chipus

Company Presentation

Summary

Company

- Chipus mission
- Chipus facts
- Our services

Analog IP

Digital Expertise

ASICs

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Chipus Mission

Chipus Mission

"Develop chips that enable **innovative** and **power efficient** products"

Chipus has been delivering ultra low power analog IP, efficient power management circuits and tailormade ASICs for more than 10 years.

Chipus Facts

- Founded in 2008
- Successfully delivered projects to customers in:
  - North America
  - Europe
  - Asia
- ISO 9001 certified since 2017

- Based in Florianopolis, Brazil
- Subsidiary in Santa Clara
- Business development in the USA, Europe and Asia

[Link to Design & Reuse about ISO 9001 certification]

Bureau Veritas Certification

CHIPUS MICROELETRÔNICA S/A.

Rua Emilio Blum, 131, salas 1006 a 1009 Torre A, Centro - 88020-010 - Florianópolis / SC - Brasil

Bureau Veritas Certification certifica que o Sistema de Gestão da organização acima foi avaliado e encontrado em conformidade com os requisitos da Norma detalhada abaixo.

Norma

ISO 9001:2015

Escopo de Certificação

PROJETOS DE CIRCUITOS INTEGRADOS.

Data de Início do Ciclo de Certificação: 13-11-2020
Sujeito à operação satisfatória contínua do sistema de gestão da organização, este certificado é válido até: 18-11-2023
Validade do certificado anterior: 19-11-2020
Data da auditoria de recertificação/certificação: 06-11-2020
Data de Aprovação Original: 20-11-2017
Certificado Nº: BR034483 Versão: 1 Data da Revisão: 13-11-2020

Bruno Bomtorim Moreira
Gerente Técnico

OCS 0006

Escritório local: Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 4º Andar Vila Cruzeiro, 04726-170 - São Paulo - SP - Brasil
Esclarecimentos adicionais a respeito do escopo deste certificado e à aplicabilidade dos requisitos do Sistema de Gerenciamento podem ser obtidos consultando a Organização. Para verificar a validade deste certificado, telefone para +551126559001.

1/1

Company

Foundries and Nodes

ams

CMOS **FD-SOI** **BCD**

LFOUNDRY
A SMIC COMPANY

40nm

22nm 28nm

SMIC

GLOBAL FOUNDRIES

chipus Microelectronics

SILTERRA

90nm 0.13µm

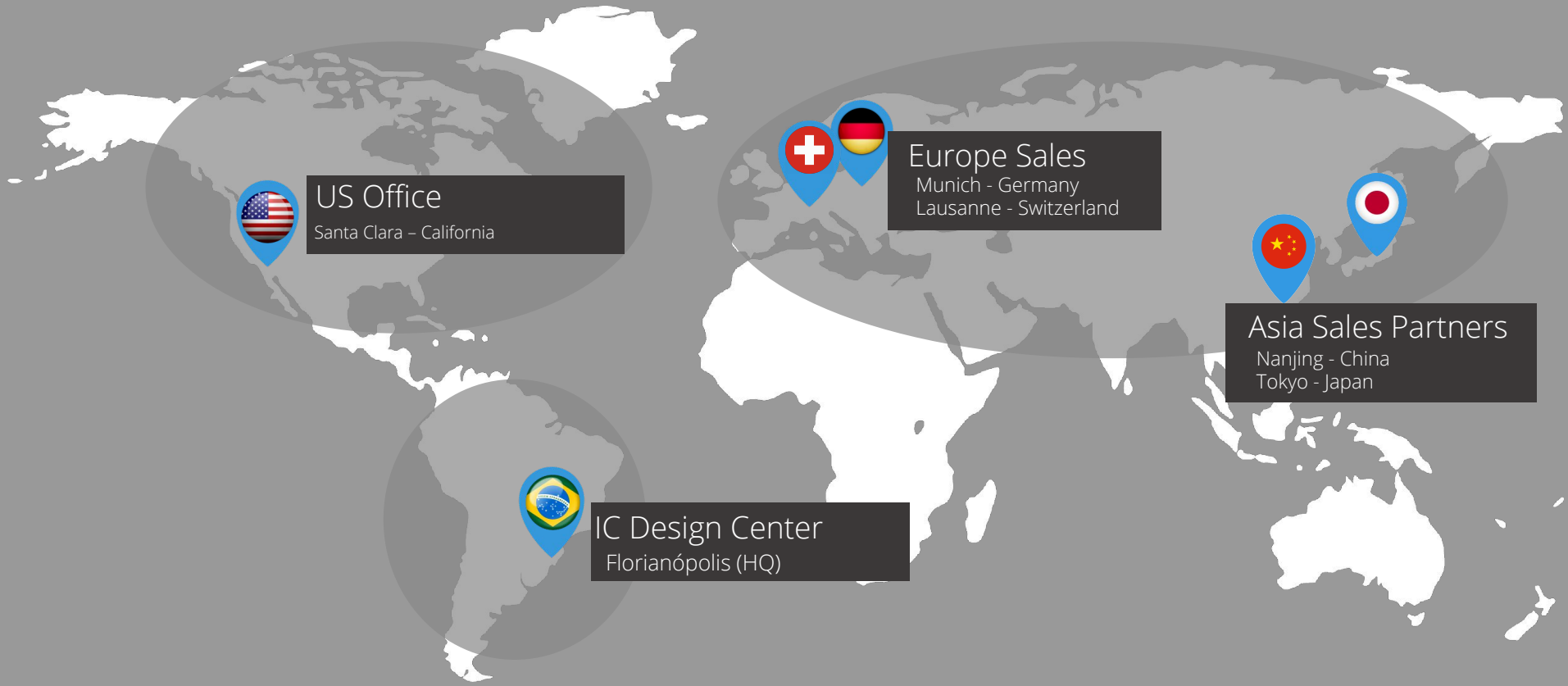
0.35µm

X-FAB
MIXED-SIGNAL FOUNDRY EXPERTS

0.11µm 0.18µm

TOWERJAZZ

Company

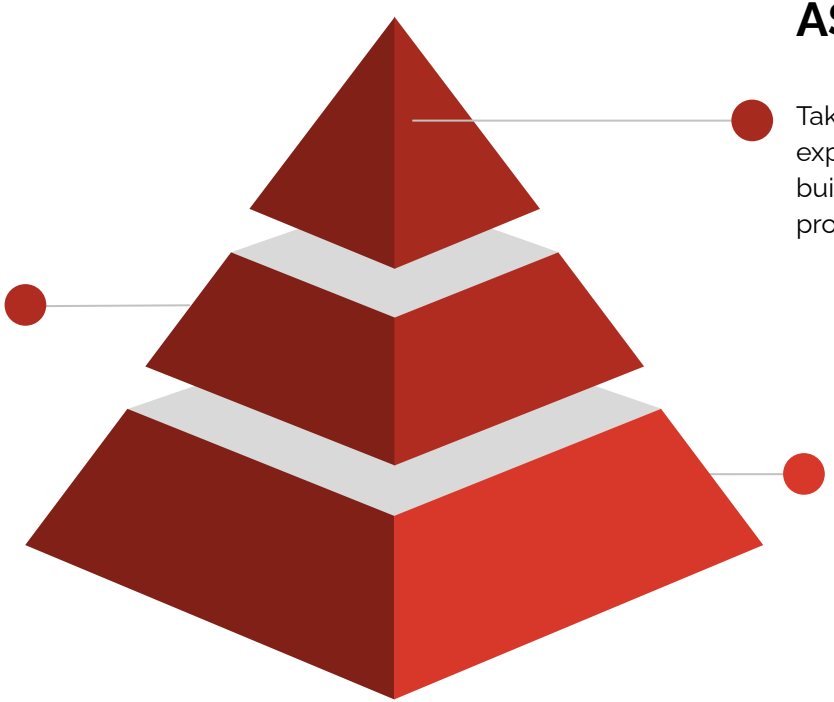

US Office
Santa Clara – California
Europe Sales
Munich - Germany
Lausanne - Switzerland
Asia Sales Partners
Nanjing - China
Tokyo - Japan
IC Design Center
Florianópolis (HQ)

Our Services

Chipus is a one-stop shop for semiconductor design

Design services

Develop **custom circuits** and **retarget Chipus' IPs** using **best-in-class support** in order to help you develop a successful product



ASIC

Taking advantage of the in house experience, Chipus is enabled to build **turn-key ASIC solutions** with proven success cases

Analog IP

Based on a wide **proven IP** portfolio built over **10 years** in the market, Chipus can provide you the **ultra low power**, **analog** and **mixed signal** piece you are looking for.

Our Services

Expertise

Chipus has been in the market for 10 years

Consistency

Solid growth since its inception in 2008

Knowledge

Our technical team is composed of engineers, masters and PhDs

Market focus

Projects delivered to customers in North America, Europe and Asia

Customer Service

Best-in-class customer support for IP integration

Quality

+200 IP portfolio
ISO 9001 certified

Analog/Mixed Signal IPs

IPs

Links to Chipus IP portfolio / listings:

- IP Portfolio at Chipus website
- IP Portfolio at Design&Reuse Portal

See also:

1) Chipus Ultra-Low-Power Analog IP Solutions for SilTerra Platform
2) A Flexible 200kHz-20MHz Ring Oscillator in a 40nm CMOS Technology

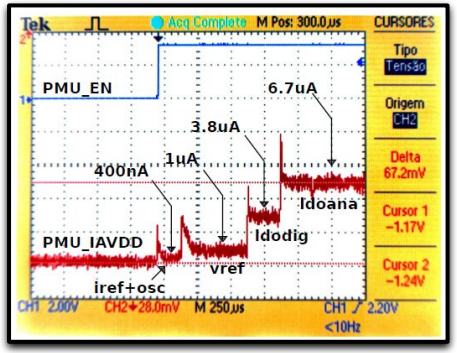
Analog/Mixed Signal IPs

Ultra Low Power IPs developments is in our DNA.

- **10 years** developing ultra low power circuits
- Team with **170 man-years** of experience in "nA" design

2010

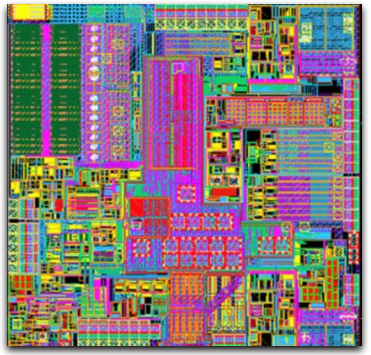
Ultra Low Power Management Unit for Mobiles



	CM1311bg	Competitor #1	Competitor #2	Competitor #3
Company	Chipus			
Consumption	3.8µA	10.0µA	6.0µA	5.0µA
Output Ripple	0 mV	-	5 mV	-
PSRR	-40dB	-	-	-
Reference Included	Yes	Yes	-	-

2018

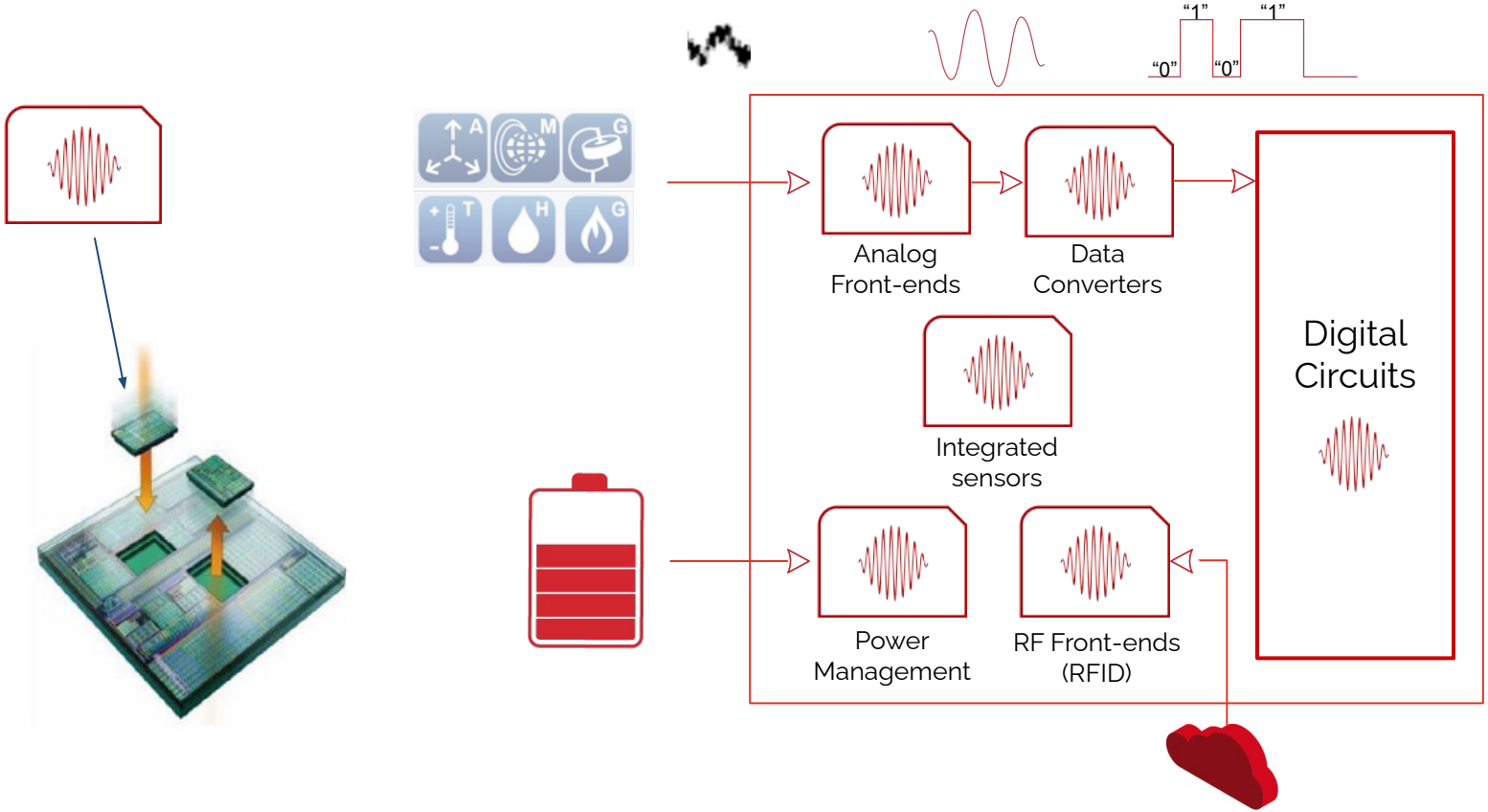
Ultra Low Power Management Unit for IoT



Idle Mode = 350 nA

10 x Reduction in power !

Analog/Mixed Signal IPs



Digital Design Expertise

Design/Functional Verification

- Modeling
  - SystemVerilog
  - SystemC
- RTL design
  - Verilog
  - VHDL
- Testbench
  - Verilog
  - SystemVerilog
- Methodology
  - UVM

Logic Synthesis/ATPG

- Logic synthesis
- Insertion of DFT structures
- ATPG

Structural Verification

- Logic Equivalence Check (LEC)
- Static Timing Analysis (STA)
- Power Analysis (EM/IR)
- Physical Verification (DRC/LVS)

Design Implementation

- Floorplan
- Power Plan
- Placement
- CTS
- Routing
- Signal Integrity
- Timing closure

ASICs

ASIC Design

- Mixed-Signal ASIC design
- FPGA to ASIC

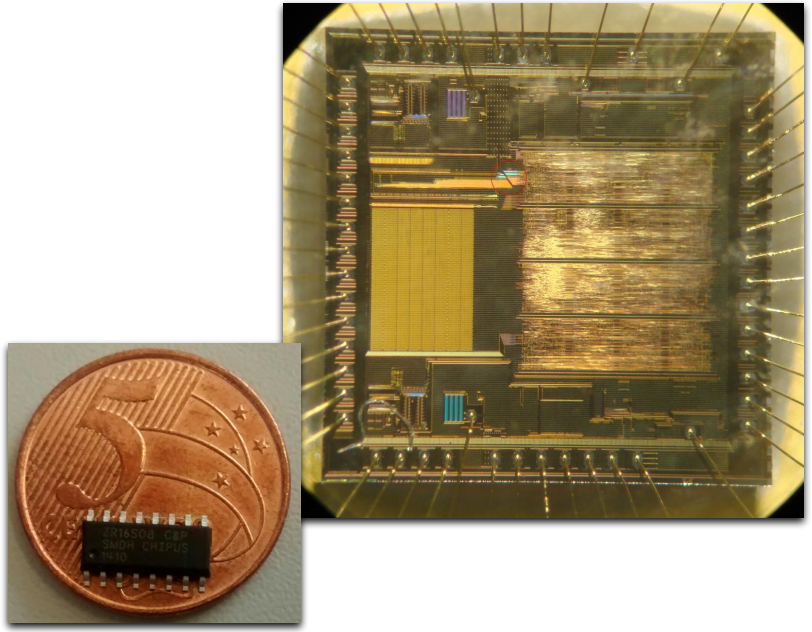
- Chipus has designed several ASICs for applications such as:
  - Proprietary microcontroller with analog and HV blocks
  - RFIDs for different protocols (EPC Gen 2 and GB "chinese standard")
  - Magnetic Sensor IC
  - Power Management IC
  - Among several others
- Chipus has implemented FPGA-to-ASIC conversion for client in Germany
  - Obsolete component replacement
  - Pin-to-pin compatible

ASICs: Proprietary microcontroller

Success case on proprietary microcontroller IC

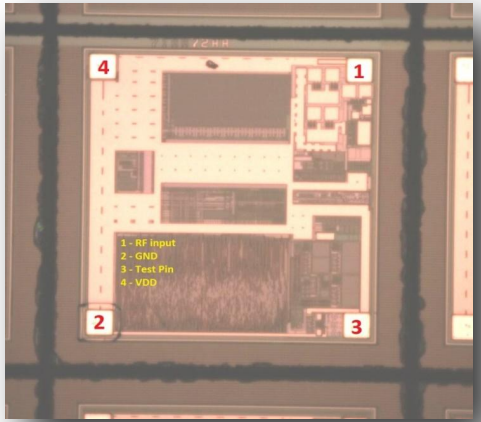
Microcontroller developed by Chipus
Functionalities:

- 8-bit microcontroller core
- Integrated SRAM
- Watchdog, timers
- Serial interface
- 10-bit SAR ADC
- Capacitive touch sensor interface
- 30V voltage regulator
- Node: 0.35µm CMOS

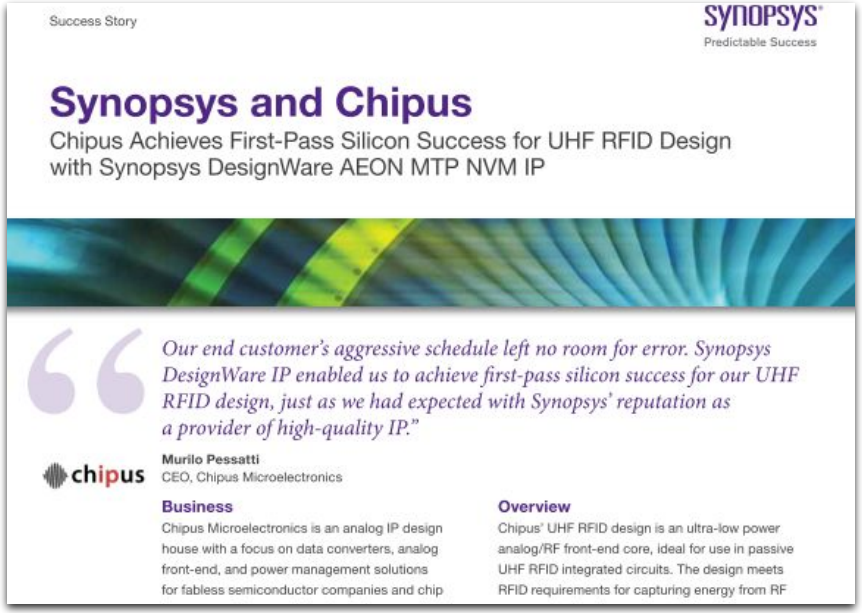


Success case on RFID design

- RFIDs compliant with EPC Gen 2 protocol and GB protocol (China)
- 3 complete RFID ASICs were designed at Chipus using UHF RFFE IP
- Clients in Brazil and China
- Used low power NVM from Synopsys
- Nodes:
  - 0.16µm CMOS
  - 0.18µm CMOS



Link to publication in Synopsys website



Success Story

SYNOPSYS®
Predictable Success

Synopsys and Chipus

Chipus Achieves First-Pass Silicon Success for UHF RFID Design with Synopsys DesignWare AEON MTP NVM IP

"Our end customer's aggressive schedule left no room for error. Synopsys DesignWare IP enabled us to achieve first-pass silicon success for our UHF RFID design, just as we had expected with Synopsys' reputation as a provider of high-quality IP."

chipus

Murilo Pessatti
CEO, Chipus Microelectronics

Business

Chipus Microelectronics is an analog IP design house with a focus on data converters, analog front-end, and power management solutions for fabless semiconductor companies and chip

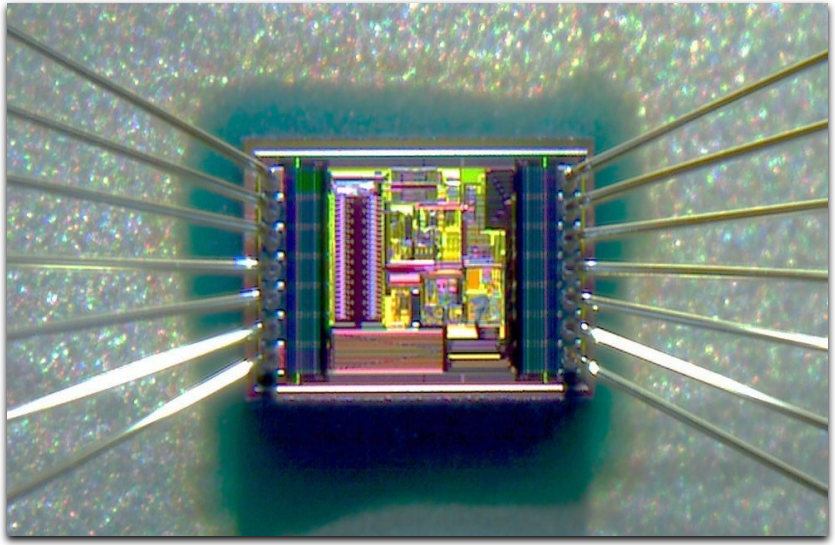
Overview

Chipus' UHF RFID design is an ultra-low power analog/RF front-end core, ideal for use in passive UHF RFID integrated circuits. The design meets RFID requirements for capturing energy from RF

ASICs: Sensor IC

Success case on Sensor IC design

- Integrated Magnetic Sensor
- Ultra low power (250 nA)
- Disruptive Technology
- Integrated poly fuses (designed by Chipus)
- Specs to Production in 18 months
- Node: 0.13µm CMOS
- Client in the USA

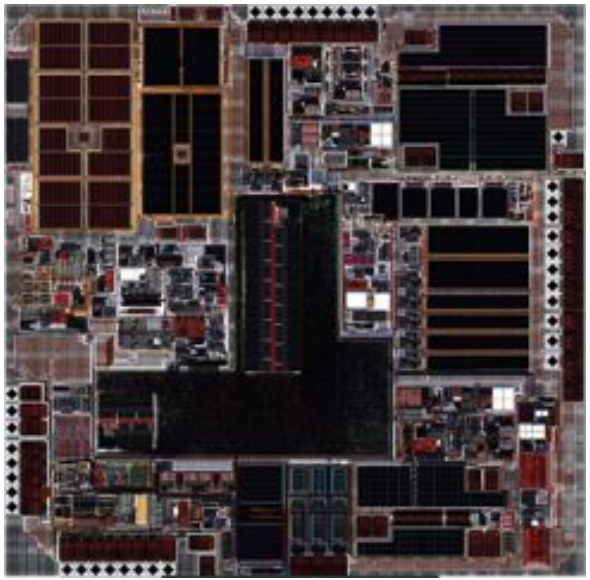


Success case on Power Management IC

PMIC for IoT applications
Functionalities:

- DC-DCs (2 bucks and 1 boost)
- Battery Charger up to **1.1 A**
- LED Driver
- Load switches up to 100mA
- ULP LDOs
- USB interface for battery charging
- Two-Wire interface
- Integrated poly fuses (designed by Chipus)
- Ultra low power **(350 nA)** in idle mode

Client in Europe
Node: 0.18µm BCD



Power Management ASIC for IoT

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Thank you