ROBOTIC FUNCTIONAL KIT ™
Wiring Instructions

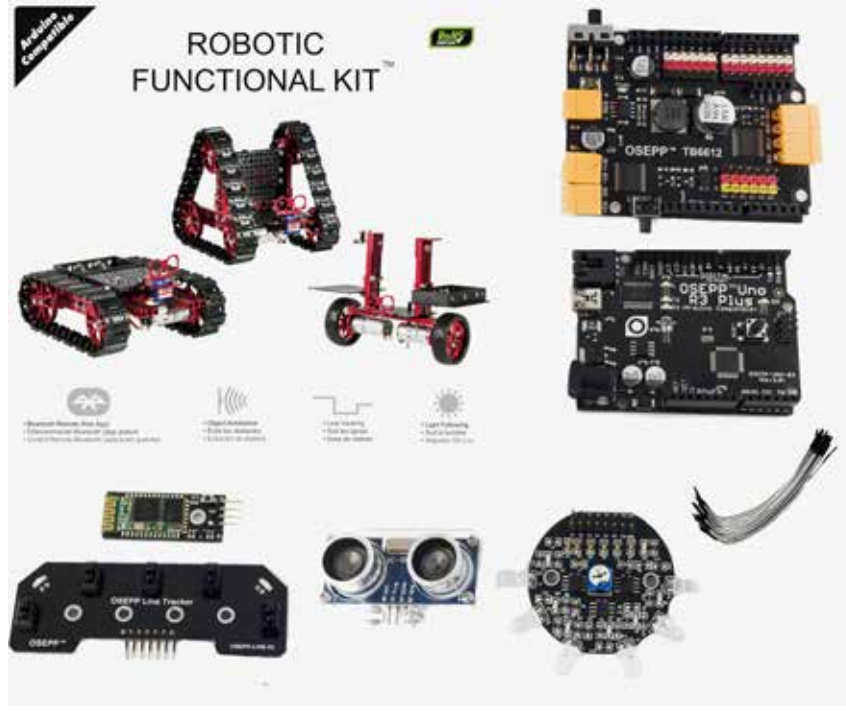


Table of Contents

2 WHEELER MECHANICAL KIT

Balancing Function 1
Bluetooth Control Wiring 6

TANK

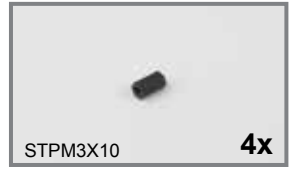
Bluetooth Control 13
Light Following with Object Avoidance 23
Line Following with Obstacle Detection 35
Line Maze Discovery 49
Object Avoidance 60

TRIANGULAR TANK

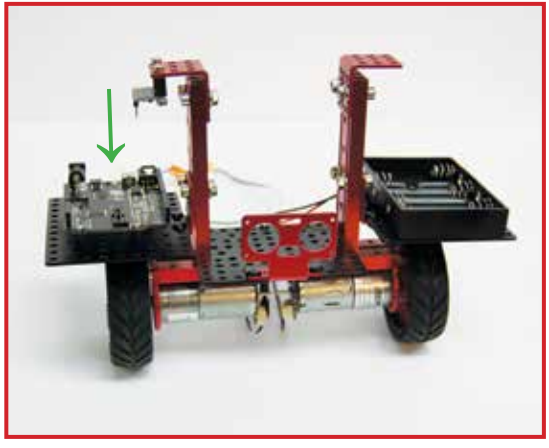
Bluetooth Control 68
Light Following with Object Avoidance 79
Line Following with Obstacle Detection 97
Line Maze Discovery 113
Object Avoidance 125

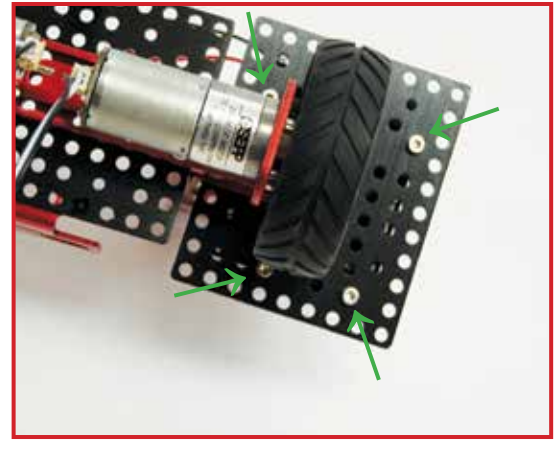
1 2 WHEELER MECHANICAL KIT

Balancing Function



2

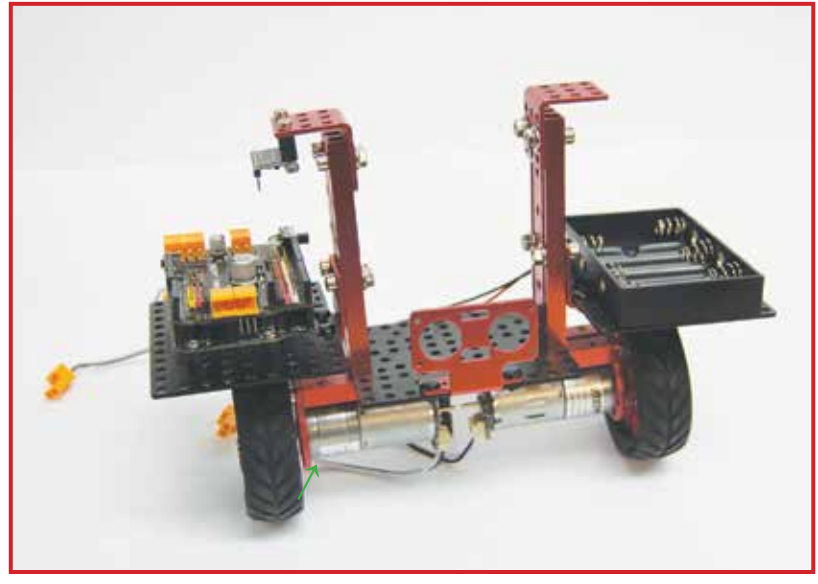




3

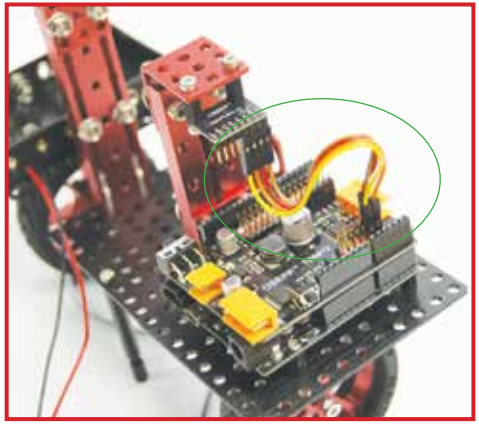
TBSHD-01

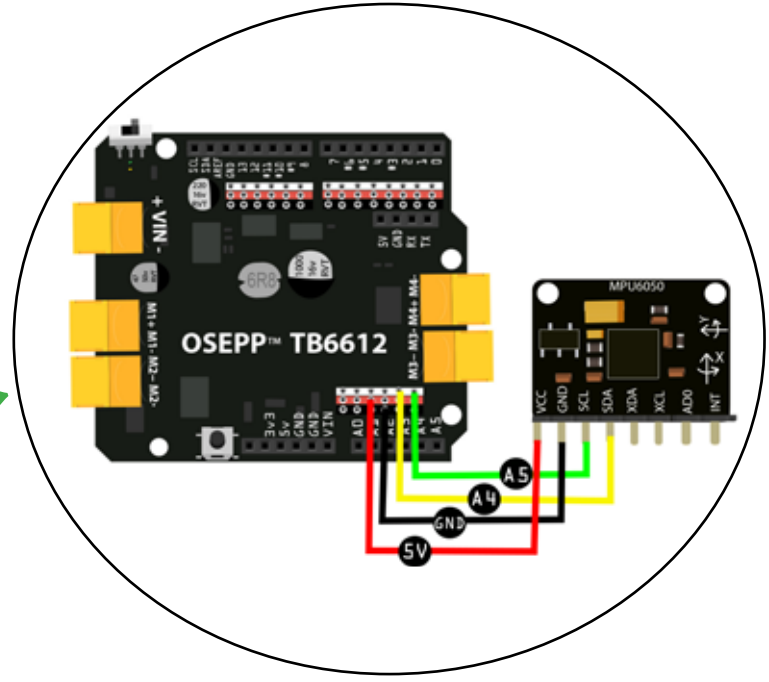
1x



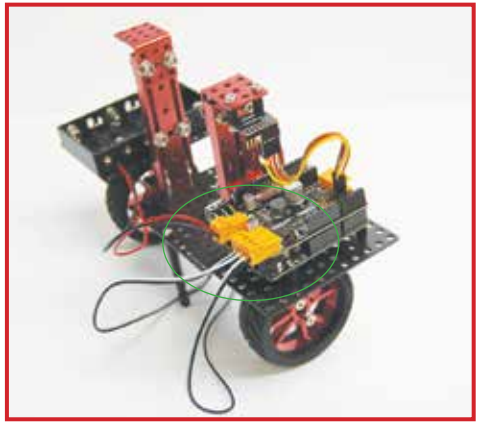
4

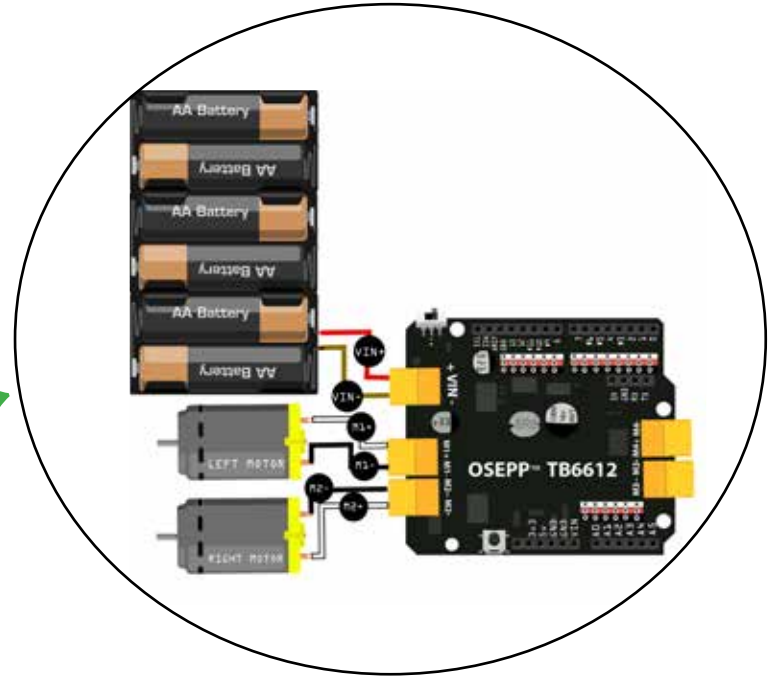
RIB10CM
4x




OSEPP™ TB6612
MPU6050
VCC
GND
SCL
SDA
XDA
XCL
ADO
INT
A5
A4
GND
5V

5

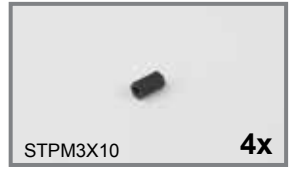



AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
VIN+
VIN-
M1+
M1-
M2-
M2+
LEFT MOTOR
RIGHT MOTOR
OSEPP™ TB6612

1 2 WHEELER WITH WHEEL ENCODER

Bluetooth Contol Wiring

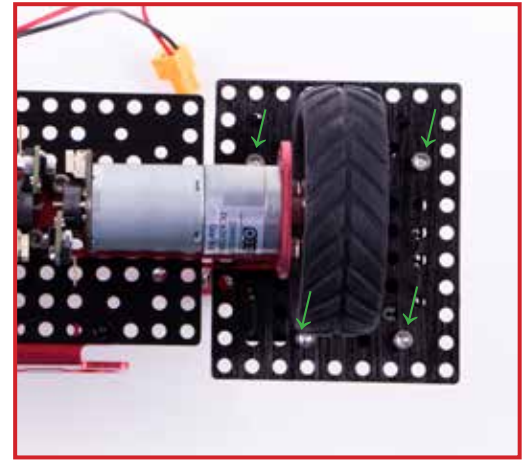
UNO-03 **1x**


STPM3X10 **4x**

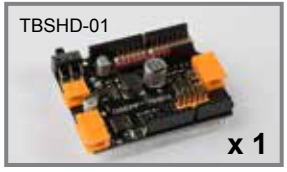
SCM3X6 **4x**

SCDR-001

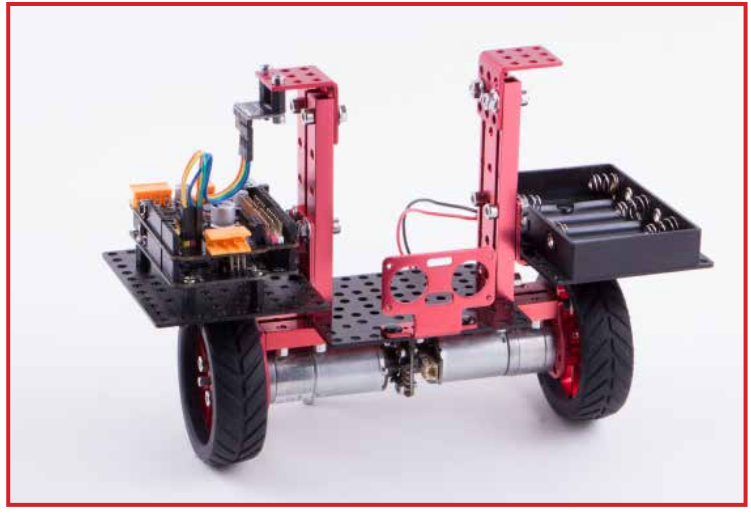
2

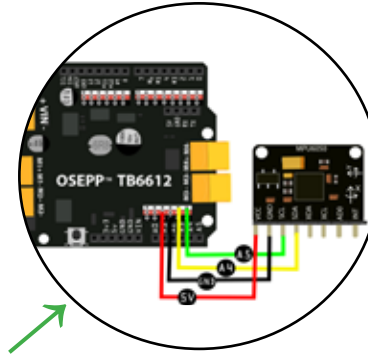


3



4

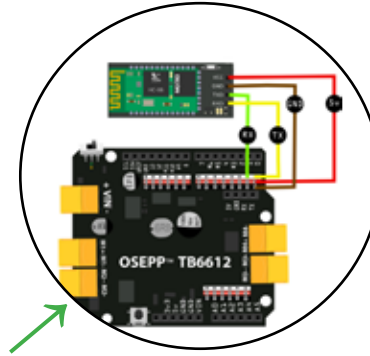




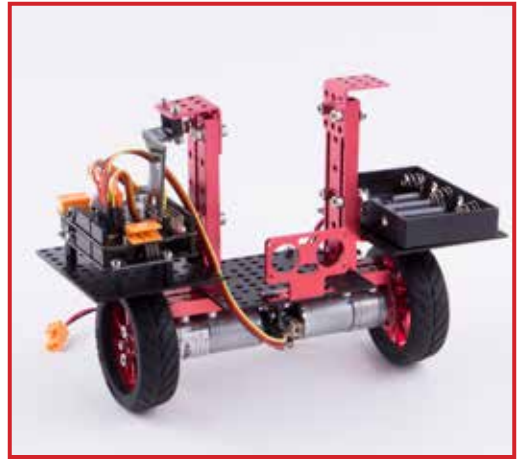
5

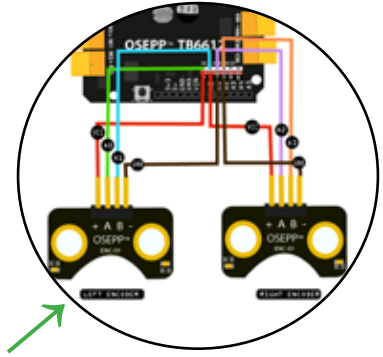
BTM-01

x 1



6





7

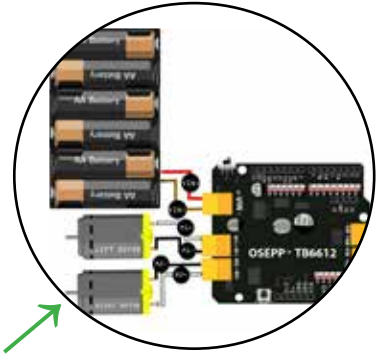
DCCBL-001

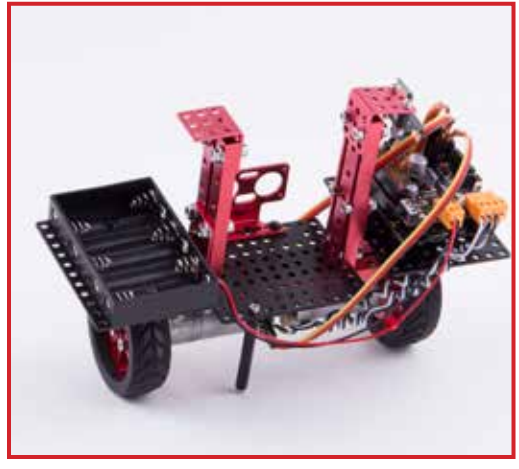
x 2

TBLK-001

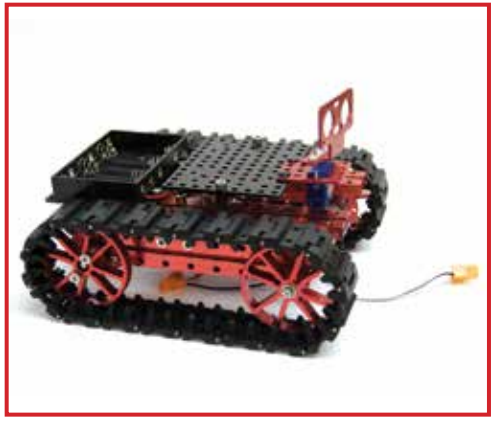
x 1

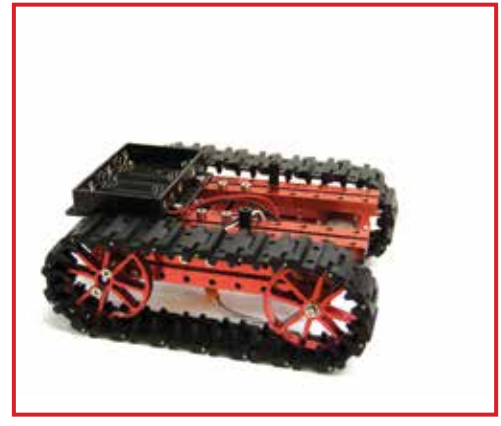
SCDR-001



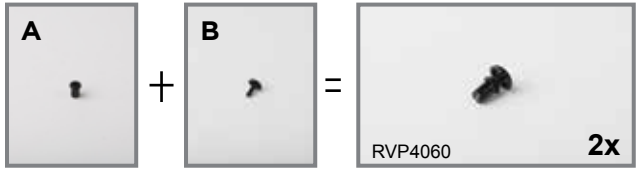


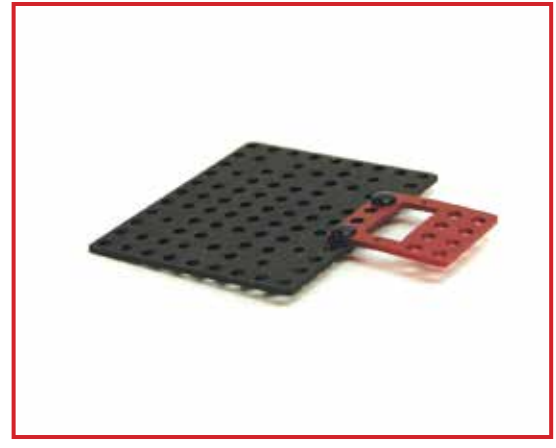
1 TANK Bluetooth Control



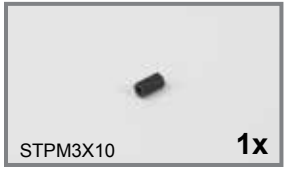


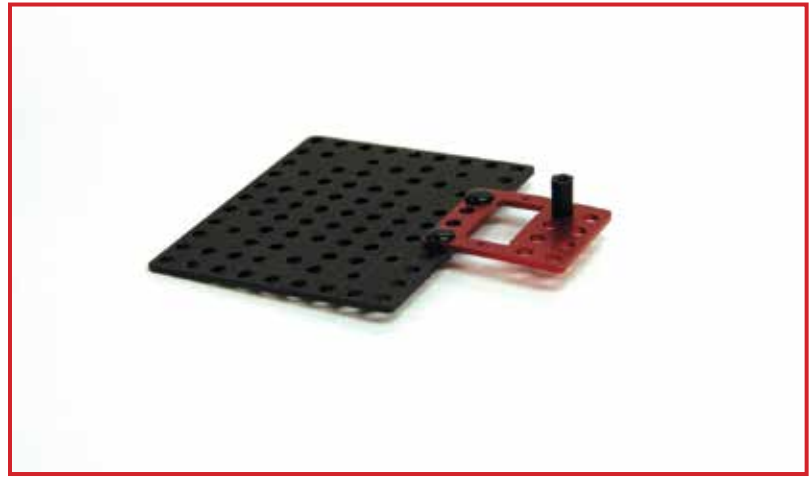
2



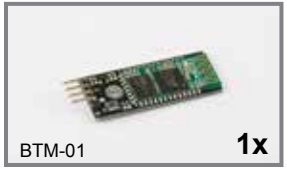


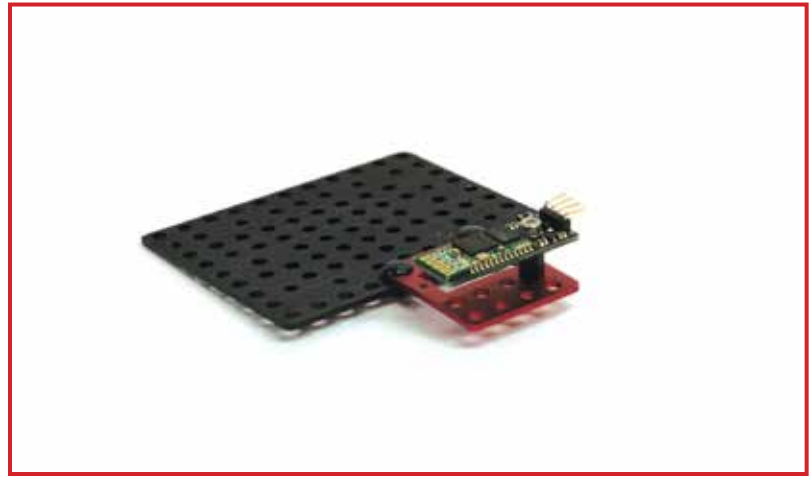
3



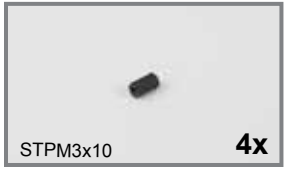


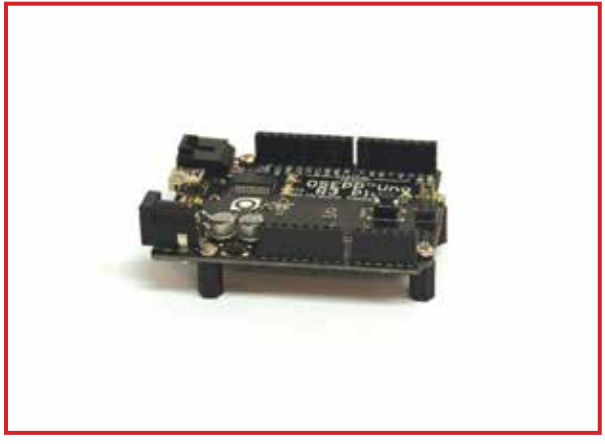
4

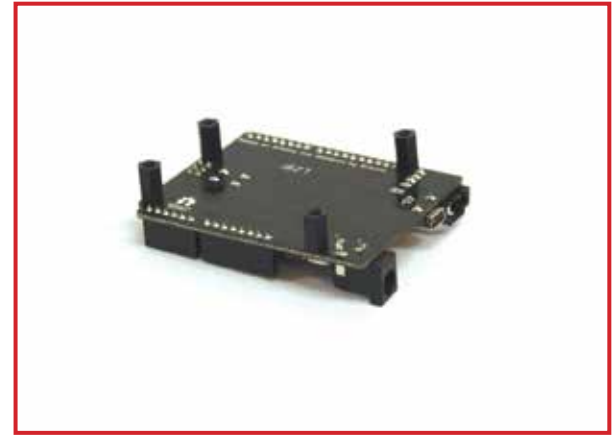




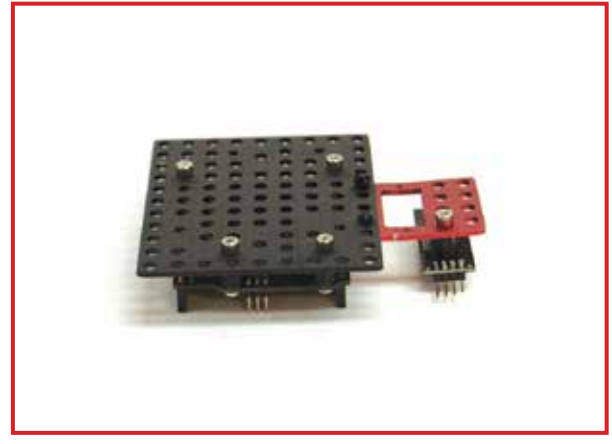
5





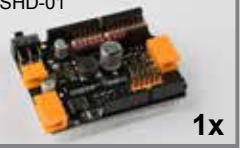


6

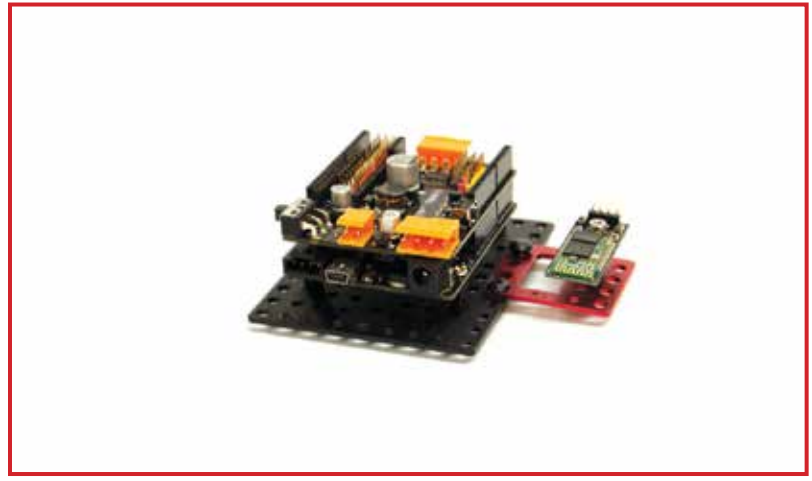


7

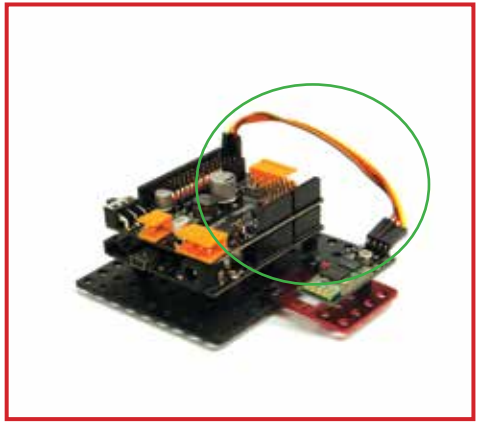
TBSHD-01

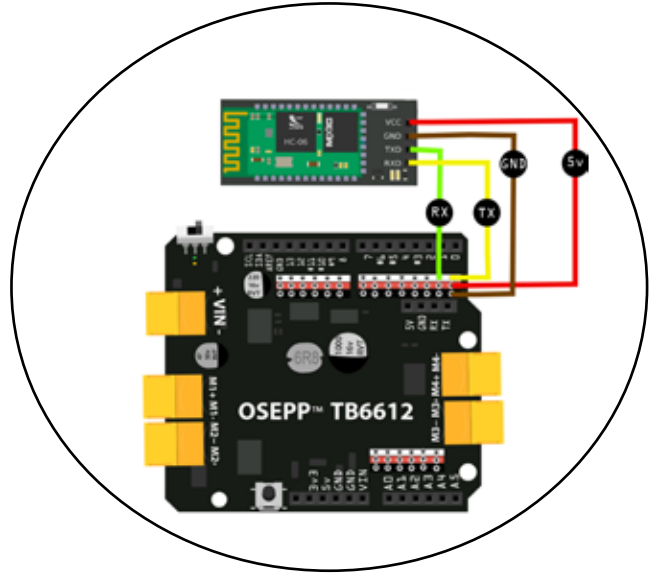


1x



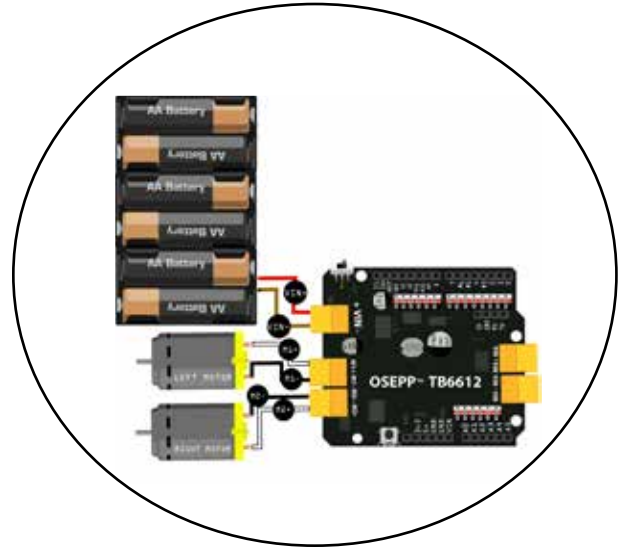
8

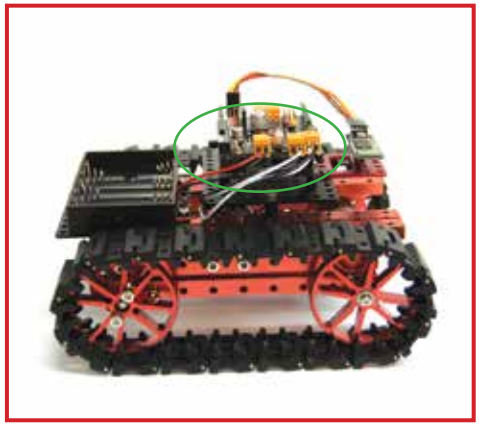




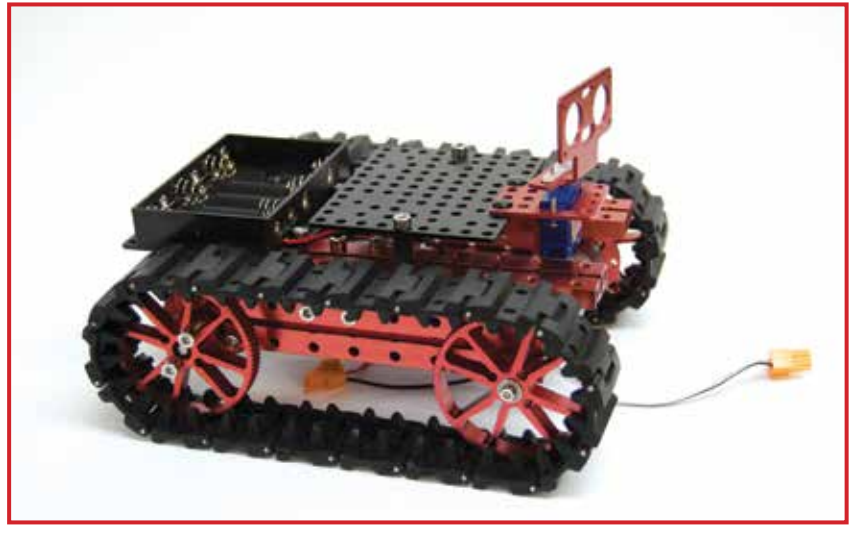
9

10

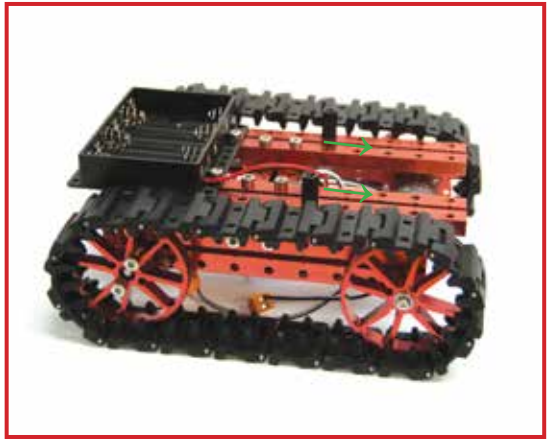


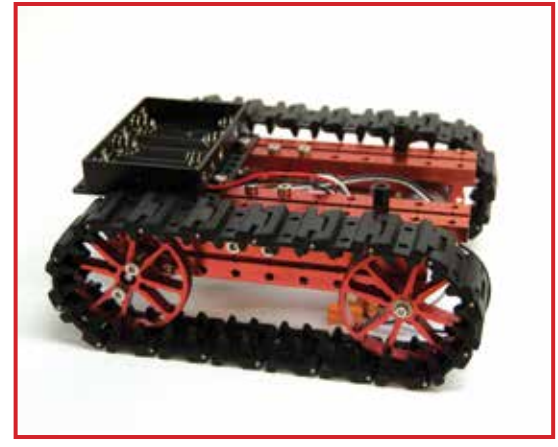


1 TANK Light Following with object avoidance



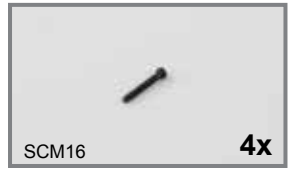
2





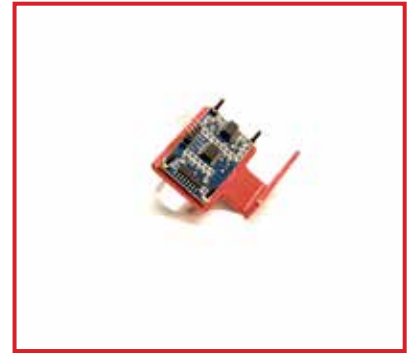
3

HC-SR04 **1x**

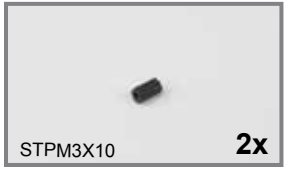

SCM16 **4x**

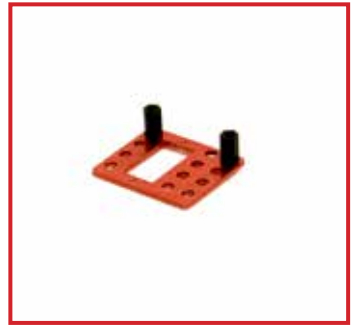
NUTM16 **4x**

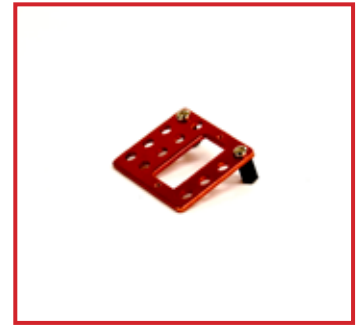
SCDR-001



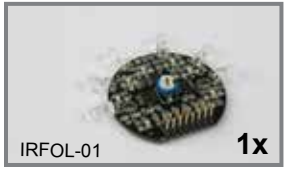
4

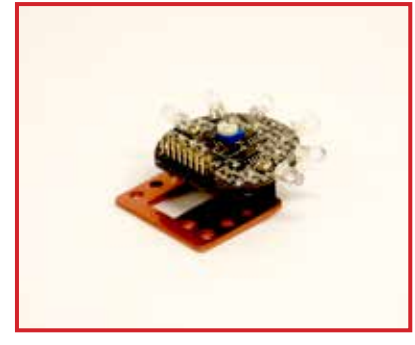






5





6

TANK-01

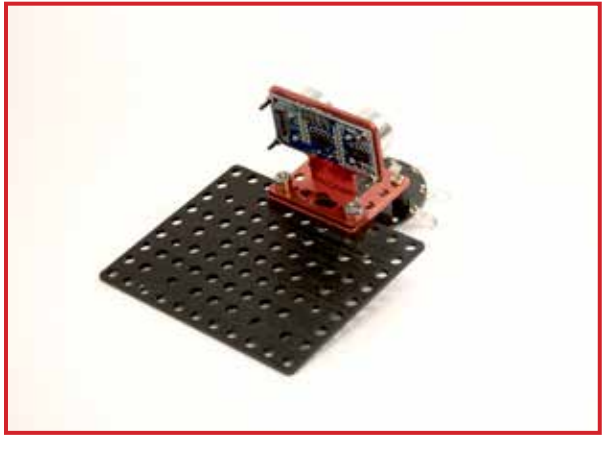
HEXM4X12 **2x**

TANK-01

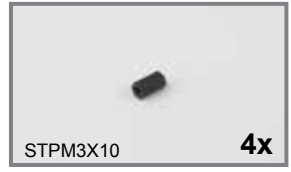
NUTM4 **2x**

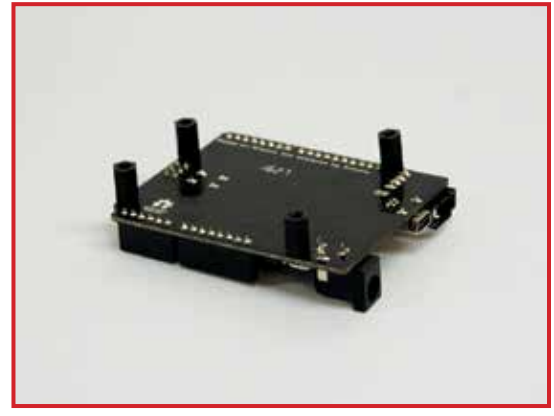
TANK-01

Ⓐ ALKEY30

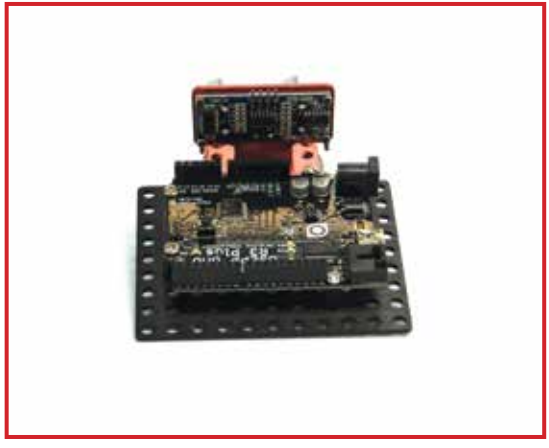


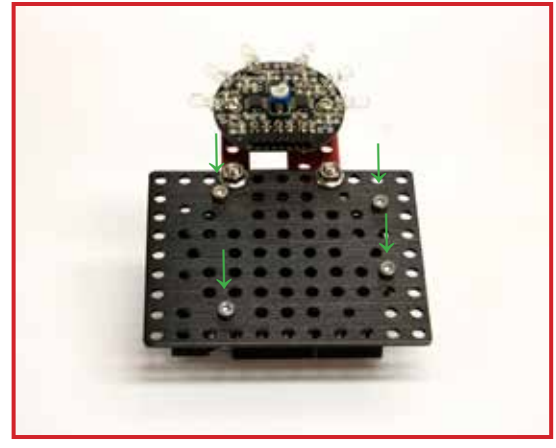
7





8

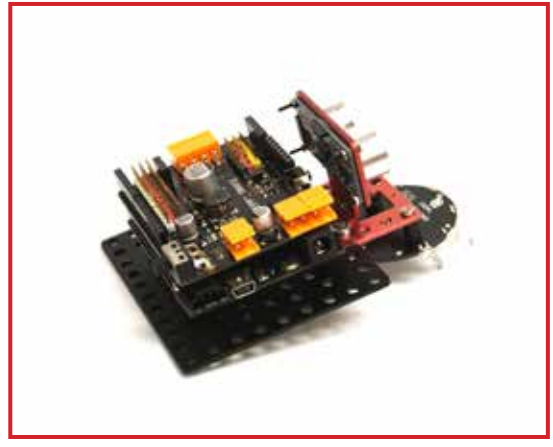




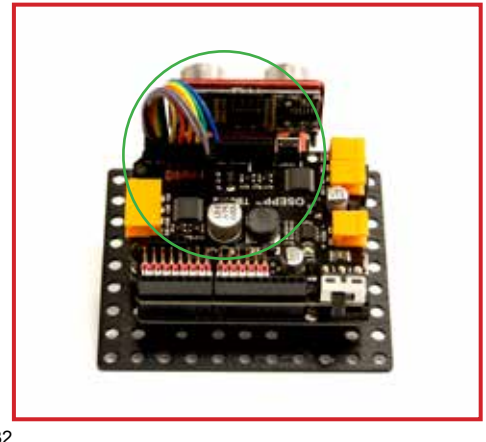
9

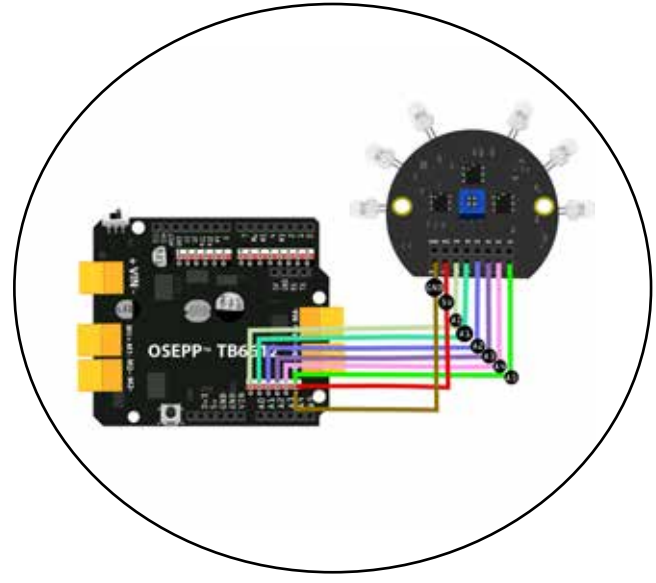
TBSHD-01

1x

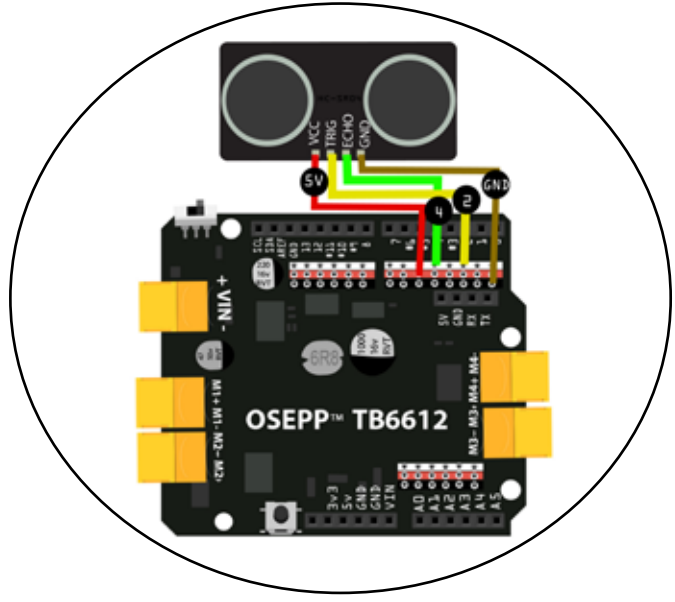


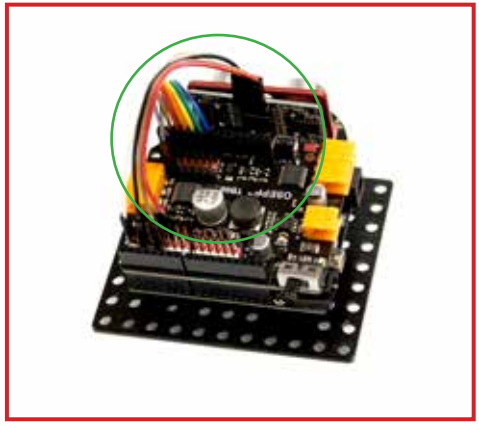
10



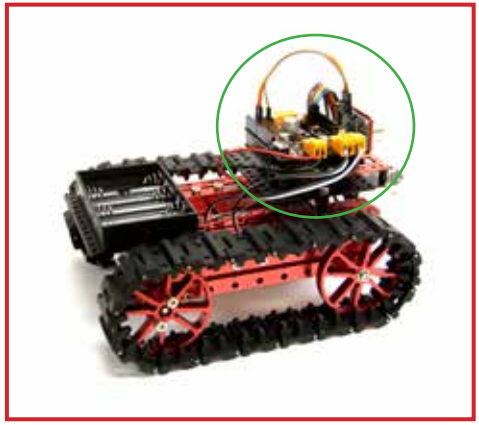


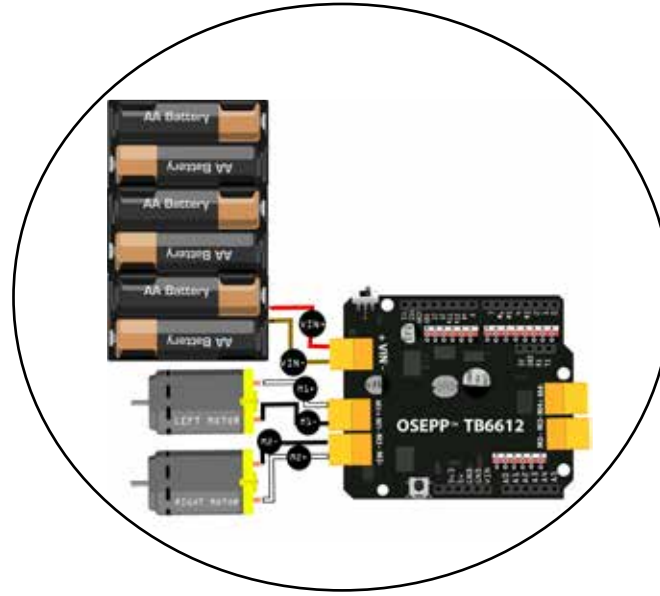
11



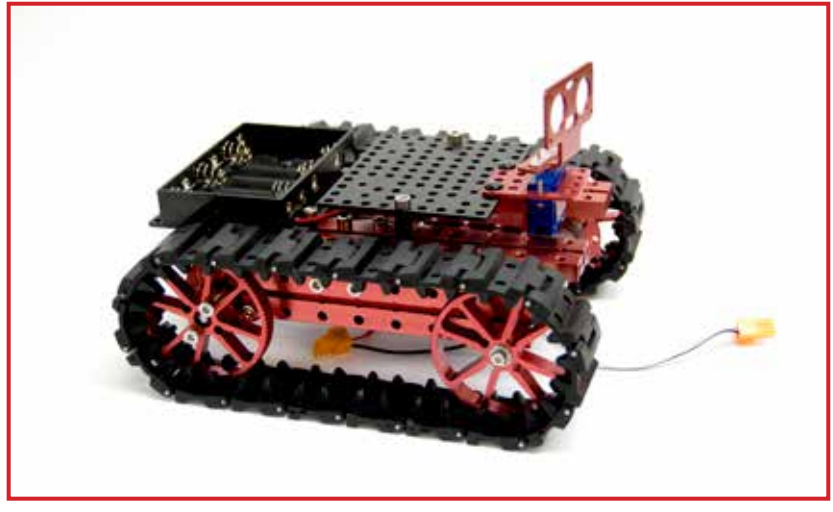


12

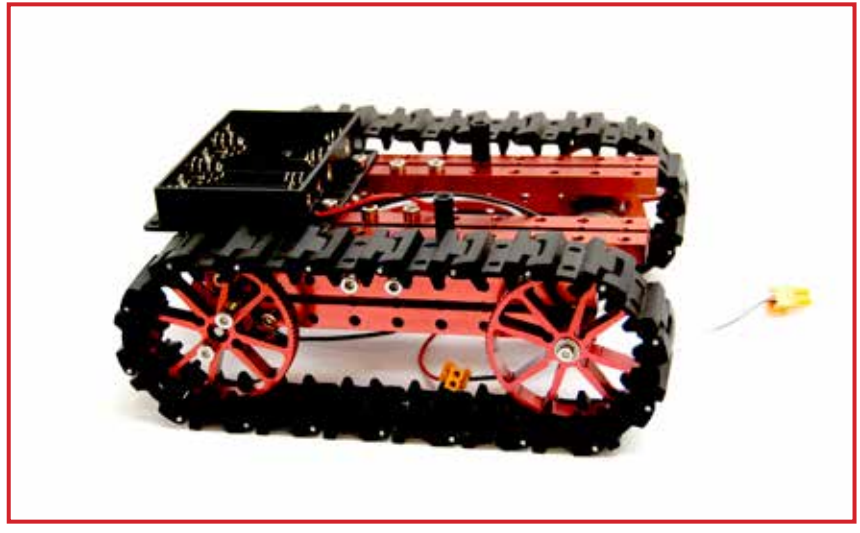




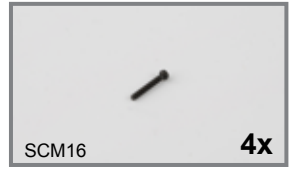
1 TANK Line Following with Obstacle Detection

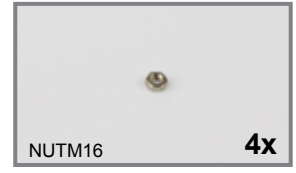


2

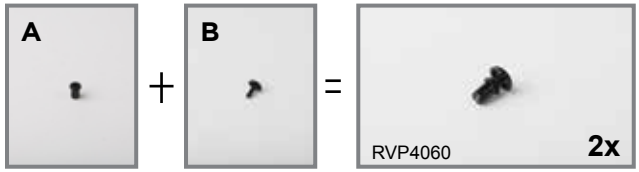


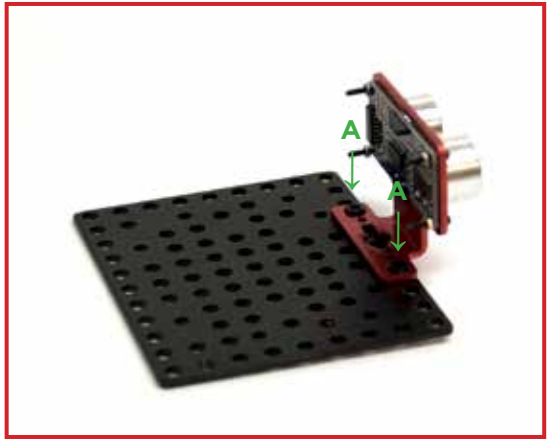
3

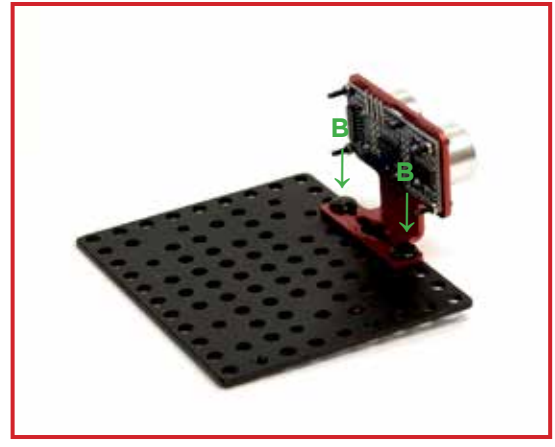




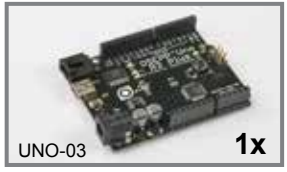
4







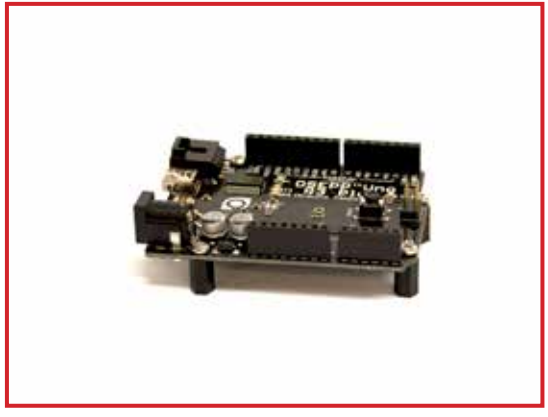
5

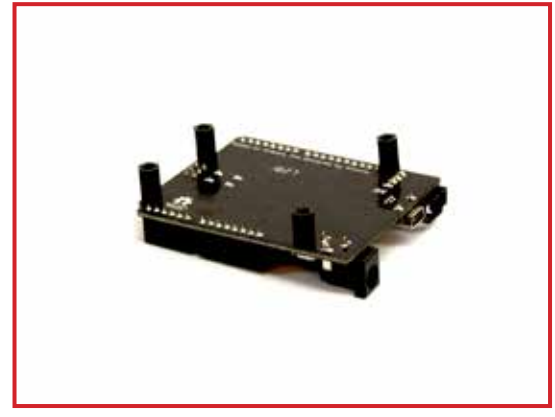

UNO-03 **1x**

STPM3X10 **4x**

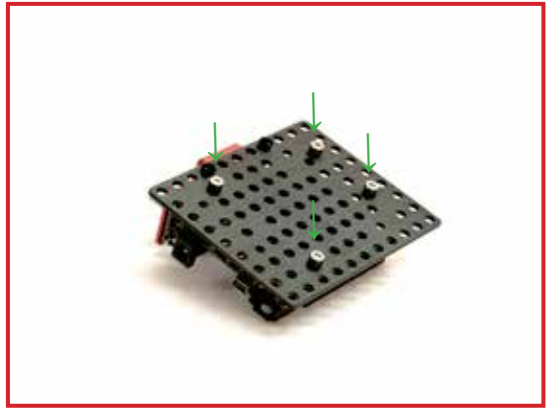
SCM3X6 **4x**

SCDR-001





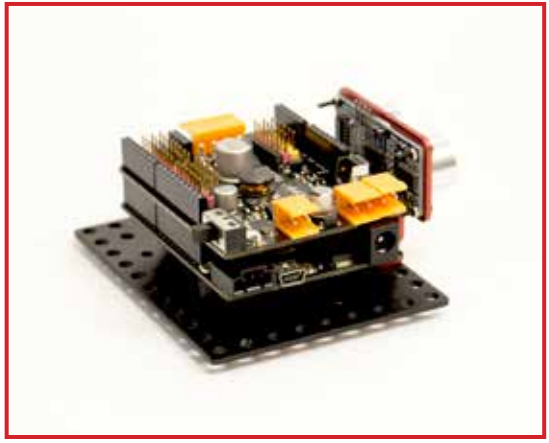
6

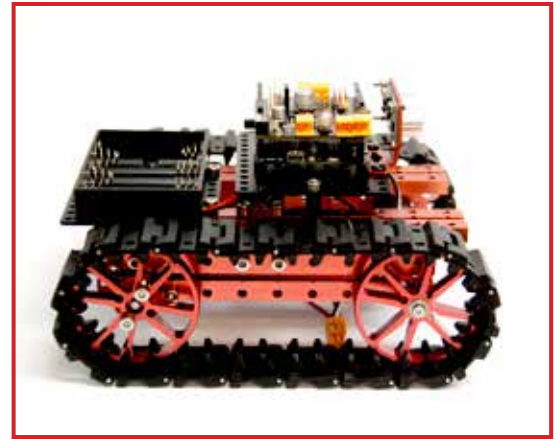


7

TBSHD-01

1x





8

STPM3X406 **2x**

NUTM3 **2x**

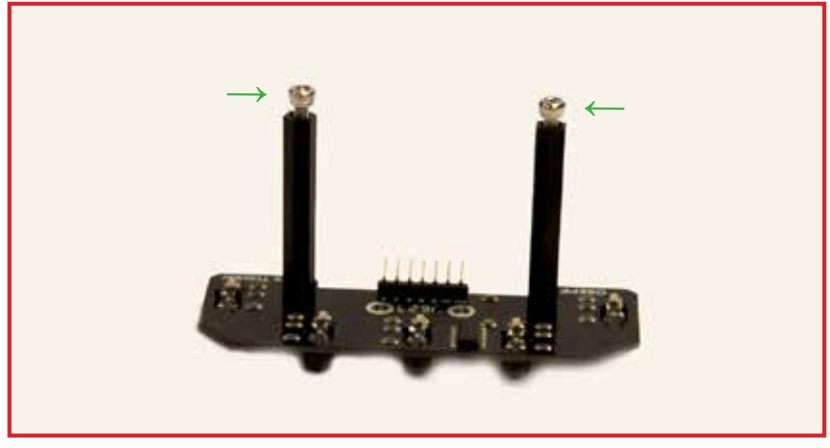
LINE-05 **1x**

WRM4M3 **1x**

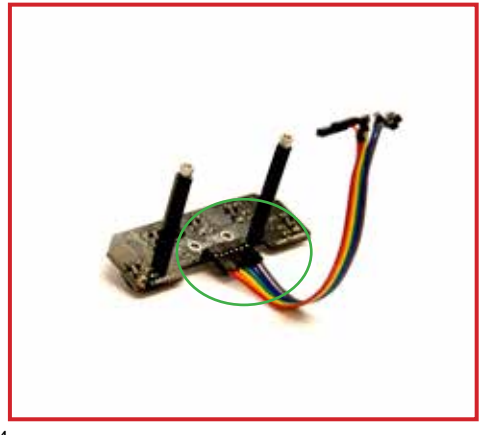
9

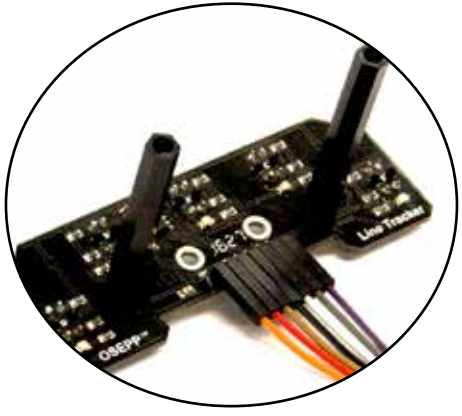
TANK-01

HEXM3X6 **2x**

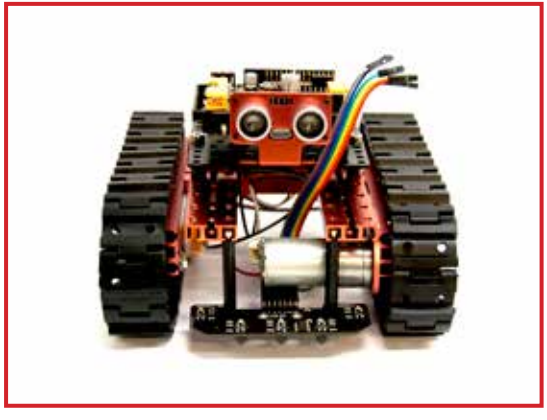


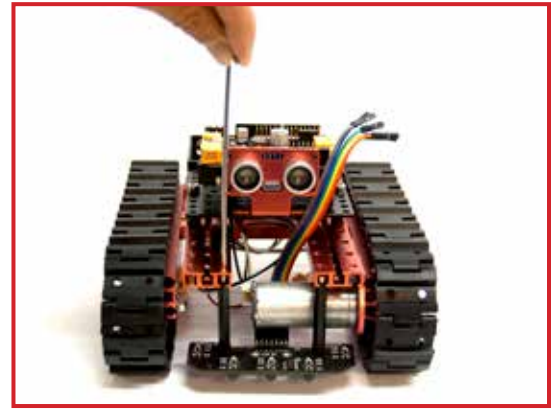
10



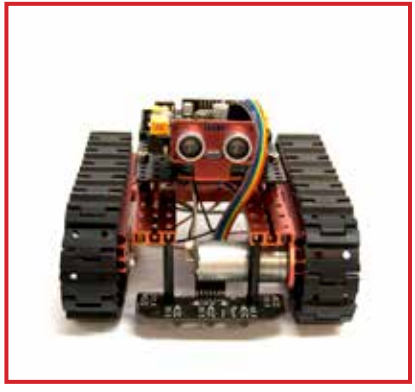


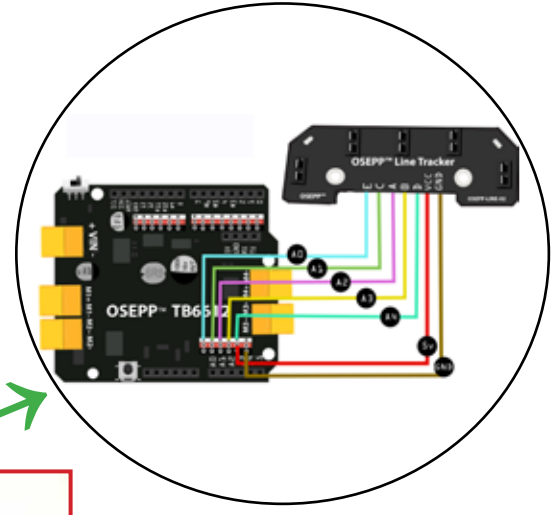
11

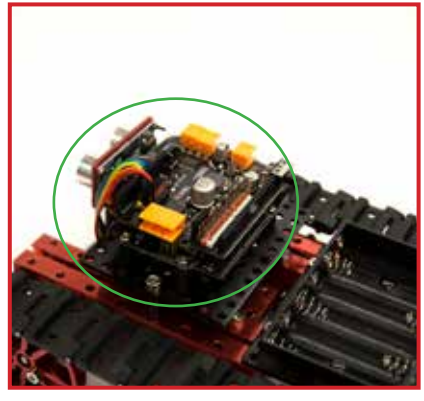




12

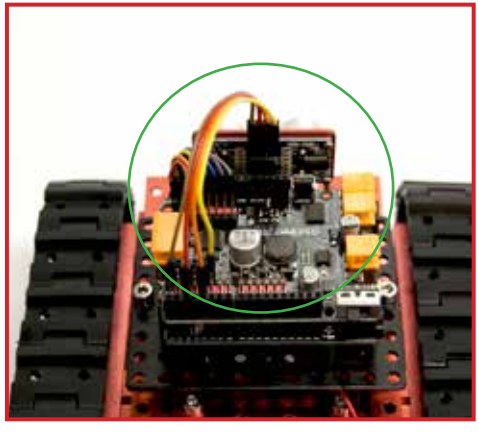


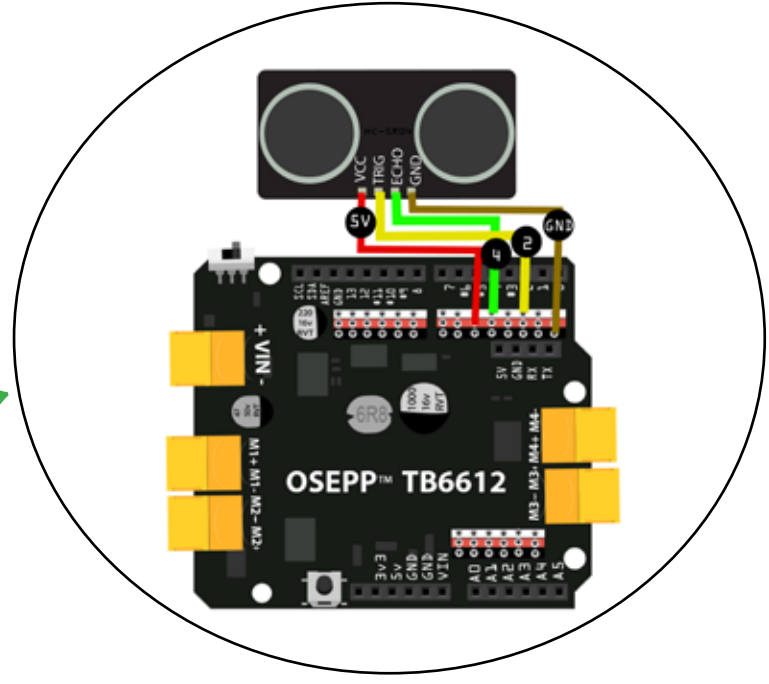




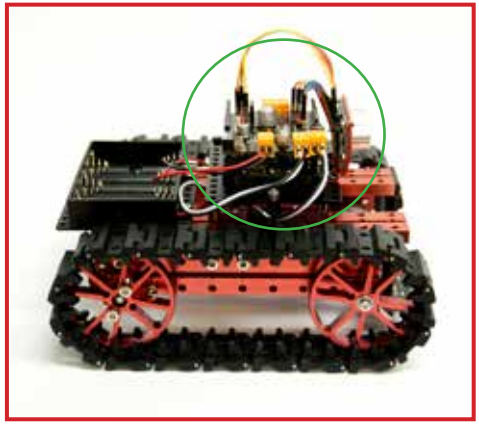
13

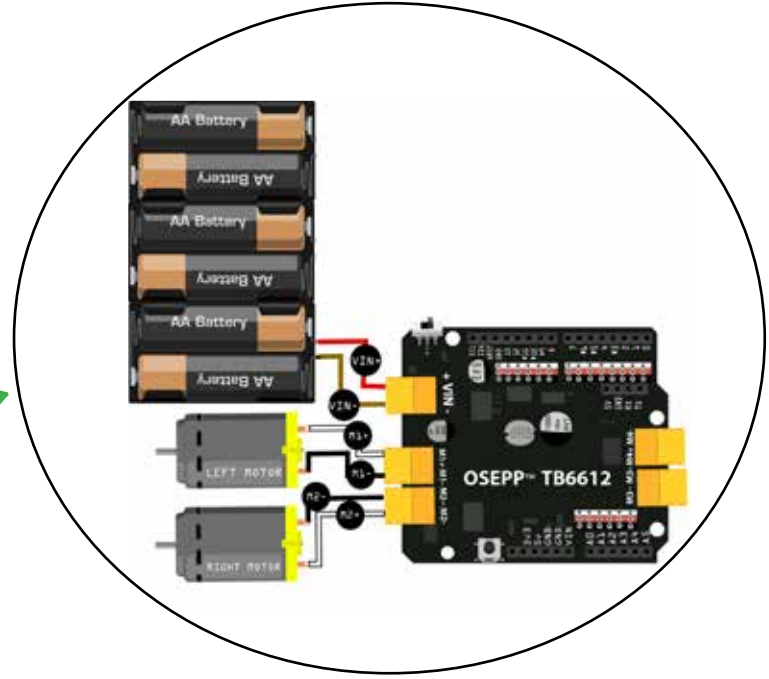
RIB10CM
4x



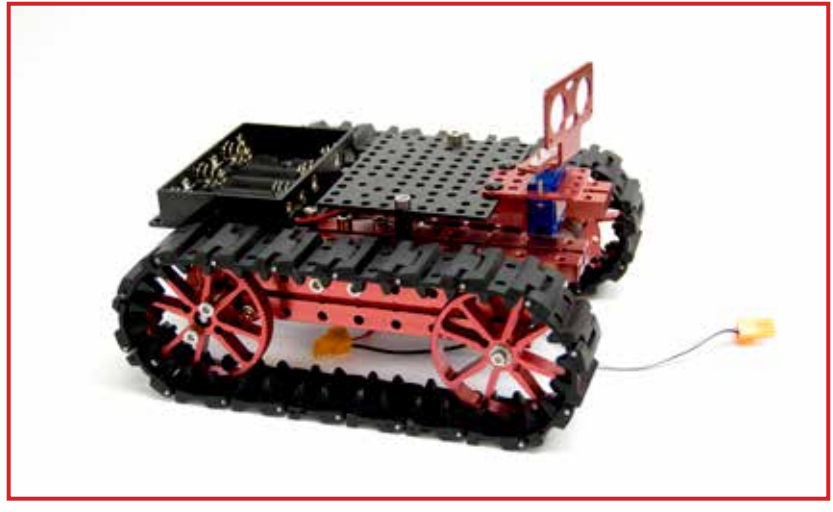

VCC
TRIG
ECHO
GND
5V
GND
4
2
+ VIN -
OSEPP™ TB6612
M1+ M1- M2- M2+
M3- M3+ M4+ M4-
3v3
5v
GND
GND
VIN
A0
A1
A2
A3
A4
A5

14

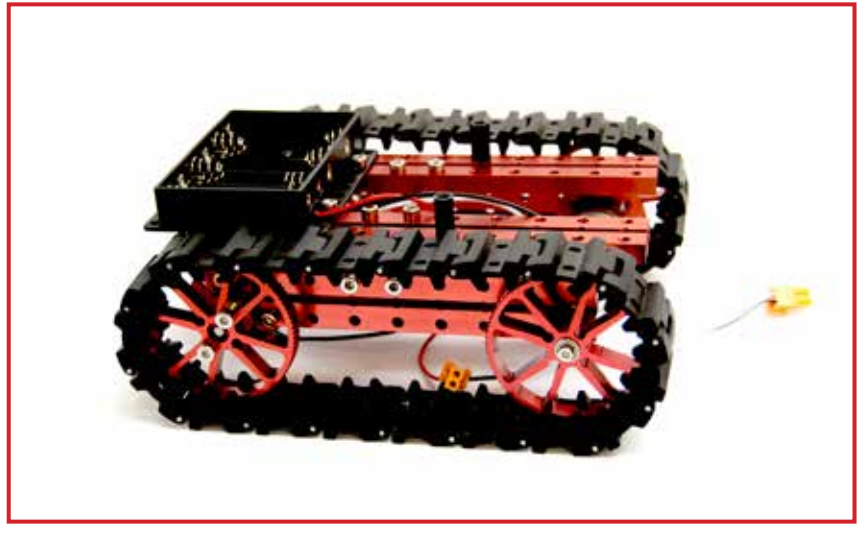



AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
VIN+
VIN-
M1+
M1-
M2-
M2+
LEFT MOTOR
RIGHT MOTOR
OSEPP™ TB6612
+ VIN -

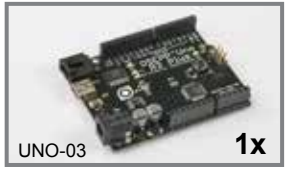
1 TANK Line Maze Discovery



2



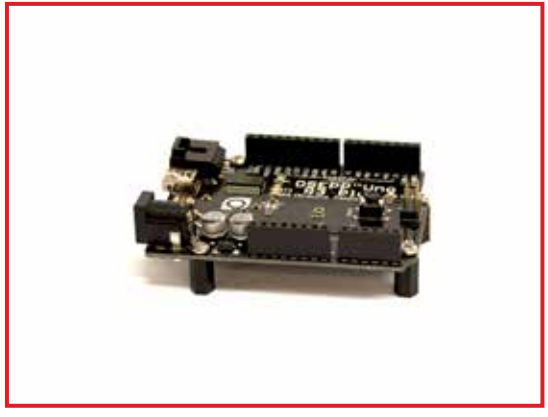
3

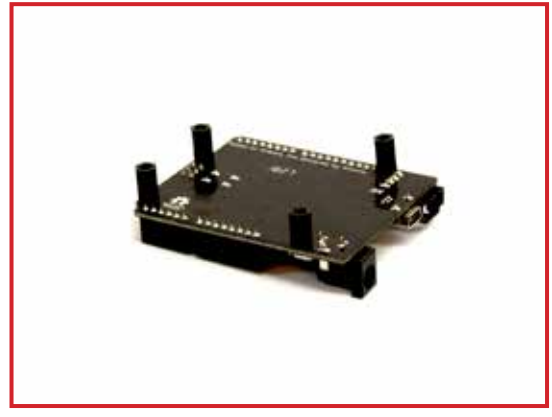

UNO-03 **1x**

STPM3X10 **4x**

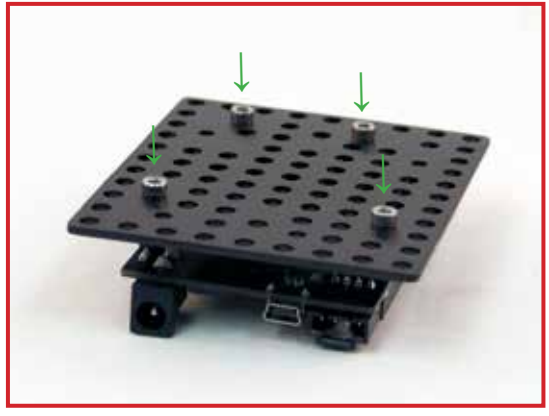
SCM3X6 **4x**

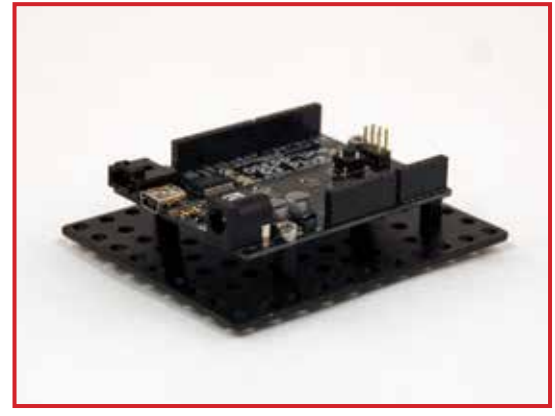
SCDR-001





4

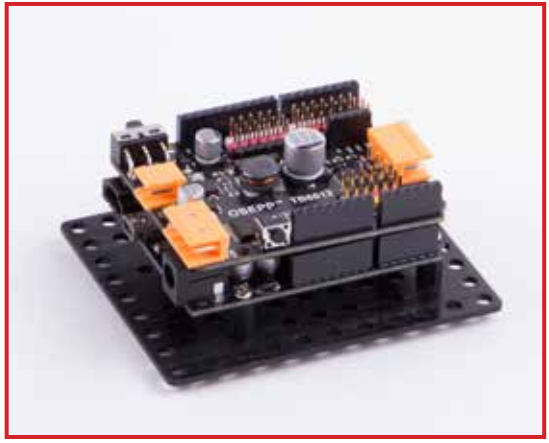


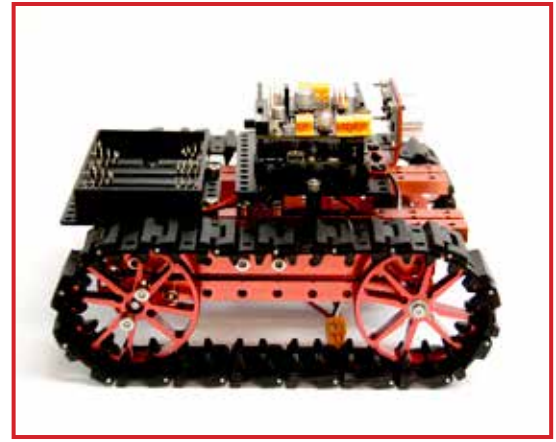


5

TBSHD-01

1x





6

STPM3X406 **2x**

NUTM3 **2x**

LINE-05 **1x**

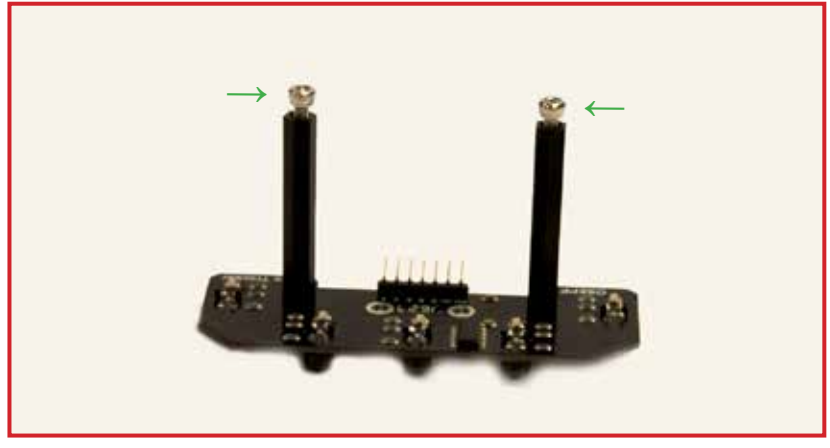
TANK-01

WRM4M3 **1x**

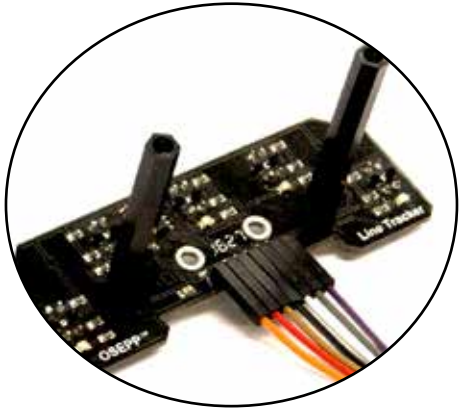
7

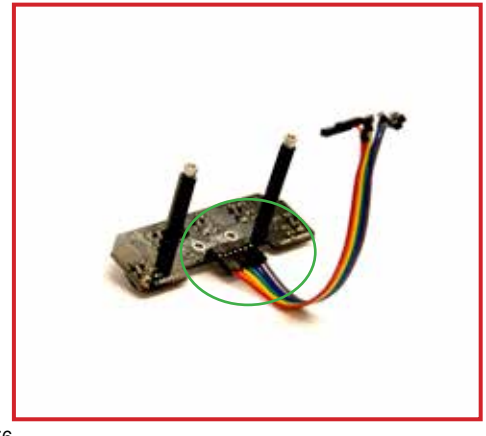
TANK-01

HEXM3X6 **2x**



8

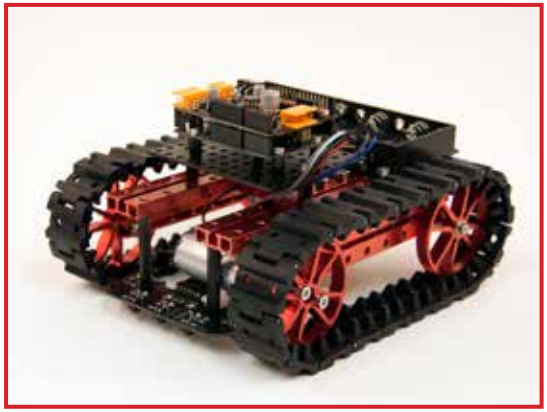


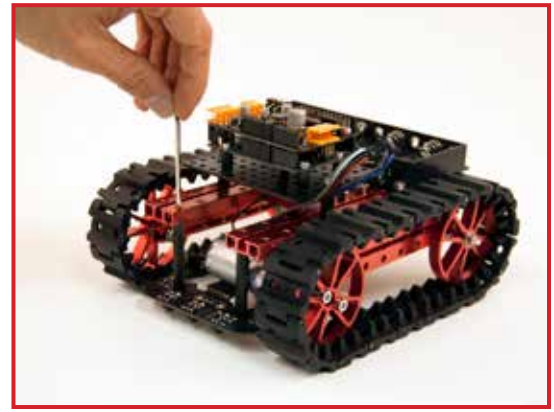


9

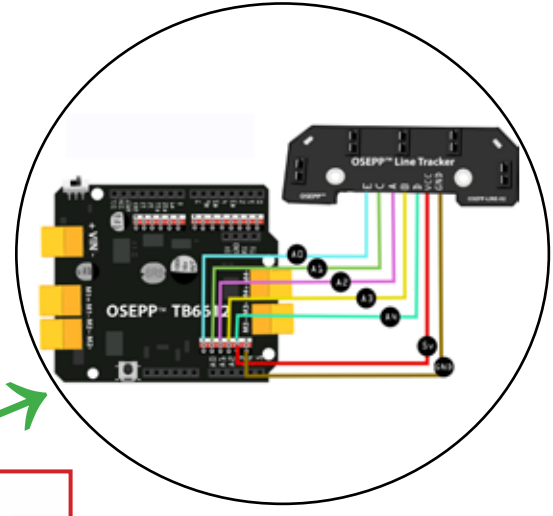
TANK-01

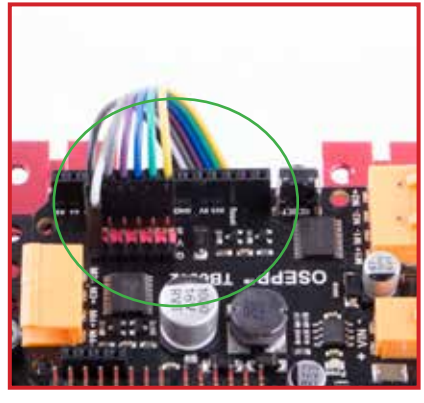
Ⓑ ALKEY25



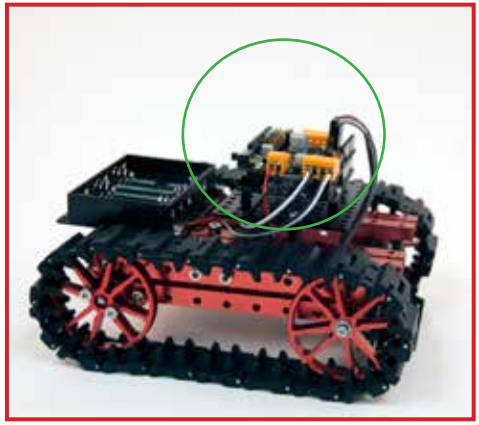


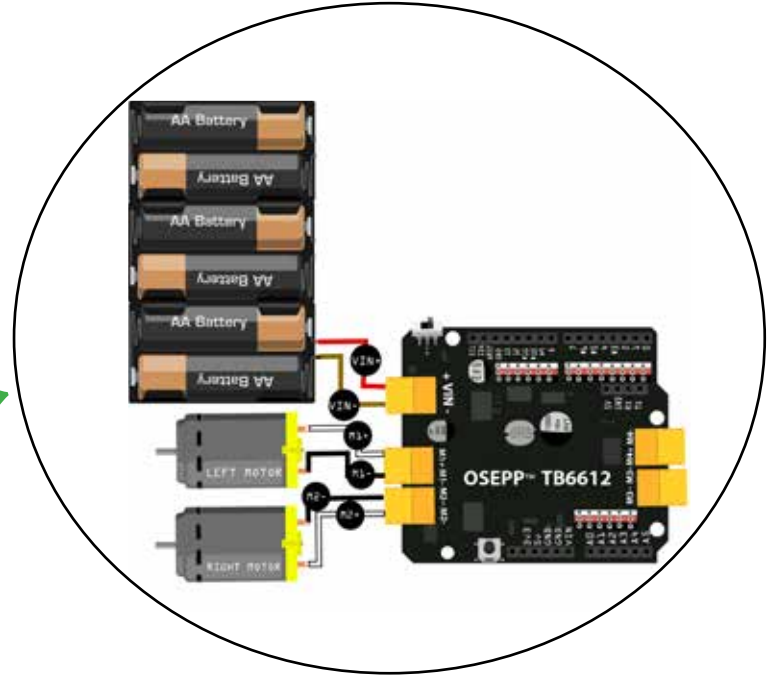
10



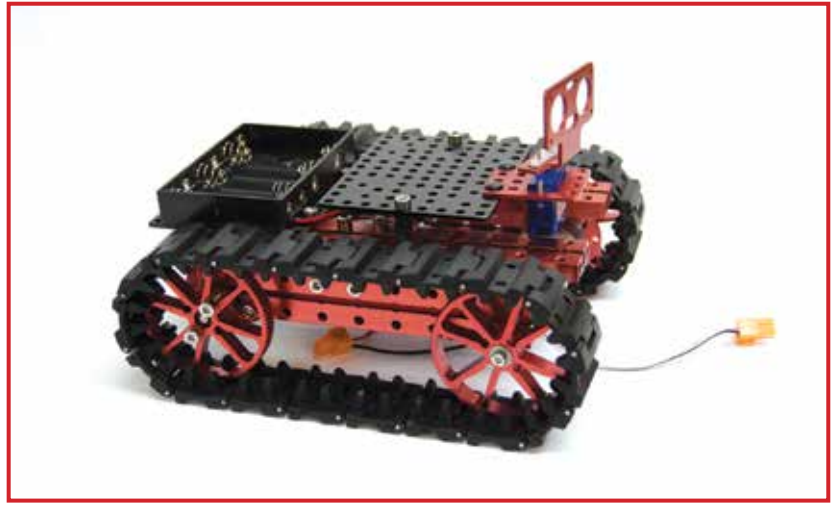


14

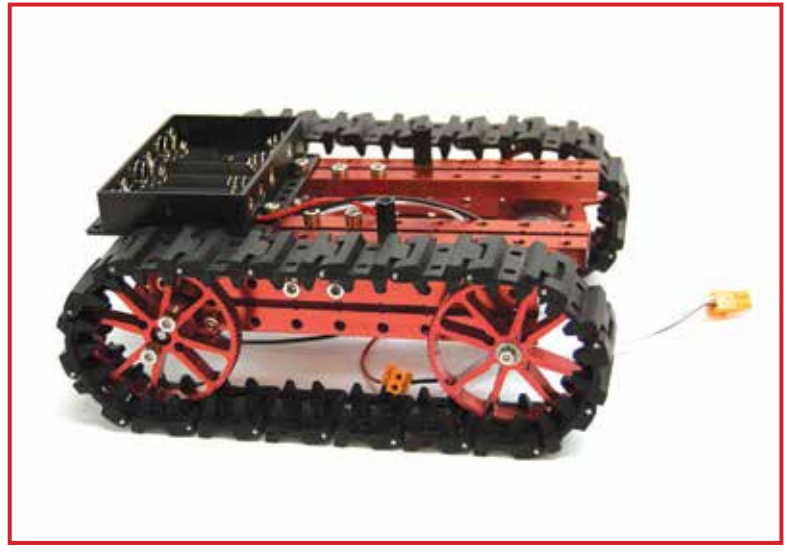



AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
VIN+
VIN-
M1+
M1-
M2-
M2+
LEFT MOTOR
RIGHT MOTOR
OSEPP™ TB6612

1 TANK Object Avoidance

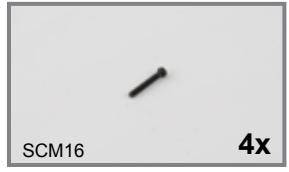


2



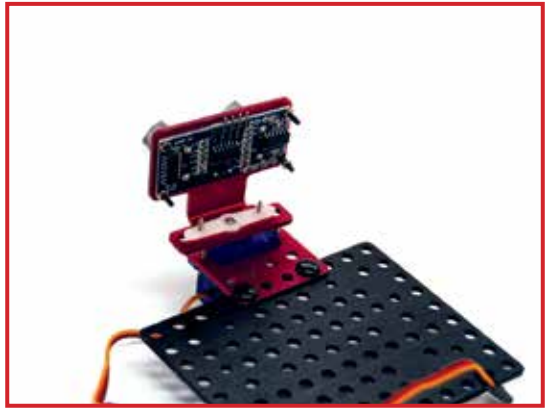
3

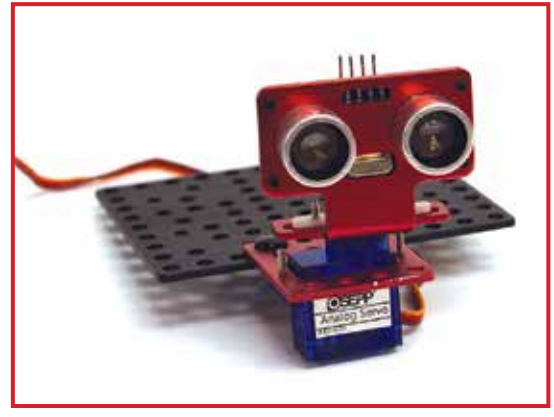
HC-SR04 **1x**


SCM16 **4x**

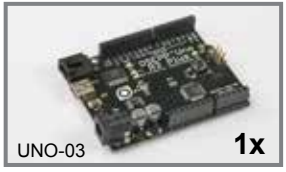
NUTM16 **4x**

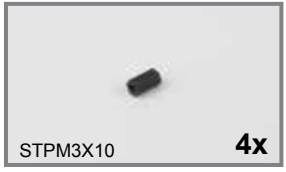
SCDR-001





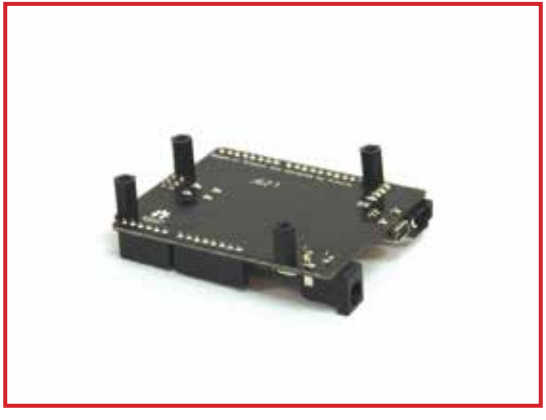
4

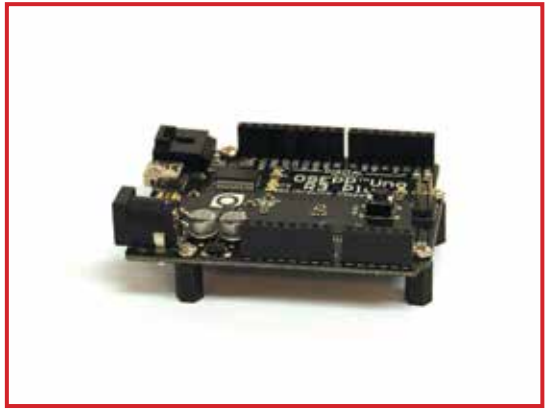

UNO-03 **1x**


STPM3X10 **4x**

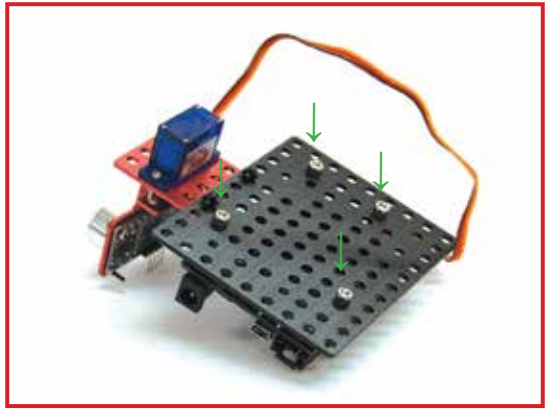
SCM3X6 **4x**

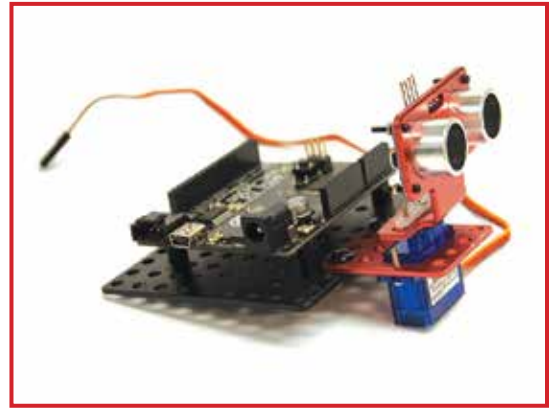
SCDR-001



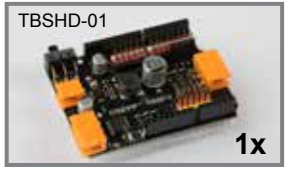


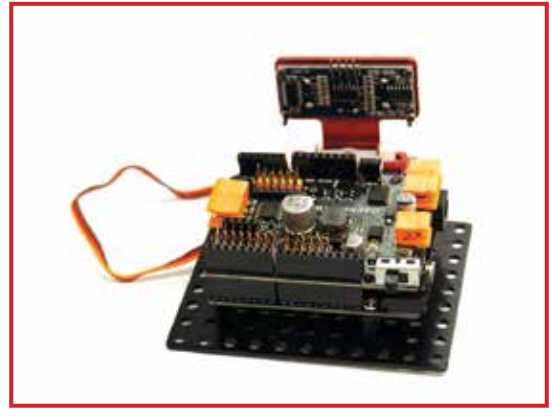
5



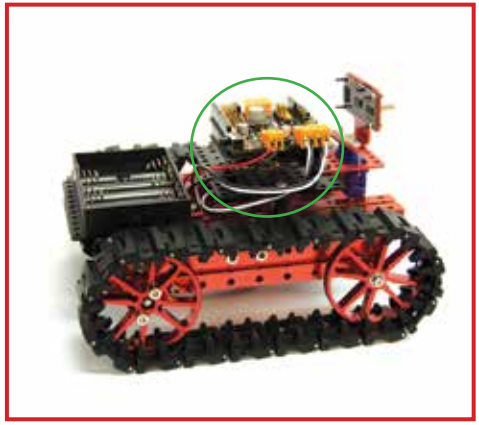


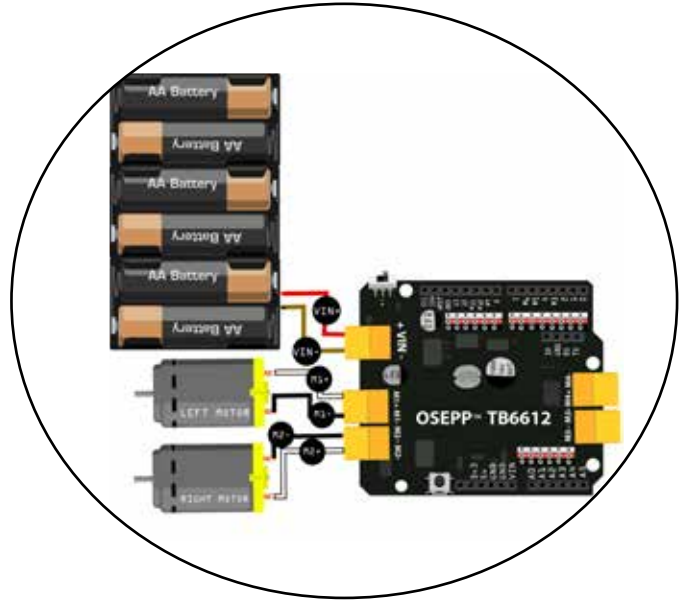
6



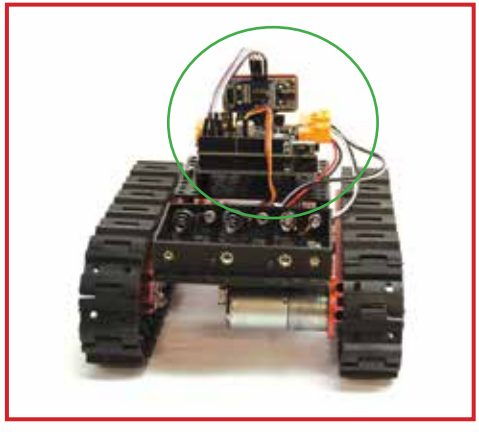


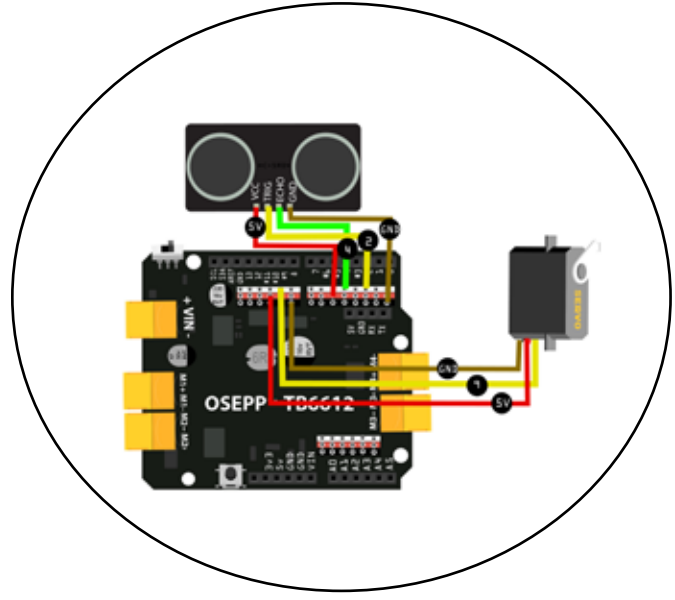
7




AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
LEFT MOTOR
RIGHT MOTOR
OSEPP™ TB6612

8





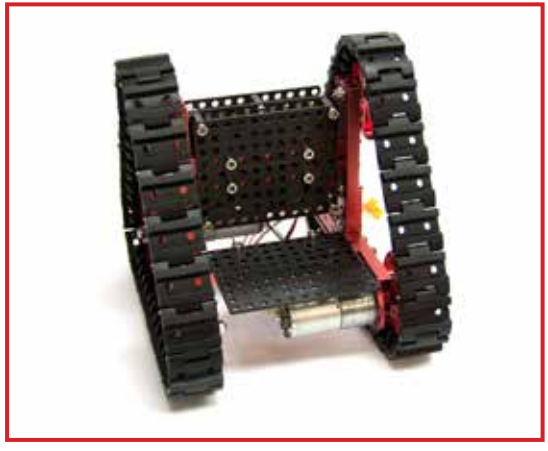
1 TRIANGULAR TANK

Bluetooth Control

2

TRITANK-01

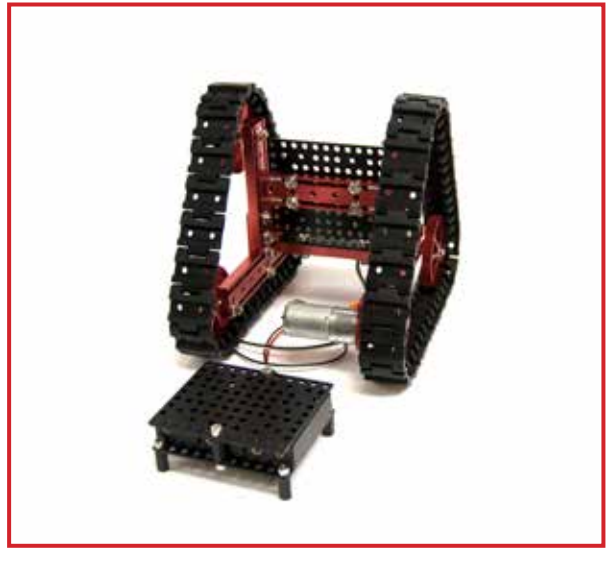
Ⓐ ALKEY30



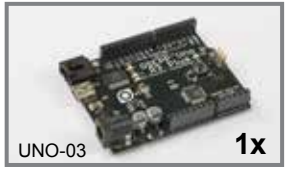
3

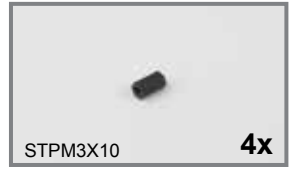
TRITANK-01

Ⓐ ALKEY30



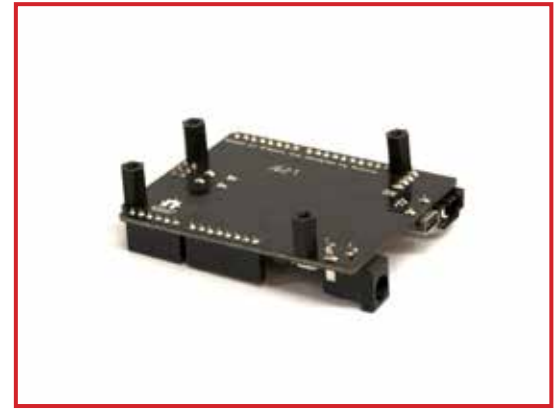
4


UNO-03 **1x**

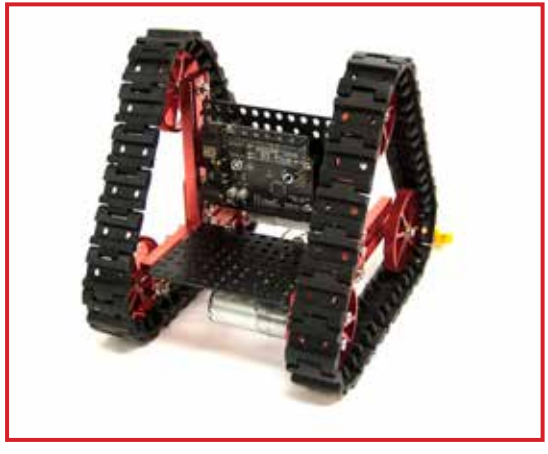

STPM3X10 **4x**

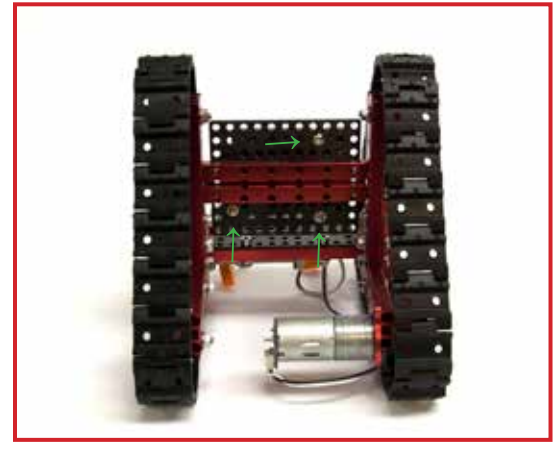
SCM3X6 **4x**

SCDR-001

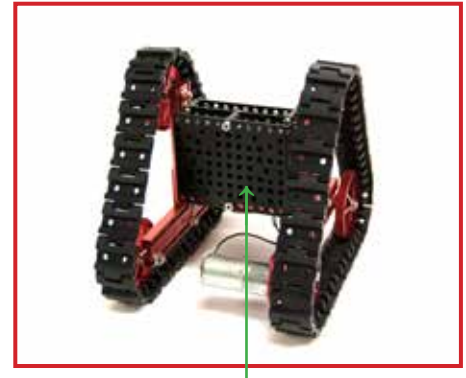


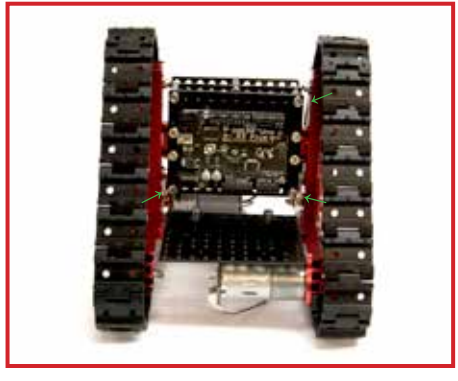
5

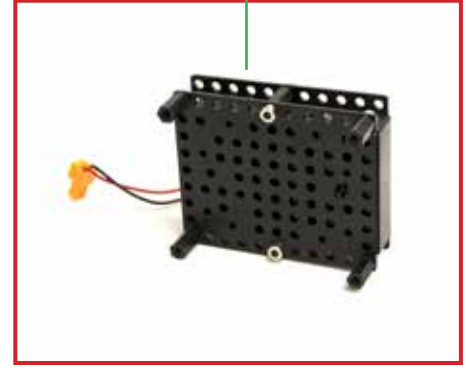




6



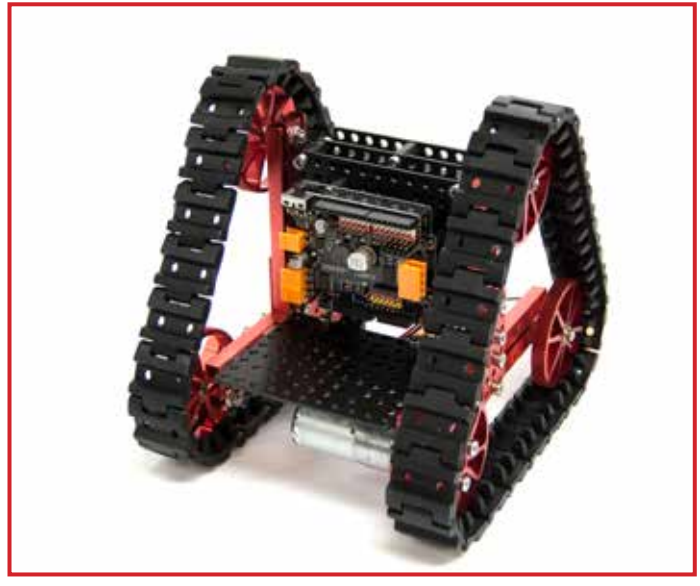




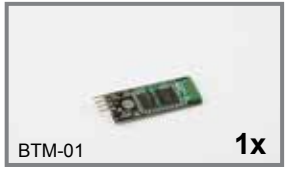
7

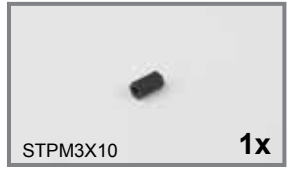
TBSHD-01

1x

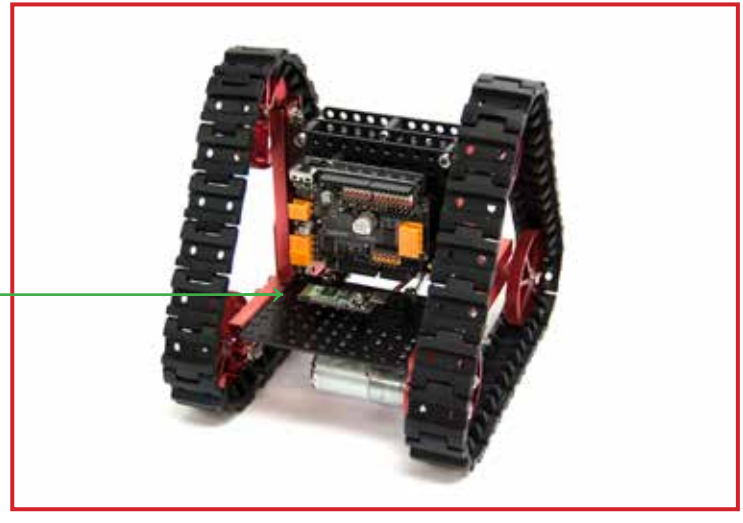


8

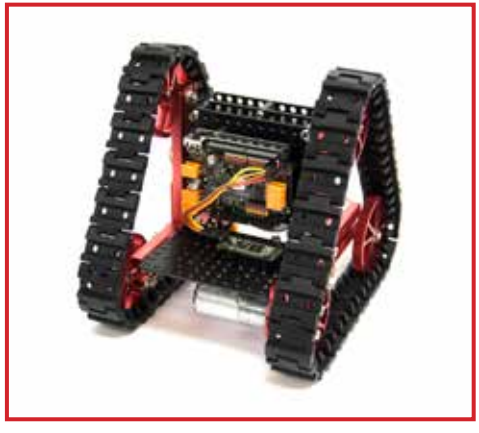


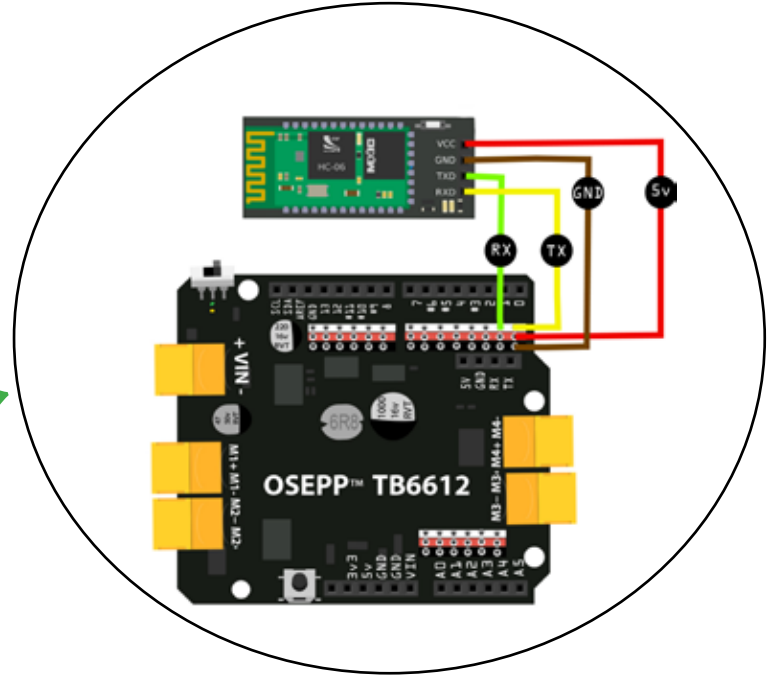


9

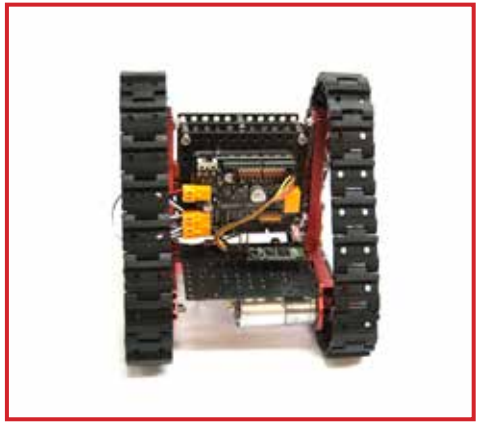


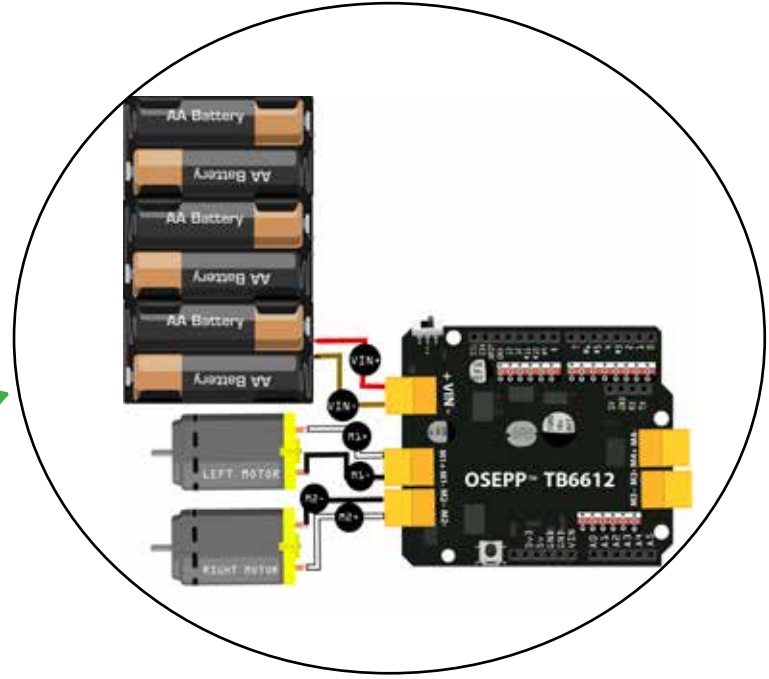
10





11




AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
VIN+
VIN-
M1+
M1-
M2-
M2+
LEFT MOTOR
RIGHT MOTOR
+ VIN -
OSEPP™ TB6612

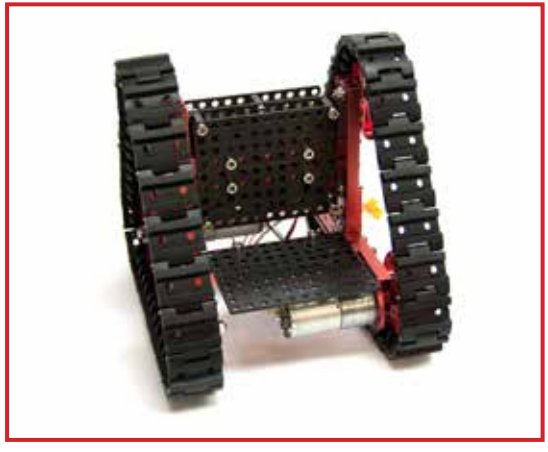
1 TRIANGULAR TANK

Light following with object avoidance

2

TRITANK-01

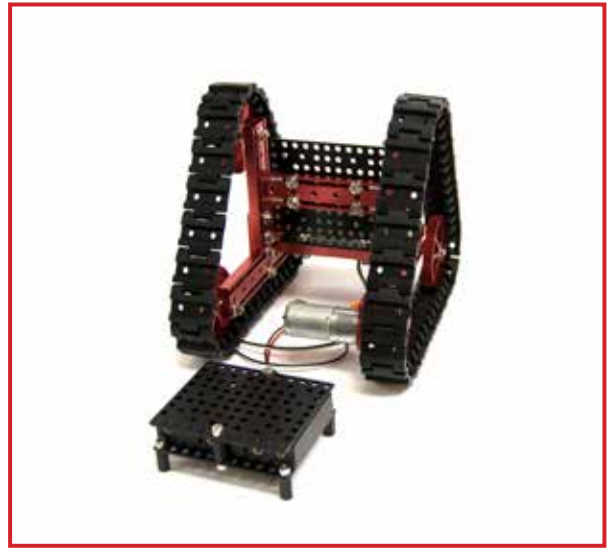
Ⓐ ALKEY30



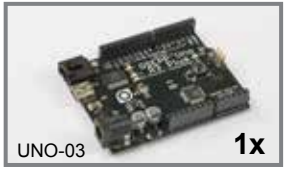
3

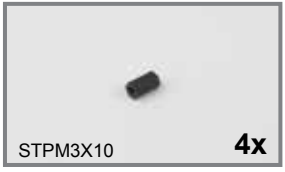
TRITANK-01

Ⓐ ALKEY30



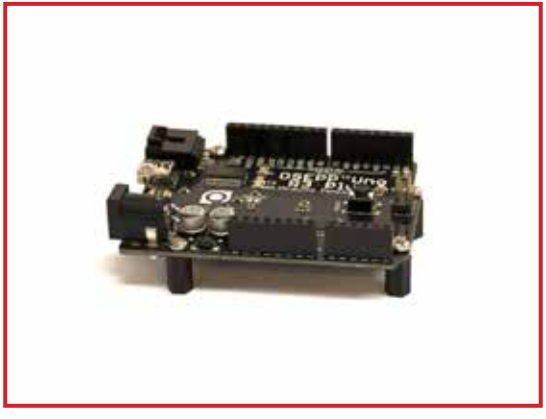
4

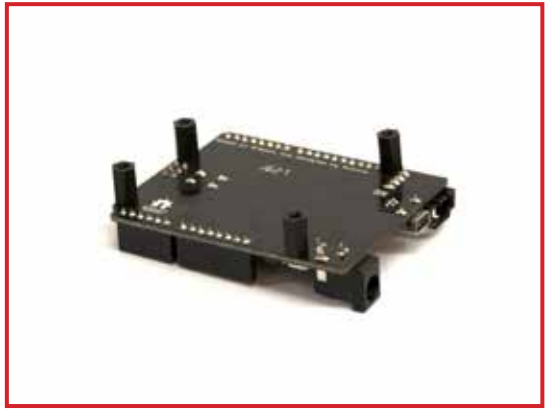

UNO-03 **1x**


STPM3X10 **4x**

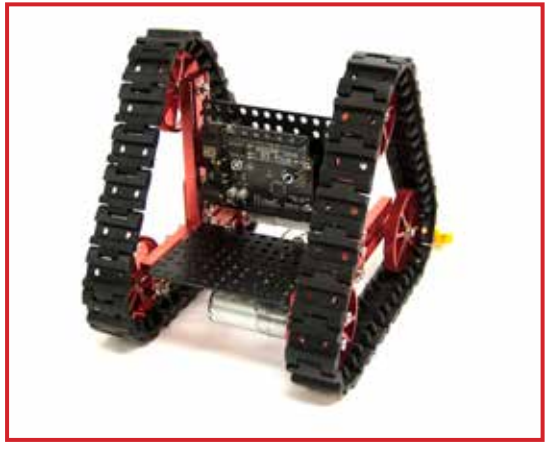
SCM3X6 **4x**

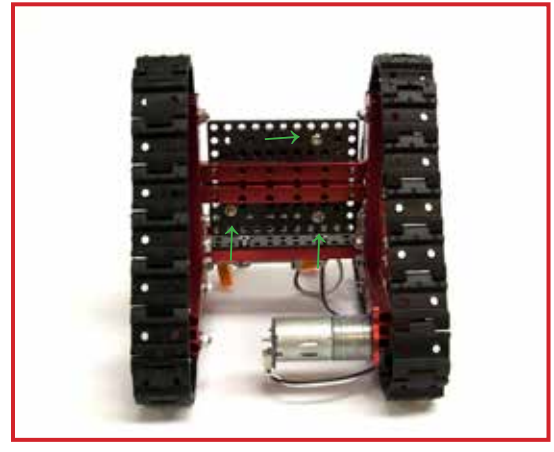
SCDR-001



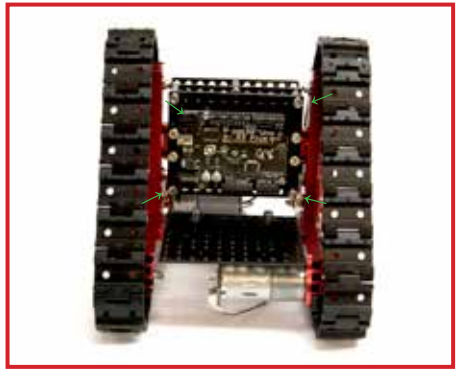


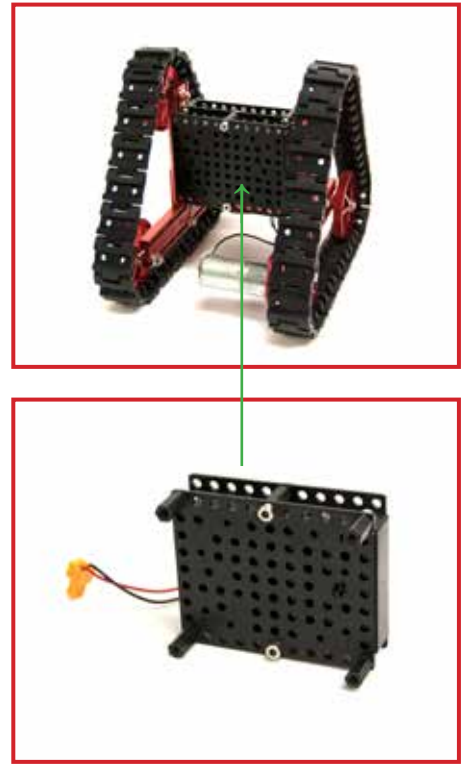
5





6

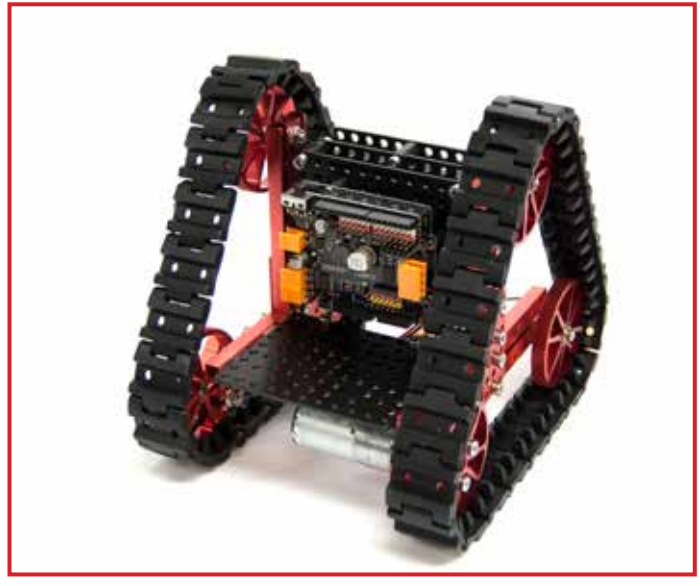




7

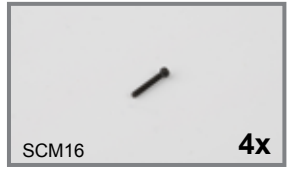
TBSHD-01

1x



8

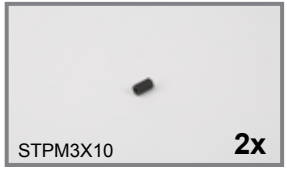
HC-SR04 **1x**


SCM16 **4x**

NUTM16 **4x**

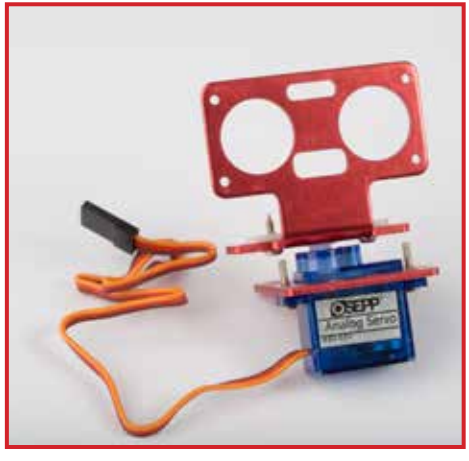
SCDR-001

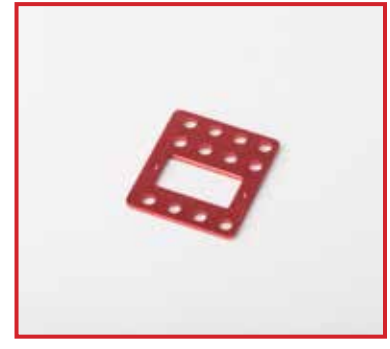
9



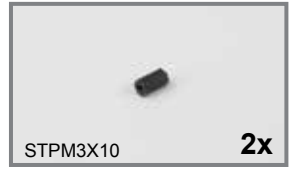
10

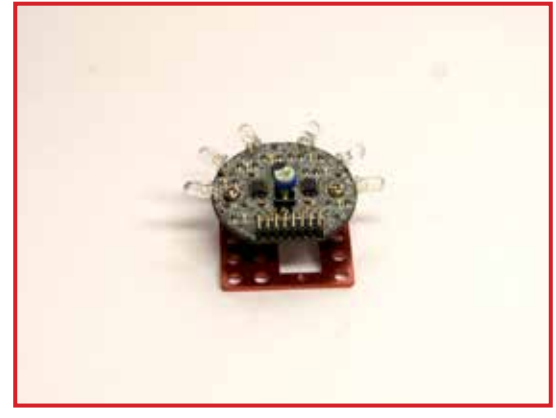
SCDR-001



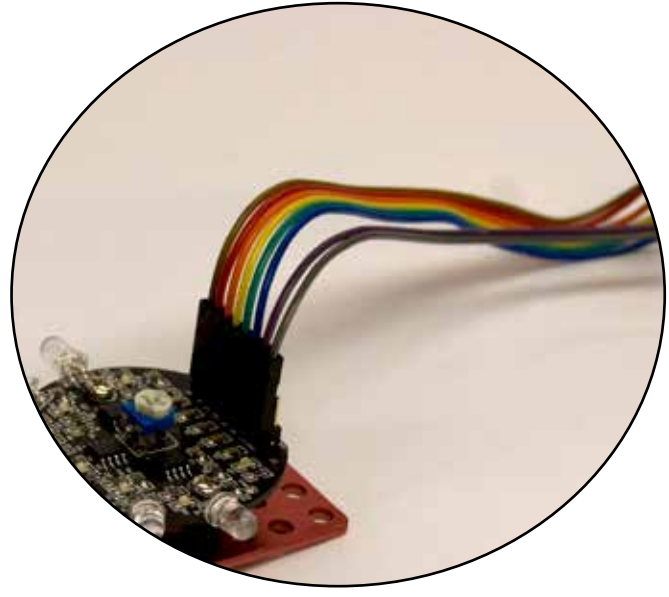


11

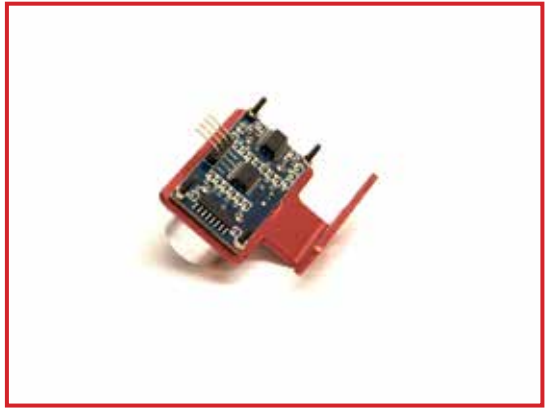




12



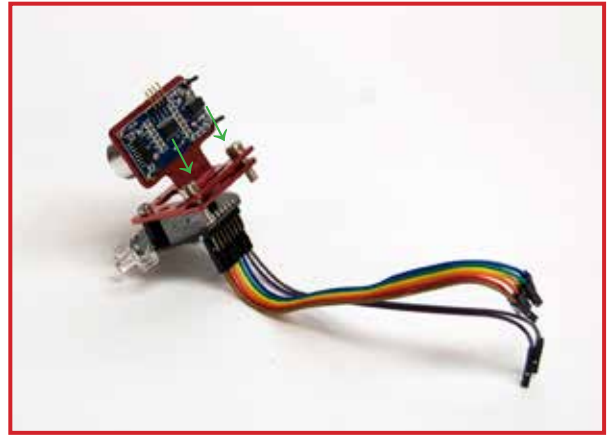
13



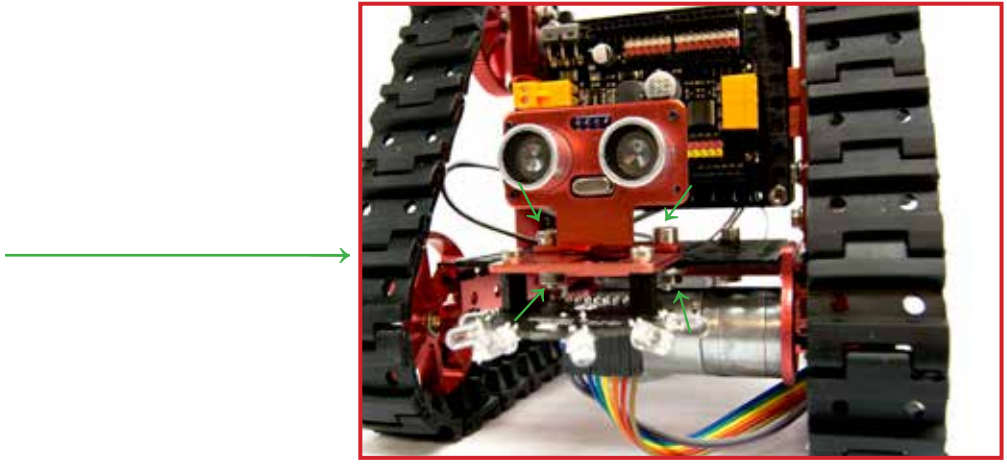
14

TRITANK-01

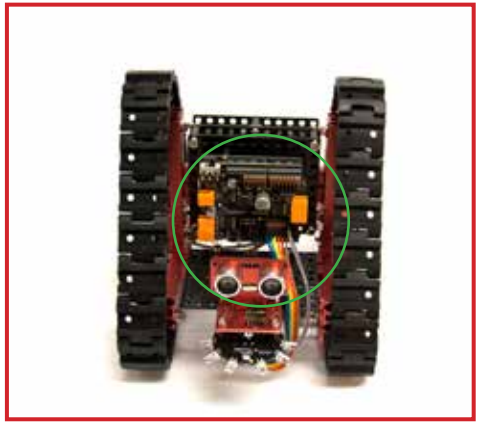
HEXM4X12 **2x**

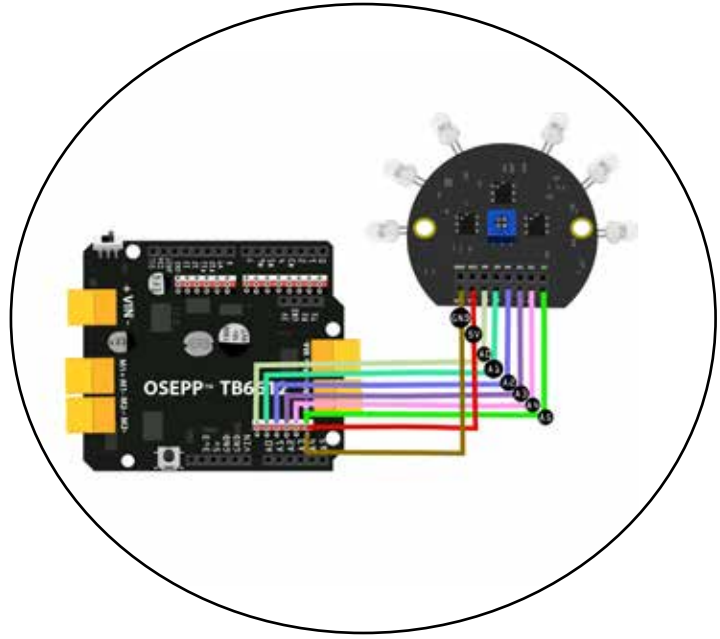


15

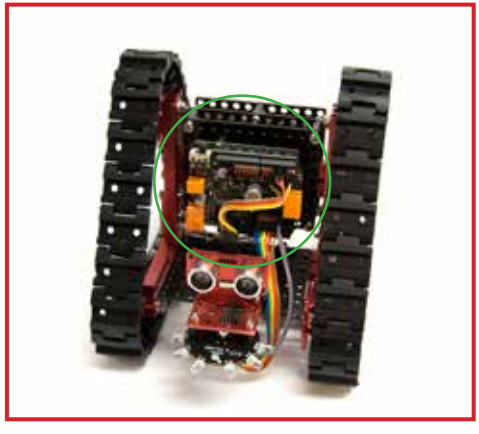


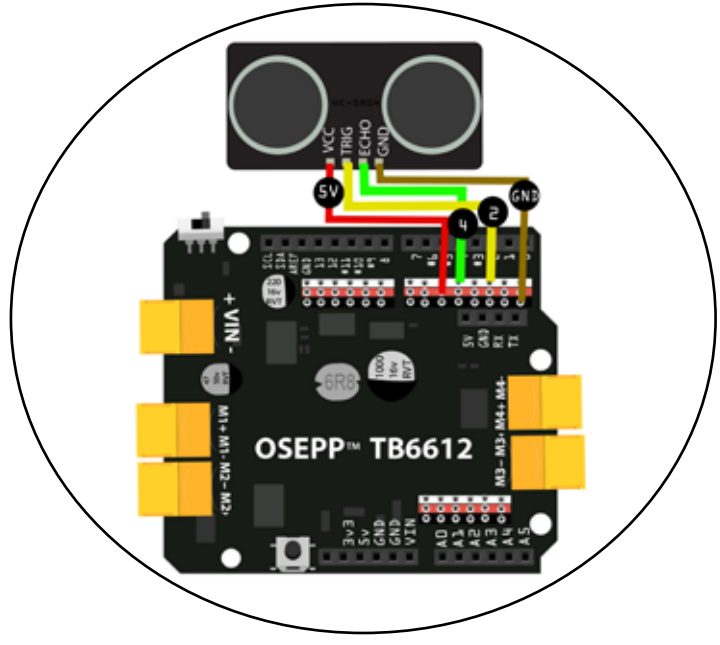
16



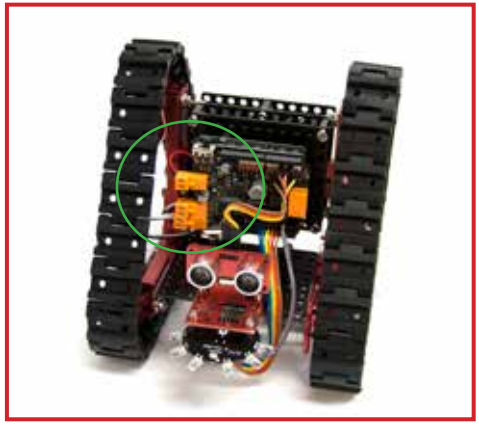


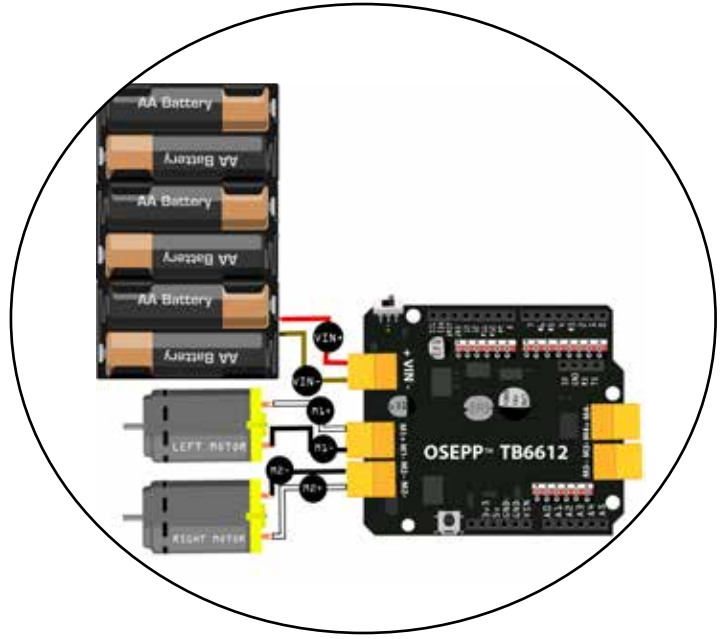
17





18

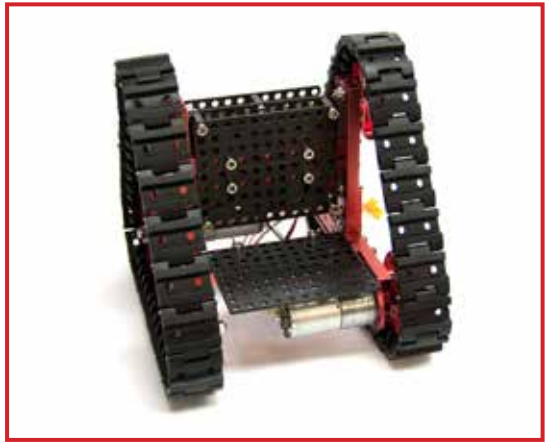


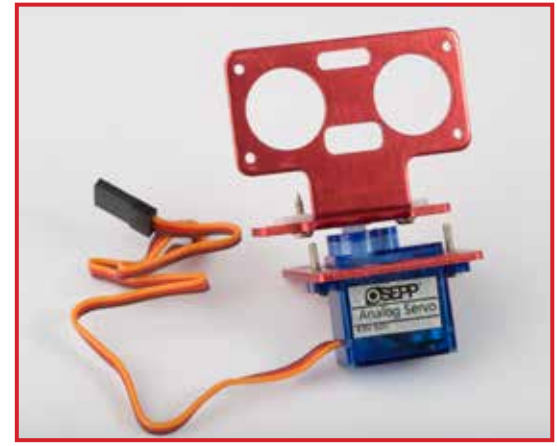

AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
LEFT motor
RIGHT motor
OSEPP™ TB6612

1 TRIANGULAR TANK

Line Following with Obstacle Detection

2

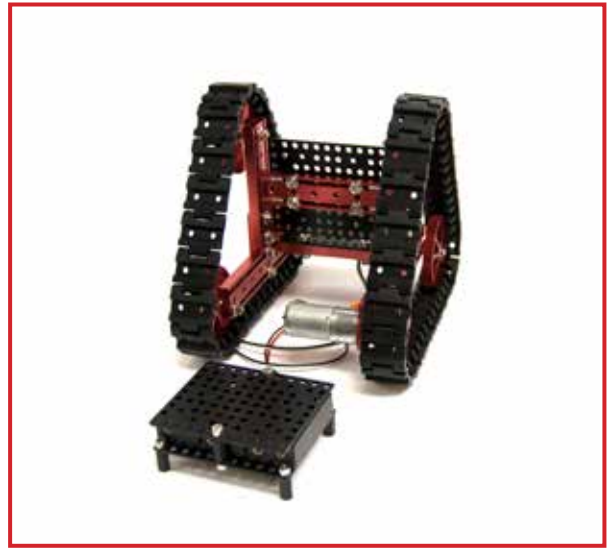




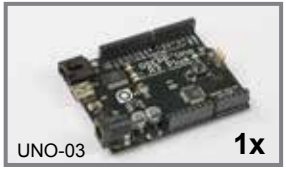
3

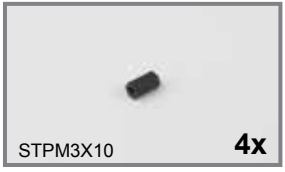
TRITANK-01

Ⓐ ALKEY30



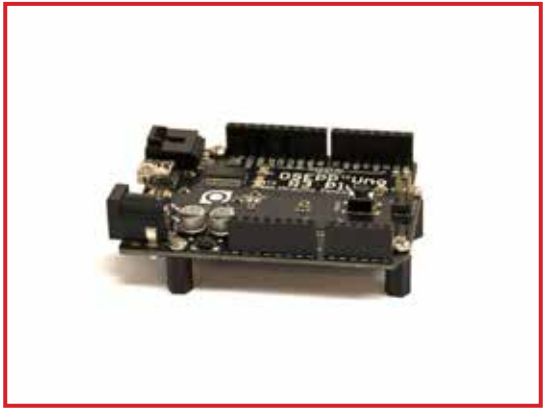
4

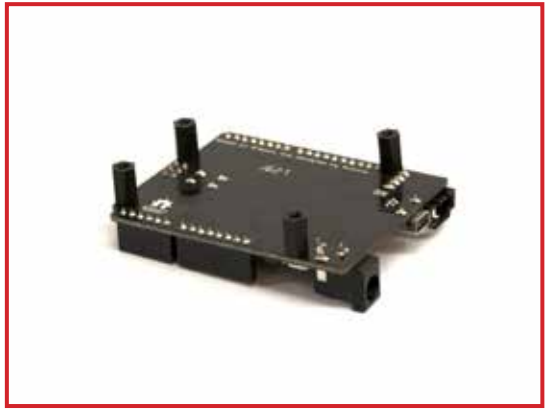

UNO-03 **1x**


STPM3X10 **4x**

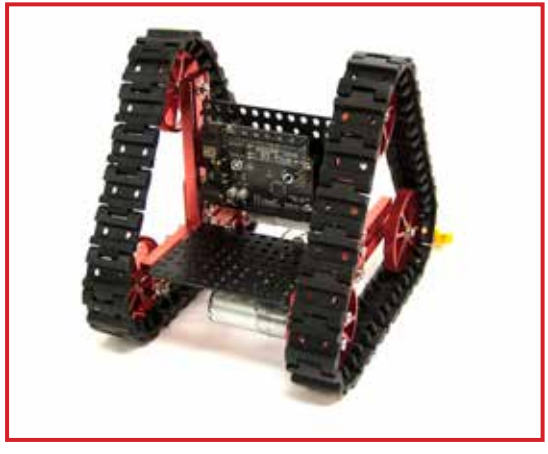
SCM3X6 **4x**

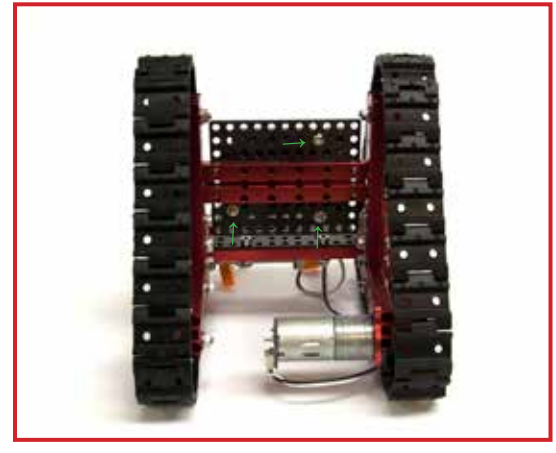
SCDR-001



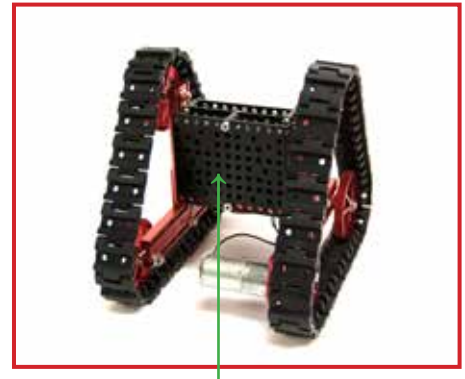


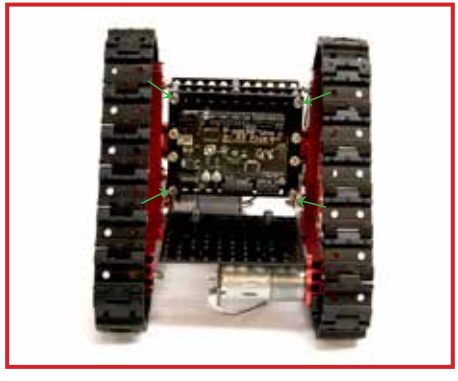
5

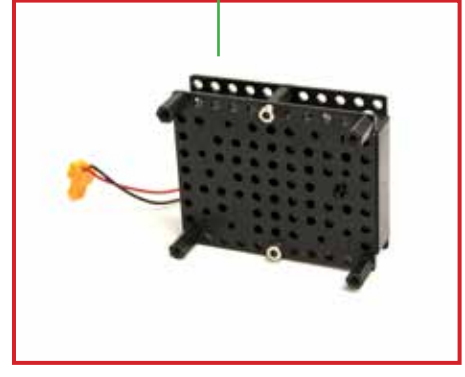




6



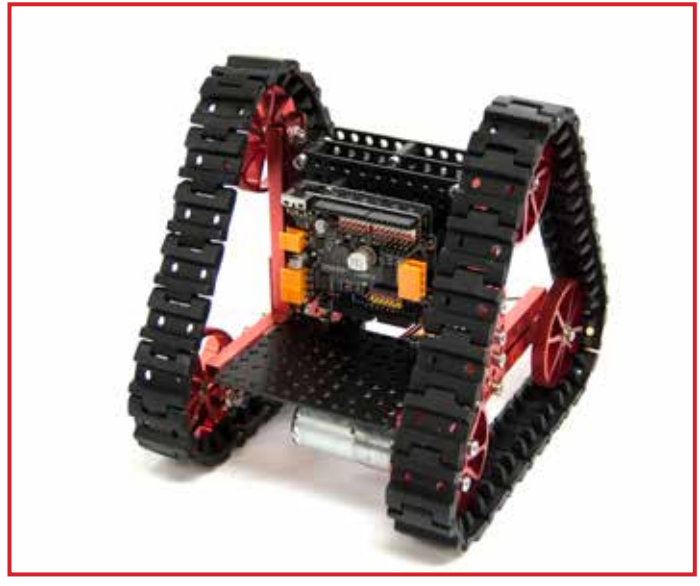




7

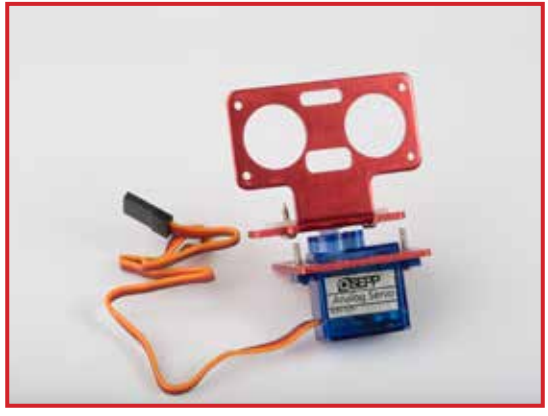
TBSHD-01

1x

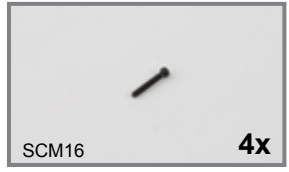


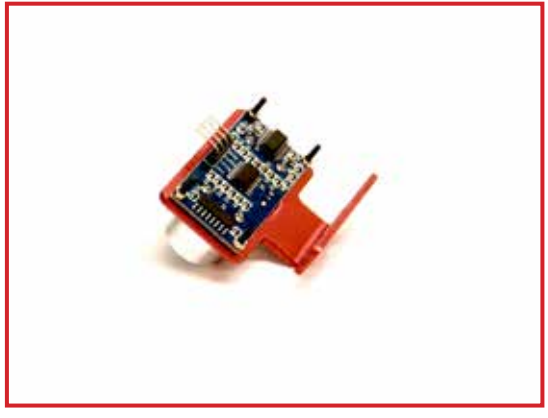
8

SCDR-001

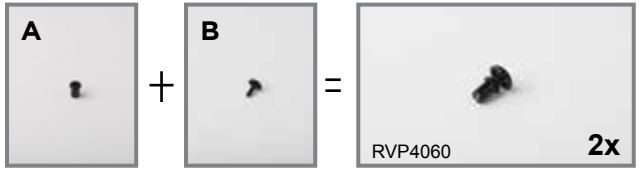


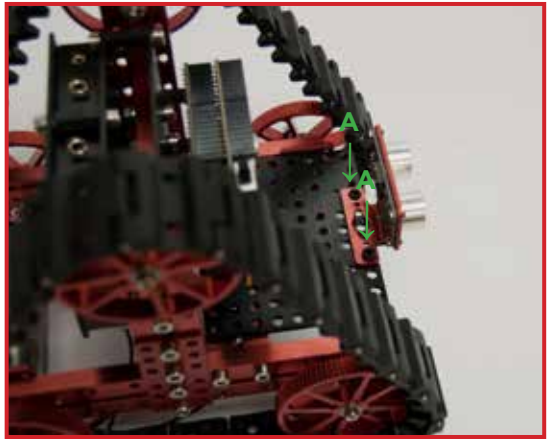
9

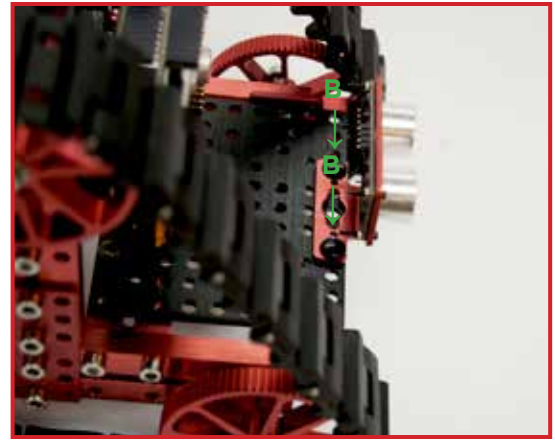




10

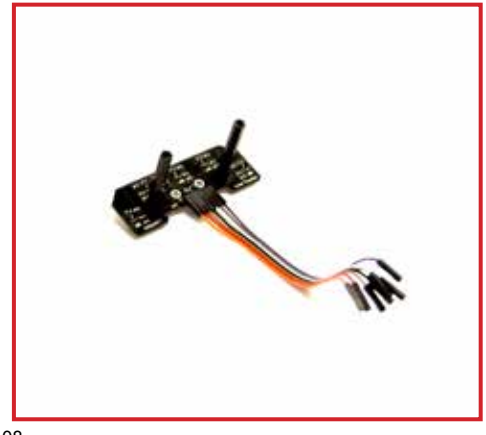


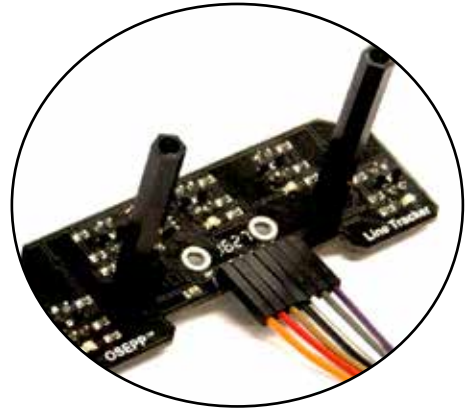




11

12





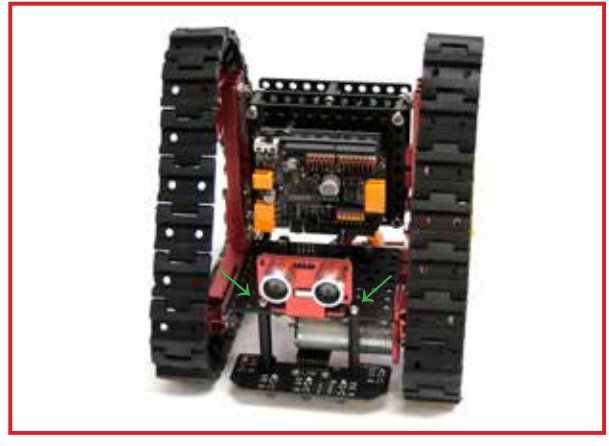
13

TRITANK-01

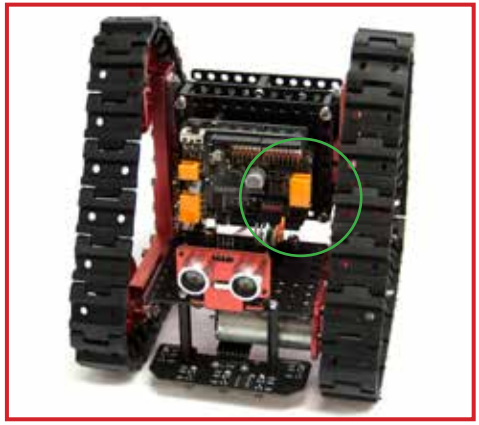
HEXM3X6 **2x**

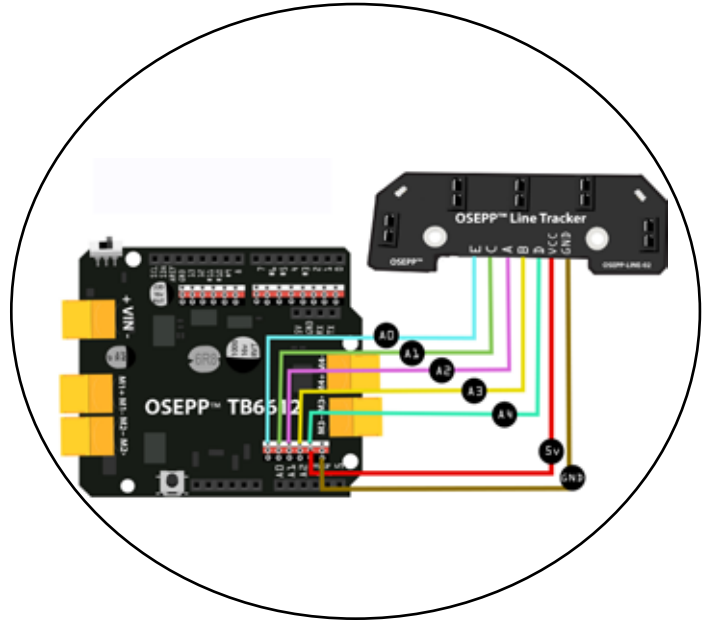
TRITANK-01

Ⓑ ALKEY25

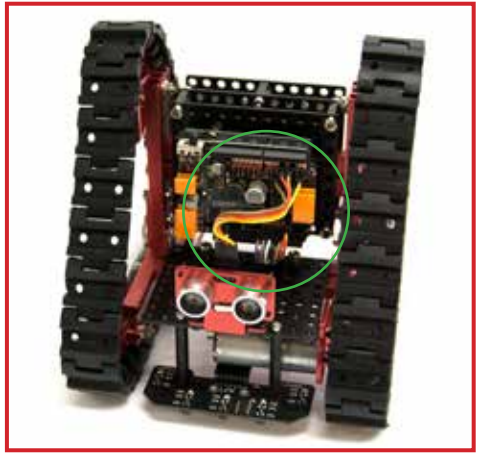


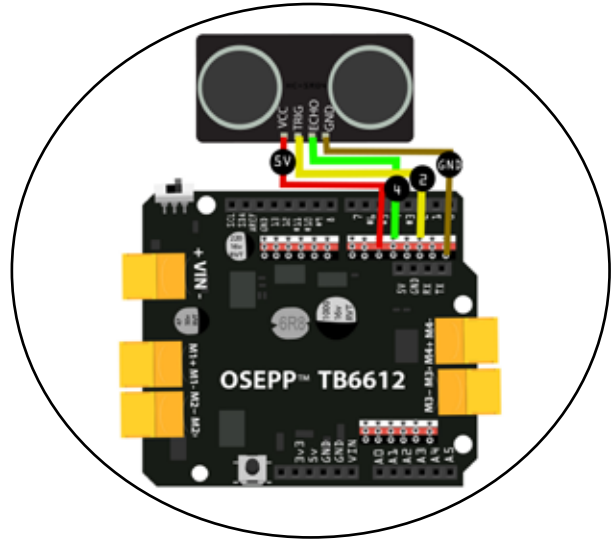
14



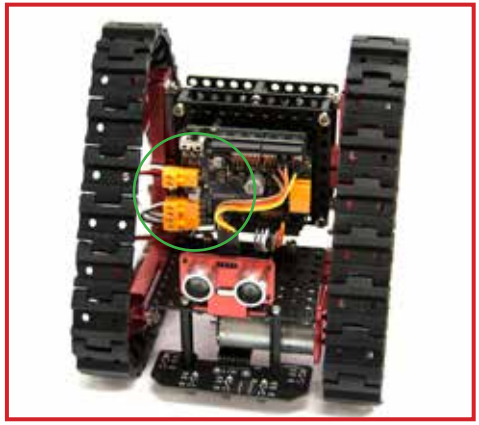


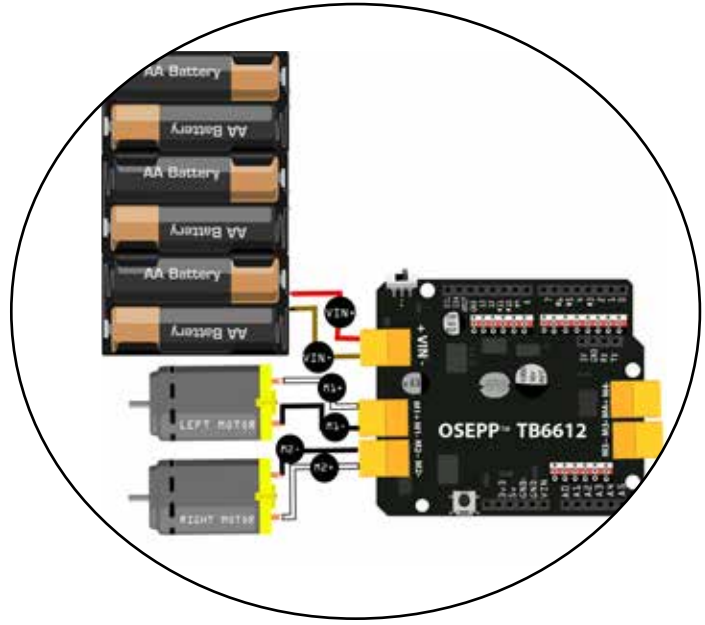
15





16

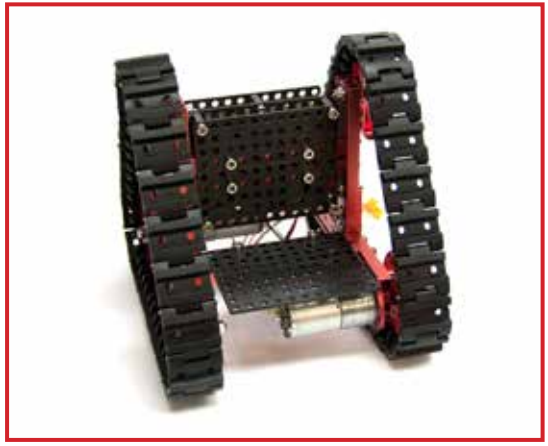


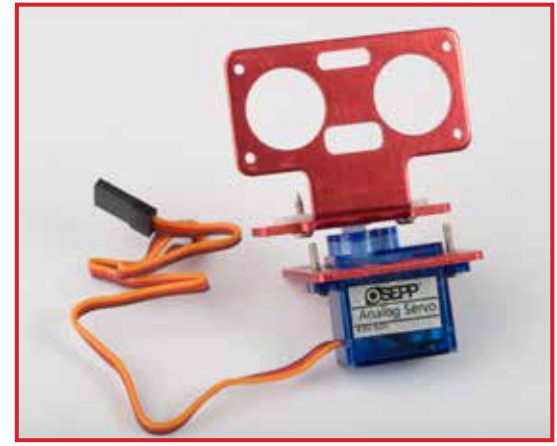

AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
VIN+
VIN-
M1+
M1-
M2-
M2+
LEFT MOTOR
RIGHT MOTOR
OSEPP™ TB6612

1 TRIANGULAR TANK

Line Maze Discovery

2

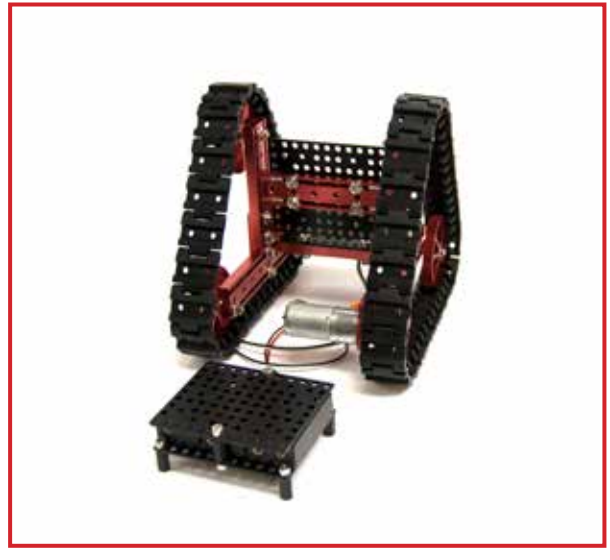




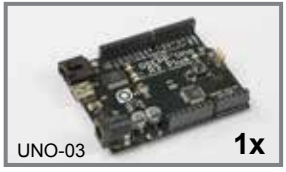
3

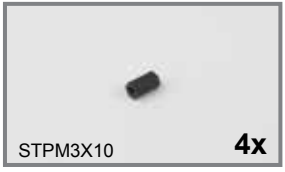
TRITANK-01

Ⓐ ALKEY30



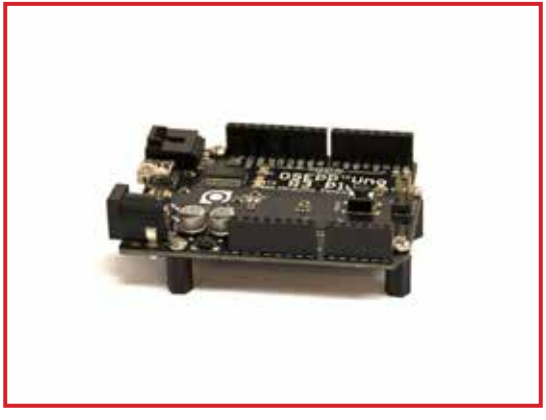
4

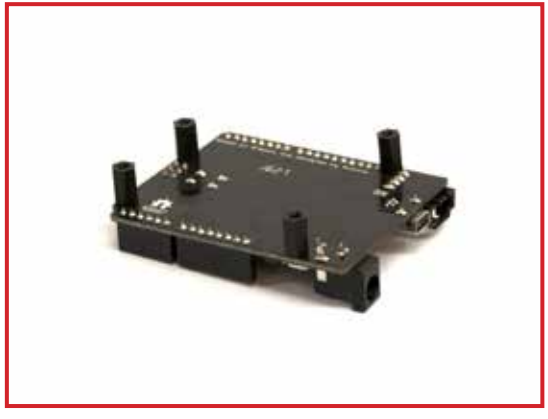

UNO-03 **1x**


STPM3X10 **4x**

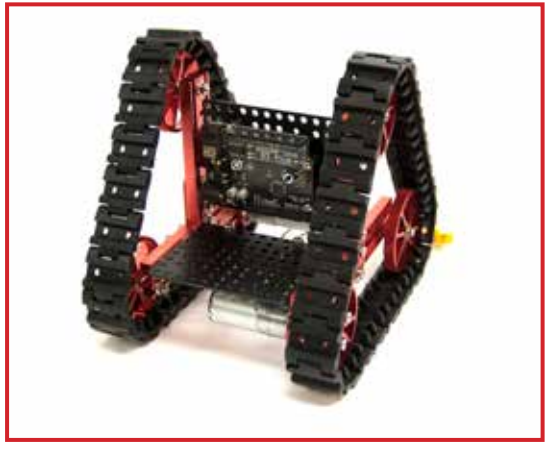
SCM3X6 **4x**

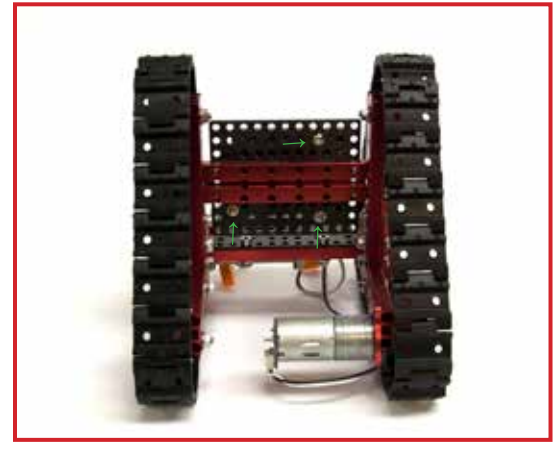
SCDR-001



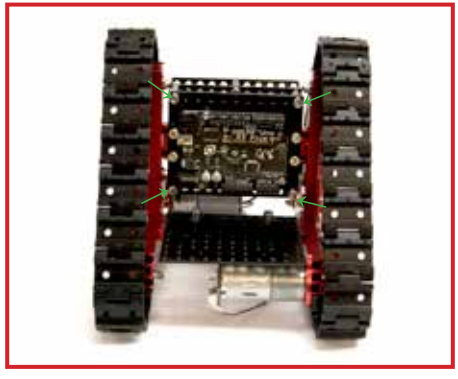


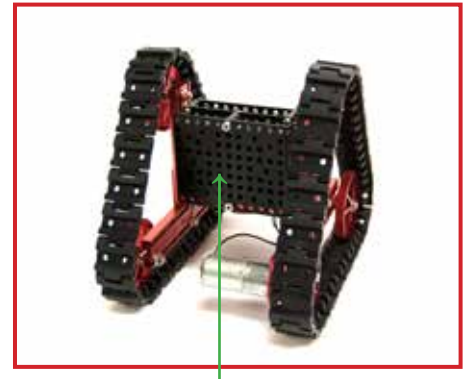
5

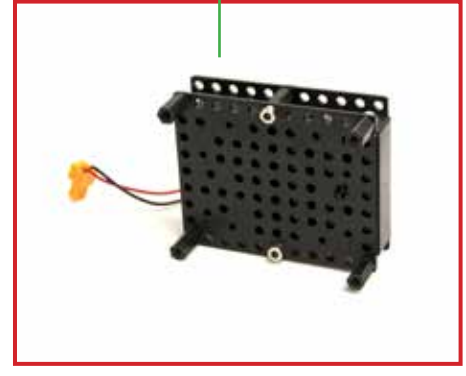




6



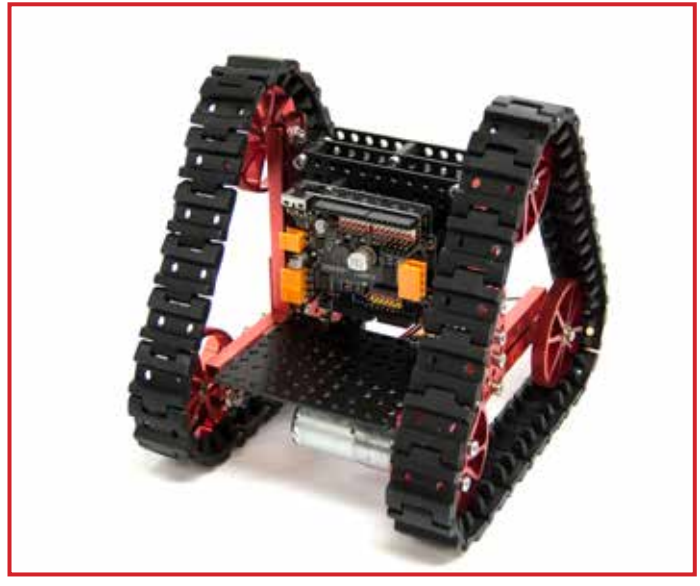




7

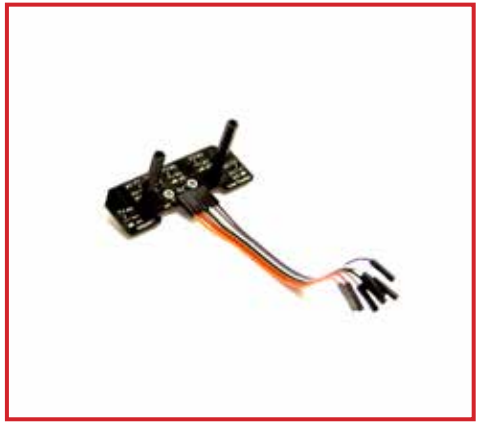
TBSHD-01

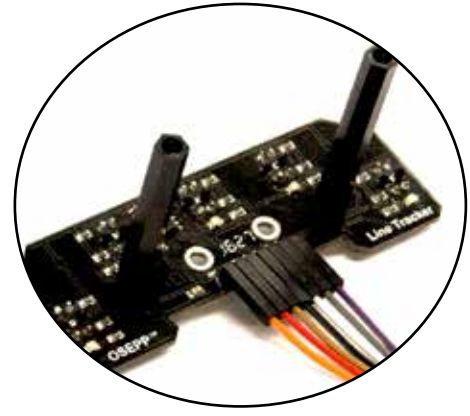
1x



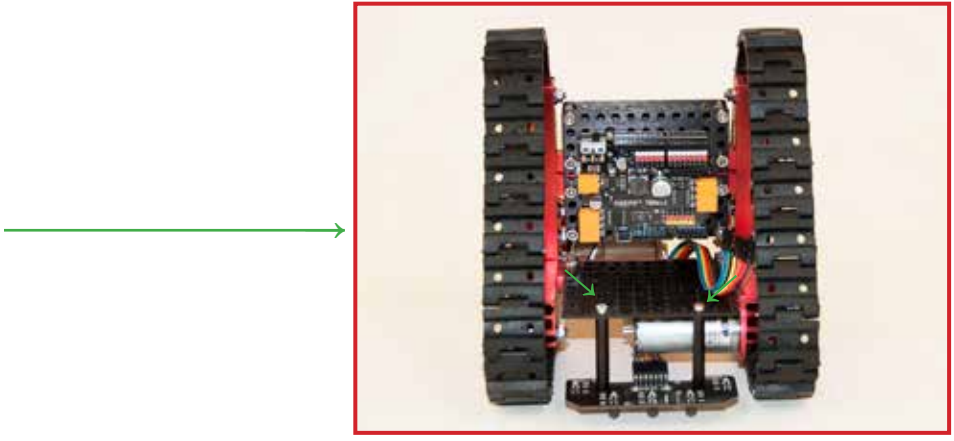
8

9

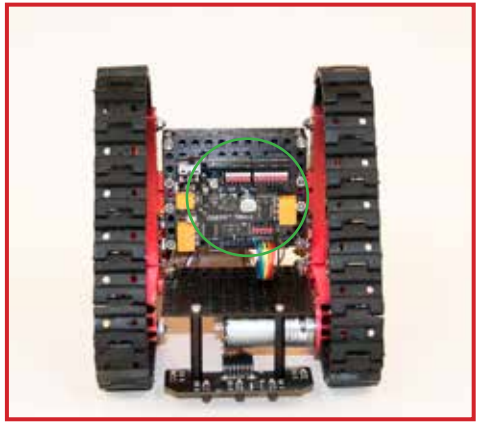


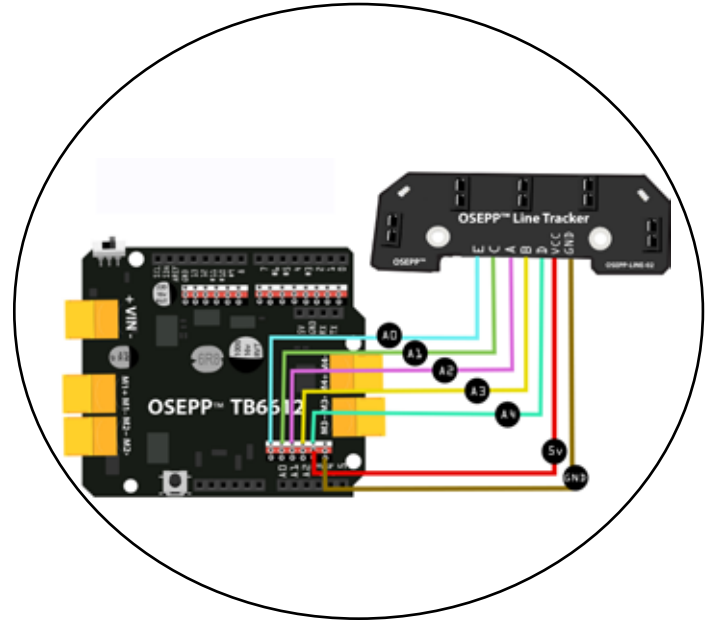


10

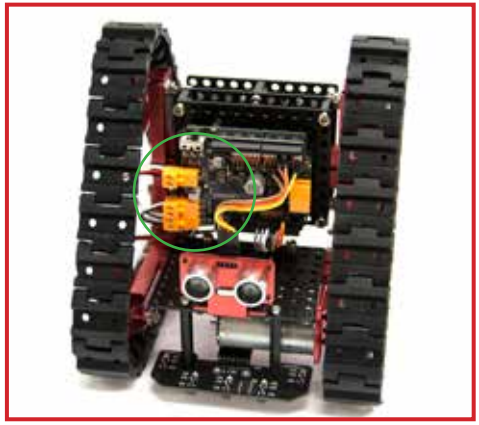


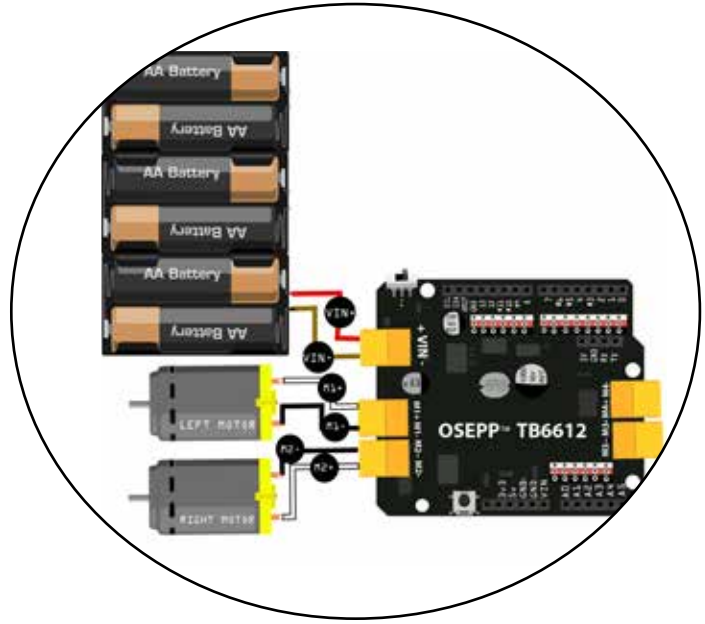
11





12




AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
VIN+
VIN-
M1+
M1-
M2-
M2+
LEFT MOTOR
RIGHT MOTOR
OSEPP™ TB6612

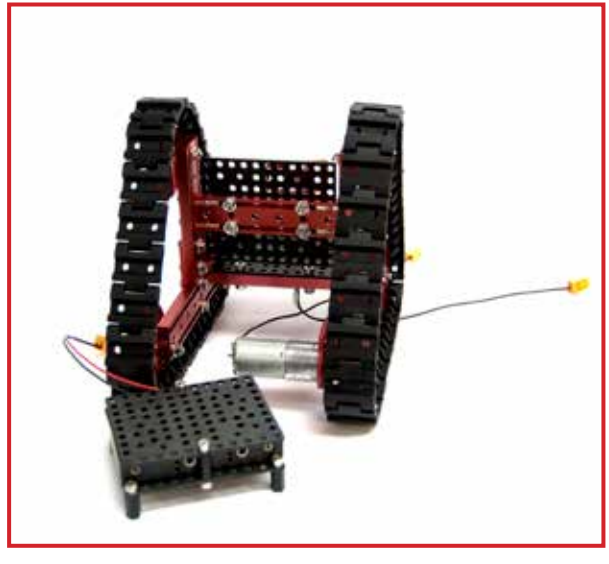
1 TRIANGULAR TANK

Object avoidance

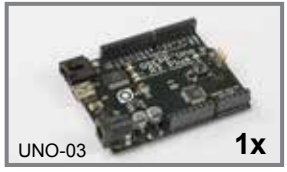
2

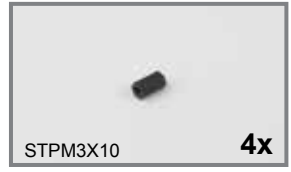
TRITANK-01

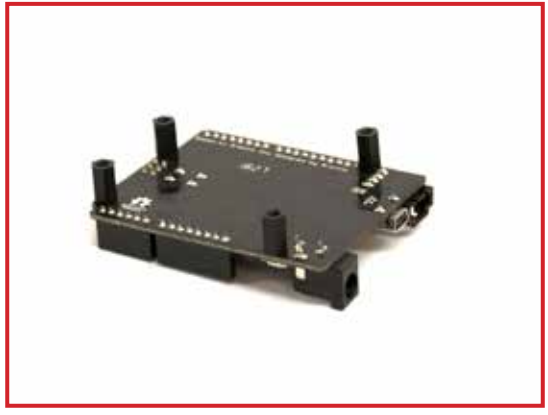
Ⓐ ALKEY30

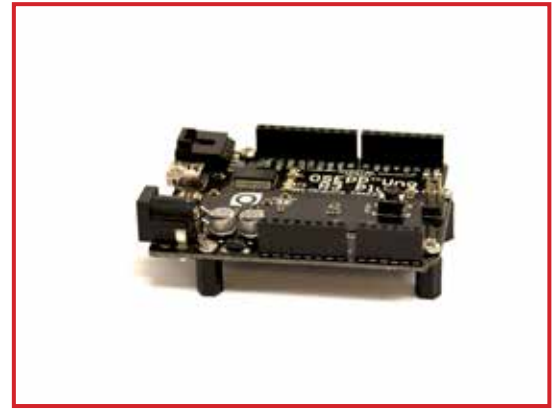


3

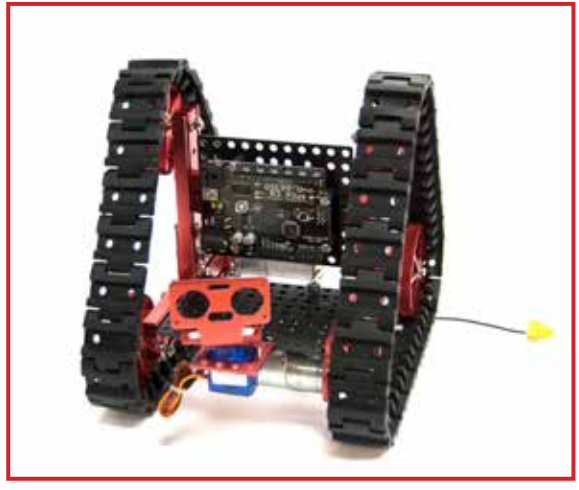


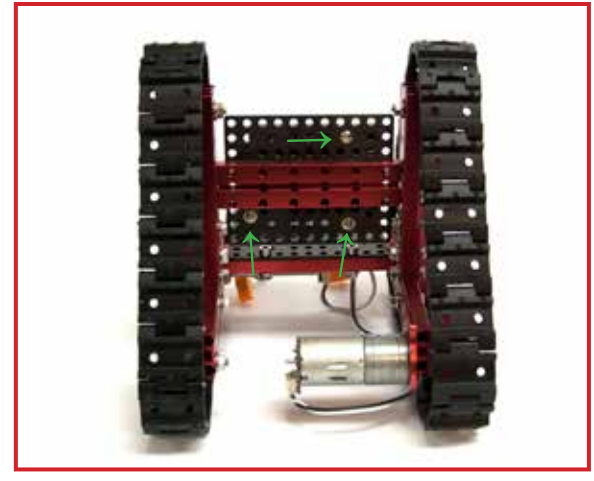




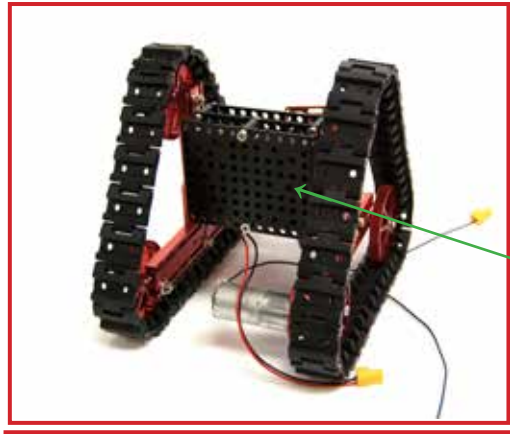


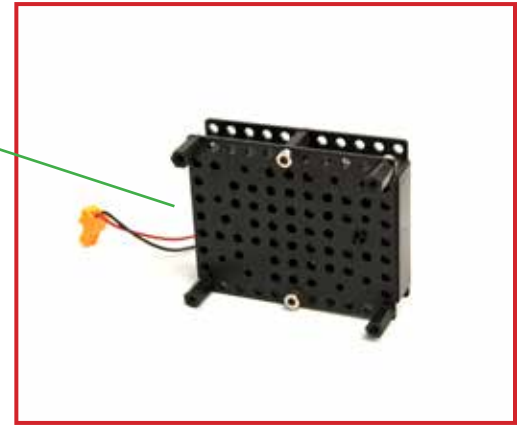
4

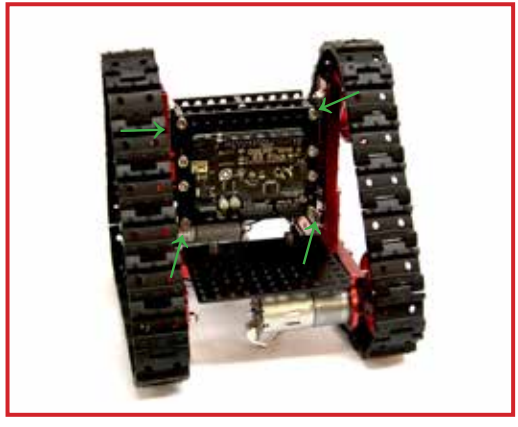




5



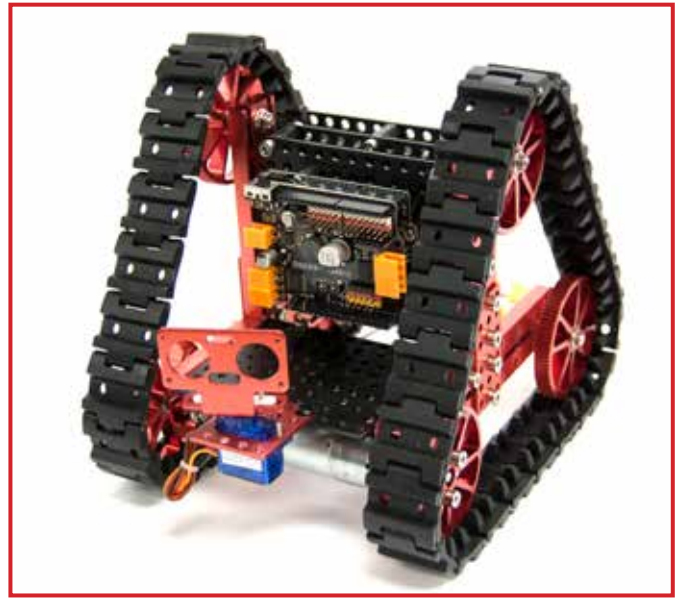




6

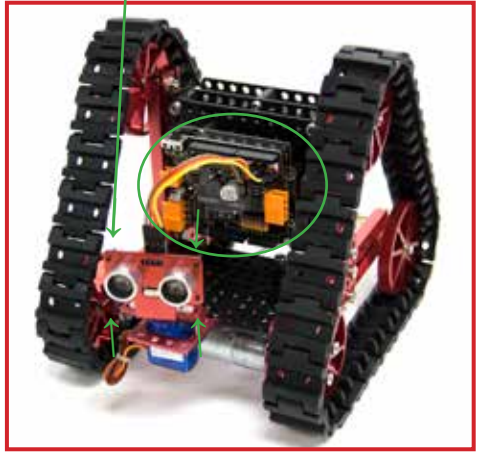
TBSHD-01

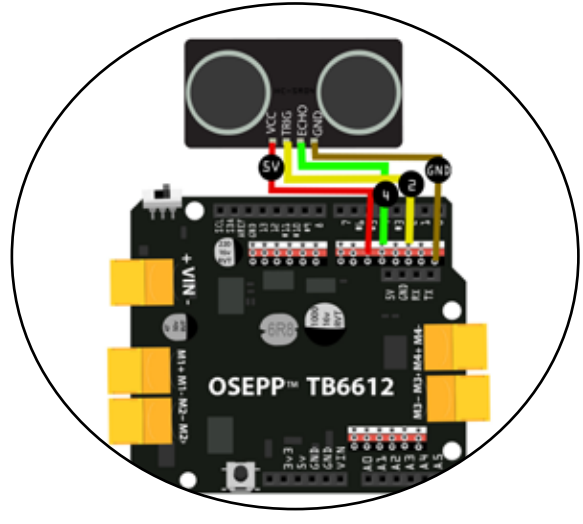
1x



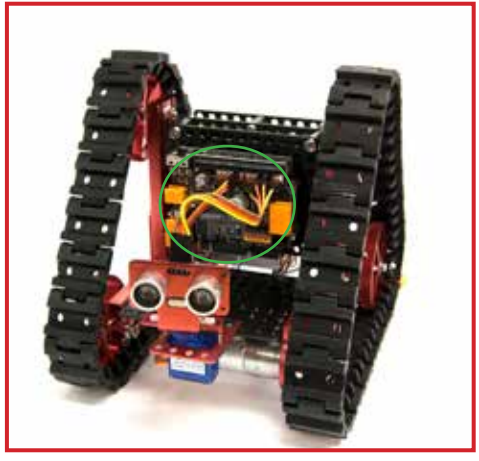
7

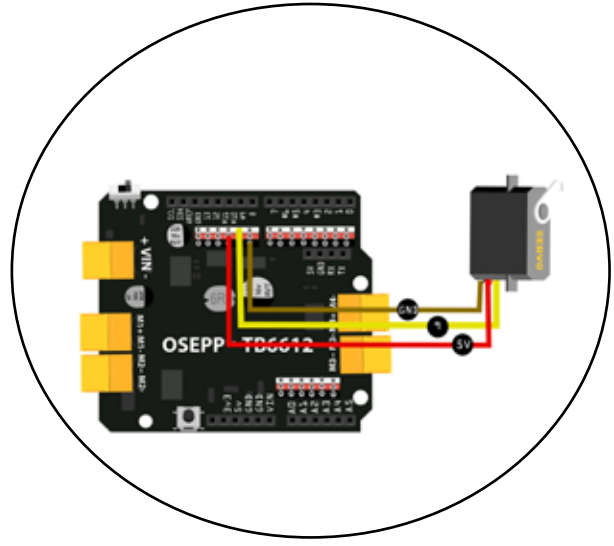
SCM16
NUTM6



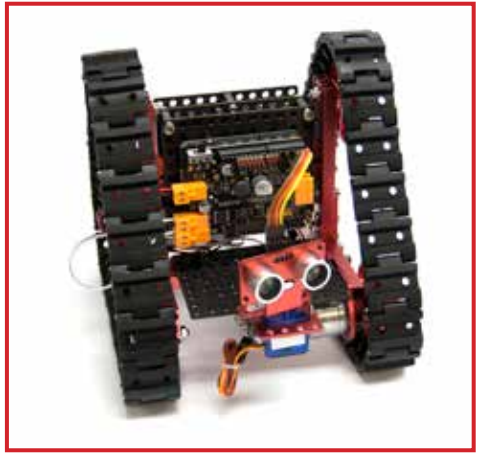


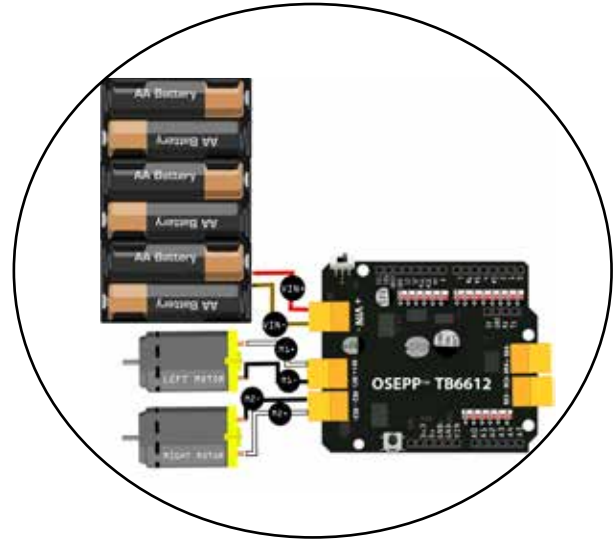
8





9




AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
AA Battery
VIN+
VIN-
M1+
M1-
M2-
M2+
OSEPP- TB6612

OSEPP™

TANK-01

2WBAL-01

TRITANK-01

osepp.com