DIMENSION4

UWB Directional Sensor

OVERVIEW

The Ubisense DIMENSION4 range of ultra-wideband (UWB) sensors are precision measurement devices, containing an array of antennas and UWB radio receivers. The sensors detect UWB pulses from Ubisense DIMENSION4 Tags, allowing the Ubisense location system to find the tag positions to a very high accuracy in three dimensions, in real-time.

ACCURATE LOCATION

By using UWB technology, the system's location accuracy is maintained even in cluttered, highly-reflective indoor environments. The Ubisense UWB location system is the only one capable of measuring both Angle-of-Arrival (AoA) and Time-Difference-of-Arrival (TDoA) of tag signals, enabling it to generate accurate 3D tracking information even when only two sensors can detect the tag. This reduces the infrastructure requirements for an installation, minimizing costs whilst dramatically improving the reliability and robustness of the system.

Specifications

Dimensions & Weight:
IP30: 22cm x 15cm x 6cm (8.7" x 5.9" x 2.4"), 720g (25.4 oz)
IP54: 22cm x 15cm x 10cm (8.7" x 5.9" x 3.9"), 860g (30.3 oz)
IP69K: 22cm x 15cm x 9cm (8.7" x 5.9" x 3.5"), 1100g (38.8 oz)

Field of View:
+/-80° in azimuth, +/-40° in elevation

Range:
65m (Standard Gain), 100m (Medium Gain) , 130m (High Gain)

Temperature:
-40°C to 60°C (-40°F to 140°F)

Humidity:
0 to 95%, non-condensing

Enclosure:
ABS/PC (V0), UV Stabilized
Tested to protection level IP30 / IP54 / IP69K

Connectors:
RJ45, Power-over-Ethernet IEEE 802.3af-compatible

Power Usage:
Budget 15.4W per unit at the switch

Radio frequencies:
Ultra-wideband channel: 6 - 7GHz

Certifications:
US: FCC Part 15
EU: CE
Canada: RSS-Gen

Mounting options:
Adjustable mounting bracket (supplied)
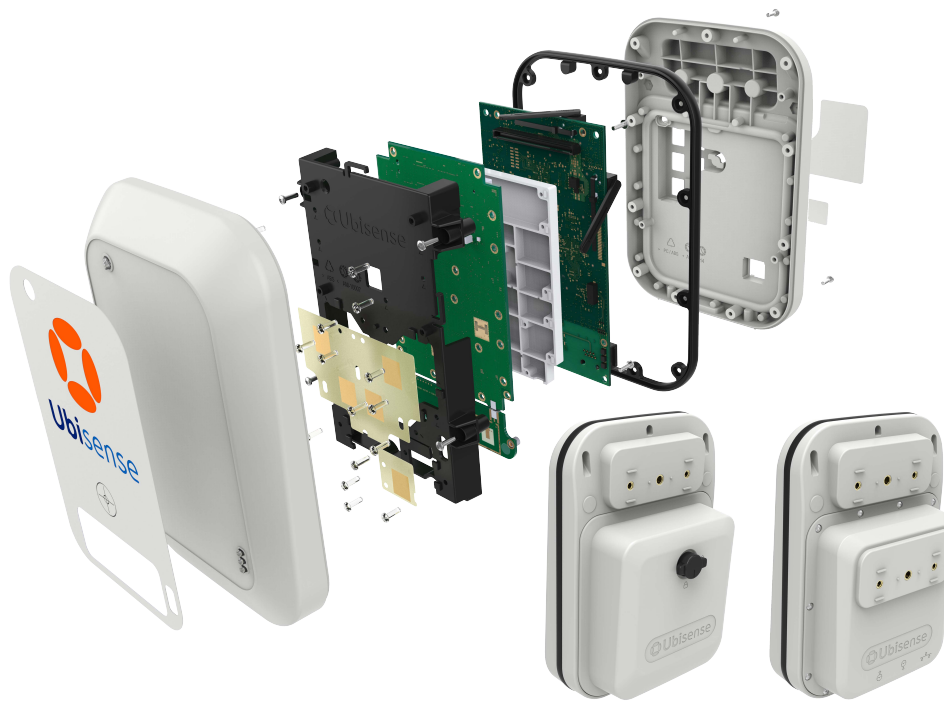Safety Cable (not supplied)

Ubisense part codes:
D4SENSOR32IP30NR (IP30 sensor)
D4IP54UPGRADE (IP54 sensor upgrade)
D4IP69KUPGRADE (IP69K sensor upgrade)
UBIEAZYBRKT (mounting bracket)
UBISAFECAB (safety cable)

FLEXIBLE AND SCALABLE

Ubisense uses a cellular architecture to scale from small to very large installations - large areas are covered by tiling them with 'cells' consisting of a small number of sensors working together.

Thousands of sensors can be integrated into a single enterprise- wide system to monitor an unlimited area and manage thousands of tags. Sensors can be connected together in a variety of ways, allowing infrastructure cost to be traded off against location accuracy in accordance with application requirements.

STANDARD NETWORKING

Sensors operate within a standard Ethernet network using infrastructure, such as Ethernet switches and Cat5e structured network cabling, for communication between sensors and servers. Sensors are powered through the network cable using Power-over-Ethernet switches.

IP-RATED SENSOR VARIANTS

DIMENSION4 sensors are engineered to operate in both normal and extremely harsh industrial environments. Three variants are available for a variety of indoor and outdoor scenarios:

IP30-rated sensor for normal indoor operation where a standard level of protection against water and dust is required.

IP54-rated sensor for more challenging indoor environments. A rear backing plate and two self-adhesive brushes on the sensor base prevent water splashes and dust from entering the sensor.

IP69K-rated sensor for extreme outdoor operation in harsh environments with a backing plate and cable glands providing protection against water, dust, high winds, heat and cold.

EASE OF MAINTENANCE

Sensors are administered remotely and firmware downloaded over the Ethernet network allowing easy upgrades when new features are available.

To find out more, contact us on:

US +1 720 217 4397   UK +44 1223 53 5170
DE +49 211 229733-0   FR +33 1 83 79 06 82

www.ubisense.com