



## BerryClip Module:





## **Contact Us**

**SINOVOIP CO., LIMITED**

**Company Add:5/F, Comprehensive Building of Zhongxing  
industryCity,Chuangye Road,Nanshan District,  
Shenzhen,Guangdong,China**

**Version: 1.0**

**Data: 2014.7.25**



## Shenzhen SINOVOIP CO., LIMITED Copyright Statement:

The document only describes the information about the product. However, it cannot guarantee the product function and performance. If the document content or the product feature and technical specification included in the document are changed, it will be notified further.

Content in the document might be outdated. Our cooperation cannot promise to update this information.

Some information in the document might be disabled in your local area, including product and service. You can consult with the contact and agency in your local area.

Copyright in the document belongs to Shenzhen SINOVOIP CO., LIMITED. Users can only use the content after they have obtained authorization from our company or other obligees. However, users cannot copy, paraphrase, or create similar devices or products.

The document's final right to interpret and use the document belongs to Shenzhen SINOVOIP CO., LIMITED.

### More information:

Get more product and support information, please contact Shenzhen SINOVOIP CO., LIMITED ([www.banana-pi.com](http://www.banana-pi.com))

### Attention:

Due to technical requirements of components, please do not touch directly connected core board and development system. These systems contain static-sensitive devices. Quiet electrical charges can easily accumulate in the human body, and the device cannot detect possible damage to equipment. It is recommended to take anti-static measures. It is recommended not to touch or store anti-static effect devices.





## Banana Pi Expand Module Serial:

### **Infinity cascade IO expand module:**

This module is designed specifically for the Banana Pi IO expansion modules. The module expand 32 IO, Multiple modules can cascade, infinity cascade, infinity GPIO.

### **I2C GPIO expand module:**

This module is designed specifically for the Banana Pi IO expansion modules. The Module use I2C bus to connect to Banana Pi. The module expand 8 Bidirectional GPIO and wit isolation protection function which can effectively excessive external voltage. There are 8 I2C address, you can choose one of them through setup the jumper. Multiple modules can cascade and maximum cascade 8 modules!

### **Prototype development module:**

The Prototype development module is designed specifically for the Banana Pi. The module suitable enthusiasts and user can weld peripheral to the module; The module expand some amphenol connector and some SMT, so the user can finish prototype test easily.

### **Berryclip expand module:**

The BerryClip module is designed specifically for learning how to use the GPIO of Banana Pi. There are 6 multiple color LED, 1 button and 1 Buzzer on the module.

### **Berryclip(DIY) expand module:**

The module is not the end product, you need weld them by yourself. The function of the module is the same as BerryClip module.

### **UNO compatibility module:**

The module makes Banana Pi compatible with Arduino Uno and many Arduino Shields. The module's GPIO is the same as Arduino Uno and you can choose the voltage of GPIO between 5V or 3V through setup jumper.

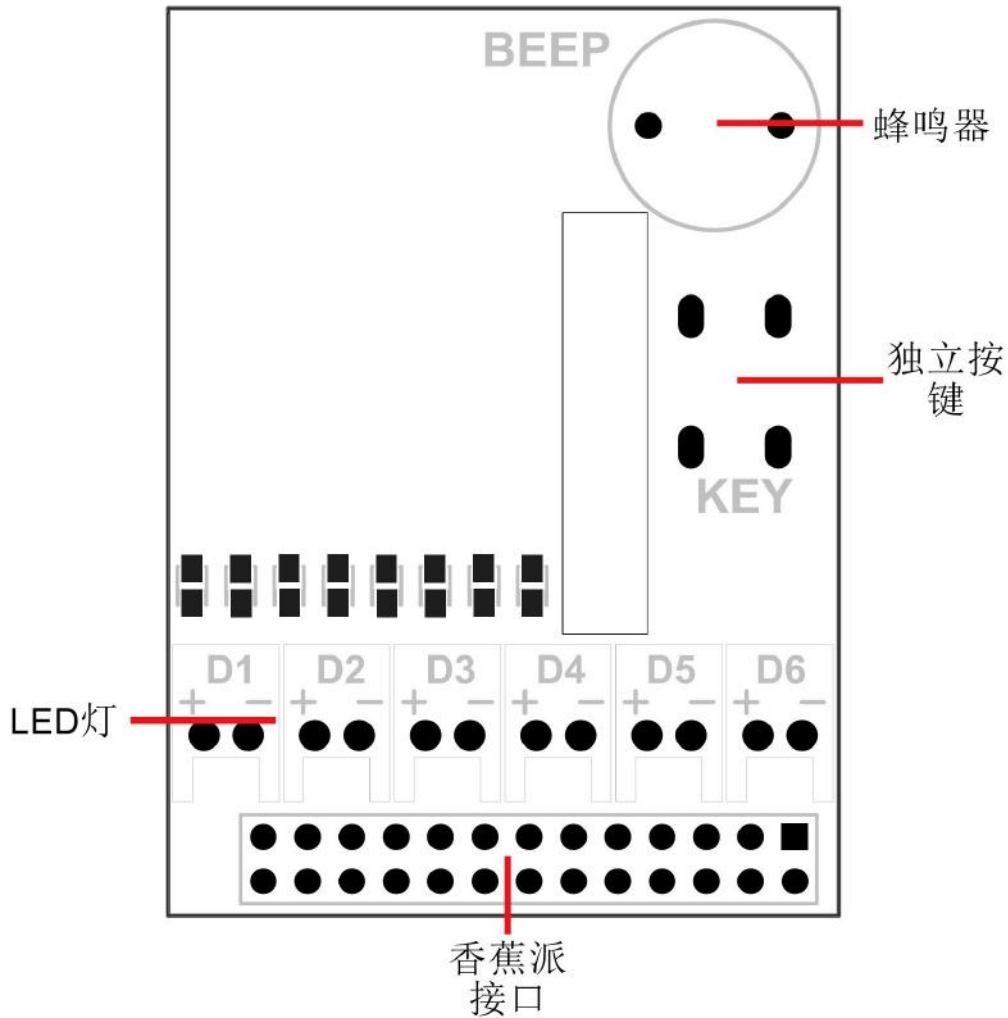
### **T Electric level convert module:**

The module expand the GPIO of Banana Pi to breadboard. It convert 3.3V electric to 5V electric level, then the Banana Pi can connect many 5V electric level peripheral.

### **IO extraction module:**

The module expand all of GPIO of Banana Pi to breadboard.

## Product specification



## Product Overview:

The module is designed specifically for learning control the GPIO of Banana Pi. There are 6 LED, 1 button and 1 Beep on the module; All of them can use the GPIO of Banana Pi to control. The beginner can learn the INPUT mode of GPIO through the key and learn the OUTPUT mode through the LED or Beep



### Product Feature:

- 6 multicolor LED
- 1 single button on board
- 1 Beep on board

### Port:

- BananaPi 2X13 port

### Product Parameters:

- Working voltage: 3.3V
- LED max current allow 8mA
- Beep max current allow 12mA

### Typical Application:

- Hardware beginner learning
- Education

### How to use:

Insert the BerryClip in the Banana Pi, Pay attention don't make the direction reversed!  
The correct direction of insert module is above the Banana Pi's PCB.

### Testbench:

- Setup the GPIO OUTPUT, Output LED High level, the LED will be lighten;
- Setup the GPIO INPUT, press the button;
- Test finish

### Example and Test Code:

```
#include <wiringPi.h>
#include <pcf8574.h>

int LED1[]={7,0,3,12,13,14};
int i;

int initIO()
{
    pinMode(7,OUTPUT);
```



```
pinMode(0,OUTPUT);
pinMode(3,OUTPUT);
pinMode(12,OUTPUT);
pinMode(13,OUTPUT);
pinMode(14},OUTPUT);
}

int LED()
{
    for(i=0;i<=6;i++)
    {
        digitalWrite(LED1[i],1);
        delay(500);
        digitalWrite(LED1[i],0);
        delay(500);
    }
}

int main()
{
    int val;
    wiringPiSetup();
    pcf8574Setup(200,0x27);
    initIO();
    pinMode(10,INPUT);
    digitalWrite(11,1);
    while(1)
    {
        blink();
        val=digitalRead(10);
        if(val==0)
        {
            LED();
            digitalWrite(11,1);
            i=0;
        }
        else
            blink();
    }
}
```