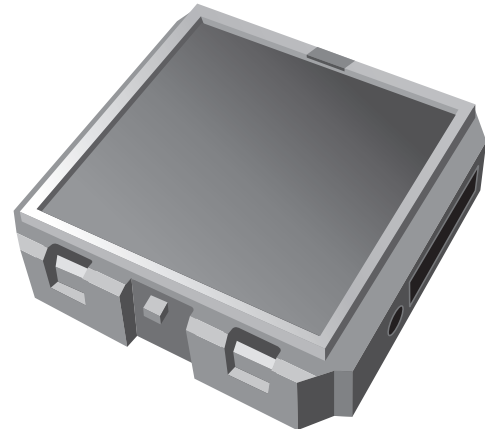# kozee RANGE

Wireless Navitas

BATTERY-POWERED

Multi-Sensor Module (BLE)

Features and benefits

The Kozee multi-sensor module enables the realization of energy harvesting wireless sensors communicating based on the BLE radio standard.

Key applications are wall-mounted or equipment-mounted sensor applications for the measurement of temperature, humidity, illumination or acceleration / orientation.

The Kozee multi-sensor module integrates dedicated sensors for temperature, humidity, illumination, acceleration and magnet contact. These sensors measure and transmit the current status every 60 seconds. The transmission is indicated using a dedicated LED.

The Kozee multi-sensor module will immediately wake-up and transmit an update if a change in the acceleration vector occurs (e.g. due to the Kozee multi-sensor module being moved or shaken) after a period without such change.

The Kozee multi-sensor module contains an integrated solar cell optimized to generate the required energy based on available ambient lighting. Under typical indoor lighting scenarios (200 lux for 6 hours per day) it operates fully self-supplied. For other cases it is possible to mount a dedicated backup battery.

The Kozee multi-sensor module contains an integrated NFC interface that can be used for device configuration and device commissioning. In addition, it contains a LRN button that can be used for simple commissioning tasks.

The Kozee multi-sensor module is delivered as module in PTM module form factor for integration into customer design frames.

For alternative use cases, the ready to use white label product EMSIB integrates the Kozee multi-sensor module into a housing with wall mount and front cover frame.

Specifications

Antenna	Integrated antenna
Radio Standard	2.4GHz Bluetooth Low Energy (Advertising Mode)
Radio Channel	BLE Channels 37, 38 and 39 (Advertising Channels)
Sensor Data Encoding	According to EnOcean BLE Sensor Protocol
Transmission Interval	Every 60 s (adjustable via NFC)
Device Identification	Individual 48 Bit Device ID (factory programmed)
Security	AES128 (CBC) authentication with sequence counter
Transmission Range (typ.)	30 m line of sight / 10 m indoor environment
Power Supply	Integrated Solar Cell
Temperature / Humidity Sensor	-20 °C - +65 °C (+-0.3 K) / 0 - 100 % r.h. (± 3 %) [1]
Illumination Sensor	0 - 65535 Lux (± 10%)
Acceleration Sensor	- 4g - +4g (± 0.05g) with configurable trigger (default 0.0625 g)
User Interface	Learn button + LED
Required Ambient Lighting	200 Lux for 6 hours per day
Autonomy (operation without light)	4 days
Backup Battery (if required)	CR1632
Operating Conditions	C5 - 45 °C / 0 - 90 % r.h. (indoor use in dry rooms only)
Dimensions (Module)	40 mm x 40 mm x 13 mm

[1] EMSIB / Kozee multi-sensor module should be used only within the specified operating conditions.

Battery-free by EnOcean

Bluetooth technology

Assembled in the UK

RoHS Compliant   CE

www.wireless-navitas.co.uk