



Maqueen Plus

Product Introduction

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Product Brief

Maqueen Plus is the advanced version of Maqueen. Compared with Maqueen 4.0, it provides with more functions, more extended ports, better power management, and larger capacity power supply. Besides, Maqueen Plus comes with a larger size and more stable chassis.

Maqueen Plus is not only suitable for classroom teaching, also can be used for after-school educational activities or robot competitions. It carries abundant scientific and technological knowledge, which could be a very good teaching tool for middle school students and above.



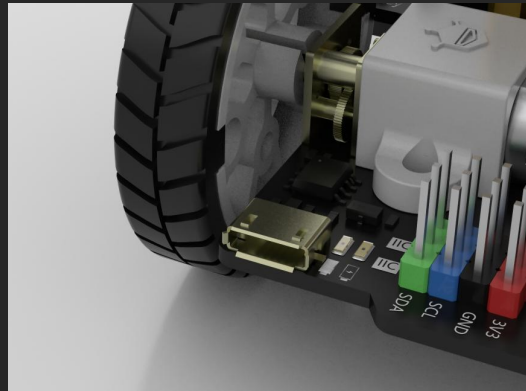
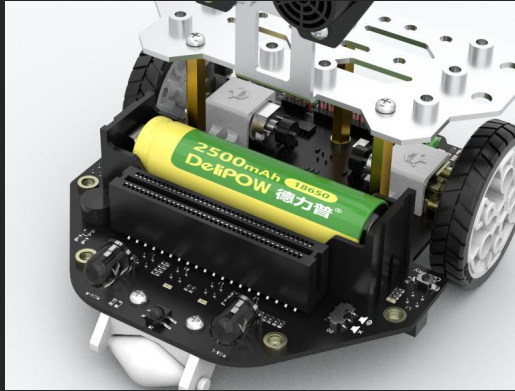
Rich Functions Designed for Middle School Students



1	Powered by 18650 high capacity lithium battery; onboard charging circuit and battery indicator.	6	A larger size and more stable chassis; available for combining with more accessories.
2	6 line tracking sensors; support complex routine and program, complicated maze program algorithm, analog reading, and sensor calibration with one key.	7	2 magnetic speed sensors to read speed and direction in real-time; able to control multiple Maqueen cars accurately; supports for PID control (Not applicable in case of high real-time requirements).
3	9 GPIO expansion ports; 3 IIC extension ports; 3 servo expansion ports.	8	2 large-size RGB LEDs; supports for displaying 6 colors.
4	12 M3 threaded connections.	9	High-quality ultrasonic sensor developed by DFRobot; stable and reliable performance; a line-tracking map for your convenience.
5	260 RPM high speed metal motor; higher travel speed; well suitable for robot competitions.	10	Onboard infrared receiving sensor and buzzer; fully compatible with Maqueen mechanic and Huskylens AI camera.

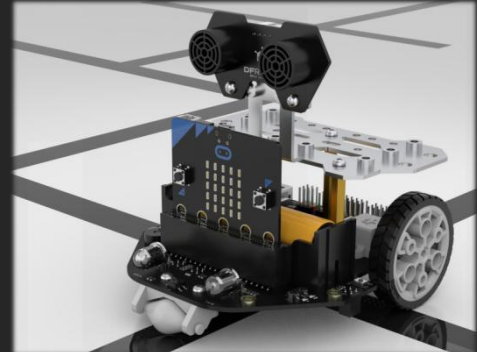
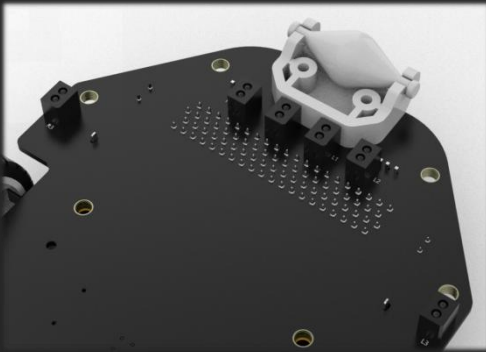
High Capacity Lithium Battery

- Powered by 18650 high capacity lithium battery.
- Onboard charging circuit and battery indicator.



Equipped with Competition-level Sensors

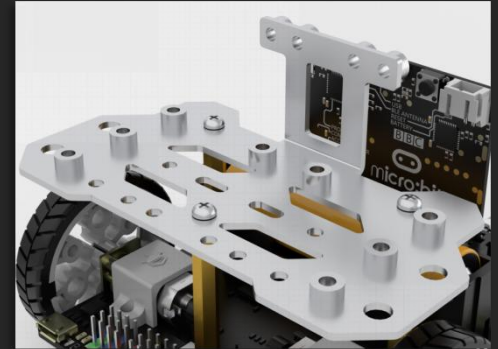
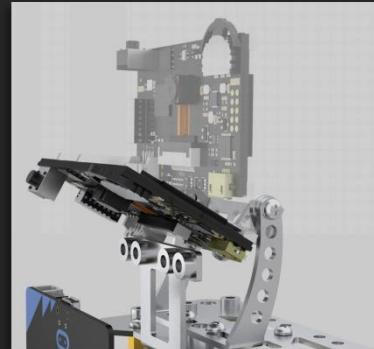
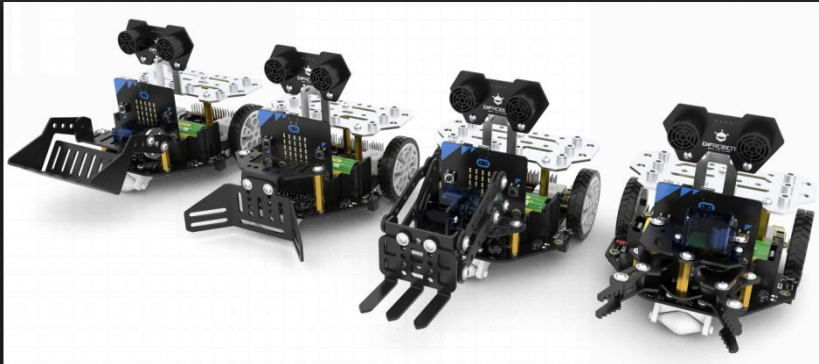
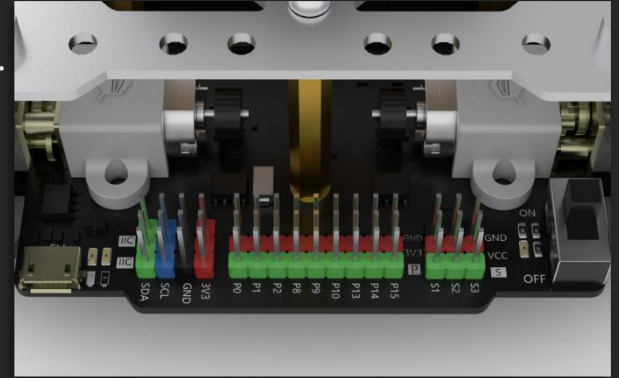
- 6 line tracking sensors to allow complex routine program, and complicated maze algorithm.
- Support analog reading, and sensor calibration with one key.



Rich Extension Interfaces



- 9 GPIO expansion ports, 3 I2C extension ports, 3 servo expansion ports.
- 12 M3 threaded connections.
- Fully compatible with Maqueen mechanic and Huskylens AI camera.

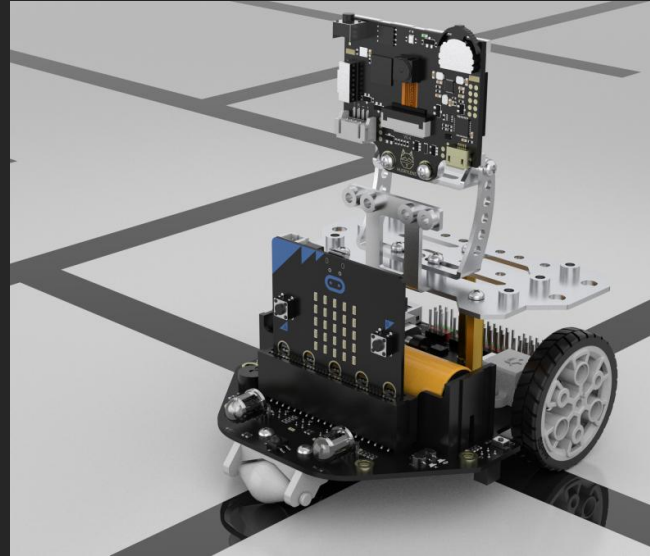
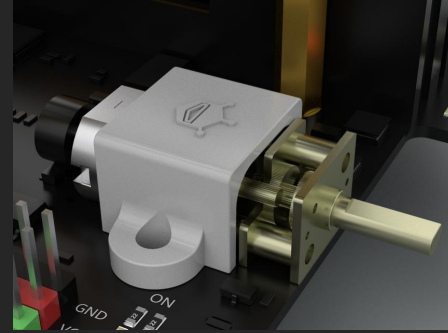


High Speed Metal Motor



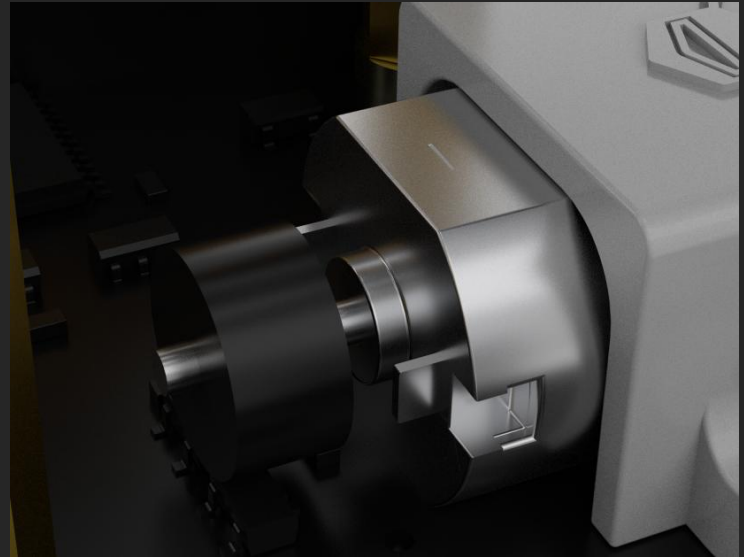
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- 260 RPM high speed metal motor; higher travel speed, and well suitable for robot competitions.



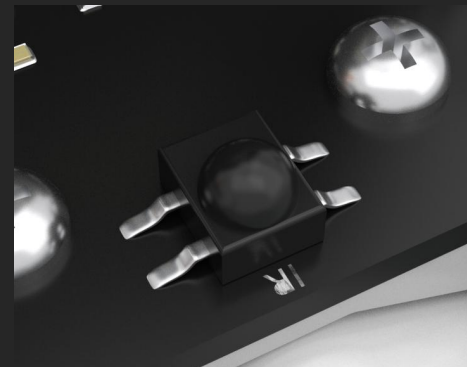
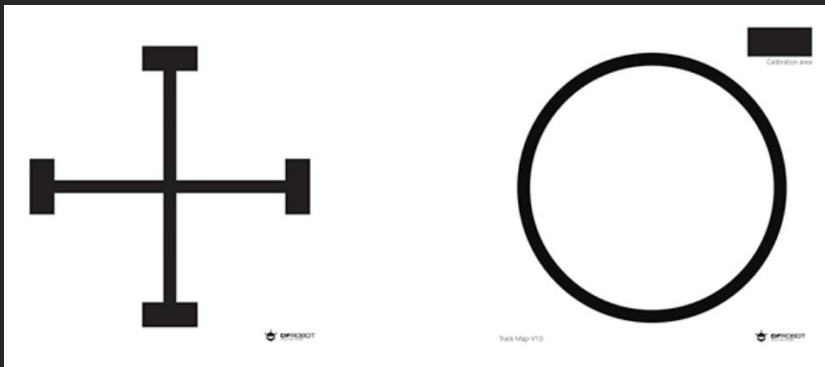
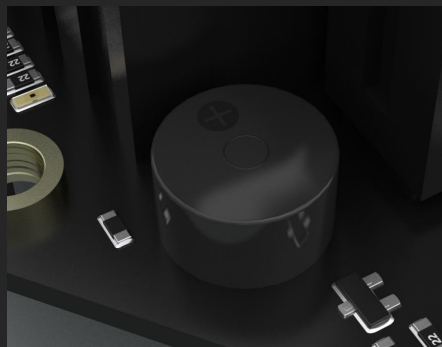
Magnetic Speed Sensors and PID

- 2 magnetic speed sensors to read speed and direction in real-time; able to control multiple Maqueen cars accurately.
- Support PID control (Not applicable in case of high real-time requirements).



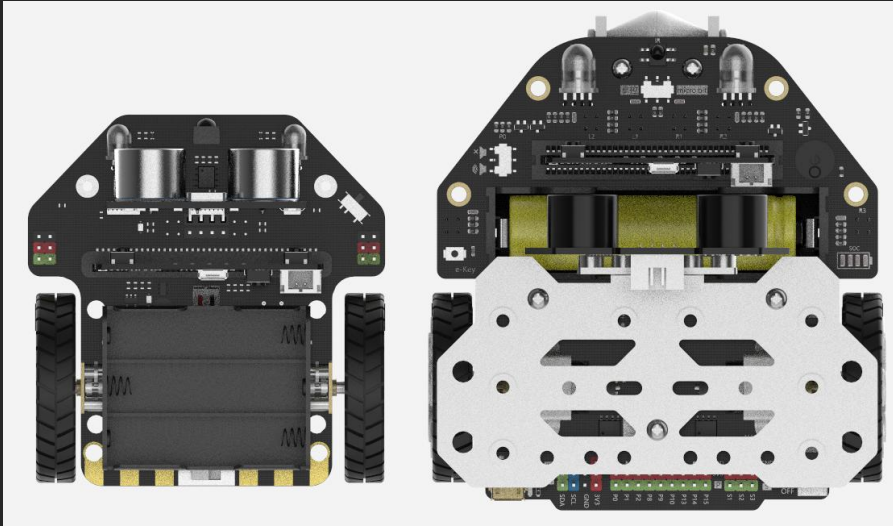
Rich configuration

- 2 large-size RGB LEDs, supports for displaying 6 colors.
- Onboard infrared receiving sensor and buzzer.
- High-quality ultrasonic sensor developed by DFRobot, stable and reliable performance.
- A Line-tracking map for your convenience.



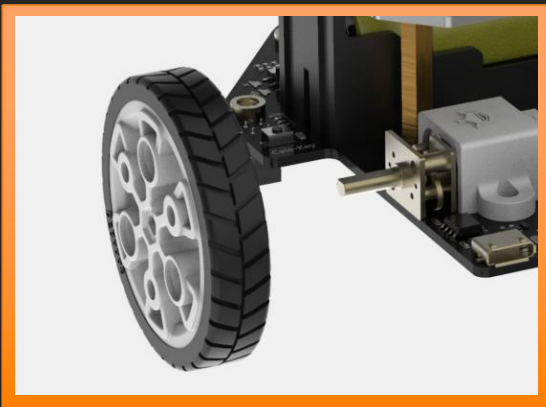
Maqueen Plus - Larger and Stable

A larger size and more stable chassis, available for combining with more accessories.



As easy as Maqueen4 installing

STEP1 : Install wheels

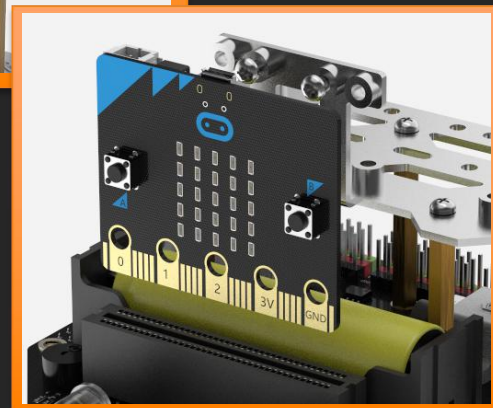
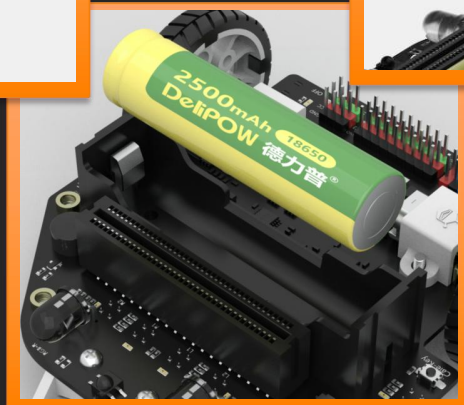


STEP3 : Install the expansion bracket



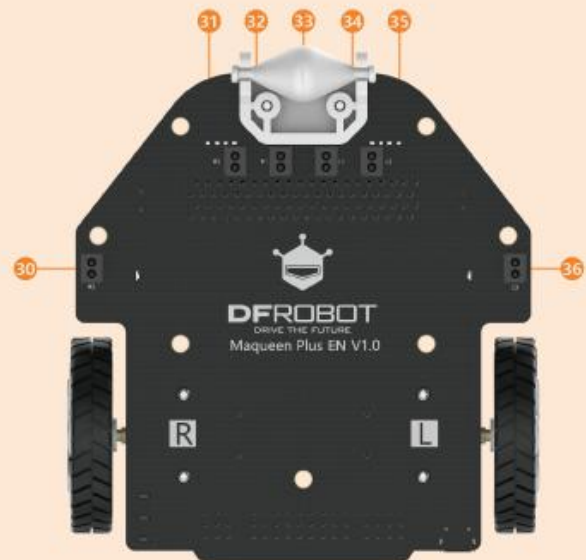
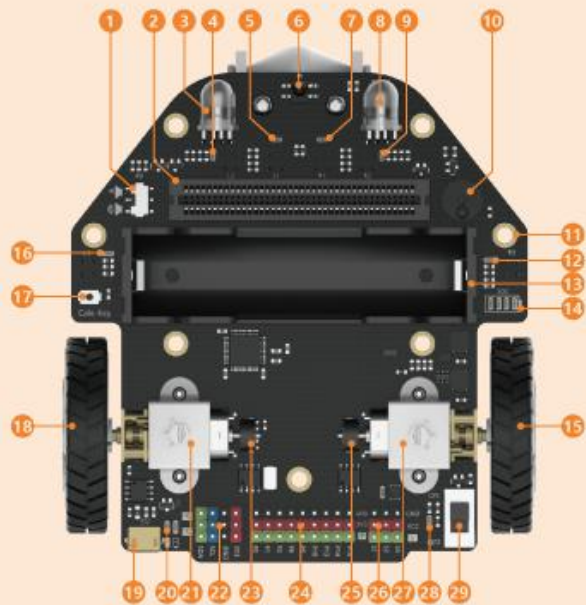
STEP4 :
Plug in micro:bit board

STEP2 : Install battery



Maqueen4.1 VS Maqueen Plus

Name	Maqueen 4.1	Maqueen Plus
Power supply	3 AAA Batteries or CR123A Lithium battery(600~800mA)	18650 Li-ion battery(2300mA~2500mA)
Charging circuit	×	√
Power display	×	√
Encoder and PID control	×	√
Support for installing Huskylens AI camera	×	√
Support for line-tracking sensor calibration	√	√
Support for analog reading of line-tracking sensor	×	√
Number of line-tracking sensor	2	6
Number of IO expansion port	4	12
Number of servo port	2	3
Number of mechanic expansion thread	2	16
Motor rated rotation speed	133 rpm	260 rpm
LED color	Red LED	Large size RGB LED with 6 colors
Ultrasonic Model	H-SR04	DFRobot high-quality URM10 ultrasonic sensor
Continuous usage time with Huskylens	30min	180min
Standard continuous usage time	8h	24h
Come with lint-tracking map	×	√
Onboard IR receiver and buzzer	√	√
Onboard WS2812 RGB LED	√	×
Application	Elementary classroom teaching	Middle school teaching, after-school educational activities, competition



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|----------------------------------|----------------------------|----------------------------|-------------------------------|------------------------|------------------------------|----------------------------|----------------------------|
| 1 Buzzer switch | 2 micro:bit socket | 3 RGB-LED-L | 4 L2 indicator LED | 5 L1 indicator LED | 6 Infrared receiver | 7 R1 indicator LED | 8 RGB-LED-R |
| 9 R2 indicator LED | 10 Buzzer | 11 M3 Mounting holes | 12 R3 indicator LED | 13 Battery case | 14 Electricity indicator LED | 15 Right wheel | 16 L3 indicator LED |
| 17 Line-tracking Calibration Key | 18 Left wheel | 19 Charging port | 20 Charging indicator LED | 21 Motor-L | 22 IIC expansion port | 23 Encoder-L | 24 GPIO port |
| 25 Encoder-R | 26 Servo port | 27 Motor-L | 28 Power supply indicator LED | 29 Power supply switch | 30 R3 line-tracking sensor | 31 R2 line-tracking sensor | 32 R1 line-tracking sensor |
| 33 Support wheel | 34 L1 line-tracking sensor | 35 L2 line-tracking sensor | 36 L3 line-tracking sensor | | | | |

Specification and Shipping List



• Specification

- Power Supply: 3.7V-18650 lithium battery
- Charging Voltage: 5V
- Charging Current: 900mA
- Charging Time: 4h
- Battery Indicator: 4 LEDs
- Drive Motor: N20 motor 260 rpm
- Buzzer * 1
- RGB-LED * 2
- GPIO Expansion Ports : P0 P1 P2 P8 P12 P13 P14 P15 P16
- I2C Expansion Ports * 3
- Servo Expansion Ports *3
- Line Tracking Sensors *6
- Line Tracking Sensor Output Data: analog + digital
- Line Sensor Calibration: support
- Infrared Receiving Sensor *1
- Ultrasonic Sensor: URM10
- Top Metal Plate * 1
- M3 threaded connections *12
- Map Size: 50cm*50cm
- Dimension: 107x100mm/4.21 x3.94"

• Shipping List

- Maqueen Plus *1
- Ultrasonic Sensor *1
- Top Metal Plate *1
- Wheel *2
- Copper Pillar *3
- Instruction *1
- Line-tracking Map *1



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Thank You !