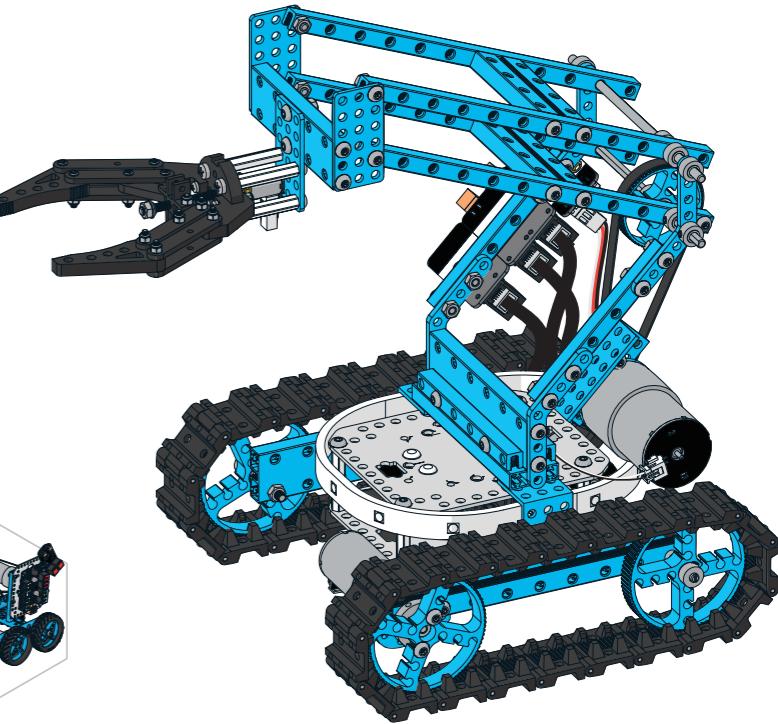
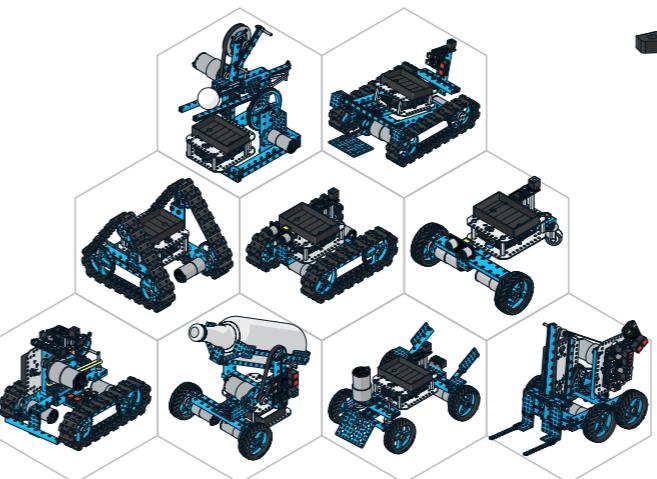




Ultimate Robot Kit



MAKER WORKS TECHNOLOGY INC

No. 426, F/4, Gonglehuating Business Building, Xinhu Road,
Xixiang Sub-district, Bao'an District, Shenzhen, 518102 China.

Please contact with us if you need some technique

support: support@makeblock.cc

www.makeblock.cc

Parts List

Pictures for reference only

2× Beam 0824-64



2× Bracket P3



2× Beam 0824-80



1× Caster Wheel



3× Beam 0824-96



2× DC Motor-25



2× Beam 0824-128



1× DC Motor-37



2× Beam 0824-144



2× DC Motor-25 Bracket



4× Beam 0808-88



1× DC Motor-37 Bracket



4× Beam 0808-184



3× Shaft Connector 4mm



4× Bracket 3×3



1× Timing Pulley 18T



1× Bracket 3×6



2× Timing Pulley 62T



4× Plate 3×6



4× Timing Pulley 90T



1× Plate 7×9



2× Timing Pulley Slice 90T



8× Link Rod



1× Gear 16



1× Gear 80



4× Tire 68.5×22mm



50× Track



50× Track Axle



1× Timing Belt 98MXL



1× Timing Belt 240MXL



2× D Shaft 4×56mm



2× D Shaft 4×128mm



6× Threaded Shaft 4×39mm



10× Shaft Collar 4mm



8× Flange Bearing 4×8×3mm



1× Robot Gripper



1× Hex Screwdriver



1× Cross Screwdriver



1× Wrench



2× Hex Allen Key



30× Screw M4×8



40× Screw M4×14



10× Screw M4×22



10× Screw M4×30



28× Nut M4



2× Nut M8



30× Nylon Lock Nut M4



10× Screw M3×8



16× Headless Set Screw M3×5



6× Nylon Stud M4×30



16× Plastic Rivet R4060



12× Plastic Rivet R4120



50× Plastic Ring 4×7×2mm



2× BaseBracket



1× Battery Holder for (6) AA



4× Nylon Pulley with Bearing



4× Plate 45°



1× Disc D72



2× Timing Belt Connector



1× Makeblock Orion



1× Me Dual Motor Driver



1× Me Ultrasonic Sensor



1× Me Bluetooth Module



1× Me Line Follower



1× Me Sound Sensor



1× Me RJ25 Adapter



1× LED RGB Strip-Addressable (0.5M)



2× Micro Switch



3× RJ25 Cable-20cm



3× RJ25 Cable-35cm



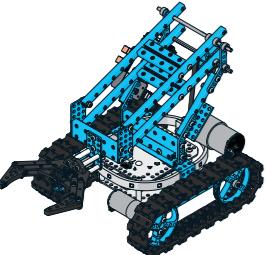
1× Micro USB Cable



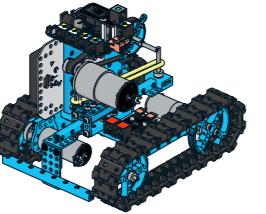
6× Rubber Ring



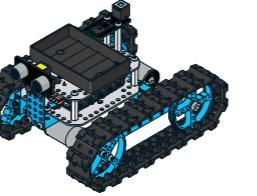
Robot Ideas



Robotic Arm Tank



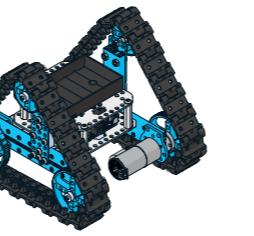
Attack Tank



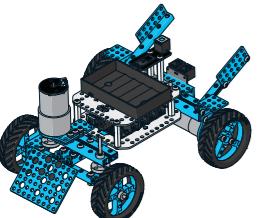
Robot Tank



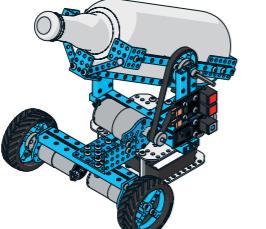
Sumo Tank



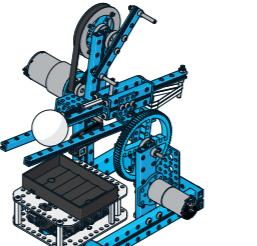
Triangular Tank



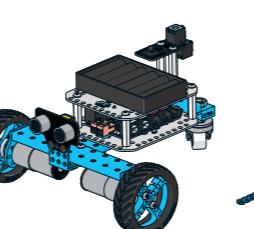
Skill Racing car



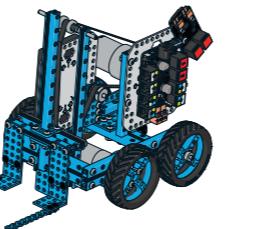
Drink Car



Ball Launcher

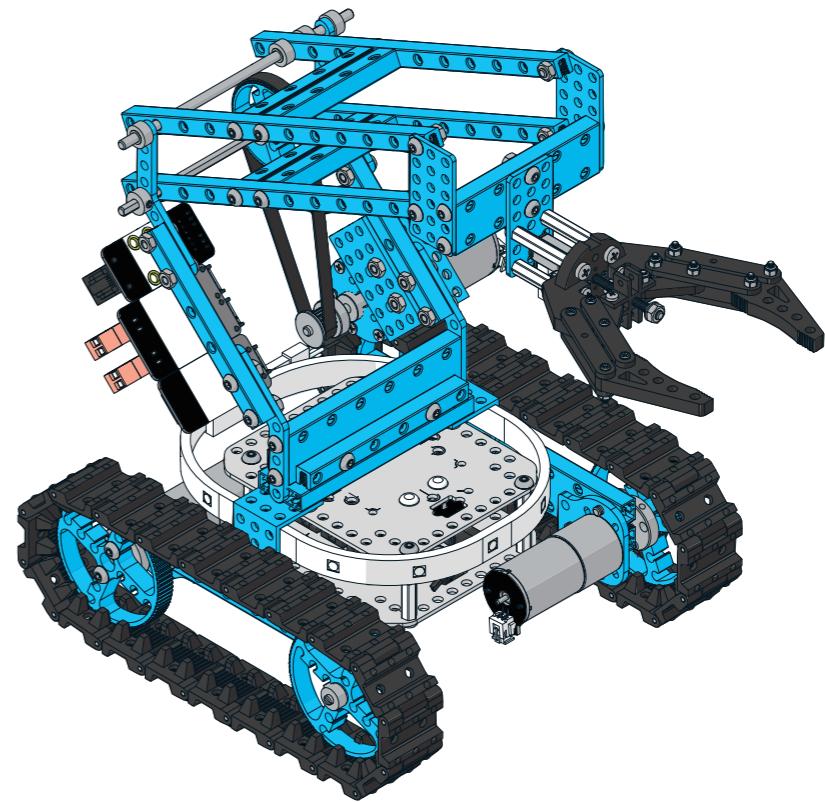


3-Wheeled Car



Forklift

Building the Robotic Arm Tank



Please visit

<https://grabcad.com/makeblock-1/projects>
to view 3D models.

Parts List for the Robotic Arm Tank

1× Timing Belt 98MXL



4× Beam 0808-184



4× Beam 0808-88



1× Beam 0824-64



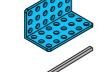
1× Beam 0824-80



2× Beam 0824-96



2× Beam 0824-144



2× Bracket 3×3



1× Bracket 3×6



2× D Shaft 4×128mm



2× DC Motor-25



1× DC Motor-37



6× Flang Bearing 4×8×3mm



21× Nut 4mm



4× Nylon Lock Nut 4mm



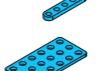
1× DC Motor-37 Bracket



2× DC Motor-25 Bracket



4× Plate 45°



3× Plate 3×6



4× Plastic Ring 4×7×2



2× Plastic Rivet R4060



4× Plastic Rivet R4120



13× Headless Set Screw M3×5



8× Screw M3×8



29× Screw M4×8



40× Screw M4×14



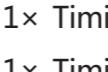
3× Screw M4×30



2× Shaft Connector 4mm



10× Shaft Collar 4mm



2× Threaded Shaft 4×39



38× Track



38× Track Axle



1× Timing Pulley 18T



1× Timing Pulley 62T



4× Timing Pulley 90T



1× Me RJ25 Adapter



1× Me Dual Motor Driver



1× Me Bluetooth Module



4× Nylon Stud



1× Battery Holder for (6)AA



2× BaseBracket



1× Makeblock Orion



1× Robot Gripper



2× RJ25 Cable-20cm



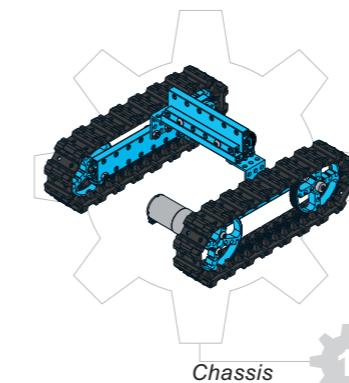
2× RJ25 Cable-35cm



1× Micro USB Cable



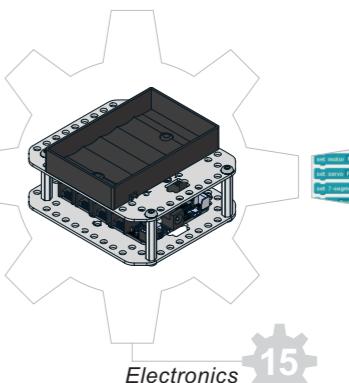
1× LED RGB Strip-Addressable (0.5M)



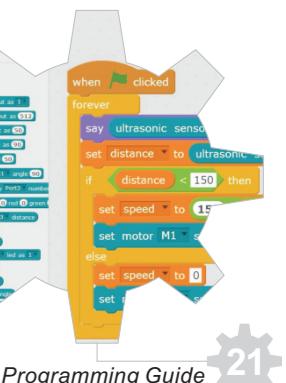
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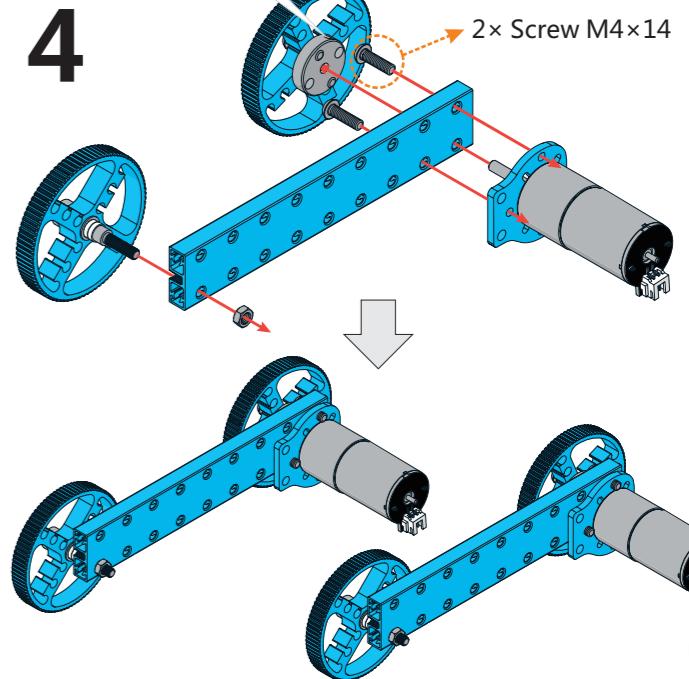
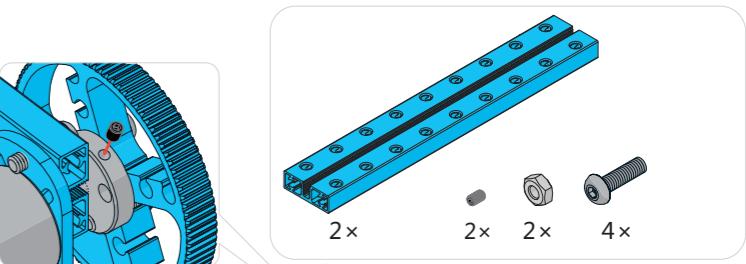
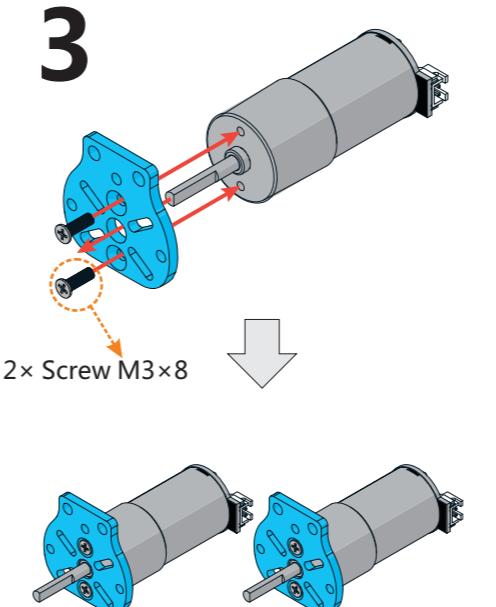
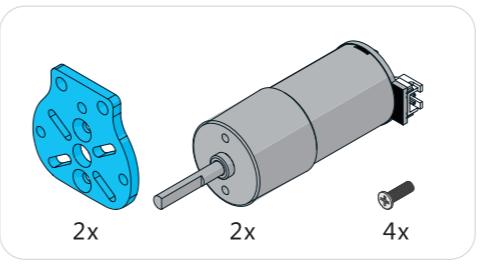
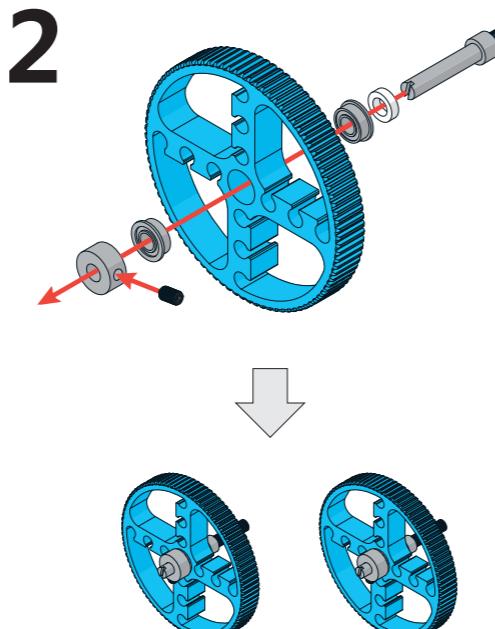
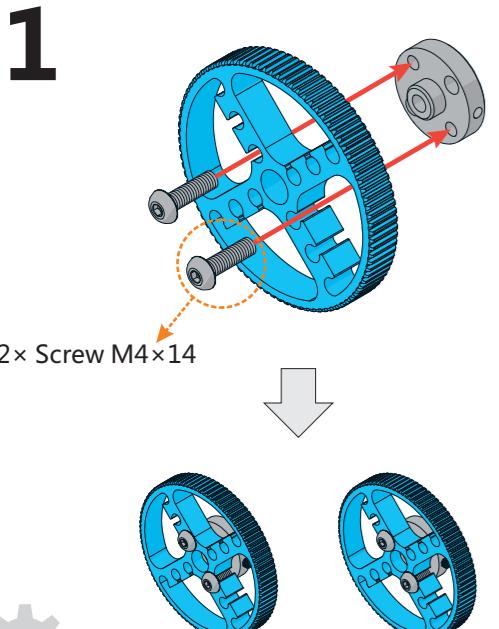
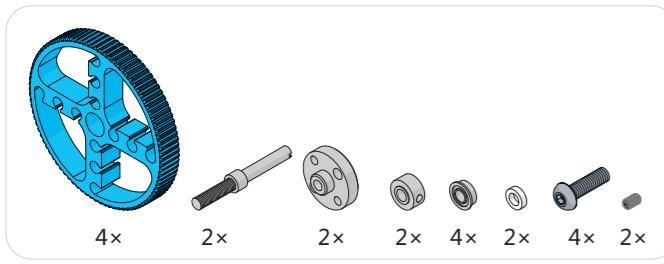
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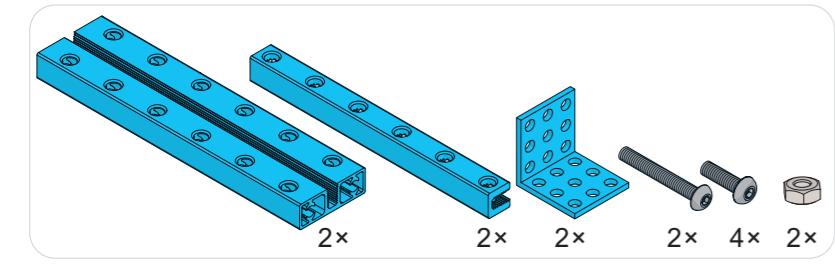


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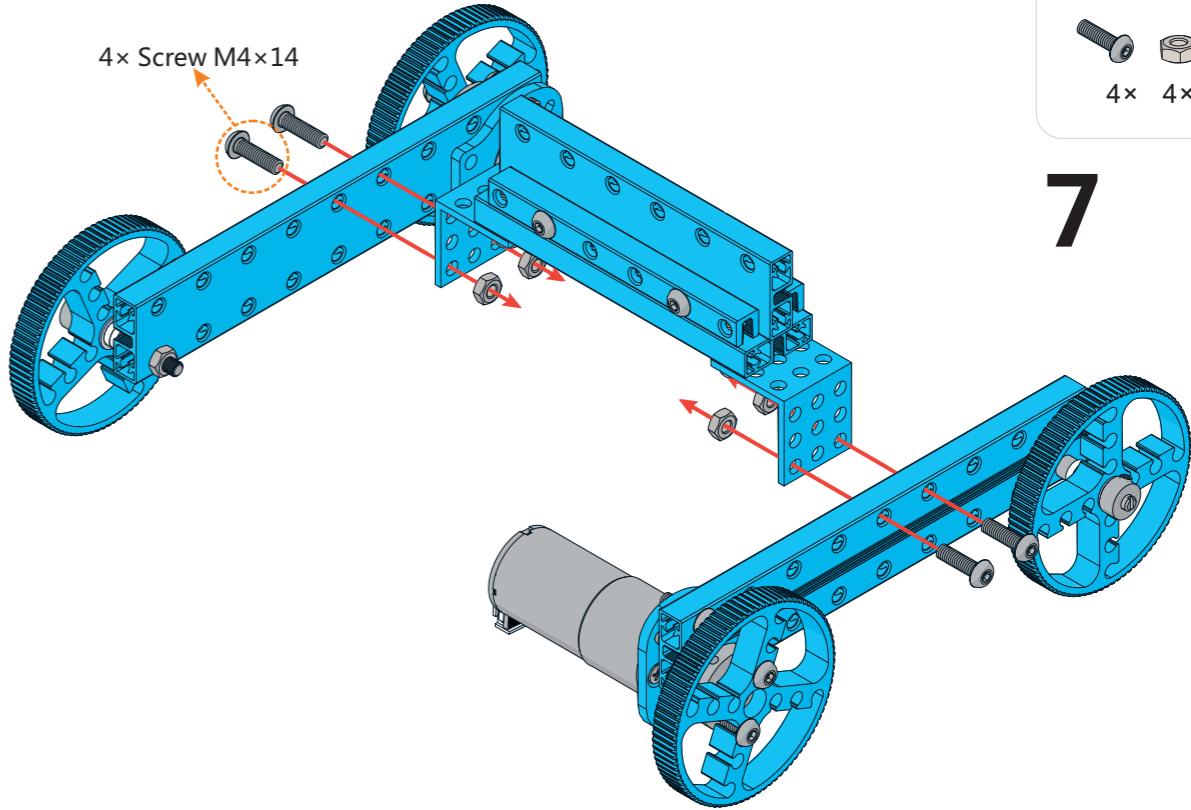
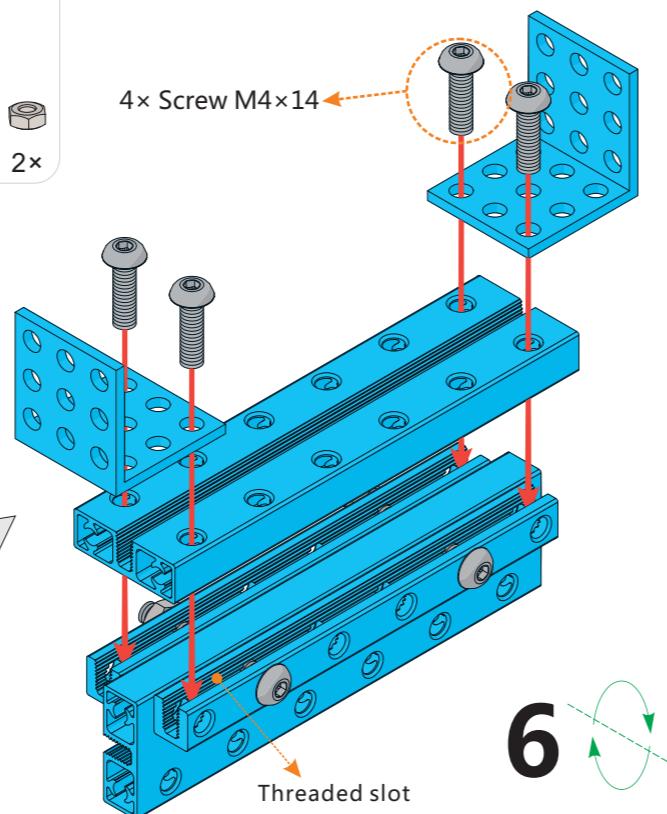
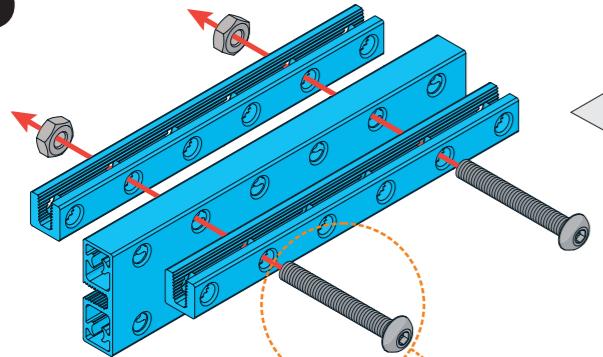


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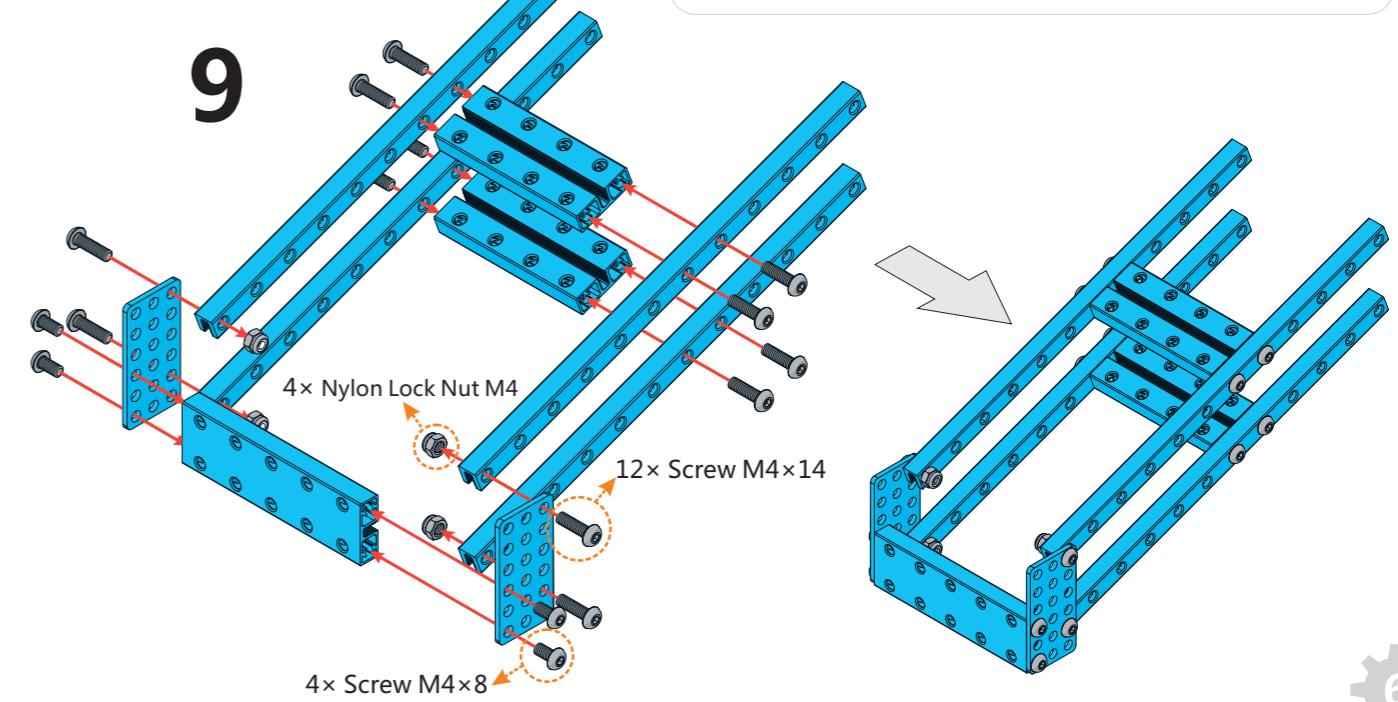
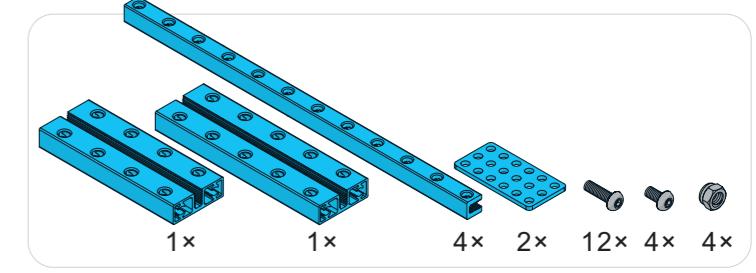
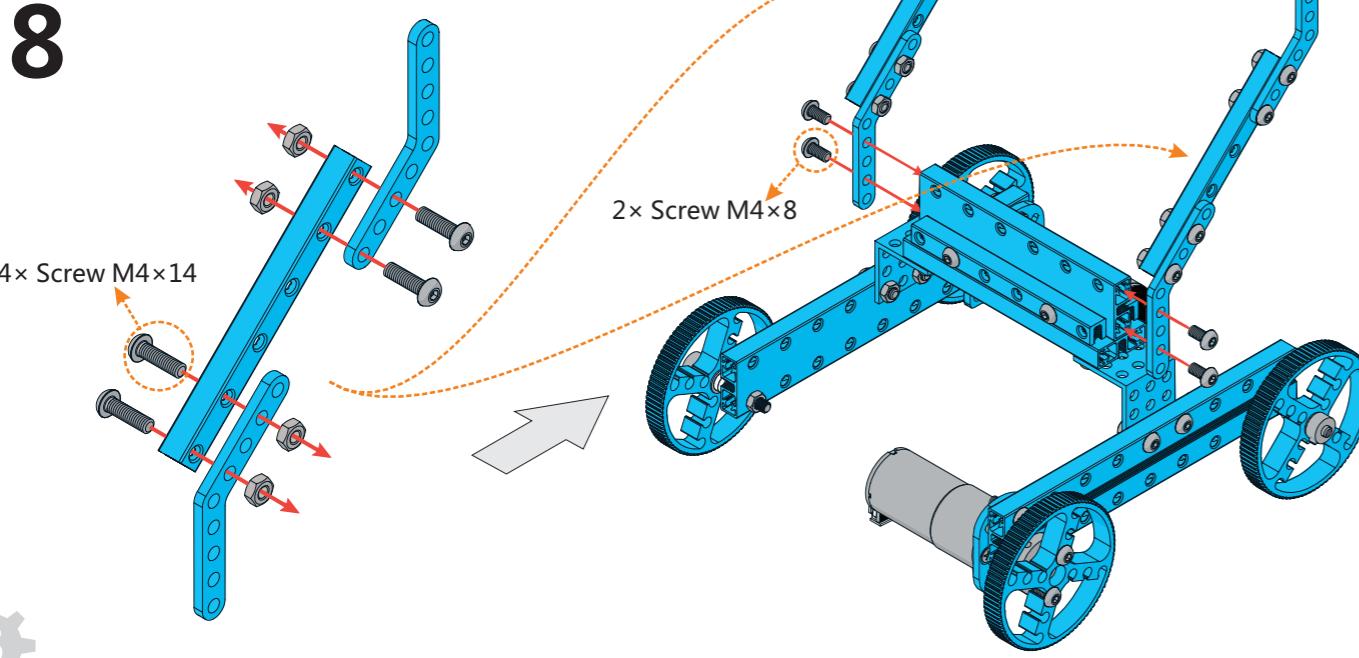
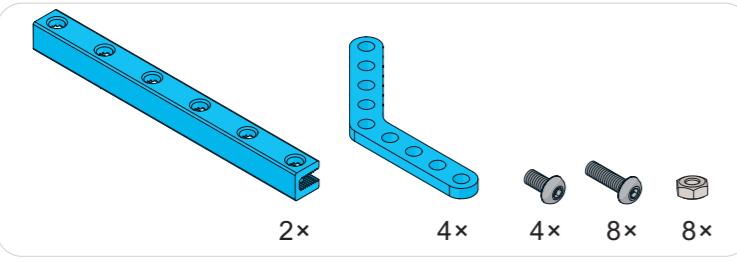
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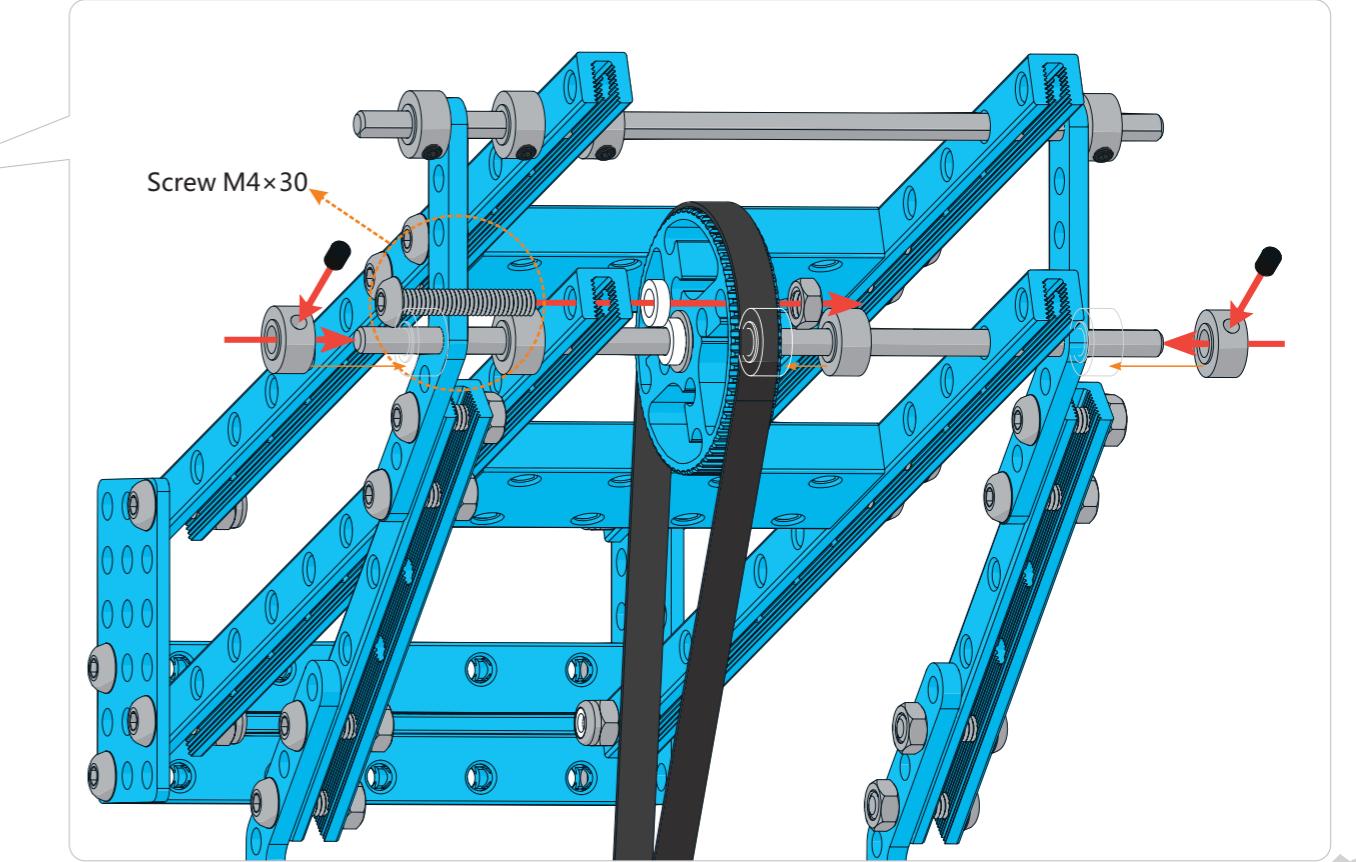
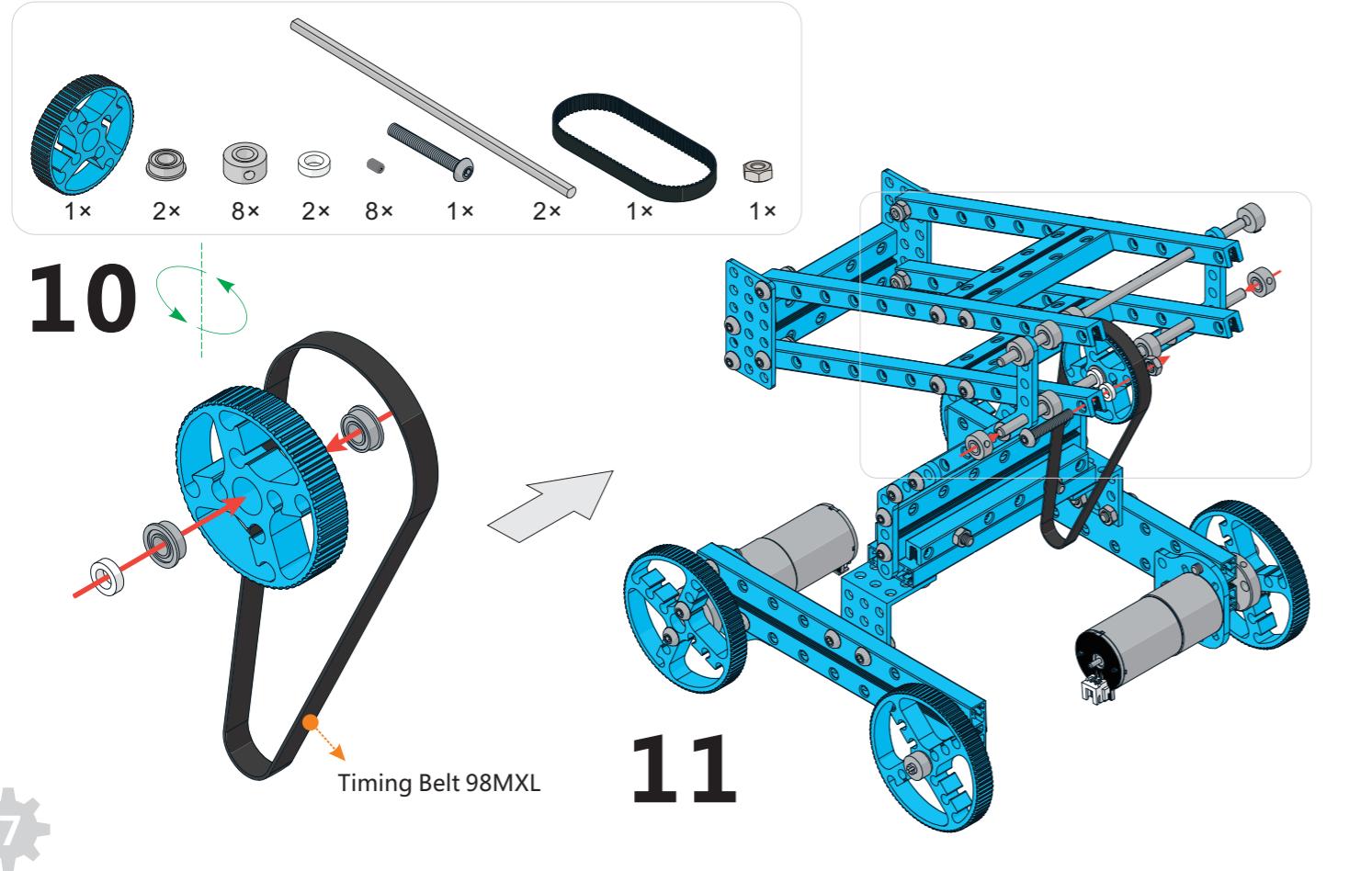


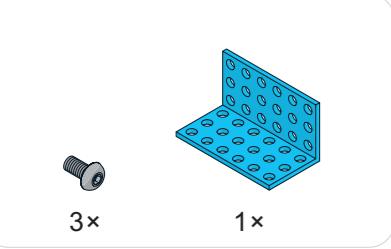
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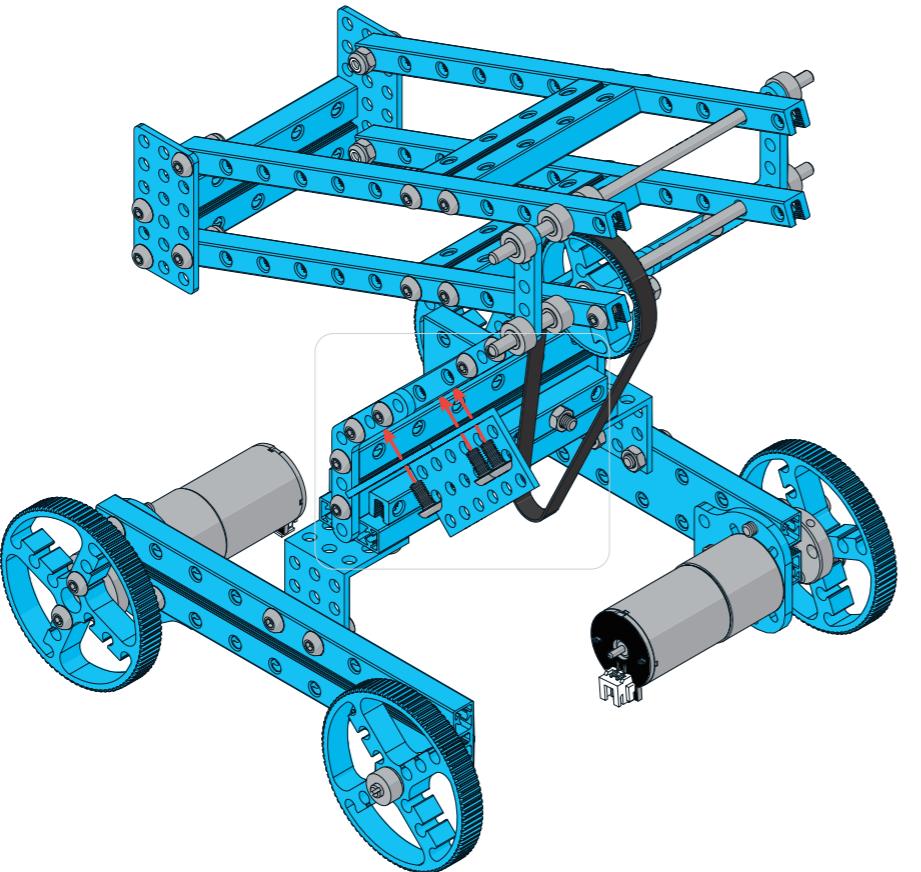




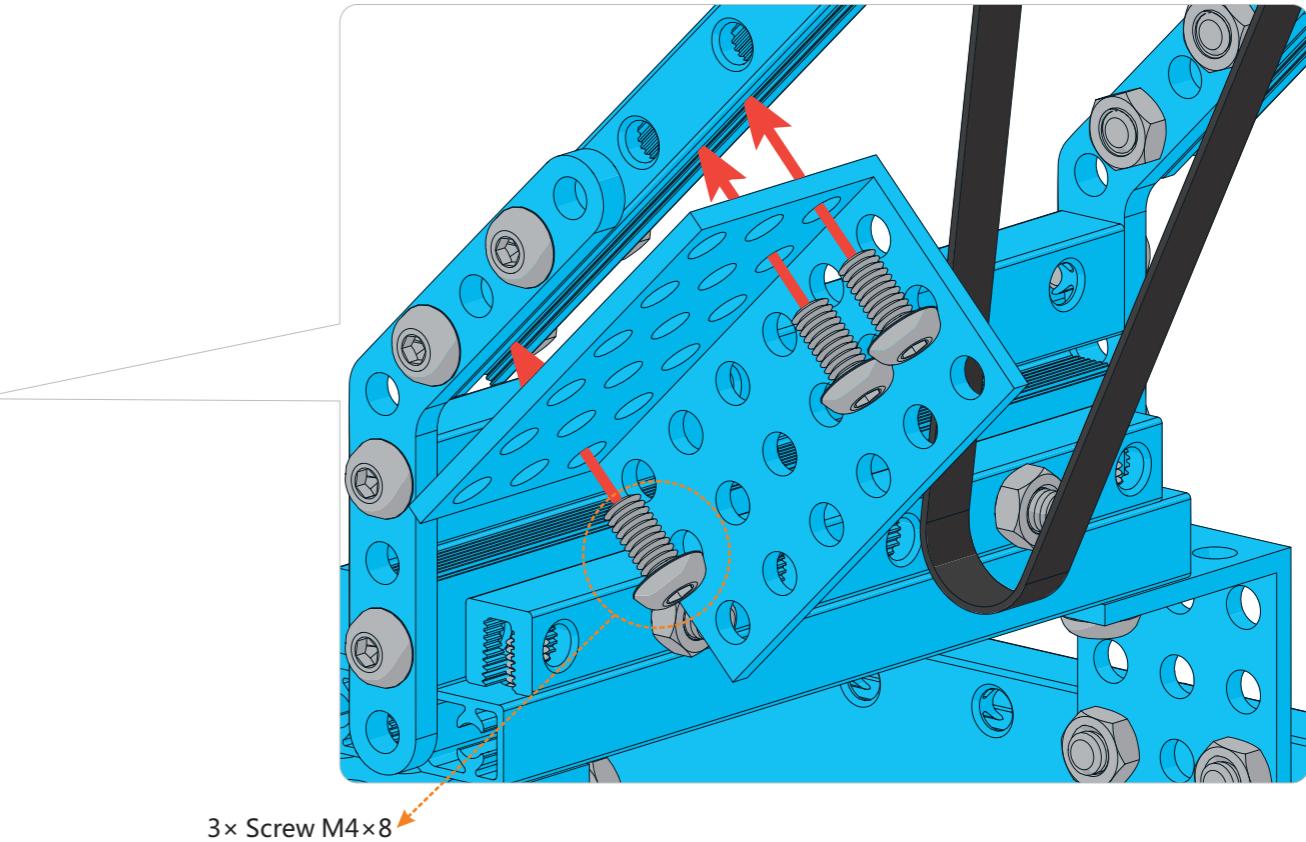




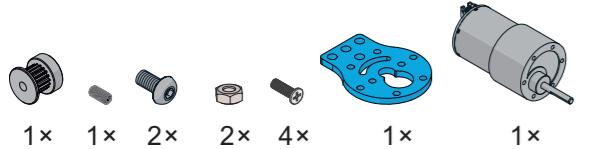
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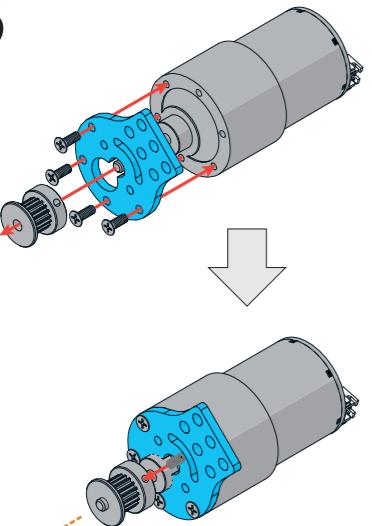
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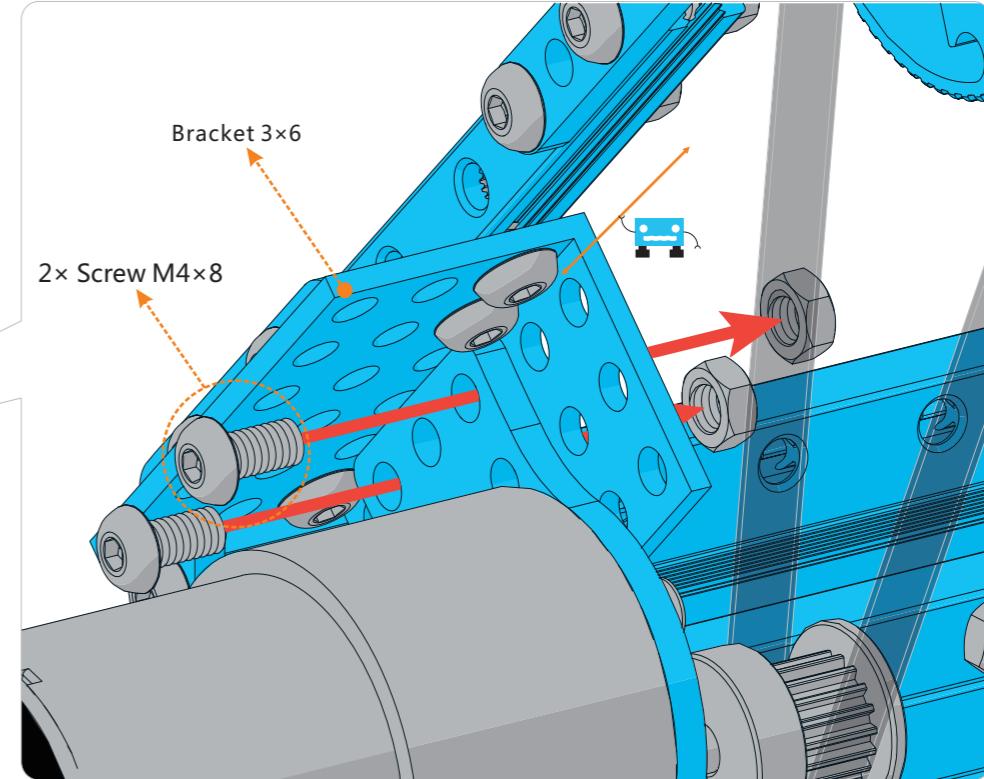
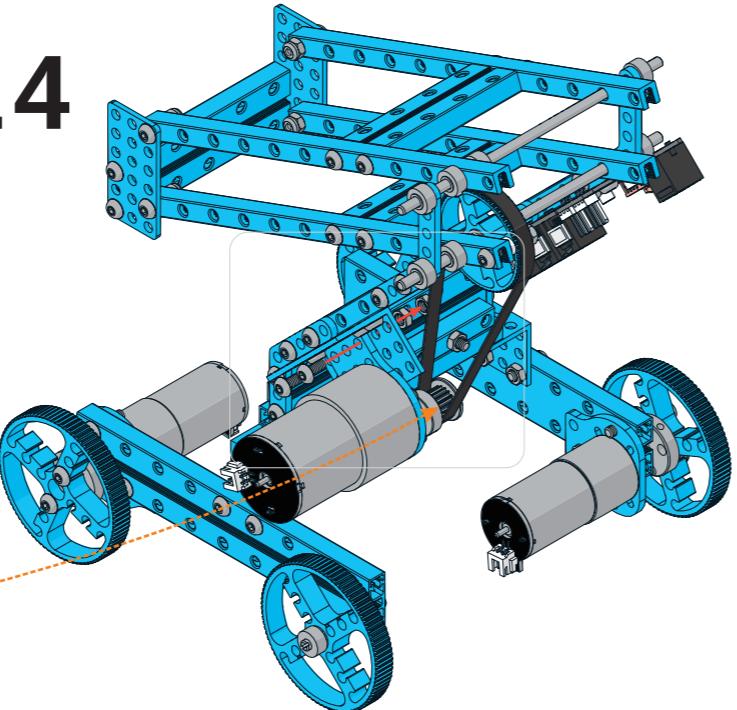
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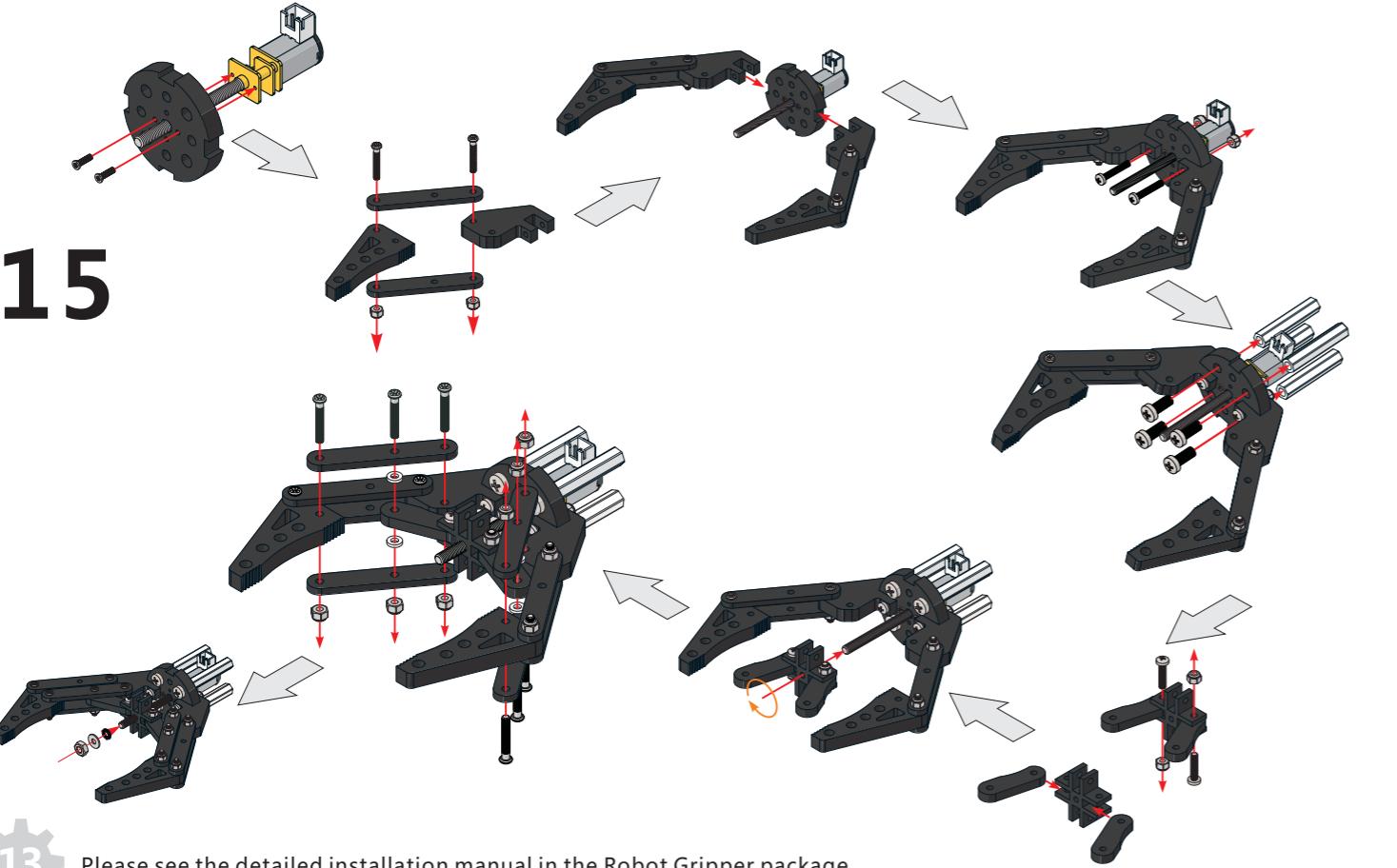
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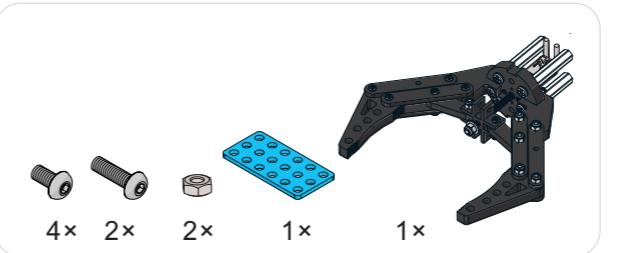
14



You may need to adjust the position of Bracket 3x6 to tension the timing belt.

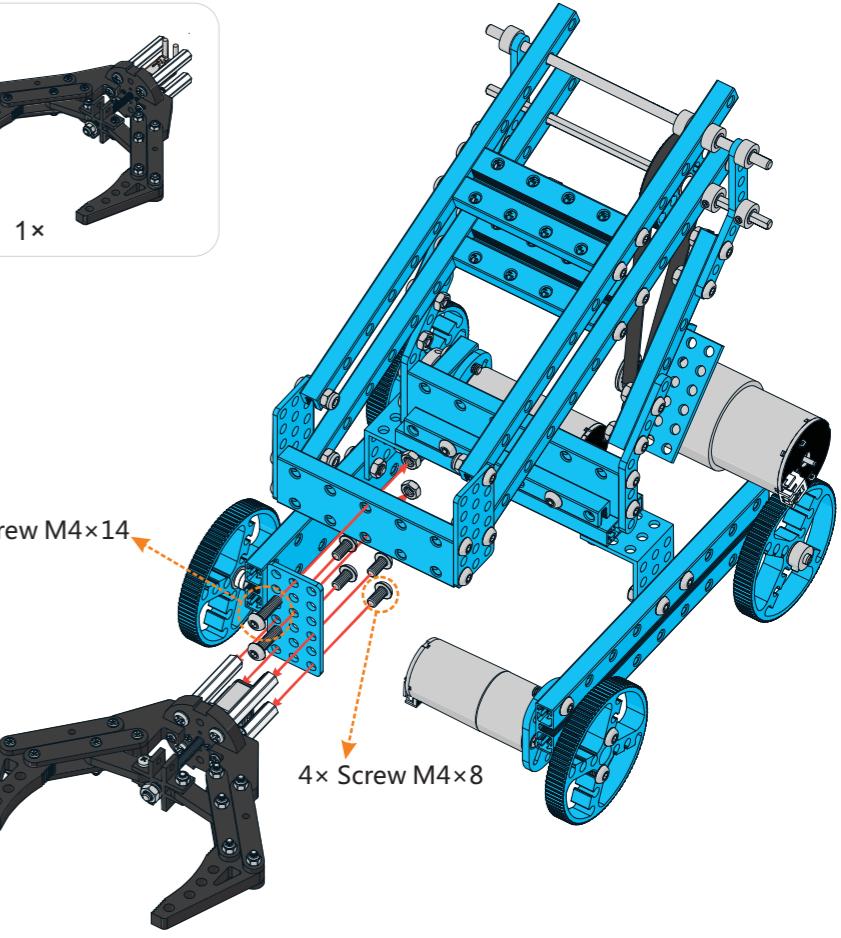
15**13**

Please see the detailed installation manual in the Robot Gripper package.

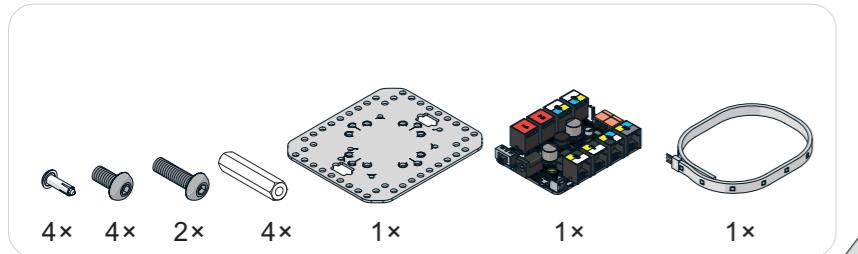
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2x Screw M4×14

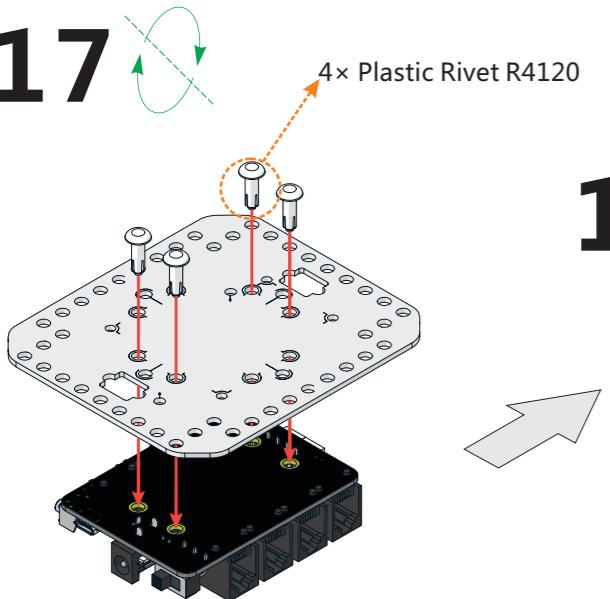
4x Screw M4×8

**14**

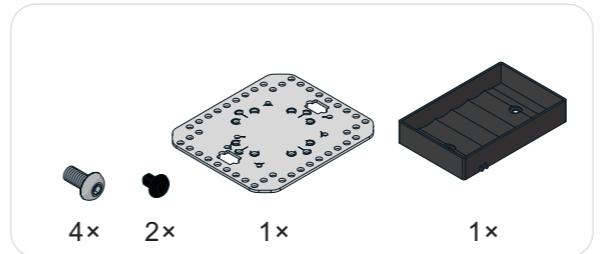
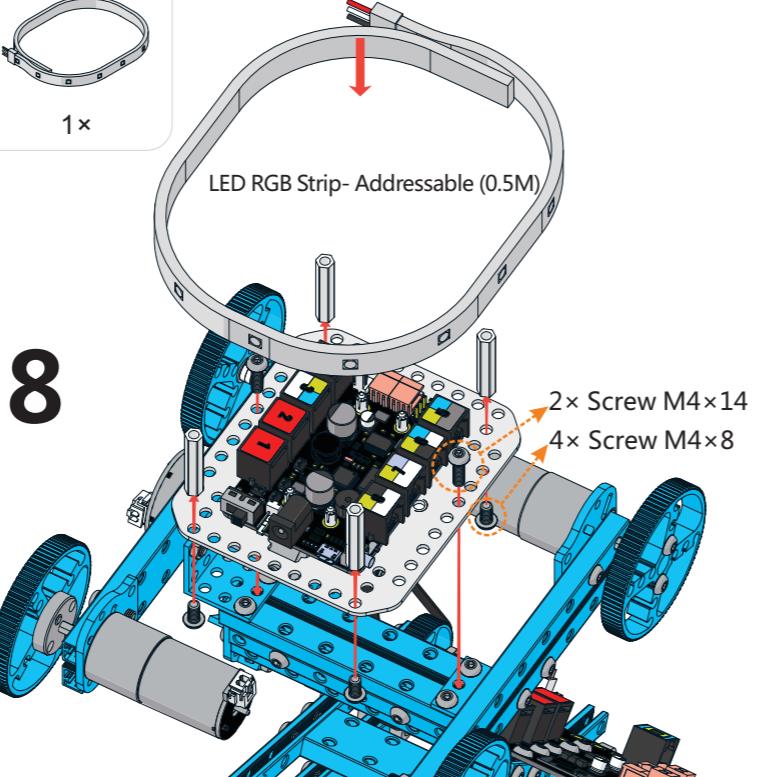
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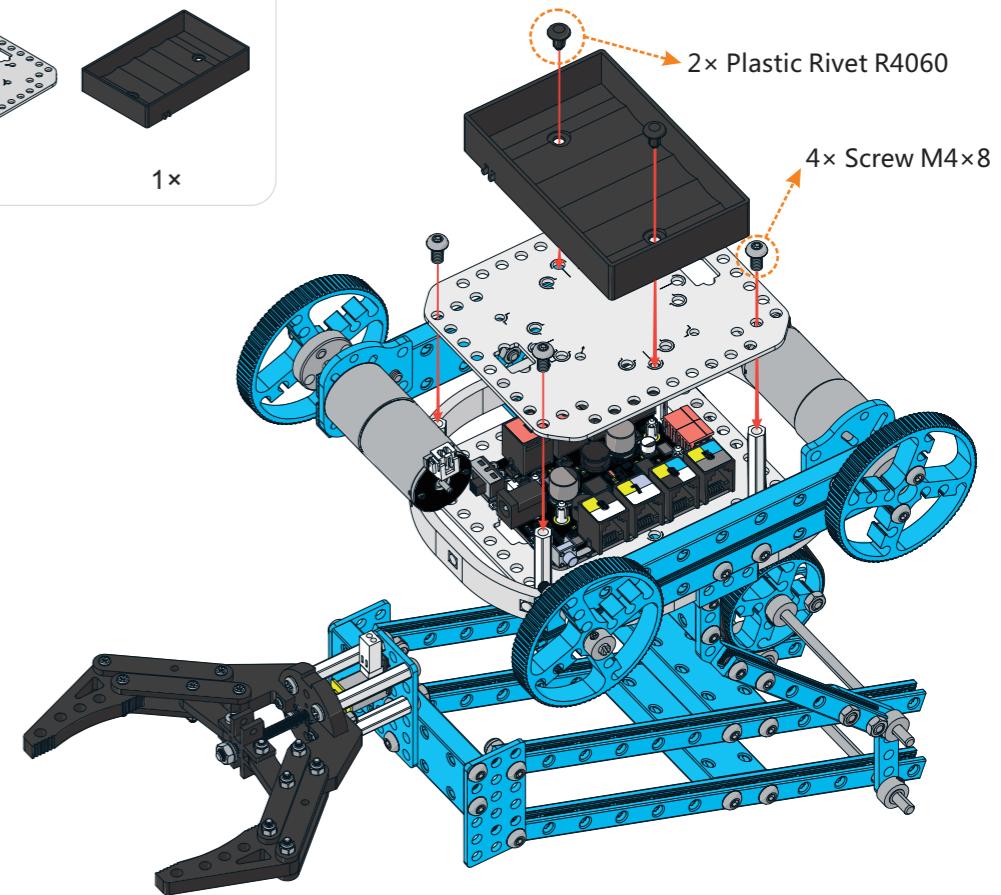
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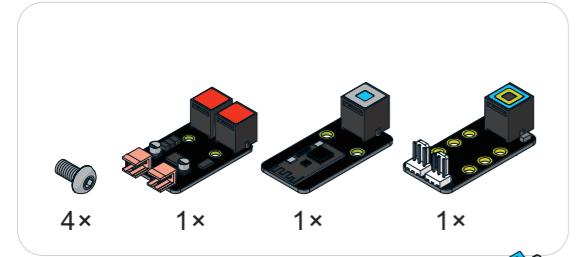
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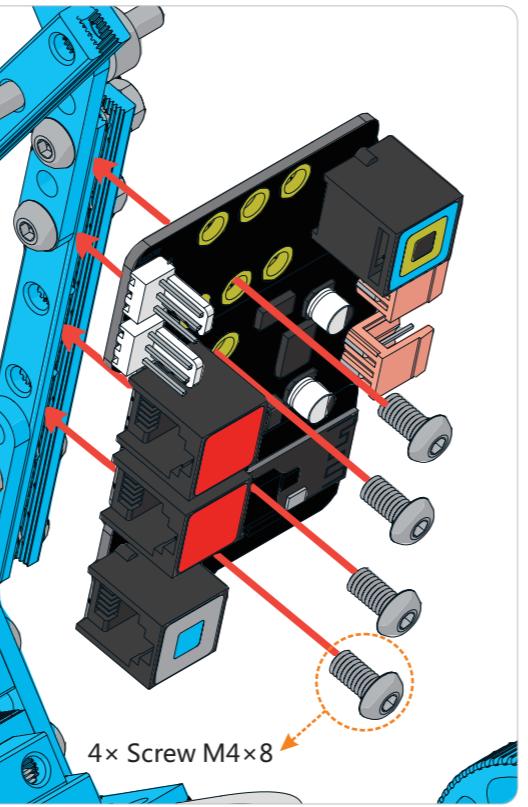
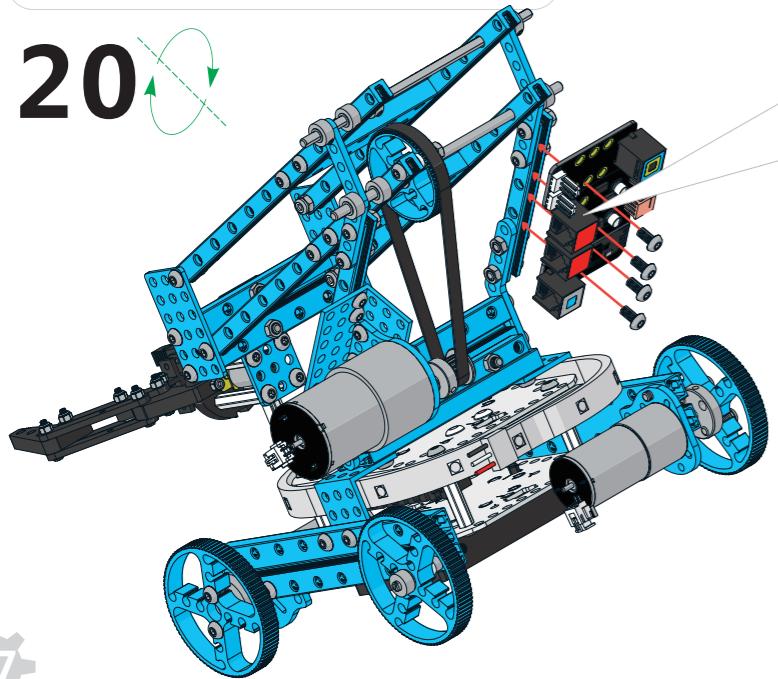
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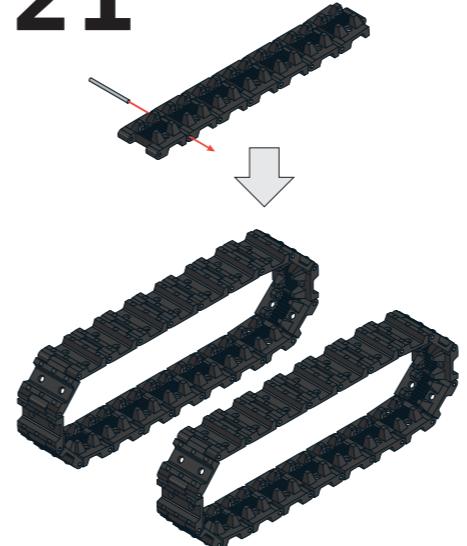
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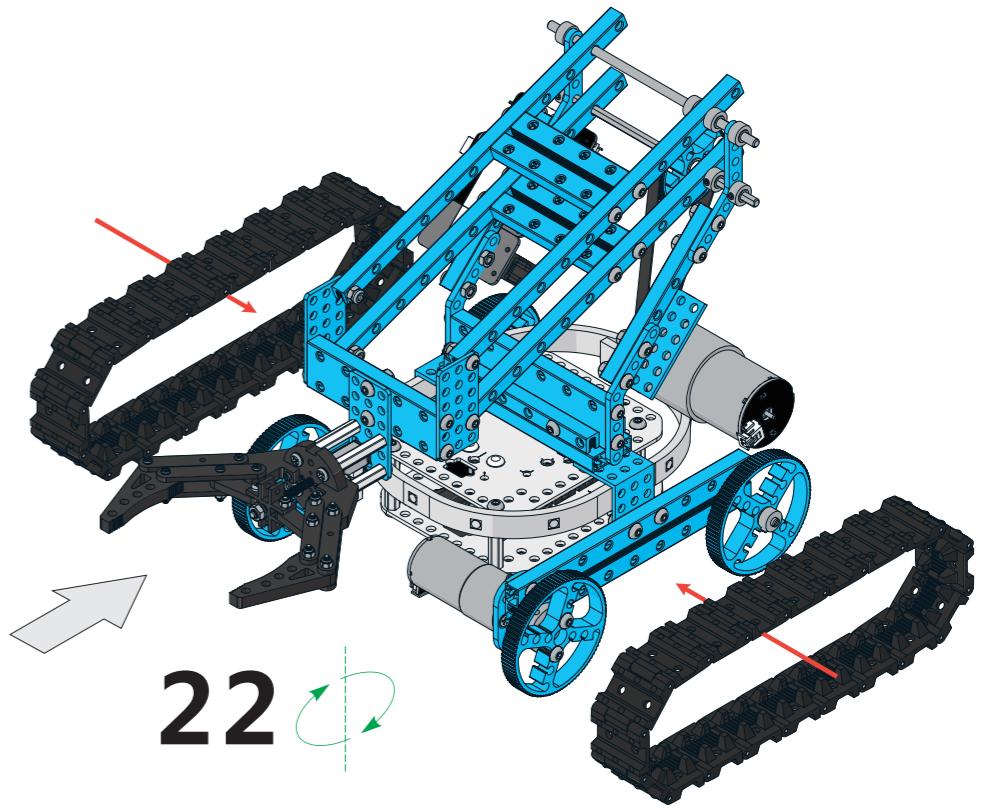
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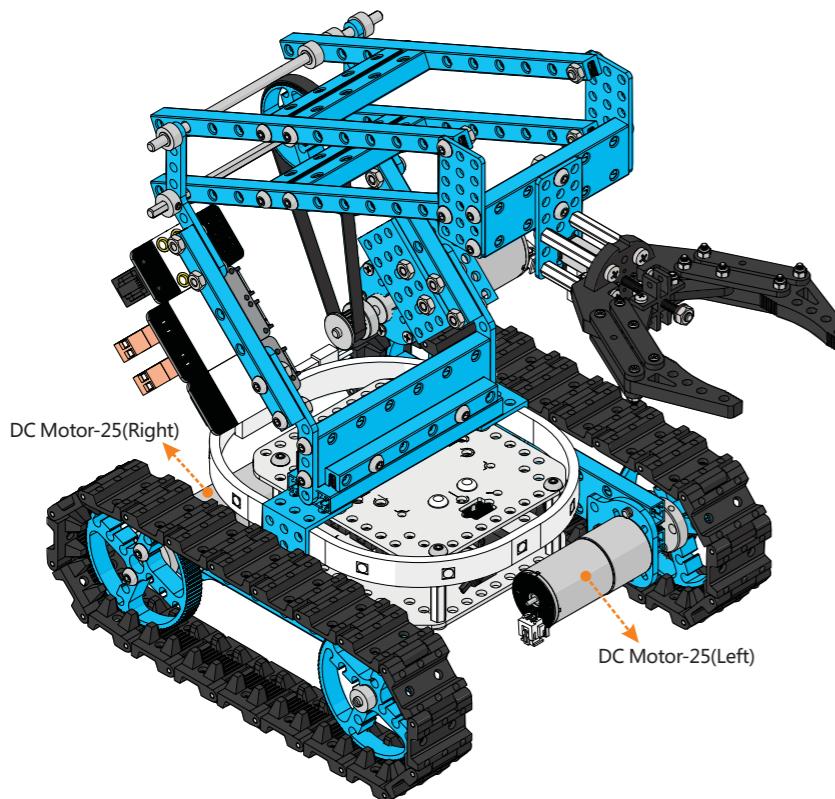


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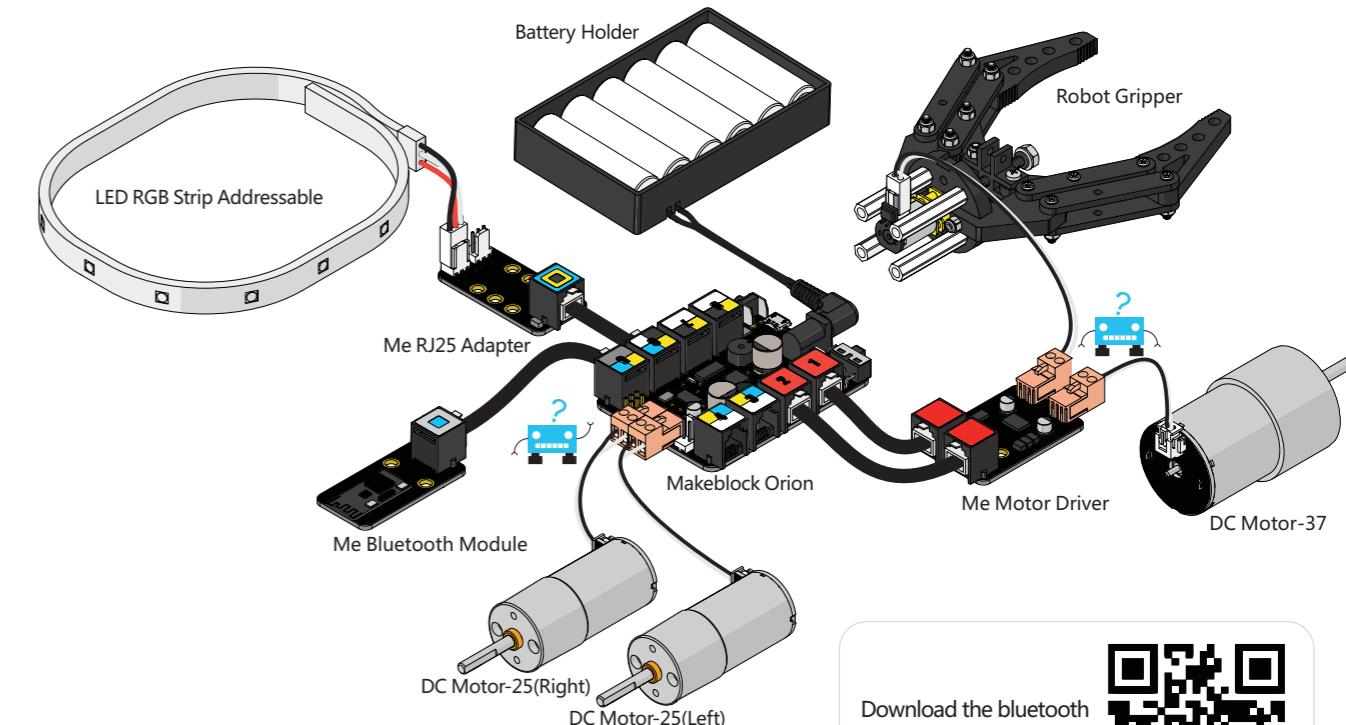


Wiring and Programming

To reduce the electromagnetic interference,
Please consider to add the magnetic ring to
the wire which connected to motors.



For additional robot ideas,
see the 3D models at www.makeblock.cc.



You may need to switch the order of two
wires to correct the rotation direction.

Download the bluetooth
control App by scanning
the QR code



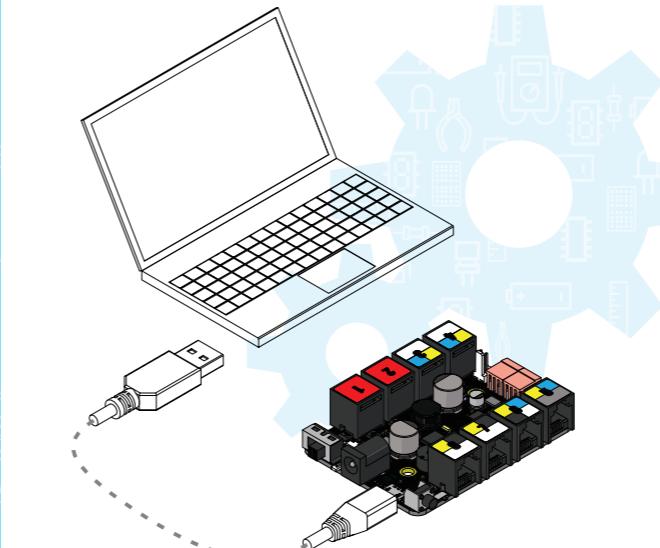
<http://app.makeblock.cc/>

Programming Guide

If you want to creat advanced and customized programs, please refer to this part.

Makeblock Orion Driver Installation

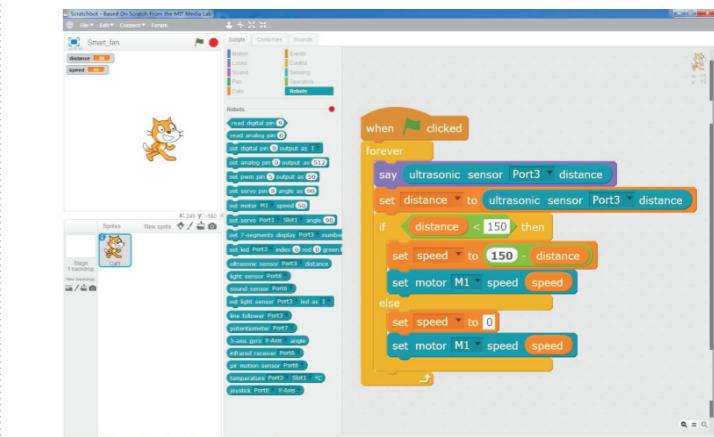
The USB interface of Makeblock Orion uses the chip CH340, you may need to install the chip CH340 drivers manually.



Visit the following URL for more details:
http://learn.makeblock.cc/driver_installation/

Working with Scratch —Hack the Physical World

Makeblock platform supports graphical programming language Scratch, you can simply drag and joint the blocks to run your creations without difficult coding.



Visit the following URL for more details:
<http://learn.makeblock.cc/learning-scratch>

Scratch is a programming language and online community where you can create your own interactive stories, games, and animations — and share your creations with others around the world. In the process of designing and programming Scratch projects, young people learn to think creatively, reason systematically, and work collaboratively. Scratch is a project of the Lifelong Kindergarten group at the MIT Media Lab. It is available for free at <http://scratch.mit.edu>

Working with Arduino IDE

—Learn Programming the Fun Way

The screenshot shows the Arduino IDE interface with a sketch titled "TestSlaveBluetoothBySoftSerial". The code uses the Makeblock library to control a robot. It includes setup and loop functions for initializing serial communication and reading from a digital input. It also handles data from a serial connection and prints to the Serial Monitor.

```
#include <Makeblock.h>
#include <Arduino.h>
#include <SoftwareSerial.h>
#include <Wire.h>

MBLuetooth bluetooth(PORT_4);

void setup()
{
    Serial.begin(9600);
    bluetooth.begin(9600);
    Serial.println("Bluetooth Start!");
}

void loop()
{
    char inData;
    char outData;
    if(bluetooth.available())
    {
        inData = bluetooth.read();
        Serial.print(inData);
    }
    if(Serial.available())
    {
        outData = Serial.read();
        bluetooth.write(outData);
    }
}
```

Learn and play at the same time!
Enjoy it your own way.

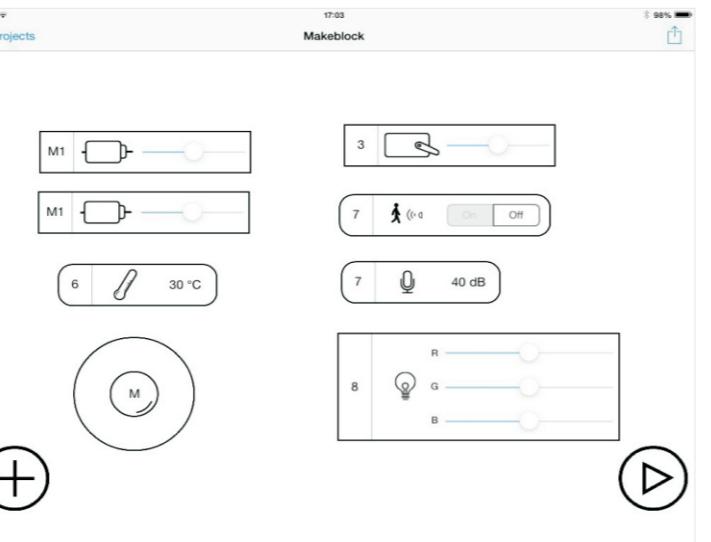
Visit the following URL for more details:
<http://learn.makeblock.cc/learning-Arduino>

Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. The Arduino software consists of a development environment (IDE) and the core libraries. The IDE is written in Java and based on the Processing development environment. The core libraries are written in C and C++ and compiled using avr-gcc and AVR Libc.

Working with the Makeblock App

—Construct It Once, Control It Everywhere

Install the Makeblock app to control your creations with your Android or iOS device.



Visit the following URL for more details:
<http://learn.makeblock.cc/learning-APP>

Construct Your Dreams