

Add:6A-3CDE, Baoneng Science and Technology Park, Longhua district, Shenzhen 518109, Guangdong, China. Website: www.kkmcn.

KBeaconPro App Instruction

Revision History

Version	Date	Change Description	Author
V1.0	2017/11/12	Initial draft for KBeaconTools	Adam
V1.1	2018/02/23	Name updating	Adam
V1.2	2018/03/08	Updating iBeacon/Eddystone URL/Eddystone UID/Eddystone TLM configuration	Adam
V1.2	2018/03/27	Updating RSSI value setting	Adam
V2.0	2018/10/02	App Interface updating	Claire
V3.0	2019/10/15	Name updating&App Interface updating	Claire
V4.0	2021/07/06	Name updating&App Interface updating	Claire
V4.1	2021/11/24	Adding Power off and Reset function	Claire
V4.2	2022/06/15	Adding trigger and sensor function	Elaine
V4.3	2022/11/2	Adding Power Profiler function	Elaine

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1. Download KBeaconPro App

Download the App 'KBeaconPro' from iOS App Store or Android Google Play or scan the QR code below to down the App.



A mobile phone with *Bluetooth* 4.0 support is needed. For Android devices, Android version 5.1 or newer. For iOS devices, iOS version 10.0 or newer.

Reminder: This instruction uses Android App to demonstrate. The iOS App interface is slightly different from Android App.

2. How to connect KBeacon device to KBeaconPro App

Kindly note: Please make sure your KBeacon device is with battery already. Enable your smart phone Bluetooth and run the App 'KBeaconPro'.

2.1 Turn on KBeacon

 KBeacon with external or internal button (Including model K1/K11/K21/K23/K3/K4/K41/K4P/K5/K51/K5P/K6/K61/K6P/K7/K71/K8/K81/W59/F1/W3/W52/B1/B2 /S1/P2)

The factory setting of KBeacon with button is OFF.

Turn ON the device: Hold the button for 3 seconds, the LED starts flashing and the flashing lasts for 30 seconds. Turn OFF the device: Hold the button for 5 seconds, the LED starts flashing and flash 8 times.

• KBeacon without button (Including model K12/K15/K15A/K15L/W4/U1/K9/K91/K9P/W7/S2/P1)

The factory setting of KBeacon without button is ON. K12/K15/K9/P1/W7 does not support turning off the power.

K1/K11	K21/K23	K12	К3
0			
K4/K41/K4P	K5/51/K5p	K61/K6P series	K7/K71
		-	
K8/K81	K9/K91/K9P	W4	W59
			0
U1	F1	W51	W52
-	0		
W3	W7	B1	B2
0			\bigcirc
S1	S2	P1	W8

D	E.	
K15/K15A/K15L	Р2	
•		

2.2 Connect KBeacon

Let's use a K9P (MAC: DD3311000588) to demonstrate, the MAC ID is printed on the device:



• Method 1: Scan QR code to connect

Run KBeaconPro App, Find 'Scan QR code' on the App, and then scan the QR code on the device to find this KBeacon device quickly.

(Distance)	1000	Dwitten Specifi	Devic	e)	
Tart ett Mar	/~	Tax a set for	Elifera Marcititi T.M		49dBar Battery 101 Battery 101 Battery 101

Reminder: iOS App filter the device by Device Name when use the 'Scan QR code' method. If the device name is not KBPro, the device can not be found on iOS App when scan the QR code.

• Method 2: Scan the Bluetooth signal to connect

Run KBeaconPro App and tap 'SCAN' in the top right corner, the App can scan the device's Bluetooth signal, then the Beacon device will be displayed on the scan page.

Find the corresponding KBeacon device on the App according to its MAC ID, Tap it, it will start connecting and jump to the configuration page (see pictures below).

Sevices	870P	• Beacon Detail	
i.te edit.filite	, v	Typetterin birthe	
Beacon_164508	-79dBm	Descar Harse	- 28
BPyn_136307	Pattery:34%	Memory Power	
	Battery Bits	Power On Always	
Happ Hand Hang/rit	101	Modify gunswirth	
Bescon_134641 ac0033:16:00:01:50	-97dBm Battery:102%	Tâtel anmer	
Num Test	ALL OLD AND AND COULD	Tripper Gortmand	
AX0250	-75dBm	Ferrivare lipitate	
ac DD 34 80 90 14 94 Nadon Halt Statistics 149	Buttery:1025	Power Off	
Minut Mangdow		Reset Configuration	
Seacon_150219 w003334:1308A5	-83dBm Battery:94%	Power Profiler	
	nen cont nelle ener sitteren Traffic		
epp 34 81 82 2F A1	-91dBm		
	Buttery 1095. 4/20 4/20 4/20	Gamming Surray Surray	autry .
leacon_40598	-85dBm	Target States	

If there are too many devices found, filter by RSSI to find a certain Beacon quickly.

Put the KBeacon device close to your phone (within 10cm range). Slide the RSSI bar to set the RSSI value at -30~-40dBm, tap the arrow on the top right corner, then the nearest KBeacon can be found.

Devices	
Tap to Add film	
test Neve In Hacadeola	/
nuit	•
Kilepcon_7886	-87dBe
Max F3 RF 18 SE 1E CE	Esthery 1001
Alternor Antoritem	
Tangendier Hamming	10.01
KBeacon, 12644	-91dBm
Max:18 Gt E0 54 31 64	Battery:NU
TLM Statestern	784
INTERNET	1000010
1-1-a anna	atalagi Heldt (1
iBeacon Main Interna-	### 5751 6L/h 688/10/000

Devices	
-4000111	× v
KBPrn_136307 Mec:00:33:11:08:05:58	-24dBm Battery 693
Bascon Wein Hinnighe Maan Maan Aangi m	ina na n
confidential	

3. How to configure KBeacon

3.1 SLOT Definition

KBeacon supports total 5 SLOTs (SLOT0 to SLOT4). Each SLOT is independent and configurable. The Beacon type can be set for each SLOT. Beacon parameters such as Adv interval, Tx Power, Connectable enable/disable etc can be configured separately for each SLOT. They are independent of each other.

Each SLOT can be set to one Beacon type ONLY. For example, if you set SLOT0 to be iBeacon, set SLOT1 to be URL, set SLOT2 to be TLM, then the KBeacon device will broadcast iBeacon, URL and TLM simultaneously.

System (D	201 22 11 10 10 10 44
Model	10,00500
Hardware Version	112
Firmware Version	16.74
Beacon Name	
Manature Power	= >
Power On Always	>
Modify password	>
Tingger Command	>
Provivare Lipidate	>

General States States States States

KBeacon supports the following Beacon types:

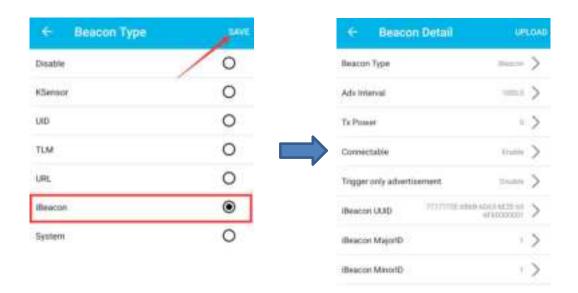
- iBeacon
- Eddystone URL
- Eddystone UID
- Eddystone TLM
- KSensor: KKM self-defined protocol, includes battery level and sensor information
- System: Including the KBeacon device info such as System ID (ie.MAC ID), Model name.

e Beacon De	ernil 197	LOAD	 Beacon Type 	- 58
езоол Туре	Encol	>	Disable	0
dv Interval	1992.0	>	KSensor	0
Power	à	>	UID	0
Mode	Lagary		TLM	0
ectable	OK.		URL	0
			Beacon	۲
er only advertiserne		S	System	0
8 - 1.W	(777730-4848) 4043 4023 43 (#4656000)	>		
B (3	>		
D	0.019			

3.2 How to configure iBeacon and Eddystone

(Take iBeacon as an example)

Tap: Beacon Type-> iBeacon-> Save-> Return



iBeacon parameters (UUID, Major ID, Minor ID, Adv Interval, Tx power etc.) can also be configured in the App.

Eddystone URL, UID, TLM, can be configured by the same steps above.

Reminder: After the parameters are modified, you need to tap: UPLOAD — > OK, then all the parameters configured can be loaded to the device successfully.

e Beacon D	etail 🔎	INAD
acon Type	Repaire	>
lv Interval	1002.4	>
Power	6	>
orinectable	Tradie	>
igger only advertisiem	et Double	>
Beacon UUID	777772E 50548 4043 4826 43 6F9D00007	>

3.3 How to configure KSensor and System

KSensor is KKM self-defined protocol, it includes battery level and sensor information (for example temperature&humidity sensor, acceleration sensor etc).

Tap: Beacon Type > KSensor > Save > Re	eturn
--	-------

← Beacon Type	BANC	 Beacon Detail 	- 04
Disable	0	Beacon Type	cleare
KSensor	۲	Adv Interval	1005.0
up	0	Tx Power	1
TLM	0	Adv Mode	Lapica
JRL	0	Connectable	360
Beacon	0	Trigger only advertisement	110
System	0	Sensor Axis	384
		Sensor H&T	-19

'System' can also be configured by the same steps above.

> > > > > >

N.

3.4 How to configure Trigger Command

Reminder: The Trigger Command function can be configured ONLY when the KBeacon device has a push button or has sensor such as accelerometer, temperature-humidity sensor.

Tap: Trigger Command—>Trigger Type

← Beacon Detail	a and a second sec	🗧 Trigger list		 Trigger Type 	(500)
Dystam tets	>	tragged	- ma > 1	Bul	۲
Bascol Name	instant, 3	Suggest	~~ >	Malten	0
Measure Power	- >	16pper2	~ >	Hold Button	0
Power Dn Ahropa	->	trapped	>	Button simple click	0
Modify password	->	hopper4	~ >	Button double click	0
T&H sensor	>			Button triple click	0
Trigger Communit	>	→		->	
Fernware Upstate	>				
Power Off	>				
Reset Configuration	>				
Power Problet	>				
General Marris Marris Marris	T 34271 44274				

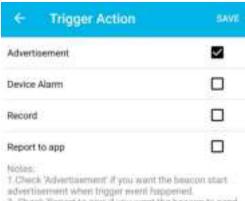
(Take 'Button single click' as an example)

Tap: Button single click—> Save—> Return

< Trigger Type	1999T	+ Triggerű	(6210	140
Nut	0	Trigger Type	Barrier angle state 👌	>
Moton	0	Trigger Action	1.3	ŝ
Hold button	•	Trigger Adv Skat	merro 🕽	5
Button single cilck	۲	Advertisement Change	HD)	5
Button double click	0	Trigger Adv Time		
Button triple click.	0	Ingger Adv Time	20	>

Return to the trigger page, and then you can see the trigger parameters such as Trigger Action, Trigger Adv Slot, Advertisement Change, Trigger Adv Time can be configured.

• Trigger Action: What the Beacon device would do when the trigger event happens



2. Check Report to appr if you want the beacon to send

a notification to app when trigger event happened

If set "Report to app", there will be a message notification displayed on the cell phone when the trigger event happens.



Trigger Adv Slot: Which SLOT the Beacon device would broadcast when the trigger event happens. For example, SLOT0 is set to be iBeacon, if 'Trigger Adv Slot' is set to be SLOT0, then when the Beacon button is single clicked, the Beacon will broadcast iBeacon.

← Trigger0	UR	LOAD	🗧 Trigger Ad	v Slot Sav
Trigger Type	Batteri alegia i datt	>	sker0	۲
Digger Action	Methoda	>	Skyt1	0
Rigger Adv Slot	3640	2	Sket2	0
dvertisement Change	Itudie		Slut3	0
Trigger Adv Time		>	Shot4	0

• Advertisement change: When this feature in ON, the UUID will change when trigger event happens



• **Trigger Adv Time:** The Advertisement duration when trigger event happens

٠	Trigger Adv Time	SAVE
30		
	Vertisement duration when trigger d, the range is 2-7200 and the uin	

• **Trigger only advertisement:** When this feature is set to be 'YES', this slot will be broadcasted only when the trigger happens.

For example. If you set 'Trigger Adv Slot'of 'Button single click' to be SLOT0, and SLOT0 is iBeacon, then iBeacon will be broadcasted only when the button single click happens

← Beaco	on Detail	(ue	LOAD
Beacon Type		illeacan	>
Adv Interval		1000.0	>
Tx Power		0	>
Adv Mode		Legicy	>
Connectable		09	>
Trigger only adver	tisement	NO	>
UUID	7777725-6666	6F6000001	>
MajoriD		2	>
MinorID		\$235	>

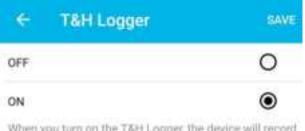
3.5 How to configure Sensor

For some KBeacon models with sensor, parameters can be configured.

Temperature & Humidity Sensor (K23/K6P/K6PS/K6PB/K6PT)

 Beacon Detail 	HECOAD	T&H sensor	. UPCOM
System Info	>	T&H Logger	
Beacon Name	WINTYN_2288807 >	Measure interval	- >
Measure Power	= >	Temperature change log threshold	• >
Power On Always	ю >	Humidity change log threshold	= >
Modily password	>	History data	>
T&H sensor	>		
Trigger Command	>		
Firmware Update	>		
Power Off	>		
Reset Configuration	>		
Power Profiler	>		

threshold you set.



When you turn on the T&H Logger, the device will record when the temperature or humidity change exceeds the specified threshold.

T&H Logger: When this feature is on, the device will record when temperature/humidity change exceeds the

Measure interval: Time interval for measuring temperature and humidity.

÷	Measure interval	SAVE
3		
Notes 1	the valid measurement interval ranne	ie 1 - 200

Temperature / Humidity change log threshold: If you set a value (take 5 as an example, it means 0.5 Celsius), the device will save the record if the difference between the current temperature / humidity and the last saved temperature / humidity greater or equal than 0.5 Celsius.

÷	Temperature change lo	SAVE
5		
5	the valid range is from 0 ~ 200, and the u	nia in O

Celsius. The device will save the record if the difference between

the current temperature and the last saved temperature greater or equal then this threshold.

History data: The data can be loaded or cleared.

6 T&H	history	(EXPORT E
2022-06-16 18:0	9:19	Temperature: 29.8610 Humidity: 70.311
2022-06-16 18:0	7:96	Temperature: 30.05*0 Humidity: 67.04%
2022-06-16 18:0	4:19	Temperature: 30.2*0 Humidity: 70.14%
2022-06-16 17:5	6(31	Temperature: 29.7910 Humidity: 71.45%
2022-06-16-17:5	4:19	Temperature: 29.5°C Humidity: 74.47%
2022-04-16 17:5	3.22	Temperature: 29.0510 Humidity: 74.841
2022-06-16 17:5	1.91	Temperature: 29.1910 Humidity: 71.25
2022-06-16 17:4	9:31	Temperature 29.6610 Humidity: 69.17%

Load All	T&H histo	÷
Clear	6-16 17 53:22	2022-0
Humidity: 74.54%		
Temperature 29.1910	6-16 17:51:31	2022-0
Humidity 71.2%		
Temperature: 29.66°C	6-16 17:49:31	2022-0
Humidity 69.17%		
Temperature: 29.89°C	6-16 17:38:39	2022-0
Humidity 72.2%		
Temperature: 29.65°C	6-161724:45	2022-0
Humidity: 69.19%		
Temperature: 29.77°C	616172129	2022-0
Humiday: 72.11%		
Temperature: 29.63°C	6-16 17:16:29	2022-0
Humidity: 69.15%		
Temperature: 29.31°C	6-16 17:01:15	2022-0
Humidity: 72:185		

Notes, the valid measurement interval range is 1 ~ 200, and the unit is second

Trigger Command: The feature and setting is same as 3.4 except "Temperature threshold" in "Temperature/Humidity above/below". If you set a value (take 60 as an example, it means 6 Celsius), when the temperature is above 6 Celsius the trigger event happens.

		and a surprise of the second	and the second	+ Trigger list	
mare arts	>	Trigger Type	~ >	Triggerti	164
acce Name	101-0.2000 >			Tiquet	
onuin Preim	- >			Tigged .	
war Gr Alvaya	= >			Tropett	36
affy password	->			Trigger4	100
Camina	2				
ger Command	>				
revent Lijulate	>				
ut Solfganter	5				
an frather	>				
	ante auto		 Trinner0 	11P	LOAD .
← Trigger-T			Trigger0 Trigger Type	UP Temperatum above	
€ Trigger T					
C Trigger T ut		0	Trigger Type	Temperatum Above	>
Trigger T ut ation		0	Trigger Type Trigger Action	Temperatum above	> > >
Trigger T ut lation emperature above emperature below		0 0	Trigger Type Trigger Action Trigger Adv Slot	Temperature above 1 do.0715	> > > > > > >
← Trigger T		0 0 0	Trigger Type Trigger Action Trigger Adv Slot Advertisement Change	Temperature above 1 <u>010775</u> ND	> > > > > > > >
Trigger T ul at			Trigger Type Trigger Action Trigger Adv Slot Advertisement Change Trigger Adv Time	Temperatum above 1 dLOTO NO 30	> > > > > > >



Notes, the valid range is from -50 ~ 1000, and the unit is 1Celsius.

• >
>
= >
>
• >
- >

Click "Save" and return, then click "Upload".

• Cutoff Sensor (S1)

100	Beacon Detail	UPLOAD
Rysterr	into	>
leacor	Name	sama, 2002 🗲
leasu	re Power	- >
0WIE	On Always	>
lodify	paseword	>
utatt	sensor	>
ligger	Command	>
imwa	ere Update	>
wier	on	>
iset (Configuration	>
iwer	Profiler	>

÷	Cutoff sensor		OĄI
	VeriodD	(10.00) - 00.00	>
Osuble P	Seriod1.	00.60 - 00.04	>
Disable F	Period2	10:00 - 90:09	>
History d	ate		>

Cutoff 0 means S1 is installing well and closed;

Cutoff 1 means S1 is installing well and opened;

Cutoff 2 means S1 is not installing well and closed, the black button (at the bottom of the device) didn't press down;

Cutoff 3 means S1 is installing well and opened, the black button didn't press down.

Beacon Name

Measure Power

Power On Always

Modify password

Trigger Command

Firmware Update

Reset Configuration

18,010

10.00

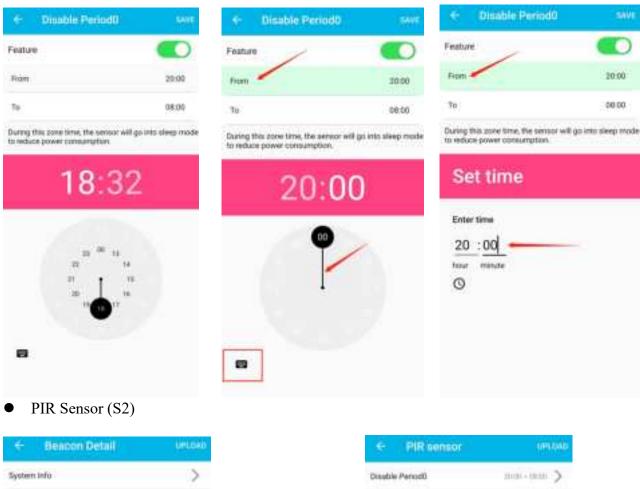
Power Profiler

Derrotal

Power Off

PH antikar

Disable Period: When this feature is on, you can set the time period of sleep mode by turning the hour hand and minute hand, or input the time through the keyboard.



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91174

← PIR sensor	EPI DAL
Disable Period0	
Disable PeriodT	
Disable Period2	
History data	>



The configuration is same as "Cutoff Sensor".

NAMES.

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10.071

KKM Co.Ltd

3.6 How to evaluate battery life

KBeaconPro supports evaluating the battery life of beacon according to the configured parameters.

+ Beacon Detail	101.040	 Battery life eval 	untion
lystem krto	×	Battery voltage	
soon Name		Battery capacity	
nesure Power	- >	Adv starsby	
over On Ahnaya	~ >	Adv Skot (0)(KSerray))	
odły pasowert	- >	Are standby	
Sit sensor	>	Azz Azis Adv(trigger falles)	
ngger Dommand	>	H&T standby	
www.ane.Update	>	H&T Measure(Interval 2)	
over Off	>	Summary	
weet Configuration	>	Average current	1040
tower Pholiter	>	Battery afficiency	
		Estimated bottery life	

Average current: The average current of the device is based on the current configuration parameters, and is calculated after the device is powered on for 30 seconds for current stabilizes. The average current does not include power consumption by trigger broadcasting. Also, it does not include the power consumption when the device was connected.

Battery efficiency: Usually the battery capacity is based on the ideal 1mA discharge model at room temperature. In actual use, the capacity of the battery is related to temperature, current and self-discharge. We recommend 75%.

Estimated battery life: Estimated battery life = Battery capacity * Battery efficiency/ Average current/24(hours)/30(days)

3.7 How to configure Adv Mode

For some KBeacon models that support BLE5.0 long range feature, 'Adv Mode' can be configured.

- Legacy: BLE 4.0 advertisement
- **PHY Code:** BLE 5.0 long range feature
- **PHY 2Mbps:** BLE5.0 broadcasting at a rate of 2Mbps

KBeaconPro App can detect which Adv Mode your phone support (Only supported on Android phones).

Adv Mode Lepers > Code 1
Adv Interval Tx Power Tx Power Adv Mode Legety > PHY 2 Tx Power Tx Dop Tx Dop Tx Dop T
Adv Mode Lapace > Code ref
Adv Mode Legacy > Code refe
10 BL F5.0
Connectable ON > Early a my
Trigger only advertisement no >
UUID TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
MajoriD v >
MinoriD anta >
Trigger by Mutan

Reminder:

Please make sure that your phone supports BLE 5.0 PHY Code(Long range) feature, otherwise you will not be able to scan the PHY code advertisement if the Beacon was set to PHY Code(Long range) Mode.

If you set the Beacon to PHY code advertisement, and your phone doesn't support PHY Code broadcast, you can force the device to enter the Legacy mode for 30 seconds by single click the button of the device.

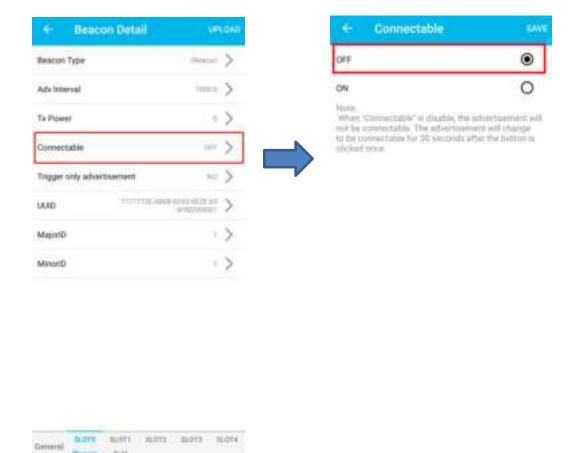
4. Other settings

4.1 Unconnectable mode

Each SLOT has two different advertising status, connectable mode and unconnectable mode. Only when the advertising status is connectable, the KBeacon is configurable. But the unconnectable mode saves about 10% -20% power consumption than connectable mode.

After the KBeacon is deployed, we recommend setting the KBeacon to be unconnectable mode. This can lower battery power consumption and the Beacon also have better security performance.

How to set unconnectable mode: Tap: Connectable -> OFF --> Save --> Return --> UPLOAD.



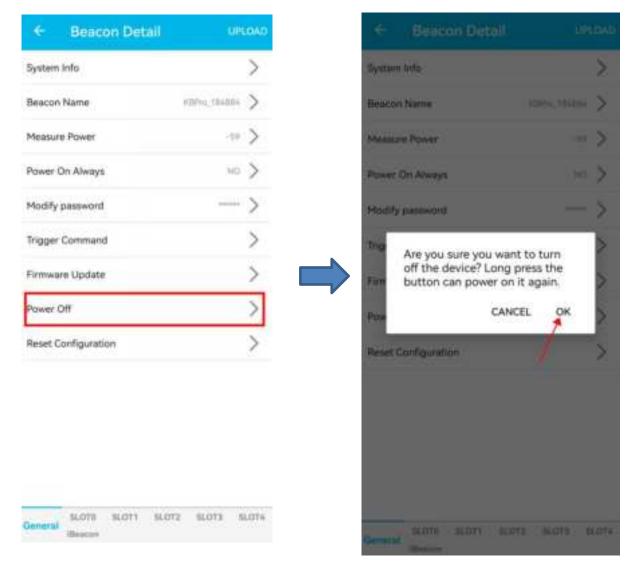
Question: How can I configure KBeacon again if it was set to be unconnectable mode?

- For KBeacon with button: click the button, the Beacon will enter a connectable mode for 30 seconds, users can connect the device within these 30s. Or re-install battery.
- For KBeacon without button: Re-install battery
- Reminder: For the KBeacon device that doesn't have button and whose battery can not be re-installed, once the device was set to unconnectable mode, it can not be confirgured any more!

4.2 Power Off

For KBeacon device WITH BUTTON, you can use the App to turn off the device.

Tap: Power Off—> OK



4.3 Reset configuration

You can reset the KBeacons setting to factory default configuration on the App.

Tap: Reset configuration—> OK

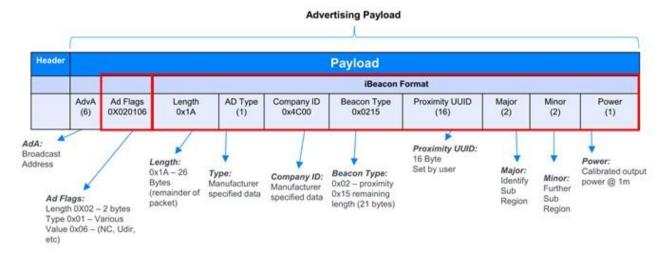
← Beacon Detail	UP	OAD
System Info		>
Beacon Name	43970,184884	>
Measure Power	598	>
Power On Always	NO	>
Modify password		>
Trigger Command		>
Firmware Update		>
Power Off		>
Reset Configuration		>

🗧 Bencon Dotal	
System into	2
Beacon Isame	644, 1880 S
Measure Power	->
Pawer On Always	>
Modify passeord	->
Trig Are you sure you want to Fim all configuration?	reset
CANCEL	OK >
Paset Configuration	S.
General BLOHL SLOTT SLOTT	8.001 - 8.07A

General	store	31071	SLOTE:	01,010	01,074
	ibeacore				

5. KBeacon payload

• iBeacon payload struct



How to calculate distance from iBeacon signal:

Formula:

distance = $10^{((abs(RSSI) - abs(Calibrated Power)) / (10 * n))}$

And:

- RSSI: received rssi on phone
- Calibrated Power: Calibrated power at 1 meters
- n: environment factor, typical value is 2.0

• Eddystone payload struct

Advertising Payload

Header							Payloa	d				
			1				Eddyste	one Beacon F	ormat			
	AdvA (6)	Ad Flags 0X020106	Eddystone ID 0x0303AAFE	Len (1)	Ad type 0x16	UUID 0xAAFE	Frame type (1)		Fr	ame-specific	Format	
	AdvA (6)	Ad Flags 0X020106	Eddystone ID 0x0303AAFE	Len (1)	Ad type 0x16	UUID 0xAAFE	Frame type (1)	Tx Power (1)	URL Scheme (1)		Encoded URL (up to 17 bytes	
	AdvA (6)	Ad Flags 0X020106	Eddystone ID 0x0303AAFE	Len (1)	Ad type 0x16	UUID 0xAAFE	Frame type (1)	Tx Power (1)		NID (10)	BID (6)	RFU (2)
	AdvA (6)	Ad Flags 0X020106	Eddystone ID 0x0303AAFE	Len (1)	Ad type 0x16	UUID 0xAAFE	Frame type (1)	TLM (1)	VBATT (2)	TEMP (2)	ADV_CNT (4)	SEC_CNT (4)

URL – Physical Web

UID – Broadcasts Unique beacon ID

TLM – Broadcasts telemetry (health and status)

• KSensor payload struct

1. The advertising data packet of KSensor is defined by KKM. Please refer to the following table for details.

Offset	Length	Туре	value
0	1byte	AdvA	0x6
1	3byte	AdvFlags	0x020106
4	4byte	ID	0x0303AAFE
8	1byte	Length	
9	1byte	Adv type	0x16
10	2byte	UUID	0xAAFE
12	1byte	Frame Type	0x21
13	1byte	Version tag	0x1
14	1 byte	Sensor mask	0bit: voltage; 1bit:temp 2bit: humidty 3bit: acc 4bit: cutoff 5bit: PIR indication 6~7bit: reserved
15	2byte	Voltage	big-endian battery voltage, unit is mV
17	2byte	Temperature	Exist if temp bit set 1. Temperature, Fixed Point 8.8 format
19	2byte	Humidity	Exist if humidty bit set 1. Temperature, Fixed Point 8.8 format
21	2byte	Acc axis X pos	Exist if acc bit was set 1. big-endian axis X, unit is mg
23	2byte	Acc axis Y pos	Exist if acc bit was set 1. big-endian axis Y, unit is mg
25	2byte	Acc axis Z pos	Exist if acc bit was set 1. big-endian axis Z, unit is mg
27	lbyte	cutoff flag	Exist if cutoff bit was set 1. bit0: 1 device was cutoff bit1: 1 device was plug, 0 normal
28	1byte	PIR flag	Exist if PIR indication bit was set 1. 1: The human body is detected

Remark:

- The uint of battery is mV. For example, if the VBATT is 3270, it means the battery voltage is 3270mV;
- Temperature. 2 bytes Fixed Point 8.8. The format is same as temperature in Eddystone TLM.

• Humidity. 2 bytes Fixed Point 8.8. The format is same as temperature in Eddystone TLM.

The Fixed Point 8.8 format: http://people.ece.cornell.edu/land/courses/ece4760/

Example for KSensor Data. Android app: NRFConnect

= Devic	es				SCAN	1
SCANNER	BON	DED	AĐ	VERTISER		
-72 dBm					*	×
NOT BON	DED	. ∦ -51 8	lim	↔103 m	8	
C N/A		20		C	ONNECT	
5E:4D:EF: NOT BON	1000	c 	0m	618i/A		-
KBeacor	179	(Eddysto	ne")	ONNECT	:
DD:34:01:	222.2.2.2.	· · · · · · · · · · · · · · · · · · ·	the second			
NOT BON	2.7585	#:62d	0(1)	17 000		
Device typ		10.0				
Advertisir	TO ALCON		Die	drNotSupp	battad	
101-1128 (101-112) 0.0				UIDs: 0xFI		
Eddystory					Crot	
Frame typ Data: 0x0	e: Unkn	own <0x2	1≥			
Service D	ata: UUII	D: 0x2080	Dat	a: 0x6C010	00000B	3
Complete	Local N	lame: KBe	acor	1_179		
		CL	ONE	RAV	MO	RE

2. System advertisement Data Format

The advertising data packet of System is defined by KKM. Please refer to the following table for details.

Offset	Length	Туре	value
0	1byte	AdvA	0x6
1	3byte	AdvFlags	0x020106
4	4byte	ID	0x0303AAFE
8	1byte	Length	
9	1byte	Adv type	0x16
10	2byte	UUID	0xAAFE
12	1byte	Frame Type	0x22
13	1byte	Model ID	Device model ID

14	1byte	Battery	Battery Precent	
15	6byte	Mac address	big-endian	
21	2byte	Software version	big-endian format. For example if the value is 0x0632, then version is V6.49	

Model ID define:

- K1: 10
- K11:11
- K12: 12
- B1: 13
- U1:14
- F1: 15
- K18: 18
- K15a: 16
- K15:19
- S1: 17
- K21:21
- B2: 22
- K21u:25
- S2:26
- K23: 23
- K23p: 24
- K3: 30
- W3: 38
- K4: 40
- K41:41
- K4u: 45
- W4: 48
- K4p: 47
- K5: 50
- K51: 51
- W52: 52
- K5p: 57
- K5pt: 58

- K6: 60
- K61:61
- K6p: 67
- K6pb: 68
- K6ps: 69
- K7: 70
- K71: 71
- K7u: 75
- W7: 78
- K8: 80
- K8u: 85
- W8:86
- W8u:87
- K9: 90
- K91:91
- K9P: 97
- K9Pb: 98
- P1:101
- B1u:102
- P2: 102

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different

from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.