



**mOway<sup>®</sup>**

*education*



# What is mOway?

The mOway robot is an **educational tool**, a complete learning solution that brings technology close to educational centres. Its goal is to be a practical tool inside the world of education.



# How do I program my mOway?

Works with **SCRATCH**

Also:

- ✓ **mowayworld:**  
Based on **flowcharts**
- ✓ **C programming**
- ✓ **Assembler**



## Features

- ⦿ PIC18F86J50 as main controller
- ⦿ Motor station with path control commanded by I2C
- ⦿ 4 Anti-collision infrared sensors
- ⦿ 1 Directional light intensity sensor
- ⦿ 2 Opto-reflective infra-red sensors for the floor
- ⦿ Bicoloured luminous indicator on top
- ⦿ Frontal lead and red rear leds
- ⦿ 1 Temperature sensor
- ⦿ 3 axis accelerometer
- ⦿ Microphone and speaker
- ⦿ SPI/I2C expansion bus for electronic cards
- ⦿ Radio Frequency module for wireless communication
- ⦿ LiPo battery rechargeable via USB with 2 hours battery life
- ⦿ Prepared for collaborative robotics



**Compact &  
optimum  
size for the  
classroom**

## Who is moway for?

- ⦿ Teachers and students in:
  - Schools
  - Colleges
  - Universities
- ⦿ Newcomers to the world of robotics
- ⦿ Everyone with a keen interest in robotics applications



## Scratch Kit

The new **mOway Scratch Kit** includes everything you need to control your mOway robot with Scratch programming environment.

The mOway Scratch Kit contents:

- 1 mOway robot
- 1 RF-USB
- 1 RF Module
- 1 Mini-USB cable

It is also available a complete **manual** about mOway + Scratch with different Classroom Challenge in the mOway website.



## Basic Kit

Take the **first steps** in robotics and programming. Students learn to program successfully, controlling the various sensors of a robot.

✓ **The perfect educational tool**

### Contents

- 1 mOway robot
- CD with MowayWorld Software
- Instruction Manual



## Deluxe Kit

Take a **further step** in robotics and programming. Students learn to program and to do exercises in **collaborative robotics** between two or more mOways.

### Contents

- ⦿ 2 mOway robots
- ⦿ CD with MowayWorld Software
- ⦿ 2 Radio frequency modules
- ⦿ 1 RF-USB stick
- ⦿ Instruction Manual



## Educational Kit

The perfect working **tool for teachers**. Includes a detailed manual adjusted to the school subject of Design and Technology, thus providing the teacher with a lesson plan.

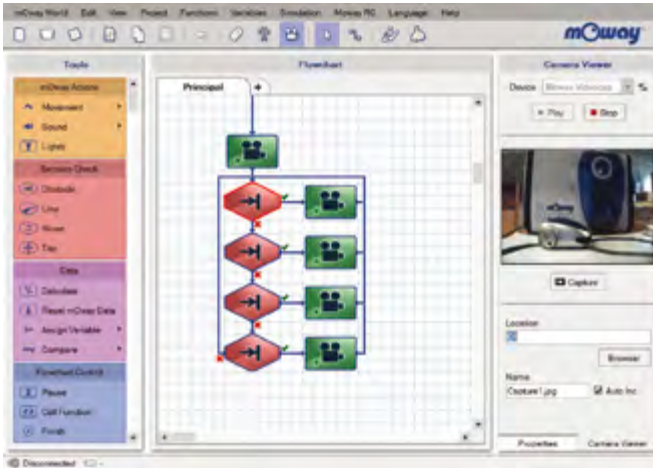
### Contents

- ⦿ 1 Deluxe Kit
- ⦿ CD with MowayWorld Software
- ⦿ 1 Teacher's Guide
- ⦿ mOway tracks
- ⦿ Obstacles



# Moway Camera Board

A **vision system** that connects to the mOway expansion slot. Provides viewing on a real-time basis and captures pictures that will be shown in the new graphical user interface of the MowayWorld.



# Moway Wifi Board

A **Wi-Fi Communication System**. It is connected to the expansion slot and enables you to both control the robot and monitor its sensors through the new web interface created.



## Expansion Kit

Equip mOway with even more options. Personalised electronic circuits can be created and added to let the imagination soar with mOway. The Expansion kit is connected to the expansion connector.



## Smart City

Moway Smart City is an **accessory** for mOway that simulates the city of the future and how we will interact with urban infrastructures and other systems and structures that we may find in them.



Works with  
**SCRATCH**

- Arduino based technology
- Energy efficiency
- Control over the street lighting
  - Ambient-light-based street lighting monitoring control
  - Energy saving when there is no traffic
- Traffic management
  - Level crossing
  - Presence detection
  - Road Safety
- Real-time information of the city
  - City traffic recording
  - City temperature recording
- Compatible with the expansion modules of mOway:
  - Radio Frequency, WiFi, Camera, Expansion Kit
  - Communication between the smart city and the smart vehicle
  - Remote monitoring control of the city services

### Contents

1 Board  
16 Board bases  
Moway Controller Board  
3 Streetlights  
1 Acces control barrier  
2 Presence sensors  
1 Light sensor  
1 Tunnel  
8 USB – Mini USB cables

# mOway®

Av. de la Ribera de Axpe  
Ed. 11 B mod. 310-312  
48950 Erandio - Bizkaia (Spain)  
+34 94 438 56 44

[www.moway-robot.com](http://www.moway-robot.com)

