

## 4 Learning Curve

Users should refer to the documents under the Manual Folder in CD package. These documents will give users a step by step guide for proper use of the robot.

Below is the documents description:

### 01\_Install\_Battery.pdf

**A.** This PDF describes how to install the 18650 Lithium battery into the battery package to provide power for the robot when users receive the robot kit.

Or

**B.** This document describes how to install the battery to the remote control.

### 02\_Getting\_Start\_Guide.pdf

Getting Started Guide described how to power on the robot, set the switches to the pre-set settings, run the basic operation and control the robot via Smartphone or IR Remote Control.

### 03\_Hardware\_Manual.pdf

Hardware Manual provides the hardware resources of the main devices on the DE10-Nano and motor driver board.

### 04\_User\_Guide.pdf

The user guide describes the functions and how those functions work regarding the main devices on the balancing robot.

### Product webpage

Please refer to our product webpage <http://www.bal.terasic.com> for more detailed data.

The related design data will be constantly updated on this webpage.



[www.terasic.com](http://www.terasic.com)

If you encounter any problems, please contact us via

✉ Email: [support@terasic.com](mailto:support@terasic.com)

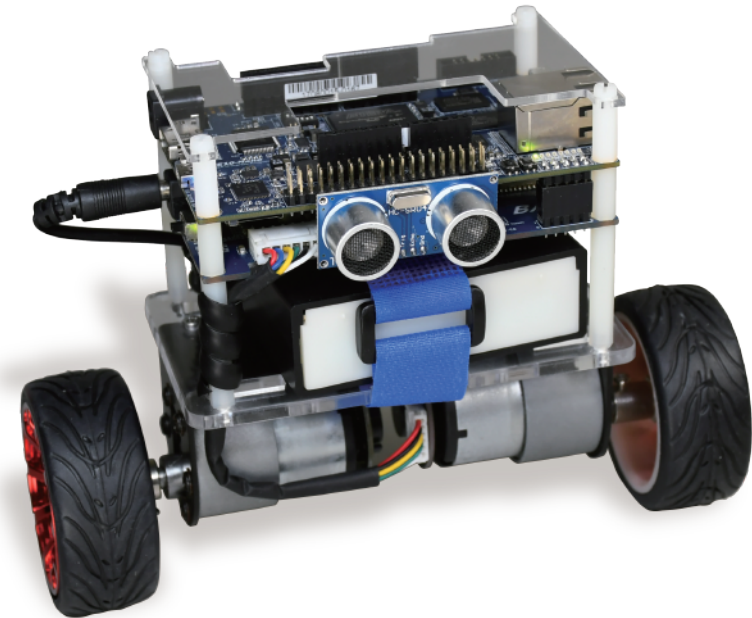
☎ Tel: +886-3-575-0880

CPT-3335-00

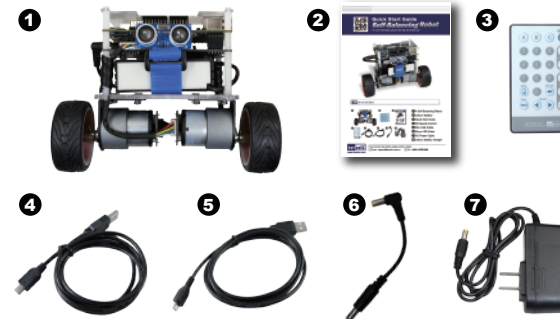


# Quick Start Guide Self-Balancing Robot

For more information, please visit: <http://bal.terasic.com>



## 1 What's in the Box?



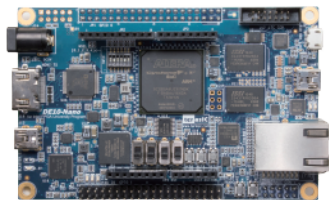
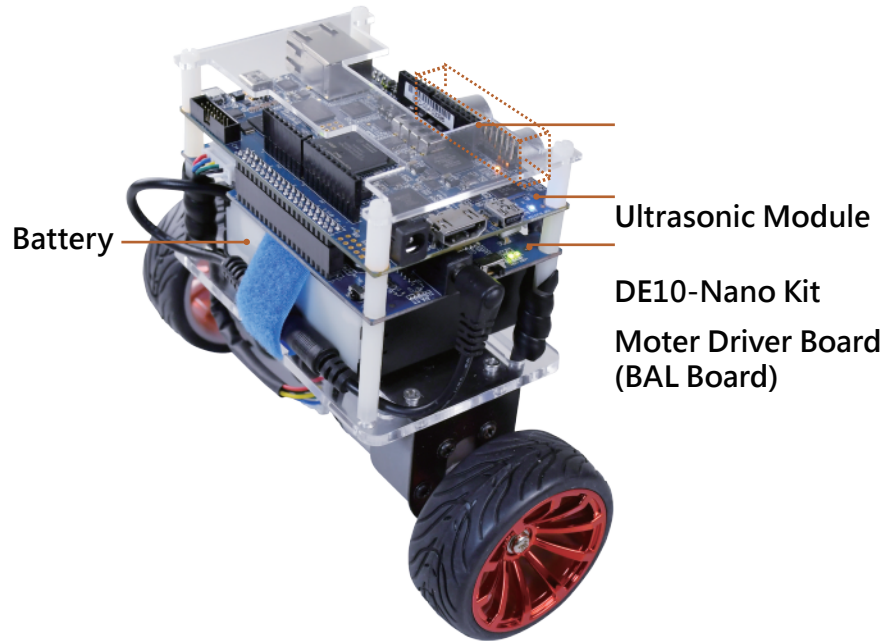
- 1 Self-Balancing Robot
- 2 Quick Start Guide
- 3 IR Remote Control
- 4 Mini USB Cable
- 5 Micro USB Cable
- 6 DC Power Cable
- 7 Lithium Battery Charger

**terasic**  
[www.terasic.com](http://www.terasic.com)

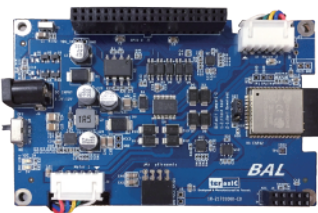
If you encounter any problem, please contact us below:

✉ Email: [support@terasic.com.cn](mailto:support@terasic.com.cn)

☎ Tel: +886-3-5750-880



DE10-Nano



BAL Board

The Terasic's Self-Balancing Robot is a DE10-Nano based platform, it integrates BAL board (motor driver board), ultrasonic module, and it is designed and manufactured independently by Terasic.

The Self-Balancing Robot comes with multiple advanced features such as object following, obstacle avoidance, and it can also be controlled by Android APP and IR remote control.

After receiving the robot kit, users can download the robot CD package from

<http://bal.terasic.com/cd>.

The package includes demonstrations, design data and documents on how to use the robot.

Below are the package detail contents:

### Package Contents

Folder	Contents
Datasheet	The component datasheets of the Self-Balancing Robot
Demonstration	Design examples
Schematic	Schematic of the Self-Balancing Robot
Tools	The design and testing tool for the robot
User Manual	The documents of the Self-Balancing Robot

The Terasic DE10-Nano FPGA Development board is used as the brain of the Balancing car. It has its own CD package.

For information on how to use this FPGA board and get related design resources, please download its CD package from the provided link

<http://de10-nano.terasic.com/cd>.

## Self-Balancing Robot