# Smarthon Documentation

*Release 1.0*

**Smarthon Limited**

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# ONE

# QUICK START GUIDE

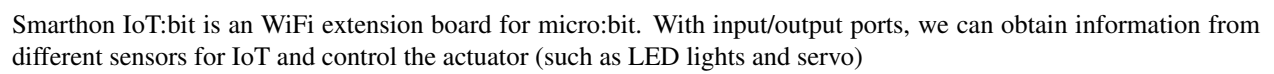## 1.1 Smarthon Smart City IoT Starter Kit

### 1.1.1 About Smarthon Smart City IoT Starter Kit

#### Introduction

Smarthon Smart City IoT Starter kit is designed to introduce Internet of things (IoT). With basic knowledge of computing knowledge and electronics provided in the kit, you can be a city creator and build a unique IoT system in the city. Based on Smarthon IoT board, which is compatible with multiple sensors and actuators, you can design city features; for example: using sensors to detect traffic status and upload city information to the internet.

#### Component List

### 1.1.2 Smarthon IoT:bit Introduction

## Introduction



Smarthon IoT:bit is an WiFi extension board for micro:bit. With input/output ports, we can obtain information from different sensors for IoT and control the actuator (such as LED lights and servo)

**Pinout Table**

### 1.1.3 Chapter 1: Connect the micro:bit to the Wi-Fi

### 1.1.4 Chapter 2: [Data visualization] Upload Data to ThingSpeak
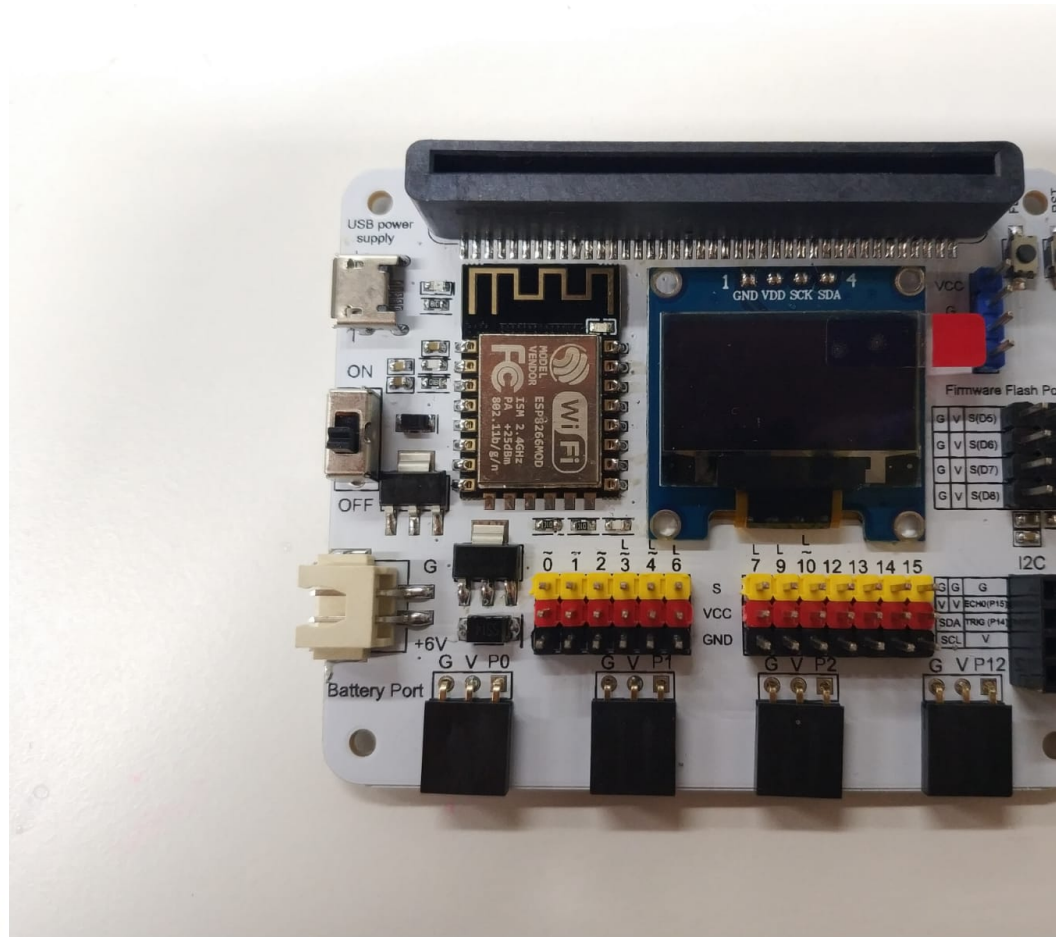
### 1.1.5 Chapter 3: [IoT Services] Send Email by IFTTT

### 1.1.6 Chapter 4: [Mobile App/Web Control] Control your micro:bit by App inventor 2

### 1.1.7 Chapter 5: [Object to Object Communication] WI-FI Group communication

### 1.1.8 Chapter 6: [Access Internet information] Connect your micro:bit to IoT Cloud by IFTTT

### 1.1.9 Case 01: Automated Smart Playground Lamp



Level: ★ ☆ ☆ ☆ ☆

**Part List:**

- LED Light X1
- Motion Sensor X1
- Connecting Wire X1
- micro:bit X1
- USB Cable X1

**Description:**

Motion sensor is used to detect if there are people moving in the playground, if there are, the LED light will be turned on; otherwise, it will be turned off.

**Coding:**

Motion sensor keep checking the value of the motion sensor, if there are people moving (motion sensor value >=700), then the LED light will be turned on for 10 seconds.

**Hardware:**

- Connect Motion sensor to P0
- Connect LED light to P1
- Download the code and transfer to micro:bit
- Plug the micro:bit into WiFi IoT extension board

### 1.1.10 Case 02: Smart Car park Access Barrier

**Introduction**

### 1.1.11 Case 03: Garbage disposal system

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### 1.1.12 Case 04: Urban noise detection

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### 1.1.13 Case 05: Car speed monitoring

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### 1.1.14 IoT Case 06: Weather Station

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### 1.1.15 IoT Case 07: Smart defense system

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### 1.1.16 IoT Case 08: Automated Traffic Light – Sender and receiver

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### 1.1.17 IoT Case 09: Smart House door control

**Introduction**

### 1.1.18 IoT Case 10: Smart Street Light

**Introduction**

### 1.1.19 IoT Case 11: Roof garden clothes rack

**Introduction**