

Wideband Location System



UB-Tag Dimension4 UWB+BLE Tag (D4UWBBLE)

User's Manual

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Introduction

The UB-Tag Dimension4 UWB+BLE tag (model number D4UWBBLE) is a location tracking tag for the real-time location of objects. It transmits wideband pulses which are picked up by a network of basestations (Ubisensors), allowing the 3D position of the tag to be found. The use of wideband technology enables greater positioning accuracy within buildings than other wireless technologies, because it is much less susceptible to multipath interference effects. Applications of the system include healthcare, workplace productivity, security, retail management and manufacturing.

This document describes the features and specifications of the UB-Tag Dimension4 UWB+BLE tag and important regulatory information concerning its use.

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 (D4UWB+BLE) 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:

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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

The Modular Tag V3.1 is approved under Industry Canada documents RSS-GEN, RSS-102, RSS-247 and RSS-220.

[Le Modular Tag V3.1 est certifié et approuvé conforme selon les documents de l'Industrie du Canada RSS-GEN, RSS-102, RSS-247 et RSS-220.](#)

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.

[Le présent appareil est conforme aux CNR d'Industrie 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, 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.](#)

Device Specifications

Wideband transmitter section

Operates under:	FCC Part 15.250 Industry Canada RSS-220 ETSI EN 302065-2
Centre frequency:	6.500GHz
-10dB bandwidth:	0.926GHz

2.4GHz proprietary BLE (Bluetooth Low Energy)-based radio transceiver

Operates under:	FCC Part 15.247 Industry Canada RSS-247 ETSI EN 300328
Lowest channel frequency:	2401.00MHz
Highest channel frequency:	2481.75MHz

General specifications

Dimensions (WxHxD):	46mm x 41mm x 18mm
Weight:	24g
Power supply:	Non-replaceable CR2477 lithium coin cell
Operating temperature range:	-20°C to +70°C

User Information

The UB-Tag Dimension4 UWB+BLE tag device is shown below:



Switching on the tag

The device is shipped in a quiescent (non-transmitting) deep sleep state. To turn on the tag, bring a magnet next to the side of the tag near the LED light pipe, as shown in the diagram above. The LED on the tag will illuminate. Hold the magnet there until the LED turns off of its own accord – the tag LED will then brighten from dim to bright, and will then go out.

At this point, the tag is running and transmitting location packets. Typically the tag will flash periodically to show that it is awake (although the precise LED behaviour and tag update rate will depend on the settings pre-programmed into the tag for your site).

Troubleshooting

In case of problems with your Ubisense location system and tags, please contact support@ubisense.net.

Disposal of device

The UB-Tag Dimension4 UWB+BLE tag has an exceptionally-long battery lifetime. Note that the battery is not user-replaceable. At the end of the device's lifetime, please either return to Ubisense for recycling or dispose of in an environmentally-conscious manner.