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 smarthone app

Example configuration of a temperature sensor label.
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.