



The AMANDA project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No. 825464

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NEWSLETTER No.2

June 2020

AutonoMous self-powered miniAturized iNtelligent sensor for environmental sensing and asset tracking in smArT IoT environments



AMANDA

The world in your hands

SECOND YEAR OF THE AMANDA PROJECT IMPLEMENTATION

The AMANDA project is a three-year project, funded by the European Union under the Horizon 2020 programme and it's successfully undergoing the second year of implementation.

The AMANDA project aims to stretch the limits of Electronic Smart Systems (ESS) in terms of energy autonomy, decision making and maintenance-free lifetime extension as well as miniaturization, by applying a high aspect ratio design architecture. The ultimate goal of the project is to develop and validate a cost-attractive next generation Autonomous Smart Sensing Card (ASSC) that will be used in IoT applications for smart living and working environments.

The objective of the AMANDA project is to create an **autonomous multisensory platform, in the size of a credit card and with a thickness not exceeding 3 mm.**

Click [here](#) to learn more about the AMANDA objectives.

AMANDA ASSC

One Card – A World of Features and Solutions!

The Consortium



WHY AMANDA ASSC?

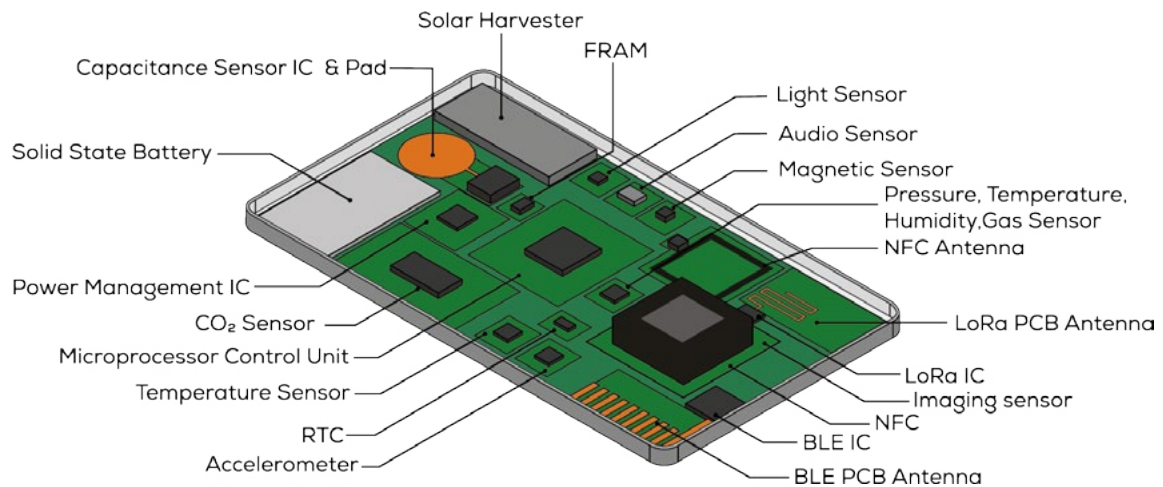
- Autonomous, connected sensor card
- Multi-sensor card
- Ultra-low-power, ultra long life (10 years)
- Solid state battery, no battery change required
- Small and thin (3mm thickness)
- GDPR compliant

ASSC Use Cases and Scenarios

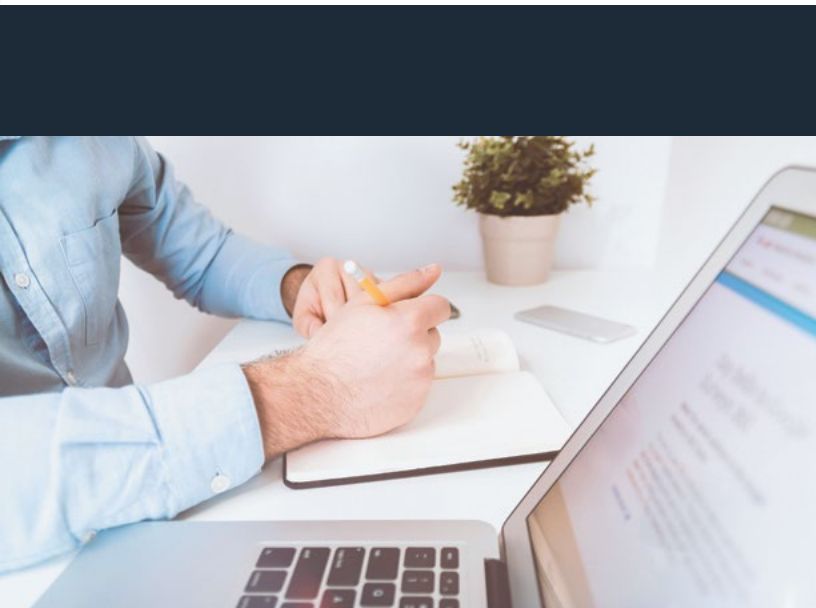
Entering the second year of the project implementation, the Consortium defined **six (6) use cases** and identified **nineteen (19) operational scenarios** for the different versions of the AMANDA ASSC. Each operational scenario is linked to one of the six defined use cases. The scenarios are a realistic reflection of the end-user needs and demonstrate the way the ASSC can be used in real-life situations in which autonomy and discretion play a major role. For more information about each operational scenario click [here](#).



INTRODUCING THE AMANDA ASSC ARCHITECTURE



In this phase, AMANDA members are focused on fine-tuning the architecture design of the AMANDA device and defining a high-level overview of the components. The project is focused on functionality design and system miniaturization to increase flexibility, allowing for multiple iterations during the integration process.



The AMANDA ASSC contains components developed and optimised by the project's partners:

MCU

Solid State Battery

Energy Harvester

Power Management IC

CO₂ sensor

Temperature sensor

Capacitive sensor

Imaging sensor

Selected short- and long-range radio interfaces, as well as off-the-shelf sensors, are also included.

PUBLIC DELIVERABLES

Within the AMANDA Project, ten public deliverables have been provided until now.

These documents reflect the project, its results, and are written and reviewed by the project Consortium and experts. Click [here](#) to read or download public deliverables.

Three versions of the AMANDA ASSC are derived by adding different sets of sensors, selecting the suitable radio interface and loading application-specific software:

indoor version
outdoor version
wearable version



ENSURING PROJECT CONTINUITY AND SUCCESS IN COVID-19 TIMES

Since the beginning of the current health emergency, members of the Consortium have implemented initiatives to work in optimal safety conditions and at the same time provide operational continuity, in full compliance with the local directives issued by the countries where the members of the Consortium operate.

The Project continuity plan is being tested by rapidly evolving challenges, such as travel restrictions, and as large-scale remote working becomes a reality. In alignment with the World Health Organization's guidance and best practices as well as the advice of local governments, the Consortium has implemented the following measures to protect its team members, clients and stakeholders:

- *Prohibited all business travel and implemented a practice of self-quarantine following certain personal travel*
- *Implemented a work from home policy across all locations*
- *All communication and arrangements within the teams are being carried out smoothly (all members are available via mobile phones and online channels (e-mail, skype, web meetings)*
- *Postponed scheduled events and moved most to online formats*
- *3rd Plenary meeting which should take place on 6th and 7th May 2020 at IMEC location in Eindhoven, the Netherlands, was held online.*

The COVID-19 outbreak has an impact on everyone's daily activities, but we hope all are staying safe and well during this difficult time. The challenges are as significant as the times we are in, but we are convinced that the result of our work will be a widely accepted innovative product.



2ND PLENARY MEETING IN OXFORD, UK

The second AMANDA Plenary meeting was held on 10-11 December 2019 at Lightricity location in Oxford, England, UK. Among other topics, the first results of the project activities were presented. During two days of meeting, a review of the work performed during the past six months and the planning for the next six-months period took place. At the first day, the AMANDA partners had an extensive discussion on the use cases of the Project. All partners were focused on the requirements of each use case to determine the exact characteristics of the sensors. Day one was also dedicated to IPR management theme and evaluation of the off-the-shelf components/sensors. During the second day, the AMANDA partners discussed potential project risks and developed a strategy what steps would be taken to reduce the adverse effect. At the very end of the successful plenary meeting, the Consortium decided to make a suggestion to the EC for an early September for the next review meeting.





MICRODUL AT MD&M WEST CONFERENCE

Microdul, a member of the AMANDA Consortium attended the MD&M West conference held at Anaheim, CA, USA. Numerous exhibitors presented their latest products, innovations and application techniques, but also connected with innovators in MedTech. Conference took place on 11-13 February 2020, and Microdul took a chance to present AMANDA project, its objectives, results and technology to potential stakeholders. Click [here](#) to download Microdul's Presentation.



UPCOMING EVENTS

Due to the recent situation of the spread of the coronavirus, many 2020 events have been postponed. We hope to come back as soon as possible with all the activities related to the dissemination and communication of the AMANDA project. Calendar of the upcoming events, i.e. conferences and tradeshow exhibitions, will be published at the AMANDA website.

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