



Services and expertise

Service

- Scientific consulting
- Technical support
- Administrative support

Hardware

- Dual-core Cortex-M4 processor
- USB and wireless charging
- Wireless data-transfer with Bluetooth 5
- Analog and digital interfaces
- Customizable 3D-printed case

Software

- Closed system with local data storage
- Transparency of data flow
- Wireless connection to user interfaces
- Android app: easy data gathering and visualization
- Python desktop app: advanced data analytics

Contact

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More information about Swarmy-V2:



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Fraunhofer Institute for Reliability
and Microintegration IZM

Wireless, autonomous, miniaturized
sensor-actuator platform for industrial
measurements

SWARMY-V2



Measure easily where you want!

Our sensor-actuator platform Swarmy-V2 is the right choice for logistics, industry and production and supports you in monitoring and analyzing processes. With a size of 36 mm x 26 mm, the module can also be mounted in hard-to-reach places.

With Swarmy-V2, you can connect multiple modules to form a swarm. This decentralized and distributed architecture brings not only robustness and flexibility, but also scalability to the overall system, opening up new possibilities for monitoring and automating processes.

The modules can be attached easily and quickly. The miniaturized IoT platform helps you from the first development step to capture your data at the desired measuring point, thus reducing your development times and keeping an overview of your processes at all times. Take automation to a new level and close the data gap between idea and established process.

Measure flexible what you want!

A customized solution, adapted to your requirements. Swarmy-V2 integrates a wide range of sensor and actuator options that can be configured into a module variant. In addition, module expansion for further sensors and actuators is possible. Swarmy-V2 enables you to detect and control:

- Indoor localization
- Light intensity to detect thresholds in ambient light or for presence
- Ambient light or presence detection
- Any movement or orientation in the room
- Indoor air quality, air pressure
- Distances between objects and detection of gestures and objects with a lidar
- Distances above the ground with an altimeter
- Humidity and ambient temperature
- Acoustic waves and angle of arrival with microphone arrays
- Relevant data at different locations simultaneously
- Two stepper motors or four DC motors
- Alarm signals, acoustic communication

Measure straightforward and fast!

The IoT platform offers you various options for recording physical and chemical measured variables and generating movements. The system is designed for simple, user-friendly set-up and can provide initial measurement data after just a few steps.

From the first concrete automation idea to the real implementation - necessary, qualitative data are the basis for the evaluation of an approach. Swarmy-V2 supports you in this process. Immediately operational, energy-efficient and independent of your already existing infrastructure. You can directly and immediately optimize set-up times, manufacturing tolerances and process variations in forming, machining, joining and coating processes.

Start your path to digital transformation with us. Contact us and experience the Internet of Things, precisely adapted to your needs and challenges.

From installation at the measuring point to the first qualitative data in a few minutes

Secure and infrastructure-independent solution through a closed system with a continuous transparency of the flow