



Ubisense DIMENSION4™

UB-Tag™ User Guide

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Contents

Ubisense UB-Tags	1
Features of UB-Tags	2
Activating UB-Tags	4
Putting UB-Tags into Deep Sleep	5
Putting a UB-Tag into a Deep Sleep	5
UB-Tag Batteries	6
Regulatory Information	7
Regulatory Information for the United States of America	7
Regulatory Information for Europe	7
Regulatory Information for Canada	8
Regulatory Information for the UK	8

Ubisense UB-Tags

The UB-Tag (DIMENSION4 UWB+BLE tag, model number D4UWBBLE) is a small, durable location tracking tag for the real-time location of objects featuring simultaneous Ultra-Wideband (UWB) and BLE tracking in a single tag. UB-Tags are mechanically strong and resistant to dust and water.

Features of the UB-Tag are:

- a 5-year battery lifetime (the battery is non-removeable)
- an LED for easy status identification

A variety of mounting methods allow the UB-Tag to be securely attached to a wide range of objects, or to be worn by people.

Features of UB-Tags

The features of the standard UB-Tag are shown in the following figure.



Features of UB-Tags

Feature	Description
A. LED indicator	The tag has an LED, which flashes periodically when it is active.
B. Location of magnet activated switch	Location of magnet activated switch (hold magnet on side of tag here to wake up device)
C. Strapping slot	<p>The strapping apertures have the following dimensions:</p> <p>Length: 15.0 mm</p> <p>Width: 1.86 mm</p> <p>You can mount the tag by using a strap / cable tie of 15.0 mm width and 1.8 mm thick.</p>
D. Mounting holes	<p>The tag has four mounting holes. The diameter of each hole is 3.26 mm and you can use any 3 mm screw with a head diameter no greater than 6.0 mm.</p> <p>You can connect the tag to either a universal mounting bracket, or a custom mounting bracket.</p>

Feature	Description
E. Rear Mounting Holes	<p>The tag additionally has four mounting holes on the base.</p> <p>These can be used to mount the tag with standard Ubisense 3 mm x 10 PT30 x 10 mm screws through a clearance hole in a 4 mm thick plate, tightened to a maximum torque of 0.4 Nm. Alternatively, a 2.5 mm PT30 could be used, tightened to a maximum torque of 0.3 Nm (the screw depths in the molding to be no more than 6.5 mm).</p>

The following sections describe how to activate and deactivate UB-Tags. You can also [*download a handy guide to these activities*](#)

(<https://docs.ubisense.com/portal/Content/Downloads/D4/UbisenseWakeUB-Tags.pdf>).

Activating UB-Tags

To preserve the battery, UB-Tags are shipped in the deep sleep (deactivated) state.

Before you use a tag for the first time, it must be woken up (activated) from the deep sleep state. You will need a *strong* magnet to activate a tag.

1. Bring a magnet next to the side of the tag near the LED light pipe. The LED lights up and then begins to flash continuously.
2. Remove the magnet and the LED turns off. The tag LED will then brighten from dim to bright, emit one bright pulse, and will then go out.

The tag is now running and transmitting location packets. It will flash periodically to show that it is awake.



Go to <https://youtube.com/shorts/ZAzwpDgjJqs> for a demonstration of how to activate UB-Tags.

Putting UB-Tags into Deep Sleep

If a tag is activated, you can put it back into the deep sleep state at any time to preserve the battery. You will need a *strong* magnet to deactivate a tag.

It is not possible to *accidentally* put a tag into deep sleep because the tag sets a 'challenge' and expects a 'response'. The LED will blink one or more times and you respond by swiping the magnet on the tag the same number of times. The tag then repeats the challenge and you respond again.

Putting a UB-Tag into a Deep Sleep

To put a UB-Tag into the deep sleep state:

1. Hold a magnet next to the side of the tag near the LED light pipe for a few seconds. The LED lights up and then begins to flash continuously.
2. Remove the magnet from the side of the tag.
3. Count the number of times the LED blinks. This can be from two to five blinks.
4. Hold against and then remove the magnet from the side of the tag the same number of times.
5. Repeat steps 3 and 4. The LED on the tag does a dim to bright transition, flashes once, and then the tag enters the deep sleep state (the state in which it was shipped).

Note: If you hold and remove the magnet from the tag the wrong number of times during steps 3 and 4, the tag starts blinking again. If this occurs, restart the process as described in step 1.



Go to <https://youtube.com/shorts/BMnfPiCfAQI> for a demonstration of how to put UB-Tags into sleep mode.

UB-Tag Batteries

The UB-Tag DIMENSION4 UWB+BLE tag has an exceptionally-long battery lifetime and is not user-replaceable. At the end of the device's lifetime, either return it to Ubisense for recycling or dispose of it in an environmentally-conscious manner.

Regulatory Information

Regulatory Information for the United States of America

The UB-Tag DIMENSION4 UWB+BLE tag is approved under Parts 15.247 and 15.250 of the FCC rules.

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.

Changes or modifications to the equipment not expressly approved by the party responsible for the grant of equipment authorization issued by the FCC could void the user's authority to operate the equipment under the grant of equipment authorization, for example:

CAUTION: Any changes or modifications made to the UB-Tag DIMENSION4 UWB+BLE tag which are not expressly approved by Ubisense Limited could void the user's authority to operate the equipment.



IMPORTANT NOTE: FCC Radiation Exposure Statement: This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The device has been evaluated as safe to use at any separation from the person.

Regulatory Information for Europe

Hereby, Ubisense Limited declares that the radio equipment type UB-Tag DIMENSION4 UWB+BLE tag (D4UWBBLE) is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.ubisense.net or from:

Ubisense
St. Andrew's House
St. Andrews Road
Chesterton
Cambridge
CB4 1DL
United Kingdom

This UWB transmitter must not be installed at a fixed outdoor location or used in flying models, aircraft and other forms of aviation.

The device uses the following frequency bands, at the output powers shown:

Radio interface	Lower frequency (MHz)	Upper frequency (MHz)	Output power (dBm)
2.4GHz	2401.00	2481.75	2.1
Wideband	6099.742	7025.941	-44.0 (/MHz)

Regulatory Information for Canada

This device (PMN: UB-Tag; HVIN: D4UWBBLE; IC: 8673A-UWBBLE) is approved under Innovation, Science and Economic Development Canada documents RSS-GEN, RSS-102, RSS-247 and RSS-220.

Cet appareil (PMN : UB-Tag ; HVIN : D4UWBBLE ; IC : 8673A-UWBBLE) est approuvé en vertu des documents d'Innovation, Sciences et Développement économique Canada RSS-GEN, RSS-102, RSS-247 et RSS-220.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(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 contient des émetteurs/récepteurs exempts de licence qui sont conformes aux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada.

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.

This device complies with the safety requirements for RF exposure in accordance with RSS-102 Issue 5 for portable use conditions in uncontrolled environments.

Cet appareil est conforme aux exigences de sécurité relatives à l'exposition aux radiofréquences, conformément à la norme RSS-102, édition 5, pour systèmes portables conditions d'utilisation dans des environnements non contrôlés.

Regulatory Information for the UK

Hereby, Ubisense Limited declares that the radio equipment type UB-Tag DIMENSION4 UWB+BLE tag (D4UWBBLE) is in compliance with the Radio Equipment Regulations 2017, the Electromagnetic Compatibility Regulations 2016, the Electrical Equipment (Safety) Regulations

2016 and the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012. The full text of the UKCA declaration of conformity is available at the following internet address: www.ubisense.net or from:

Ubisense
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St. Andrews Road
Chesterton
Cambridge
CB4 1DL
United Kingdom

This UWB transmitter must not be installed at a fixed outdoor location or used in flying models, aircraft and other forms of aviation.

The device uses the following frequency bands, at the output powers shown:

Radio interface	Lower frequency (MHz)	Upper frequency (MHz)	Output power (dBm)
2.4GHz	2401.00	2481.75	2.1
Wideband	6099.742	7025.941	-44.0 (/MHz)