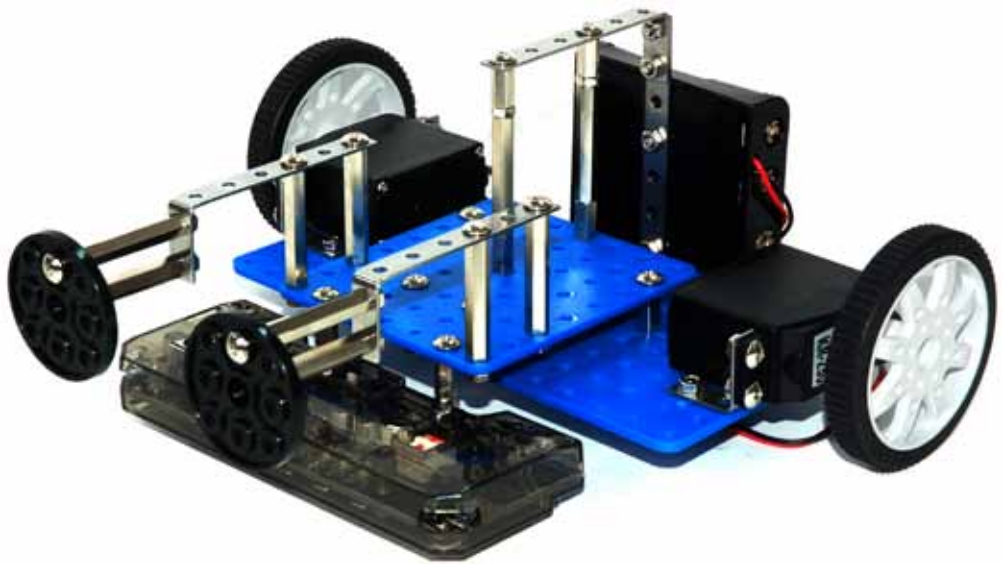


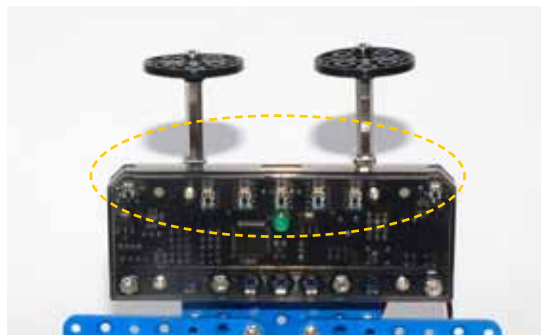
## 2. Pushing Robot



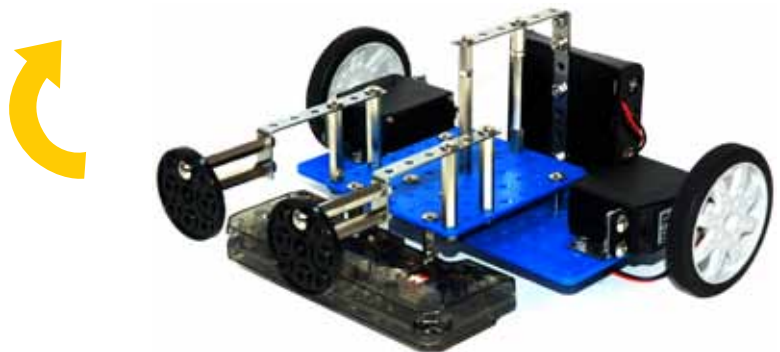
# Introduction and how it works



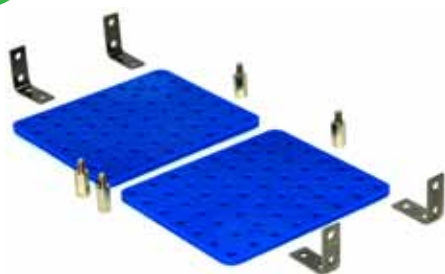
This two-wheel drive robot moves forward by using 2 DC motors. While the robot is moving forward, 7 infrared sensors that are on the back of the smart board detect the condition of the floor. When there is no floor anymore, the robot backs up or moves to the side. As it follows these principles, it never falls off a step or the edge of a table.



Detection by sensors on the bottom of the  
Smart Controller



1



X 4



X 8

2



X 8

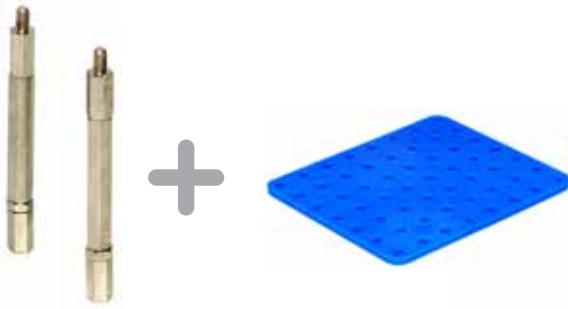


X 8

3



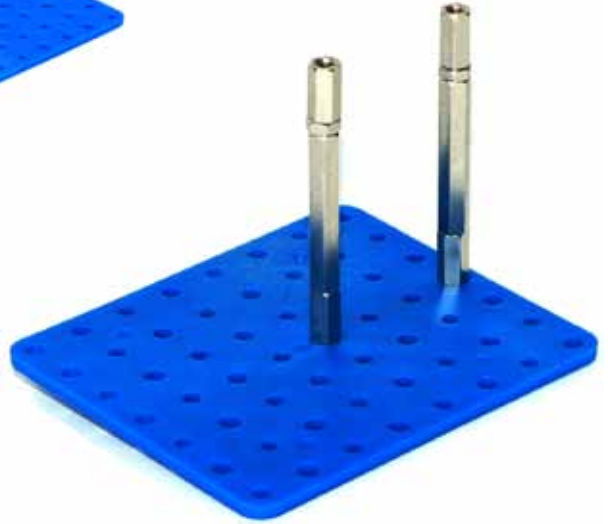
4



+



X 2



5



X 4



6



X 6



7



X 2



X 2



8



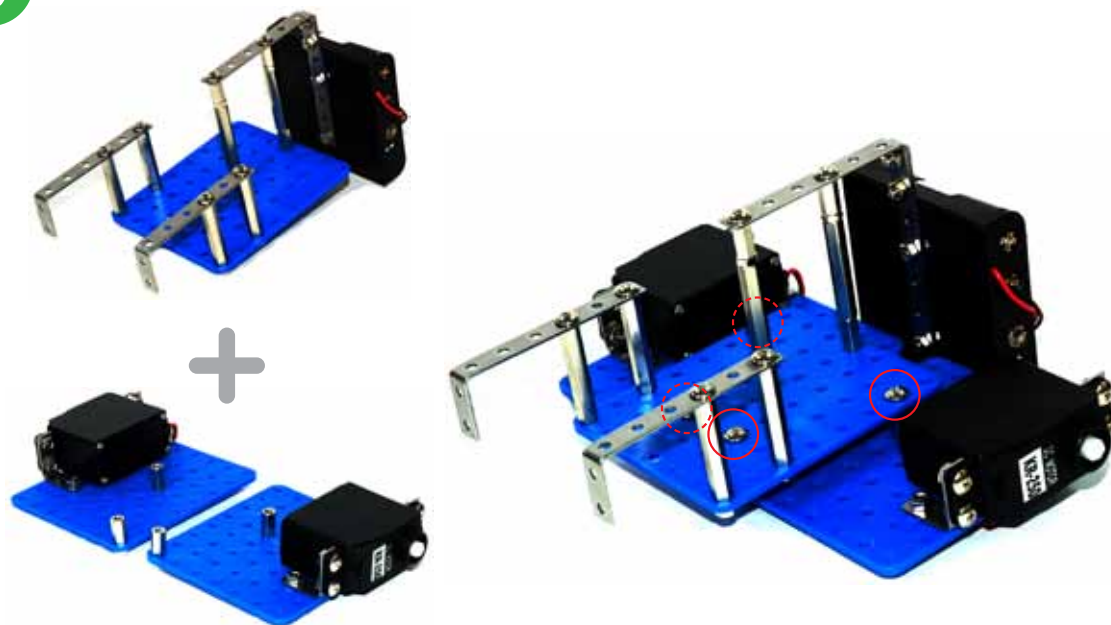
X 2



X 2

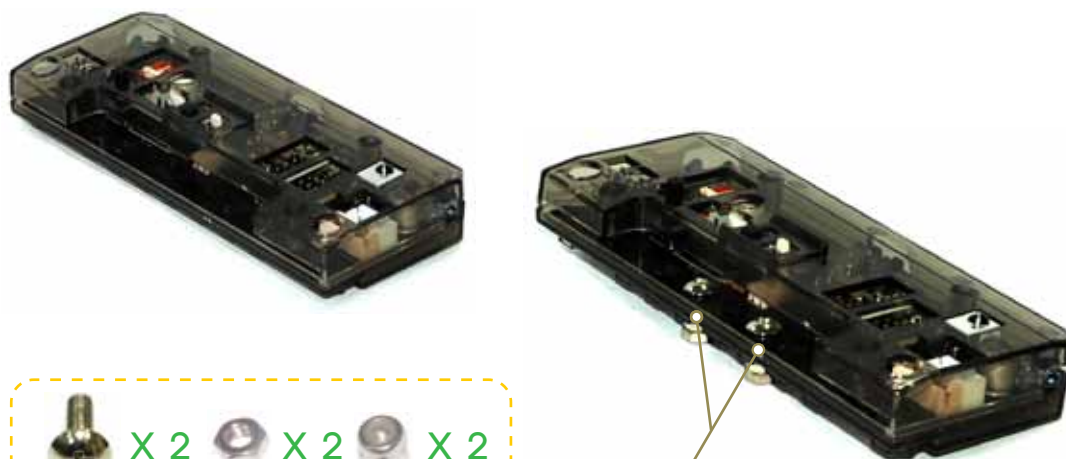


9



X 4

10



X 2



X 2

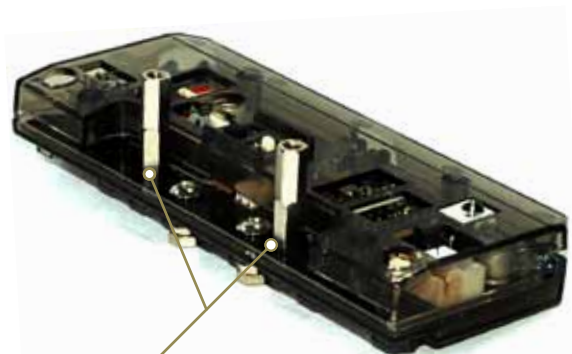
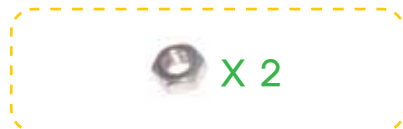


X 2

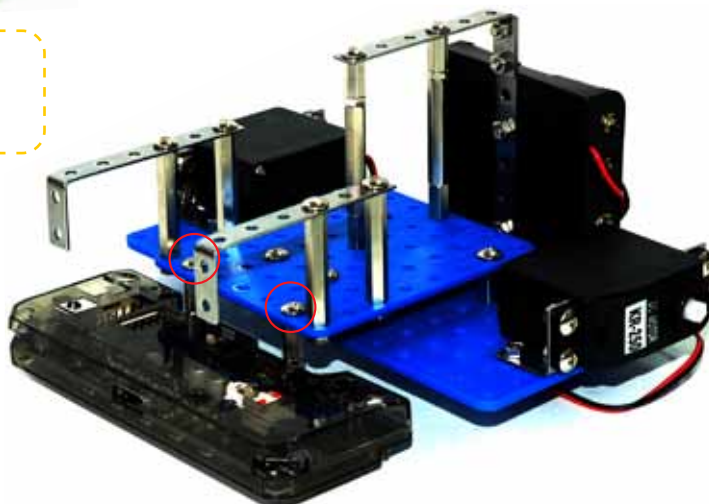
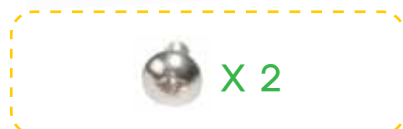




11



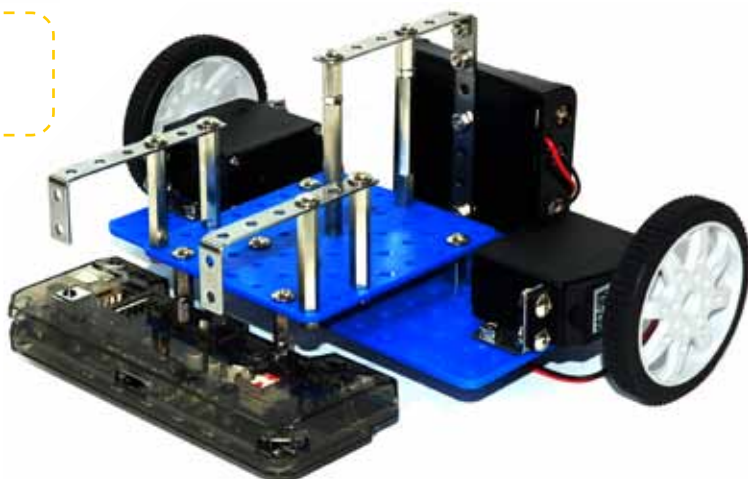
12



13



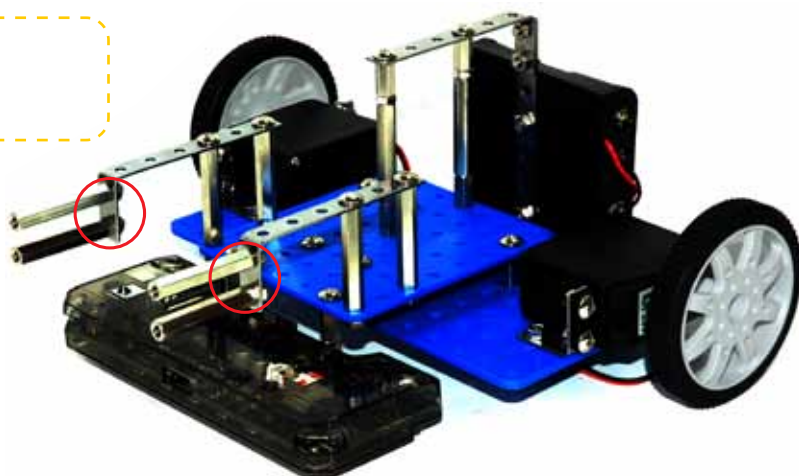
X 2



14



X 4

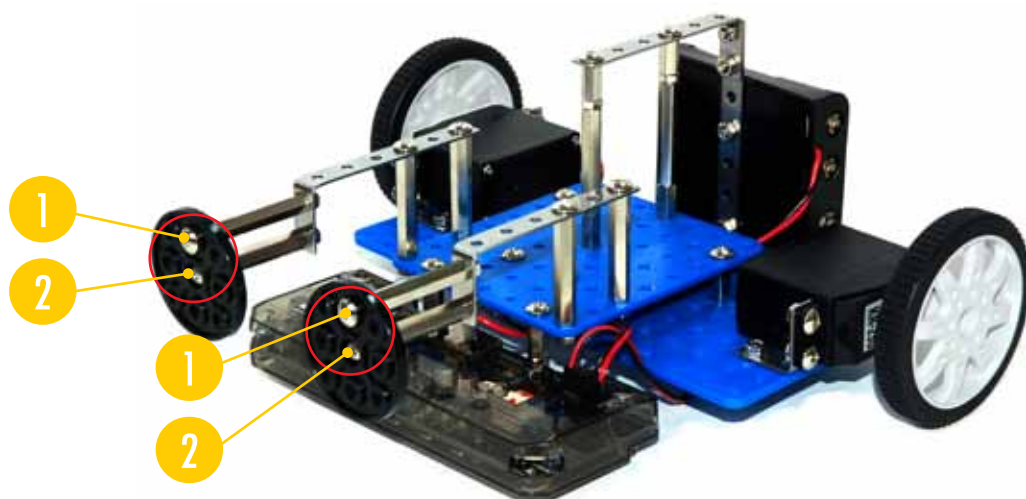


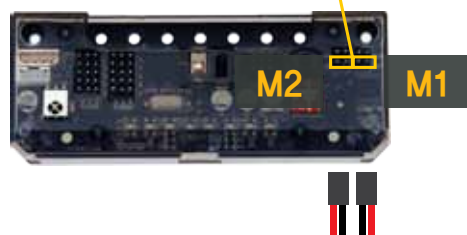
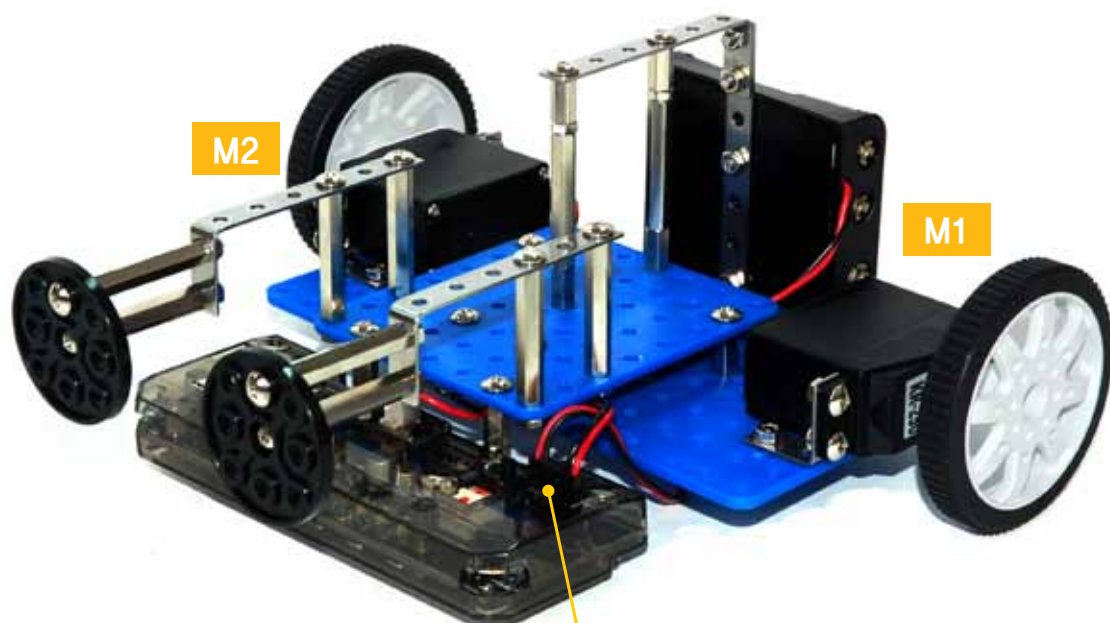


15

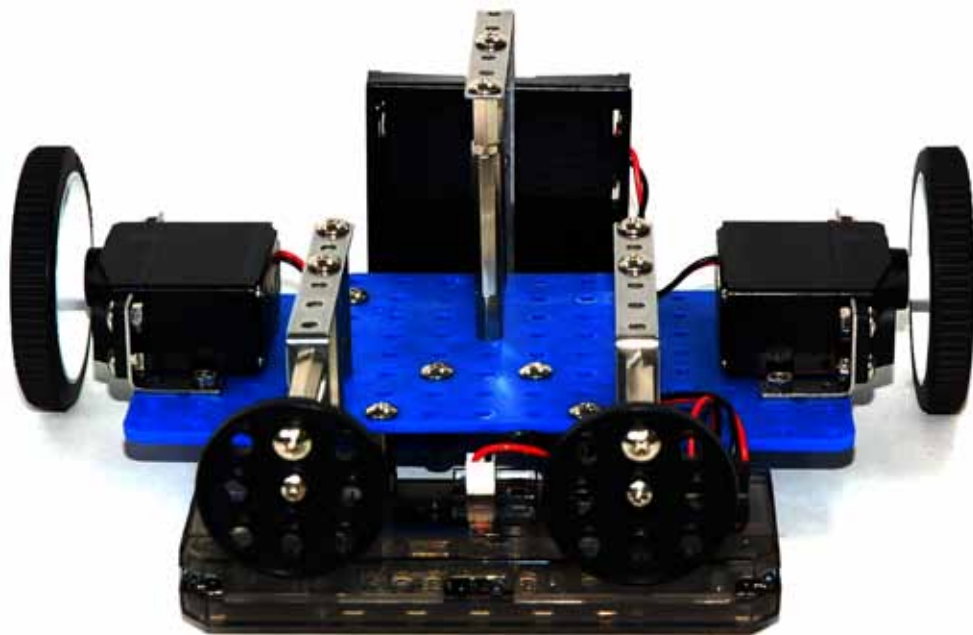


16

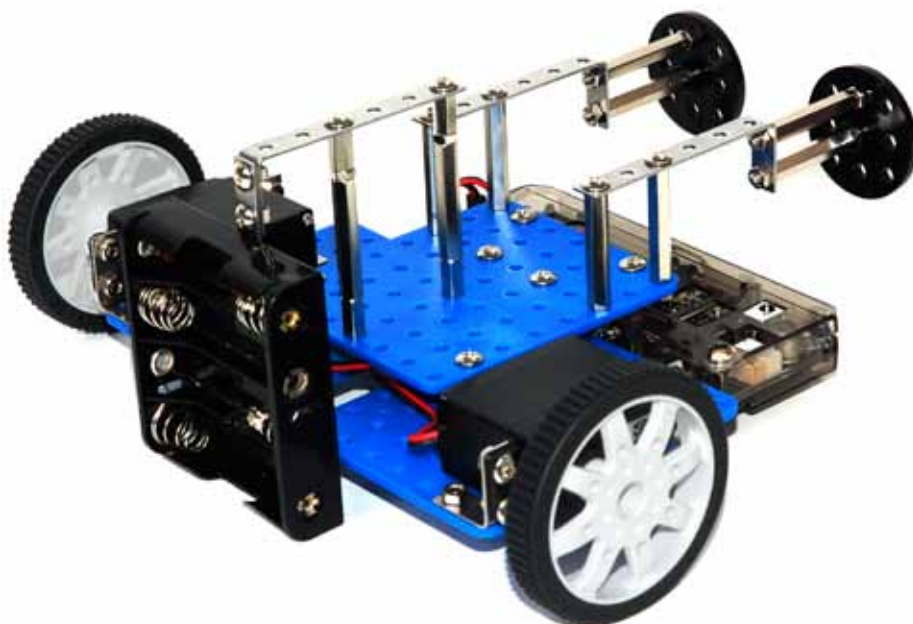




Front view



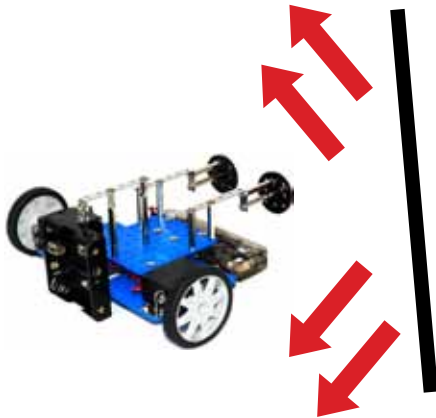
Back view



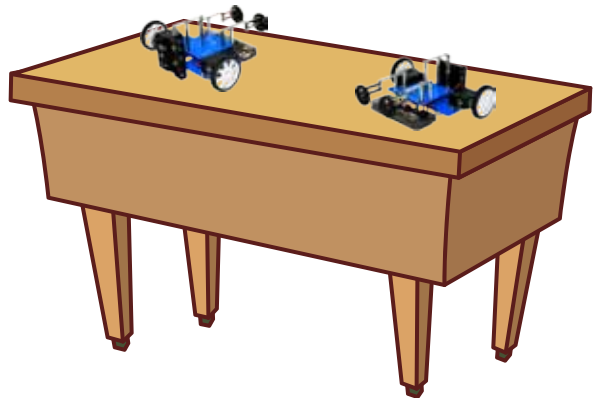
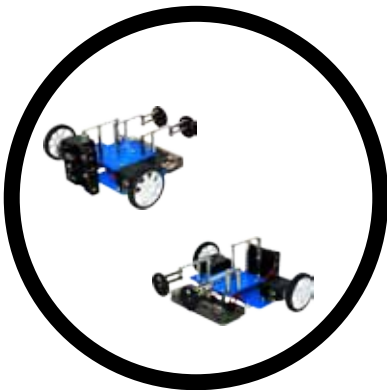
## Acting Module



The Pushing Robot uses the program mode 2 to operate.



The Pushing Robot avoids black lines on a white surface.



Not only black lines, it detects if the edge is near the robot or not.