

AKX00045

KIT ARDUINO SCIENCE R3



Overview:

Unlock a world of interactive learning with the Science Kit R3's robust hardware and software. With the Arduino Nano RP2040 Connect, Arduino Science Carrier R3, and an impressive array of sensors at your disposal, you'll have everything you need to embark on an exhilarating educational journey. Meanwhile, the Science Journal app effortlessly bridges the gap between theory and practice, facilitating real-time data collection, recording, and interpretation.

The kit elevates the learning experience by nurturing an enhanced understanding of complex physics concepts through engaging hands-on experimentation. It promotes scientific literacy and hones critical thinking skills by providing real-world application scenarios. With its intuitive content guide, both teachers and students can navigate through scientific explorations with ease.

Explore what the Arduino Science Kit R3 has to offer:

- Hands-on experimental learning: perform physical experiments, transforming abstract physics concepts into tangible and interactive experiences.
- Real-time data collection & analysis: With the integration of the Science Journal app, the kit allows students to collect, record, and interpret real-time data with mobile devices, strengthening their data literacy and scientific inquiry skills.
- Teacher and student-friendly design: Equipped with a preloaded program, the kit requires no prior knowledge of coding or electronics. It also features Bluetooth® connectivity for easy data transmission from the Arduino board to the students' mobile devices.
- Comprehensive sensor ecosystem: The kit comes with multiple sensors, providing a wide range of data collection possibilities and keeping it adaptable to evolving educational needs.

- Free guided courses - Explore Physics: Includes an intuitive courses guide that assists teachers and students in using the kit, presenting and analyzing data, and evaluating experimental outcomes. These courses also help students effectively communicate their scientific discoveries.
- Comprehensive teaching support: With its intuitive guide, the Arduino Science Kit R3 eases the instructional process for teachers. It not only instructs on kit usage, but also assists in data presentation, analysis, and evaluation, ensuring students communicate their scientific discoveries effectively.

Technical specifications:

Hardware:

- Arduino Nano RP2040 Connect
- Arduino Science Carrier R3
- Embedded sensors:

- Air quality, temperature, humidity & pressure
- IMU: 6-axis linear accelerometer, gyroscope, and magnetometer
- Proximity, ambient light, light color
- Voltage or electric potential difference
- Electrical current
- Electrical resistance
- Function generators to see and hear the effect of frequency, amplitude, and phase on a sound wave
- Ambient sound intensity sensor

Ports:

- 2x Grove analog inputs (for external temperature-probe sensor)
- 2x Grove I2C ports (for external distance & ping-echo sensor)
- 1x Battery JST connector
- 2x Output ports connected to lower power signal from function generators (future generation)
- 1x 3.3 V output port and Ground
- 2x speaker ports connected to function generators

Other:

- 50 cm double-ended cable - blue: crocodile clips one end, banana plug the other
- 20 cm double-ended cable - black: crocodile clips one end, banana plug the other
- 20 cm double-ended cable - red: crocodile clips one end, banana plug the other
- VELCRO® strips
- Silicon stands
- External temperature probe sensor
- Ultrasonic distance sensor
- Grove cable 4-pin housing with lock x2 (L=200 mm)
- USB-C® Cable
- 50 cm double-ended cable - yellow: crocodile clips one end, banana plug the other
- 2x Speakers
- Cable for battery holder with JST connector
- Battery holder for four 1.5V AA batteries



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Realizó

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