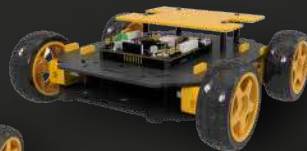


REX8

8IN1 ROBOT KIT

QUICK START GUIDE



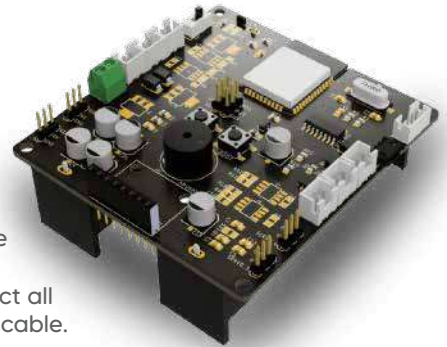
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What Is REX 8 in 1 Robot Set?

REX is an educational robot set developed by Robotistan R&D team. REX 8 in 1 robot set eliminates the difficulties in circuit set up such as connection point and cable confusion with the REX Main Board using ESP32 infrastructure. At the same time, Arduino IDE, Thonny IDE and MicroBlocks IDE provide a great flexibility for the user in the programming.

The REX main board is a special main board that designed to make the mechanical and electronic set up of the robots in the 8 in 1 set readily. This board, which uses the ESP32E processor, has connectors to connect all the components that are used in the REX 8 in 1 set to the circuit with a cable.



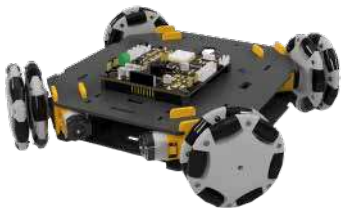
ARMBOT

ArmBot is a REX robot that allows the objects around it to be moved from one point to another point by remote control thanks to its robot arm. The robot arm on ArmBot consists of 3 servo motors. ArmBot, which can move in 4 different axes, up, down, right and left, can easily reach even objects in hard-to-reach areas with its movement.



BALANCEBOT

BalanceBot is a special robot that can remain balanced despite physical interventions thanks to the acceleration sensor on the REX board. You can use BalanceBot in situations where you need to carry objects in balance.



OMNIBOT

OmniBot provides easy access to every point without any turning movement thanks to its special omni wheels. By using OmniBot, you can reach hard-to-reach points very easily. This robot is designed to reach hard-to-reach points.



ROVERBOT

RoverBot is a REX robot that allows you to move comfortably in difficult terrain conditions thanks to its tracked structure. Like other REX 8in1 robots, you can control RoverBot remotely if you want, or you can make it move autonomously with special coding.



SONICBOT

SonicBot detects objects by emitting sound waves around it thanks to the distance sensor on it and can perform different functions by using its mechanical properties according to the values it detects. You can avoid obstacles by using SonicBot. You can use SonicBot for tasks that require you to detect objects in the environment.



SUMOBOT

SumoBot detects other objects on the track thanks to the HC-SR04 distance sensor and the line tracking sensor. Thanks to the line tracking sensor, SumoBot detects whether objects are on the track and thus moves them off the track.



TRACKERBOT

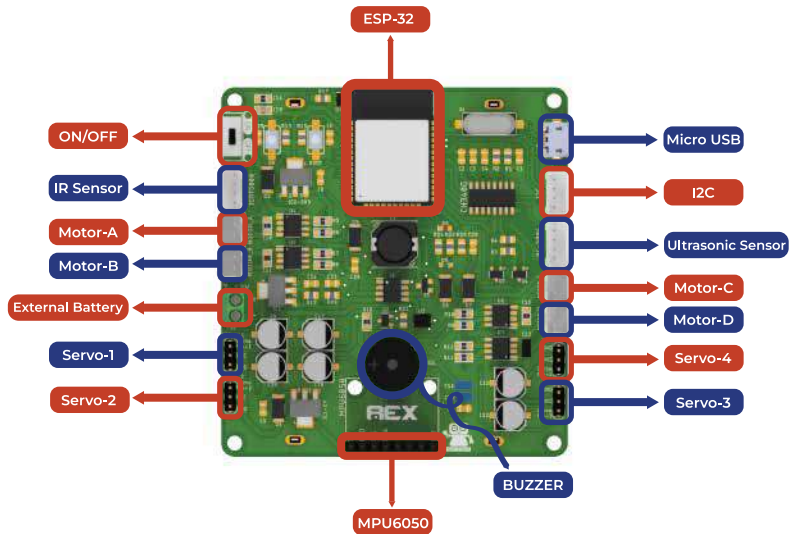
TrackerBot emits infrared lights thanks to the line tracking sensor and follows the black lines in the environment. By using the mechanical features of TrackerBot on the path we have created with lines, we can make it perform the tasks we want autonomously. We can also change the color TrackerBot follows by modifying the code.



WiBot

WiBot is a REX 8in1 robot that does not include any extra sensors for autonomous driving and only allows remote control. You can easily control WiBot with a smartphone.

REX BOARD PIN DIAGRAM



In order to make the installation of 8 in 1 robots and the circuit design, The REX Main Board has four motor drivers and servo motor connectors, some connection connectors for HC-SR04, Line Tracker and MPU6050 sensors to make their connections, a buzzer and a switch that integrated into the main board and a connection port for connecting a 12V battery externally to the circuit.

The Connection Between The REX Main Board and Arduino IDE

What is Arduino?

The Integrated Development Environment (IDE) for Arduino is a cross-platform application written in C and C++ languages (for Linux, macOS, Windows). It is used to write and upload programs to Arduino compatible boards, but can also be used in 3rd party cores and vendor development boards.

How to Use Arduino IDE?

A

Let's open <https://www.arduino.cc/en/software> in the browser.



rbt.is/ardu



Download the Arduino IDE program by selecting your system

HOW TO USE ARDUINO IDE WITH THE REX MAIN BOARD?

