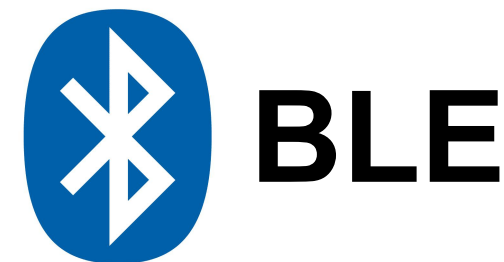


Beacon + Lighting

Tuya Bluetooth Protocol Overview



Beacon

Tuya Bluetooth Protocol Overview



Tuya BLE

Pairing



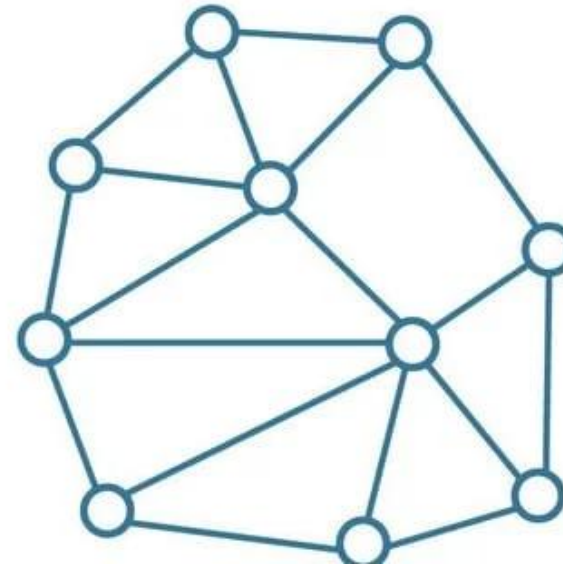
Tuya Beacon

Broadcasting



Sigmesh

Mesh



Tuya Beacon protocol is a communication technology based on BLE broadcast, is a simplified and secure Bluetooth protocol.

Protocol comparison



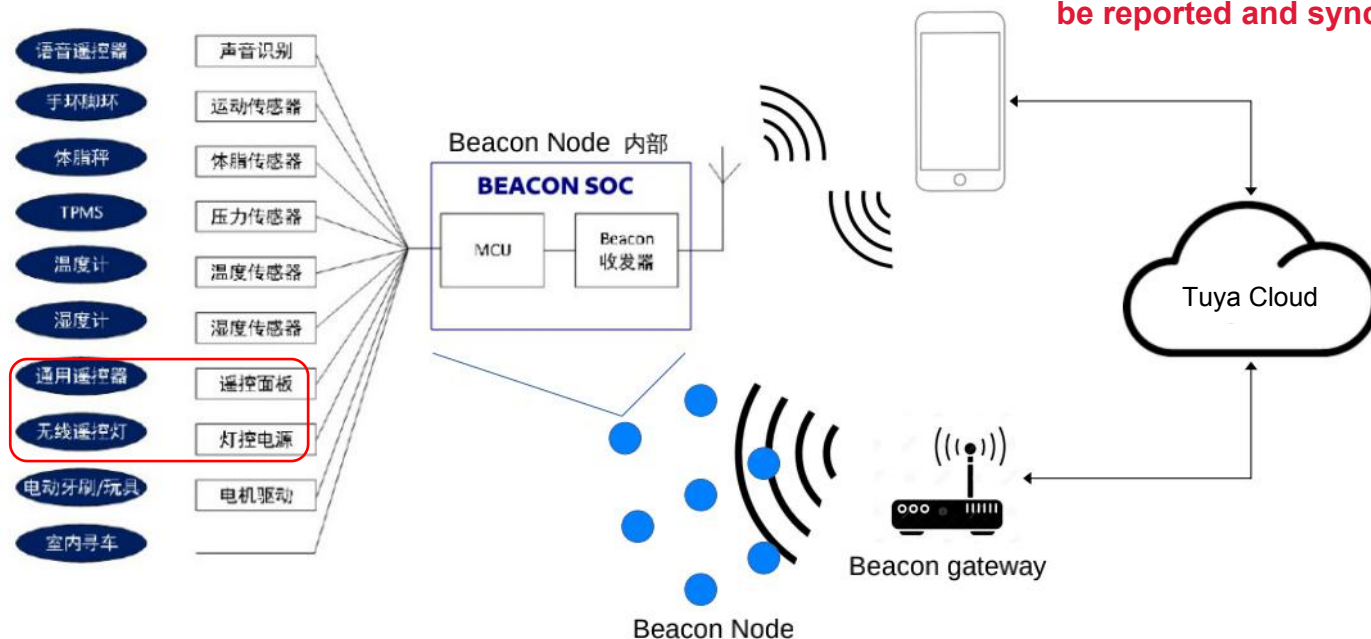
	Beacon	Sigmesh	BLE
Standby current	30mA (Low-Power Solution under development)	7.7mA	5mA
Chip	AK801AE / BK3431S	TLSR8253	BK3432
Network topology	star network	mesh network	star network
Local control (App)	Yes	Yes	Yes
Remote control via cloud	Yes (need gateway)	Yes (need gateway)	Yes (need gateway)
Control distance	20 meter	30-50 meter (8 jump at most)	30 meter
Group control	Yes	Yes	No
Compatible with BLE/Beacon remote controller	Yes (planning)	Yes	No
Work with Alexa/Google assistant etc.	Yes (need gateway)	Yes (need gateway)	Yes (need gateway)
OTA	No	Yes	Yes
BOB	No	Yes	Yes
EMC/FCC	Meet the requirements	Pass	Meet the requirements
Key selling point	Super-high value with competitive price	Large-scale networking	Low power consumption, stable connection

Beacon Interconnection model

- Support customized development based on beacon SDK

- Bidirectional Beacon, suitable for more product forms

***For lighting devices, the device status will not be reported and synchronized to App**



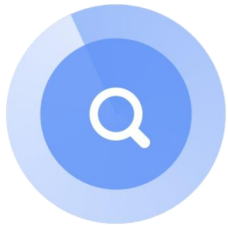
- Rich category support, can create a full experience of intelligent scene ecology

- More Cloud function and voice control with gateway

Benefits



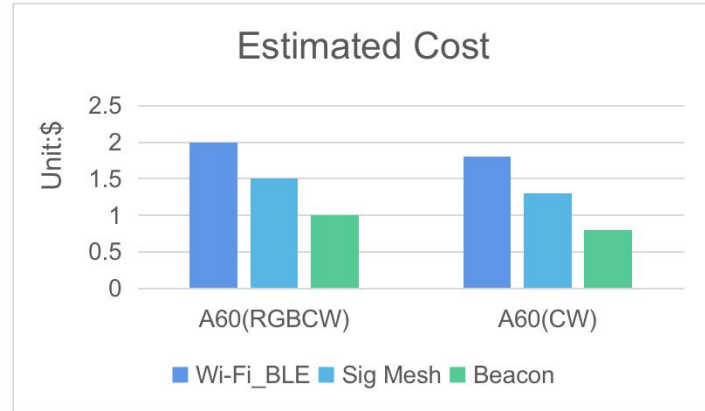
Cost saving



**Better network
connection experience**



Local control



- Fast connection in 3 seconds
- No router required
- Group / Zone Control
- Compatible with Beacon remote controller

Application Scenario (Indoor)



Bluetooth gateway (will be released in June)

1



Filament Bulb

2



Downlight

3

4



Bulb

5



LED Strip (Common or Individual control)

6



Remote controller (coming soon)

Application Scenario (Outdoor)



1



Path light

2



Flood light

3



String (coming soon)

4



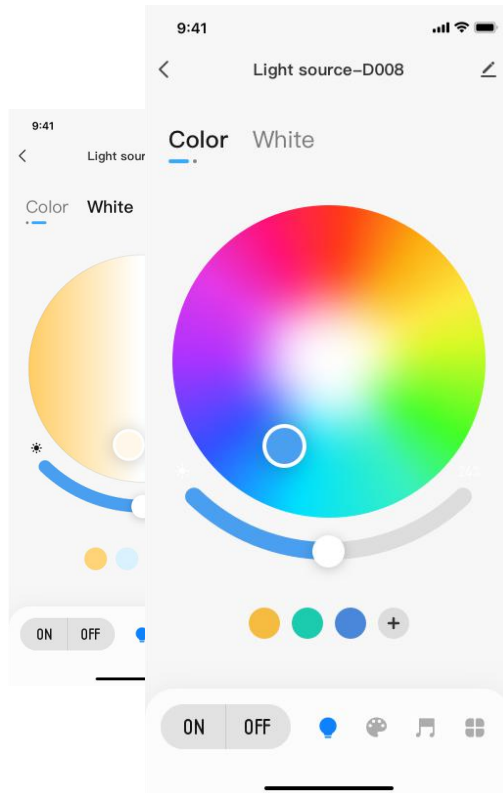
Gateway combine wall light

(On developing)



Note: In outdoor applications, due to standby power and control distance , mains supply lights and gateway combined lights are recommended.

SoC Scheme Overview



Lighting

Function

- ✓ Brightness +/-
- ✓ CCT +/-
- ✓ Colour adjustment
- ✓ Scene
- ✓ Music Rhythm
- ✓ Countdown
- ✓ Timer
- ✓ Do not disturb mode

Not supported

- × Biorhythm
- × Wake up / Sleeping Mode
- × Holiday Mode
- × Cycle timer
- × Light Gradient by Switch

Strip

Function

- ✓ Brightness +/-
- ✓ Colour adjustment
- ✓ Scene
- ✓ Music Rhythm by local Mic
- ✓ Countdown
- ✓ IR Remote controller

Coming soon:

RGBIC Strip

Remote controller

CW String



More Function



- ✓ Group / Zone Control one device can be in 8 Groups at the sametime
- ✓ Remote control via cloud (need a gateway)
- ✓ Scene automation (need a gateway)
- ✓ Voice controll - Work with Alexa / Google assistant etc. (need a gateway)
- ✓ Compatible with Beacon remote controller
- ✓ Devices sharing

Chip platform



Chip Part No.	AK801AE-M3	AK801AE-H1	BK3431S
Package	SOP16	SOP16	QFN32
Operation temperature	-40 ~ 105C	-20 ~ 85C	-20 ~ 80C
key spec	2k Byte RAM + 16k Byte OTP	2k Byte RAM + 16k Byte OTP	4k Byte RAM + 512k Byte Flash
Key feature	• High operation temperature • Easy to manufacture	• Easy to manufacture	• Rich resources can support more functionality
Recommend products	Bulb / Candle / GU10 / Filament etc.	RGB strip / remote controller	RGBIC strip / String / Sensor Luminaire etc.

THANKS

Smart Lighting Smart Life