SZ5090B

SONBEST®

ZIGBEE wireless collection terminal
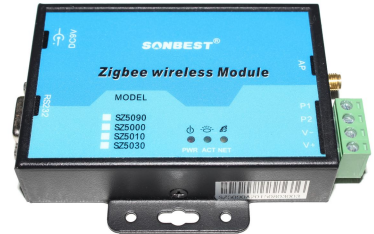
http:// www.sonbus.com

Product Overview

SZ5090B is based on ZIGBEE industrial wireless data acquisition module. This product is mainly used for industrial MODBUS-RTU protocol wireless devices data focus on the collection, it can achieve low online monitoring of practical data acquisition module.

This product can be (1) SMT industry temperature and humidity data monitoring (2) Electronic Equipment Factory temperature and humidity data monitoring (3) cold storage temperature and humidity monitoring (4) storage temperature and humidity monitoring (5) pharmaceutical GMP monitoring system (6) Environment temperature and humidity monitoring (7) telecommunications room temperature and humidity monitoring (8) other need to monitor temperature and humidity and so on various occasions.

In order to facilitate networking and industrial engineering applications, this module uses the MODBUS-RTU communication protocol widely used in industry, and support secondary development. Users only need to use any serial communication software module data query and set according to our protocol.

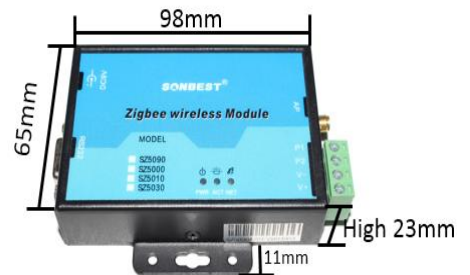### ORDERING INFORMATION

Type	Order No.	Note
SZ5090B	SZ5090B	

Parameters

parameter	Technical Specifications
Baud Rate	Communication baud rate 9600 configured baud 38400
Communication Port	ZigBee Wireless to RS485
Radio frequency	2.4G ISM band global free (ZigBee)
Network Type	Star network
Network Capacity	65 535 network nodes
Power supply	Bus-powered, DC9V 1A
Power	2W
storage temperature	-40 - 85 ℃
Operating environment:	-40 - 85 ℃ -40 ℃ ~ + 85 ℃
Dimensions	96 × 63 × 21mm³

### Dimensions

98mm
65mm
High 23mm
11mm

ZIGBEE Profile

ZigBee is based on the IEEE802.15.4 standard low-power personal area network protocol. According to this agreement technology is a short-range, low-power wireless communications technology. The name of the character comes from the bee dance, since bees (bee) is by flying and "buzz" (zig) shake wings "dance" to transmit pollen where the position information with peers, that rely on bees such a way constitute a group communication network. Its characteristics are close, low complexity, self-organization, low power, and low data rate, low cost. Mainly suitable for automatic control and remote control, it can be embedded in a variety of devices. In short, ZigBee is an inexpensive, low-power short-range wireless network communication technology.

ZigBee is a low-speed short-range wireless network transmission protocol. ZigBee protocol from the bottom to the top were the physical layer (PHY), media access control layer (MAC), the transport layer (TL), the network layer (NWK), application layer (APL) and the like. Wherein the physical layer and MAC layer follows the IEEE 802.15.4 standard. ZigBee network is mainly characterized by low power, low cost, low rate, supporting a large number of nodes, support a variety of network topologies, low complexity, fast, reliable and secure. Can be divided coordinator ZigBee network device (Coordinator), aggregation nodes (Router), the sensor node (End Device), and three roles.

1. Farther

ZigBee supports up to 15 hops between points farthest 2KM, can support large remote networking.
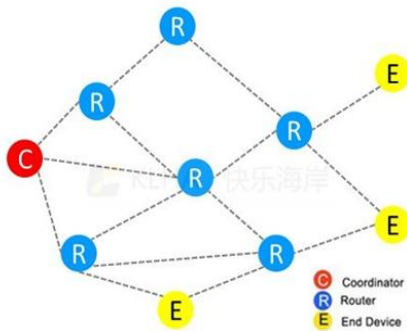
2. More powerful equipment

Flexible node type, for the center, relay, terminal, multi-node, more convenient and easier.

Third, the anti-interference ability

Channel detector allows data to reduce collisions

Composite code sequence using DSSS Direct Sequence Spread Spectrum technology, high-rate pseudo-noise code sequence and two-plus-data coding sequence mode (waveform multiplied) to control the phase of the carrier after the direct sequence spread spectrum signal is obtained, it is about the original higher power, has become a relatively narrow frequency broadband low power frequency in order to obtain a satisfactory noise immunity in the field of wireless communications.

Product structure

Products with a wireless module, just with a central module.
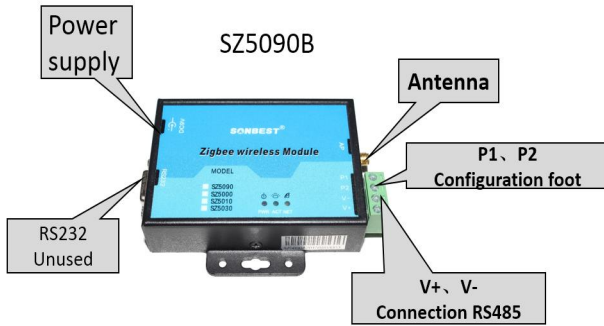For example the following figure:
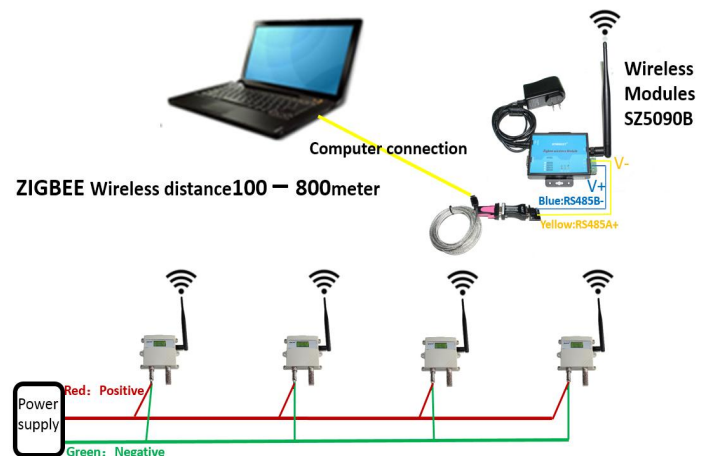
Open area, no building, shelter materials for the 800 meters, if the receiving distance becomes shorter, want to increase the reception distance, increase the relay module.

Products for the RS485 communication needs with terminal module SZ5090B and the central module SZ5090B.
For example the following figure:
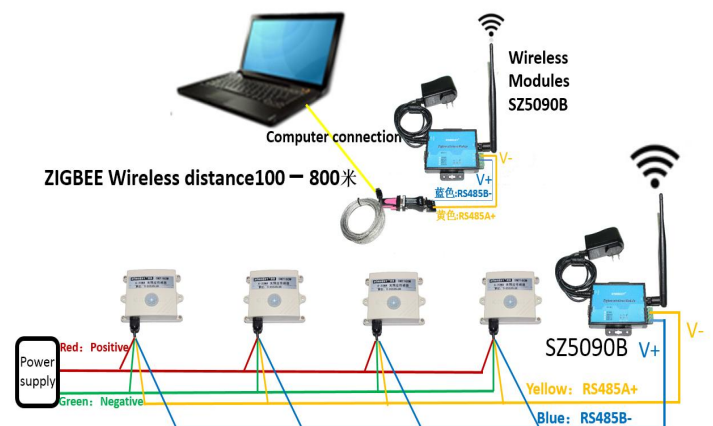
Wiring and Use

As shown, RS485 serial line on device can be connected directly to the RS485 serial port on desktop, it can also connected directly to the laptop by RS485 / USB converter cable. After power use wireless sensor distribution software to test (Please download the software company's Web site: www.sonbest.com).

Numeral	RS485 communication interface
V-	RS485 A+
V+	RS485 B-

1	PWR	Power supply is normal. ON indicates normal; OFF: not normal
2	ATC	The module is working properly. Flashing indicates normal work; OFF means not working properly
3	NET	Whether to establish a communication link. Light indicates connection; OFF indicates no connection (must be checked when configuring Link)

ZIGBEE Configuration

ZIGBEE standard product set configured:

Node Address: 0000

Node Name: Z-BEE

Node types: the central node

Network type: Star network

Network ID: FF

Radio frequency: 06

Address coding: HEX

Send mode: Broadcast

Baud rate: 9600

Checksum: None

Data bits: 8 + 0 + 1

Data Source Address: Not output

If large ZIBEE application, boot within 30 seconds, via SMS P1, P2 to enter the configuration state, can be configured through the serial debugging assistant. Configure the communication rate special rate 38400, 8, n, 1. Due to the highly specialized, not recommended for ordinary users to change the radio parameters. Generally, we will work with wireless sensor wireless parameter configuration shipped together well.

Communications protocol

The default baud rate products: 9600, 8, n, 1, generally transparent transmission, the factory and module parameters equipment. Details protocol content may reference sensor module communication protocol.