

in Amanda Project

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AMANDA

Autonomous self-powered miniaturized intelligent sensor for environmental sensing and asset tracking in smart IoT environments.

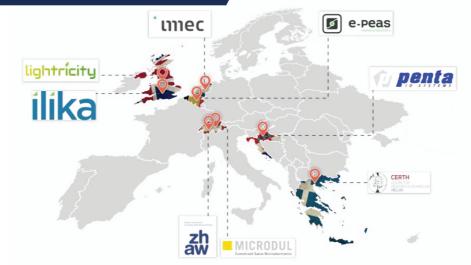
Our goal

The ultimate goal of the project is to develop and validate a cost-attractive next generation ASSC, an autonomous multisensory platform, in the size of a credit card and with a thickness not exceeding 3mm.

AMANDA ASSC combines autonomous operation with a series of measurements executed in ultra-low power manner.

AMANDA ASSC will be used for environmental sensing, asset and people tracking / monitoring in IoT applications for smart living and working environments.

The locations of consortium members





Autonomous Smart Sensing Card

The consortium











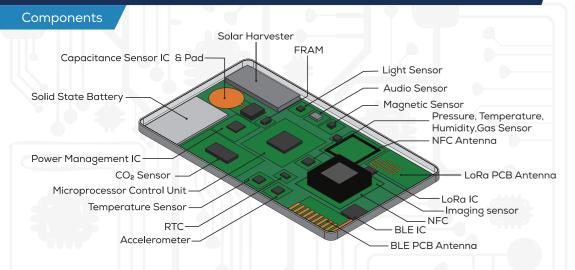






The AMANDA project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 825464

The AMANDA ASSC contains components developed and optimised by the project's partners: MCU, Solid State Battery, Energy Harvester, Power Management electronics, CO₂ sensor, Temperature sensor, Capacitive sensor and Imaging sensor. Selected short- and long-range radio interfaces, as well as off-the-shelf sensors, are also included.



	Off-the-shelf sensors	Motivation
	Low-power accelerometer	Support for positioning, activity monitoring, event capturing
	Spintronics sensor/Magnetometer	Support for positioning
	RH&T, VOC sensor	Environment monitoring
	Light sensor	Light condition monitoring for power failure prediction
	Acoustic sensor	Environment monitoring, event capturing

Three versions of the **AMANDA ASSC** are derived by adding different sets of sensors, selecting the suitable radio interface and loading application-specific software: an **indoor**, an **outdoor** and a **wearable** version.

Use case					
1	Environmental room sensing for automated room control and safety		«lm»		
	Building automation	Indoor	U		
2	Multisensory indoor po monitoring				
	Smart cities	Indoor / Outdoor	\Box		
3	Infrastructure, noise, weather and air quality monitoring station		(())		
	Smart cities	Outdoor			
4	Identification and health of people in a working environment		Q [⊕]		
	Wearables	Wearable			
5	Assets and goods tracking and monitoring				
	Industrial IoT	Indoor / Outdoor	- Δ 3		
6	Mitigating the impact of current and future epidemics		(†)		
	loT in healthcare	Indoor / Outdoor / Wearable			

The usability of the **AMANDA ASSC** will be demonstrated by using it in **nineteen** different scenarios, each one designed to present the functionality of the system in different application areas.

