Just test unique measurement high-tech
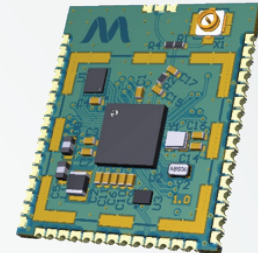## The new radio Demo Kit BLE by *Metirionic*

1 | Core IP / USP

Metirionic (*MIC*) combines advanced radar technology (measurements of distance, angle and time offset) with popular standards for wireless communication (Bluetooth LE and IEEE 802.15.4 narrowband), which complements the characteristics of other technologies (GPS, UWB, RFID, Ultra Sound and Infrared).

2 | Advantages of the *MIC* technology – demonstrated with the kit

The Demo Kit

comprises 2 radio devices or nodes for direct access to the *MIC* IP
- hereby, distances and angles can be simultaneously, stably and accurately measured
- ranging even works in non-line-of-sight as well as in complex environment (e.g. through several walls, in tunnels and buildings, long distances)
- highly flexible indoor AND outdoor operation

offers a high link budget of up to 120dB
- utilizing high sensitive modulations along with an additional antenna frontend (PA: 100 mW, LNA: 2dB(NF))
- note: modules support up to 6dBm output power

utilizes the Dialog DA1469X; in particular the following features
- wireless data communication according to Bluetooth LE©
- time domain and frequency domain signal vector measurement capabilities

demonstrates worldwide conformance to regulatory requirements 2.4GHz ISM Band

visualizes multiple reflective propagation paths – suitable for passive object detection

The GUI

provides graphical representations of the measurements
- distance over time with different filters, e.g. for predictions (Kalman, Velocity etc.)
- waterfall graphs of measured channel impulse responses for different measurement methods
- various engineering views (magnitude, phase over frequency)

enables the configuration of various parameters
- e.g. transmission power, antenna and frequencies

supports an assessment of the interference situation during the operation

3 | What's new – even more benefits

- demonstrate the scalability of the technology in regard to flexible adaptation to key requirements:
  - accuracy, multipath robustness, measurement speed, efficient protection from different kind of security attacks
- operation with highest possible output power in compliance with regulatory requirements (FCC, ETSI, …)
- precertified modules as ideal solution for fast prototyping and smaller and mid-size volumes

4 What comes next

- ✓ Improved distance + angle of arrival
- ✓ Quality measures for each measurement on display
- ✓ High precision measurements of time offsets between two nodes with accuracy (< 1ns)
- ✓ Demo Kit BLE 2.0

Bluetooth®

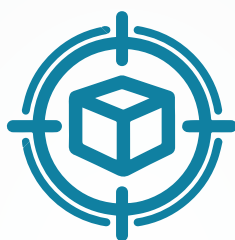## 5 Application classes of the tech for *Metirionic's* customers

Security & Safety	Asset Tracking	Radar
Point to Point - Position Finder (distance & angle)	Point to Multi-Point - RTLS (multiple distances & angles with single measurement)	Radar Applications (presence & motion detection)
• finding lost people in buildings • protecting workers on machineries • access systems	• tracking goods in storages • tracking vehicles • tracking livestock	• surveillance of parking garages • guidance in supermarkets • movement profiles in public spaces

6 More detailed information

On our website you will find more about our great technology & services:

www.metirionic.com

7 Contact for questions and ordering

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We know the distance.

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