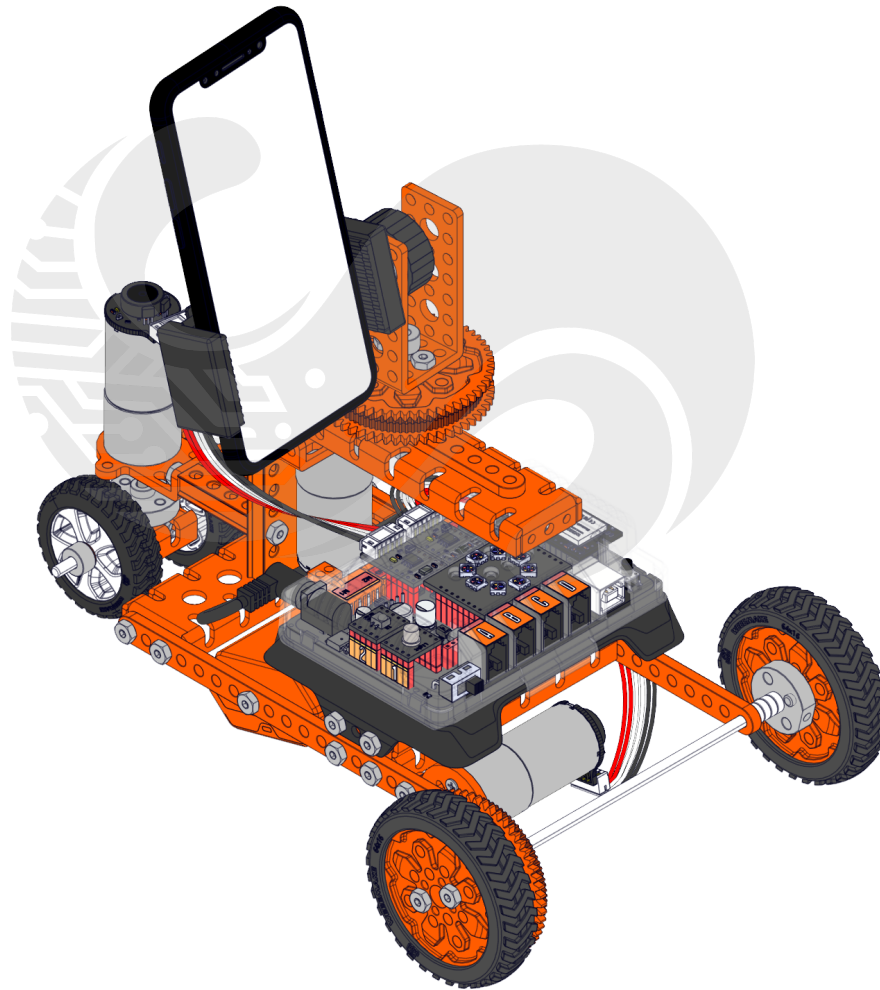


「 Chapter 12 Camera Dolly Robot 」



0.Common Module Installation—Assembly Guide of Mainboard ELF



1x328P MicroChip Module V1.0



1xWeeeMake Bluetooth 4.1 Module



1xLight Sensor (Pin)



1xIR Receiver (Pin)



1xSound Sensor (Pin)



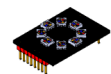
1xELF Mainboard



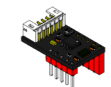
1xELF Mainboard Lid



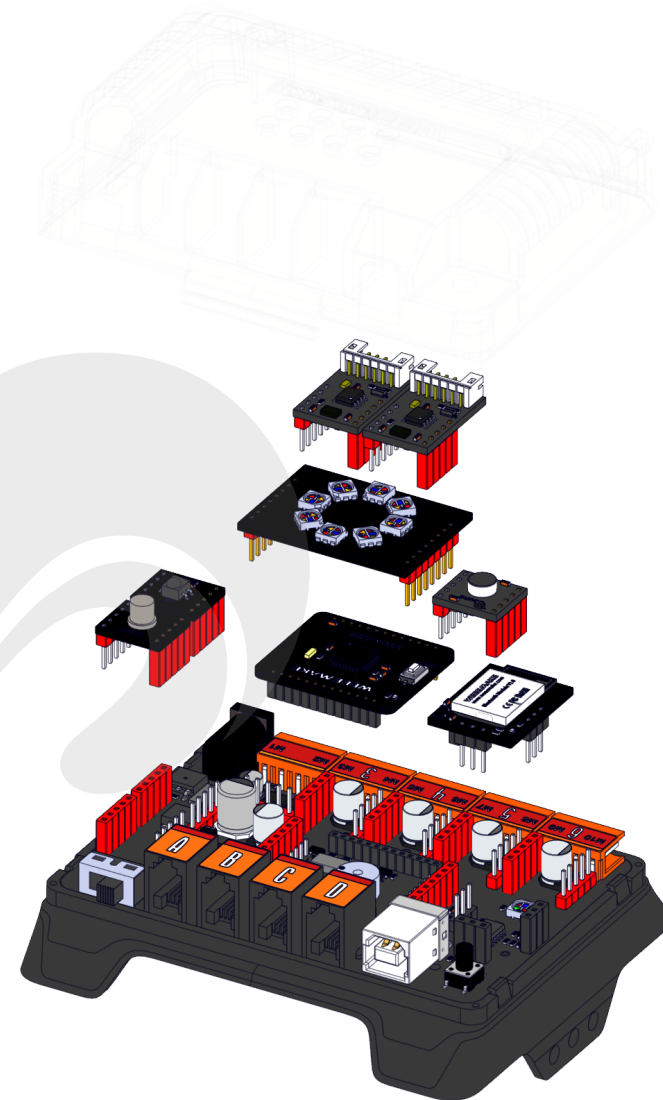
1xELF Mainbaord Base



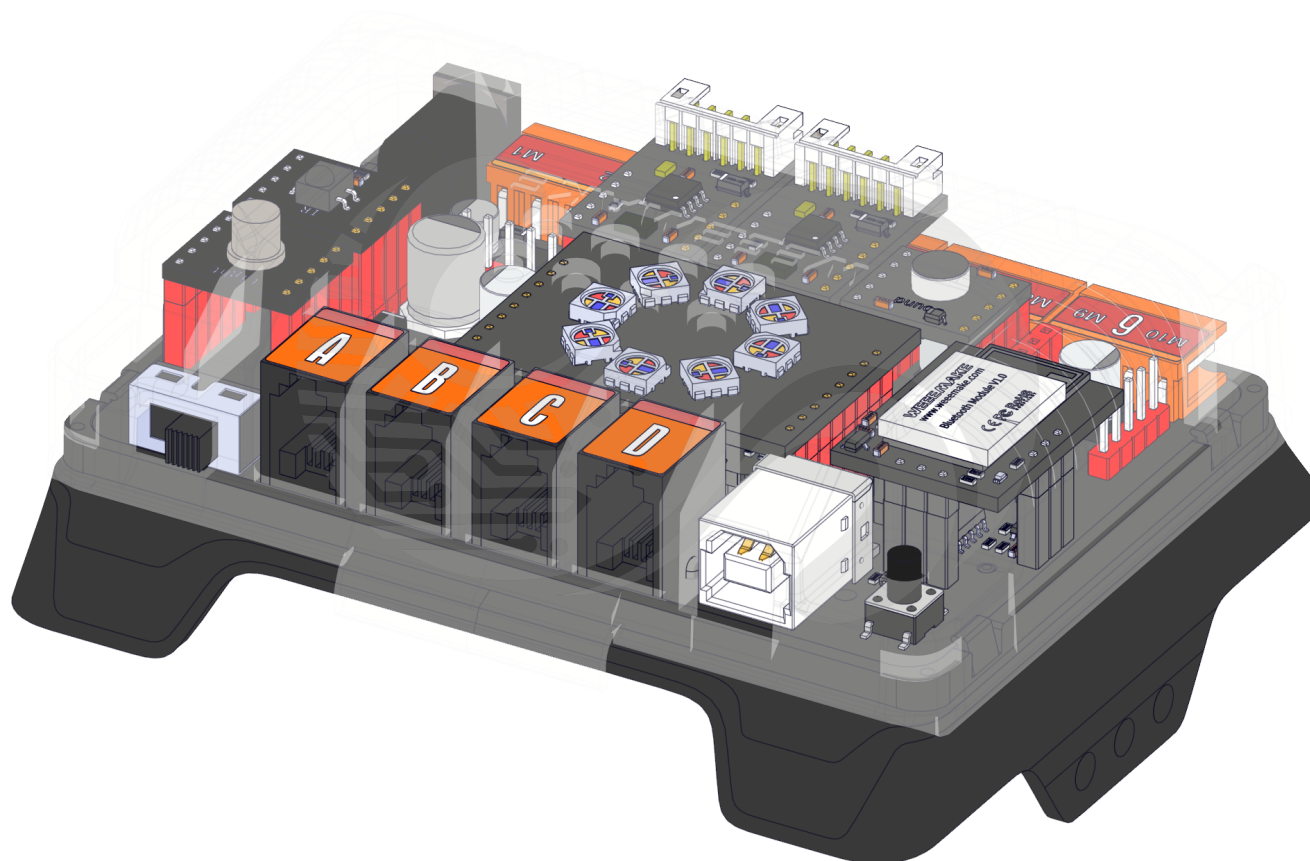
1xRGB LED - 8 (Pin)



2xDC/Encoder Motor Driver

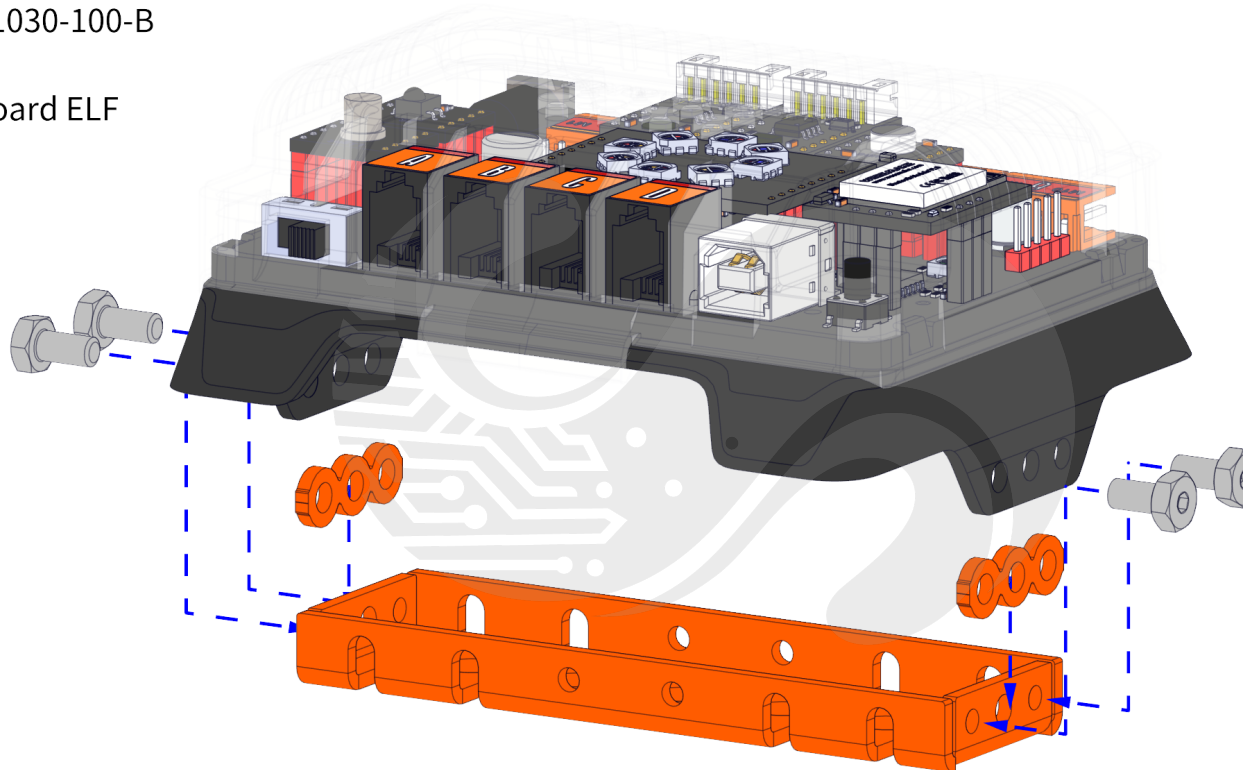


0.Common Module Installation—Assembly Guide of Mainboard ELF

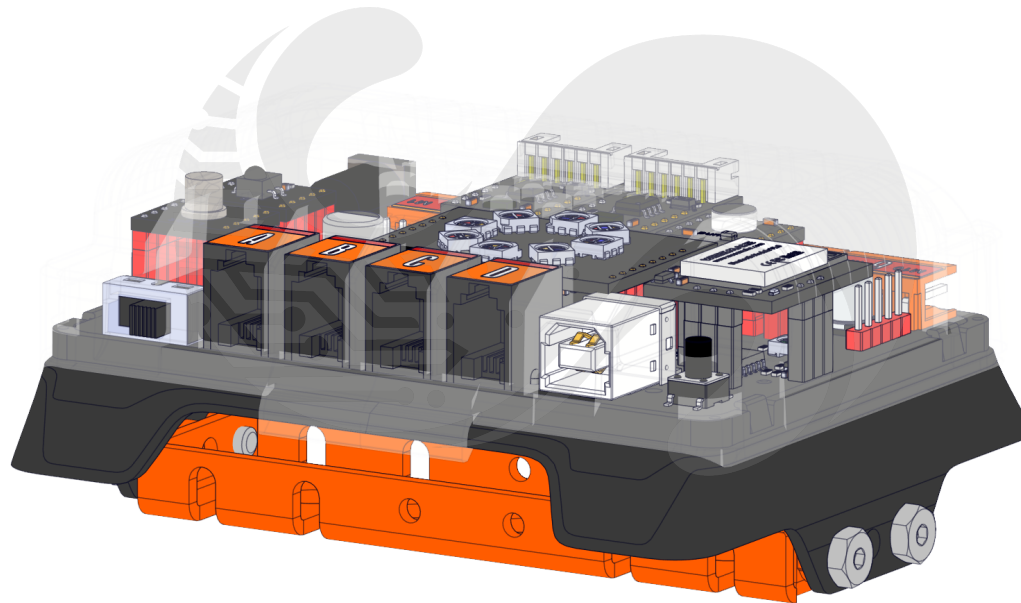


0.Common Module Installation—Assembly Guide of Mainboard ELF

-  4xScrew M4*8
-  2xLinkage 0208-24
-  1xBeam 1030-100-B
-  1xMainboard ELF



0.Common Module Installation—Assembly Guide of Mainboard ELF



Tips:

The default sensors on mainboard ELF is installed as follows:

Port 1 - Light Sensor Port 2 - IR Receiver Port 3 & 4 - DC/Encoder Motor Driver Port 5 - Sound Sensor

MCU Port - 328P Micro Chip

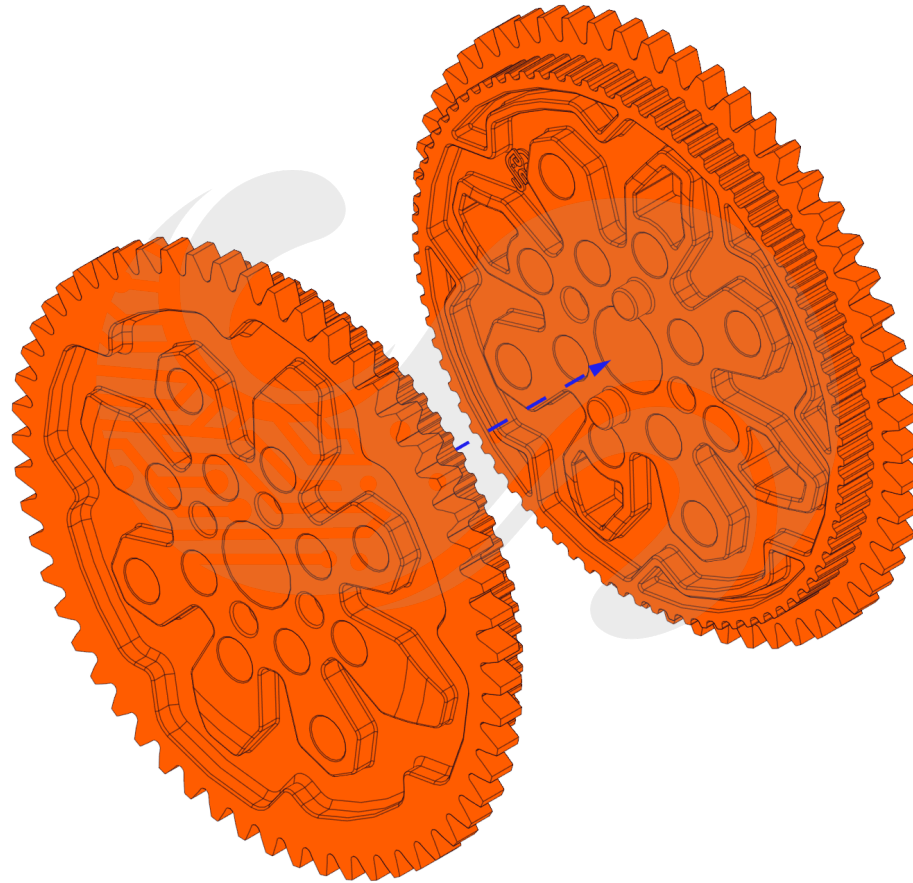
Communication Port - Bluetooth Module

Special port - RGB LED -8 Module

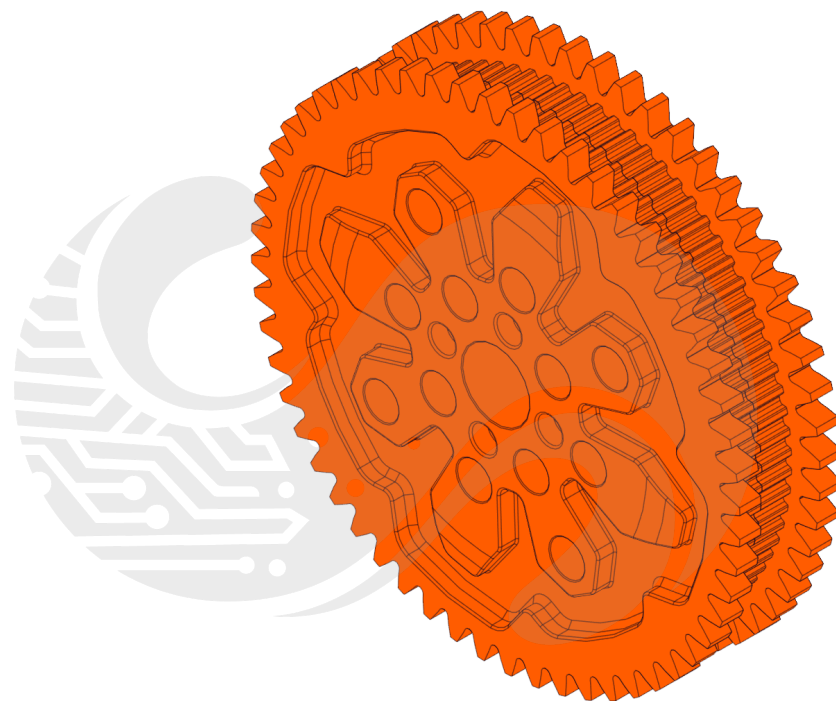
1.Assemble 56T Plastic Gear



2x56T-Plastic Gear



1.Assemble 56T Plastic Gear



× 3

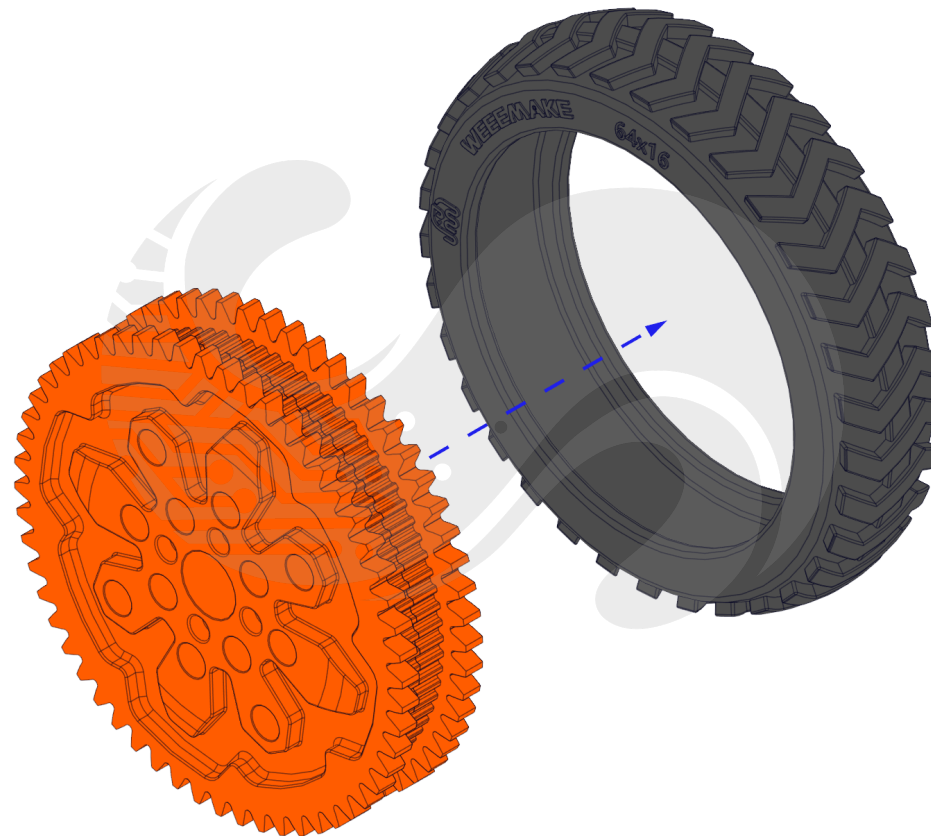
2.Assemble Tyre



1x56T-Plastic Gear Assembly



1xTyre 64*16



2.Assemble Tyre



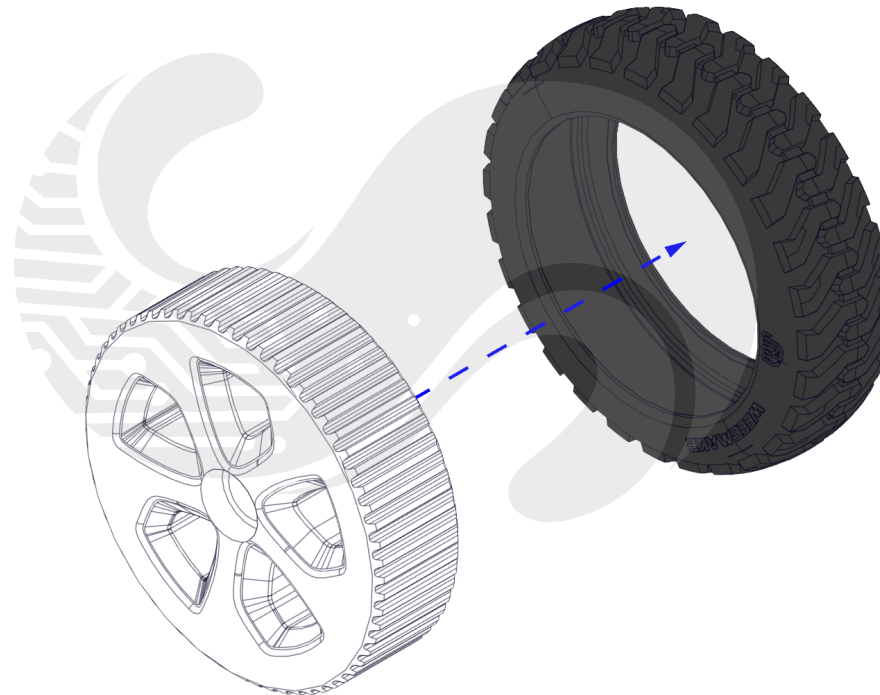
2.Assemble Tyre



1xmini Driven wheel 42x12



1xmini Tyre 48x14 V1.0

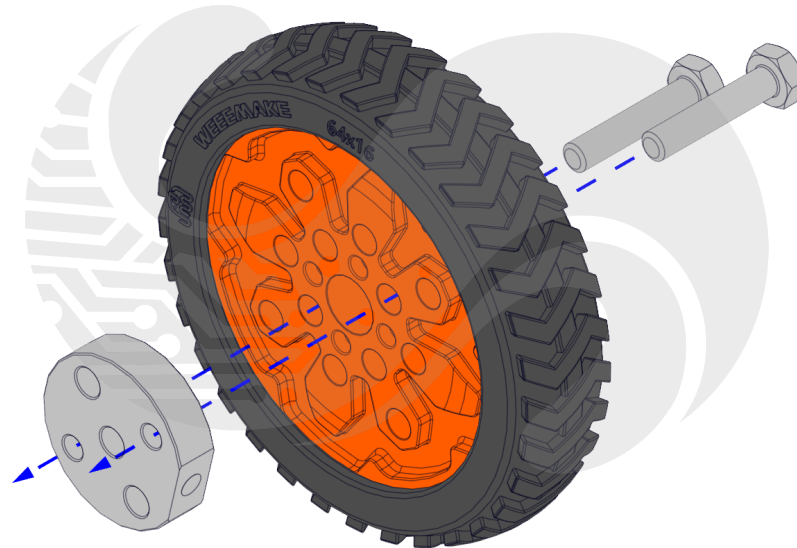


2.Assemble Tyre

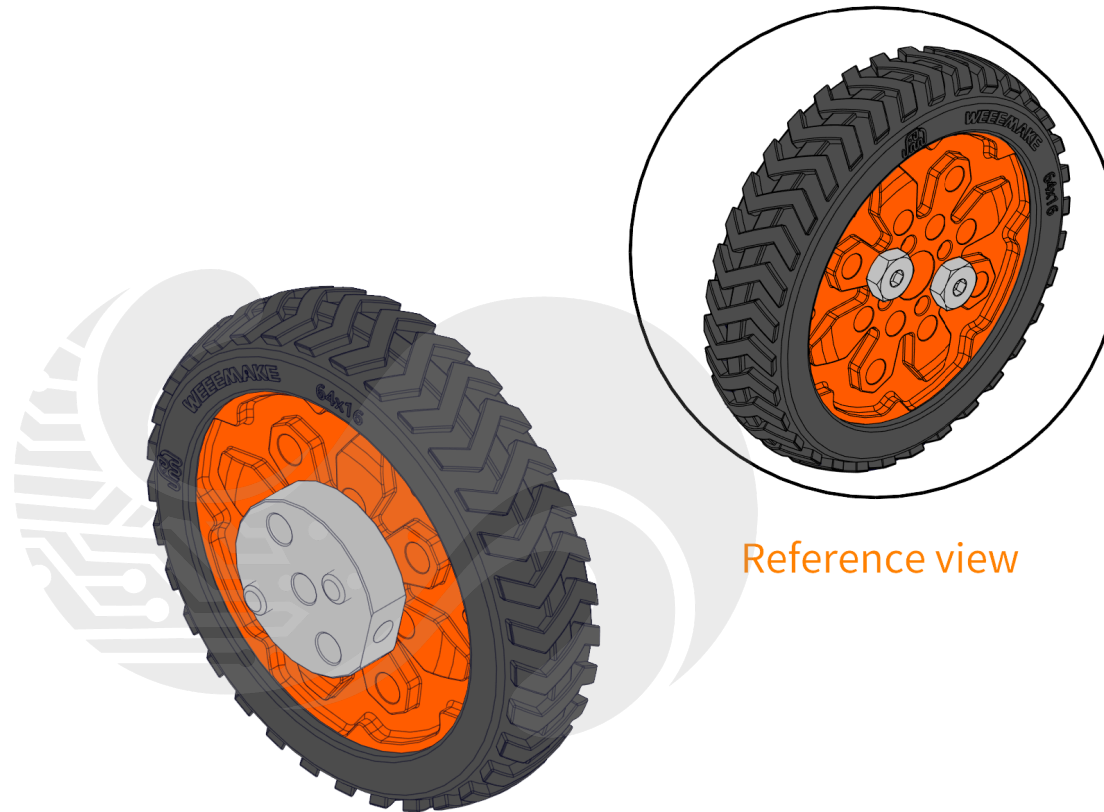


3.Assembly the Driven Wheel

-  2xScrew M4*20
-  1xDriving Flange Hub 4mm
-  1xTyre 64*16 Assembly



3.Assembly the Driven Wheel



4.Assemble Active Wheel

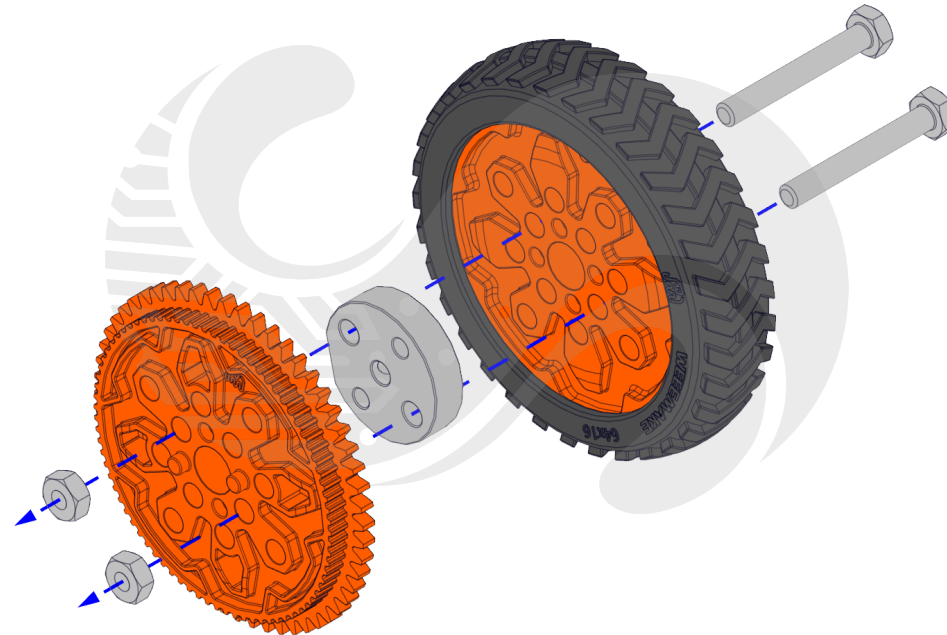
 1xDriving Flange Hub 4mm

 1x56T-Plastic Gear

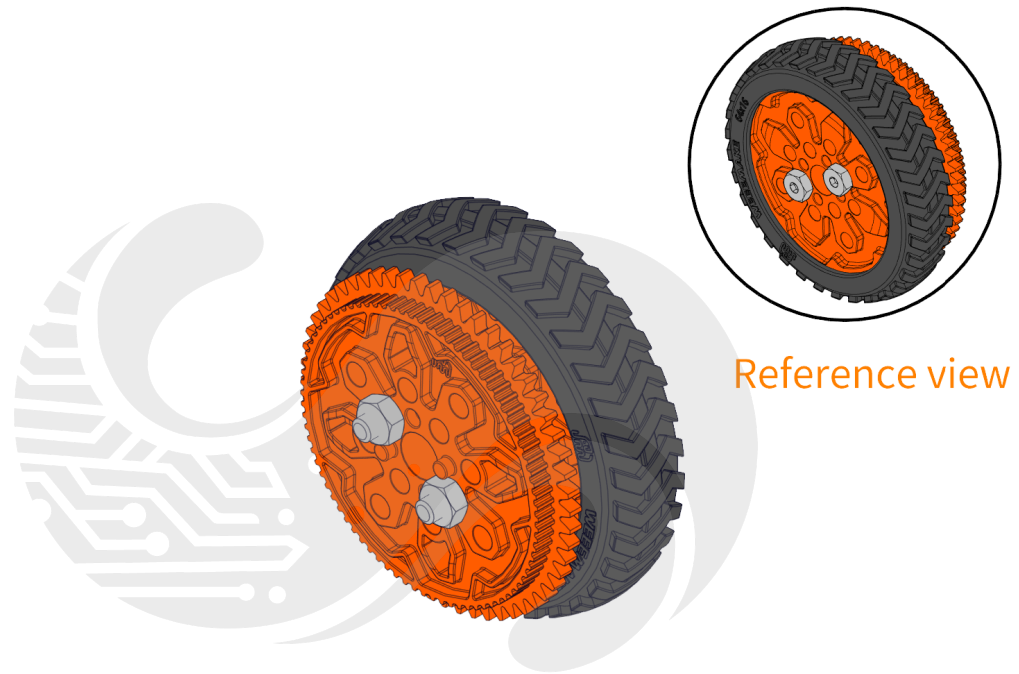
 2xNut M4

 2xScrew M4*30

 1xTyre 64*16 Assembly

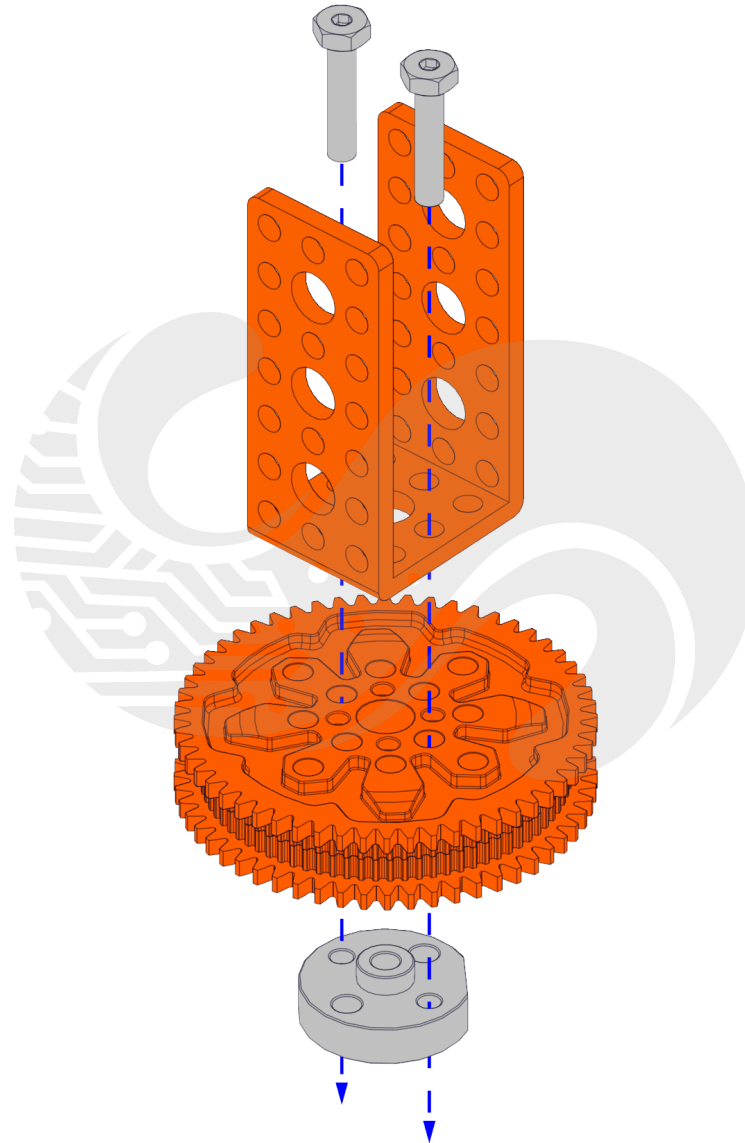


4.Assemble Active Wheel

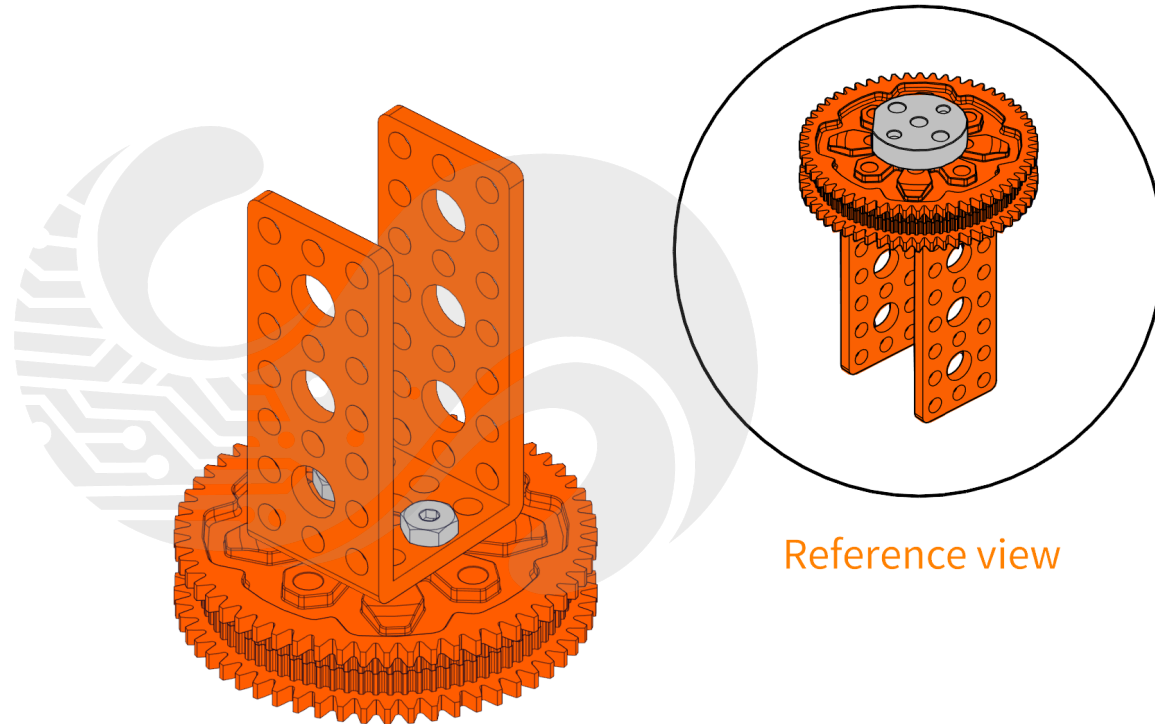


5.Assemble Horizontal Rotating Wheel

-  2xScrew M4*25
-  1xBracket U1
-  1xDriving Flange Hub 4mm
-  1x56T-Plastic Gear Assembly



5.Assemble Horizontal Rotating Wheel



6.Assemble Encoder DC Motor-25



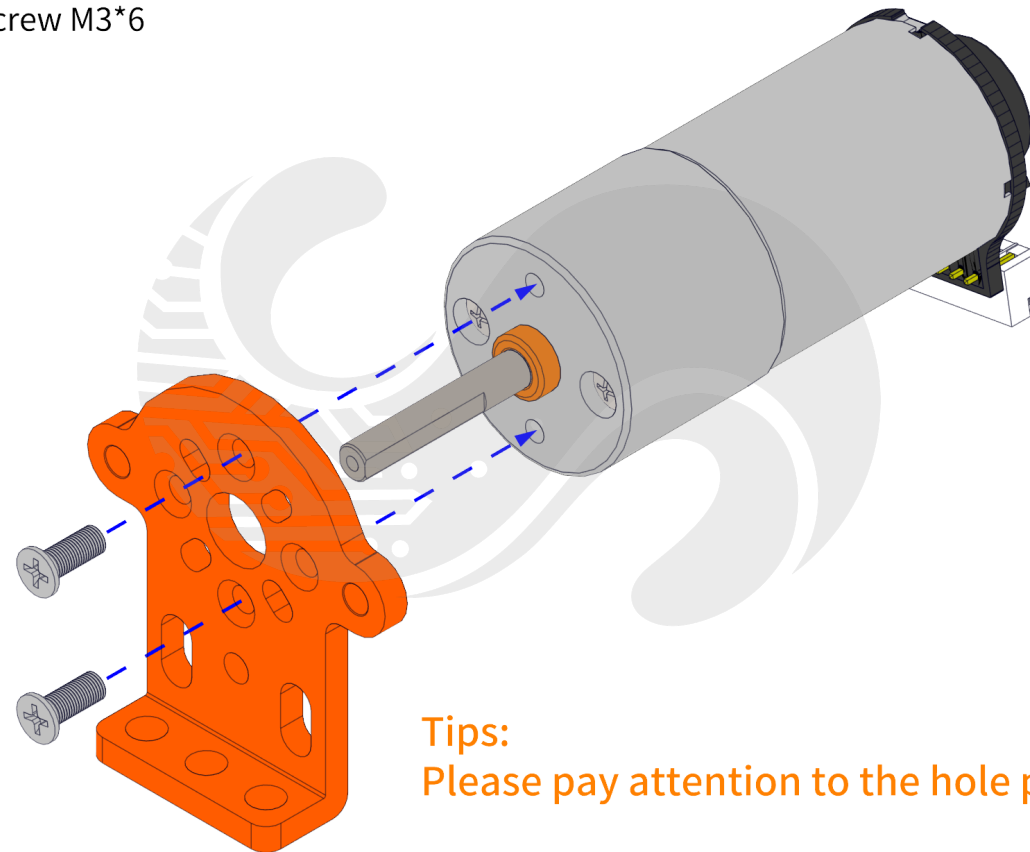
1x25 Motor Bracket



1xEncoder DC Motor-25 9V188RPM

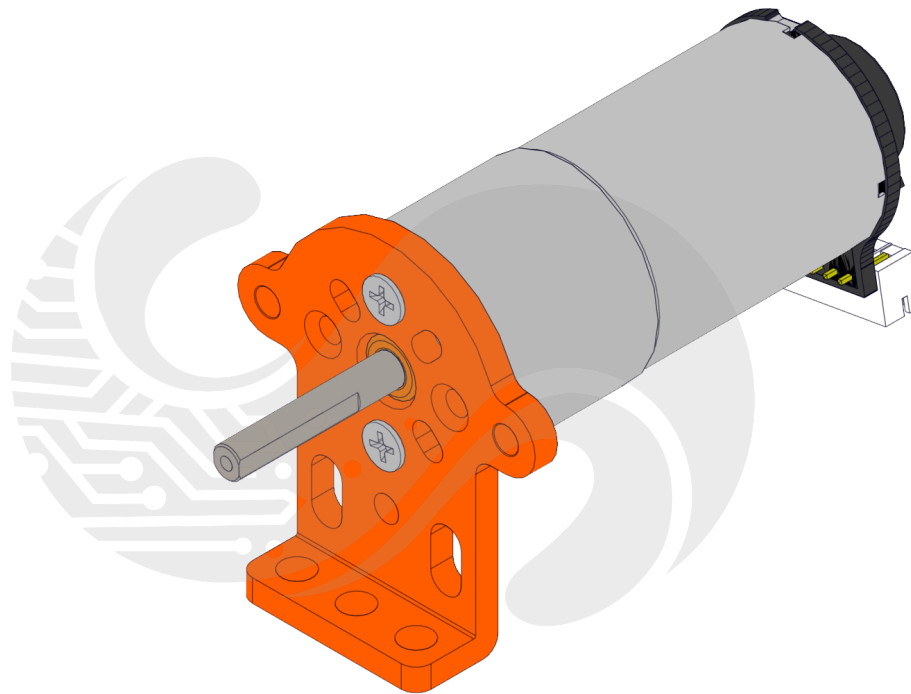


2xCountersunk Head Screw M3*6

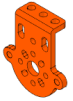


Tips:
Please pay attention to the hole position and direction.

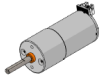
6.Assemble Encoder DC Motor-25



7.Assemble DC Motor-25 (50RPM)



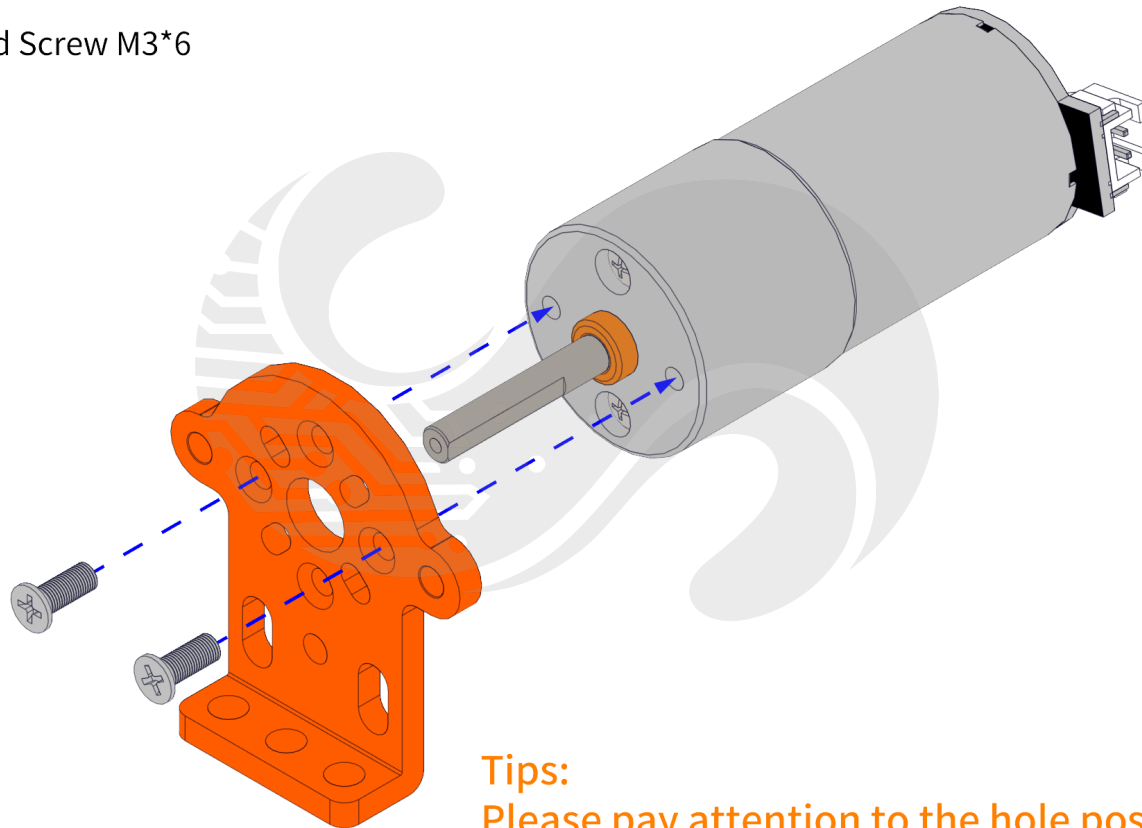
1x25 Motor Bracket



1xDC Motor-25 (50RPM)

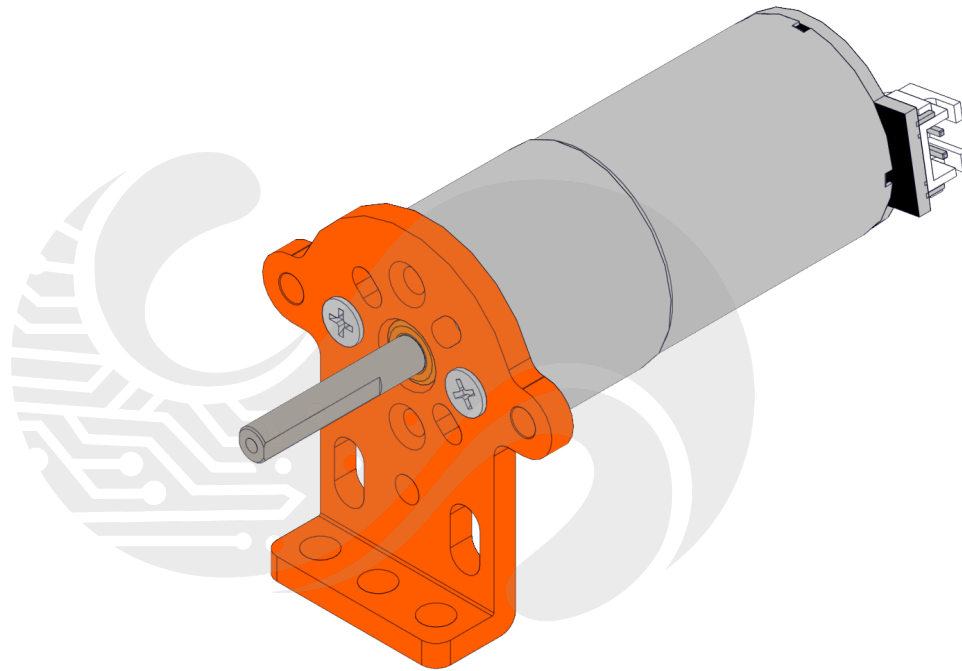


2xCountersunk Head Screw M3*6



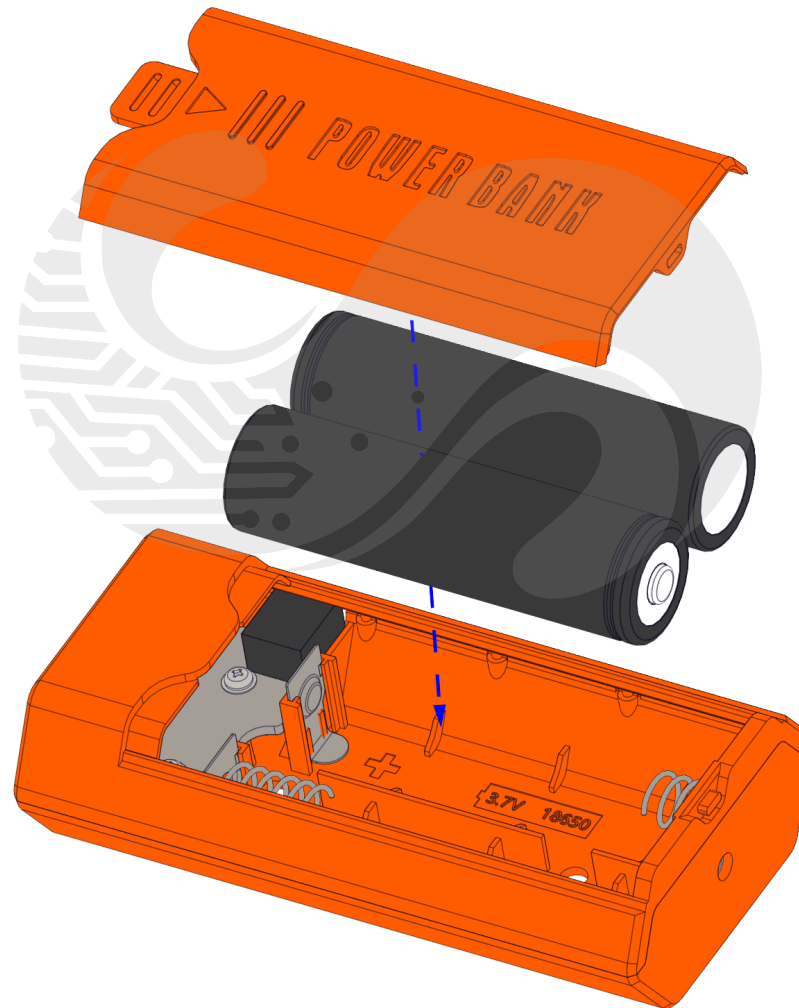
Tips:
Please pay attention to the hole position and direction.

7.Assemble DC Motor-25 (50RPM)

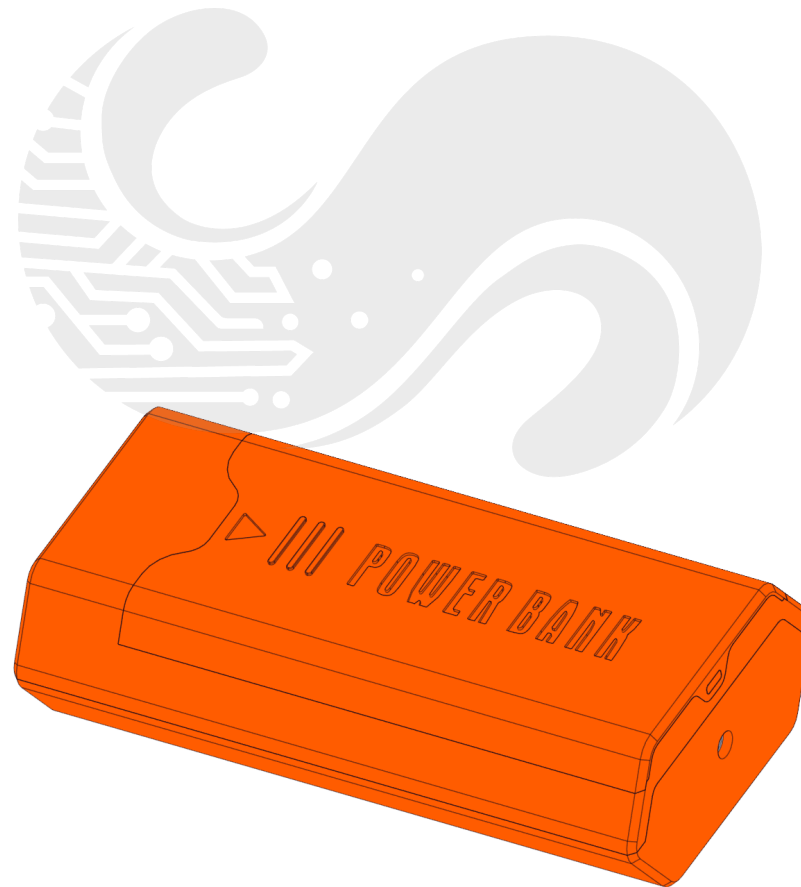


8. Assemble the 18650 Lithium Battery Holder

-  2x18650 Lithium Battery
-  1xLithium Battery Holder Lid
-  1x18650 Battery Holder

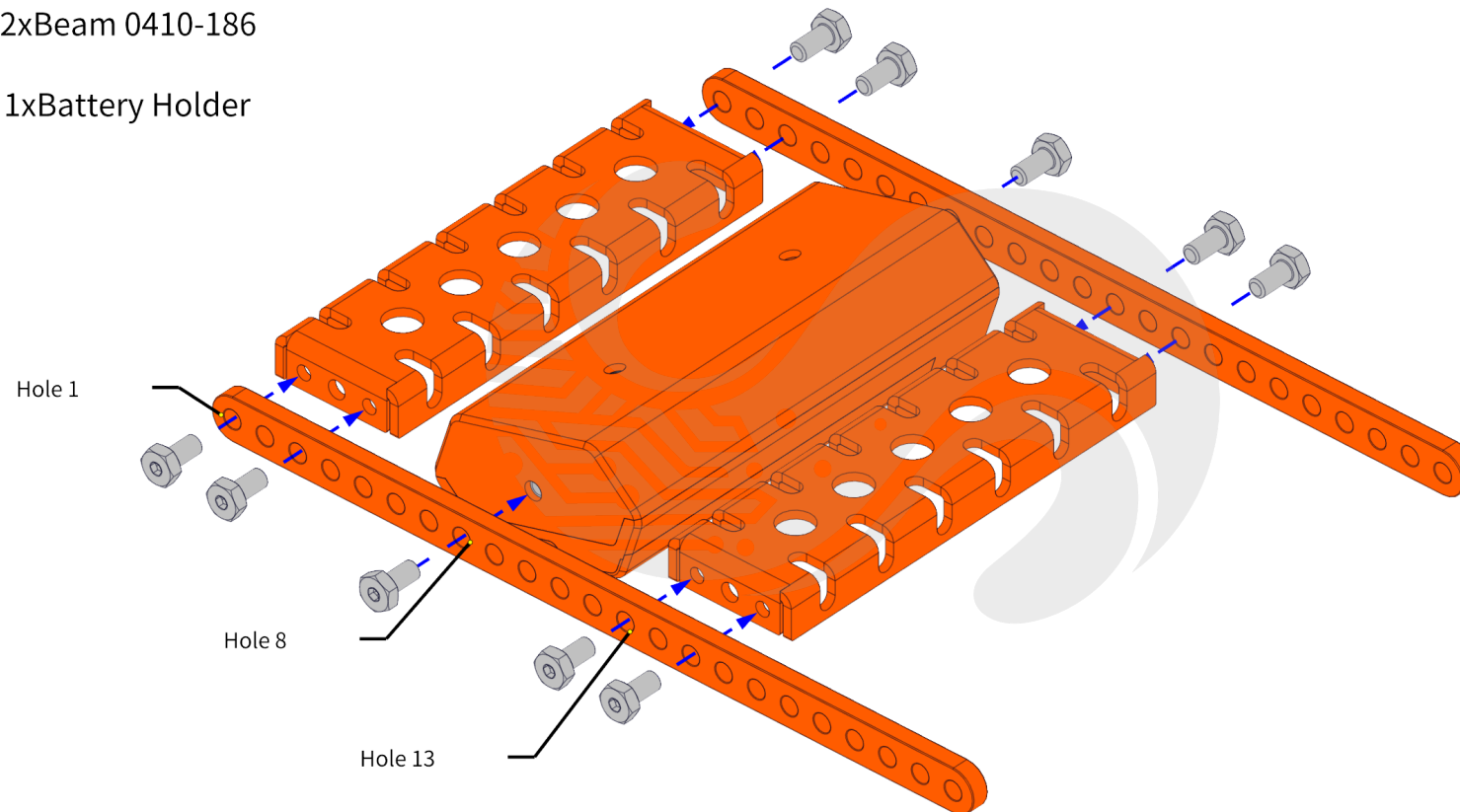


8. Assemble the 18650 Lithium Battery Holder



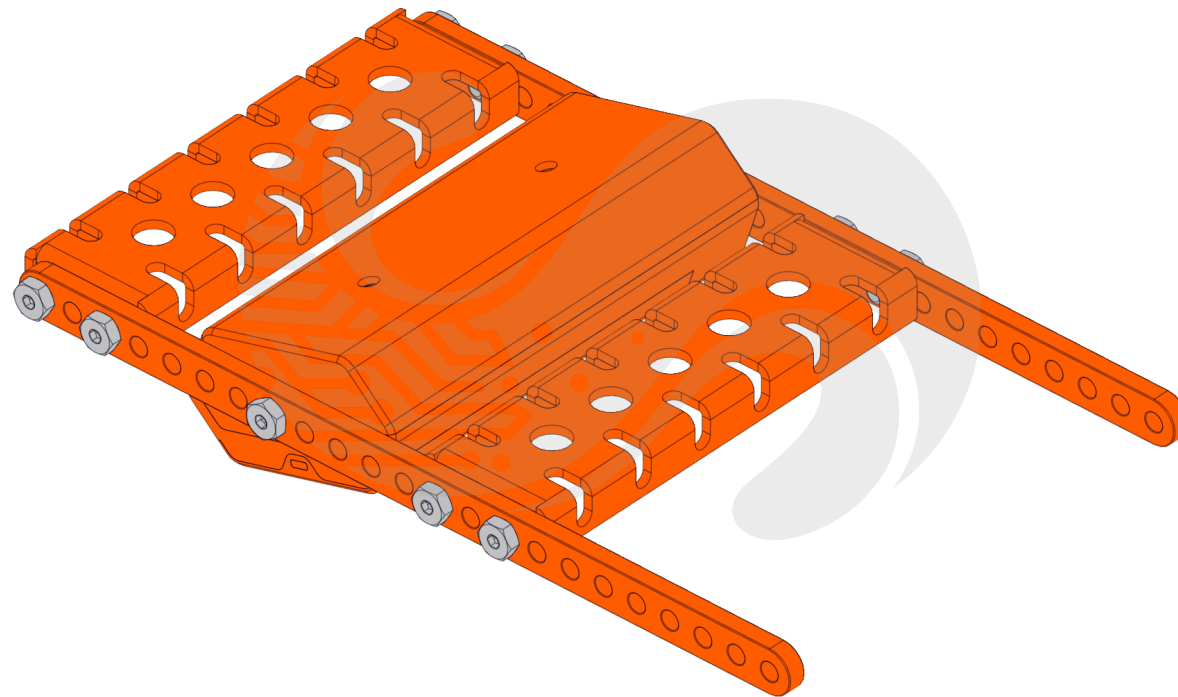
9.Assemble Base Structure

-  10xScrew M4*8
-  2xBeam 1030-100
-  2xBeam 0410-186
-  1xBattery Holder



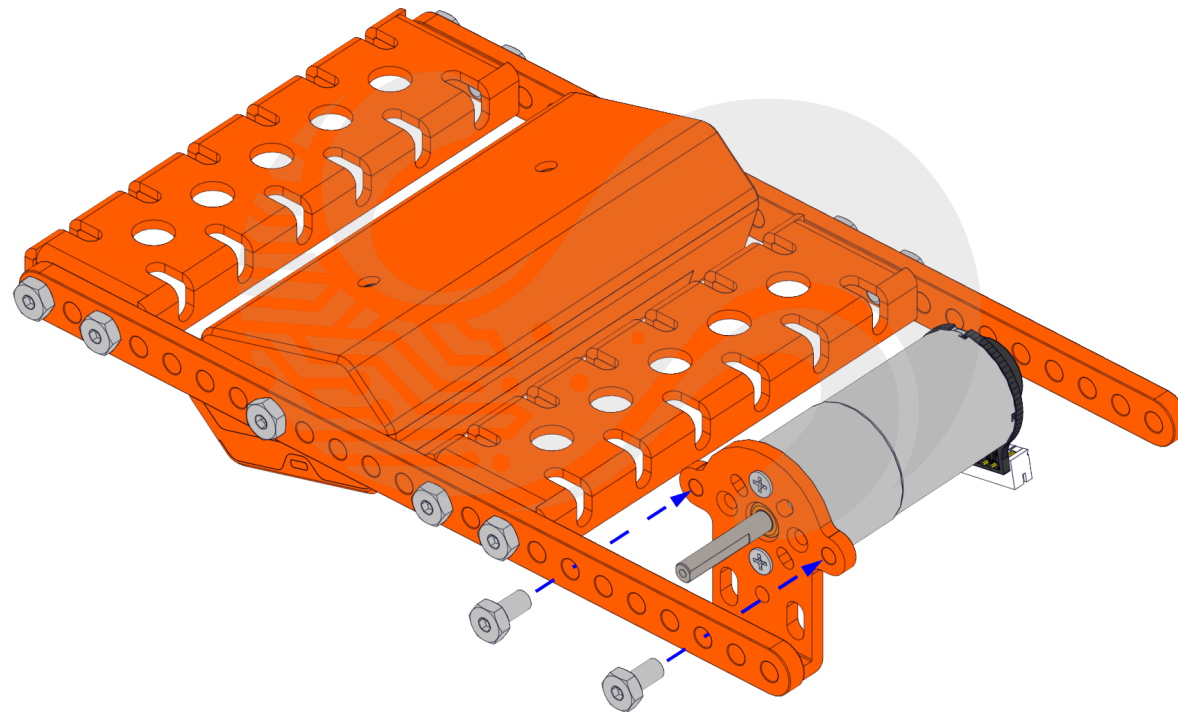
Tips:
Please pay attention to the hole position and direction.

9.Assemble Base Structure



10. Assemble Base Structure Motor

 2xScrew M4*8



Tips:
Please pay attention to the hole position and direction.

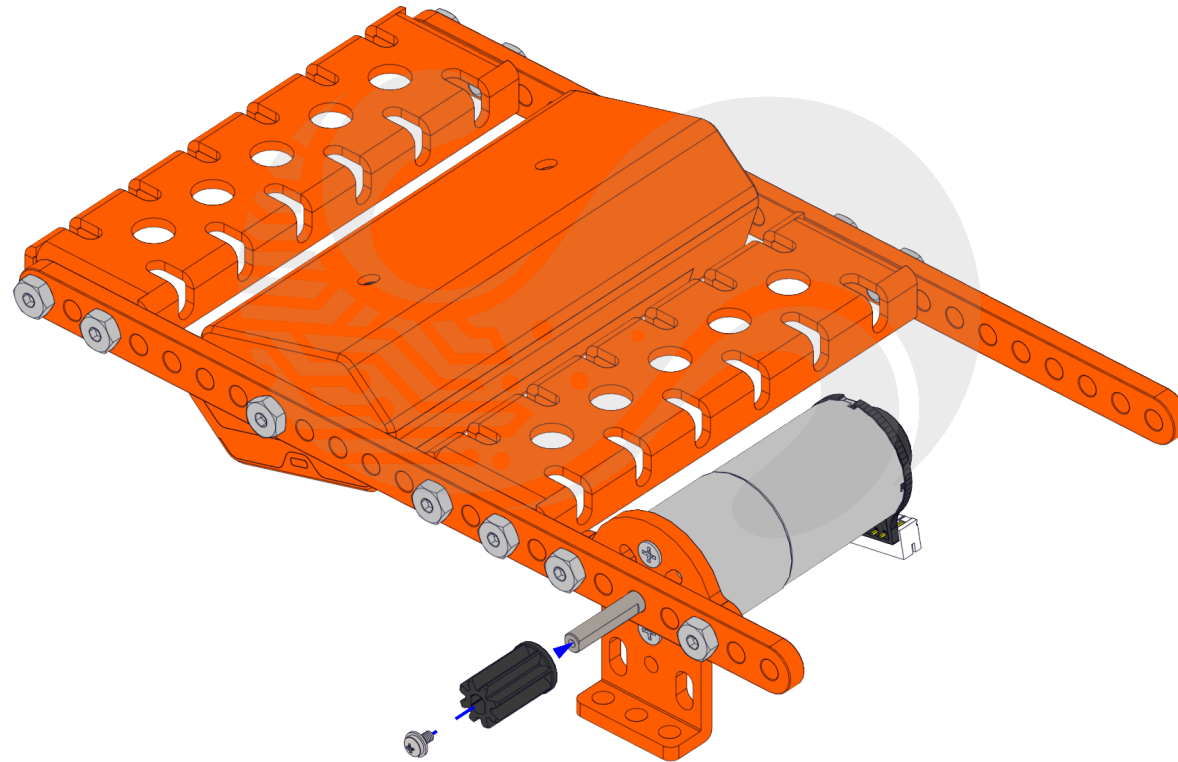
11. Assemble 8T Plastic Gear



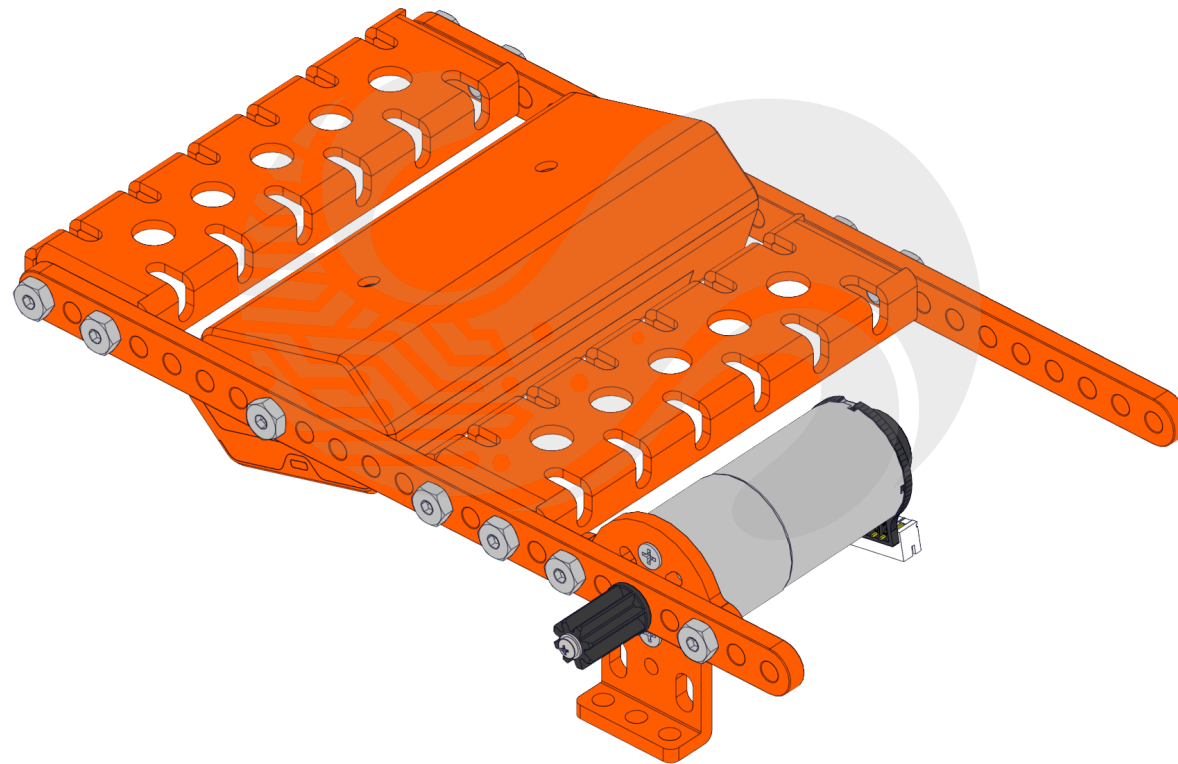
1xScrew M2*4



1x8T-Plastic Gear V1.0 (Flat Hole)

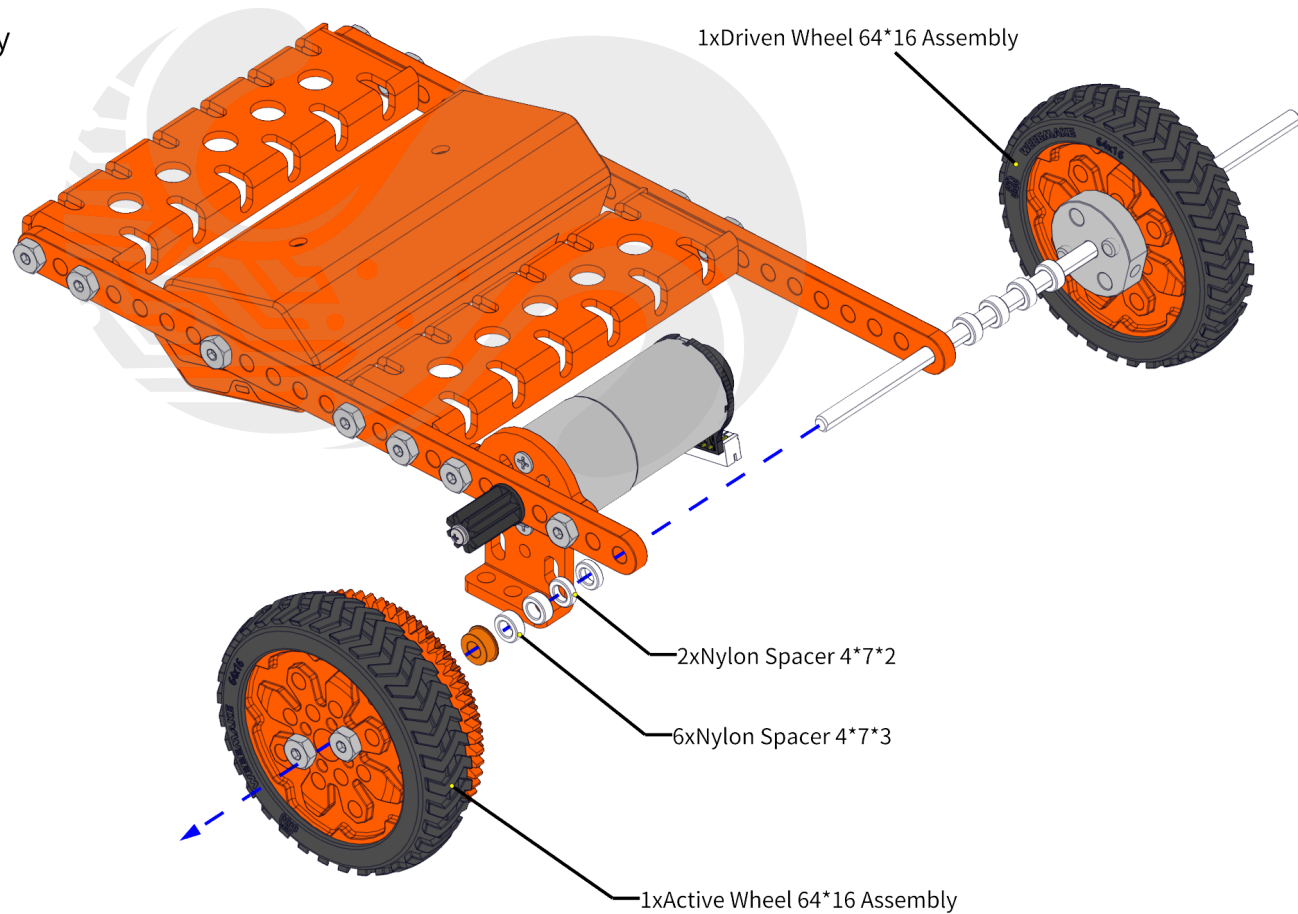


11. Assemble 8T Plastic Gear



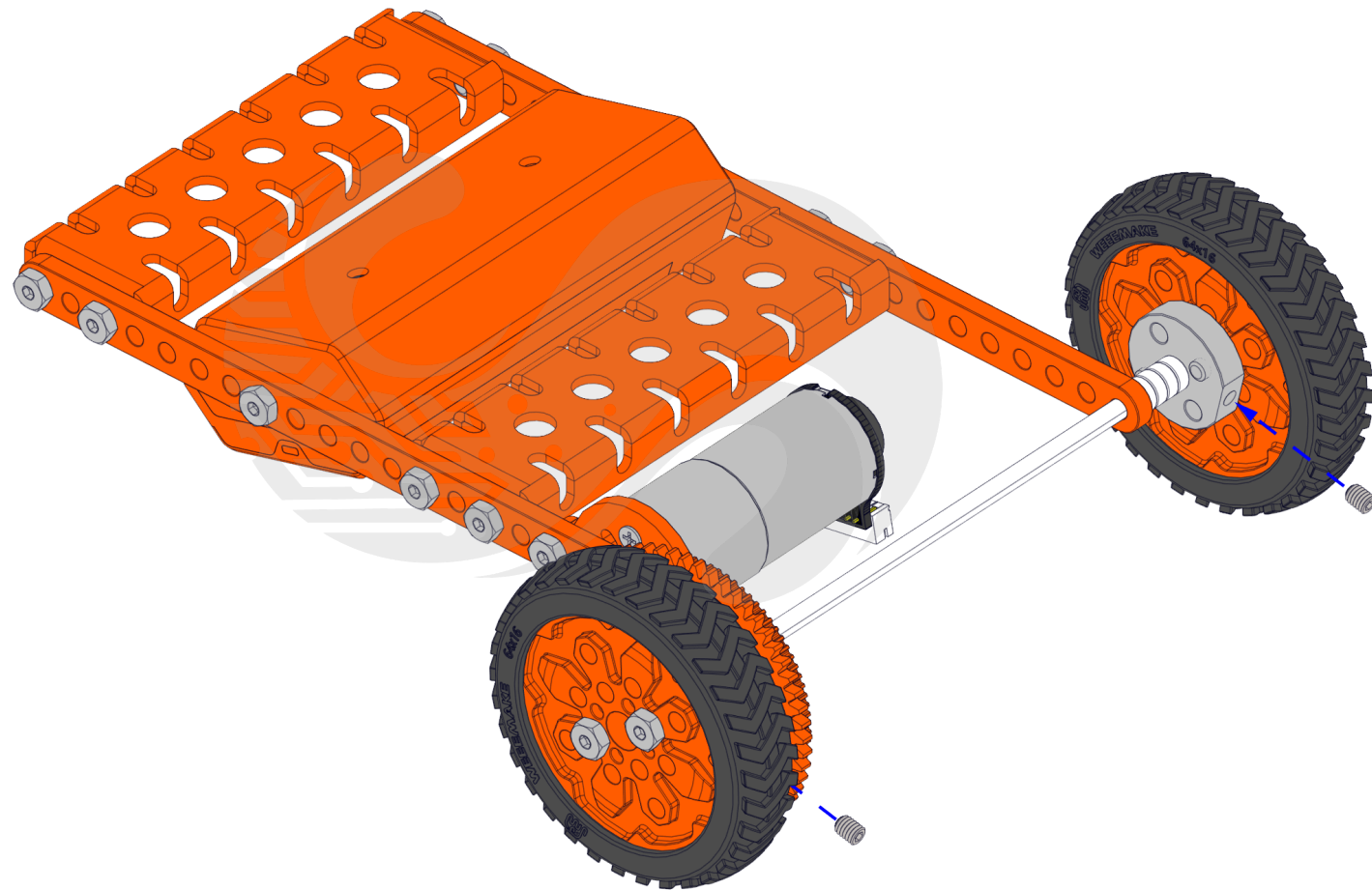
12. Assemble the Back Wheels

-  2xNylon Spacer 4*7*2
-  6xNylon Spacer 4*7*3
-  1xFlange Copper Bearing 4*8*3.5
-  1xFlat Shaft 4-160
-  1xDriven Wheel 64*16 Assembly
-  1xActive Wheel 64*16 Assembly

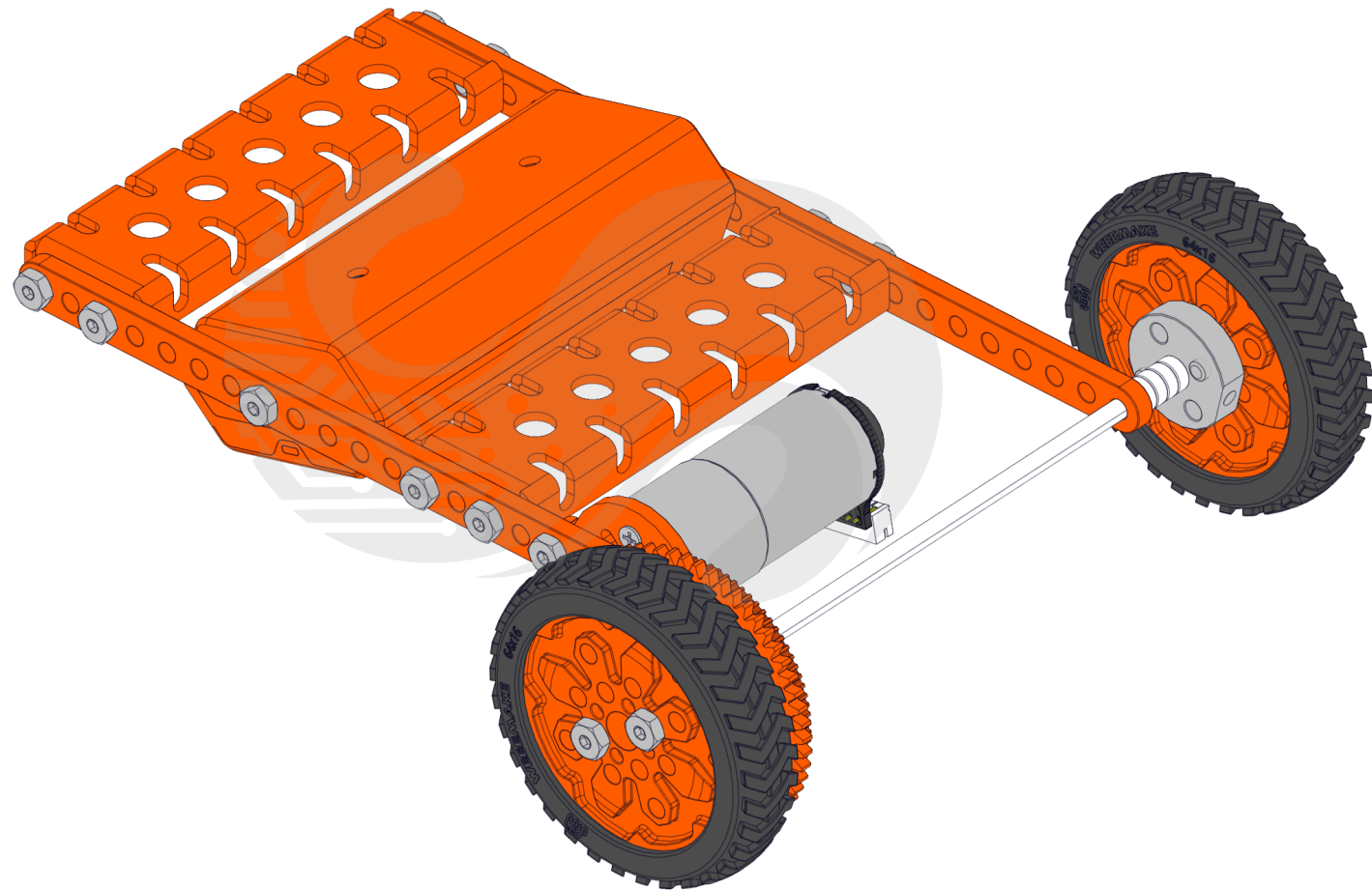


12. Assemble the Back Wheels

 2xHeadless Screw M4*5



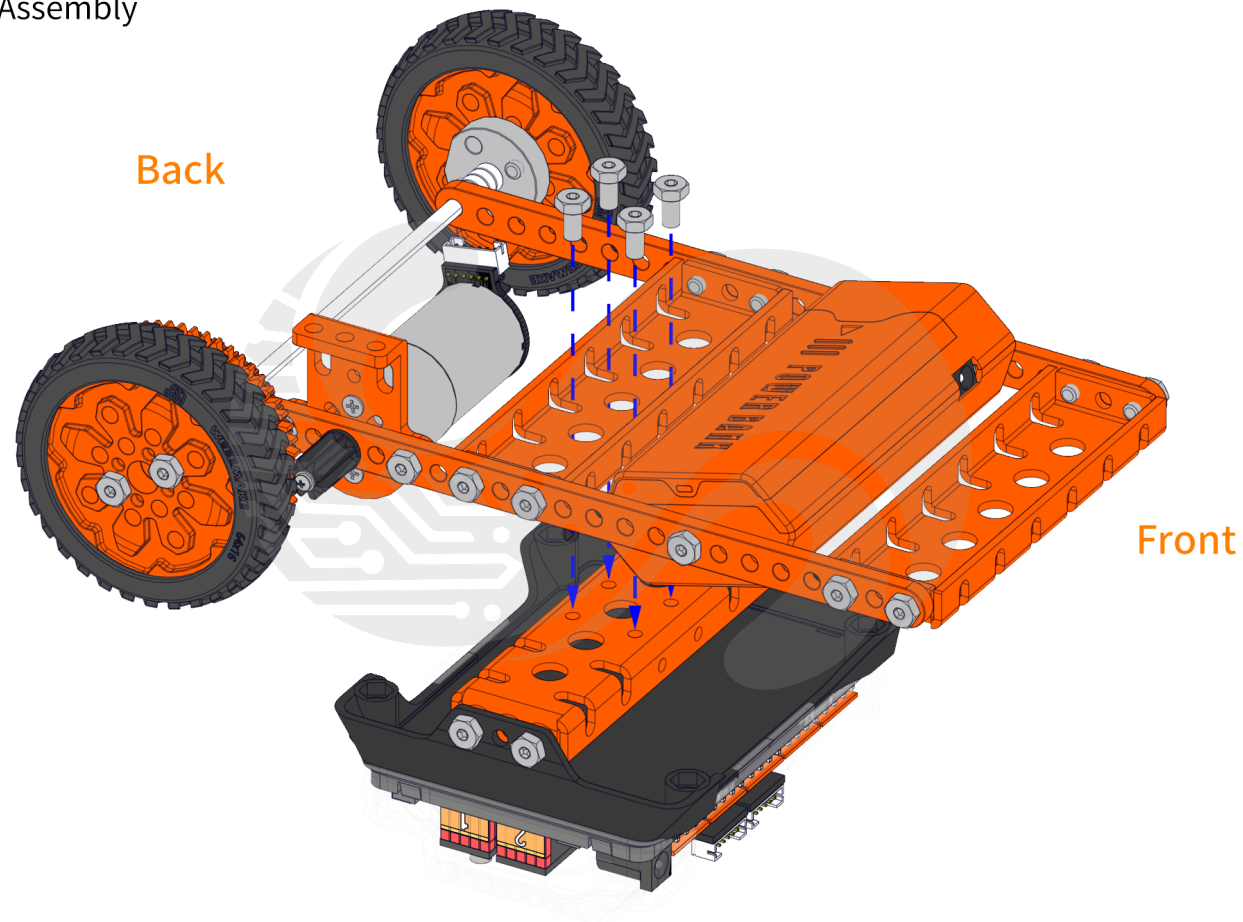
12. Assemble the Back Wheels



13. Assemble the Mainboard ELF

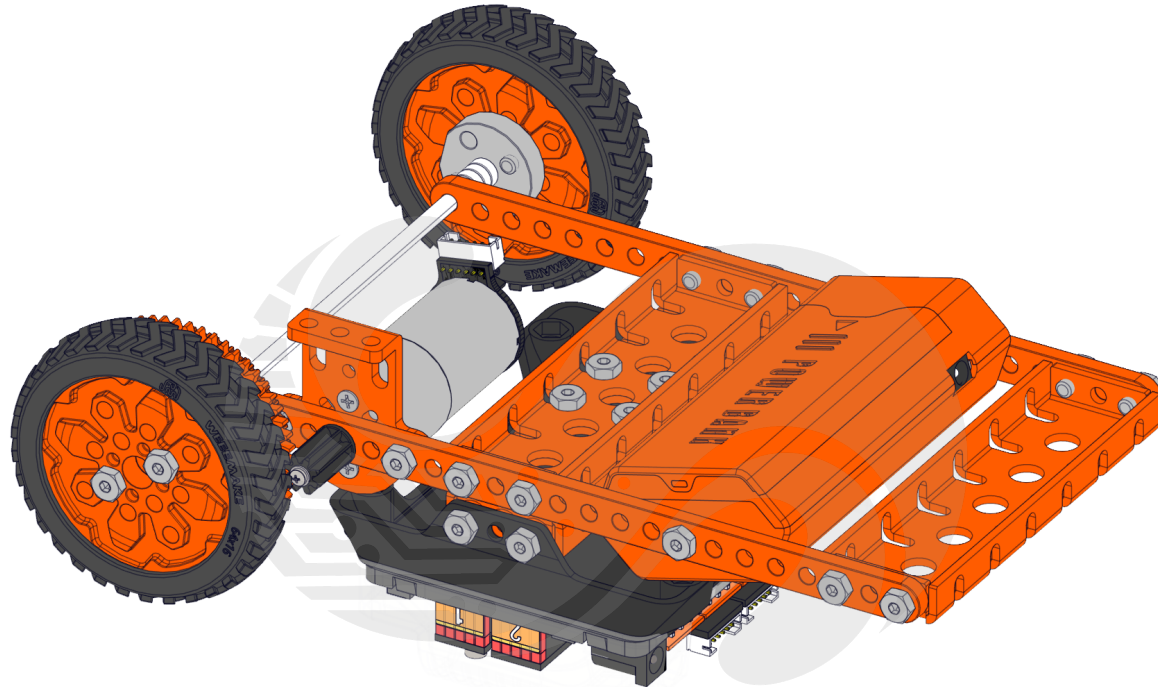
 4xScrew M4*8

 1xELF Mainboard Assembly

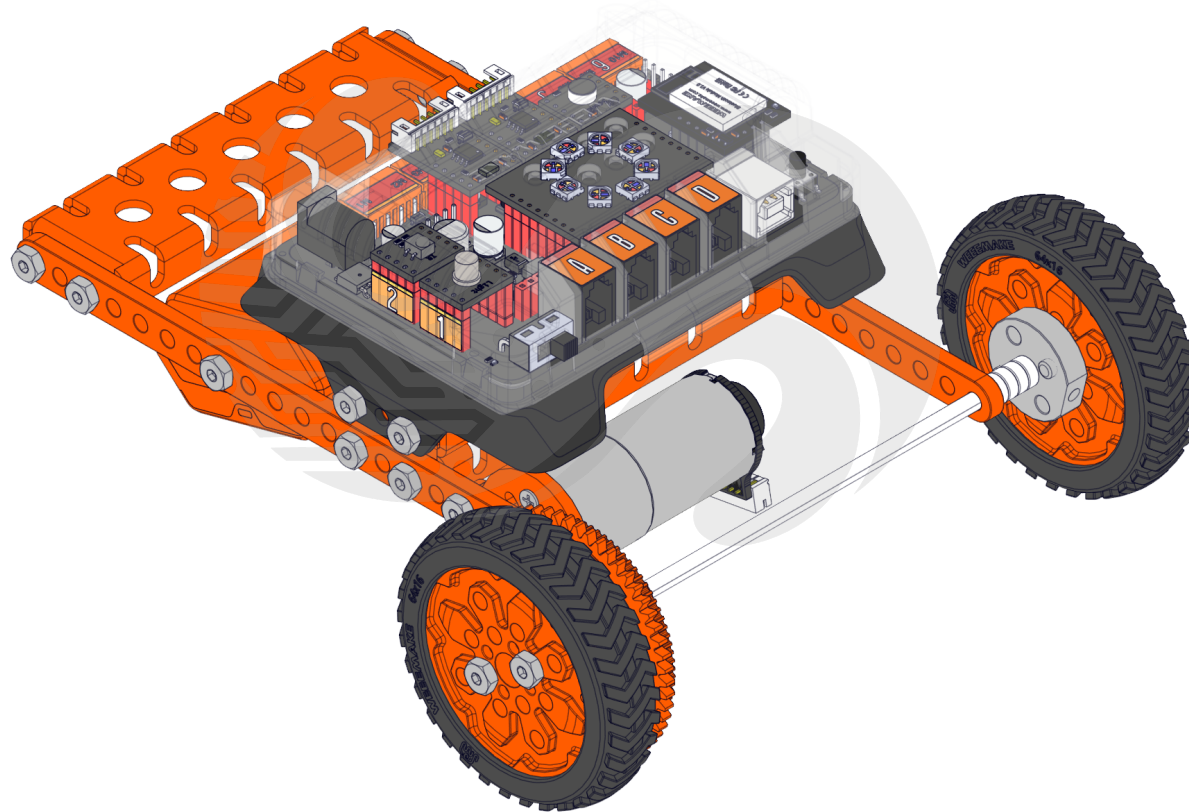


Note: While fixing the mainboard ELF, make the USB interface towards the back.

13.Assemble The Mainboard ELF



13. Assemble the Mainboard ELF



14. Assemble the Front Wheels

 2xNylon Spacer 4*7*3

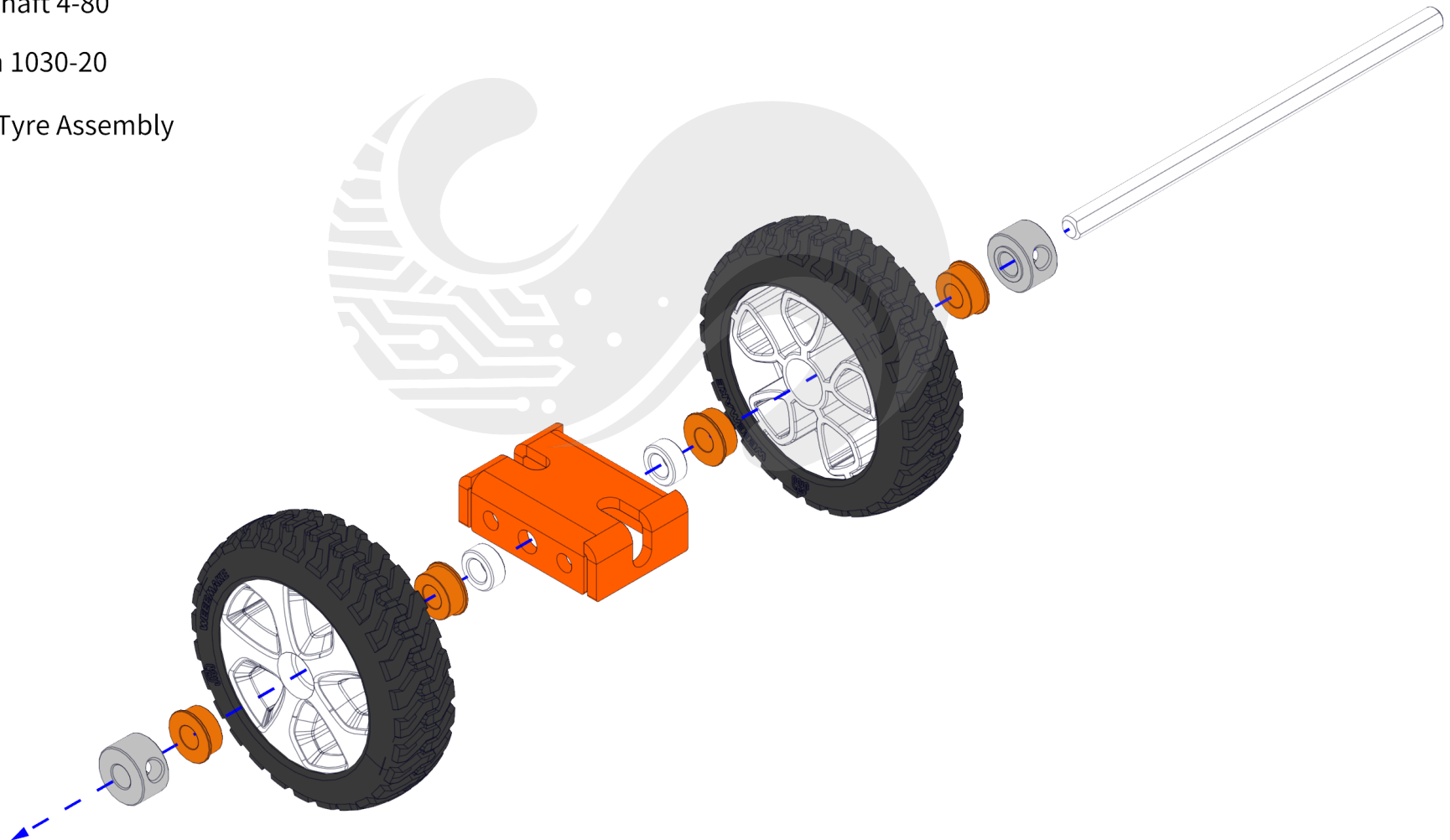
 4xFlange Copper Bearing 4*8*3.5

 2xShaft Collar - 4mm

 1xFlat Shaft 4-80

 1xBeam 1030-20

 2xmini Tyre Assembly

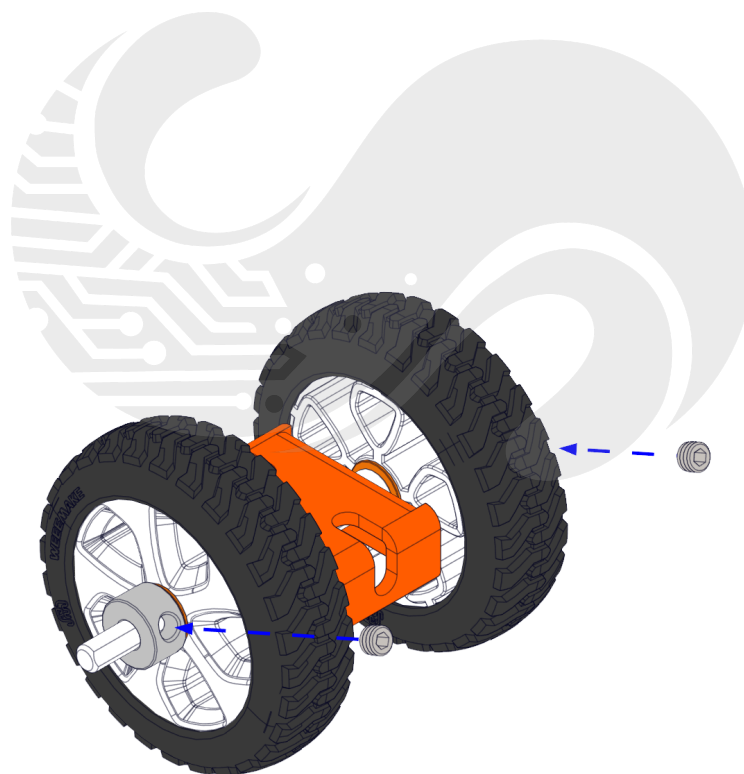


14. Assemble the Front Wheels



14. Assemble the Front Wheels

 2xHeadless Screw M4*3



14. Assemble the Front Wheels



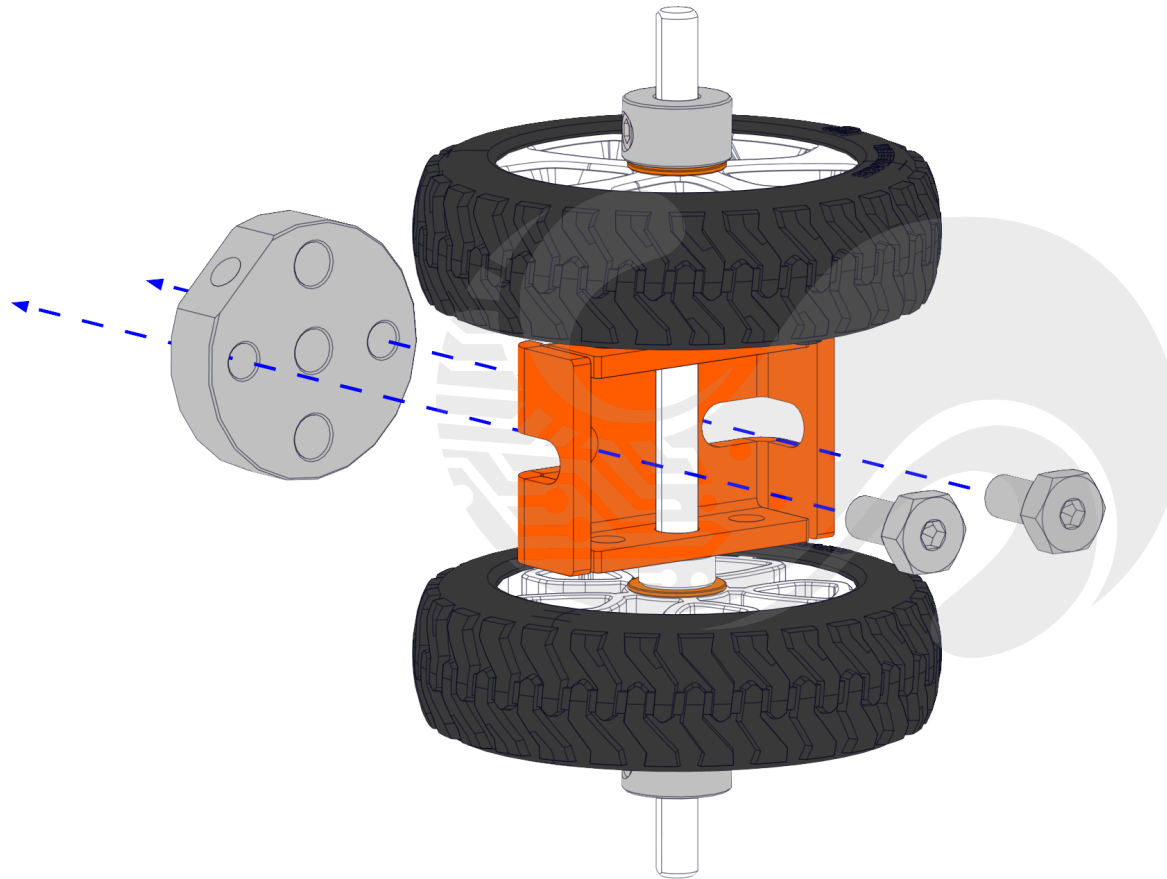
14. Assemble the Front Wheels



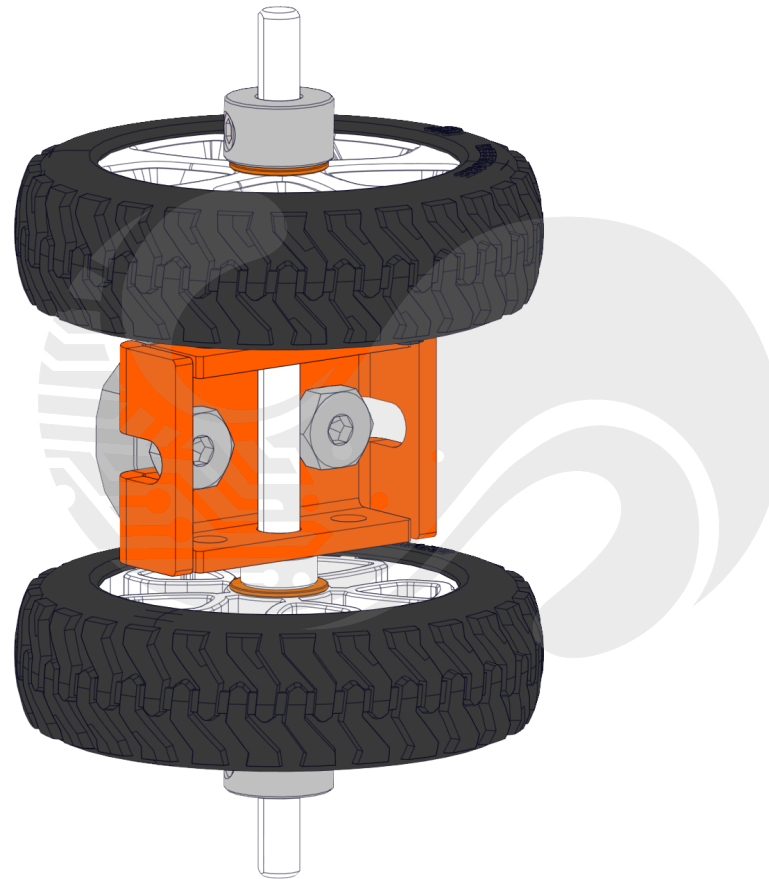
1xDriving Flange Hub 4mm



2xScrew M4*8



14. Assemble the Front Wheels



15. Assemble the Front Wheel Parts



2xScrew M4*8



2xScrew M4*20



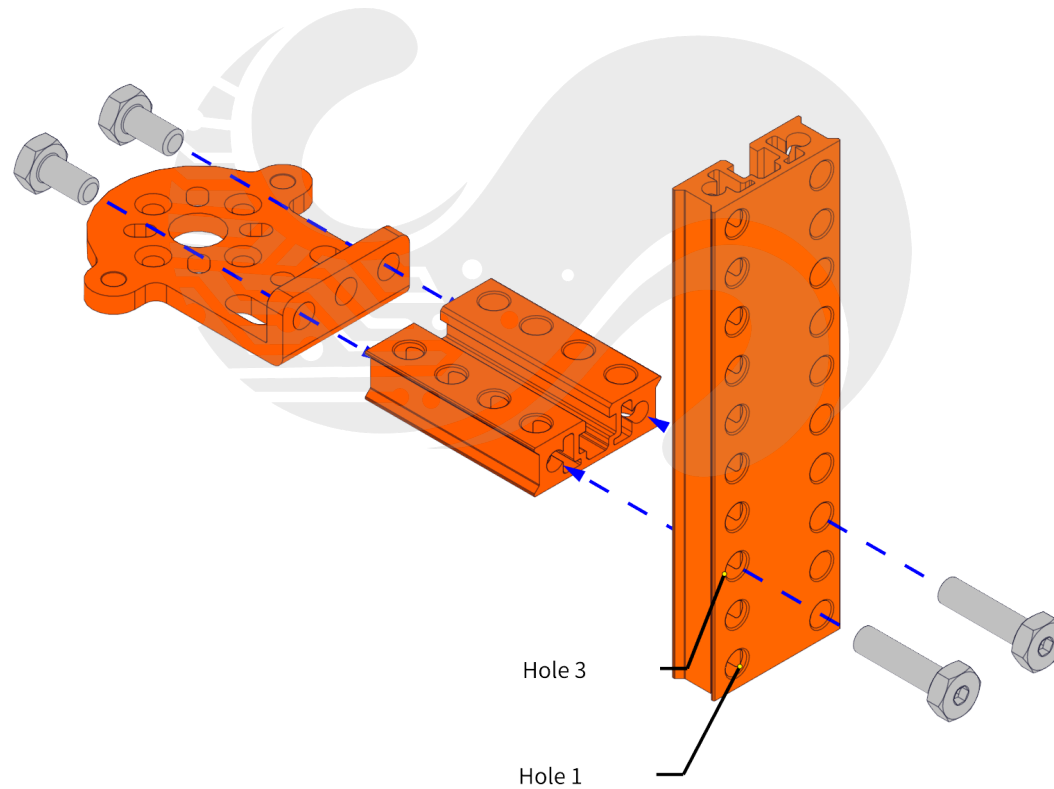
1xSlide Beam 0824-32



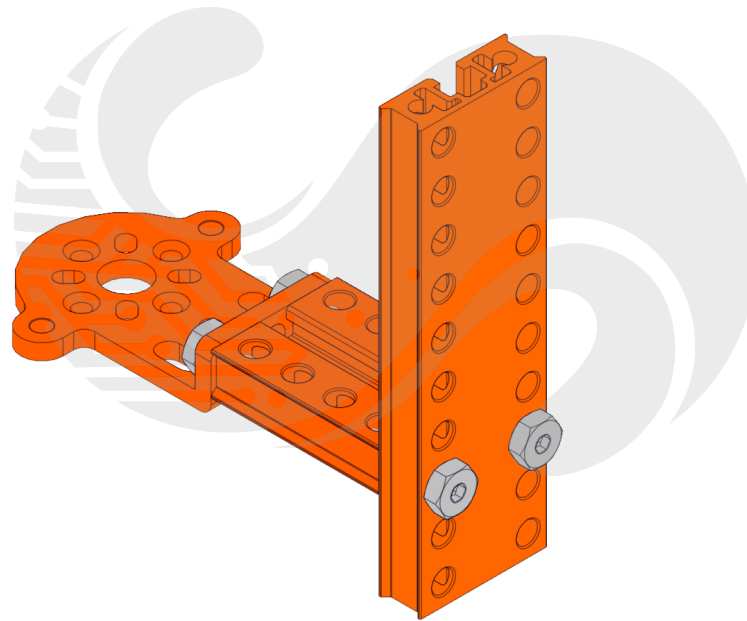
1xSlide Beam 0824-80



1x25 Motor Bracket

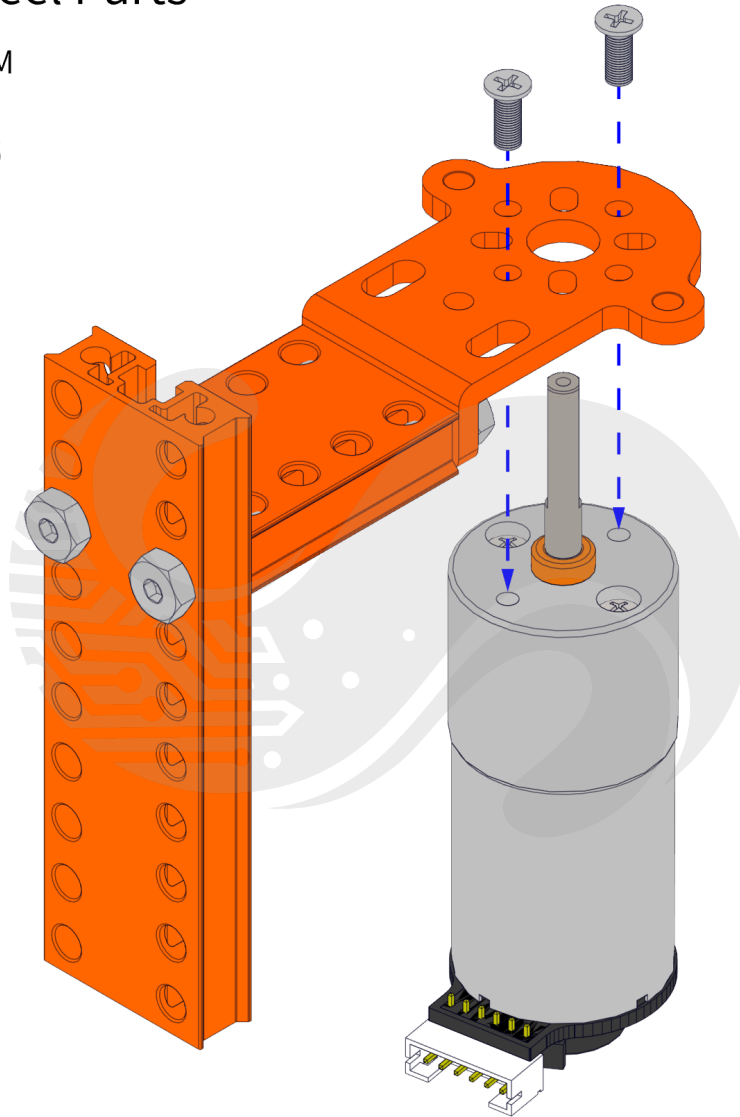


15. Assemble the Front Wheel Parts



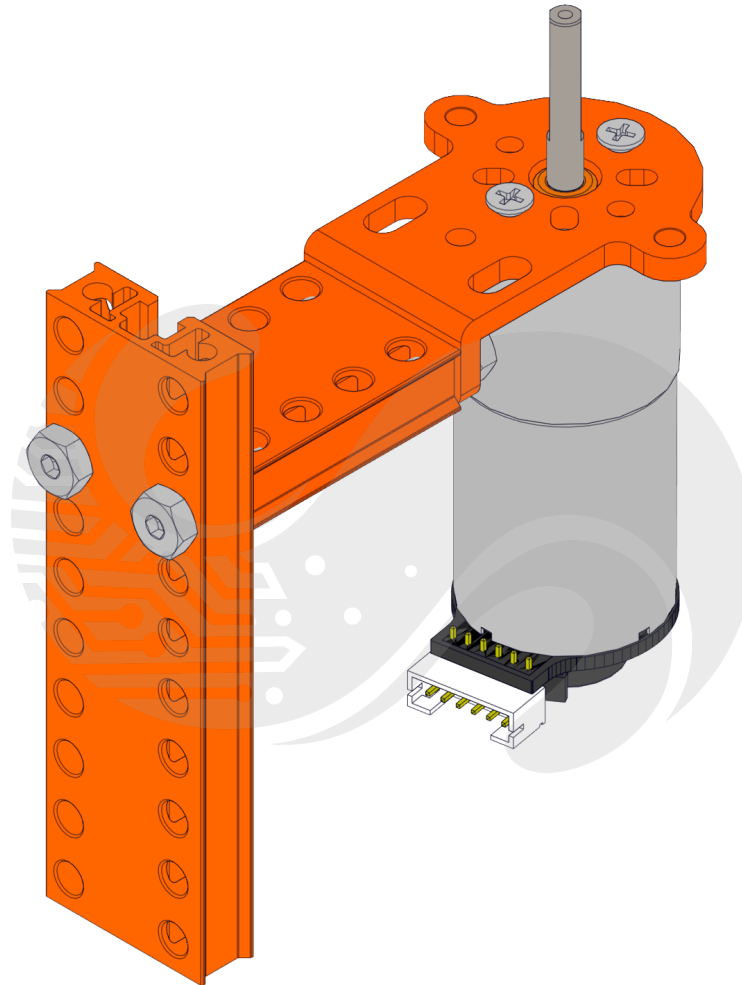
15. Assemble the Front Wheel Parts

-  1xEncoder DC Motor-25 9V188RPM
-  2xCountersunk Head Screw M3*6



Tips:
Please pay attention to the hole position and direction.

15. Assemble the Front Wheel Parts



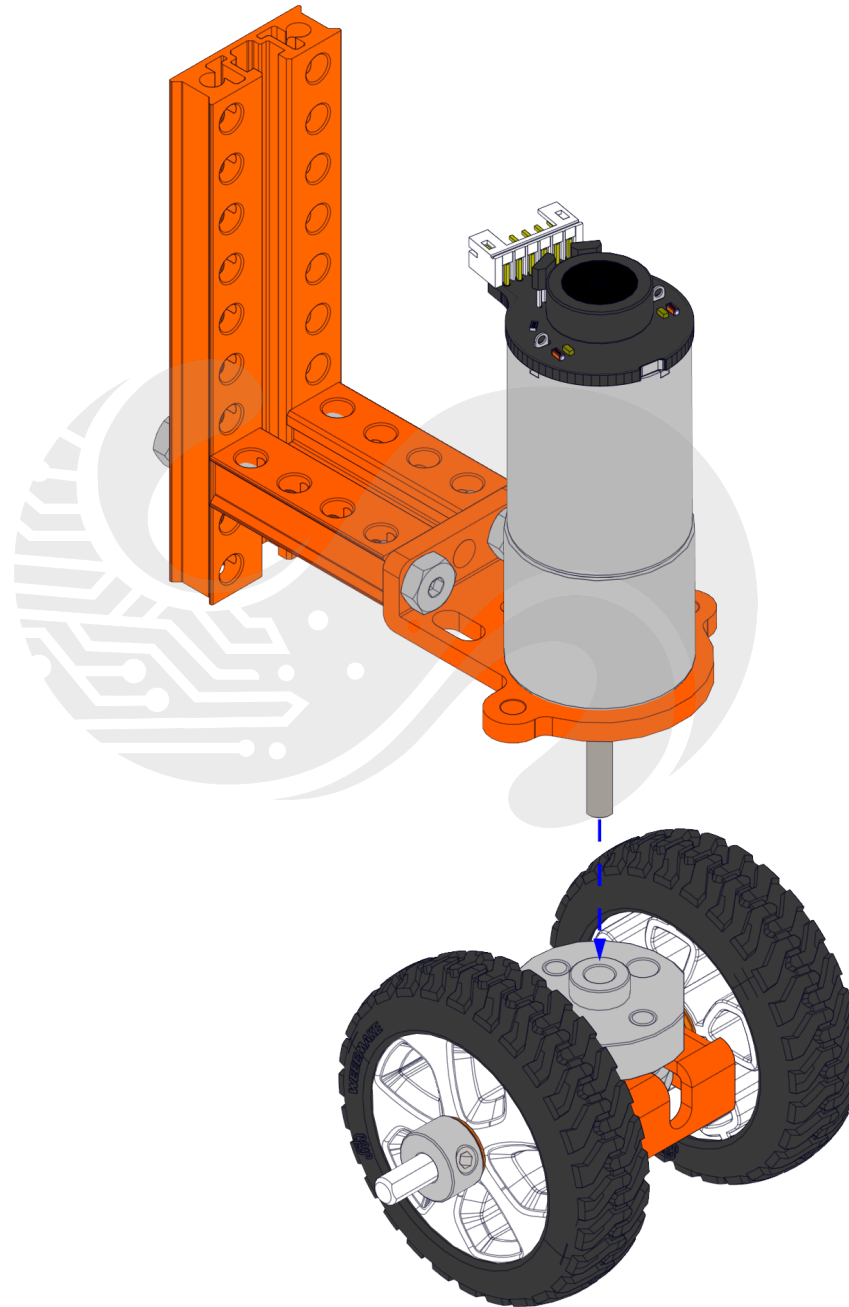
15. Assemble the Front Wheel Parts



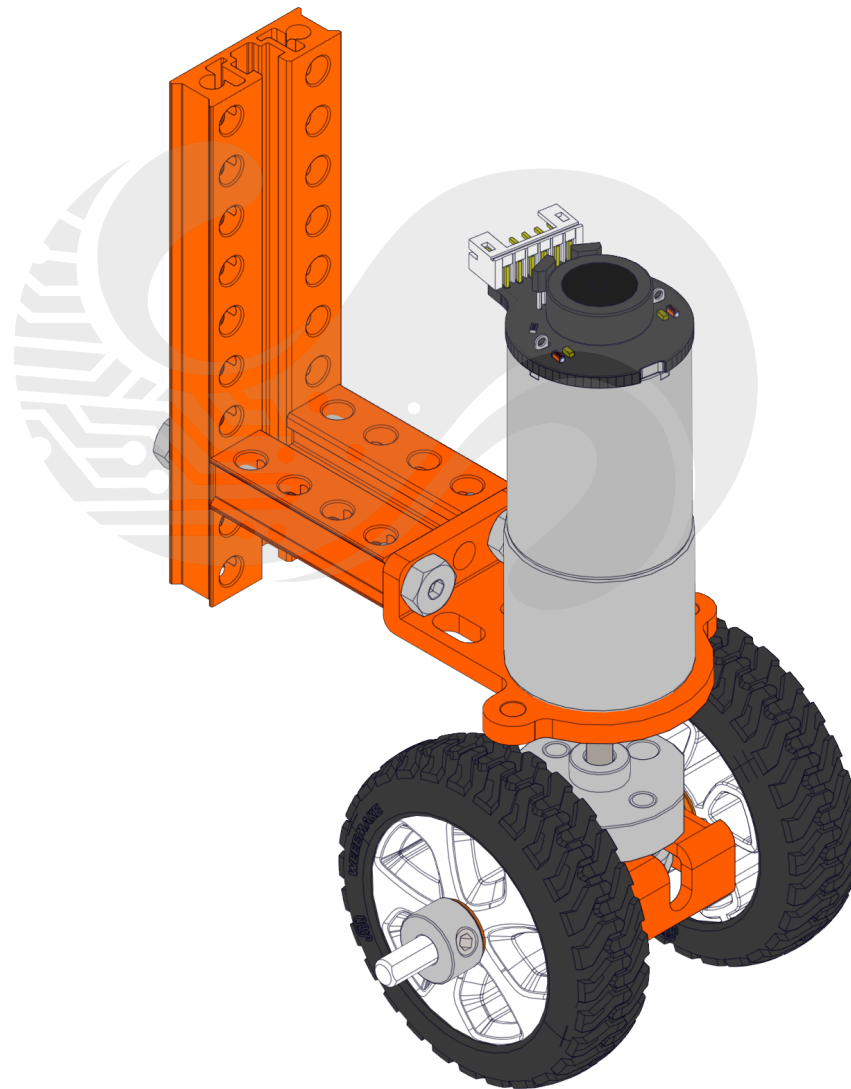
1xFront Motor Assembly



1xFront Wheels Assembly



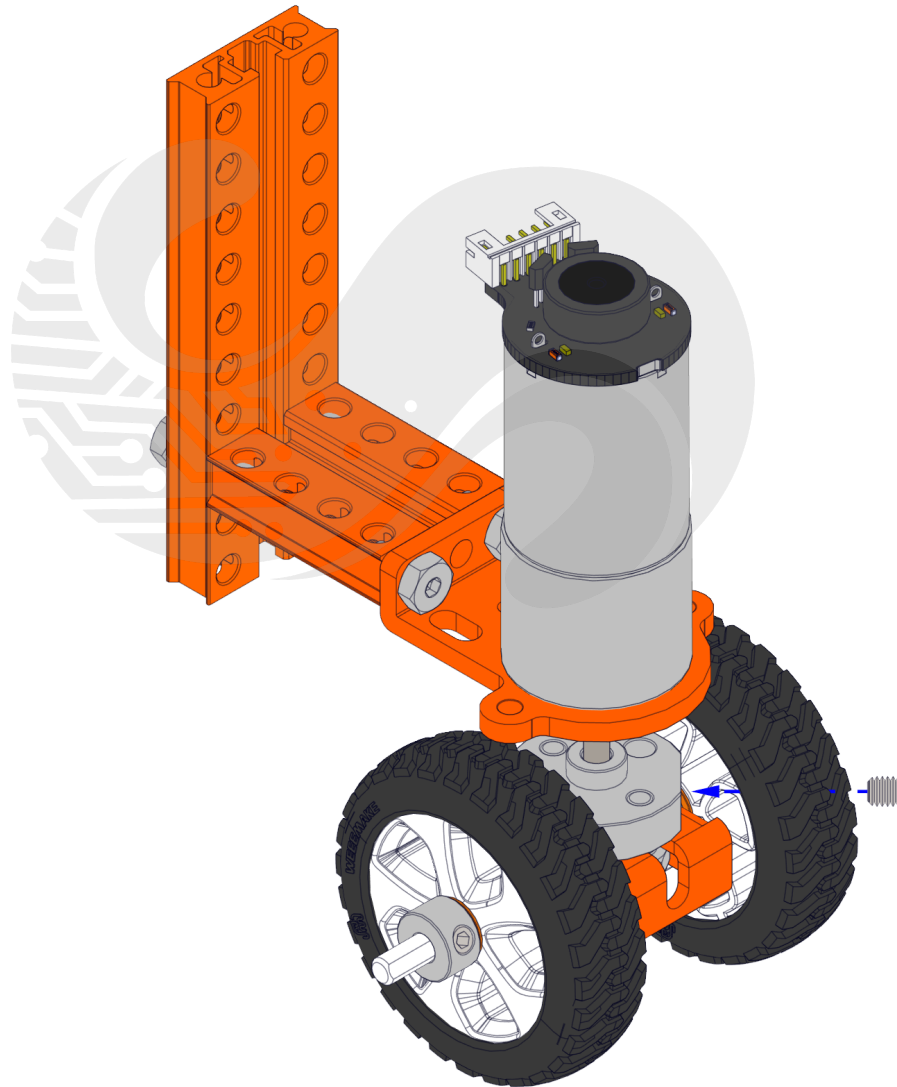
15. Assemble the Front Wheel Parts



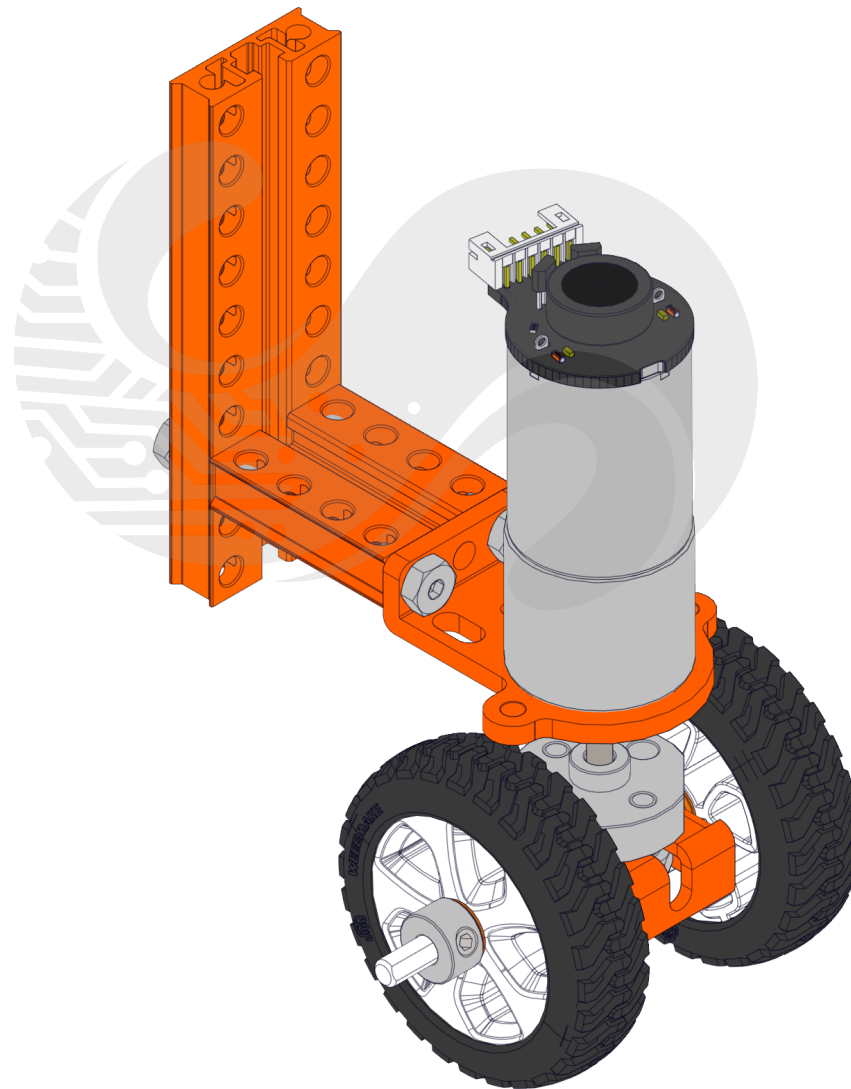
15. Assemble the Front Wheel Parts



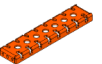
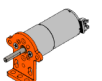
1xHeadless Screw M4*5

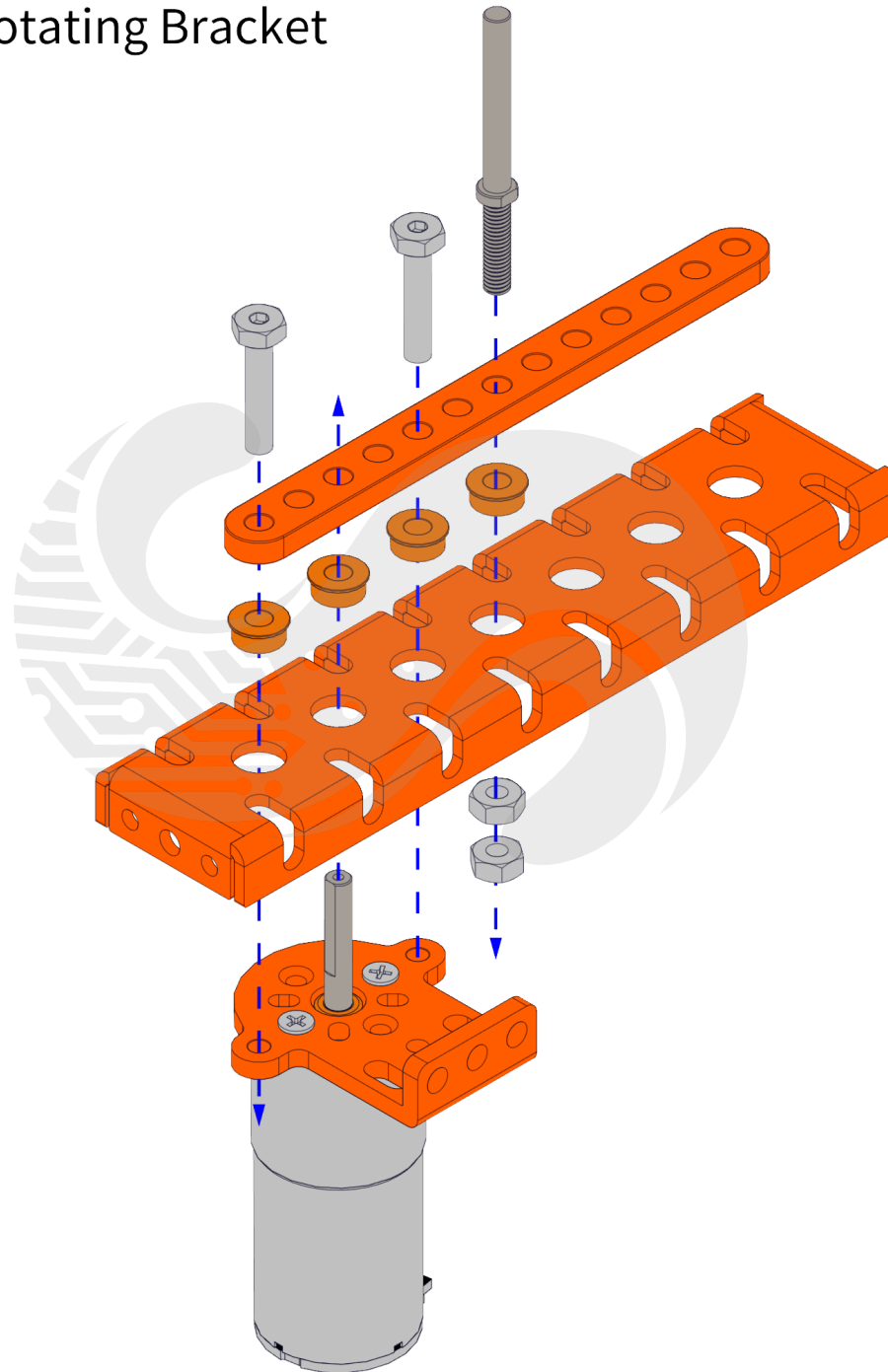


15. Assemble the Front Wheel Parts

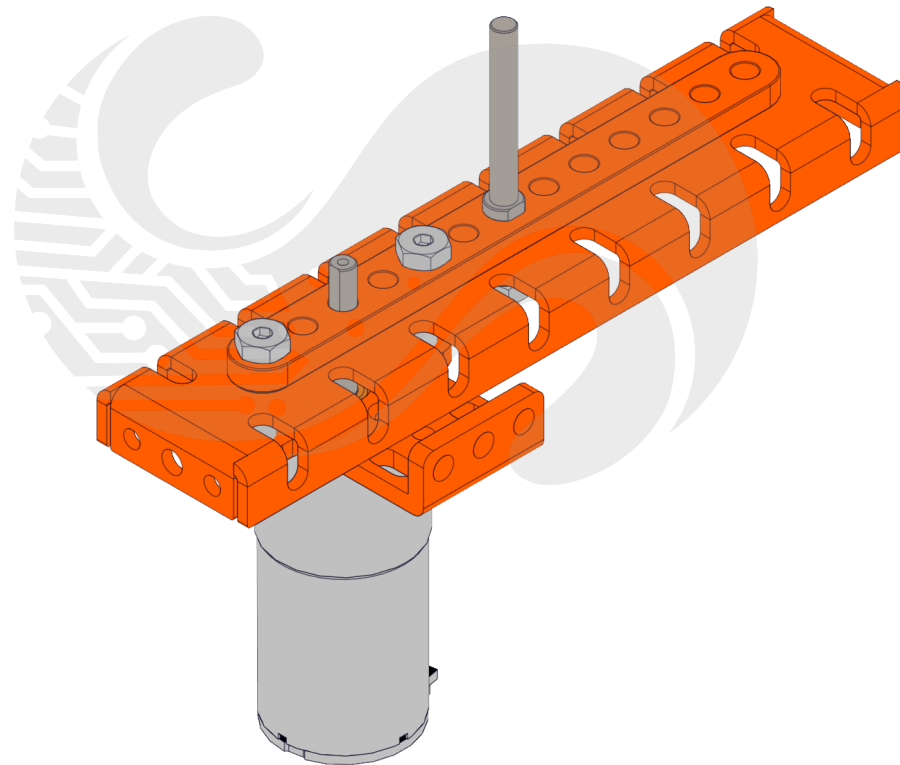


16. Assemble Horizontal Rotating Bracket

-  2xScrew M4*20
-  1xThreaded shaft 4-48
-  4xFlange Copper Bearing 4*8*3.5
-  2xNut M4
-  1xBeam 1030-132
-  1xBeam 0410-106
-  1xDC Motor-25 9V 50RPM

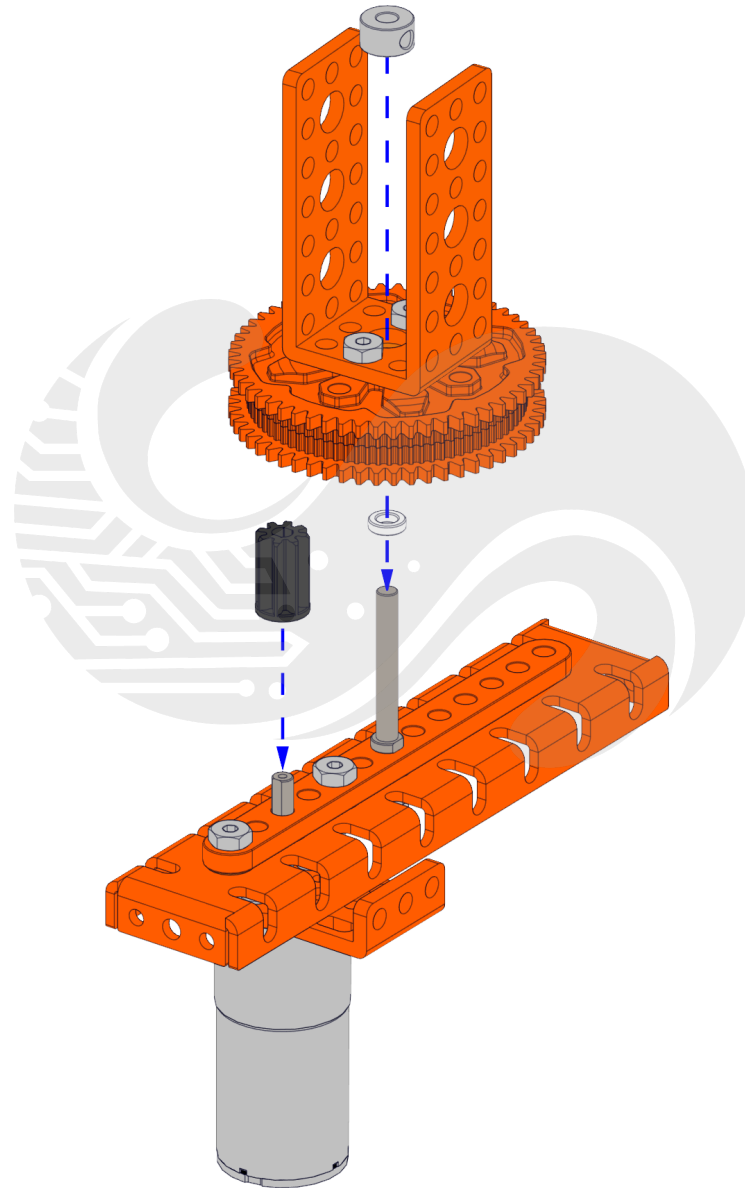


16. Assemble Horizontal Rotating Bracket

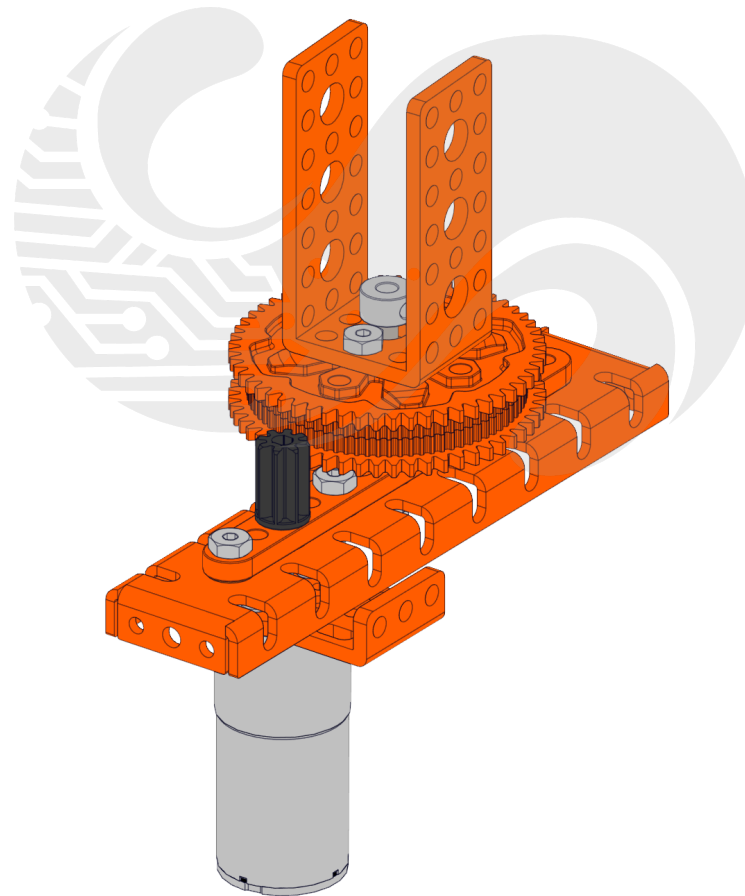


16. Assemble Horizontal Rotating Bracket

-  1x Shaft Collar - 4mm
-  1x Nylon Spacer 4*7*2
-  1x 8T-Plastic Gear V1.0 (Flat Hole)
-  1x Horizontal Rotating Wheel

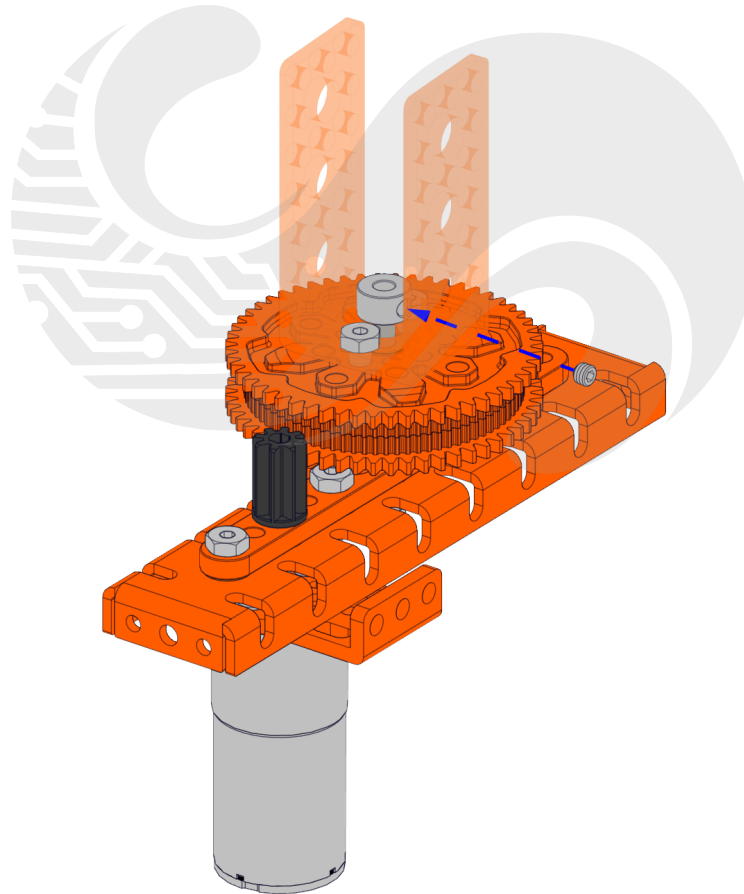


16. Assemble Horizontal Rotating Bracket

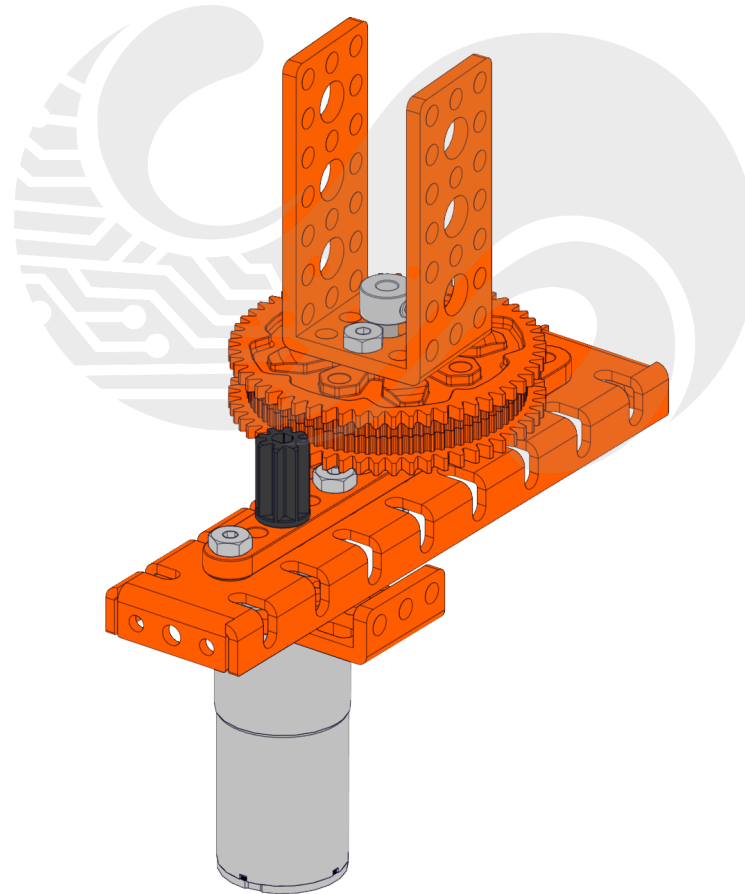


16.Assemble Horizontal Rotating Bracket

 1xHeadless Screw M4*3



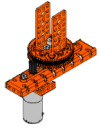
16. Assemble Horizontal Rotating Bracket



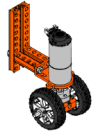
17. Assemble Camera Dolly robot



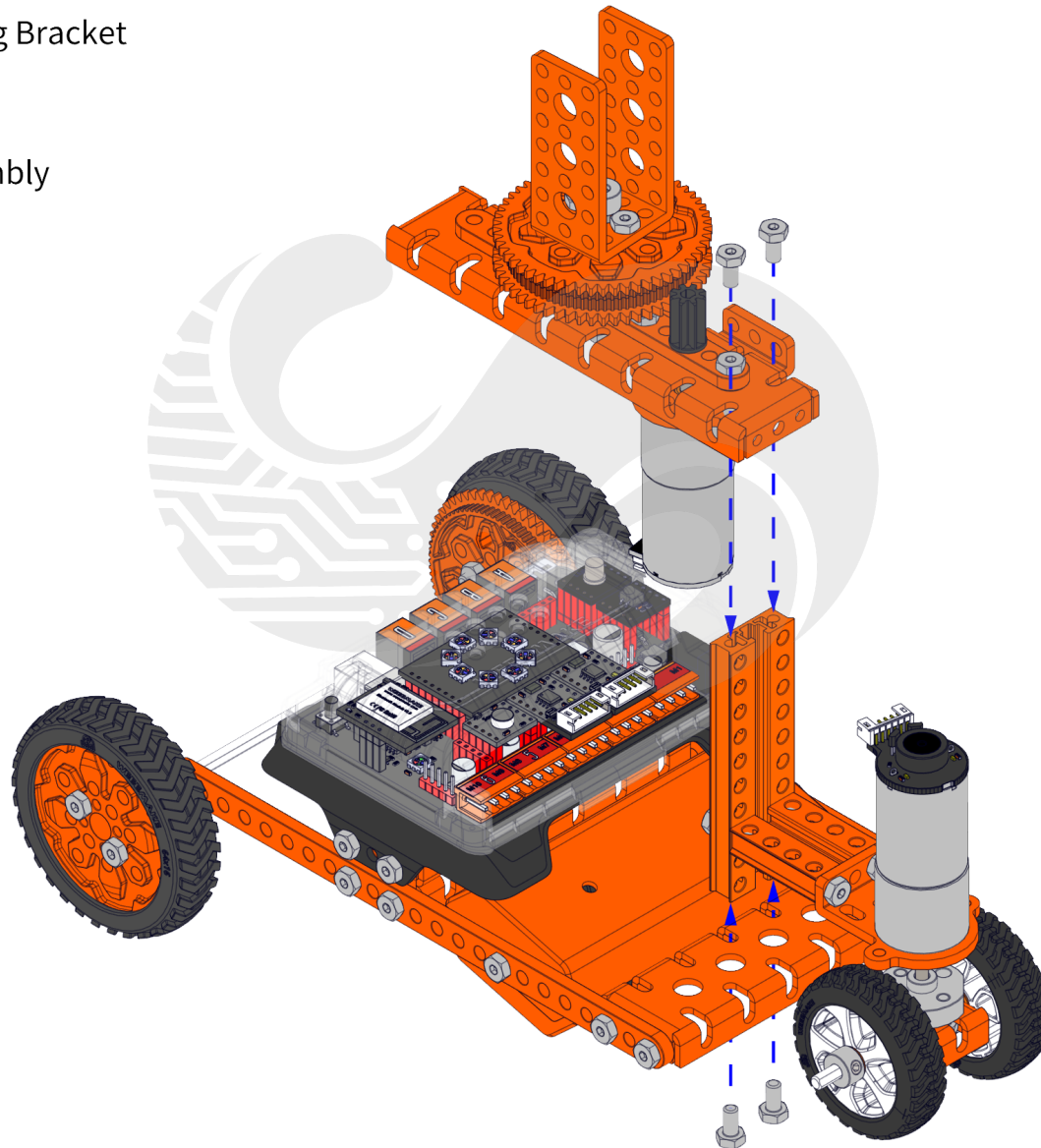
4xScrew M4*8



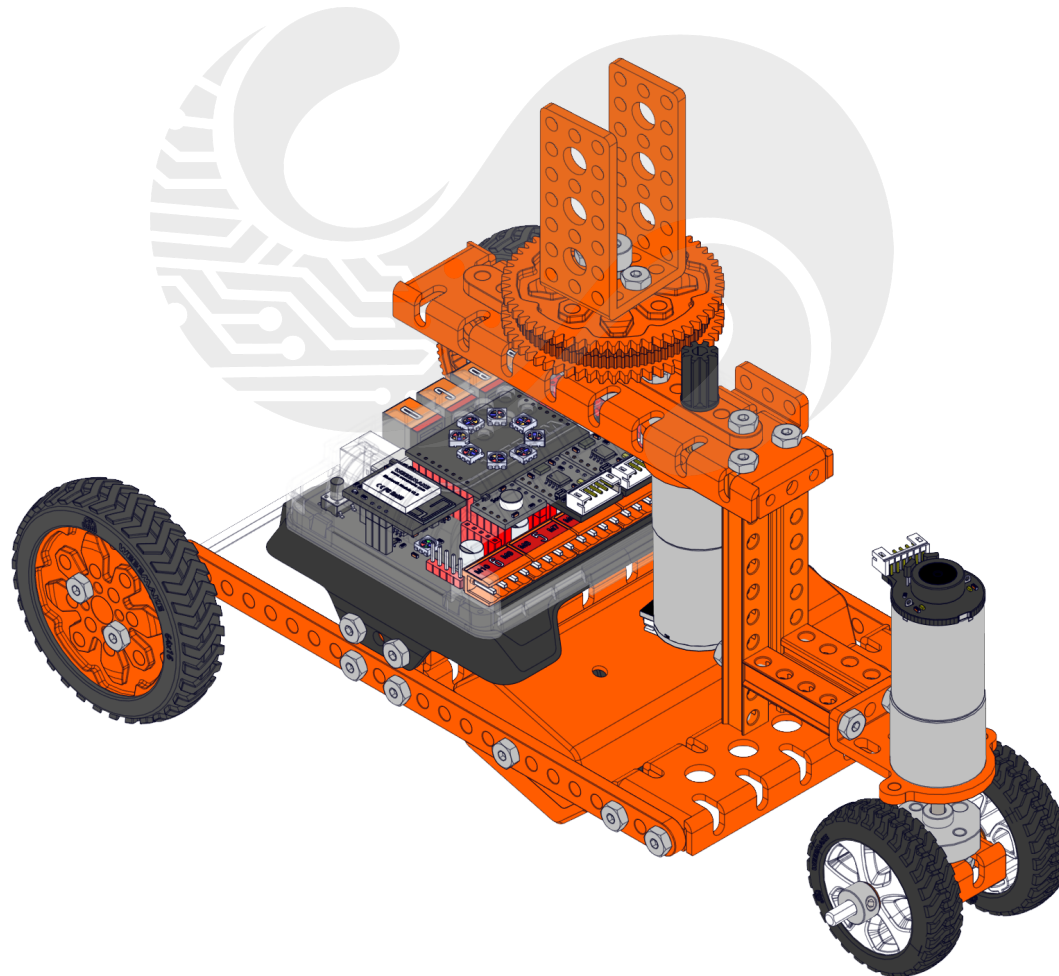
1xHorizontal Rotating Bracket



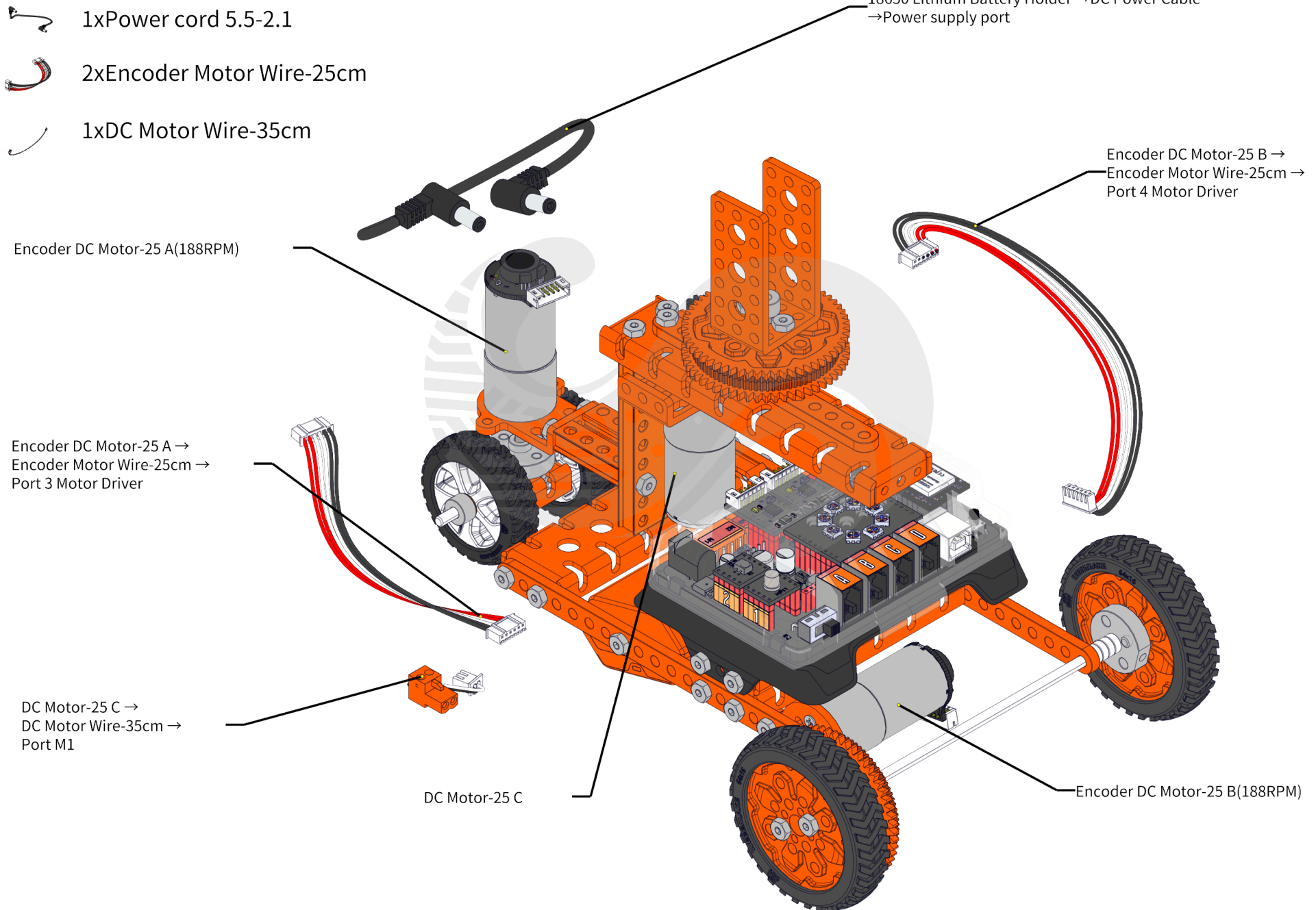
1xFront Wheel Assembly



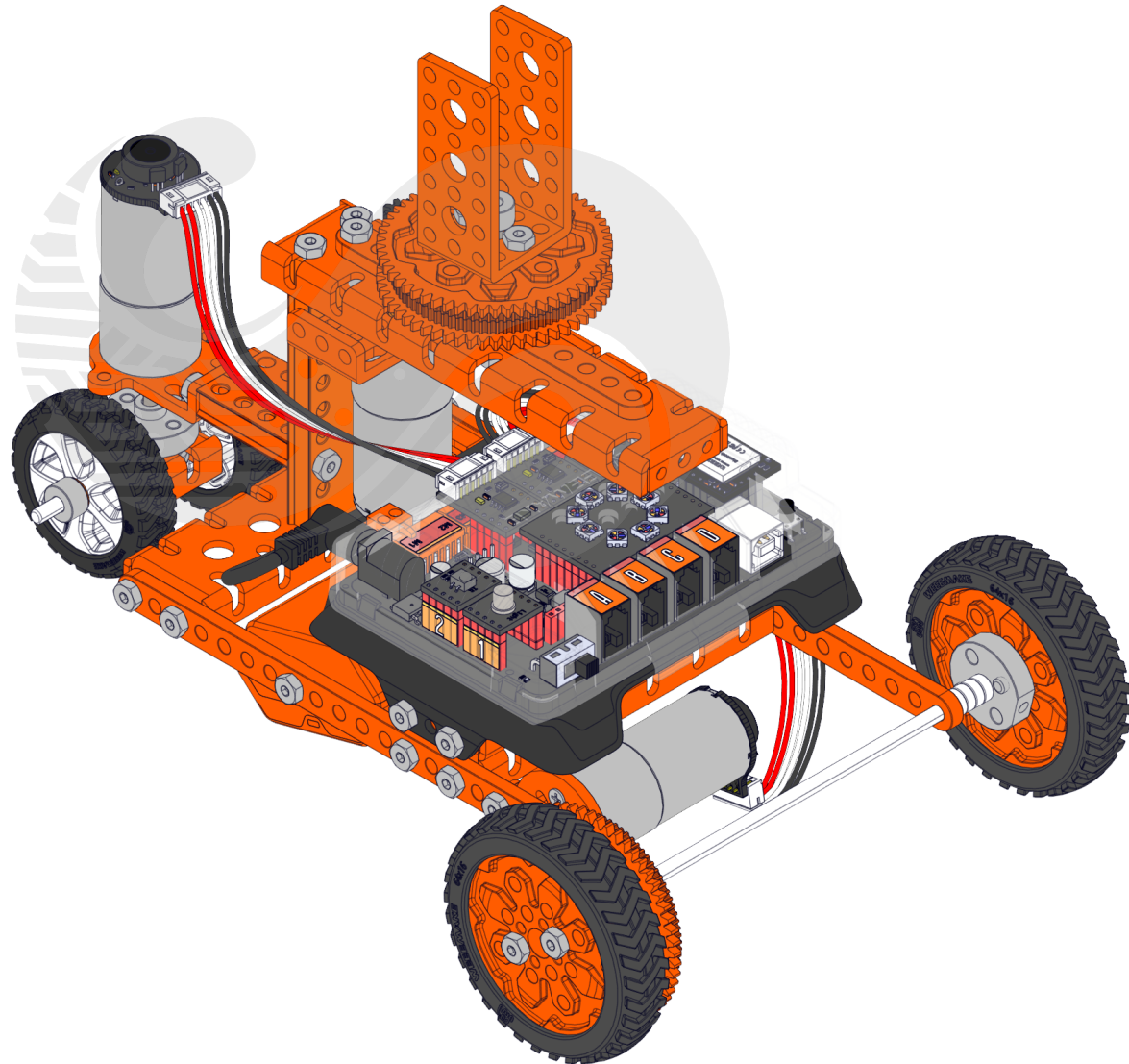
17. Assemble Camera Dolly robot



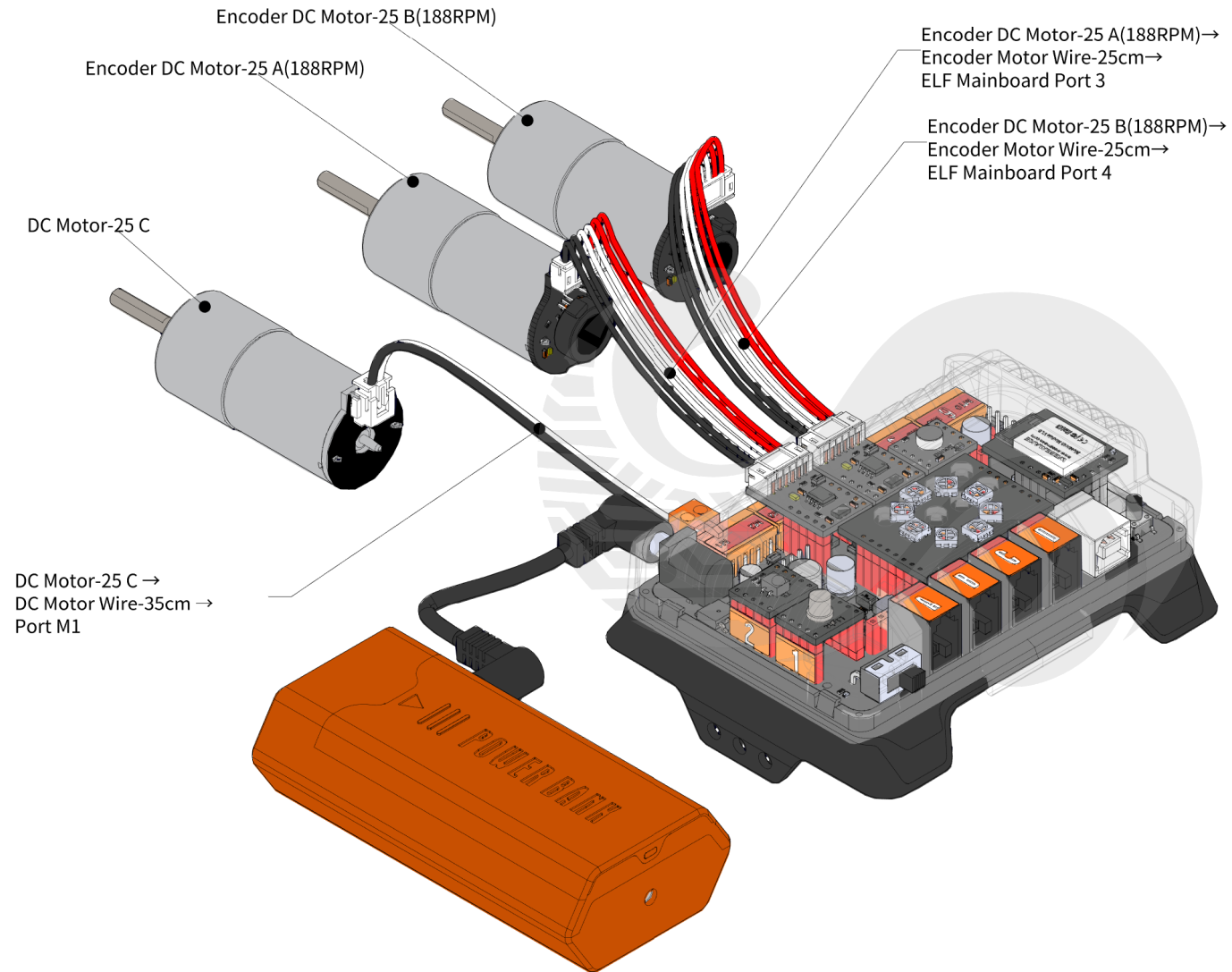
18.Wiring



18.Wiring



19.Wiring

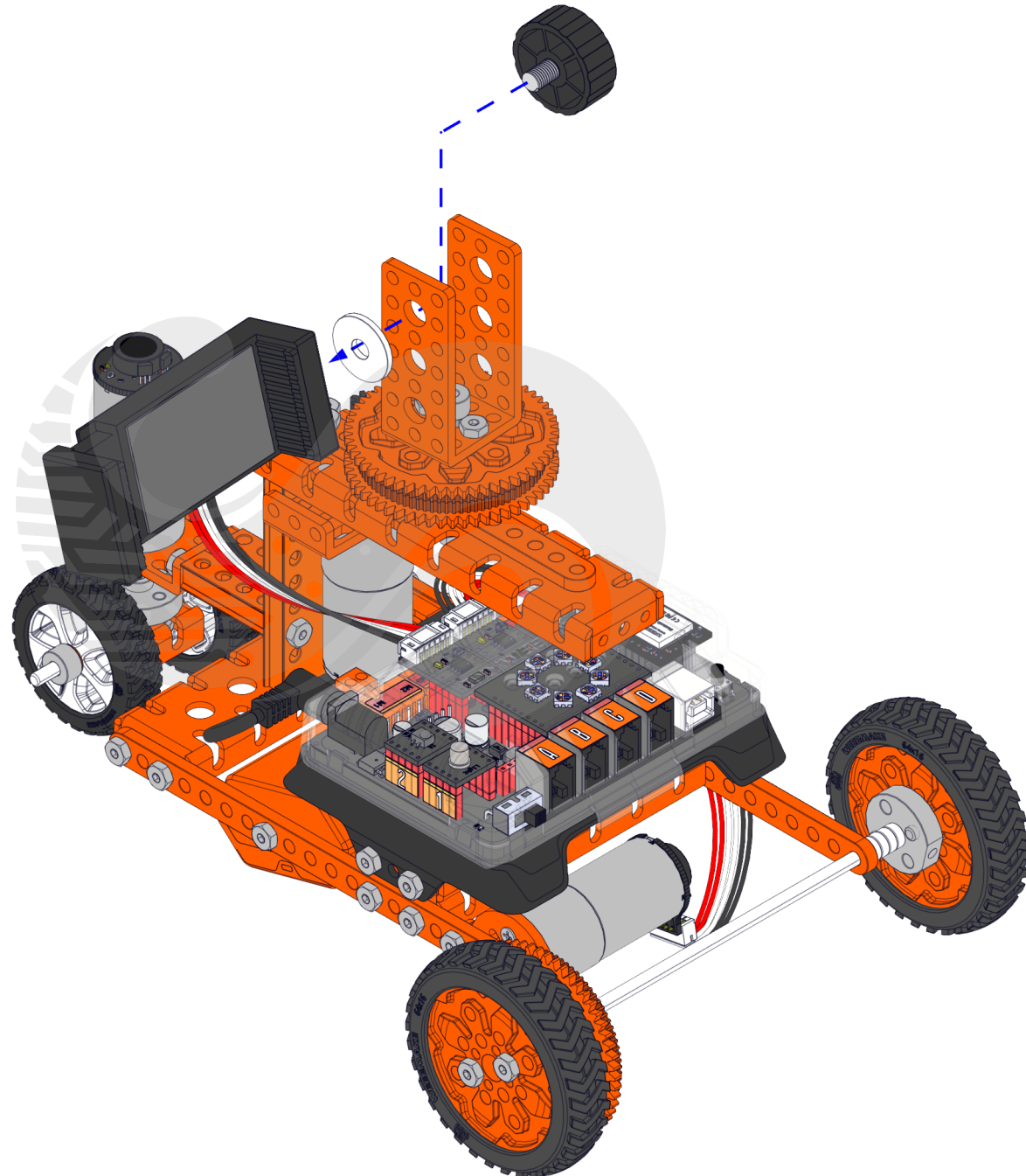


20. Assemble the Phone Holder

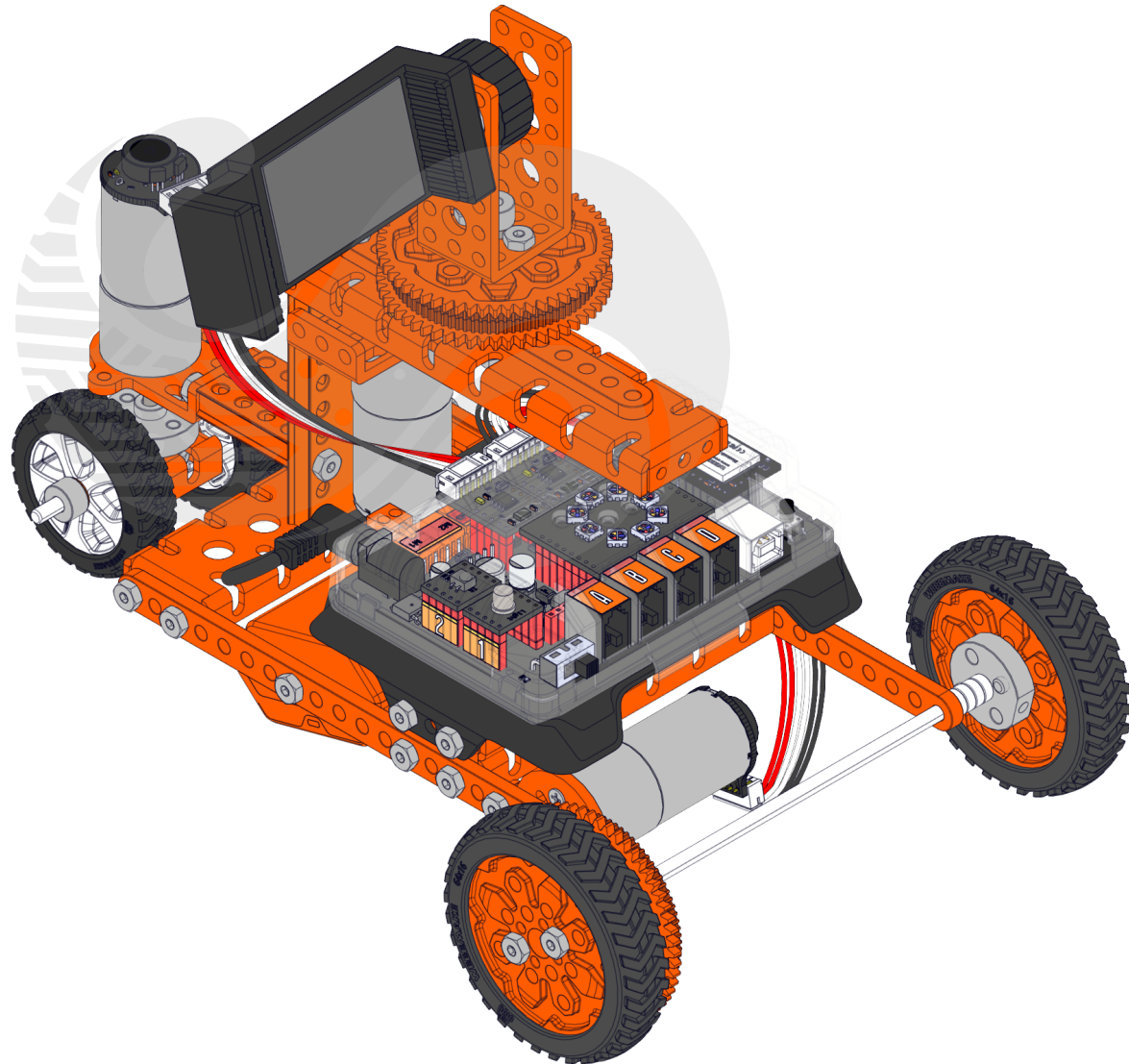
1xSilica Gel Spacer

1xLock Screw

1xPhone Holder

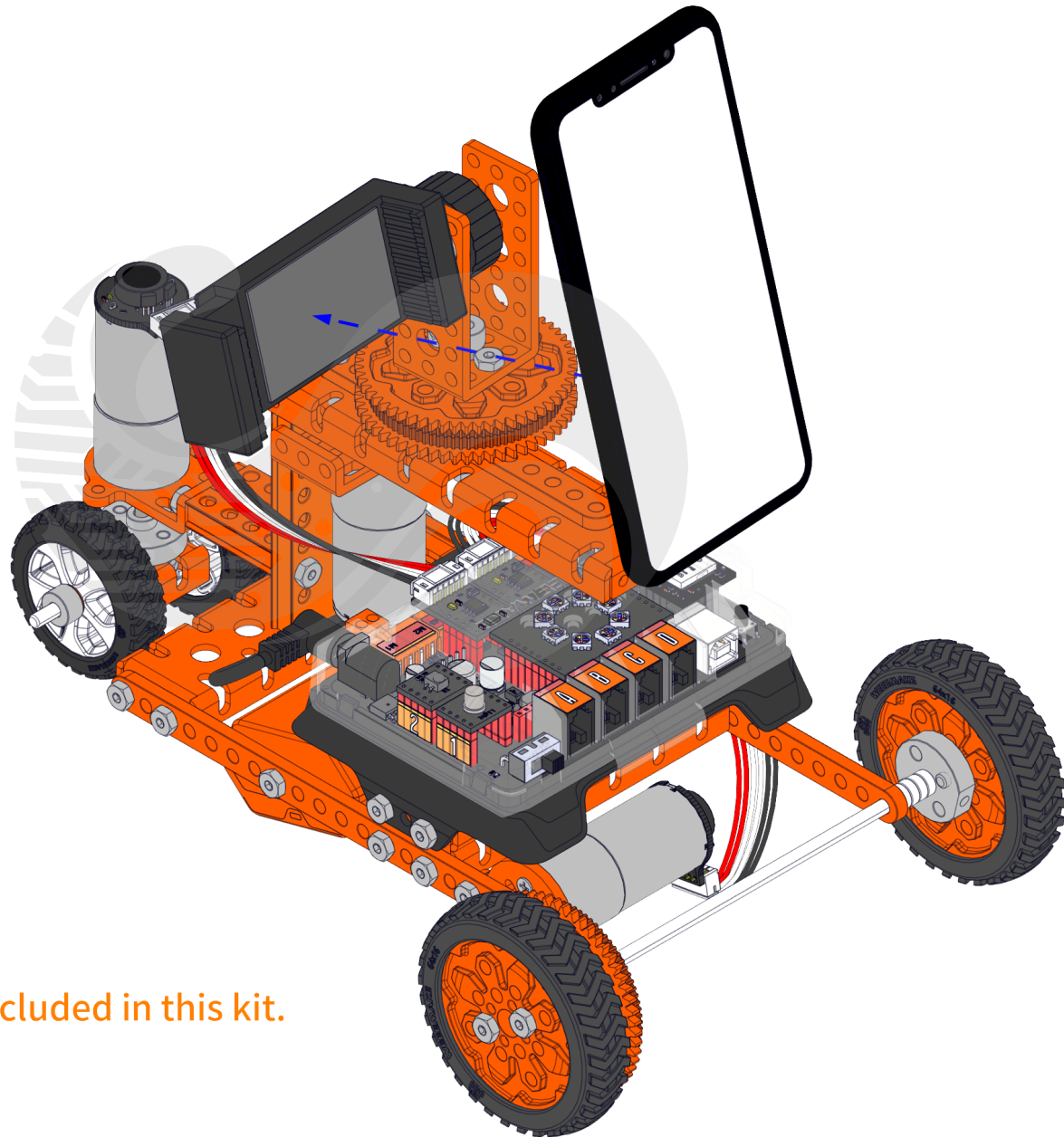


20. Assemble the Phone Holder



21. Assemble Mobile Phone

 1x Mobile Phone



Note: Phone is not included in this kit.

22.Completion Diagram

