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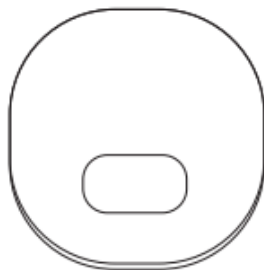
BRIGHT BEACON (Beijing) Science and Technology Ltd.

Beacon

Product manual

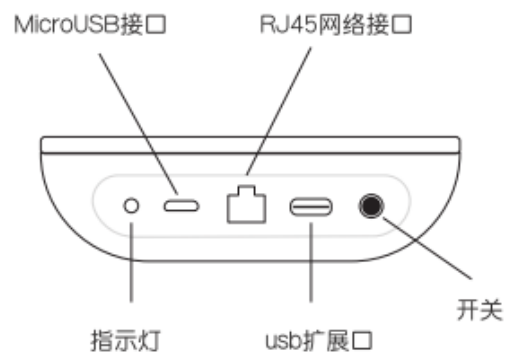
## I. Product introduction

Cloud beacon is a network sniffer based on iBeacon protocol. Through iBeacon and WiFi, to realize online iBeacon equipment information collection, at the same time, it can conduct online management on iBeacon base station in a certain range around. Support active and passive deployment, and realize the remote management and deployment, easy to collect data and information, so as to help enterprises to obtain more accurate data for marketing.



尺寸：106.87\*106.87\*24.31

重量：90g



尺寸:Dimension

重量: Weight

MicroUSB 接口: MicroUSB interface

RJ45 网络接口: RJ45 network interface

指示灯 Indicator light

USB 扩展口 USB extending port

开关 Switch

### 1.1 Hardware interface function description

Hardware interface	Mark	Function description
Switch	ON/OFF	Short press to ON/OFF

		machine (default by boot)
		Long press to reset (clear configuration file)
USB extending port	sensor	Support USB communication function extending port
RJ45 network interface		Support Ethernet cable interface
MicroUSB interface	5V 1A	Connect the power adapter to power a device

Note: When USB extending interface external connected with high-power device (USB EVDO), it is recommended to use 5V 2A power adapter for power supply of device, ensure the normal operation of device.

#### 1.2 Radio frequency information parameters

Bluetooth specification	Bluetooth smart 4.0
Bluetooth transmission power	20db
Signal receiving sensitivity	-106dbm
WLAN transmitted power	18db

#### 1.3 Background management page

Refer to CloudBeacon server-side user manual, see (II) below

#### 1.4 Indicator light state description

After device power on, light is slow flash, on for 500ms, off for 2s

WIFI working, light is normally on.

Bluetooth is scanning, light is slow flash, on for 500ms, off for 5s

Bluetooth connection is established, light is slow flash, on for 1s, off for 2s

Device is abnormal, light is quick flashing, on for 200ms, off for 200ms

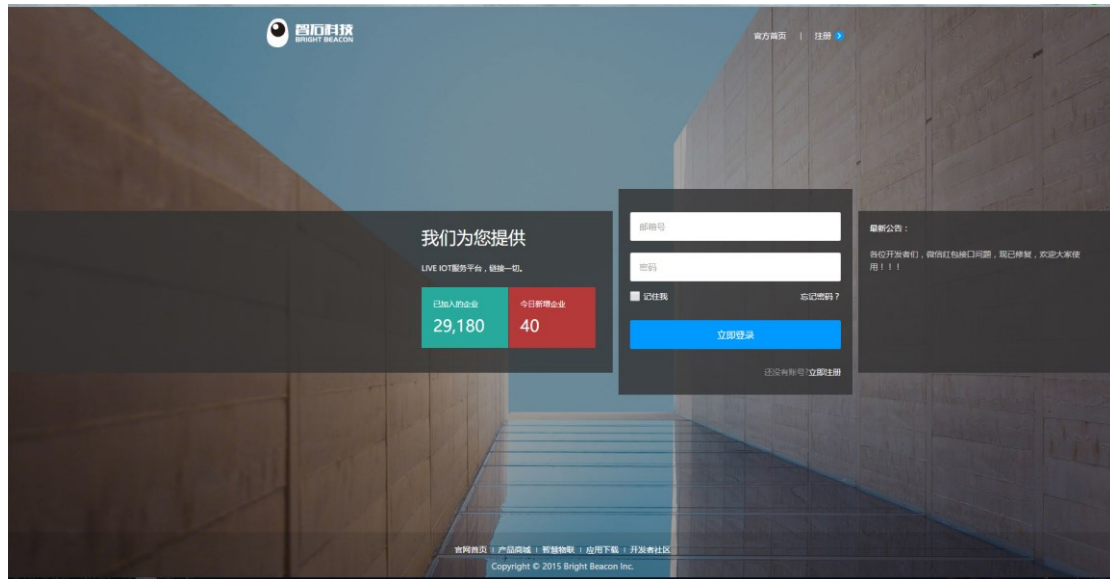
#### 1.4 Mobile phone software configuration procedure

Refer to CloudBeacon mobile terminal operating tutorial, see (III) below

### II. Service terminal user manual

#### 1. Register and login

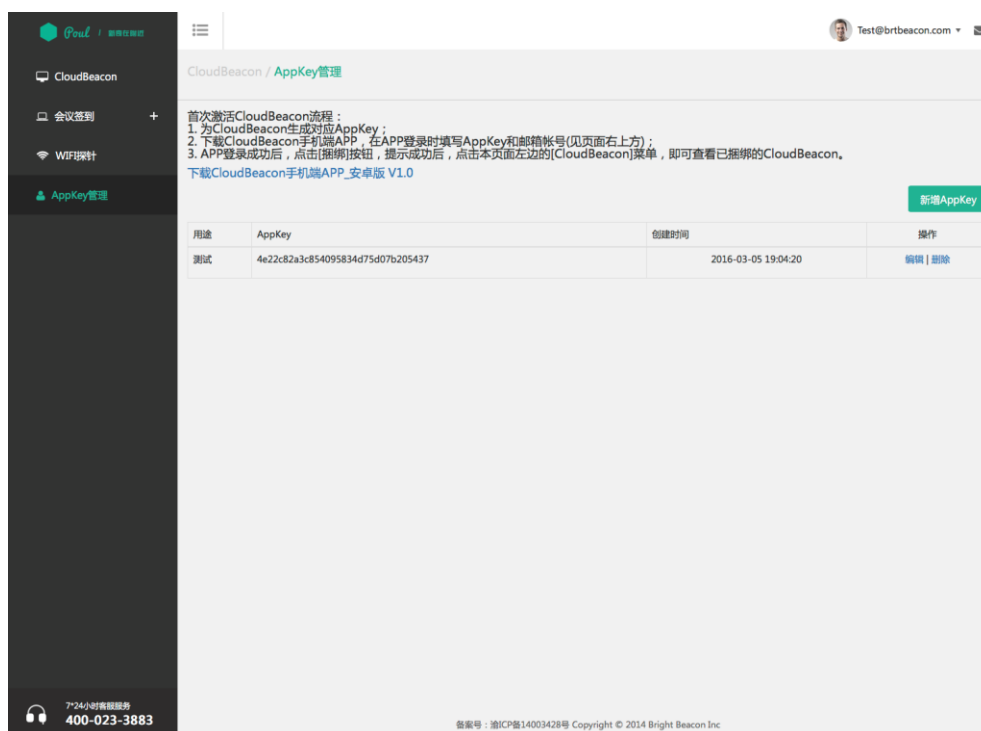
CloudBeacon management system login address is <http://cloudbeacon.brtbeacon.com>, it is recommended to use topspeed mode of Google browser however, QQ or 360 browser. If you do not have an account, please click the register link on top right corner. See Fig. 1-1



## 2. Binding CloudBeacon

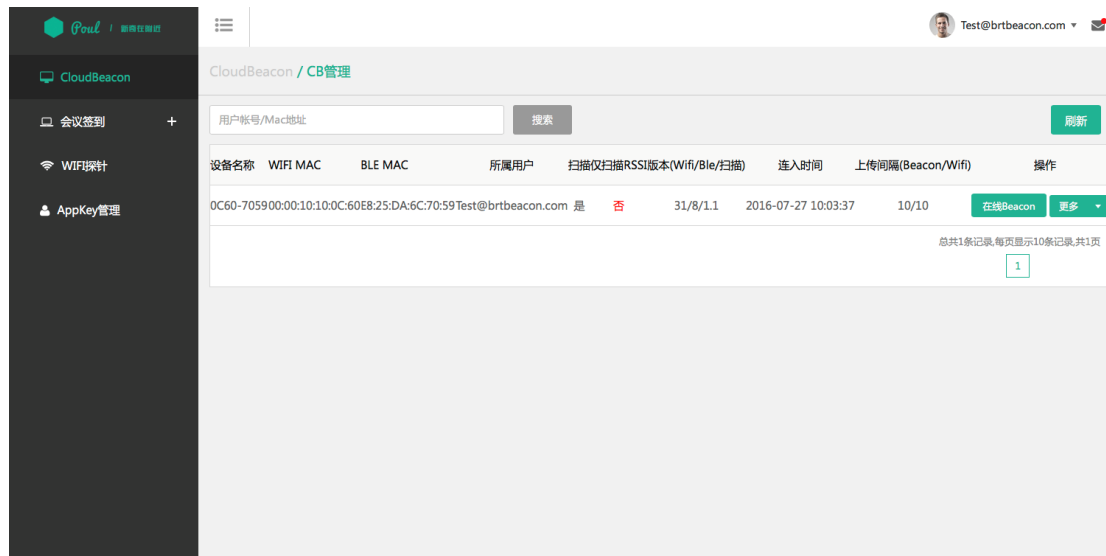
User login system for the first time, one needs to bind the purchased CloudBeacon to his own account, the system will show the bundled CloudBeacon. Bundled CloudBeacon process is as follows:

1. To generate the corresponding AppKey for CloudBeacon;
2. Download CloudBeacon mobile APP, when APP login, fill in AppKey and mail account (see the top right of page);
3. After APP success login, click [Binding] button, the prompt of success, click [CloudBeacon] menu on the left of this page to check the bundled CloudBeacon.



### 3. Management interface

After user login, there will list the bundled account CloudBeacon in CloudBeacon interface, see Fig. 3-1.



Click “On-line BEACON”, will list the current CloudBeacon scanning to Beacon device.

Click “More”, will pop up the following menu, see Fig. 3-2



**Start scanning:** after scanning starts, CloudBeacon will scan the peripheral Beacon device and Bluetooth, the store the scanned Beacon device information and Wifi probe data, and send them to CloudBeacon server, after CloudBeacon server received, it will show the Beacon device information on [On-line Beacon] function interface, and Wifi probe data will be shown on [Wifi probe] function interface.

**Data report configuration:** CloudBeacon will scan the data upload to cloudBeacon server in form of TCP mode, also can upload the scanned data to customer’s server in form of Http, upload the configuration parameter can also by this menu setting.

**Scanning device type:** in this menu, configurable CloudBeacon can scan the identified Beacon device type.

**Bluetooth setting:** in this menu, can configure CloudBeacon Bluetooth parameters.

**Unbundling:** user can unbundle the bundled CloudBeacon, after unbundling, this device will not be displayed in CloudBeacon list.

**Basic information:** display CloudBeacon basic information

List abnormal device: show Beacon device with electric quantity lower than 30%.

#### 4. On-line Beacon

In CloudBeacon list, click [online Beacon] button, will list the current Beacon device scanned by CloudBeacon, as shown below: (see Fig. 4-1)

<input type="checkbox"/>	设备名称	Mac地址	Major   Minor	RSSI	电量	固件类型	更新时间	操作
<input type="checkbox"/>	B-Plus	C4:2F:E5:3F:C9:5D	10041   57311	-44	100%	307	2016-07-27 16:18:45	<a href="#">配置</a>
<input type="checkbox"/>	BrtBeacon307	E4:08:2B:9E:F8:75	11166   64373	-54	100%	307	2016-07-27 16:18:45	<a href="#">配置</a>
<input type="checkbox"/>	BrtBeacon307	D4:9A:E3:F7:A:A4	58359   31396	-58	100%	307	2016-07-27 16:18:45	<a href="#">配置</a>
<input type="checkbox"/>	2016-2-23	E6:38:31:32:63:5F	12594   25439	-62	100%	307	2016-07-27 16:18:45	<a href="#">配置</a>
<input type="checkbox"/>	BrtBeacon307	F2:06:83:53:E8:4C	33619   59468	-68	100%	307	2016-07-27 16:18:45	<a href="#">配置</a>
<input type="checkbox"/>	B-AA	D3:76:6C:1B:7A:C4	54134   27675	-69	100%	312	2016-07-27 16:18:45	<a href="#">配置</a>
<input type="checkbox"/>	2016-4-13	C8:71:3F:A6:A5:80	121   131	-44	88%	304	2016-07-27 16:18:44	<a href="#">配置</a>
<input type="checkbox"/>	BrtBeacon307	EF:99:20:80:F6:20	8320   63008	-50	100%	307	2016-07-27 16:18:44	<a href="#">配置</a>
<input type="checkbox"/>	B-Plus	D2:C7:9B:A5:C2:DC	39845   49884	-50	100%	307	2016-07-27 16:18:44	<a href="#">配置</a>
<input type="checkbox"/>	B-AA	F8:51:82:E7:8D:61	45799   36193	-52	100%	312	2016-07-27 16:18:44	<a href="#">配置</a>

批量配置 刷新

总共58条记录,每页显示10条记录,共6页

1 2 3 4 5 6 >

Configuration: Click the information parameter of configurable Beacon;

View: if the Beacon type cannot be identified, then only view the information parameter of Beacon;

Batch configuration: To select multiple Beacon and configure the same parameters at the same time;

Unfinished configuration: in batch configuration, display the unfinished configuration of Beacon;

Finished configuration: in batch configuration, display the finished configuration of Beacon;

Search: According to the device name, Mac address, Major and Minor for fuzzy search.

##### 4.1 Single Beacon configuration

Click "Configuration" to configure single Beacon, as shown in the figure below (see Fig. 4-1-1)

The screenshot shows the '配置Beacon' (Configure Beacon) page in the CloudBeacon management system. The left sidebar contains navigation options: CloudBeacon, WiFi探针, and AppKey管理. The main content area displays configuration fields for a beacon named 'B-Plus'.

Configuration fields include:

- 设备名称 (Device Name): B-Plus
- UUID: FDA50693A4E24FB1AFCFC6EB07647825
- Major: 10041
- Minor: 57311
- 测试功率 (Test Power): -65
- 发射功率 (Transmit Power): 0dBm(80米)
- 发射间隔 (Transmit Interval): 0.80秒
- 广播模式 (Broadcast Mode): 仅广播Beacon数据
- 温度间隔 (Temperature Interval): 关闭
- 电量间隔 (Battery Interval): 1小时
- 光感间隔 (Light Sensing Interval): 关闭
- 光感休眠 (Light Sensing Sleep): 关闭

A '配置' (Configure) button is located at the bottom right of the form.

Fill in the Beacon parameters need to be modified, click [SAVE] button, the server will send Beacon parameters to CloudBeacon, CloudBeacon receives the parameters, will look up the corresponding Beacon configuration parameters, the whole process needs 10 to 60 seconds, after configuration complete, system will prompt success or failure information.

The screenshot shows the 'Beacon详细参数' (Beacon Detailed Parameters) page. It displays a table of parameters for a beacon named '0458-3560'.

参数名称	参数值	参数名称	参数值
Beacon设备的名称	0458-3560	Beacon设备次要版本号(Minor)	13664
Mac地址	C2:87:73:D0:35:60	地址类型	1
Beacon设备唯一标识(UUID)	E2C56D85DFFB48D28060D0F5A71096E0	Beacon设备广播信号强度(dBm)	191
广播地址ID	113,131	Beacon设备的名称	0458-3560
Beacon设备主版本号(Major)	29661		

The footer of the page includes the text: '版本号: 14003428号 Copyright © 2014 Bright Beacon Inc'.

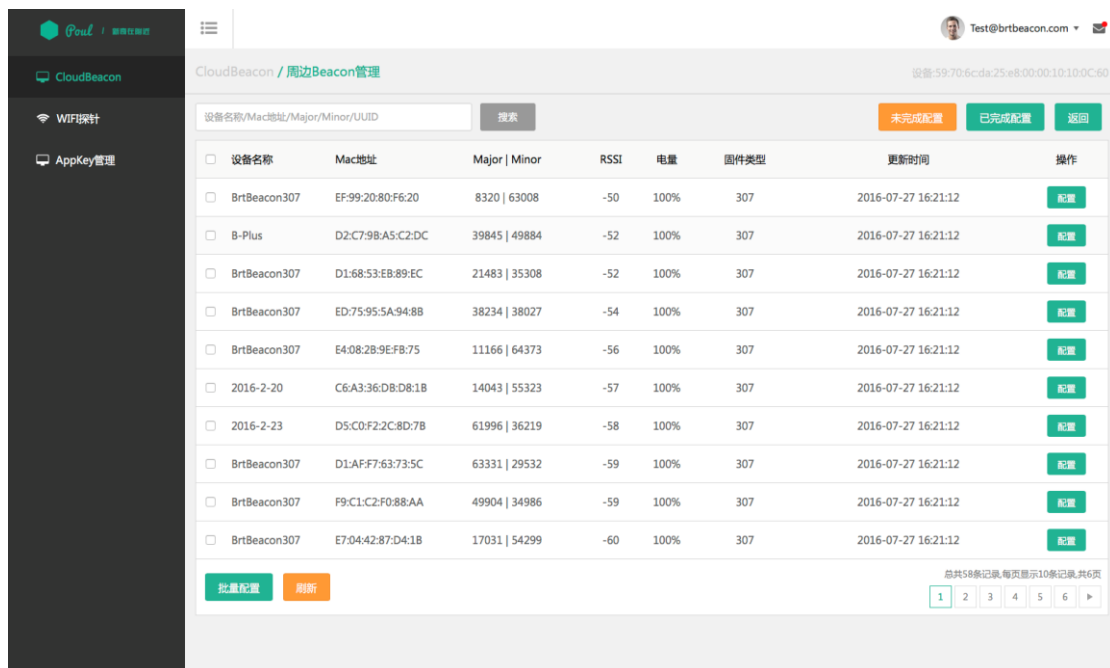
## 4.2 View Beacon parameter

If the type of the Beacon cannot be recognized, then the Beacon parameters cannot be configured, can only view the Beacon parameters, as shown in the figure below: (see figure 4-2-1)

## 4.3 Batch configuration

If a large number of Beacon need configuration, using single configuration function is very time-consuming; Use [batch configuration], can select multiple Beacon at the same time configure

the same parameters, is very convenient. As shown in the figure below (figure 4-3-1)



CloudBeacon / 周边Beacon管理

设备名称/Mac地址/Major/Minor/UUID

搜索

未完成配置 已完成配置 返回

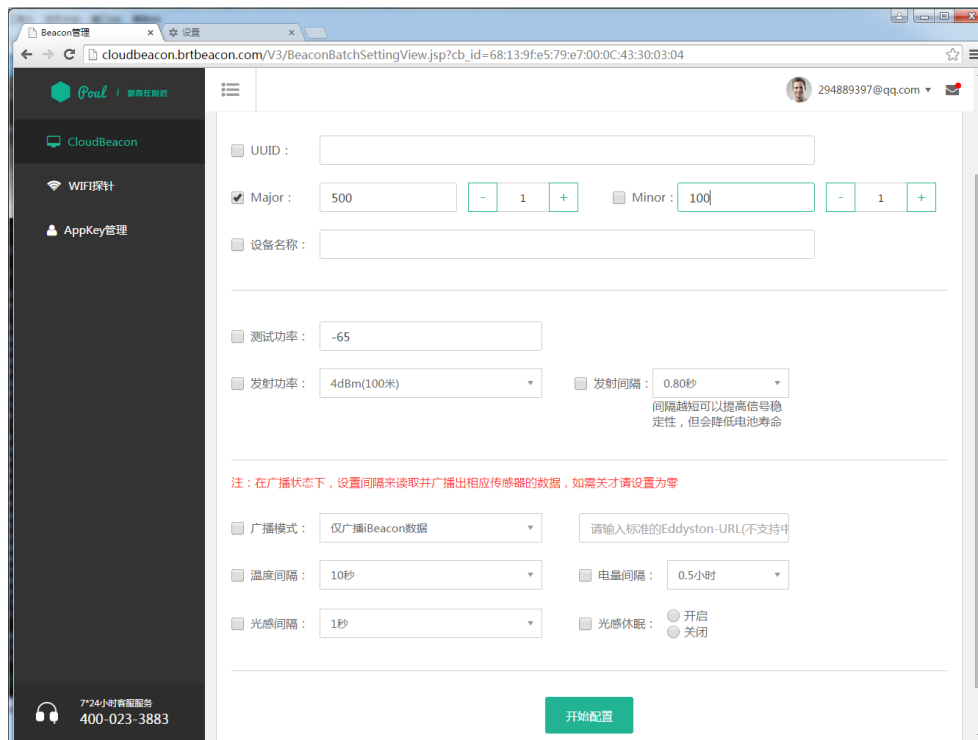
<input type="checkbox"/>	设备名称	Mac地址	Major   Minor	RSSI	电量	固件类型	更新时间	操作
<input type="checkbox"/>	BrtBeacon307	EF:99:20:80:F6:20	8320   63008	-50	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	B-Plus	D2:C7:9B:A5:C2:DC	39845   49884	-52	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	BrtBeacon307	D1:68:53:E8:89:EC	21483   35308	-52	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	BrtBeacon307	ED:75:95:5A:94:88	38234   38027	-54	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	BrtBeacon307	E4:08:2B:9E:F8:75	11166   64373	-56	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	2016-2-20	C6:A3:36:D8:D8:1B	14043   55323	-57	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	2016-2-23	D5:C0:F2:2C:8D:7B	61996   36219	-58	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	BrtBeacon307	D1:AF:F7:63:73:5C	63331   29532	-59	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	BrtBeacon307	F9:C1:C2:F0:88:AA	49904   34986	-59	100%	307	2016-07-27 16:21:12	配置
<input type="checkbox"/>	BrtBeacon307	E7:04:42:87:D4:1B	17031   54299	-60	100%	307	2016-07-27 16:21:12	配置

批量配置 刷新

总共58条记录,每页显示10条记录,共6页

1 2 3 4 5 6

Select the Beacon in configuration, and then click "batch configuration" and show the following configuration interface (as shown in figure 4-3-2)



Beacon管理

cloudbeacon.brtbeacon.com/V3/BeaconBatchSettingView.jsp?cb\_id=68:13:9fe5:79:e7:00:0C:43:30:03:04

294889397@qq.com

☐ UUID :

☒ Major :     ☐ Minor :

☐ 设备名称 :

☐ 测试功率 :

☐ 发射功率 :  ☐ 发射间隔 :

间隔越短可以提高信号稳定性,但会降低电池寿命

注:在广播状态下,设置间隔来读取并广播出相应传感器的数据,如需要才请设置为零

☐ 广播模式 :

☐ 温度间隔 :  ☐ 电量间隔 :

☐ 光感间隔 :  ☐ 光感休眠 : ☐ 开启 ☐ 关闭

开始配置

Before configuring the designated parameter, user needs to select the configured parameter,

☒ Major : configuring Major parameter for example, one needs to select Major parameter

, click button , can make Major and Minor increasing based on previous

Beacon.

开始配置

Click , system will submit the configuration for background processing automatically, then return to online Beacon interface. In online Beacon interface, can click

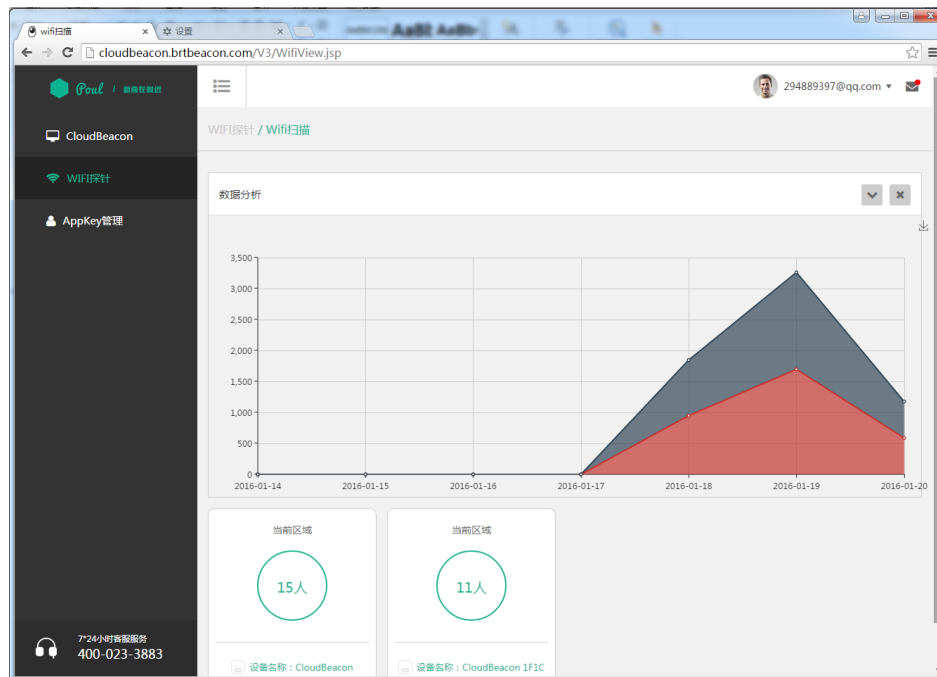
未完成配置

and

已完成配置

to view the configuration results.

## 5. WIFI probe (see Fig. 5-1-1)



## 6. Other configuration

Data report configuration (see Fig. 6-1-1)



Beacon管理

CloudBeacon

WiFi探针

AppKey管理

7\*24小时售后服务

400-023-3883

cloudbeacon.brtbeacon.com/V3/DataReportSetting.jsp?cb\_id=681339fe579e7000c4330304

294889397@qq.com

CloudBeacon / 数据上报配置

保存 返回

与智云服务器通信的配置信息

参数名称	参数值	参数名称	参数值
是否上传Beacon数据:	<input checked="" type="checkbox"/>	上传Beacon数据时间间隔(秒):	2
接收Beacon数据的地址:	cloudbeacon.brtbeacon.com	接收Beacon数据的端口:	55838
是否上传Mac数据:	<input checked="" type="checkbox"/>	上传Mac数据时间间隔(秒):	10
接收Mac数据的IP地址:	cloudbeacon.brtbeacon.com	接收Mac数据的端口:	55838

与客户端服务器通信的配置信息

参数名称	参数值	参数名称	参数值
是否上传Beacon数据:	<input checked="" type="checkbox"/>	上传Beacon数据时间间隔(秒):	2
接收Beacon数据的IP地址:	cloudbeacon.brtbeacon.com	接收Beacon数据的URL地址:	/upload/beacon/info
接收Beacon数据的端口:	8081		
是否上传Mac数据:	<input checked="" type="checkbox"/>	上传Mac数据时间间隔(秒):	10
接收Mac数据的IP地址:	cloudbeacon.brtbeacon.com	接收Mac数据的URL地址:	/upload/mac/info
接收Mac数据的端口:	8080		

Beacon管理

CloudBeacon

WiFi探针

Beacon类型

AppKey管理

7\*24小时售后服务

400-023-3883

cloudbeacon.brtbeacon.com/V3/BluetoothSettingView.jsp?cb\_id=3c75fc3cabxc0000c43303020

liyanyun4job@163.com

CloudBeacon / 蓝牙设置

保存 返回

参数名称	参数值	参数名称	参数值
设备名称:	BrtBeacon401	设备地址:	3C75FC3CABC0
UUID:	E2C56D85DFF848D2B06D0F5A7109E0	Major:	15612
Minor:	30012	固件类型:	1025
固件版本:	1	设备模式:	32768
测量信号强度:	-65	发送功率:	4
电池电量百分比:	100	设备温度:	19
广播间隔时间(毫秒):	100	温度检测间隔时间(秒):	3600
电量检测间隔时间(秒):	600	广播切换间隔时间(秒):	750
Eddystone URL地址:		设备KEY:	

备案号: 湘ICP备14003428号

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CloudBeacon basic information (see Fig. 6-1-3)



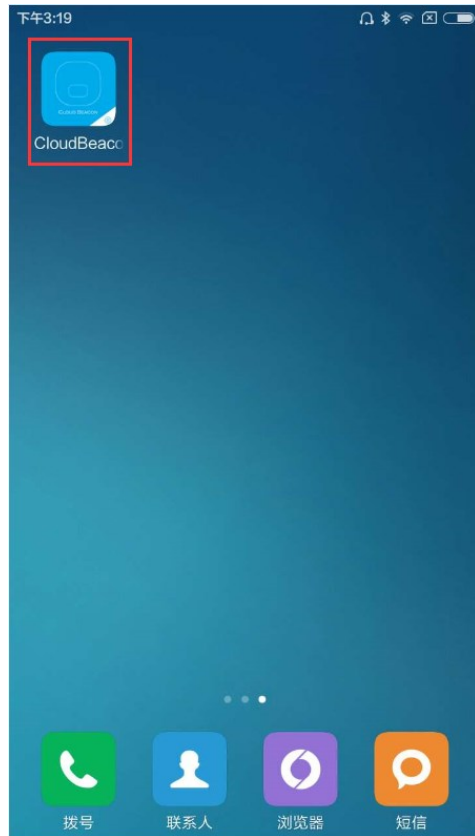
### III. CloudBeacon Mobile terminal configuration of network connection and binding

1. Power on CloudBeacon, CloudBeacon adopts Micro USB for power supply, it recommended 5V 1A power adapter for device power supply.
2. Download CloudBeacon configuration APP. Download link: <http://fir.im/cloudbeacon>, or log in CloudBeacon management background: <http://cloudbeacon.brtbeacon.com>, And download in Appkey management page.

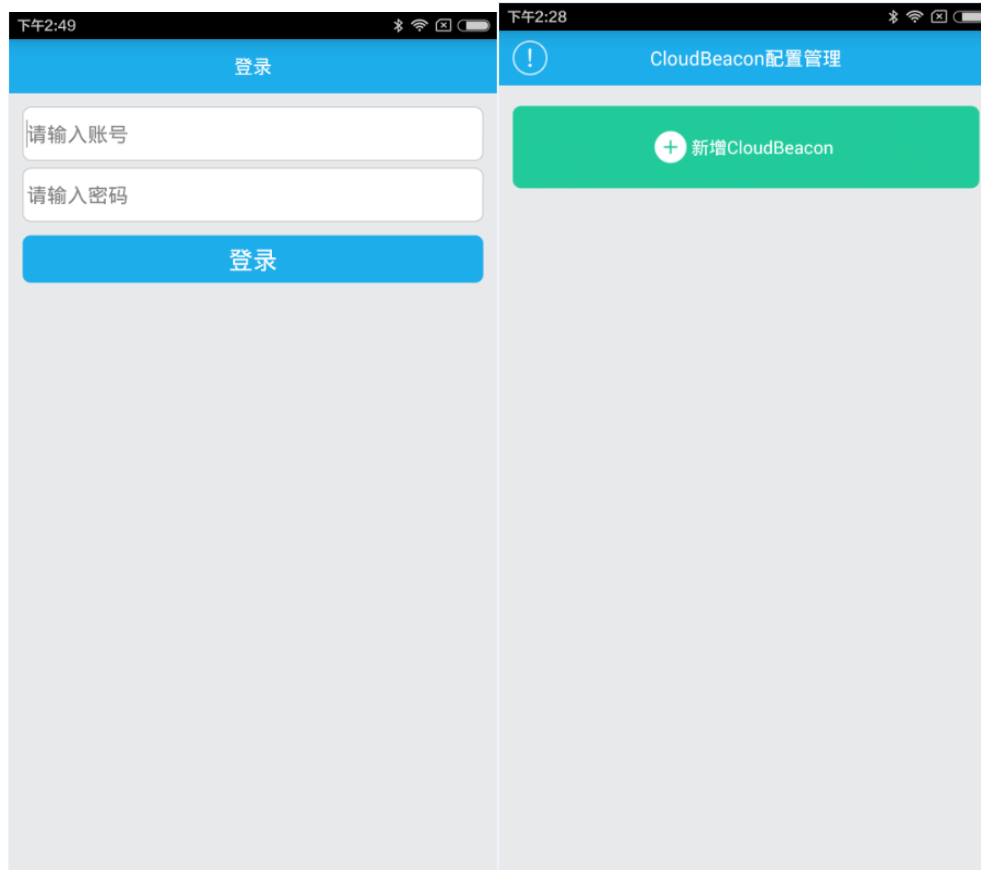


Scan 2D barcode to download

3. Connect the phone WIFI to CloudBeacon emission WIFI. Open the phone Settings function select WLAN, select CloudBeacon emitted WIFI in attachment WALN list, CloudBeacon emitted WIFI name is named by BRTXXXX, click to enter the password, default password is 12345678.
4. Turn on CloudBeacon configuration terminal APP, see Fig. 3-1-1



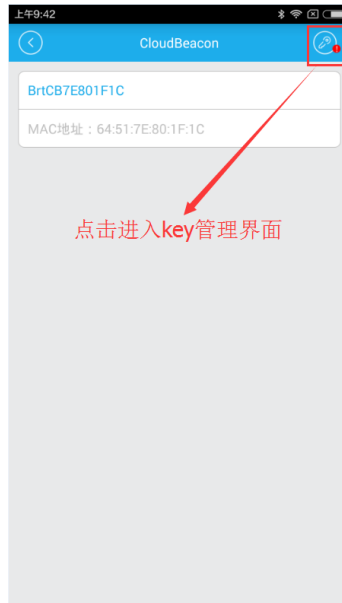
5. Enter the user name and password, the user name and password are the account and password of developer center (login function here is to record the user's accounts, but also have to enter the correct username and password, and will be validated when binding the device). As shown in figure 3-1-2
6. Add CloudBeacon, see Fig. 3-1-3

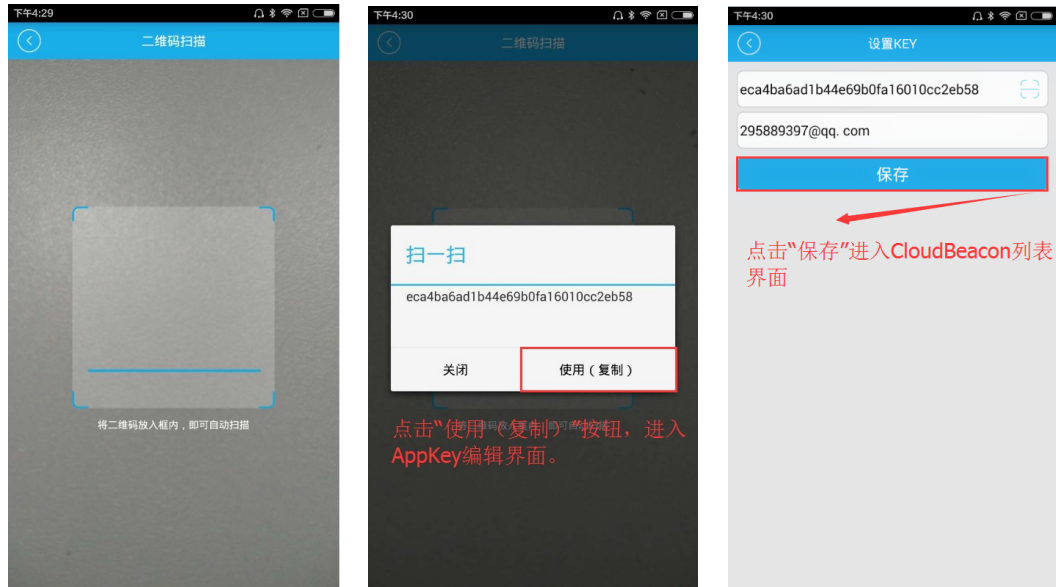


7. Choose online pattern. CloudBeacon provides two online patterns, respectively are limited connection and STA mode, limited connection refers to connect intent network cables from network ports, the STA mode refers to by setting to connect CloudBeacon connected to surrounding WIFI to get to the Internet, here we mainly illustrate the STA mode configuration. As shown in figure 3-1-4



8. Add APPKey, operation procedure as shown below:



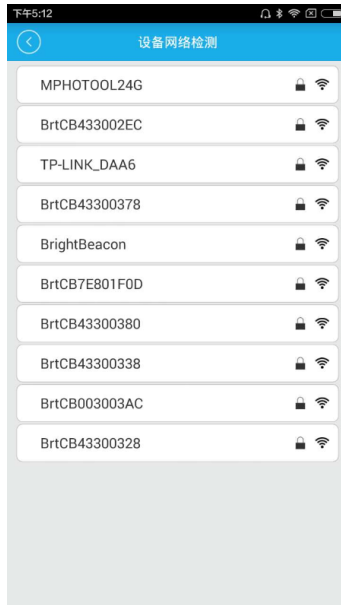
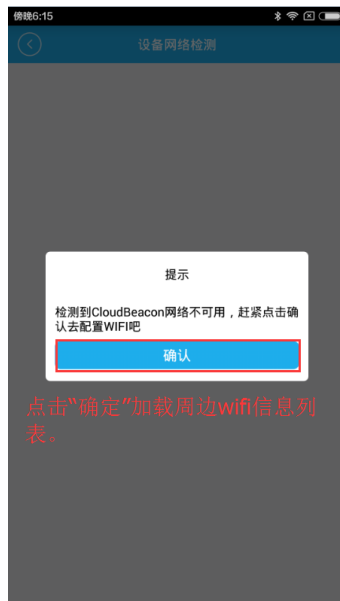


9. CloudBeacon list interface, see Fig. 3-1-4



Click CloudBeacon information to enter into available WIFI list surround CloudBeacon

- CloudBeacon surrounding WIFI management interface. After entering into CB surrounding wifi management interface, it will determine whether the CB is connected to network or not, if it is connected to network , then directly operate binding CB with user account, if it is not connected to network, then load the available WIFI list surrounding CB device (here mainly show operation without network connection).



## 11. STA mode CB binding with user

### a、Bind CloudBeacon binding

