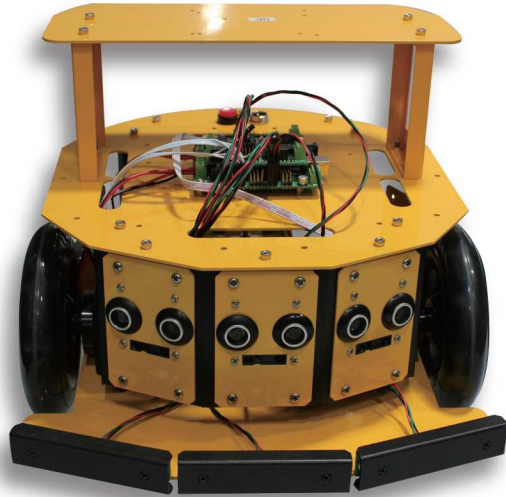


## 2WD mobile robot kit 10004



This robot kit provides an economical introduction to the world of robotics. It has 2 drive wheels and a freewheel. It includes a series of sensors making it aware of the surrounding: Sonar sensors to detect the obstructions, IR distance measure sensors used as a fall-arrest detector, bumper sensors to make it turn around while run into obstruction in its way. It is based on Arduino microcontroller. Its aluminum alloy body is firm enough to be mounted with extension equipments.



Aluminum alloy frame



Fall detect sensor



Ultrasonic sensor



IR sensor



Encoder



Programmable



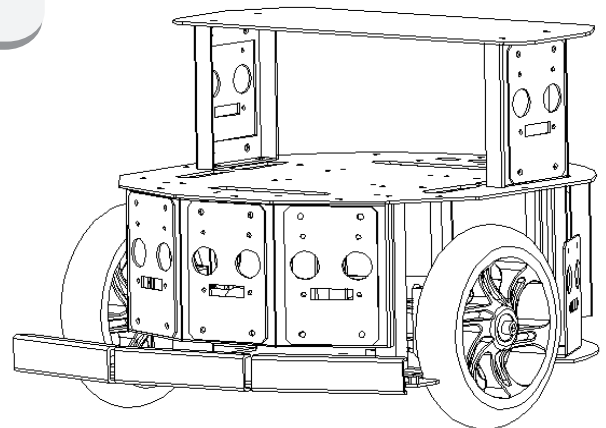
Easily expand

### Features:

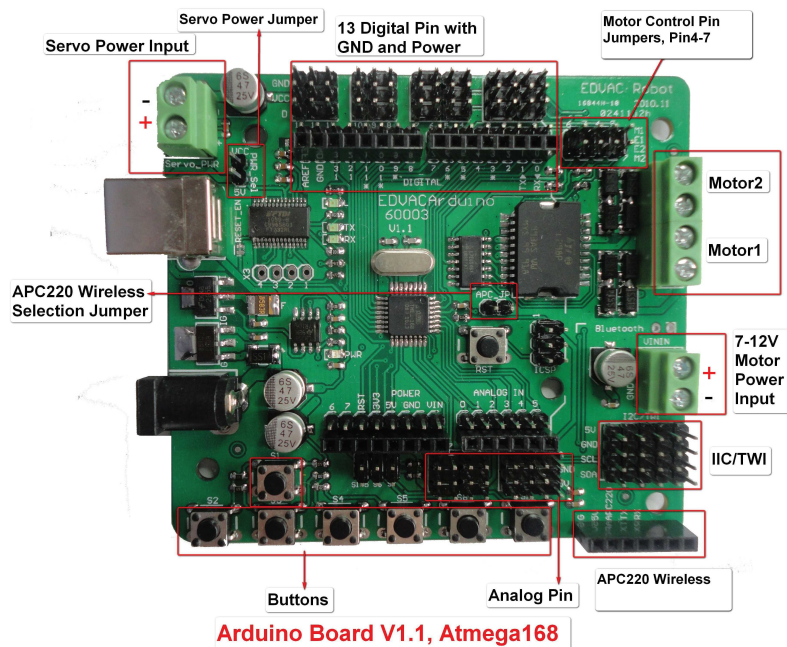
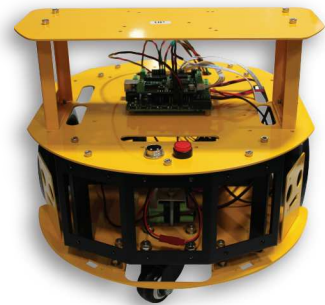
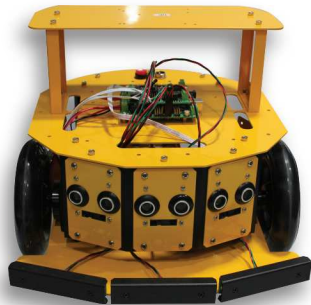
- 2 wheels drive
- Aluminum alloy body
- IR sensors and ultrasonic sensors mounted as range finder
- Fall detect sensors equipped to avoid fall
- Bumper sensors to prevent collision
- Still spare mounts for sensors
- Easily expand with pre-drilled holes
- Second and third plates for extended components

### Parts included:

- 135mm PU Wheel X 2
- Faulhaber 12V DC Coreless Motor X 2
- Arduino 328 ControllerX1
- Arduino IO Expansion X1
- Ultrasonic Range Finders X 3
- GP2Y0A21 Infrared Sensor X3
- Bumper Sensors X 3
- Fall Detect IR Sensors X 2
- 12V Ni-Mh BatteryX1
- 12V ChargerX1



## 2WD mobile robot kit 10004



### Specifications:

<b>Chassis</b>	Appearance	Circular
	Length	357mm
	Width	313mm
	Height	267mm
	Chassis Height	39mm
	Wheel Tread	280mm
	Wheel Base	160mm
	Coupled Mode	Compaction
	Material	Aluminum
	Color	Yellow, Black
	Speed	0.8m/s
	Drive Mode	2 wheels drive, 1 directional
	Climbing Capacity	20degree
	Load Capacity	10kg
	min-ITX Compatible	Yes
<b>Wheel</b>	Diameter	143mm
	Thickness	28mm
	Material	PU

<b>Motor</b>	Type	Faulhaber 12V DC Coreless Motor
	Power	17W
	RPM	120rpm
	Diameter	30mm
	Length	42mm
	Total Length	85mm
	Diameter of Shaft	6mm
	Length of Shaft	35mm
	No Load Current	75mA
	Load Current	1400mA
<b>Encoder</b>	Type	Optical
	Encoder Phase	AB
	Encoder Resolution	12CPR
<b>Battery and Charger</b>	Battery	12V Ni-Mh
	Slow Charger	100-240V In, 2.4-12V Out
	Duration of Charge	2 hours
	Running Time	0.5 hour

<b>Microcontroller Specification</b>	Atmega 328
	14 Channels Digital I/O
	6 PWM Channels (Pin11, Pin10, Pin9, Pin6, Pin5, Pin3)
	8 Channels 10-bit Analog I/O
	USB interface
	Auto sensing/switching power input
	ICSP header for direct program download
	Serial Interface TTL Level
	Support AREF
	Support Male and Female Pin Header
	Integrated sockets for APC220 RF Module
	Five IIC Interface Pin Sets
	Two way Motor Drive with 2A maximum current
	7 key inputs
	DC Supply: USB Powered or External 7V-12V DC
<b>IO expansion board</b>	DC Output: 5V / 3.3V DC and External Power Output
	Dimension: 90x80mm
	To support RS485 interface or drive 4 motors