TheoryLight

TLMA06-Z-SC-3.0

TLMA06-Z-XX-XX-XX-XX-OTA-3.0 is a kind of Zigbee 3.0 standard module. It outputs 1 channel PWM, 2 channel PWMs, 3 channel PWMs, 4 channel PWMs, 5 channel PWMs for dimming, CCT, RGB, RGBW, RGBCW driver or controller.

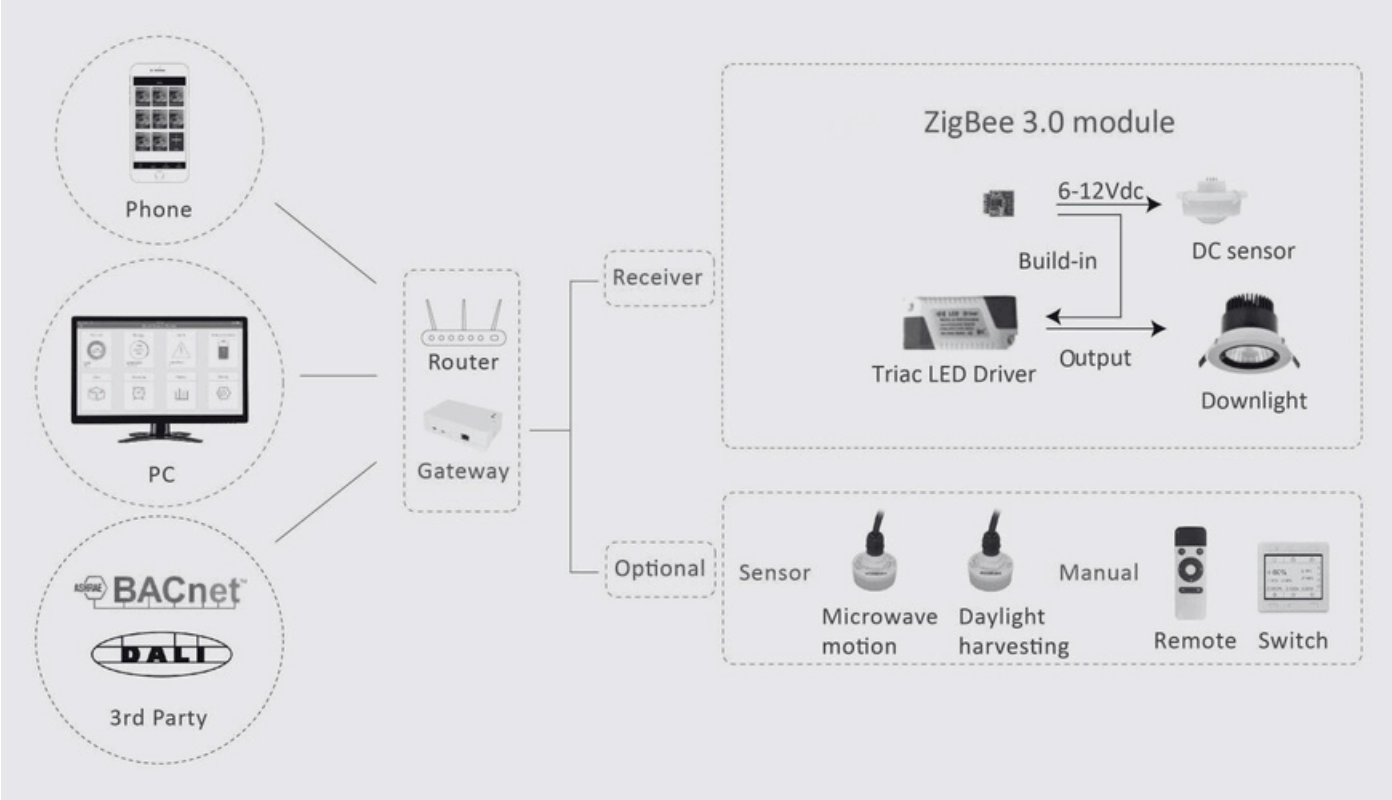
TLMA06-Z-XX-3.0 Module makes fixture compatible with ZigBee standard gateways/hubs like Philips Hue or other ZigBee 3.0 standard gateway. The Apple homekit also available to control this module by Philips Hue bridge.
It works with theorylight's ZigBee lighting control system to achieve long-distance controlling led lights by Mobile Phone, Tablet, PC,

Part no.

TLMA06-Z-XX-XX-XX-XX-OTA-3.0

TLMA06	project name/ index		
Z	ZigBee		
XX	SC/CT/RGB/RGBW/RGBCW		
XX	antenna option	IA	internal antenna
		EA	external antenna
XX	Channel option	2C	
		3C	
XX	Logic option	PL	Positive Logic
		RL	Reverse Logic
OTA	OTA upgrade		
3.0	ZigBee 3.0 protocol		

System Diagram



Software Operation

1. Initial states. When the ZigBee module is powered up, the LED of module will keep blinking.
2. First 30 minutes. The ZigBee module in initial state is searchable by the ZigBee gateway in the first 30 minutes after power up.
3. Choose a gateway. Power on the ZigBee gateway, open the App “theorylight Pro”, select gateway from Settings/Add device.
4. Add device. Click “Search” button. The LED of module stops blinking and then stay ON after added.
5. Create a new area and add the ZigBee module into this area. On/off the bridge in this area.
6. Binding. Click “Binding Setting” on “Setting” page. Bind the ZigBee module with other device/group.
7. For more operating details please refer to user manual of gateway.

Initial States Setting

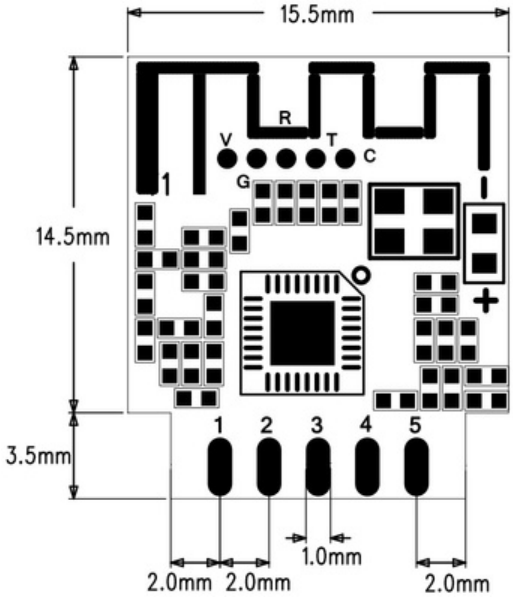
1. Soft reset: keep the device powered on and delete it on the “theorylight Pro” App. Or, Hard reset: power off the
2. device and wait for > 3 secs, power on and wait for < 3 secs, power off power on, power off power on, 4 times in total. If reset is successful, the LED of bridge
3. will keep blinking. All data of the device is cleaned up.

Parameter

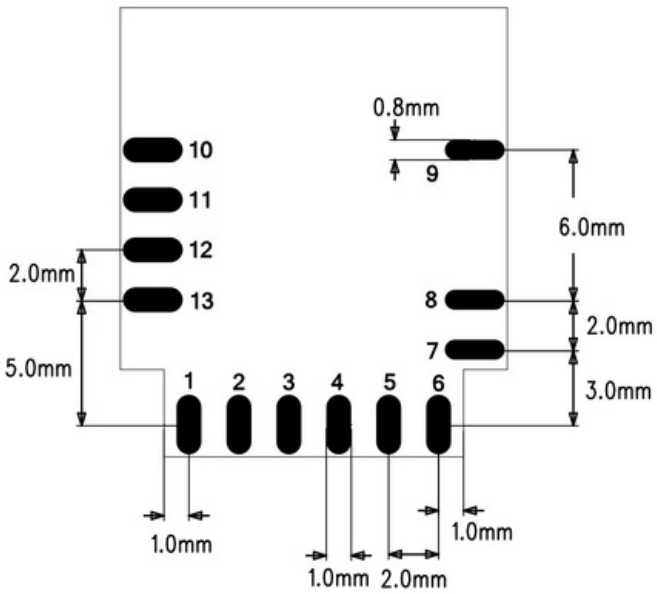
Input Voltage	3-3.6V
Current	11mA(Peak current 180mA)
Frequency	2.4GTL
PA	19dBm
Control Range	30m
Working Temperature	-40℃ to 105℃
PWM Frequency	4K
PWM logic	Normal or Reverse
Package	1PC/ Package

Dimension

Product

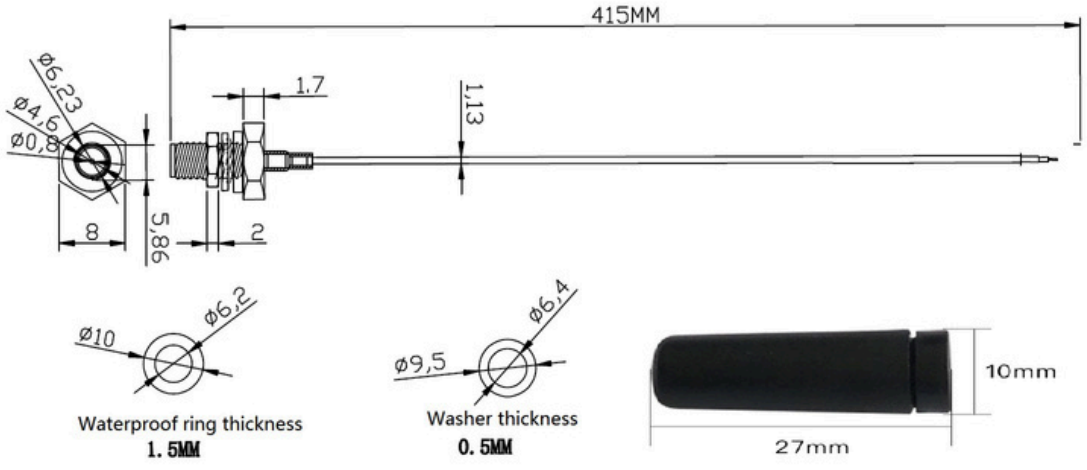


TOP



BOTTOM

External antenna



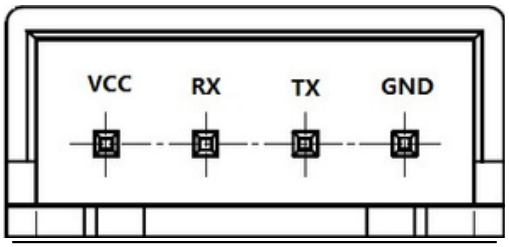
Pin Definition

Index	PIN	TLMA06-Z-SC- XX-XX-OTA -3.0	TLMA06-Z-CT- XX-XX-OTA -3.0	TLMA06-Z-RG B-XX-XX-OTA-3 .0	TLMA06-Z-RG BW-XX-XX- OTA -3.0	TLMA06-Z-RG BCW-XX-XX- OT A-3.0	TLMA06-Z-SC- XX-2C-XX- OTA- 3.0
BOTTOM							
1	VCC	VCC 3V–3.6V	VCC 3V–3.6V	VCC 3V–3.6V	VCC 3V–3.6V	VCC 3V–3.6V	VCC 3V–3.6V
2	GND	Ground	Ground	Ground	Ground	Ground	Ground
3	PC01	PWM output	Cool PWM output	R PWM output	R PWM output	R PWM output	1st channel PWM output
4	PC02	-	Warm PWM output	G PWM output	G PWM output	G PWM output	2nd channel PWM output
5	PC03	-	-	B PWM output	B PWM output	B PWM output	-
6	PC04	-	-	-	W PWM output	Warm PWM output	-
7	PD03	UART-RX	UART-RX	UART-RX	UART-RX	UART-RX	UART-RX
8	PD02	UART-TX	UART-TX	UART-TX	UART-TX	UART-TX	UART-TX
9	RESET	Reset	Reset	Reset	Reset	Reset	Reset
10	PC00	-	-	-	-	Cool PWM output	-
11	PC05	On/Off output	On/Off output	On/Off output	On/Off output	On/Off output	On/Off output
12	PA01	Key input	Key input	Key input	Key input	Key input	Key input
13	PA02	-	-	-	-	-	-
TOP							
1	RESET	Reset	Reset	Reset	Reset	Reset	Reset
2	PC00	-	-	-	-	Cool PWM output	-
3	PD02	UART-TX	UART-TX	UART-TX	UART-TX	UART-TX	UART-TX
4	PD03	UART-RX	UART-RX	UART-RX	UART-RX	UART-RX	UART-RX
5	PC05	On/Off output	On/Off output	On/Off output	On/Off output	On/Off output	On/Off output

Note:

PC05-When turn off light, output low voltage. When turn on light, output high voltage.

UART: Sensor interface refer following 4Pin connector to work with our DC sensor TL937 series (Daylight sensor/ motion daylight sensor/ PIR daylight sensor/ motion sensor/ PIR sensor/ temperature and humidity sensor)



VCC	6-12V output to Dc sensor HSS937 UART_RX of
RX	TLMA06, please make ESD protection UART_TX of
TX	TLMA06, please make ESD protection Ground
GND	