mBot Ranger - Transformable STEM Educational Robot Kit

SKU 110090102

What's mBot Ranger? mBot Ranger Robot Kit is a three-in-one STEM educational robot kit which supports 3 building forms: robot tank, three-wheel racing car, and a self-balance car.
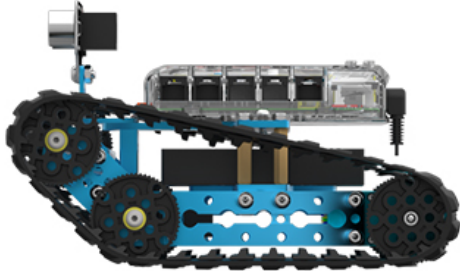

Description

What's mBot Ranger
mBot Ranger Robot Kit is a three-in-one STEM educational robot kit which supports 3 building forms: robot tank, three-wheel racing car, and a self-balance car. Program & Control mBot Ranger via iPad, tablets, or laptop to start your exploration!
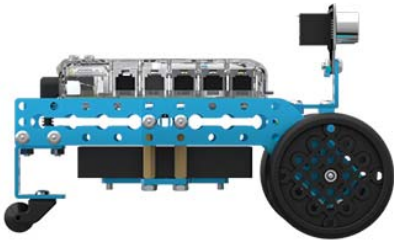
Off-Road Land Raider

Being an off-road robot tank, Land Raider is designed to handle a wider variety of terrain than most other vehicles or robot cars.

Dashing Raptor, the Predator

Transform your Land Raider easily, turning it into Dashing Raptor, which is a three-wheel racing car that runs/spins fast like a raptor which eager to catch its game.
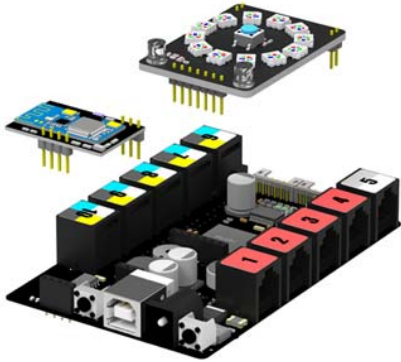
Self-Balance Nervous Bird

A smart self-balance car which remains level when driving straight or standing still and leans at an angle when making turns.
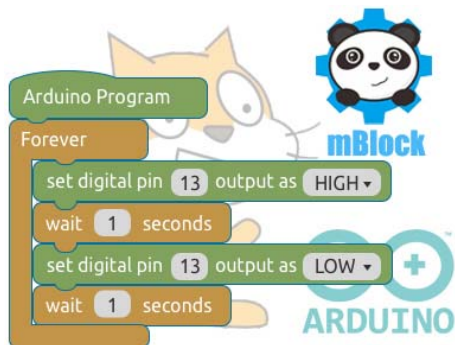
Powerful Mainboard

Latest Me Auriga mainboard developed based on open-source Arduino Mega 2560. It provides not only 5 on-board sensors, but also 10 extension ports that enable you to add more functions per needed.
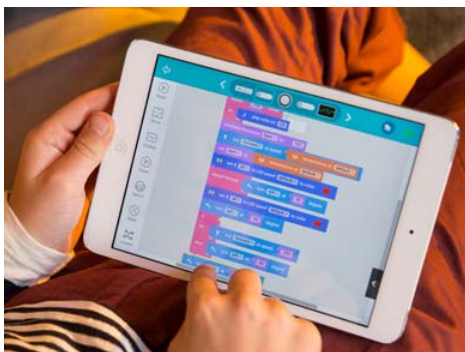
Graphical Programming from PC

mBot Ranger is fully compatible with mBlock which is a graphical programming environment based on Scratch 2.0 Open Source Code. It makes programming projects and interactive applications easier through simply dragging and dropping function blocks.

iPad/Tablet Programming

In addition to PC programming, mBot Ranger also supports being programmed from your iPad and tablets with an easy-to-use app – Makeblock HD. Explore with mBot Ranger using the existing projects, or develop your own.

Wireless Control

Makeblock HD provides existing projects which enable you to interact with Ranger immediately. Push the button to control Ranger wirelessly and start having fun!
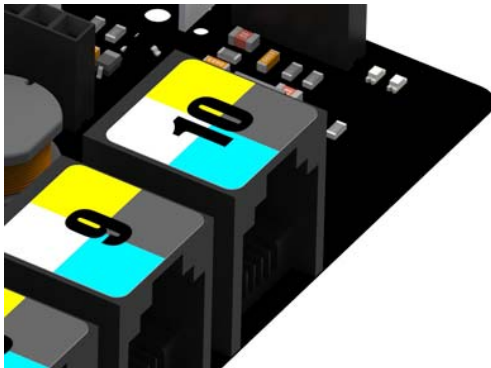

Free Online Courses

Provide 16 chapters of courses on graphical programming with Ranger, helping kids to enjoy the fun of programming in various game scenes step by step.

Easy Wiring

Modules in this kit all equipped with RJ25 ports for easy wiring. Just by connecting the modules tgether, robots can be built in a really quick way. All the wiring is simple and very clean.

Infinite Extensibility

Fully compatible with Makeblock platform (about 400 parts totally), allowing you to develop more projects or ideas adding Makeblock parts on Ranger or to explore hundreds of free projects online for more fun.

mBot Ranger VS. mBot

If you're trying to figure out the difference between mBot Ranger and mBot, check this comparison chart.

	mBot Ranger	mBot
Form(s)	3	1
Main Control Chip	Arduino Mega 2560	Arduino Uno
Extension Ports	10 motor/sensor ports	4 sensor ports
On-Board Sensor	6 x sensors, include: Light sensor Ultrasonic sensor Line follower Gyroscope Temp sensor Sound sensor	3 x sensors, include: Light sensor Ultrasonic sensor Line follower
LED Lamplets	12	2
PC Programming	mBlock	mBlock
iPad/Tablet	Makeblock HD	mBlockly
Smartphone App	Under development	mBot app

Arduino	√	√
Communication	Bluetooth/2.4G	Bluetooth/2.4G
Online Courses	√	√

Specifications	
Software and programming	PC-mBlock; iPad/Tablet - Makeblock Arduino IDE
Main Control Board	Arduino Mega 2560, 256KB flash memory, 8KG SRAM, 4KB EEPROM
Sensor	2 x Light sensor 1 x Sound sensor 1 x Gyroscope 1 x Temperature sensor 1 x Ultrasonic sensor 1 x Line follower
Speaker	1 x Buzzer
Battery	6 x AA battery (not included)
Motor	2 x 400 RPM Encoder Motor
Wireless Communication	Bluetooth/2.4G
Dimensions	200 x 165 x 120mm (7.78 x 6.49 x 4.71inch) Max.
Weight	1600g (56.44oz)

Part List

2 x Beam0824-112	2 x 90T Wheel	1 x USB Cable
1 x Beam0824-48	2 x 90T Tyre	2 x RJ25 Cable
2 x Plate O324	2 x Track	1 x Wrench
2 x Plate 135°	4 x Plastic Spacer 4x7x10	1 x Hex & Cross Screwdriver
1 x Plate for Battery Holder	2 x 180 Encoder Motor	22 x Screw M4x8
1 x Plate T-type	8 x Copper Bush 4x8x4mm	4 x Screw M4x10
1 x Bracket 3x3	1 x Bruss Stud M4*30+6	6 x Screw M4x14
1 x Bracket U1	1 x Battery Holder	4 x Screw M4x25
1 x Universal Wheel	1 x Me Auriga	2 x Screw M2.5x12
4 x 62T Wheel Without Step	1 x Ultrasonic Sensor	10 x Nut M4
2 x 62T Wheel	1 x Line Follower Sensor	2 x Encoder Motor Wire