Fraunhofer

PORTUGAL

RESEARCH CENTER FOR ASSISTIVE INFORMATION AND COMMUNICATION SOLUTIONS

PROJECT SPEC SHEET (EN)

IOTIP | INTERNET OF THINGS IN A PACKAGE:
WAFER LEVEL MODULAR ARCHITECTURE FOR INTERNET OF THINGS
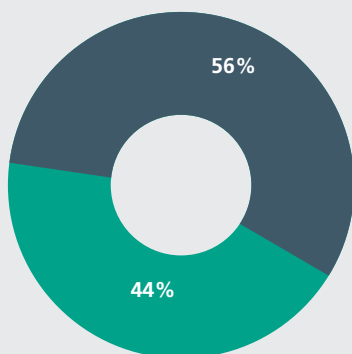
Project nº: 17763

Supported by the "Sistema de Incentivos": Investigação e Desenvolvimento Tecnológico (SI I&DT)

Partners: ATEP - Amkor Technology Portugal, S.A. (Leader) Associação Fraunhofer Portugal Research

Total eligible cost: 668.536,92€

**EU Funding**: 377.157,61€ (ERDF)

National/regional funding: N/A

56%

44%

■ **COPROMOTORS FUNDING**
■ **EU FUNDING**

Project's overview

Over the last few years we have seen the integration of sensor technology, processing power and radio connectivity in the objects that surround us in our everyday life, corresponding to the emerging "Internet of Things". Despite the increasing number of smart devices there are still some challenges that have a negative impact in the sustainability and dissemination of the "Internet of Things". One of the most concerning challenges is the time and costs associated to hardware development. Having this in mind, IoTiP proposal addresses these problems by presenting a development platform that will contribute for the spread of the "Internet of Things". IoTiP's platform combines hardware, firmware and software components to build a development ecosystem for the "Internet of Things". This will contribute for simplify and speed-up the development of new IoT solutions, thus contributing for a more advanced technology addressing new markets and requirements.

Furthermore, IoTiP will also address technical related issues, such as miniaturization, reduction of energy consumption, integration with other systems or the access to higher levels of information.

Portugal – Oporto
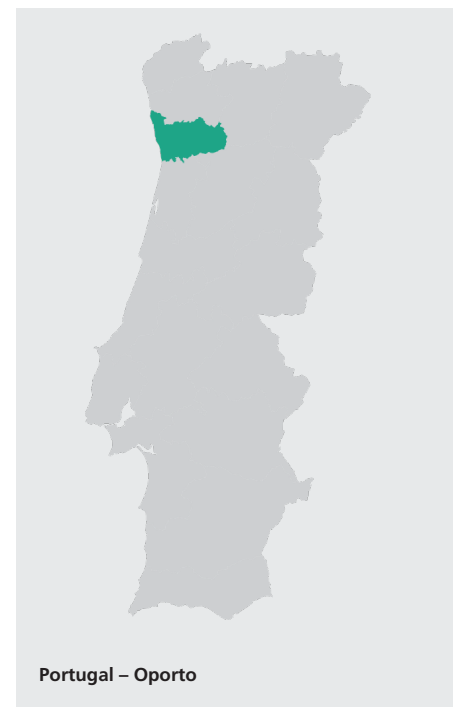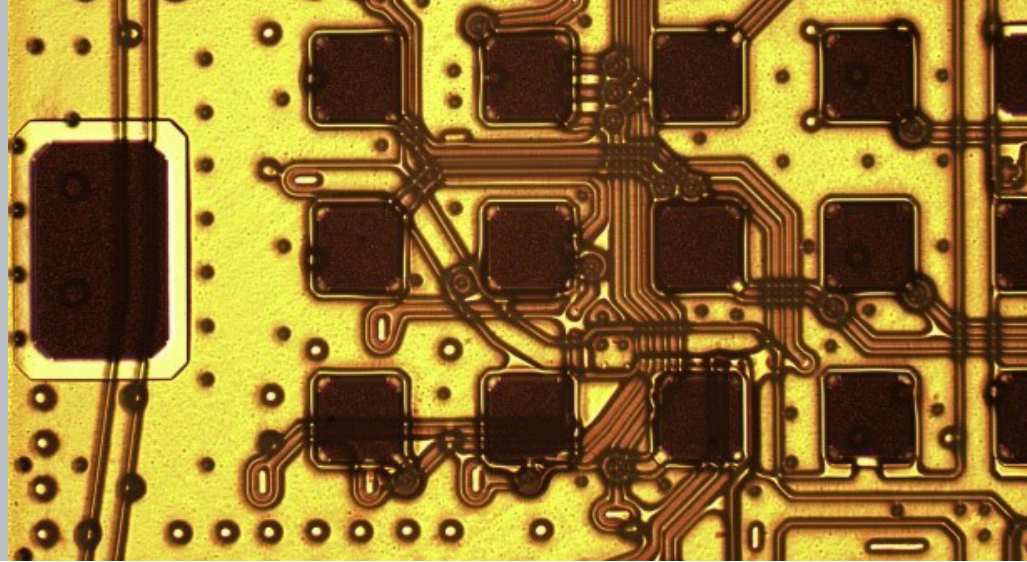
The proposed ecosystem is built on the top of a new SiP (System-in-Package) that embeds sensing, processing, energy management and radio communications. This chip will also provide a physical interface to enable a modular architecture for adding new features that can be of practical use in a huge variety of applications.

Moreover, IoTiP's ecosystem will provide a hardware abstraction layer that will allow developers to seamlessly interact with the SiP and its features in order to reduce even further the development cycle. In the scope of the project we also propose the

development of a web platform to provide the specifications, documentation, and examples to develop solutions based on IoTiP's ecosystem.

Not only is our goal to offer a development platform that stimulates the creation of new IoT solutions, but also to enable former low-tech industries, such as footwear or textile industries, to embed technology in their solutions yielding a differentiated product.

IoTiP is proposed by two different entities (NANIUM and Fraunhofer) that have all

the necessary competences to develop a "made in Portugal" technology that will contribute for IoT growth at a global scale.

Photos, videos and other dissemination materials
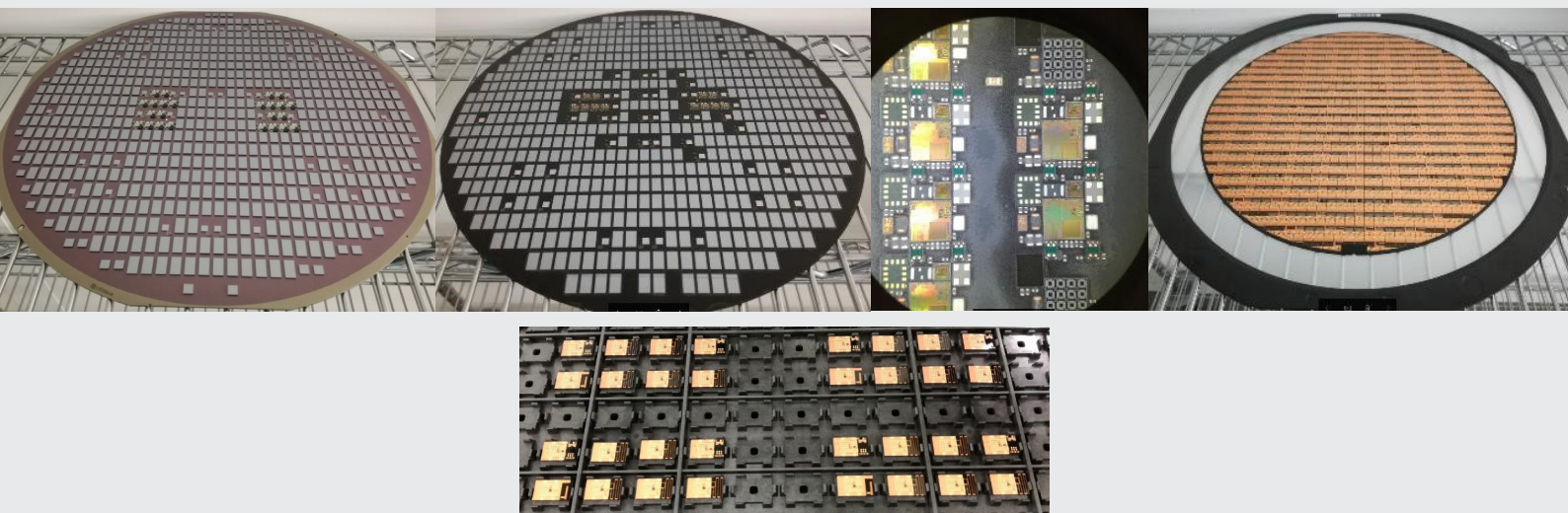
■ A "made in Portugal" technology for IoT growth (29.11.2016)

https://www.fraunhofer.pt/en/fraunhofer_portugal/news/news_archive/a-_made-in-portugal-technology-for-iot-growth.html

■ Researchers debate Internet of Nano Things in Braga (10.03.2017)

https://www.fraunhofer.pt/en/fraunhofer_portugal/news/news_archive/Researchers_debate_Internet_of_Nano_Things_in_Braga.html