CODINGLAB ERP PRO
EXPANDABLE ROBOT

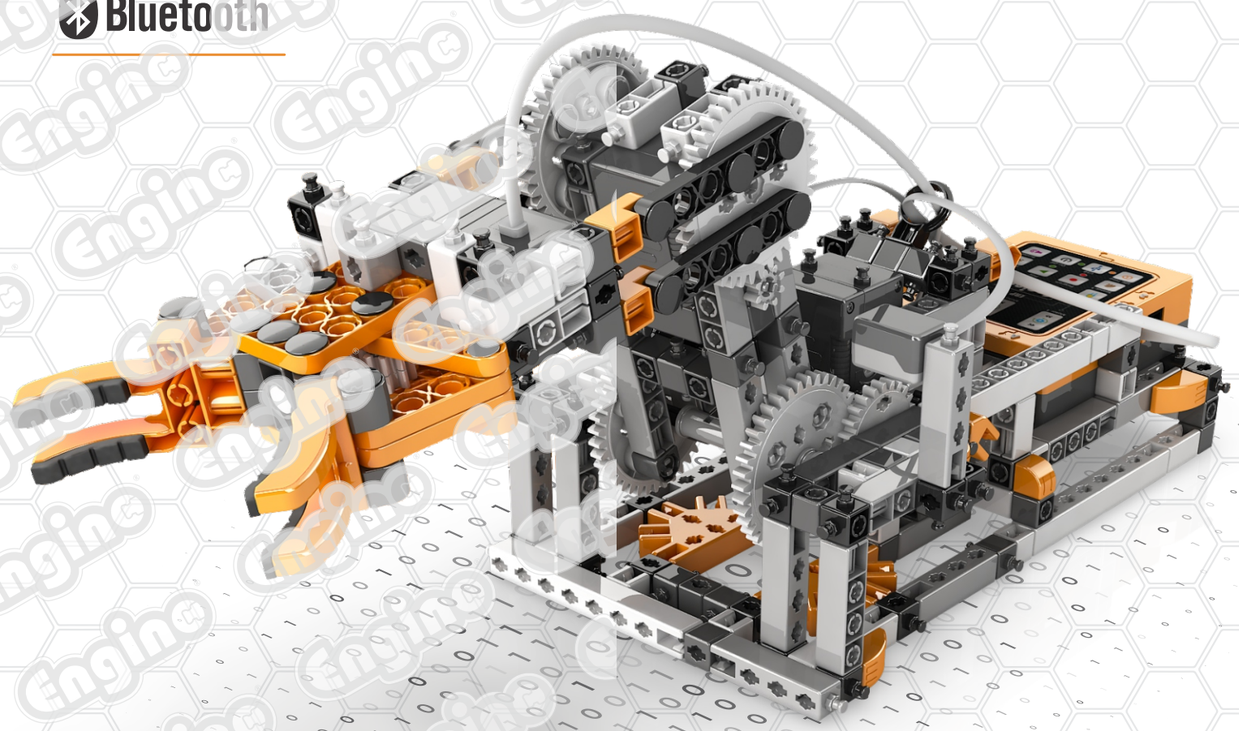
1 model — printed instructions (included)

1 model — online 3D instructions

9+

Bluetooth™

CODINGLAB ERP PRO™ is based on the first robotic platform of ENGINO® which has introduced a new era of innovations, leading the global STEM trend. The gadget set, besides the Ultrasonic sensor, one IR sensor and 3 motors, includes an extensive library of mechanical parts with gearing systems to build advanced models including a functional robotic arm and a grabber vehicle. ERP PRO™ comes with a manually programmable controller that can also be connected with bluetooth to smart devices or with a USB port to a PC. It is programmable with the KEIRO™ software and allows full reconfiguration to create robotic models and practice coding with algorithmic reasoning.



More Models Online

A Use your PC or tablet and go to the following link for more models:

www.engino.com/instructions/rob30

B Download the app to discover step-by-step instructions in 3D view!

Engino KidCAD (3D Viewer) app:

GET IT ON Google Play — Download on the App Store

CODE LEARN & INVENT
with flow icons & text programming

master engineers

EXTRA MODEL

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Fax: +357 25821961
E-mail: info@engino.com
Web: www.engino.com

Made in EUROPE

WARNING:
CHOKING HAZARD–Small parts.
Not for children under 3 yrs.

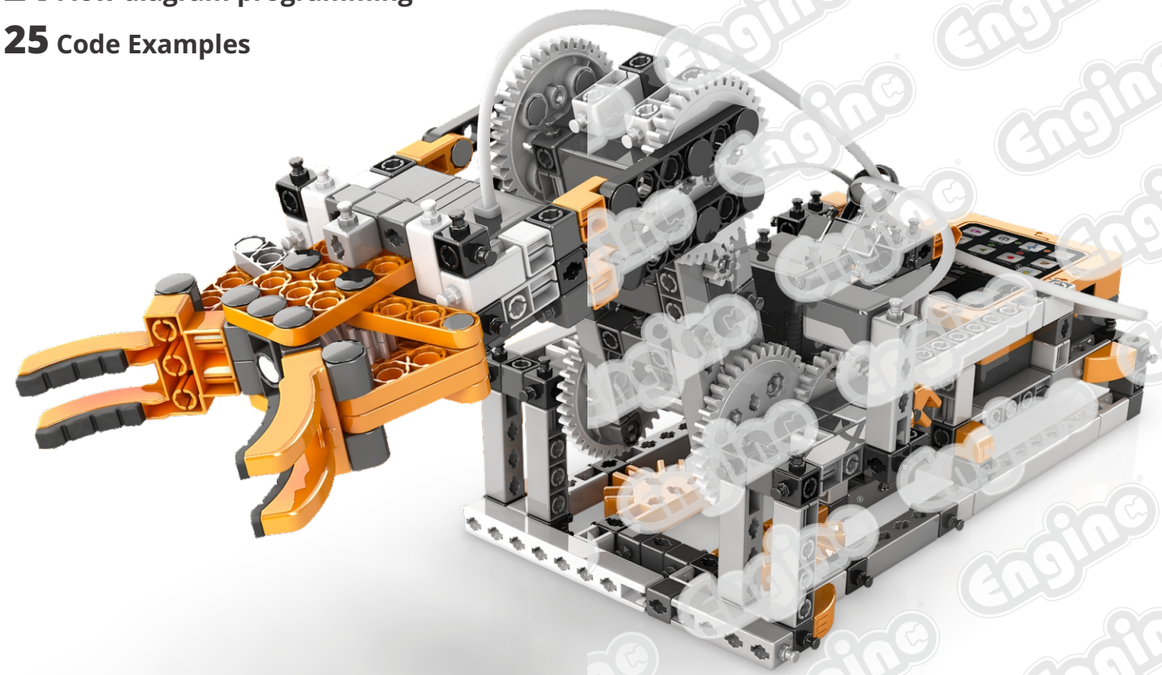
Product Code: ROB30

Contents

User Manual

Experiments

Building Instructions



User Manual

Engino® Robotics philosophy

Intellectual development helps students to develop their ideas while acquiring new information. This is essential for the development and improvement of creativity and laboratory skills. The combination of PRO 2.0 controller with the patent pending KEIRO™ software is an ideal solution for teaching robotics.

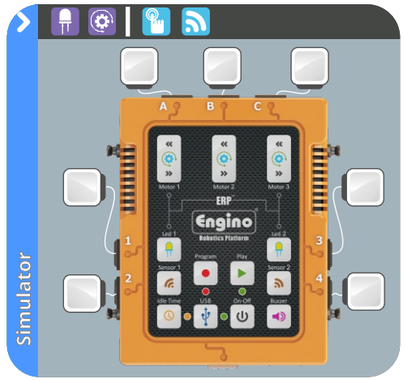
Engino® is providing educational products with multiple innovative ideas. The PRO 2.0 controller allows **five interconnected ways of programming**, so that users can choose the desired method according to their age and experience. Furthermore, executing **simultaneous tasks** has never been easier with the introduction of "with/after" and "run in parallel" modes to action blocks.

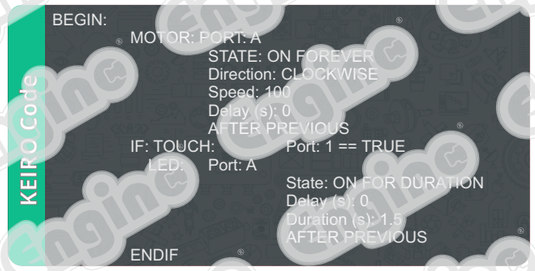
Manual programming

This first level of programming is about interacting physically with control devices. The action of pushing buttons is a method that all children are familiar with. Students can record any sequence of commands directly from the PRO 2.0 controller and save it on the device. The action can then be recalled and repeated for unlimited number of times. This fundamental programming method is essential in teaching the procedure of commands and sequence of events.

Simulator

This is a special window in the KEIRO™ software that simulates the functions of the actual controller, with digital buttons instead of physical. Once the PRO 2.0 controller is connected to a device (either PC or tablet), the user can record a program and get a visible feedback from the robot. While the program is being recorded, the flow diagram is generated and appears as visual blocks.





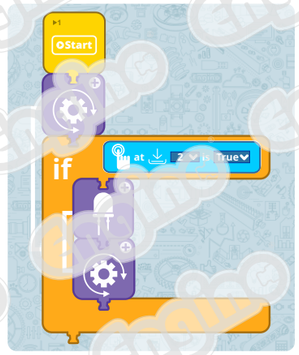
KEIRO™ Code

A "pseudolanguage" (not an actual programming language) created specifically for the KEIRO™ software. It has many known terms of programming such as BEGIN, IF, END, etc. It is the ideal tool for introducing advanced programming, as it offers a quick preview of the program in a textual form.

Flow Diagram

The “Flow Diagram” is the main programming feature of the KEIRO™ software. Here, the user can manipulate inputs and outputs to create sophisticated programs withe minimal efford. The platform is designed in a scratch like block programming language that offers a gradual transition from manual to digital programming.

Drag-and-drop programming environments have been proven to be valuable educational tools which provide an easy way to interact with the real world and develop an intuitive human-machine interface.



A flow diagram is created easily by dragging and dropping action blocks

Smart device connectivity

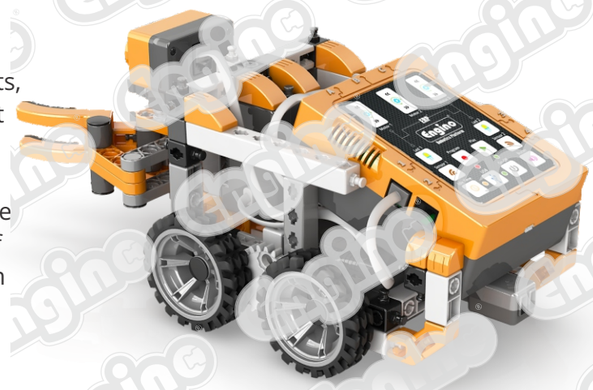
Complying with modern technological advancements, PRO 2.0 Controller can also be controlled by a smart device (mobile or tablet) through a bluetooth connection. KEIRO™ software is a Scratch-based graphical programming platform which can either be used on **PC** or a **smart device**. The programming of the robot is done in a fun way, utilizing all classroom possibilities in a way that students would always be eager to work on their projects.

KEIRO™ *Software*

EnginoRobot BT™

GET IT ON Google play

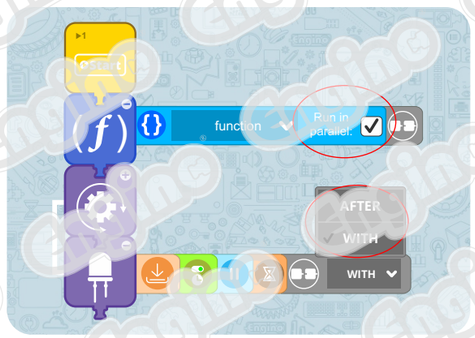
Available on the App Store



Furthermore, the **EnginoRobotBT™** app, available on Google Play or Apple Store, is essentially simulating the interface of the actual controller. Users can control the model, record and play a program just as they could do by pushing the physical buttons on the PRO 2.0 controller. All these can be achieved remotely and digitally! The app is featuring two additional controlling methods, the ***Joystick*** and the ***Tilter.*** Download the app for free, and expand manual programming potential.

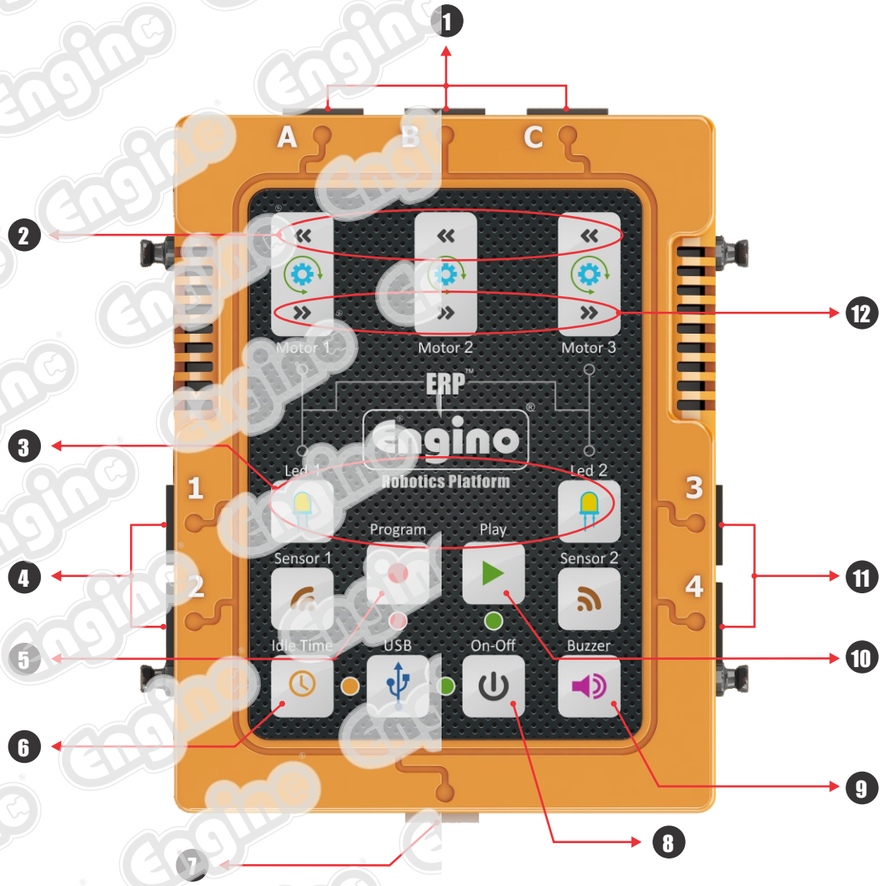
Parallel programming

A major innovation of Engino® in educational robotics is the function of parallel programming. Action blocks in KEIRO™ software contain an ingenious property which allows the user to choose whether a command will be executed **after** or **with the previous** one. In addition, the software can call a function (tuple of commands) with an option to **run in parallel** to the subsequent action blocks of the code. These options reduce the complexity of programming and allow sophisticated tasks become easily feasible.



PRO 2.0 controller

The Engino® PRO 2.0 controller is a robotic device consisting of a main controller, a variety of buttons and indicators. Through the 7 ports that are featured on the device, it can be connected with peripherals such as motors, LED, InfraRed and touch sensors. The PRO 2.0 controller is a powerful, flexible and easy to use tool. This manual provides information about the main features of the controller, how to install the KEIRO™ software and how to program your robots through code examples.



1. **A,B,C RJ** PORTS
connects peripherals to the controller

2. **ANTICLOCKWISE** BUTTONS
anticlockwise for motors A,B,C

3. **LED** BUTTONS
turns on a LED at ports 1,3

4. **1,2 RJ** PORTS
connects peripherals to the controller

5. **PROGRAM** BUTTON
records a sequence of commands

6. **IDLE** BUTTON
sets the robot to an idle mode

7. **mini USB** PORT
connects controller to a PC

8. **POWER** BUTTON

9. **BUZZER** BUTTON
sound signal

10. **PLAY** BUTTON
runs the stored program

11. **3,4 RJ** PORTS
connects peripherals to the controller

12. **CLOCKWISE** BUTTONS
clockwise for motors A,B,C

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