

## **UDOO KEY is now over 1000% overfunded. UDOO announces UDOO KEY PRO AI VISION KIT**

*November 4, 2021, 11.36 AM* - UDOO KEY, the Edge AI microcontroller by UDOO, hit the Kickstarter goal of \$10,000 in 90 minutes and is now over 1000% overfunded with more than 13 days to go.

UDOO KEY, the flexible AI platform, is a brand-new AI-first solution based on Raspberry Pi RP2040 and ESP32. It enables machine learning applications in the most popular programming languages and libraries, including TinyML, TensorFlow Lite, MicroPython, C, C++ etc. The board, designed for Edge AI projects, marks the fifth crowdfunding campaign by UDOO, which already raised more than 2 million dollars in previous Kickstarter campaigns.

**Link to the campaign:** [key.udoo.org](https://key.udoo.org)

UDOO KEY combines Raspberry Pi RP2040 and a fully programmable ESP32 into a single powerful piece of hardware. The board comes in two versions: UDOO KEY and UDOO KEY PRO. Both feature Wi-Fi, Bluetooth and BLE; UDOO KEY PRO also features a 9-axis IMU and a digital microphone. The board is fully compatible, both hardware and software-wise, with Raspberry Pi Pico and ESP32.

UDOO KEY also grants access to Clea, the upcoming AI as a service platform by SECO Mind, SECO's daughter company. Clea is an extensible AI & IoT platform for professional developers, startups, R&D departments and hobbyists. It allows users to quickly build, monitor and deploy Artificial Intelligence models and apps over a fleet of remote-controlled devices. It comes with a set of pre-built AI models and apps called Clea Apps, all developed by SECO. Last but not least, it's natively compatible with UDOO KEY, Raspberry Pi as well as Arm and x86 processors.

Maurizio Caporali, Co-CEO of SECO Mind, said, "Today, AI is very misunderstood. Many AI use cases don't require a powerful processing unit, and that's where UDOO KEY comes in. For the first time ever in the world of Edge AI, the user has the option to build an AI project on their terms, using either Raspberry Pi RP2040, ESP32, or both. Several companies we are in touch with find it difficult to take advantage of the AI revolution. UDOO KEY and Clea make this as easy as it gets."

Shipping will start in January 2022. The Early Bird UDOO KEY is available at \$4, while the Early Bird UDOO KEY PRO is available at \$9. Both are limited to 1,000 units.

### **The kits**

UDOO has also made available three special kits.

The first kit, in collaboration with Arducam, is named "Early Bird UDOO KEY PRO Cam Kit + Clea " and includes 1x UDOO KEY PRO, a 2MP SPI Camera and access to Clea.

The second kit, in collaboration with SeeedStudio, is named "Early Bird UDOO KEY PRO Grove Kit + Clea" and includes 1x UDOO KEY PRO, access to Clea and 14 handpicked Grove Modules, including 5 sensors/ 5 actuators/ 2LED/ 1 LCD display/ 1 Grove shield.

The third kit, in collaboration with Arducam, is named "UDOO KEY PRO AI VISION KIT" and includes:

- UDOO KEY PRO
- UDOO VISION X5, i.e. a powerful single-board computer for computational-intensive computer vision tasks at the edge
- a 4K 8MP Autofocus USB camera
- Access to Clea

UDOO VISION X5 is the perfect companion for UDOO KEY.



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It's a powerful x86 single-board computer based on an Intel® Atom® X5-E3940 Quad Core. The board is built upon a Pico-ITX pocket-size form factor - the ideal platform for computer vision projects. Unlike other development boards, UDOO VISION X5 natively runs OpenVINO™, a toolkit by Intel to quickly deploy computer vision and AI/ML apps at the edge.

### More details on UDOO KEY

The Raspberry Pi Pico-compatible part of UDOO KEY is built upon a Raspberry Pi RP2040 dual Arm Cortex-M0, featuring a QSPI 8MB flash memory, 133 MHZ clock, and 264KB of on-chip SRAM. The ESP32 is based on a dual-core Xtensa 32-bit LX6, with 16 MB flash memory, 8MB PSRAM, Wi-Fi, Bluetooth and Bluetooth Low Energy. The two microcontrollers can talk to each other via serial port.

The user can program the two microcontrollers in an easy way via a USB-C connector and decide whether to talk with RP2040 or ESP32 via jumper. The UDOO KEY provides many more interfaces: three fully programmable LEDs, and the same pinout of Raspberry Pi Pico, making it 100% compatible with it, both hardware and software-wise. Last but not least, the UEXT connector is accessible from the ESP32, which exposes the I2C, UART and SPI interfaces.

The UDOO KEY also mounts two powerful sensors: a 9-axis IMU and a digital microphone, plus a standard UEXT connector to easily add sensors and other interfaces. Thanks to the on-board ESP32 microcontroller, the UDOO KEY features full Wi-Fi 802.11b/g/n connectivity, Bluetooth and BLE v4.2.

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### About UDOO

UDOO is a SECO brand of Open Source Mini PCs for makers and professional developers. Behind UDOO there is a multidisciplinary team of researchers with expertise in interaction design, embedded electronics, sensor networks and cognitive science who along the years have worked together on several projects, sharing the same vision about the role of technology in human life.

Contact [info@udoo.org](mailto:info@udoo.org) for further inquiries.  
[www.udoo.org](https://www.udoo.org)

### About SECO

SECO (IOT.MI), listed on the Italian Stock Exchange (STAR segment), develops and manufactures cutting-edge technological solutions, from miniaturized computers to fully customized integrated systems combining hardware and software. SECO also offers Clea, a proprietary end-to-end IoT-AI analytics software suite, made available on a SaaS basis, that allows clients to gather insightful data from their on-field devices in real time. SECO employs over 500 people worldwide and operates through 3 production plants, 6 R&D hubs and sales offices in 9 countries. With a turnover of more than €75 million as of December 31, 2020, SECO serves more than 200 blue-chip customers which are leaders in their respective fields, including Medical, Industrial Automation, Aerospace & Defense, Fitness, Vending and many other sectors. SECO R&D capabilities are further enhanced by long-lasting strategic partnerships with tech giants and collaborations with universities, research centers, and innovative start-ups. Corporate social responsibility is part of the strategy of SECO, which undertakes several actions to reduce its environmental footprint and increase its impact on its people and local communities.

For further information: <http://www.seco.com/>