

## RE Ecosystem Partner Solution ITEN Rechargeable SMD Micro-Battery



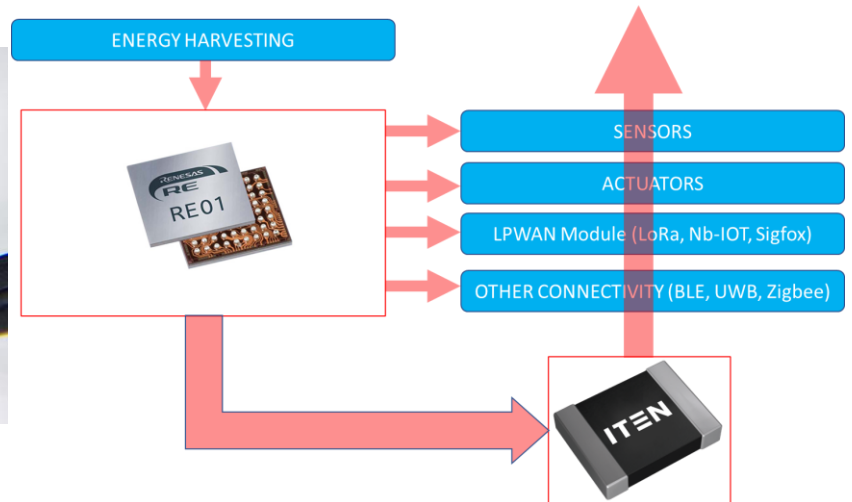
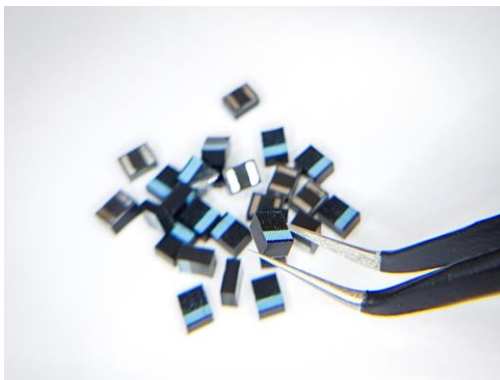
### Solution Summary

ITEN provides safe and fast rechargeable SMD micro-batteries, delivering high peak currents required by sensors, actuators and various short and medium range RF. This is the ideal solution to store energy collected by energy harvesters in low-power autonomous wireless sensor nodes

### Features/Benefits

- Solid-state and safe
- Easy to recycle like any other ROHS component
- Footprint 8-14mm<sup>2</sup> - thickness 0,33mm – 2,5mm
- Compatible with reflow soldering
- Fast recharge to 80% in less than 5 mn
- Peak currents: 30 -150 mA
- Operating T°: -20°C +70°C  
-- Soon -40°C +85°C
- Lifetime > 10 years
- > 2000 cycles @ 75% DOD

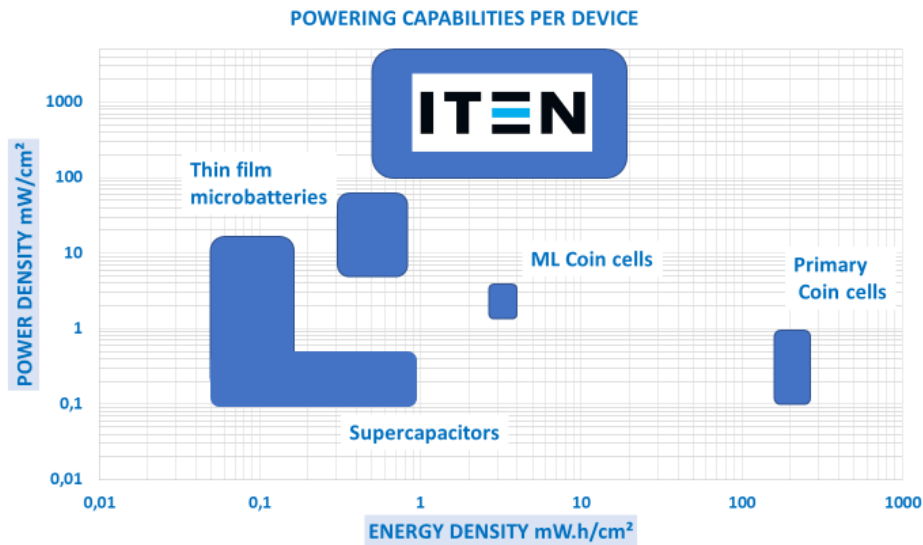
### Diagrams/Graphics



### Target Markets and Applications

- Wireless sensor networks
- Asset tracking & monitoring
- Smart metering
- Sensor data loggers and tags
- Smart cards and access control
- Back-up (RTC, memories,  $\mu$ C)
- Car Keyless entry systems
- Electronic Shelf labels
- Augmented Reality
- Mobile phone accessories
- Home automation & smart buildings
- Medical devices and skin patches

# ITEN



Compared to coin cells, ITEN micro-batteries deliver much higher power, are SMD components easy to assemble on automated PCB assembly line (no holder) and easy to recycle like a microcontroller or a memory. They are also easy and fast rechargeable at constant voltage.

Compared to supercapacitors, ITEN micro-batteries feature much higher energy storage densities (up to x10), are SMD and much more compact and are able to store energy for several months. They store energies between 2,7V (charging) and 2V (end voltage) with a plateau-like discharge curve (nominal voltage 2,2-2,5V).

# ITEN



Privately held company  
Headquarter nearby  
LYON ( France)

Proprietary technology,  
processes and materials

> 150 patents granted

Production facilities #  
2000 m<sup>2</sup>