The fastest and easiest way to create IoT solutions

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Our story
The soul

“Zolertia’s core platform-on-module to simplify the connection to internet for low-power consumption and constrained objects”

A new approach to wireless communications:

- Up to 300x less power consumption than WiFi
- Up to 50x distance communication than BLE
- Cryptography enhancement
- Mesh topology IP-based networks
- Easy and fast integration
The soul

Based on Texas instrument CC2558 System on Chip

✓ ARM Cortex-M3 32 MHz clock speed, 512 KB flash and 32 KB RAM (16 KB retention) ISM 2.4-GHz IEEE 802.15.4, Zigbee compliant
✓ ISM 868-, 915-, 920-, 950-MHz ISM/SRD Band
✓ AES-128/256, SHA2 Hardware Encryption Engine
✓ ECC-128/256, RSA Hardware Acceleration Engine for Secure Key Exchange
✓ Small form-factor of 16.78 x 30.89 mm
✓ Self-contained and EMI-protected module under a shield
✓ Fast integration and short time to market
Business case

New product requirements:

- Demand of connected solutions
- Big competitors working on this
- No background in-house
- Limited resources, time & money
Simple and fast 3-step solution

Outcome:
✓ Not connected lights but true smart lights interacting through Internet
✓ Boost the solution integrating other IoT devices: sensors and actuators
✓ Everything developed only in 9 months, from conception to market

Program your application into the zoul module
Integrate in a intermediate board
Plug’n’play in RIVA’s existig product
The IoT immerse process

Zoul
Connected products
R&D, engineering

Firefly
Mock-ups
Makers, R+D

RE-Mote™
Fast prototyping & Proof of Concept,
Start-ups, Makers, Research
The RE-Mote

Ultra Low-Power Consumption Hardware platform

✓ **Consumption** down to 150 nA using the shutdown mode
✓ Programming over **BSL** without requiring to press any button to enter bootloader mode
✓ Built-in **battery charger** (500 mA)
✓ **Wide range** DC Power input: 3.3-16V
✓ **MicroSD** (over SPI)
✓ On board **RTCC** (programmable real time clock calendar) and external watchdog timer (WDT)
✓ Programmable **RF switch** to connect an external antenna

Early development & proof-of-concept
Platforms

- IBM Bluemix™
- Wonderware® by Schneider Electric
- PTC®
- ThingWorx®
- Axeda®
- relayr
  bring things to life
- FI-WARE
- Microsoft Azure
- Amazon Web Services™
- EVRYTHNG™
The FireFly

Exposes the most basic Zoul features, sporting only the most down-to-core ones to work with it

✓ On-board printed PCB sub-1GHz antenna, alternatively u.FL for sub-1GHz/2.4GHz external antennas
✓ Compatible with breadboards and protoboards
✓ On-board CP2104/PIC to flash over USB, with a PCB connector
✓ User and reset buttons
✓ RGB LED to allow more than 7 colour combinations
✓ Small form factor (53x25mm)
Main applications

- Logistics
- Smart Cities
- Industry 4.0
- Farming
We already have a slice of the market.

**2014**
- 20 Countries believed
- 100 Customers believed
- 1k Units sold

**2015**
- 35 Countries believed
- +270 Customers believed
- 3k Units sold
The team who made it possible

Product development: expertise and wide knowledge

Product management & sales

Leadership & strategy

Toni, Electronics BSc UOC
Aitor, Electronics BSc UOC
Antonio, Computer Sc. PhD U Bogotá
Elisa, Admin.
Alex, Electronics BSc UB
Albert, Telecom MsC UPC
Javi, Electronics BSc UB
Marc, Telecom+Electr. MsC UPC
Next steps

- Finish porting:
  - ADC
  - Power management block
  - 2.4GHz and **CC1200**
- **Documentation** & examples
- OpenThread

Join us!

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