Assembly Guide

ZYC0043

Note: Since international logistics channels prohibit the transportation of products with batteries, the kit does not include any batteries, please prepare batteries in advance or purchase them separately.
The model of the battery is: 18650 3.7v 2000mAh-3500mAh

Product list

M3*30 round head screw*8pcs

M3*8 flat head screw*26pcs

M3*8 round head screw*14pcs

M2*10 round head screw*2pcs

M1.6*10 Round head screw*4pcs

M3 Nut*18pcs

M2 Nut*2pcs

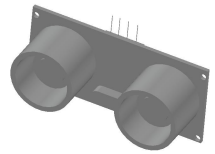
M1.6 Nut*4pcs

M3*40 Copper column*6pcs

M3*30 Copper column*4pcs

M3*15 Copper column*6pcs

Motor bracket*8pcs

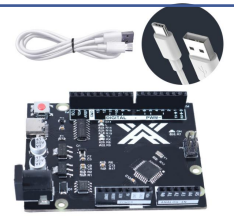


Ultrasonic module*1pc

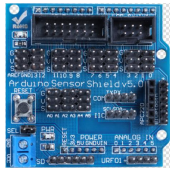
Ultrasonic bracket*1pc

Speed encoder*4pcs

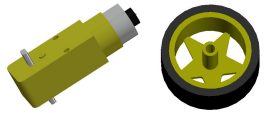
Product list



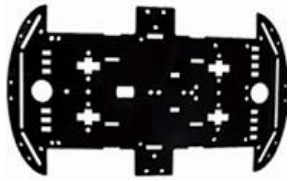
UNO R3 CH340G Main control board with USB cable*1pc



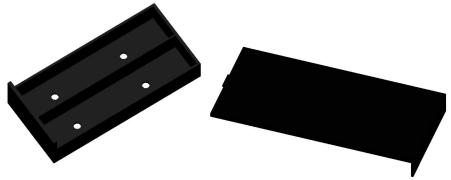
Expansion board*1pc



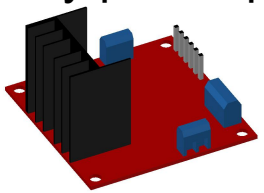
motor (with wheel welding wire)*4pcs



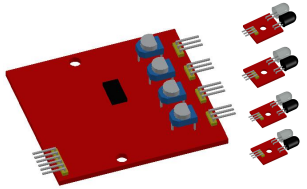
Acrylic black base plate*2pcs



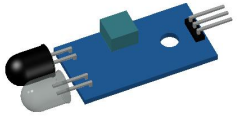
battery pack*1pc



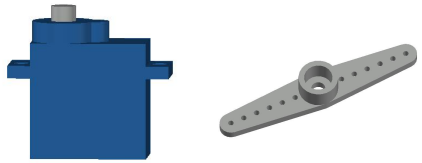
Motor drive board*1pc



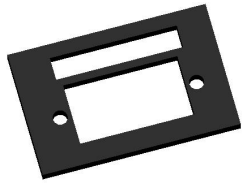
Four-way tracking module*1pc



Infrared obstacle avoidance module*2pcs



Servo*1pc



Servo bracket*1pc

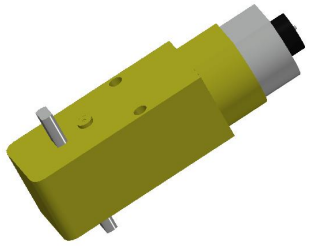
Male to male Dupont line 12P 20CM*1pc

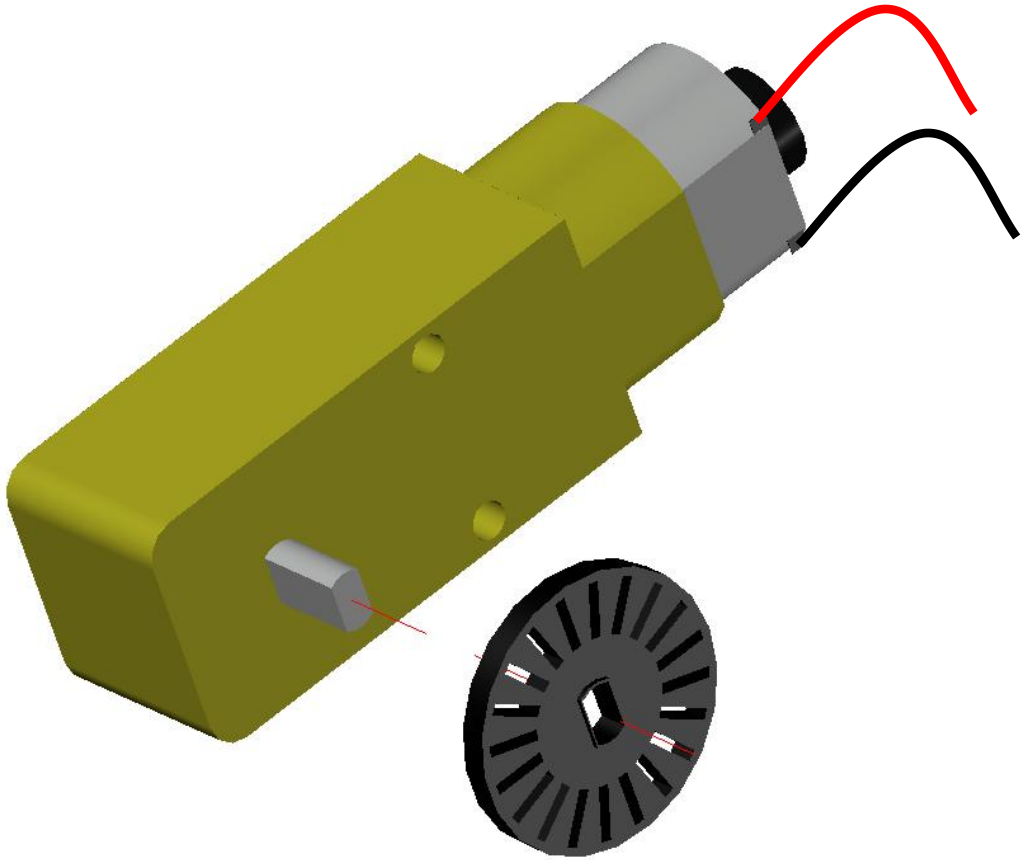
Female to female Dupont line 38P 20CM*1pc

Install Speed encoder

① Speed encoder*1pc

② motor*1pc



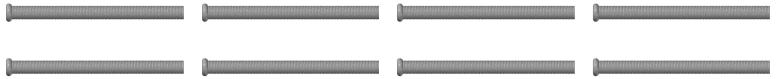


Align the hole of the speed encoder with the corresponding position on the motor and mount it with force.Install the other three motors in the same way.

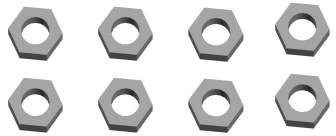
Note: Mounted on the side of the motor with solder joints.

Fixed motor

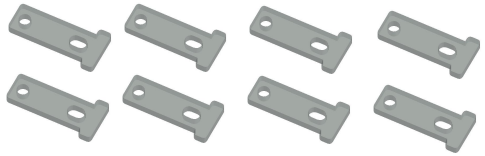
① M3*30 round head screw*8pcs



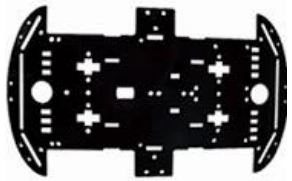
② M3 Nut*8pcs



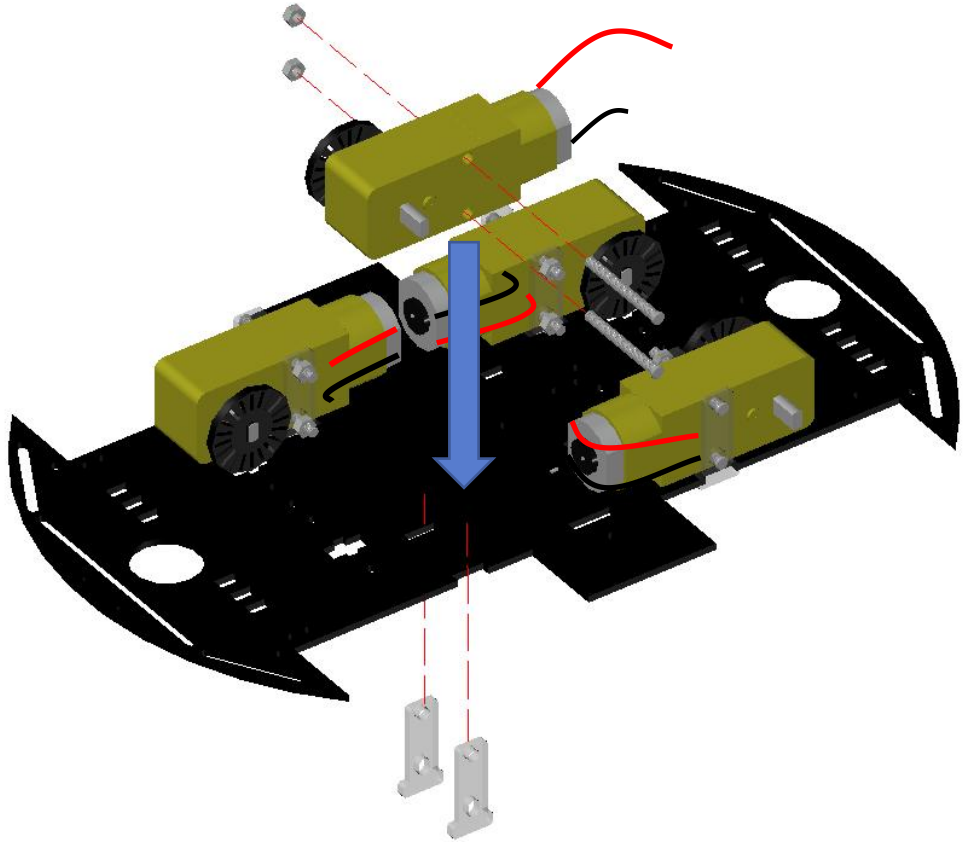
③ Motor bracket*8pcs



④ Acrylic black base plate*1pc



(Remove the plate from the set and remove its protective film)



First pass the motor bracket through the two holes corresponding to the bottom plate from bottom to top, and then lower the motor from top to bottom, finally take screws through the bracket and the two holes of the motor, lock the nut, and reinforce it with a screwdriver.

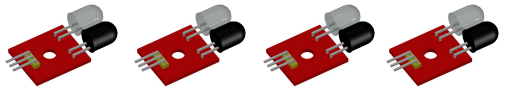
Note: the head and tail of the bottom plate should be distinguished, and pay attention to its line when installing the motor, as shown in the picture above.

Install the tracking module

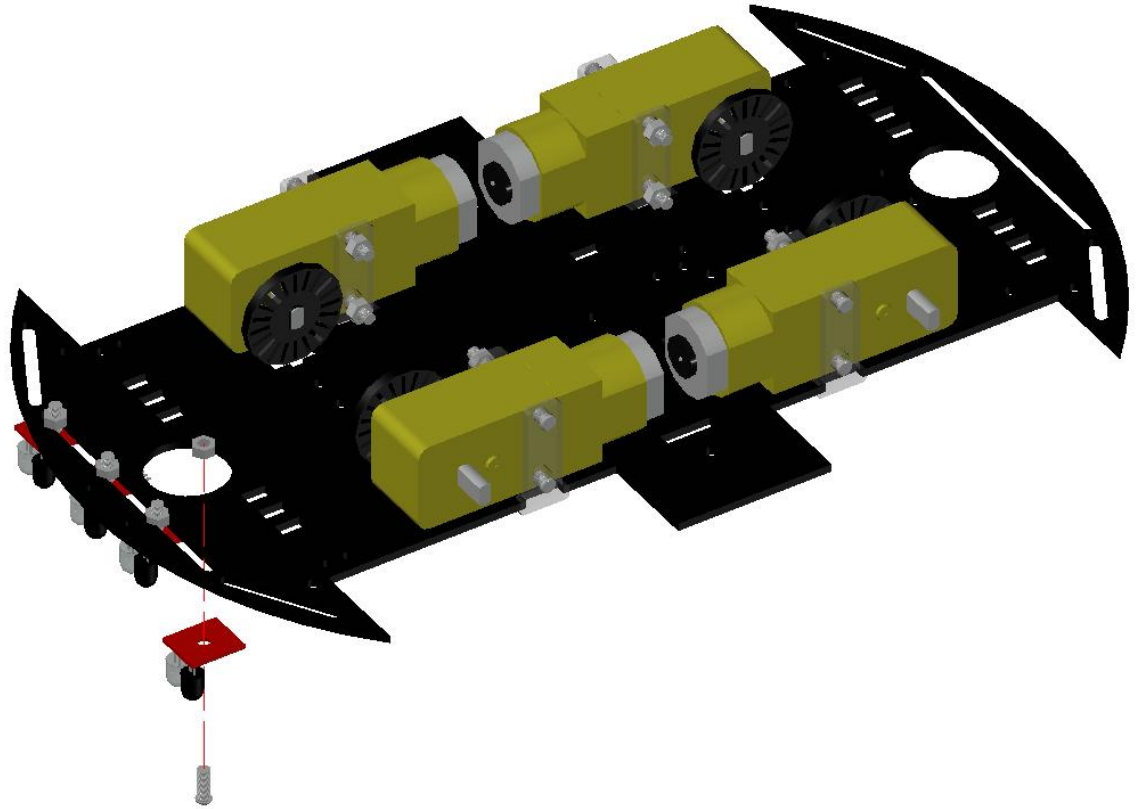
① M3 Nut*4pcs

② M3*8 round head screw*4pcs

③ Tracking module*4pcs



④Tracking module comes with dupont linefemale to female 3P*4pcs

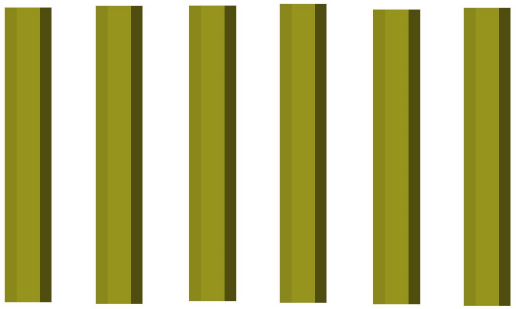


Align the hole of the tracking module with the corresponding position on the bottom plate, and then pass the screw from bottom to top. Then lock the nut, and finally reinforce it with a screwdriver.The dupont line can be connected by the way to facilitate the installation behind.

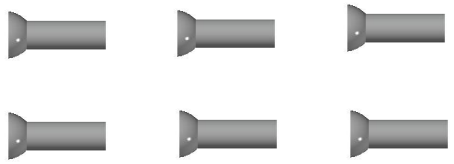
Note: do not install the modules upside down, each module should be separated in the middle, after installing the two receivers face down.

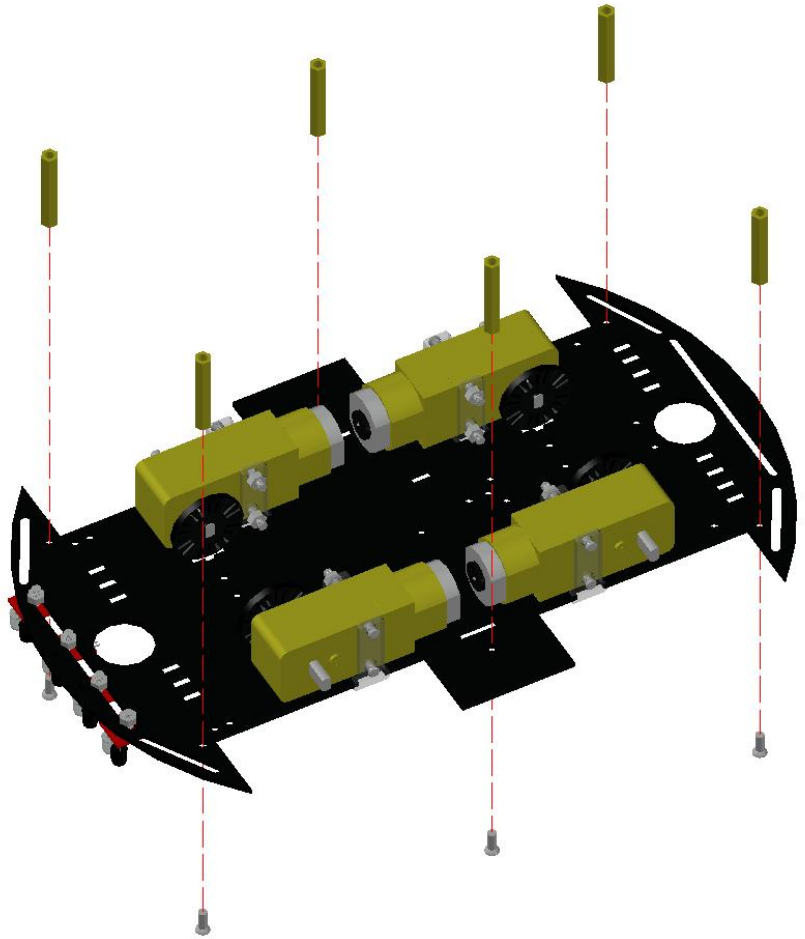
Install copper column on the bottom plate

① M3*40 Copper column*6pcs



② M3*8 flat head screw*6pcs





First pass the screw through the corresponding hole, then screw on the copper column, and finally use a screwdriver for reinforcement.

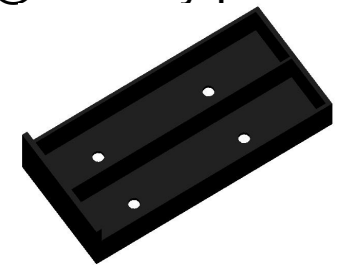
At this point, the installation of the bottom plate has been completed.

Installing the Battery pack

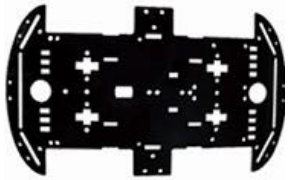
① M3*8 flat head screw*1pc

② M3 Nut*1pc

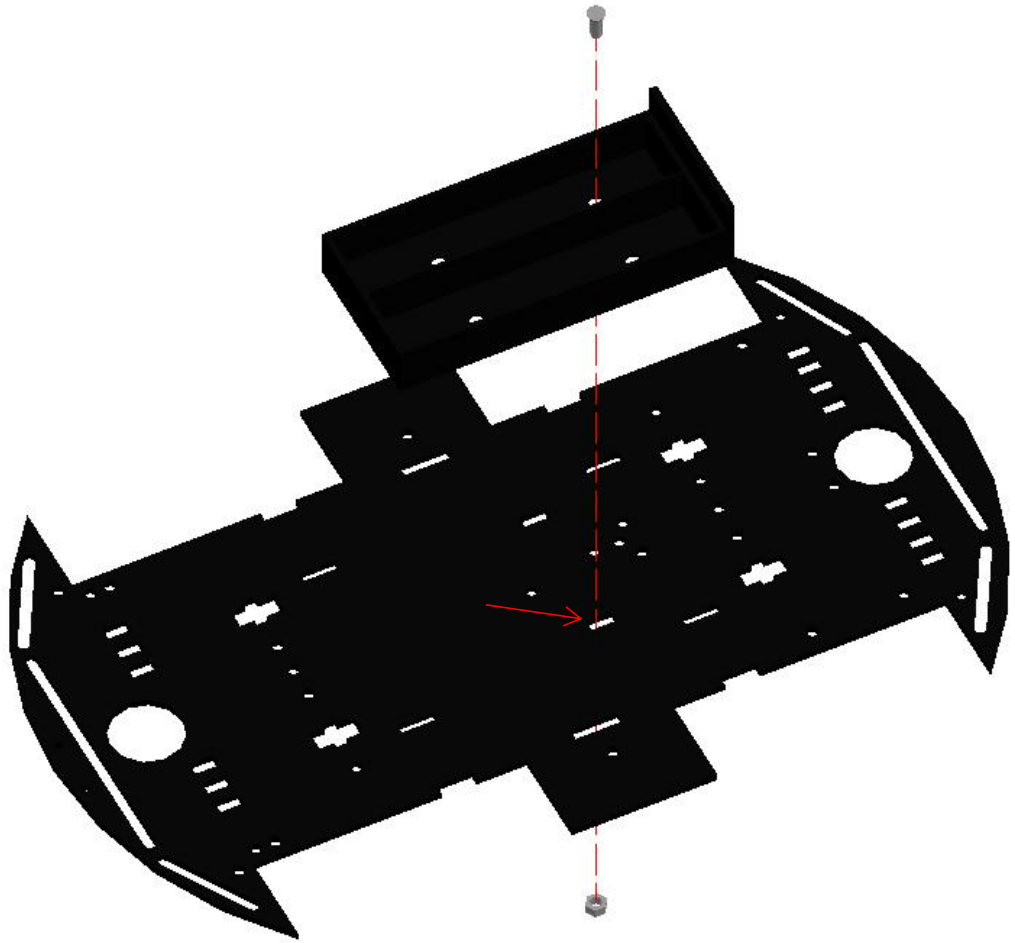
③ Battery pack*1pc



④ Acrylic black base plate*1pc



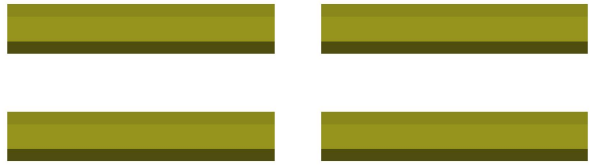
(Remove the plate from the set and remove its protective film)



When you get the battery pack, open the cover first, align the hole in the battery pack with the hole in the board, and then pass the screw from the top down. Finally, align the screw with the nut with one hand, and reinforce it with a screwdriver with the other hand.

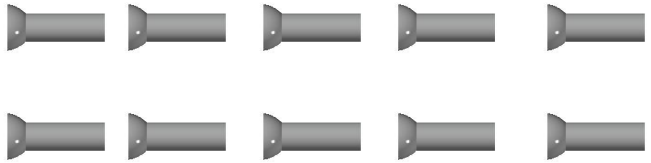
Install copper column on the top plate

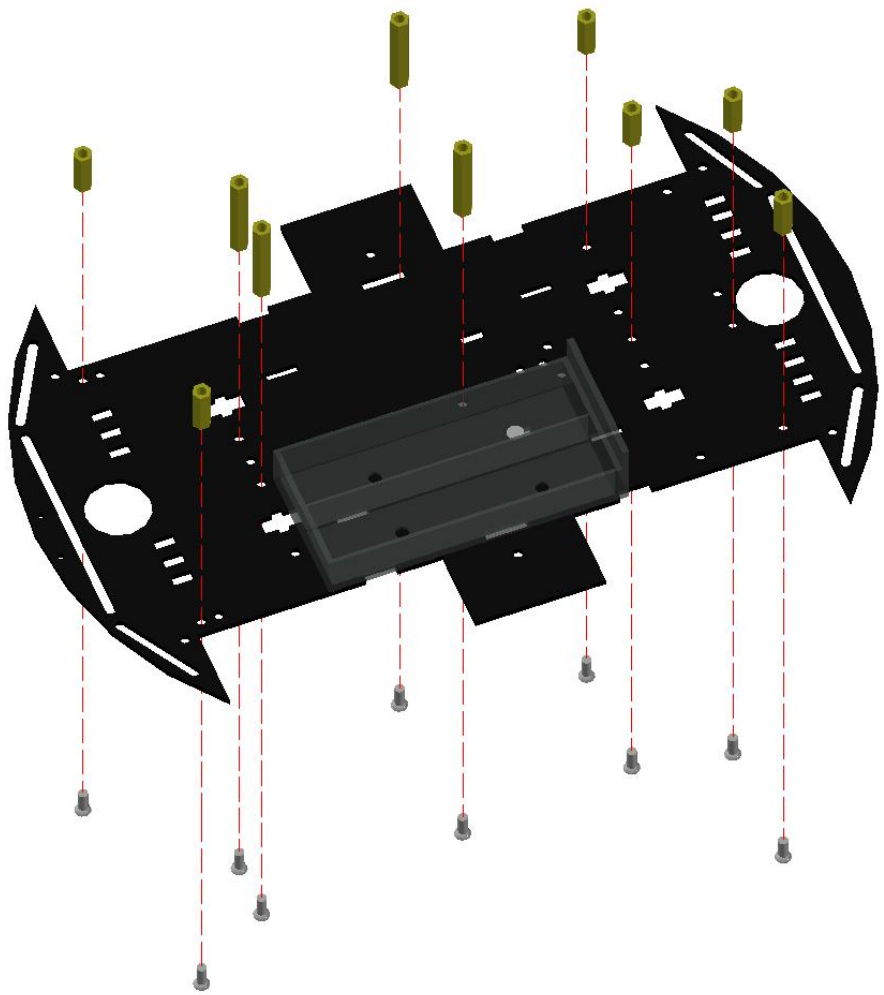
① M3*30 Copper column*4pcs



② M3*15 Copper column*6pcs

③ M3*8 flat head screw*10pcs





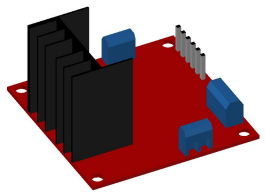
Thread the nuts through the holes from bottom to top, then screw on the copper column, and finally reinforce them with a screwdriver.

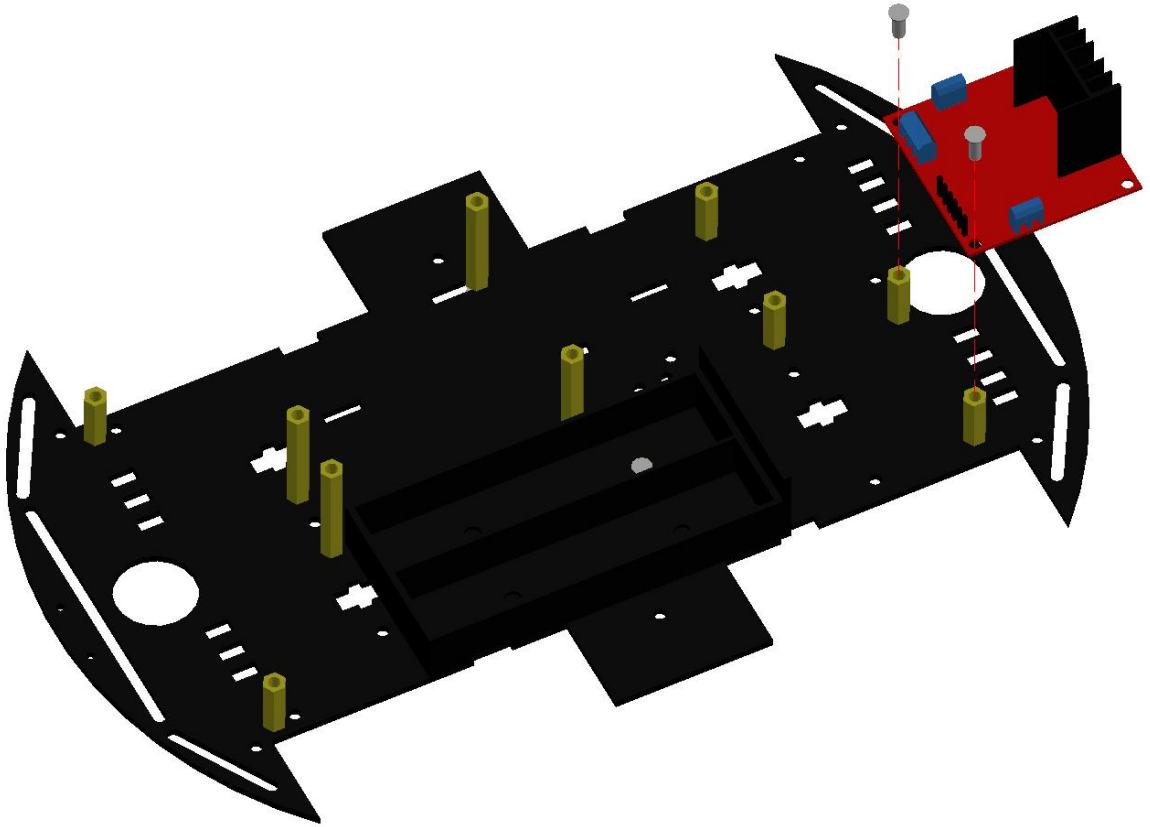
Note： Pay attention to the position of the hole, do not wear the wrong hole; Note also the position of the copper column, the middle four copper column are long, the others are short.

Install motor drive module

① M3*8 flat head screw*2pcs

② Motor drive board*1pc





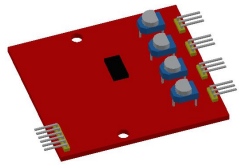
Put the motor drive plate on the copper column first, align the hole, then screw the nut, and finally reinforce it with a screwdriver.

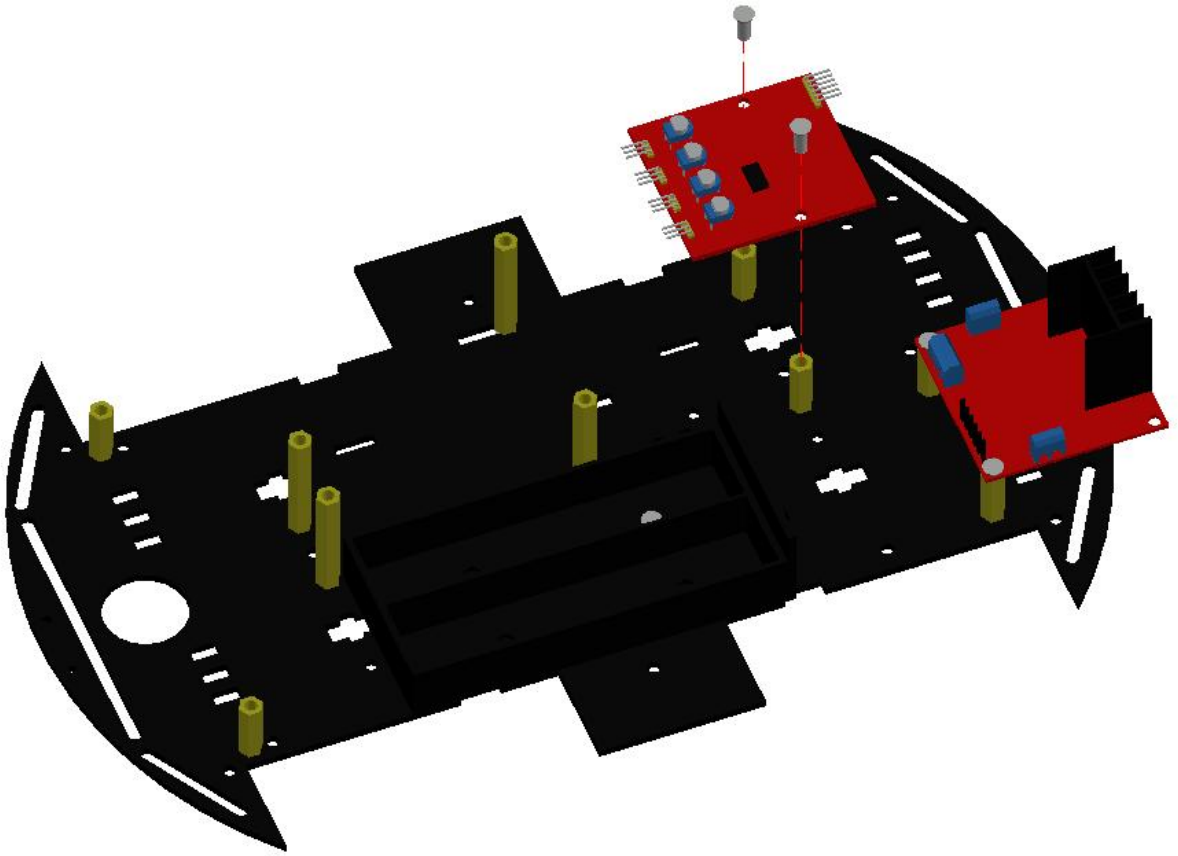
Note: Pay attention to the direction of the motor drive board.

Install four-way tracking control board

① M3*8 flat head screw*2pcs

② four-way tracking control board*1pc



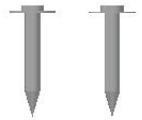


First put the four-way tracking control board on the copper column, align the hole position, then screw the nut, and finally reinforce it with a screwdriver.

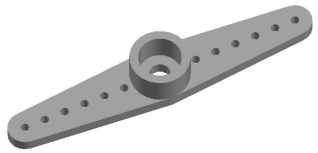
Note: Note the orientation of the control board.

Ultrasonic bracket and servo bracket splicing

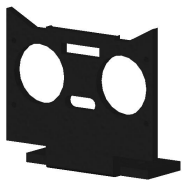
① Servo matching point screw*2pcs

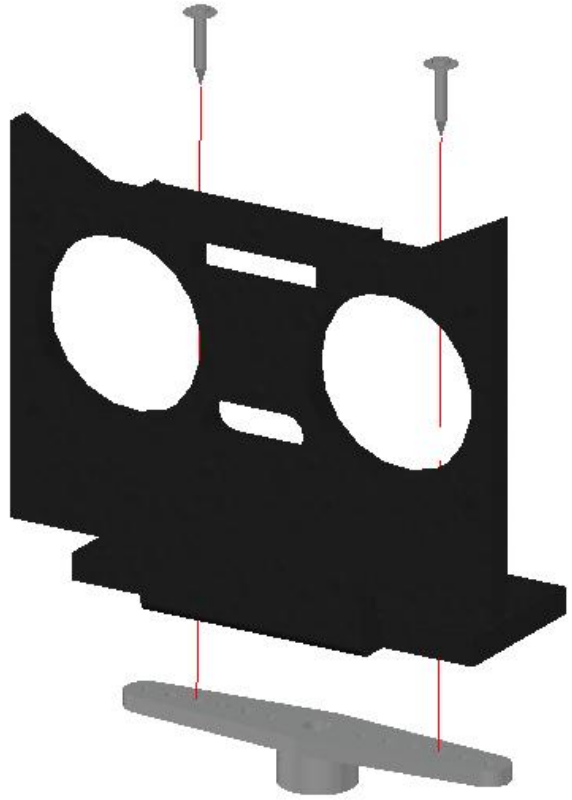


② Servo supporting plastic bracket*1pc



③ Ultrasonic bracket*1pc

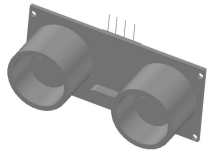




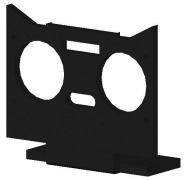
First, align the servo bracket with the ultrasonic bracket, and then push the pointed screw with the screwdriver to enlarge the corresponding hole of the steering gear bracket while fixing it.

Assembling ultrasonic module

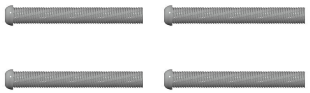
① Ultrasonic module*1pc



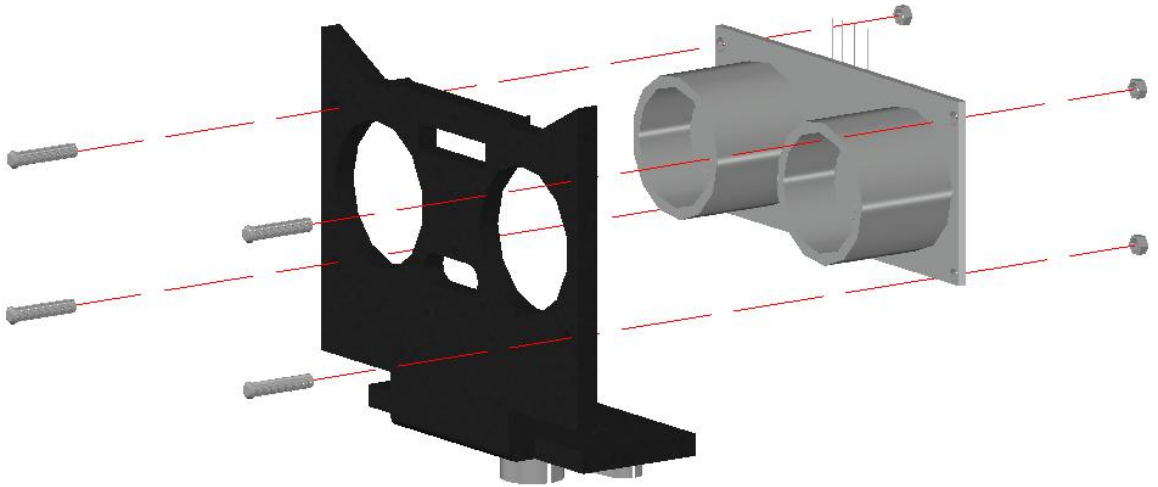
② Ultrasonic bracket*1pc



③ M1.6*10 Round head screw*4pcs



④ M1.6 Nut*4pcs

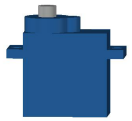


First the ultrasonic module through the bracket, initially fixed, and then screw, and then lock the nut.

Note: the parts used in this step are small and need more patience.

Install servo and servo bracket

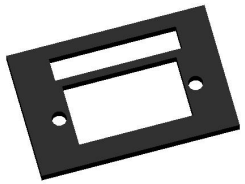
① servo*1pc

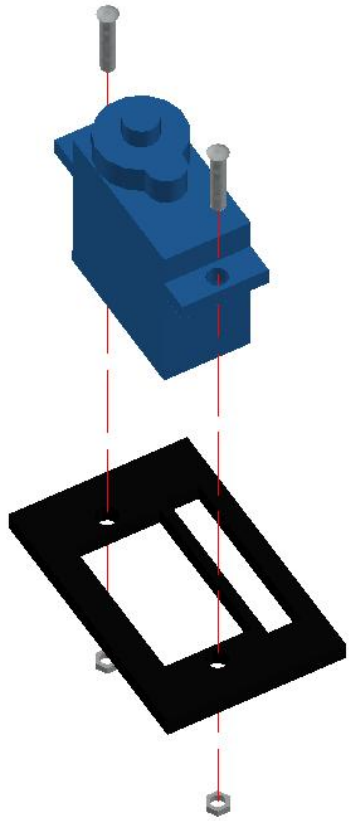


②M2 Nut*2pcs

③ M2*10 round head screw*2pcs

④ Servo bracket*1pc



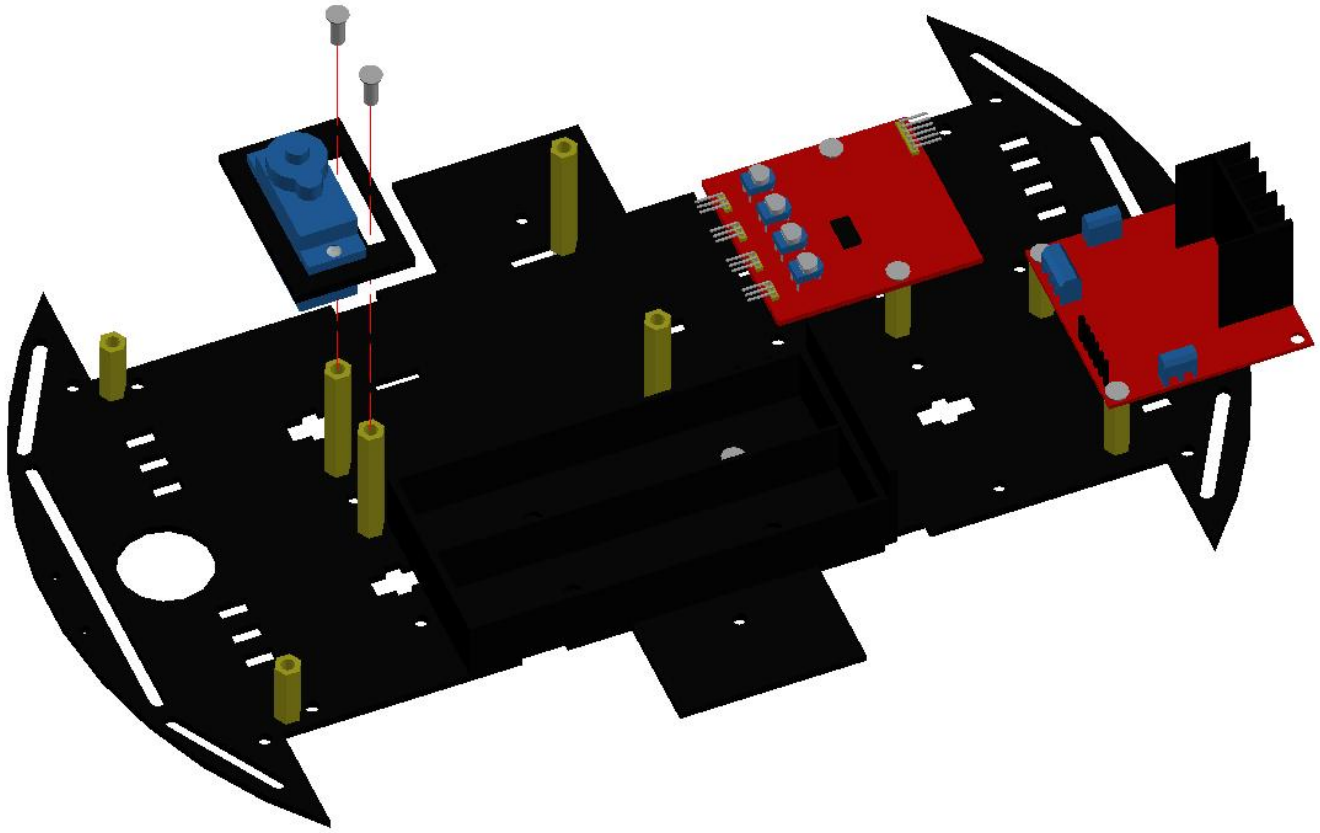


First put the servo into the servo bracket, then align the screws through the hole from the top down, screw the screws, and finally use a screwdriver for reinforcement.

Note: Note the servo facing.

Install servo and servo bracket

① M3*8 flat head screw*2pcs

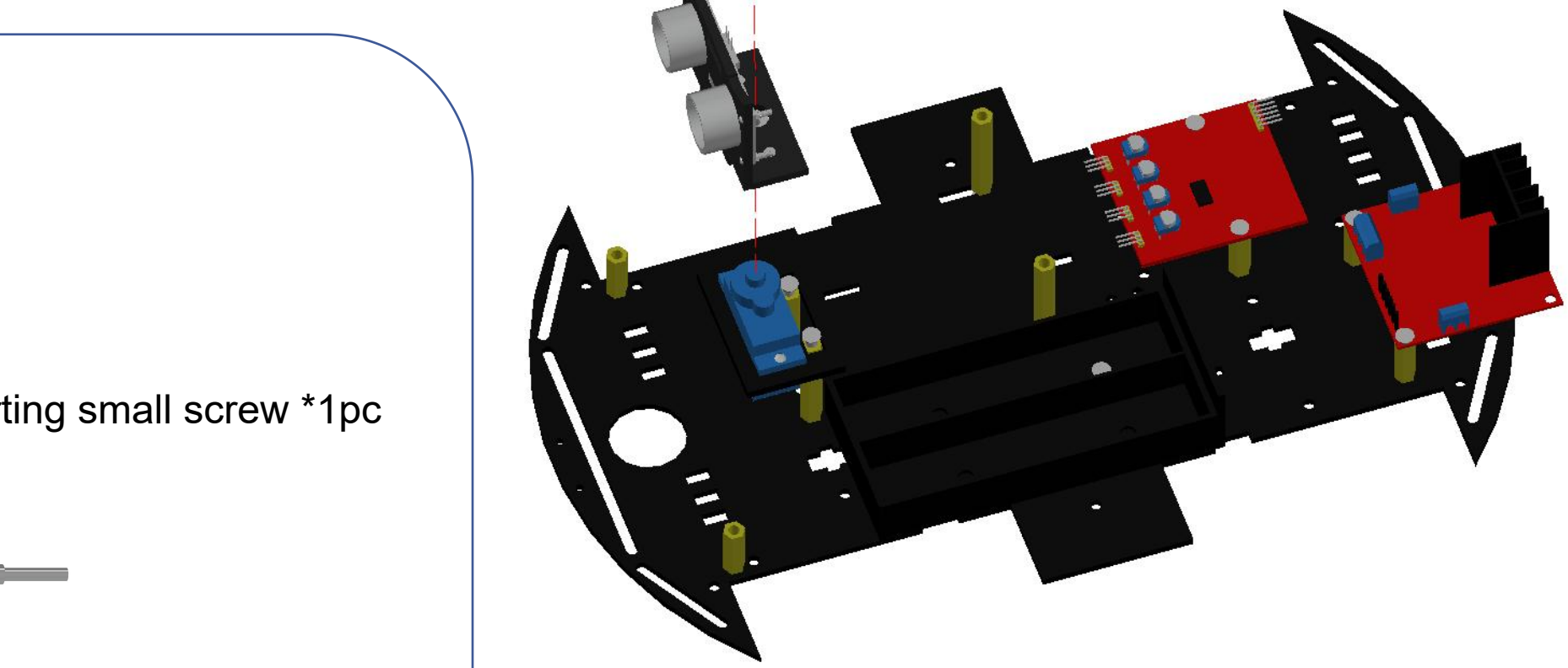


Put the servo bracket on the copper column, check the marking hole, screw on the screw, and finally use a screwdriver to reinforce.

Note: Note the orientation of the bracket.

Attach the ultrasonic to the servo

① Servo supporting small screw *1pc

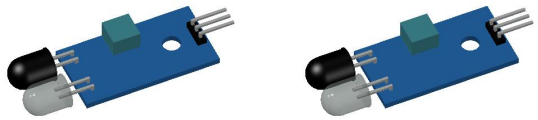


Insert the installed ultrasonic head into the servo, and then reinforce it with small screws and screwdrivers.

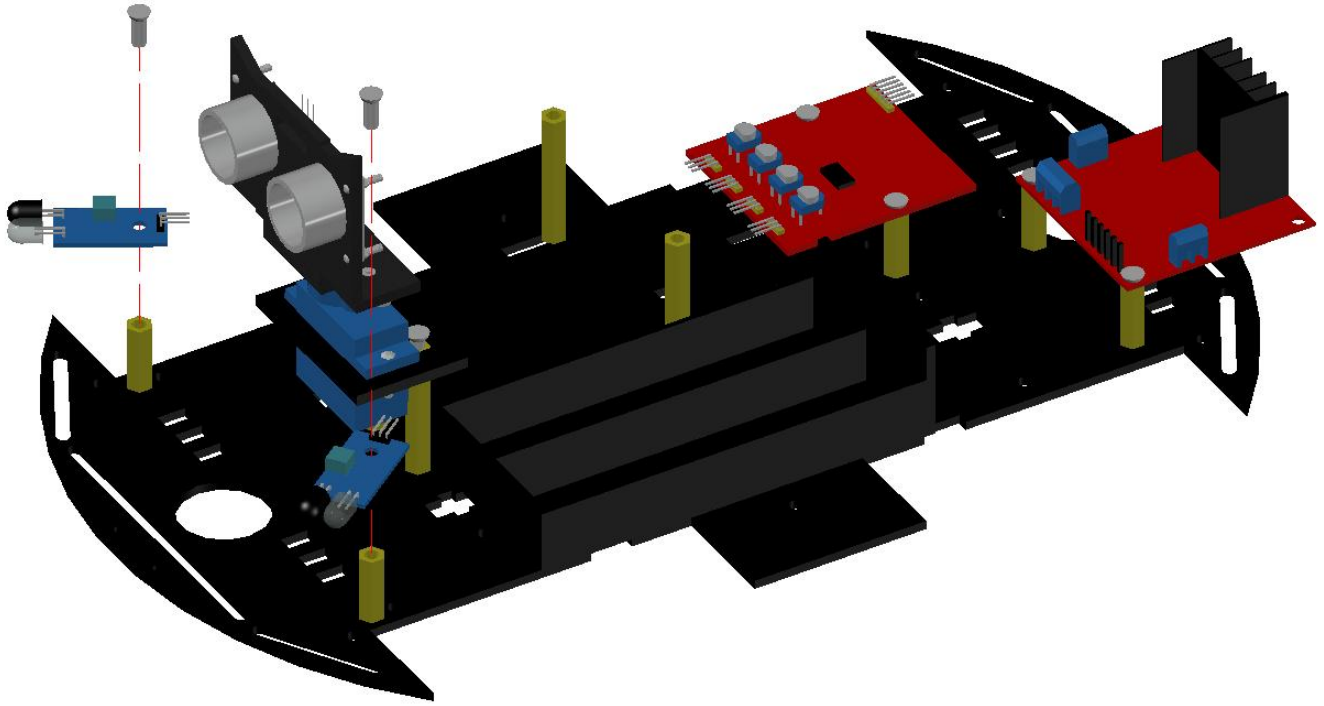
Note: Screw is a little small, need more patience when installing.

Install the infrared obstacle avoidance module

① Infrared obstacle avoidance module*2pcs



② M3*8 flat head screw*2pcs

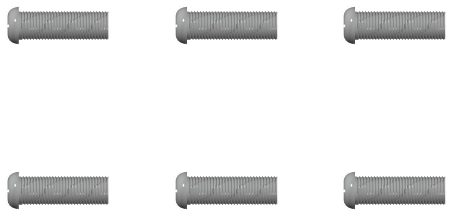


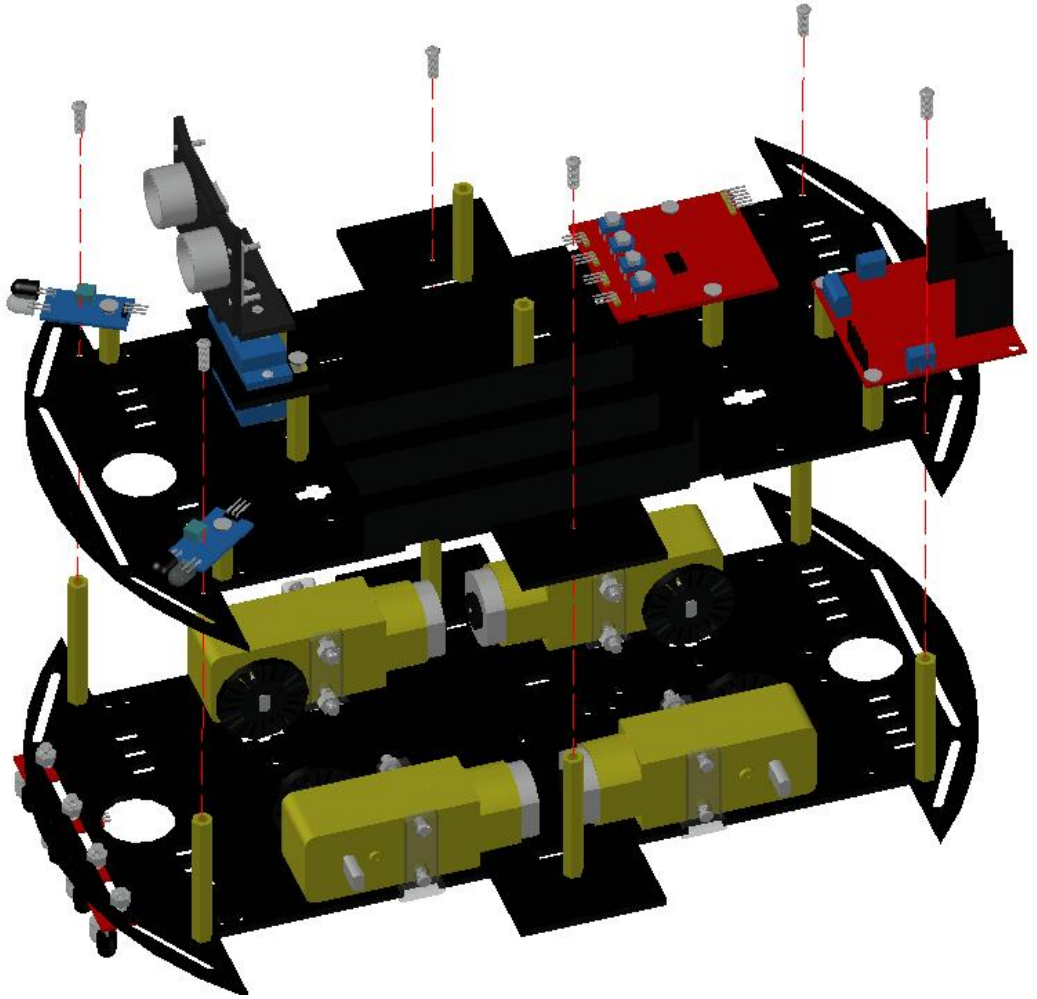
Put the infrared obstacle avoidance module on the copper column, align the hole position, and then screw it, and finally reinforce it with a screwdriver.

Note: The infrared module should face outside and have a certain Angle to achieve the effect of left-right obstacle avoidance.

Fix top plate and bottom plate

① M3*8 round head screw*6pcs



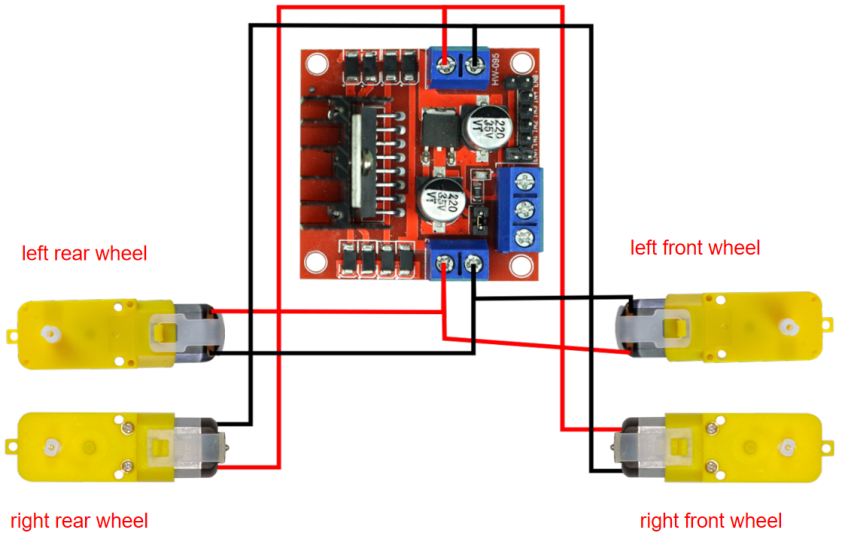


Lay the bottom plate flat, place the top plate lightly on the copper column, properly position the holes, screw on the screws, and reinforce with a screwdriver.

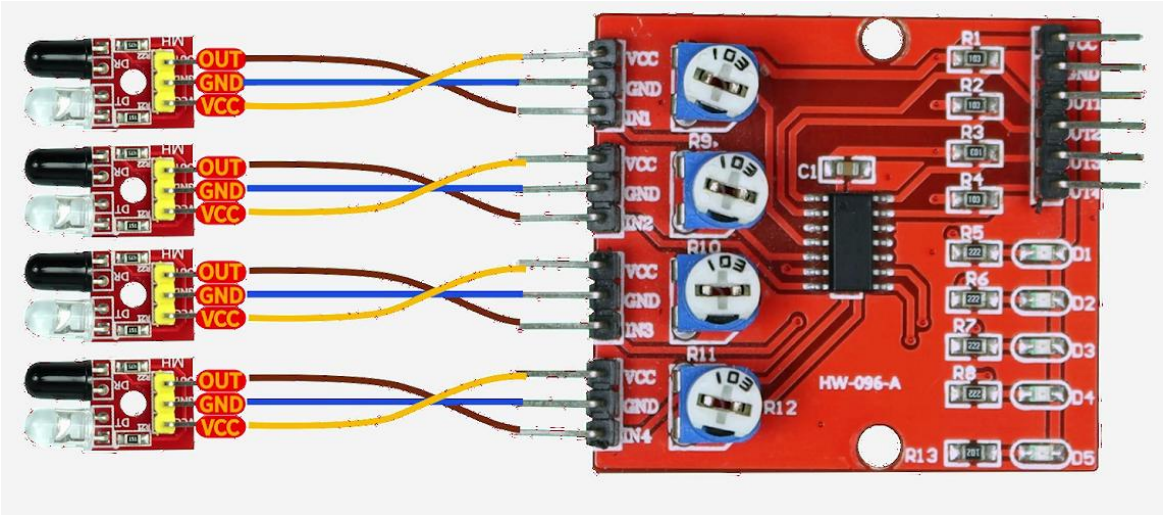
Note: pay attention to the orientation of the top and bottom plates.Before fixing, the bottom plate needs to be worn out from the hole of the top plate to facilitate the wiring behind.

Connect the line

motor and motor drive board connection diagram:



four-way tracking module connection diagram:

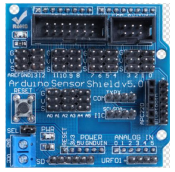


Note: These lines were threaded in the previous step from the holes near the corresponding modules on the top board.

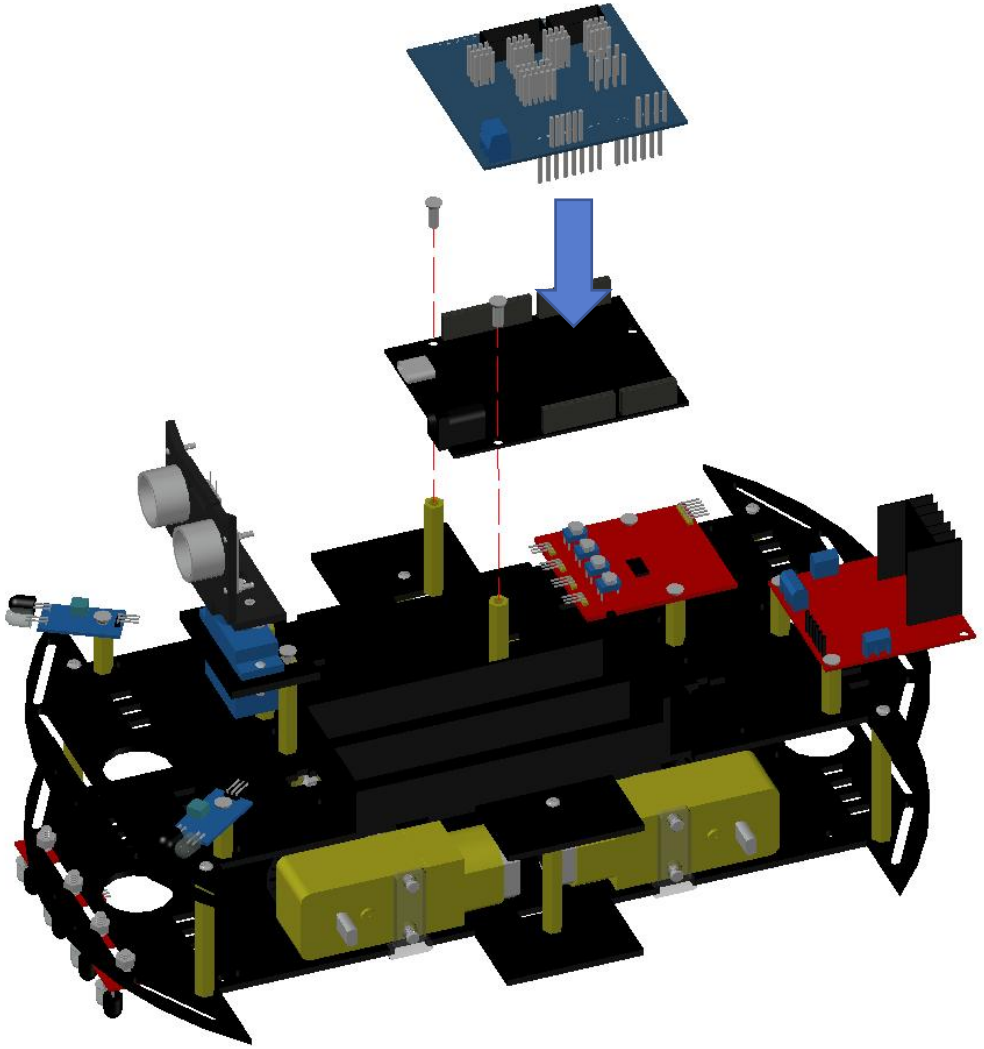
Install the mainboard and expansion board

① main board

② Expansion board*1pc



③ M3*8 flat head screw*2pcs



First put the mainboard on the copper column, align the hole, screw on the screw, and finally reinforce with a screwdriver; After installing the mainboard, insert the expansion board into the mainboard.

Note: The pins of the expansion board should not be inserted in the wrong position.

Connect the line

Female to female Dupont line 6P 20CM*1pc

(step②)

Female to female Dupont line 6P 20CM*1pc

(step③)

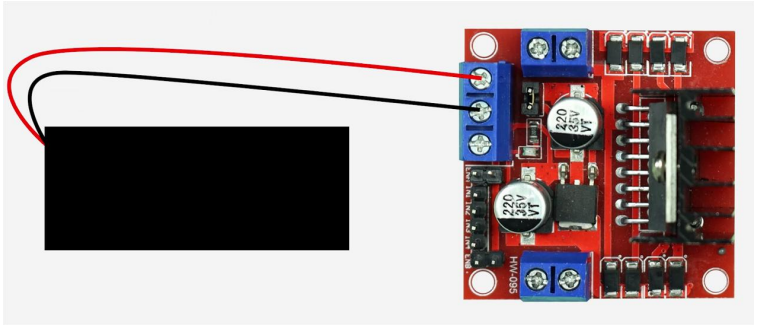
Female to female Dupont line 4P 20CM*1pc

(step④)

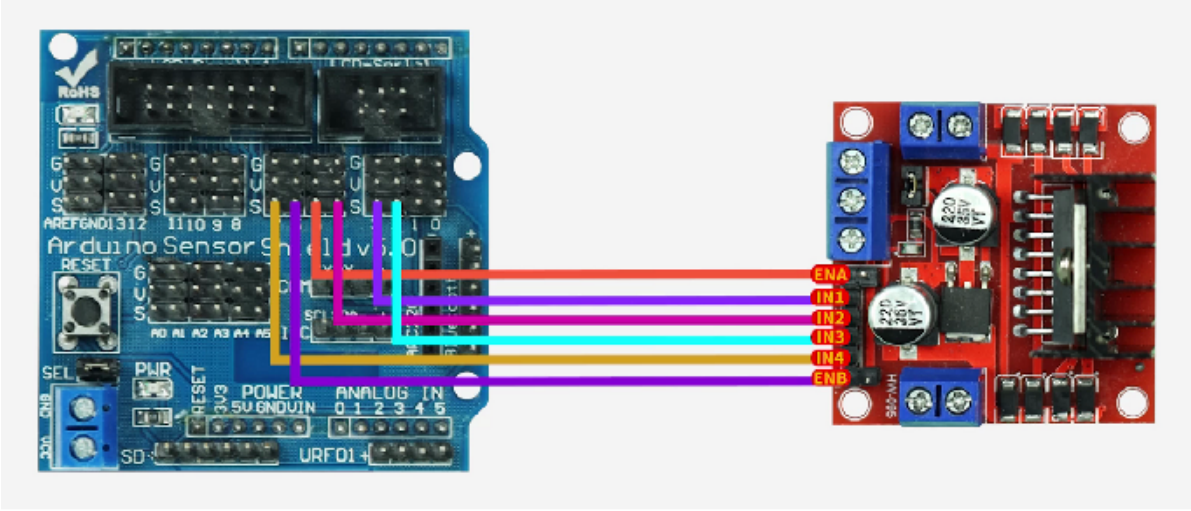
Female to female Dupont line 3P 20CM*2pcs

(step⑤)

① Battery case connection diagram:



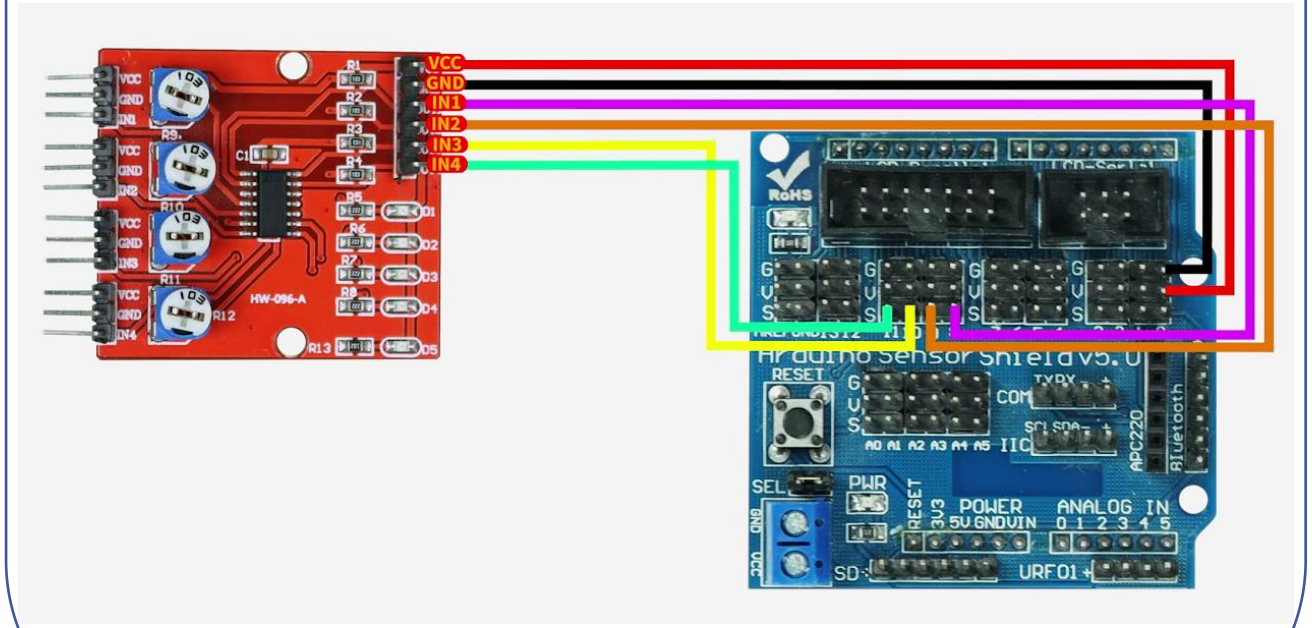
② expansion board and motor drive board connection diagram:



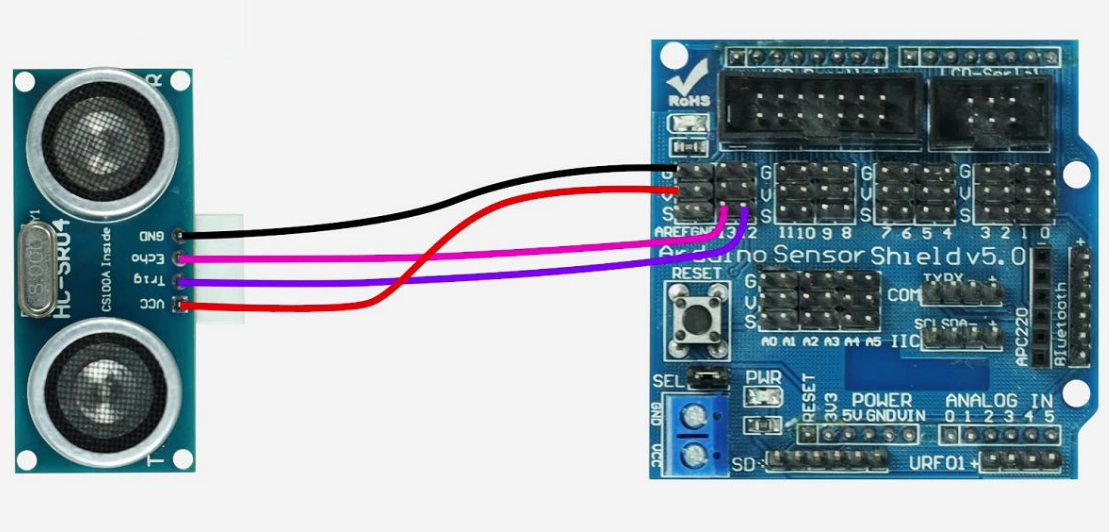
Note: After connecting the line, you can plug the port of the battery into the mainboard.

Connect the line

③ Four-way tracking control board and expansion board connection diagram:

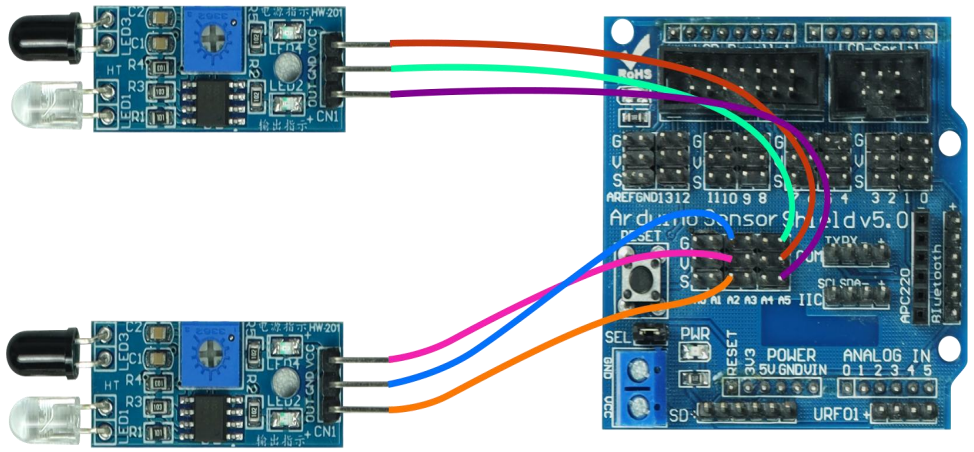


④ Ultrasonic module and expansion board connection diagram:

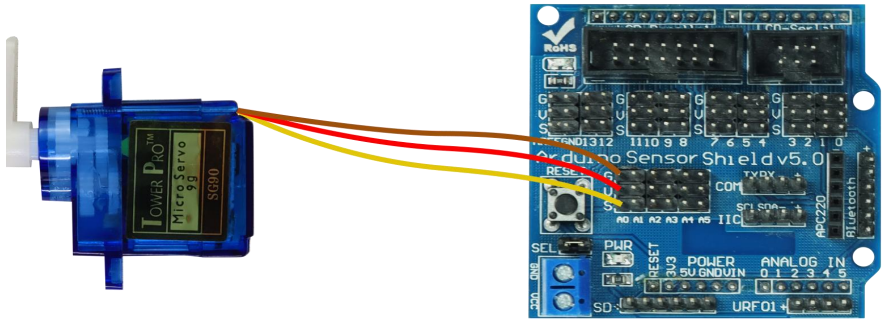


Connect the line

⑤ Infrared obstacle avoidance module and expansion board connection diagram:

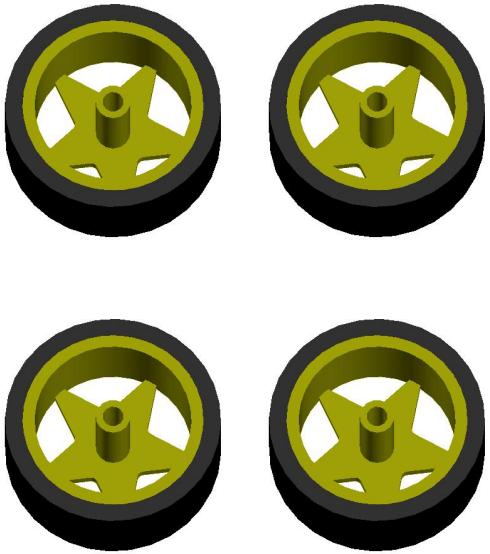


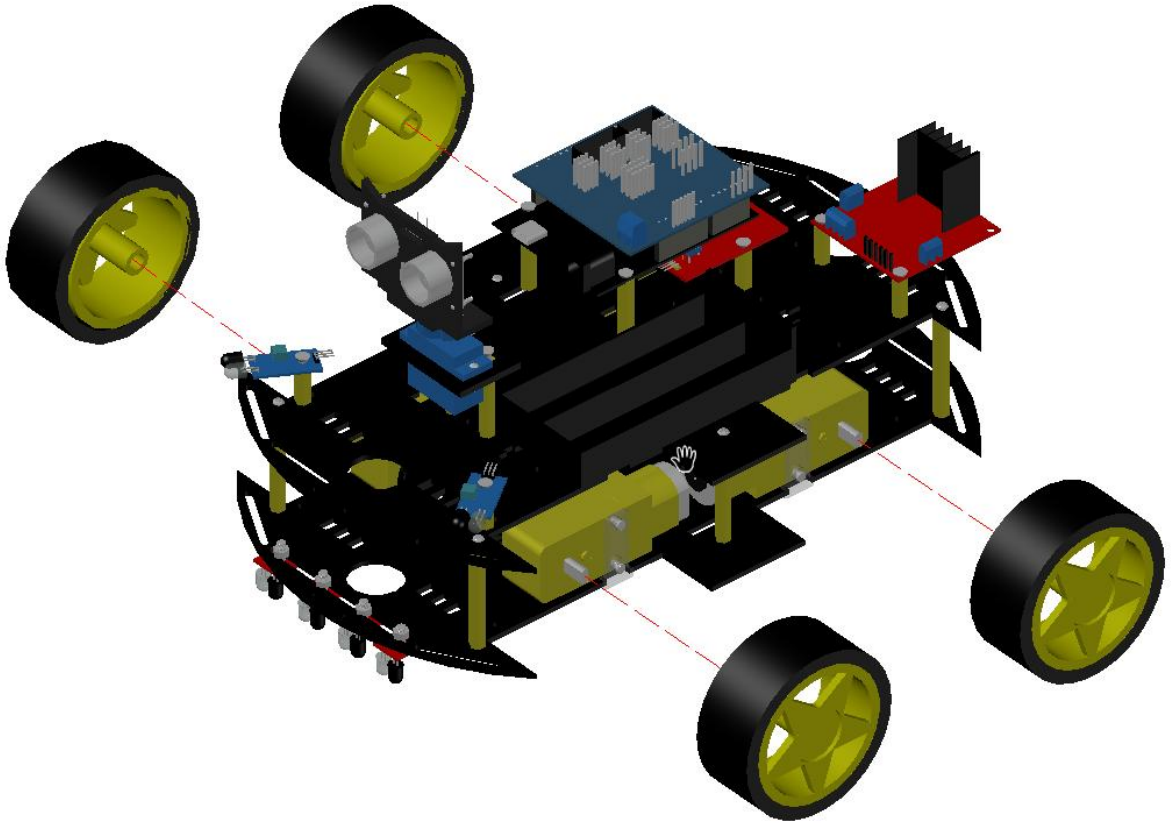
⑥ Servo and expansion board connection diagram:



Install the wheel

① wheel*4pcs

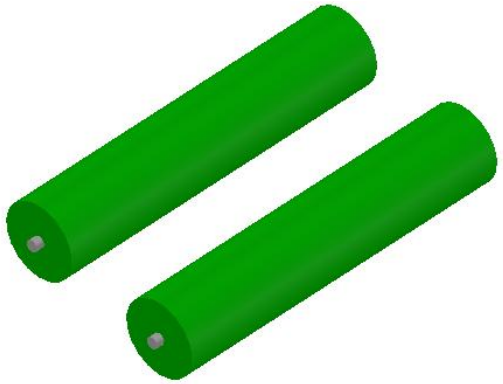




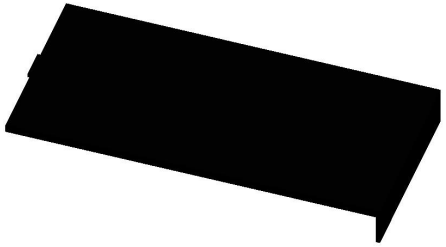
Take out the wheel to observe the shape of its hole first, and the shape of the rotating shaft on the motor, and then reinstall the fixed force.

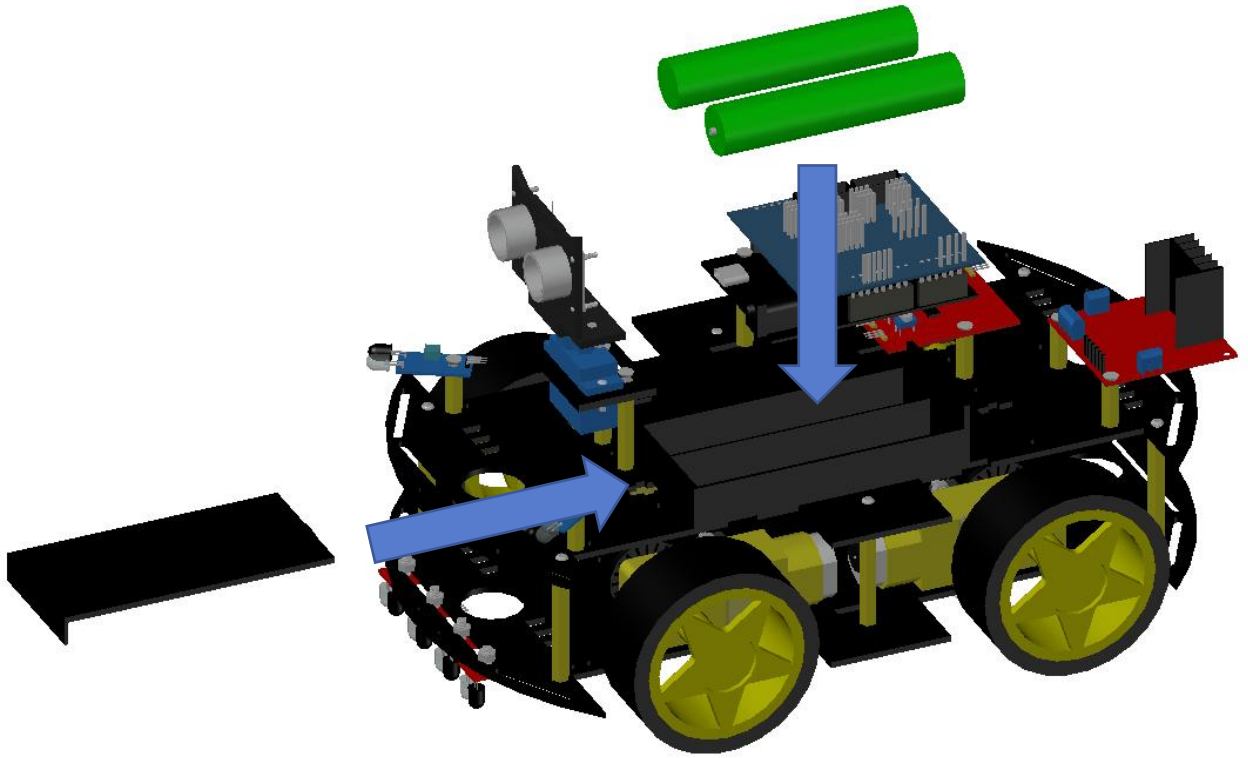
Install the battery and cover the battery

① Battery*2pcs



② Battery cover*1pc





Put the battery into the battery case first, and then put the battery cover on.

Note: pay attention to the positive and negative poles of the battery, do not install the battery upside down.

The installation is complete

Here, congratulations you have completed the whole assembly of the car, then you can combine the code to explore the fun of the smart car, enjoy the joy of programming and toy combination.