

WFBLE.DTU.PlugProA-03 Product Specification

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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	

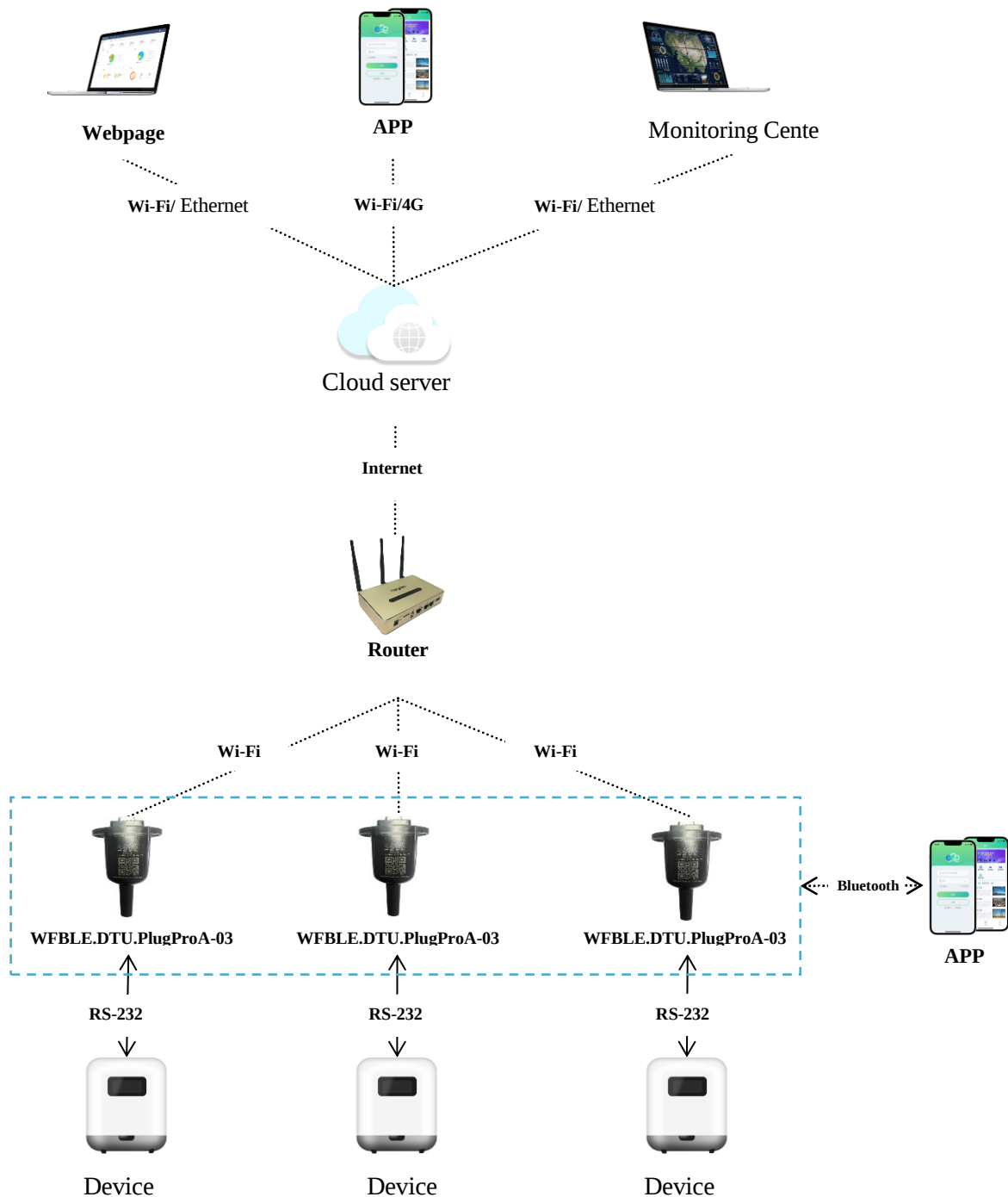
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1. Product Overview

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

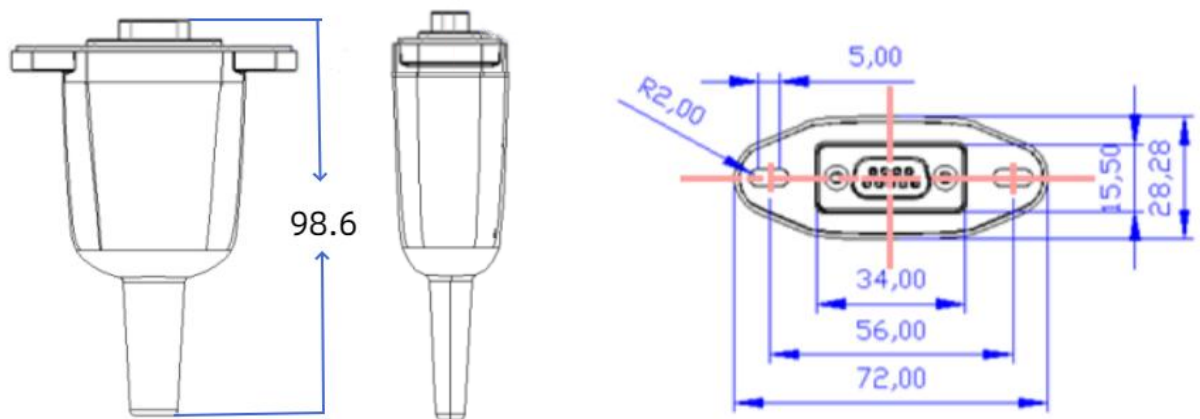
- (1) Device selection: Industrial grade components, capable of long-term operation within $-40\text{ }^{\circ}\text{C}\sim+85\text{ }^{\circ}\text{C}$;
- (2) Protection measures: Under voltage protection, dual protection of software watchdog and hardware watchdog;
- (3) Stability mechanism: heartbeat 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



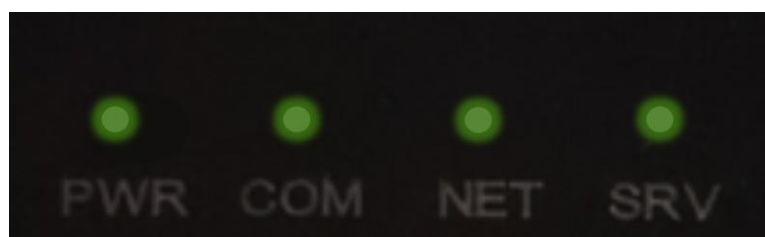
4. Product Interface

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 Light off: abnormal external power input
2	COM / Device	Light on: Device communication succeeded Light off: Device communication failed
3	NET / Networking	Light on: Network linked succeeded Light off: Network linked failed
4	SRV / Server linked status	Light on: Server linked succeeded 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°C ~ +85°C
	Storage temperature	-40°C ~ +90°C
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.