

第三場工作坊


19 Nov 2016



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING
UNIVERSITY OF CALIFORNIA, BERKELEY, CA 94720-1777, U.S.A.

支持機構（排名不分先後）



AITLE 資訊科技教育領袖協會
Association of IT Leaders in Education

協辦機構



贊助機構

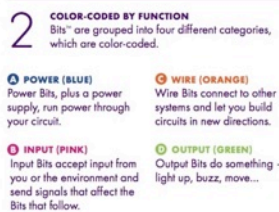
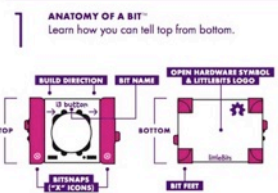
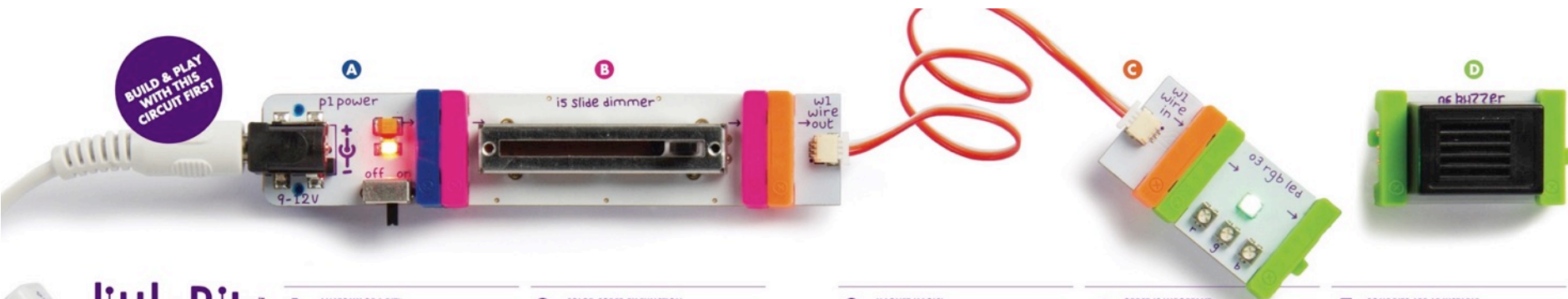
littleBits



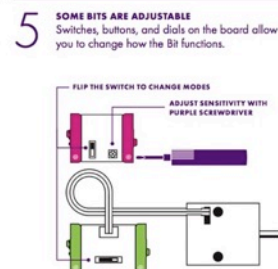
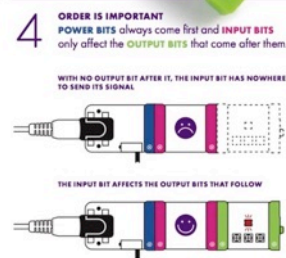
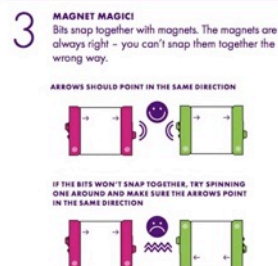
香港電腦教育學會
The Hong Kong Association
for Computer Education

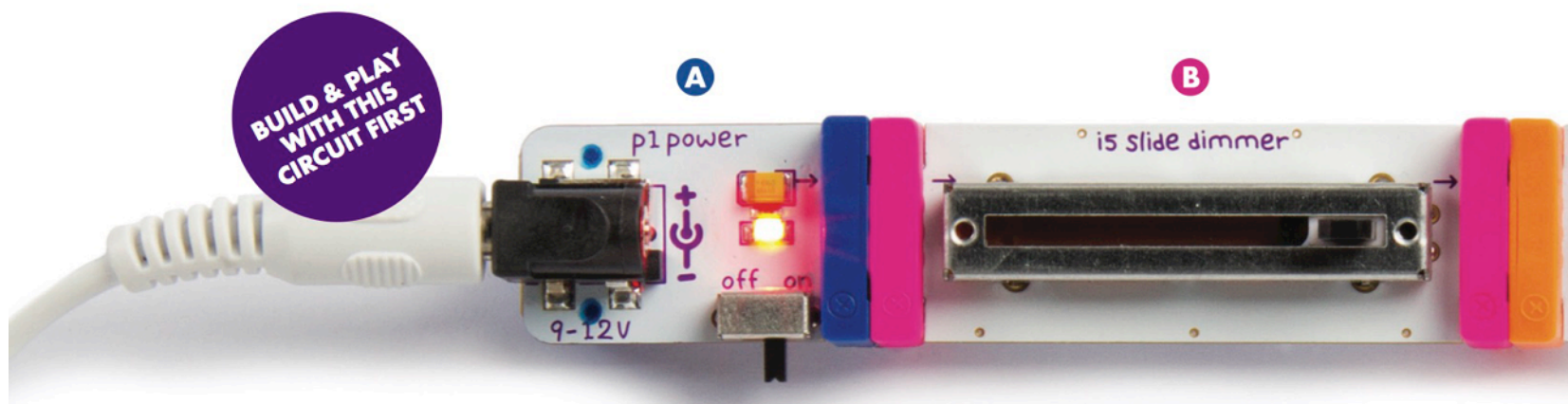


littleBits Basics



Learn more about your Bits in the **BIT INDEX ON PG 06**





**BUILD & PLAY
WITH THIS
CIRCUIT FIRST**

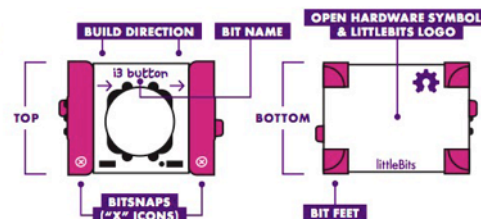


littleBits™ BASICS

1

ANATOMY OF A BIT™

Learn how you can tell top from bottom.



2

COLOR-CODED BY FUNCTION

Bits™ are grouped into four different categories, which are color-coded.

A POWER (BLUE)

Power Bits, plus a power supply, run power through your circuit.

B INPUT (PINK)

Input Bits accept input from you or the environment and send signals that affect the Bits that follow.

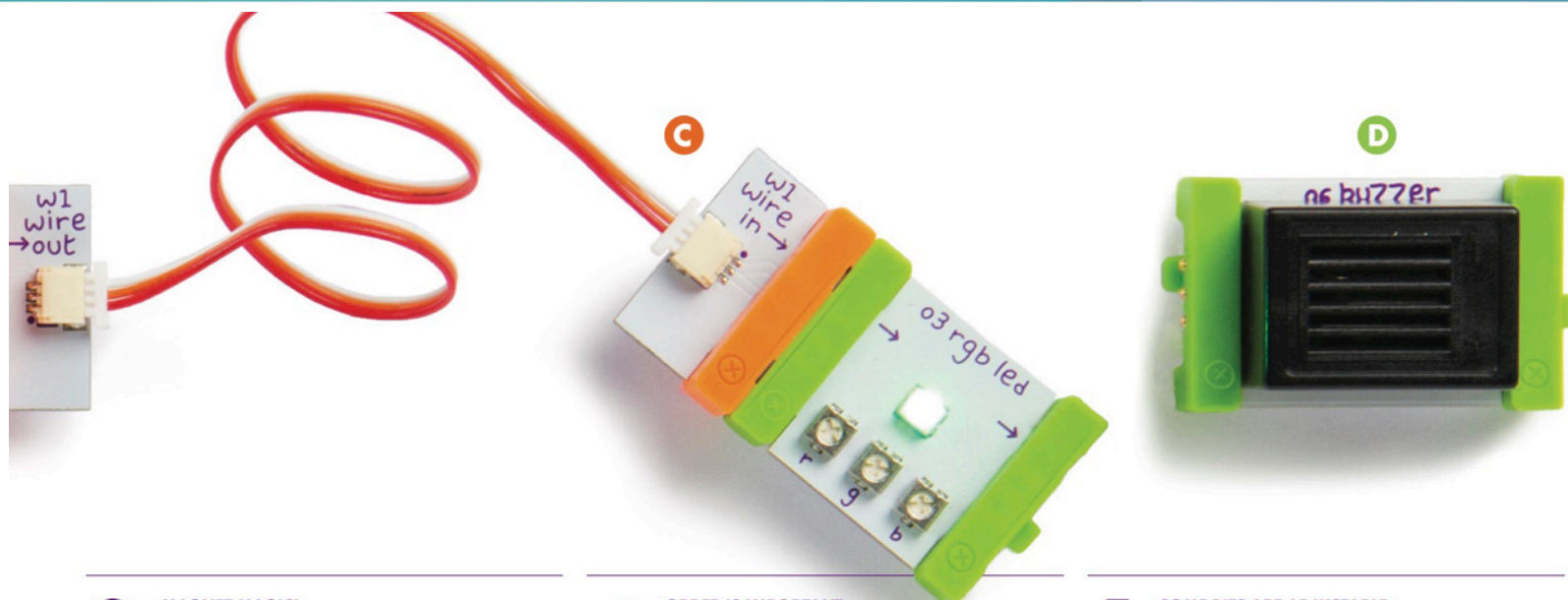
C WIRE (ORANGE)

Wire Bits connect to other systems and let you build circuits in new directions.

D OUTPUT (GREEN)

Output Bits do something - light up, buzz, move...

Learn more about your Bits in the **BIT INDEX ON PG 06**



3

MAGNET MAGIC!

Bits snap together with magnets. The magnets are always right – you can't snap them together the wrong way.

ARROWS SHOULD POINT IN THE SAME DIRECTION



IF THE BITS WON'T SNAP TOGETHER, TRY SPINNING ONE AROUND AND MAKE SURE THE ARROWS POINT IN THE SAME DIRECTION



4

ORDER IS IMPORTANT

POWER BITS always come first and **INPUT BITS** only affect the **OUTPUT BITS** that come after them.

WITH NO OUTPUT BIT AFTER IT, THE INPUT BIT HAS NOWHERE TO SEND ITS SIGNAL



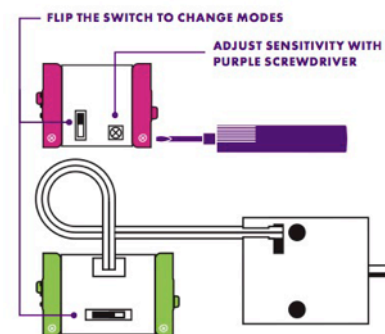
THE INPUT BIT AFFECTS THE OUTPUT BITS THAT FOLLOW



5

SOME BITS ARE ADJUSTABLE

Switches, buttons, and dials on the board allow you to change how the Bit functions.



5

littleBits Base Kit



1 dc motor



1 buzzer



1 light sensor



1 bargraph



1 button



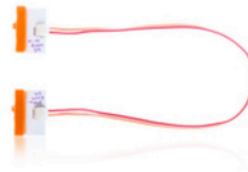
1 dimmer



1 power



1 bright led



2 wires



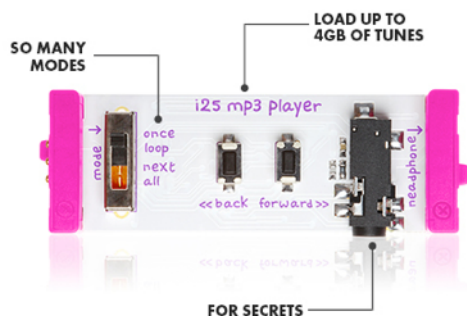
littleBits Smart Home Kit



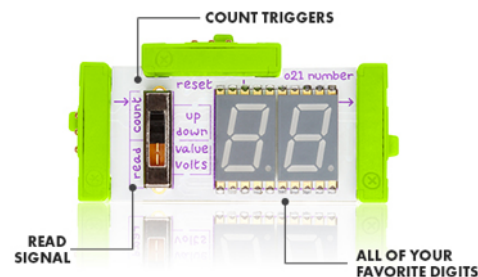
AC & IR



MP3 PLAYER



NUMBER



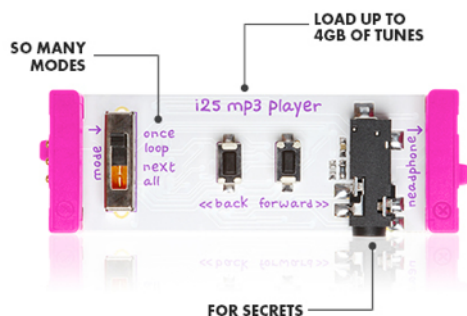
littleBits Smart Home Kit



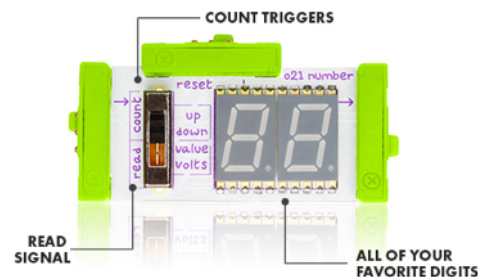
AC & IR



MP3 PLAYER



NUMBER



!? SOMETIMES FORGING AHEAD INTO UNCHARTED TERRITORY CAN GET A LITTLE TRICKY. NEED SOME HELP? **TROUBLESHOOTING AND TIPS & TRICKS** info.it-easy.com/phone-9

MORE INFO ABOUT THE COLORANT

MORE INFO ABOUT THE CLOUD

③ LITTLEBITS CLOUD CONTROL
Cloud Control is a web app that allows you to trigger or read from your cloudbit circuit remotely from across the room or across the world! info@littlebits.cc/cloudcontrol

STUDENT

Ⓢ AUTOMATE WITH IFTTT
Go to IFTTT.com and create an account. Use your cloudkit with IFTTT's simple "If this, then that" Recipe to connect your circuit to powerful Internet services.

CODE WITH OUR API
Know how to code? You can do amazing things with our powerful API. Like build your own Cloud Control. Get started at bit.ly/cw-api

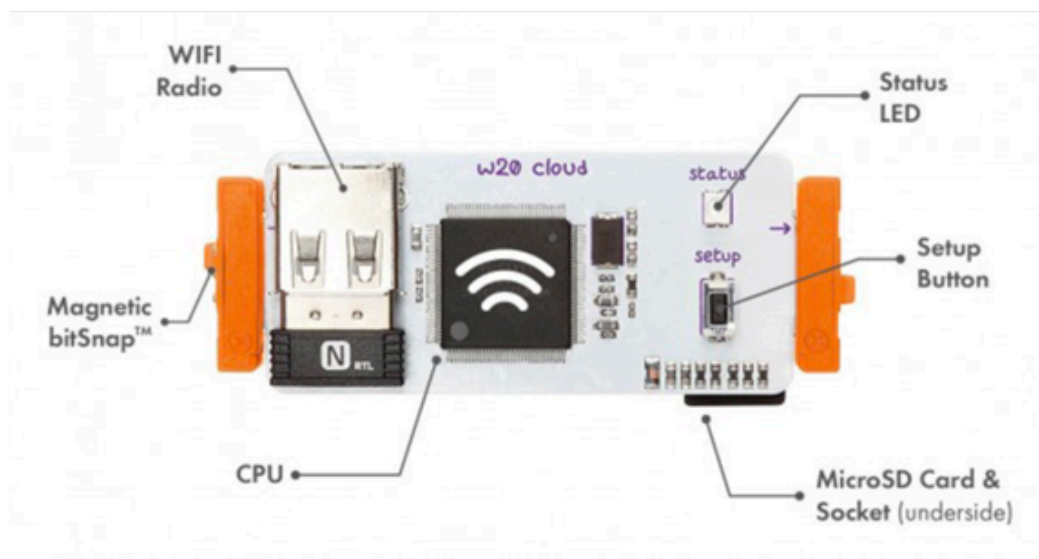
3 CLOUDBIT INTERACTIONS

• CLOUDBIT TO WEB
Use the cloudbit to communicate with web services and software. For example, a button can trigger a web action (e.g. text messages, tweets, or

WIS TO CLOUDIT
Communicate events from the web to the cloud! For example, every new "like" on Instagram causes the number module to count up.

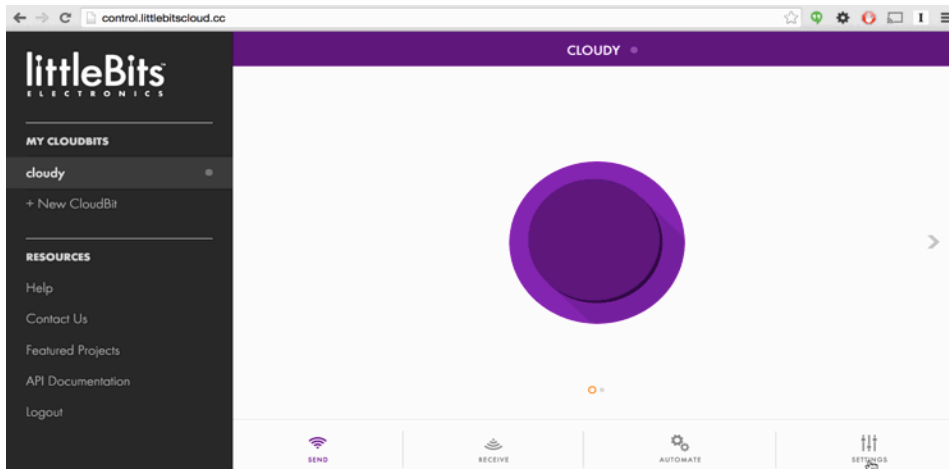
☛ CLOUDIT TO CLOUDIT
Communicate from module to module. With more than one cloudKIT, you can control modules and communicate across any distance; push a button in New York

littleBits CloudBit Starter Kit

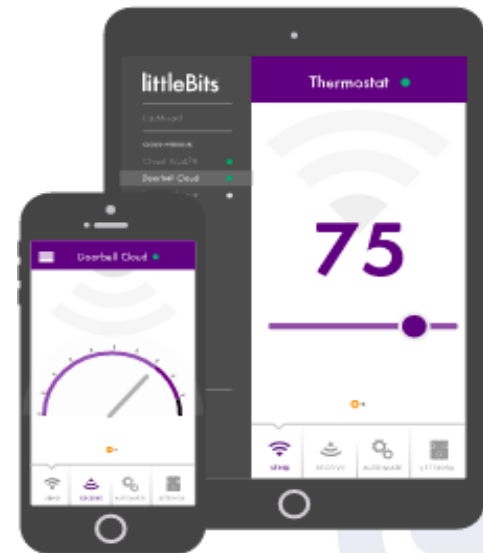


littleBits Cloud Control Platform

<http://control.littlebitscloud.cc/>



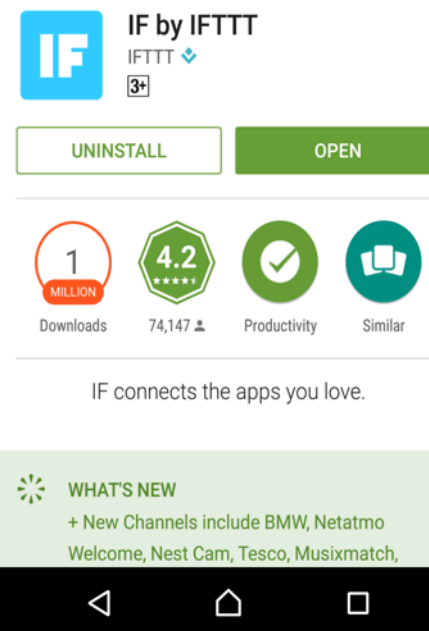
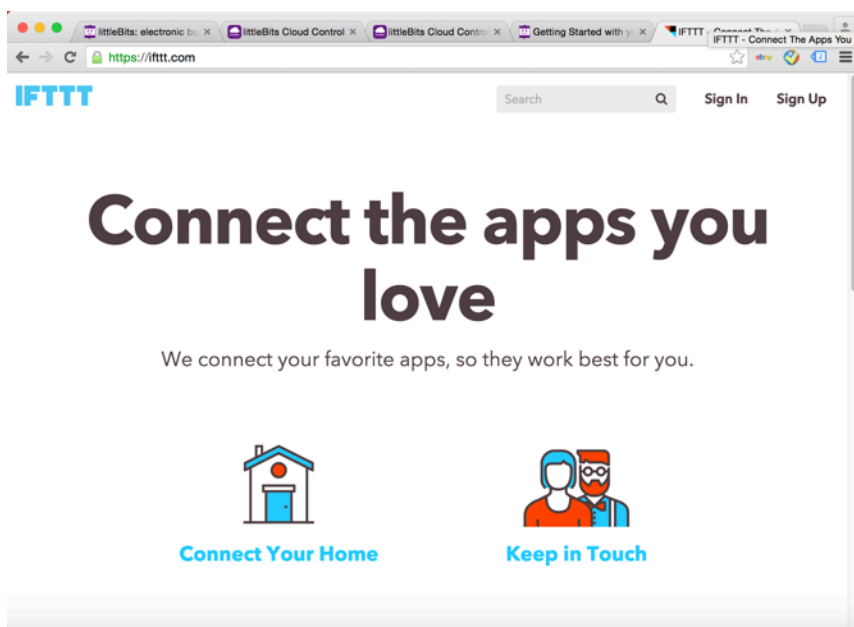
Cloud Control App





IFTTT App (for Android phone only)

IFTTT Website: <https://ifttt.com/>



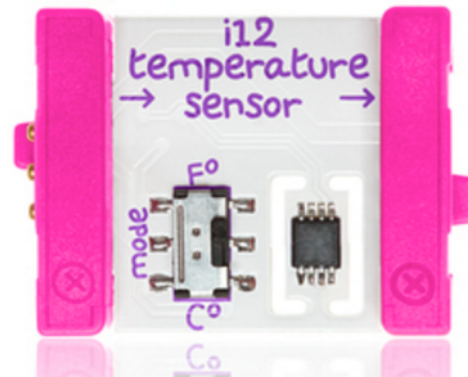
littleBits IR Transmitter



Energenie IR Power Plug



littleBits Sensors



Threshold

