

# RW1806

Bluetooth Low Energy 4.0 Module

User Manual Version1.3

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## *1 Performance parameters and applications*

### ◆ BLE 4.0 module

- Frequency: 2402MHz to 2480MHz
- Bluetooth data transfer rate: 1Mbps
- Integrated 32bit ARM Cortex-M0 MCU, embedded 128KB Flash and 64KB SRAM。
- Integrated complete BLE protocol and application profiles.
- Module size is: 12x18x2.4mm, on PCB antenna, external MCU control module through UART.

### ◆ Low Power Consumption

- Sleep current as low as 1uA
- With DC-DC mode, working voltage is 3V, RX current is 9.25mA, TX current is 8.8mA(0dBm output)

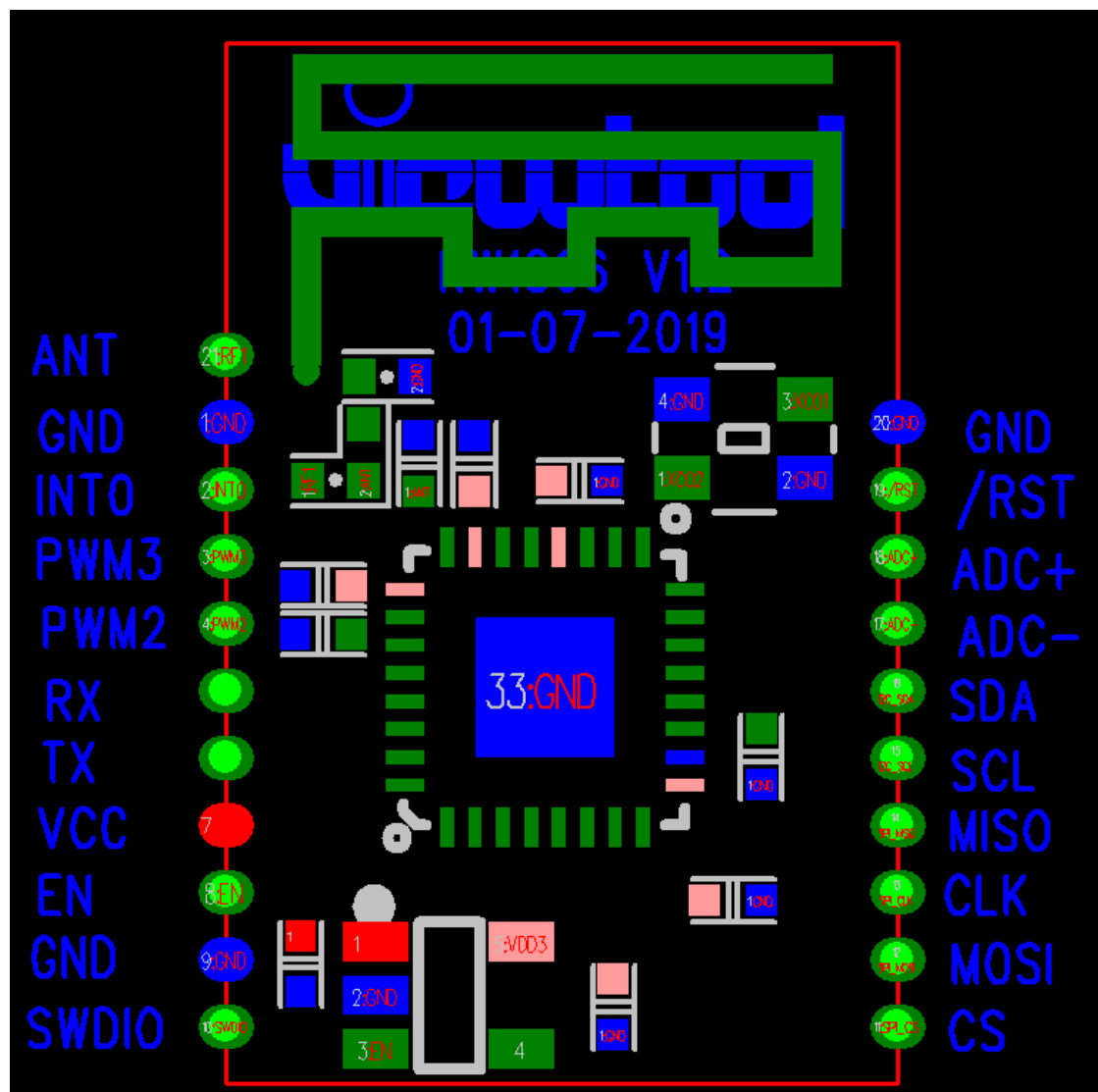
### ◆ Hight performance RF parameters

- RX sensitivity as high as -95dBm
- TX power could be adjusted from -20dBm to 4dBm, flexible for multiple application environment

### ◆ Application examples

- Sports and health devices
- Medical equipments
- Remote Controller
- Computer accessories(keyboard, mouse, etc)
- Cell phone enclosures
- Smart home
- Toys

正面视图:

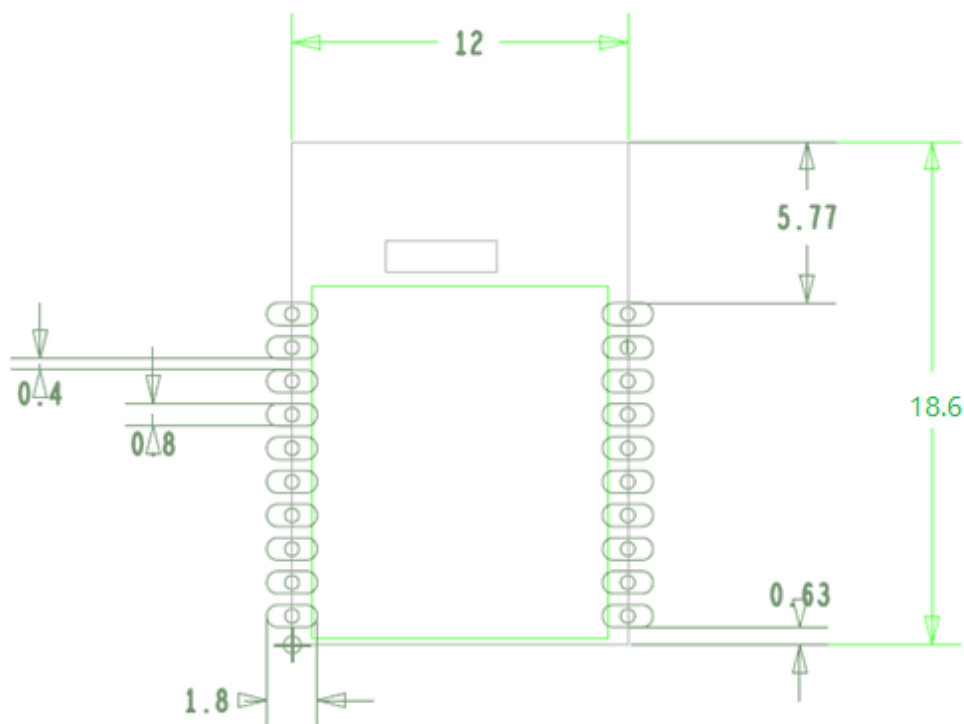


PIN	NAME	FUNCTION	DESCRIPTION
1	GND	Ground	Should be connected to ground plane on application PCB
2	INT0	Digital in/out	GPIO / INT0
3	PWM3	Ground	PWM output 3
4	PWM2	Ground	PWM output 2
5	RX	Digital in	UART RX
6	TX	Digital out	UART TX
7	VCC	VCC in	External Power supply: 2.4-10V input, current: 20mA max
8	EN	Digital in	Control external power supply on/off: 1-on, 0-off, 1:high, 0: low
9	GND	Digital output	Ground
10	SWDIO	Digital in/out	Programming I/O
11	SPI_CS	Digital in/out	GPIO / SPI chip select
12	SPI_MOSI	Digital in/out	GPIO / SPI data master out/slave in
13	SPI_CLK	Digital in/out	GPIO / SPI clock
14	SPI_MISO	Digital in/out	GPIO / SPI data master in/slave out
15	SCL	Digital in/out	GPIO / SCL
16	SDA	Digital in/out	GPIO / SDA
17	ADC-	Analog in	GPIO / ADC-
18	ADC-	Analog in	GPIO / ADC-
19	/RSTN	Digital in/out	Hardware reset, active low.
20	GND	Digital Input	Should be connected to ground plane on application PCB
21	RF	Analog In	RF antenna (2.4G), usually it's not used

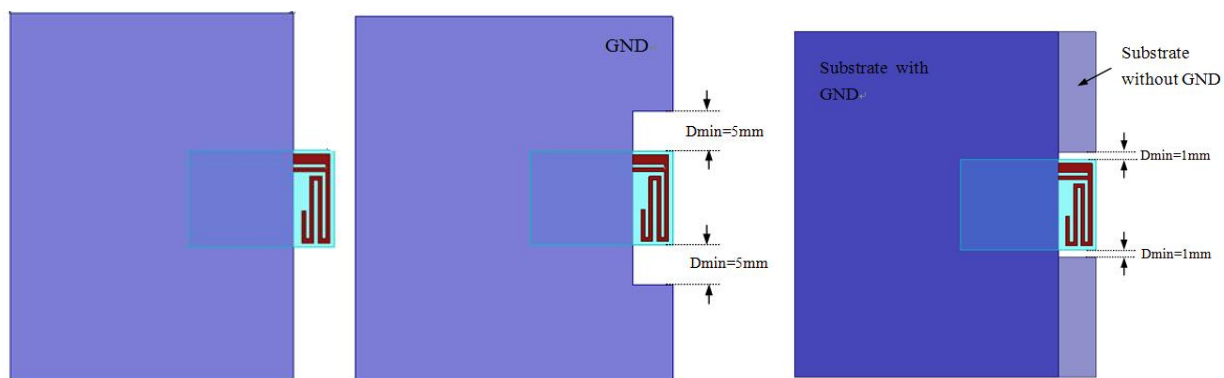
### 3 Package size and the placement of the module recommendations

#### 3.1 Package Dimension (Unit: mm)

Pin to pin: standard 2.54mm



#### 3.2 Module placement recommendations



### 3.3 Connection: when used for forehead thermometer

\* VCC: 3~9V;

\* EN: Control Pin: 1 (high: 2~3V): RW1806 power on; 0 (low: 0~0.2V): RW1806 power off;

\* RX: UART receive data; (uart baud rate: 9600)

\* TX: UART transmit data; (可以不接)

\* GND: GND;

### 3.4 ViewTool Contacts

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