

R200 YanPodo UHF RFID Module - English Datasheet

Version: V0.2

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- 2021/08/26 - V0.1: Initial version release
- 2021/08/27 - V0.2: Modified version layout and added content

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1. Introduction

The YPD-R200 module supports the ISO18000-6C/EPC C1G2 protocol. Users can communicate with their devices through the RS232-TTL pins on its interface. With a wide power supply range (DC 3.6V~5.5V) and configurable GPIO interface, it provides users with more options. Due to its low power consumption and small size, it is very suitable for embedding into handheld mobile devices and short-distance applications, such as short-range handhelds, mobile phone accessories, card dispensers, etc.

2. Product Features

- **Protocol Compliance:** ISO18000-6C & EPC Class-1 Generation-2
- **Frequency Range:** 840~960MHz
- **Sensitivity:** -10dBm local blocking condition -69dBm, test error rate 1%
- **Power Supply Voltage:** 3.6V~5.5V single supply
- **Modulation Encoding and Data Rate:** Transmission 80kHz DSB-ASK; Reception 80kHz FMO
- **Frequency Hopping:** Supports LBT and FHSS hopping modes
- **Integrated Components:** Low-noise VCO and frequency synthesizer
- **UART Interface:** Serial port with adjustable data rate, up to 115200bps
- **Typical Reading Distance:** Within 1 meter
- **Development Support:**
 - STM32 driver examples provided
 - Android driver APP and development package provided

- Windows C# host testing software and development package provided
- Hardware demonstration kit provided

3. Application Range

Applications include handheld mobile devices, item and logistics management, warehouse management, animal management, item anti-counterfeiting, electronic product surveillance, manufacturing and processing, production automation, and various wireless RFID application solutions.

4. Module Interface Description

Module Block Diagram: Referenced in original document

The module provides standard UART communication interface with the following pin configuration:

- RS232-TTL communication pins
- Configurable GPIO interface
- SMA antenna connector
- Power supply pins (3.6V-5.5V)

5. Module Parameters

Basic Specifications

1. Operating Frequency: 840~960MHz

2. Supported Protocol: ISO 18000-6C/EPC C1G2

3. Operating Voltage: +3.6V~+5.5V

4. Operating Current (5V supply):

- RPEUM-20: Peak current ~180mA when transmitting at 20dBm
- RPEUM-26: Peak current ~380mA when transmitting at 26dBm

5. Dimensions: 53mm × 33mm (excluding SMA connector)

Power and Range Specifications

6. Transmission Power:

- RPEUM-20: 12.5~20dBm, software adjustable, 1dBm steps
- RPEUM-26: 5~26dBm, software adjustable, 1dBm steps

7. Communication Distance:

- RPEUM-20: 1 meter (outdoor open area, 25mm × 25mm ceramic antenna)
- RPEUM-26: 3 meters (outdoor open area, 45mm × 45mm ceramic antenna)

Interface and Environmental Specifications

8. Communication Interface: USB to serial port

- Default baud rate: 115200bps
- Data bits: 8
- Stop bits: 1
- Parity: None
- Flow control: None

9. Operating Temperature: -25°C ~ +80°C

10. Storage Temperature: -35°C ~ +85°C

6. Contact Information

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7. Disclaimer

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