This is unconventional mobile robot kit, it has 3 omni wheels that allow it to move and turn simultaneously, and accelerate in every direction at once without changing the direction it is facing.

Besides the 3 motors for driving, the robot has 3 Ultrasonic sensors to scan the environment. To program the mobile robot kit, we chose Arduino to maintain the software easily and to exploit the excellent motor control algorithms provided.

**Features:**
- 3 wheel drive
- Omni wheel
- Aluminum alloy fram
- Capable of rotation and side way
- Includes Ultrasonic sensors
- With Arduino microcontroller and IO expansion board
- Programmable with C, C++

**Parts included**
- 48mm Omni-wheel X 3
- Namiki DC Motor with encoder X 3
- Arduino 328 Controller
- Arduino IO Expansion
- Ultrasonic Range Finders X 3
- 12V Ni-MH Battery X 1
- 12V Charger

**Parts Description**

Arduino IO Expansion is a sensor expansion board. The controller board is programmed from the PC in C, C++ programming language.

Arduino 328 is a microcontroller board. The USB port can be used for download of own programs and for transmitting data to the PC.
The Ultrasonic Range Finder is the sensor that can give your robot a picture from his surroundings.

With the help of omni wheels, robot kit can move to all direction.

### Specifications:

<table>
<thead>
<tr>
<th>Product Name</th>
<th>48mm Omni wheel mobile robot kit</th>
<th>Speed</th>
<th>0.3m/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>10019</td>
<td>Power</td>
<td>6w</td>
</tr>
<tr>
<td>Appearance</td>
<td>Circle</td>
<td>Drive Mode</td>
<td>3 Wheels Drive</td>
</tr>
<tr>
<td>Max Width</td>
<td>180mm</td>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Height</td>
<td>120mm</td>
<td>Net Weight</td>
<td>1.5kg</td>
</tr>
<tr>
<td>Body Material</td>
<td>Aluminum Alloy</td>
<td>Load Capacity</td>
<td>1.5kg</td>
</tr>
</tbody>
</table>

### Co-effect of Omni Wheels:

- **Side Way**
- **Backwards**
- **Rotation**
- **Concerning**