# WFBLE.DTU.PlugProA-03
# Product Specification

Shenzhen Eybond Co.，Ltd

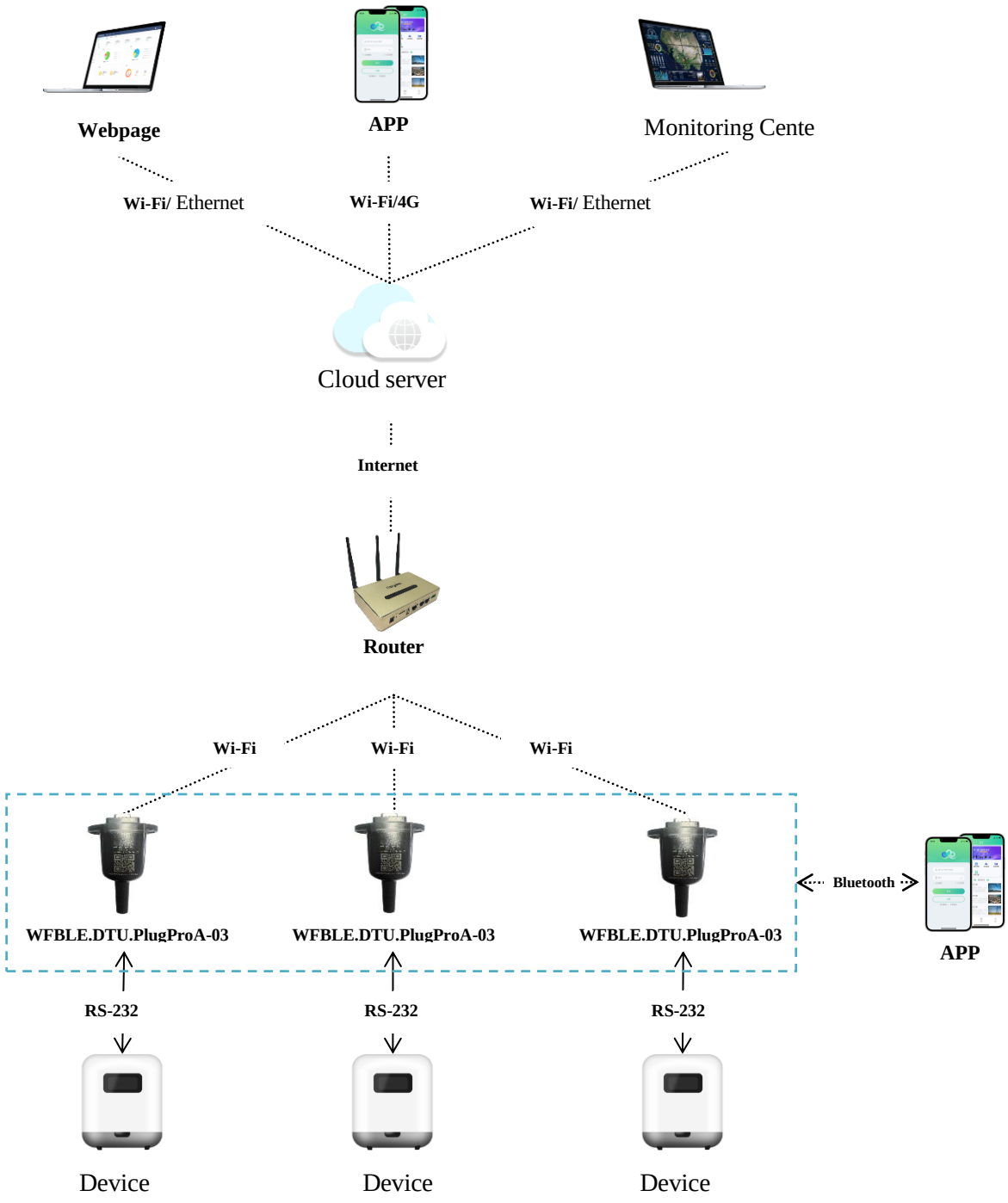
| Document version | Modification content | Modifier | Date | Remarks |
|---|---|---|---|---|
| 1.0 | First Release | Mico | 2025-03-04 | |
| 1.1 | Change the baud rate range value in the parameter table to a fixed value | Mico | 2025/04/21 | |

# Contents

# 1. Product Overview

WFBLE.DTU.PlugProA-03 digital sensor products are used to expand the Wi-Fi wireless network data transmission channel of the device, it connects and communications with the device through the DB9 interface (RS-232), with IP65 protection level, with easy installation, strong anti-interference ability, no additional configuration of power supply and other advantages; Support equipment remote control, remote debugging, remote upgrade and other functions; Connect router to cloud server with BLE configuration. It can provide users with a low cost, visual, remote operable complete monitoring solution.

This section describes the typical networking of WFBLE.DTU.PlugProA-03



# 2. Product Features

## 2.1 Easy to use

(1) Easy installation: plug and play;

(2) Easy replacement: external plug-in type, no need to disassemble the device, safe and fast;

(3) Simple configuration: Near end settings, remote settings;

(4) Easy maintenance: remote debugging, remote firmware upgrade (including devices);

(5) Easy to use: one power on, two networking, three registration;

(6) Convenient power supply: Power can be directly obtained from the device without the need for an external power source;

(7) Easy troubleshooting: Four LED lights indicate the operation status, providing a visual understanding of the working status;

## 2.2 Stability

(1) Device selection: Industrial grade components, capable of long-term operation within -40 ℃~+85 ℃;

(2) Protection measures: Under voltage protection, dual protection of software watchdog and hardware watchdog;

(3) Stability mechanism: heartbeat detection, network retry, automatic repair of device loss;

(4) Data security: private protocol, data verification;

(5) Wide voltage design: DC5V~12V wide voltage design;

(6) Outdoor waterproofing: IP65 protection level, suitable for outdoor environments;

## 2.3 Flexibility

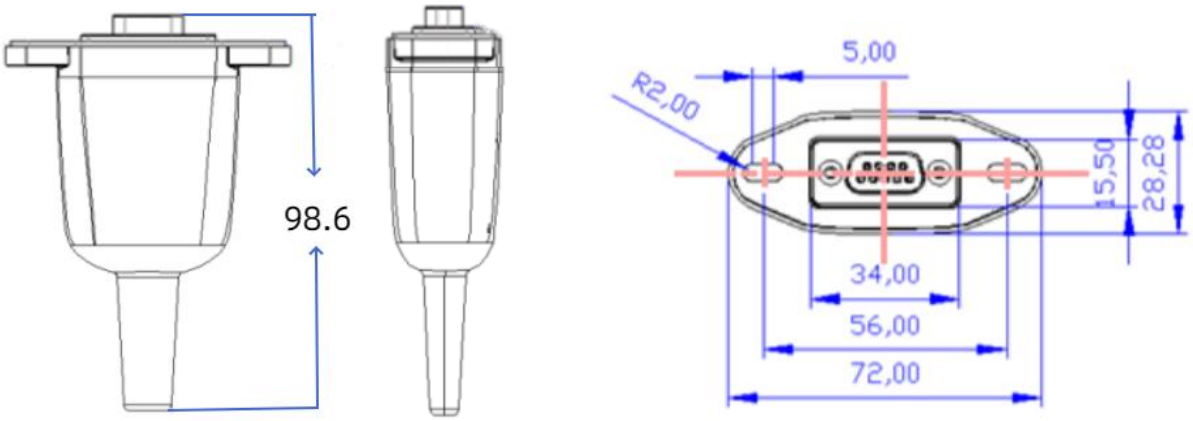
(1) Protocol adaptation: supports automatic recognition and switching of multiple communication protocols;

(2) Remote parameter configuration: Parameters can be viewed and configured remotely through the network;

(3) On site configuration parameters: In conjunction with the APP, device parameters can be viewed and configured on site.

# 3. Product Structure

## 3.1 Dimension drawing

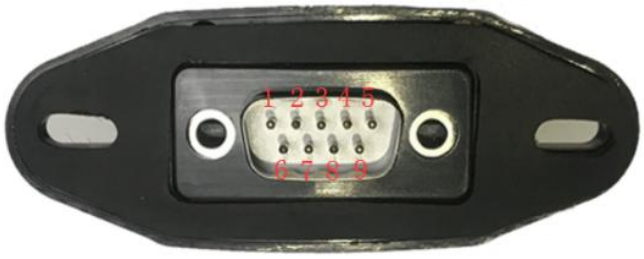



dimension： 72*28*98.6mm±0.5mm

## 3.2 Product picture

# 4. Product Interface

## 4.1 Port Definition




| lead | Pin definition | Description |
|---|---|---|
| 1 | NC | NC |
| 2 | RS-232-RX | RS-232 data reception |
| 3 | RS-232-TX | RS-232 data sending |
| 4 | NC | NC |
| 5 | GND | Power ground |
| 6 | NC | NC |
| 7 | NC | NC |
| 8 | NC | NC |
| 9 | VCC | Input DC Voltage DC5V-DC12V |

## 4.2 Definition of indicator light


| Number | Silk screen printing | Description |
|---|---|---|
| 1 | PWR / Power | Light on: external power input<br>Light off: abnormal external power input |
| 2 | COM / Device | Light on: Device communication succeeded<br>Light off: Device communication failed |
| 3 | NET / Networking | Light on: Network linked succeeded<br>Light off: Network linked failed |
| 4 | SRV / Server linked status | Light on: Server linked succeeded<br>Light off: Server linked failed |

# 5. Product Specifications

| Content | Parameter | Value |
|---|---|---|
| General parameters | Dimensions (length/width/height) | 72*28*98.6mm±0.5mm |
| | Weight | 56g |
| | Protection Level | IP65 |
| | Rated voltage | DC5V~12V |
| | Maximum Current | 800mA(DC5V) |
| | Operating temperature | -40℃ ～ +85℃ |
| | Storage temperature | -40℃ ～ +90℃ |
| External part | DB9 connector | For communication and power supply |
| | Work indicator light | Indicator lights: power supply, Device, router and server, light on means normal, light off means abnormal |
| Bluetooth part | Bluetooth standard | BLE 5.0 |
| | Bluetooth distance | 10 meters |
| | Bluetooth local monitoring refresh rate | 1s |
| | Bluetooth local monitoring of the command cycle | 2s |
| | Connect Bluetooth local monitoring | Generate first data in 5 seconds |
| Hardware part | Data entry method | RS-232 |
| | Data Output Method | Wi-Fi |
| | Serial baud rate | 2400/4800/9600/14400/19200/38400/56000/57600/115200 (default 9600bps) |
| | Hardware watchdog | Support |
| Wi-Fi part | Working frequency | 2.412GHz-2.484GHz |
| | Wireless standard | 802.11 b/g/n |
| | Antenna gain | 2.5dBi |
| | Antenna | External |
| | Data rate | 11Mbps@11b, 54Mbps@11g, 72Mbps@11n |
| | Hardware encryption | WEP, WPA/WPA2 |
| | Communication distance | 100 meters（Open environment） |
| | Operating mode | AP+STA(co-existence model) |
| Software part | Supported Device Protocols | Transparent mode |
| | Supported Network Layer Protocols | Modbus-TCP |
| | Software watchdog | Support |
| | Data upload cycle | 5 minutes (default) |
| | Parameter Configuration | SMS/Remote Server |
| | Restart mechanism | The system automatically restarts after 12 hours of continuous operation |
| | Supporting cloud platforms | Value of cloud, customers custom platform |
| Other | Number of connected devices | 1 |
| | Authentication | CE, RoHS |

## FCC warning statements:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.