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## Data Sheet of Beginner Kit for Raspberry Pi 2 (Windows 10 IoT Compatible) (KIT0103)

### INTRODUCTION

The IoT beginner kit comes with a Raspberry Pi 2 and basic modules such as temperature sensors, light sensors, rotation sensors and soil moisture sensors. Using the Pi's integrated WiFi module makes it possible to connect to the Microsoft's "Azure" Cloud service easily where you can upload your sensor data to the database, under a scaled down Windows 10 system.

After learning how sensors work, you can build simple applications such as indoor temperature alarms or fire alarms. The relay module even gives you the ability to turn devices on and off remotely in your home, office or garden. You can set up a device to turn on all the lights in your house at a certain time. Why not set up a machine to feed your fish when they are hungry? When your plants are thirsty, water them automatically! There are many fun applications for this kit. Experience the magic of Windows 10 IoT!

Check out the tutorial for some cool project ideas based on this kit.



## FEATURES

An affordable and easy to build IoT system  
Abundant open source software available on the Github  
Use Microsoft Visual Studio 2015 to develop software  
Compatible with hundreds of different sensors  
Wide range of expandible sensors

## SPECIFICATION

### Raspberry Pi 2 Module B

Broadcom BCM2836 900MHz quad-core ARM Cortex-A7 CPU  
1GB LPDDR2 SDRAM  
4 x USB 2.0  
Video out via HDMI, 3.5mm A/V Jack or Raw LCD (DSI) interface  
Audio Out via 3.5mm A/V Jack or Audio over HDMI  
Audio In via Camera interface  
Storage: Micro SD Slot  
10/100 Ethernet (RJ45)  
Low-Level Peripherals:  
    26 x GPIO  
    UART  
    I2C bus  
    SPI bus with two chip selects  
    +3.3V  
    +5V  
    Ground

Power Requirements: 600mA up to 1.8A@5V via MicroUSB or GPIO Header

### Arduino Expansion Shield for Raspberry Pi B+

Onboard Microcontroller: ATmega32u4  
Arduino Leonardo Chip  
Arduino Compatible pin mapping  
Compatible with Arduino compatible shields and sensors  
System Voltage: 5V  
Arduino Digital I/O: 20  
Arduino Analog I/O: 6  
Raspberry Pi B+ GPIO: 16  
Raspberry Pi B+ I2C: 1  
Raspberry Pi B+ ID\_I2C: 1  
Raspberry Pi B+ SPI: 1  
Raspberry Pi B+ TTL UART: 1

## DOCUMENTS

[Tutorial](#)

## SHIPPING LIST

[Raspberry Pi2](#) x 1  
[Micro SD Memory Card](#) x 1

Zhiwei Robotics Corp.

USB Adapter x 1  
Expansion Shield For Raspberry Pi x 1  
Heatsink x 1  
High Speed HDMI Cable (0.75M, Gold Plated) x 1  
Digital Push Button (Blue) x 1  
Digital Blue/Red/Green LED Light Module x 1  
LM35 temperature sensor x 1  
Analog Rotation Sensor V2 x 1  
Ambient light sensor x 1  
Relay Module x 1  
Buzzer module x 1  
Moisture sensor x 1