Ultra Wide Band TAG   AT01

Key items:
- Person and object tracking using long range UWB
- Operates outside congested wifi bands
- Decawave UWB Radio, 3-7GHz, IEEE 802.15.4a
- 8dBM Bluetooth 5.0
- Firmware upgrade over the air (AES security, unique ID)
- 500 or 600mAh LiPo battery
- Inertial Measurement Unit (20 bit, high resolution), magnetometer

Indoor localisation < 20cm accuracy[1.]
Typical indoor range in buildings for AIRTLS UWB equipment is 30m at 6.8MBps passing through some walls. Special electronics to increase sensitivity and selectivity of the radio transceiver enable long range indoor tracking. Radio signals travel through walls enabling a true 3D tracking environment of the whole building. The ultrawideband radio guarantees a reliable connection as a data backhaul for bi-directional secured communication. UWB operates outside the WiFi bands using worldwide allowed unoccupied frequencies. Automatic connection to heart rate device via Bluetooth 5.2 preset/preferred mac-addresses. Heart rate data is forwarded as part of the UWB sensor data stream.

Secure access & control
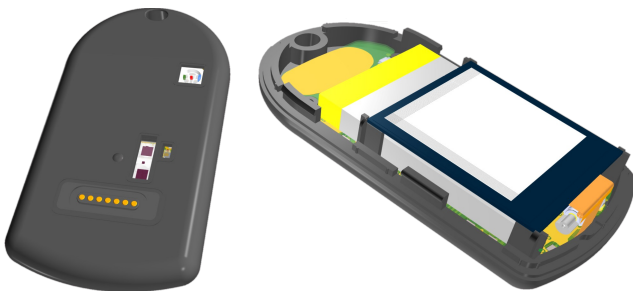
UWB indoor tracking

Energy efficient: 2 UWB modes

Network to all IOT devices

3D visualisation app

Infiniscale® , wireless scaleable

Options
- Display 128x128, 25uW, memory in pixel, or 600mAh battery instead of 500mAh
- Haptic motor
- NFC
- Qi charge
- M0x sensor (oxygen), bottom side
- GPS
- Black or transparant enclosure

7 pin magnet-USB Charge cable included

Dimensions	65 x 35 x 11 mm
Operational temperature	-15 to +70 °C
Accu	500 mAh (standard)
Radio	UWB 3-7GHz Bluetooth 2.4GHz

mail info@airtls.com

[1]: Accuracy range from sub cm accurate in line of sight condition in calibrated environement to few decimeter accuracy in standard commercial building environment with brick or concrete walls

DISPLAY

MIP display 128x128

QR code is active when the tag has horizontal orientation and is active
QR code shows mac-address and name of the tag

In other orientation device status and ranging information is displayed.
In the example:
The tag has been operational for 2min11
The battery is full
The accelerometer values are shown XYZ 1G=4096
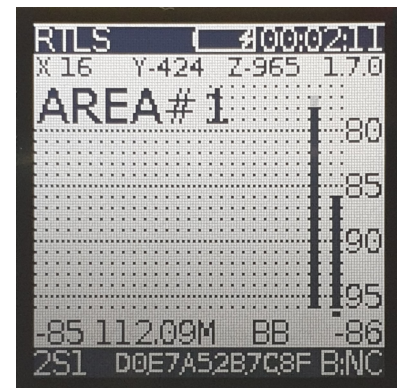The name is AREA#1 (9 char UTF-8)

The 3 pixels below the bar indicate the signal strength
from an anchor ('BB') as received on the tag plus the distance to the anchor.
-85 dBm anchor 'BB' RX
-86 dBm tag RX
Distance 112.09 meter

Dark colored footer
2S1 (UWB channel 2, seat 1 out of 188 is used by the tag). 4 distances per cycle. 12.5cycles per second.
MAC-address
B:NC Bluetooth external device like a heart rate belt of phone: NC not connected. 3 BT mac-addresses can be set
to automatically pair to the device.