



TOKENCUBE™ ACCELERATION SENSOR TC02-3D – *preliminary*



General Description

TC02-3D acceleration sensor is a Bluetooth Low-Energy proximity beacon with integrated accelerometer in 3 dimensions for attachment to objects that move. TC02-3D advertises ID data that is compatible with common beacon standards (UUID, Major ID, and Minor ID), ONLY when an object is moving, or ONLY after an object has fallen. There is also a mode to display accelerometer data and gesture counts.

Similar to EMBC01, TC02-3D is part of the coin-cell family of beacons which come in a small, weatherproof enclosure, using a standard coin-cell battery. A push-button with LED feedback allows the user to switch on and off.

Applications

- Inventory Tracking
- Asset Management
- Activity Monitoring
- Electronic Leash Applications
- Staff attendance control

Operating Modes

TC02-3D is shipped pre-programmed with the following operating mode:

- **Sensor Mode** offers 1s beacon interval, 60m range line-of-sight (LOS), and 4.5 months of battery life typical while displaying raw accelerometer data in 3 dimensions.

Further modes can be provided on demand:

- **Moving Mode** offers 100ms beacon interval, 30m range, and consumes an average of 275 μ A when beaoning and 6 μ A while idling. The device only beacons when movement is detected and one minute after the device is still
- **Fall Mode** offers 100ms beacon interval, 120m range, and consumes an average of 350 μ A when beaoning and 13 μ A while idling. The device only beacons after a fall has occurred and 10 minutes after the event

TC02-3D can be delivered in any quantity with guaranteed unique ID numbers. TC02-3D firmware can be customized for individual deployments on demand.

Individual Settings and Parameters

Flexible parameters on demand include UID, power level, beacon interval, state-machine, gesture alarm mode, gesture threshold, and accelerometer data and settings. Gestures include: any movement, no movement, taps, falls, and shocks.

Features

- Weatherproof Enclosure
- IP-64 rating, -20C to +60C operating range
 - Size: 30mm x 10mm disk; Weight: 7 grams
 - Replaceable CR2032 3V Li battery
 - Integrated push-button with LED indicators



Selectable ID Mode beaconing

- ID packet format includes:
- UUID, Major ID, and Minor ID
- Output power information
- Sensor Mode: 60m LOS, 1s beacon interval, with tap counter
- Moving Mode: 30mLOS, 100ms beacon interval, 1 minute broadcast period after movement is detected
- Fall Mode: 120m LOS, 100ms beacon interval, 10 minute broadcast period after a fall is detected

Unique Identification

- UUID
- Unique Major and Minor IDs (serialized)
- Unique Serial Number
- Serial number, Major/Minor ID embedded in QR Code for deployment

Certificates :TC02-3D is FCC, IC, and CE certified, RoHS, Reach, and halogen free compliant.

Accessories

- Wall-mount
- Key-fob
- Wrist-band

Technical Data

Battery Options

- Tocencube TC02-3D - CR2032

Enclosure

- TOK enclosure: 30mm diam, 9.5 mm thick

Apps and Software

- iOS app: TokenBrowser V2.0
- Android app: TokenBrowser V0.8
- Android app: Beacon Player V0.9
- Android/iOS app: Beacon Explorer V0.9
- Beacon Content Management System (incl. web interface) V1.0

Management System

Token Engine Device and Data Management Platform

- Central database for all recorded data
- Easy-to-use data base access

Further Products

TokenGateway TC9000 Series

TokenCube® Sensor TC3000 Series

TokenCube® Temperature Recorder TC5000

- Coolchain management system

Demo Kits available

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