

## Improved Safety, enabling trainers to deliver more comprehensive after-action reviews

Ubisense can precisely track people, assets and vehicles inside and outside during urban military training exercises. By tracking within 1ft indoors and 5ft outdoors in real-time, exercises can be run with greater efficiency



### Challenges in tracking in Military Training

Tracking participants in an urban combat training is one of the most challenging real-time location problems currently being undertaken. The combination of real-time tracking of people rapidly moving through and around large numbers of multi-story buildings requiring sub meter precision has not been practically possible until Ubisense released its technology to the market. Prior to that there were good technologies for either indoors or outdoors but none that delivered indoor and outdoor precise tracking that were deployable for large training exercises.

### How It Works

Ubisense installs a sensor network throughout the area to be monitored using Ubisense Series 7000 Sensors. All sensors are standard IP based devices connected using standard commercially available network equipment which are monitored and tuned in real-time using the Ubisense Location Platform.

Ubisense can then be used to visualize the real-time data in 2D or 3D, integrated into video systems and other military training hardware such as target, smoke, audio, and lighting. Ubisense has also integrated various After Action Review systems from its partners.

Ubisense Compact Tags are then attached to the shoulder of the participant and are assigned using a quick barcode scan. Tags can also be attached to items such as IED's or vehicles. When a person or object with an assigned tag enters an area, it is automatically located, shown in the Ubisense 3D environment and the data is passed out through the Ubisense API to other systems such as After Action Review (AAR), camera tracking systems or weapons effects program.

### Key Features

- Real-time view of inside and outside movement of players, trainers, assets such as IED's, and vehicles.
- Small, light weight tags are the only item a participant is required to wear.
- 3D viewing platform for inside and outside of buildings.
- Integration with GPS for complete coverage of all areas.
- Spatial events for automatically generating battlefield effects when tags enter user defined 3D zones.
- Integration with industry standard AAR platforms.
- Dynamically variable tag update rates for efficient tracking in different environments and scenarios.
- Buttons on tags for signalling and messages.
- Integrate tags to other items to allow the transmission of external data over Ubisense telemetry channel.
- Rugged tags and sensors designed to withstand the rigors of training environments.
- Cellular deployment allows incremental site installation and expansion.

## Applications

### Seamless Indoor and Outdoor Location Tracking

Ubisense location tracking using Ultra-wideband (UWB) technology works equally well indoors and outdoors and in areas that use many different construction materials from metal containers, to purpose built buildings to temporary installations. Ubisense is not affected by smoke, sound or other visual and audio effects.

### Real-Time Visualization

Open any number of real-time viewing windows which show different areas of your training area in 2D or 3D. Search for particular participants or groups and zoom instantly to them.

### Enterprise Browser

The Enterprise Browser allows a real-time view to be seen using standard internet browser and connection. The view can be seen on any device with an internet connection and can even be used by trainers with convenient handheld devices.

### Video Integration and Indexing

Ubisense has been integrated to many different video platforms using standard .NET integration. Ubisense captures the viewing areas of each video camera and then can either in real-time tell an operator which camera they can see a particular participant or store the information for after the fact video retrieval. Thus, simplifying the retrieval of the correct video of an individual's movement throughout and exercise based on the Ubisense video index.

### Data Recording and Playback

Ubisense stores all the movement information for an individual or object in a standard Relational Database. This data can then be played back based on different times or runs for improved After Action Review.

### Active Space Technology

Once a training area has been modelled in Ubisense, a trainer can define multiple different 3D Active Spaces. Every time a tag enters or exits a space, an event is generated and is reported both through the Ubisense API and stored in the Data Recorder. An event can be used to generate an automatic action such as target activation or smoke. A red space indicates that a tag is in a space and a green space indicates an empty space. Spaces can overlap so a user can, for example, determine if someone is in a building and the exact room they are in.



**About Ubisense**

Ubisense is the world leader in Precise Real Time Location Systems, tracking unlimited numbers of people and objects in any space of any size. With unmatched 15cm 3D tracking accuracy and high reliability, its acclaimed open standards technology platform gives enterprises the power to bring visibility and control to previously intractable business processes. Together Ubisense consulting and its partners, such as IBM, Atlas Copco, Lockheed Martin and Raytheon deliver geospatial and RTLS systems, pioneering innovation whilst reducing costs, gaining competitive advantage and improving safety for companies across all vertical markets. With over 400 customers worldwide including BMW, Caterpillar, DHL, Duke Energy, Deutsche Telekom, US Army; Ubisense is revolutionising industries today. Visit [www.ubisense.net](http://www.ubisense.net)

For further information please contact: [enquiries@ubisense.net](mailto:enquiries@ubisense.net)

**Worldwide offices****Ubisense UK & Ireland**

St Andrews House  
90 St Andrews Road  
Cambridge CB4 1DL, UK  
Tel: +44 (0) 1223 535170

**Ubisense Asia Pacific**

1 Fullerton Road  
# 02-01 One Fullerton  
Singapore 049213  
Tel: +65 6472 0186

**Ubisense Australia**

Level Twelve 200 Queen Street  
Melbourne VIC 3000  
Australia  
Tel: +61 3 8681 0400

**Ubisense Europe**

ADAC Haus  
Freie-Vogel-Str. 393  
44269 Dortmund, Germany  
Tel: +49 (0) 231 99955 500

**Ubisense Korea**

Youngdong Tower #902  
300-4, Sungsu-Dong 2-GA  
Sungdong-Gu  
Seoul, 133-120  
Korea  
Tel: +82 2 529 1472

**Ubisense New Zealand**

Level 3, 10 O'Connell St  
PO Box 6714 Wellesley St  
Auckland 1010  
New Zealand  
Tel: +64 9 304 1048

**Ubisense Americas**

5445 DTC Parkway, Suite 1110  
Denver, CO 80111, USA  
Tel: +1 720 249 4149

Ubisense reserves the right to change technical specifications without prior notice.  
For the most up to date version of this Data sheet please see [www.ubisense.net/en/resources](http://www.ubisense.net/en/resources)