

BLE.Module Specification

Shenzhen Eybond Co., LTD

Catalogue

1. Product Overview	3
2. Product Features	3
3. Product Appearance	3
3.1 Dimensional Drawing	3
3.2 Product Picture	4
4. Product Definition	5
4.1 Pin Definition	5
5. Product Specifications	6

1. Product Overview

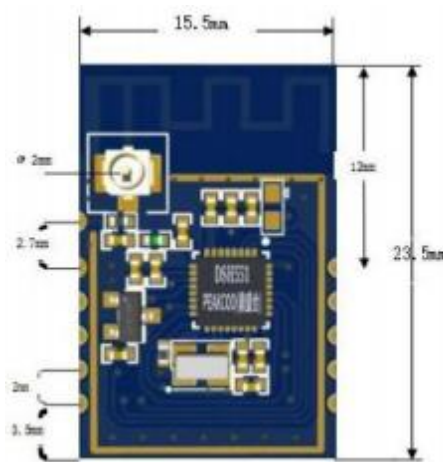
BLE Module-101 is a Bluetooth-compatible module designed for expanding data transmission channels in devices. It features compact size, low cost, and low power consumption, making it suitable for products with high real-time requirements. The module incorporates an IPEX socket antenna and enables control, debugging, and upgrade of serial port devices via Bluetooth connectivity.

2. Product Features

- (1) High integration capability: Compact size allows integration with small embedded products;
- (2) Network stability: Bluetooth direct connection ensures stable and reliable communication.
- (3) Reliable components: Industrial-grade components capable of long-term operation within a temperature range of -40°C to $+85^{\circ}\text{C}$.
- (4) Data security: Private protocol with data validation;
- (5) Easy configuration: Supports AT command configuration via serial port and Bluetooth.
- (6) System self-healing: Automatic reset upon power loss, ensuring ultra-high reliability;
- (7) Easy maintenance: Supports Bluetooth debugging and firmware upgrades.

3. Product Appearance

3.1 Dimensional Drawing



unit: mm

3.2 Product Picture



IPEX2 replacement antenna



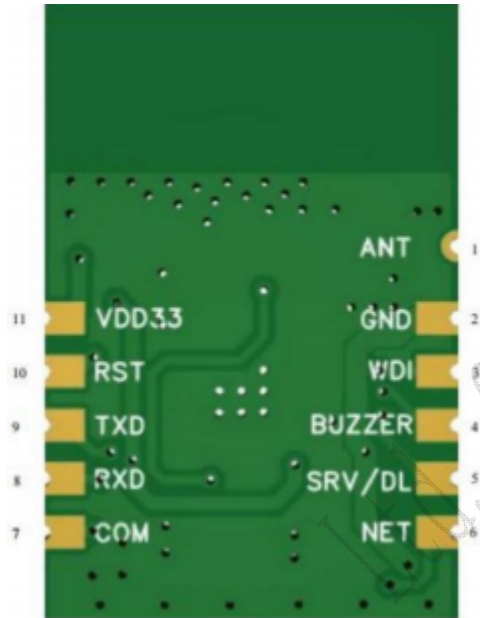
board-mounted antenna



ANT

4. Product Definition

4.1 Pin Definition



Pin	Pin name	Description
1	ANT	Bluetooth antenna: The antenna position must avoid open areas and must not be exposed to metal or copper surfaces.
2	GND	Modular logic
3	WDI	The watchdog timer feeds the dog timer output pin, generating a 1Hz square wave signal.
4	BUZZER	The buzzer outputs a high level for 2 seconds when powered on.
5	SRV/DL	Indicator light: outputs low level for 2 seconds upon power-on startup. It outputs low level when a Bluetooth device is connected, and high level when no Bluetooth device is connected (module program download port).
6	NET	The indicator light outputs a low level for 2 seconds upon power-on startup. During debugging, it flashes according to the output information. No data output results in a high level.
7	COM	The indicator light outputs a low level for 2 seconds upon power-on startup. It outputs a low level when serial port data transmission/reception is normal, and a high level when no data is transmitted.
8	RXD	TTL serial level input pin
9	TXD	TTL serial level output pin
10	RST	Reset pin, low level active
11	VDD33	Power supply: 3.3V

5. Product Specifications

Class	Entry	Parameter
Product mix	Dimensions (length/width/height)	23.5*15.5*3.3mm
	Weight	≤1g
Work environment	Working temperature	-40°C ~ +85°C
	Storage temperature	-40°C ~ +90°C
Hardware interface	Rated voltage	3.3V
	Rated current	300mA
Serial port parameters	Interface level	TTL
	Baud rate	2400bps to 115200bps (default: 9600bps)
	Check bit	NONE/ODD/EVEN
	Data bit	8
	Stop bit	1
Bluetooth parameters	Bluetooth Standard	BLE 5.0
	Bluetooth distance	20M
	Bluetooth local monitoring refresh rate	1 second
	Bluetooth local monitoring command transmission cycle	2 second
	Enable Bluetooth local monitoring	5 Generate the first data in seconds
Software Section	Work pattern	Transparent transmission mode
	Parameter configuration method	AT command, supporting Bluetooth, serial port, and other channels
Other	Quality Assurance	1 year
	Attestation	CE , ROHS
Antenna parameters	Service frequency	2.4GHz
	Antenna configuration	IPEX terminal (2nd generation), onboard antenna, ANT
	Antenna gain	1.7dBm
	Data rate	1Mbps
	Board-mounted antenna size	11.6*2.667mm serpentine antenna
	Manufacturer	Shenzhen Eybond Co., Ltd