

## Systems



# Printed Hybrid Bluetooth Low-Energy Label

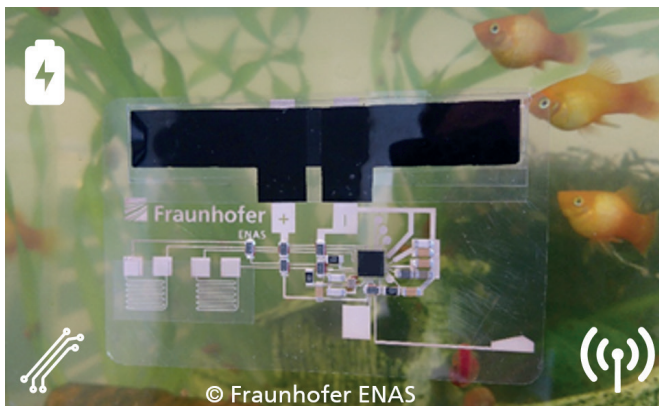
## Fast Facts

- Research and development service provider (process and product development)
- Bluetooth low-energy sensor label (size: 85 mm x 54 mm)
- Wireless sensor data transfer @ 2.45 GHz up to 24 m to an mobile device (e.g. smartphone)
- Selectable sensor

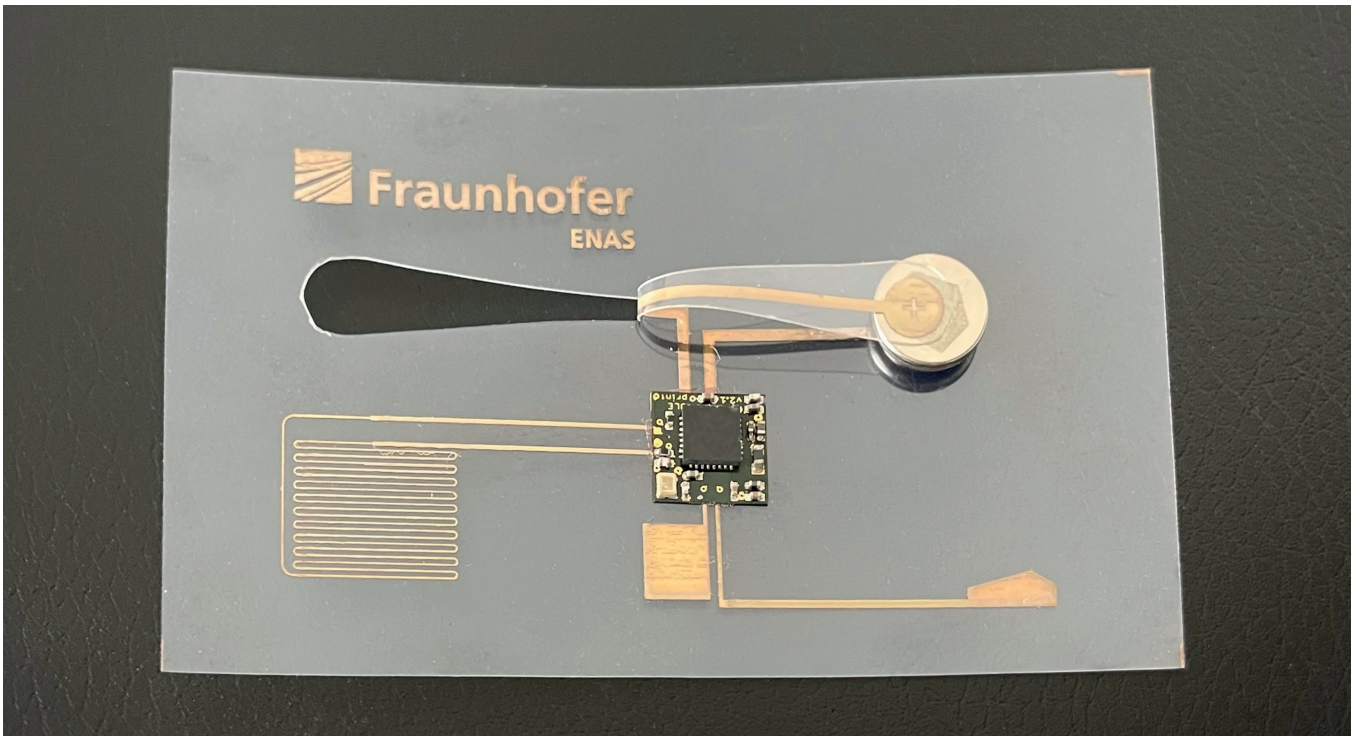
## Printed, hybrid and flexible Bluetooth low-energy label for e.g. an application in the field of sensor data acquisition

Fraunhofer ENAS has developed a wirelessly evaluable sensor label consisting of printed components (conductors, antenna, battery and sensor) and standard SMD components (resistors, capacitors, Bluetooth low-energy chip). The Bluetooth low-energy label represents a platform and can be adapted to specific applications.

- Flexible sensor platform
- Replaceable battery
- Scalable size
- Could be integrated into smartcards as well as other plastic parts
- Sensor analysis via smarhtone app



Example configuration of a temperature sensor label.



*Compact sensor platform configuration with reduced manufacturing effort.*

## Printed, hybrid and flexible Bluetooth low-energy label 2.0

The number of components required has been greatly reduced. The sensor platform now consists of a compact flex-PCB board, a printed antenna, a printed sensor and a mini button cell.

### More about Printed Functionalities



Fraunhofer ENAS is part of



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Fraunhofer ENAS  
All information contained  
in this datasheet is prelimi-  
nary and subject to change.  
Furthermore, the described  
system is not a commercial  
product.