

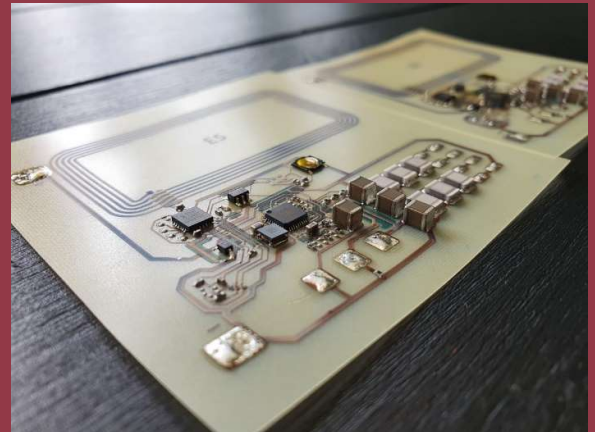
Flexible & Wearable Electronics Application Experiments



Company Profile

ISRA is an independant French company specialising in the design and manufacture of cards and customised media, mainly dedicated to trade, access control, identification and transport.

As well as its products, ISRA offers a wide range of services such as printing, customisation, card programming and routing operations (enveloping, shipping) as well as the creation of original packaging.



Problem to be solved

The goal of this project was to develop an autonomous sensor tag able to track and record the conditions that a device has undergone during transport. It should:

- fit in the size of a credit card (including 800µm thickness)
- communicate with NFC protocol
- include several sensors (temperature, humidity, intrusion and/or shock detection)

Solution provided by SmartEEs

A tag prototype was built through hybrid electronics. It allowed to combine standard packaged components such as a temperature logger and printed elements such as the conductive tracks, NFC antenna and potentially printed sensors (humidity, intrusion or shock sensor).

ISRA and InnovationLab mutually designed the electronic circuit and adapted it for printed electronics. The Printing process was produced with a copper-based electrical circuits Including the reflow soldering process directly onto the prints

Business model & impact

A creditcard sized smart tag has a huge potential in various market segments. A market study was executed and evaluated.

