABLE OPERATION.**

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

**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.

This device meets the FCC and IC requirements for RF exposure in public or uncontrolled environments.

#### Canada: Industry Canada (IC) Statement

IC Notice to Users English/French in accordance with RSS GEN Issue 3:

This device complies with Industry Canada license 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.

Cet appareil est conforme avec Industrie Canada RSS standard exempts de licence (s). Son utilisation est soumise à Les deux conditions suivantes:

#### PRELIMINARY

1. cet appareil ne peut pas provoquer d'interférences et
2. cet appareil doit accepter Toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif

This Class B digital apparatus complies with Canadian ICES-003  
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.