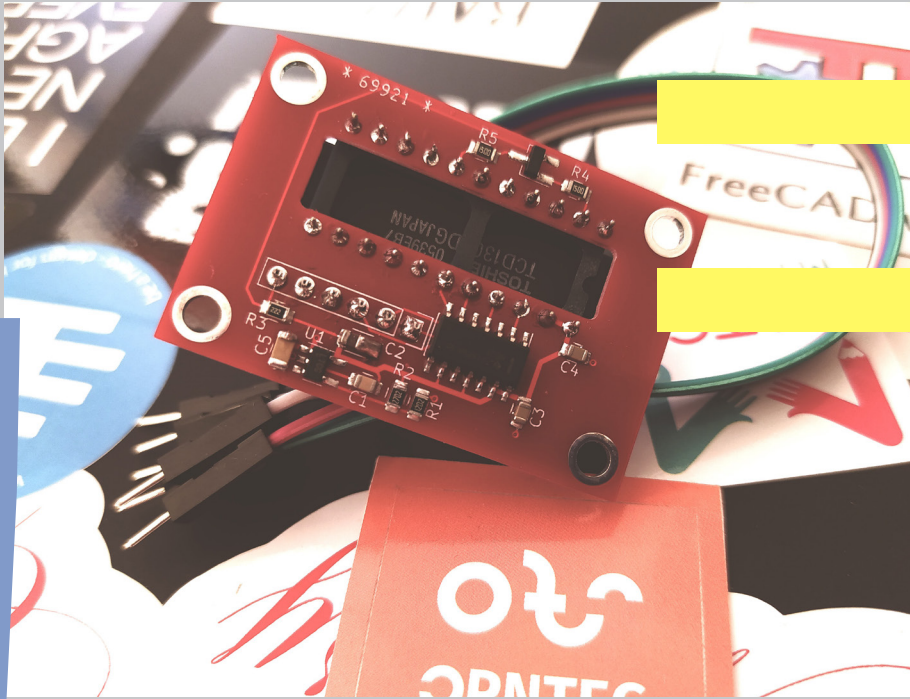




From community idea to business product

User-electronics



The co-developed
Pocket Science Lab
of OpnTec

OPEN!
NEXT

About: OpnTec

OpnTec, a company for open technologies headquartered in Berlin (GER), was founded in 2018. It develops sustainable open-source software and open-source hardware products together with a global community.

The Pocket Science Lab (PSLab) is an Open-Source Hardware project and combines multiple measurement functions in a compact board. What makes the PSLab board special is that it can be used by anyone, including teachers, students, hobbyists, scientists, etc. With the Pocket Science Lab hardware, OpnTec enables everyone, from consumers to industry, to take measurements and collect data to solve global problems with science.



The Challenge

Together with the FOSSIA community, OpnTec collaboratively developed the open source PSLab board, a small USB powered hardware extension for Android phones or PC. The board adds additional sensor capabilities to the phone and enables you to connect to hundreds of available sensors.

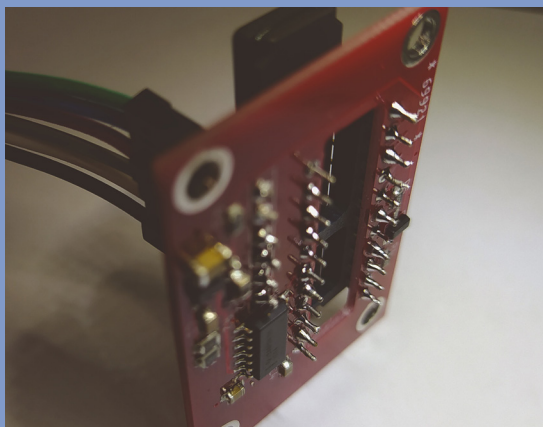
However, OpnTec is particularly challenged when it comes to engaging a community of users, teachers, students (prosumers), who are considered relevant to the development of the product. This is even more challenging during the pandemic, when physical meetings have been nearly impossible to conduct. In order to foster the PS Lab, OpnTec started the OPENNEXT journey and further entered into a cooperation partnership with Fablab Berlin, an open digital fabrication studio which offers access to a professional DIY studio and a great community of makers.

Open Source Implementation

The first version of PSLab has already been produced and sold through various channels. When used in conjunction with external sensors, the instrument can be expanded into a complete pocket-sized laboratory, collecting data on air and water quality, temperature, radioactivity and more.

The PSLab has digital pins to plug in sensors and support any sensor using the long-established I2C standard. These I2C sensors are used widely in consumer and industry devices, for example together with Arduino boards.

The pilot project is about developing a second, more consumer oriented version of the board. Here, the user community plays an essential role in the development process. For example, the community helps throughout the design process: through user testing, feature creation, prototyping, and in the final development of the second version of PSLab.



LINKS

[Website](#)

[PS Lab](#)

[GitHub](#)

[Wikifactory](#)

OpnTec already has developers from the open source community who participate in public project meetings. With the help of these developers, the company can expand on usage scenarios and sensors, and add specific features. Thanks to the open source collaboration, OpnTec has simplified and improved documentation through user testing with potential users to finally make the PSLab a consumer product.