Yanzeo R15 SR2

Yanzeo R15 SR2 UHF RFID Reader/Writer User Manual

Model: R15 SR2

1. Introduction

The Yanzeo R15 SR2 is a compact and efficient UHF RFID Reader/Writer designed for various applications requiring fast and accurate RFID tag interaction. This device supports the 860-960MHz frequency range and complies with industry standards such as EPC C1G2 and ISO 18000-6C. Its robust metal shell ensures durability, making it suitable for both indoor and industrial environments.

This manual provides detailed instructions on setting up, operating, and maintaining your Yanzeo R15 SR2 RFID Reader/Writer to ensure optimal performance and longevity.

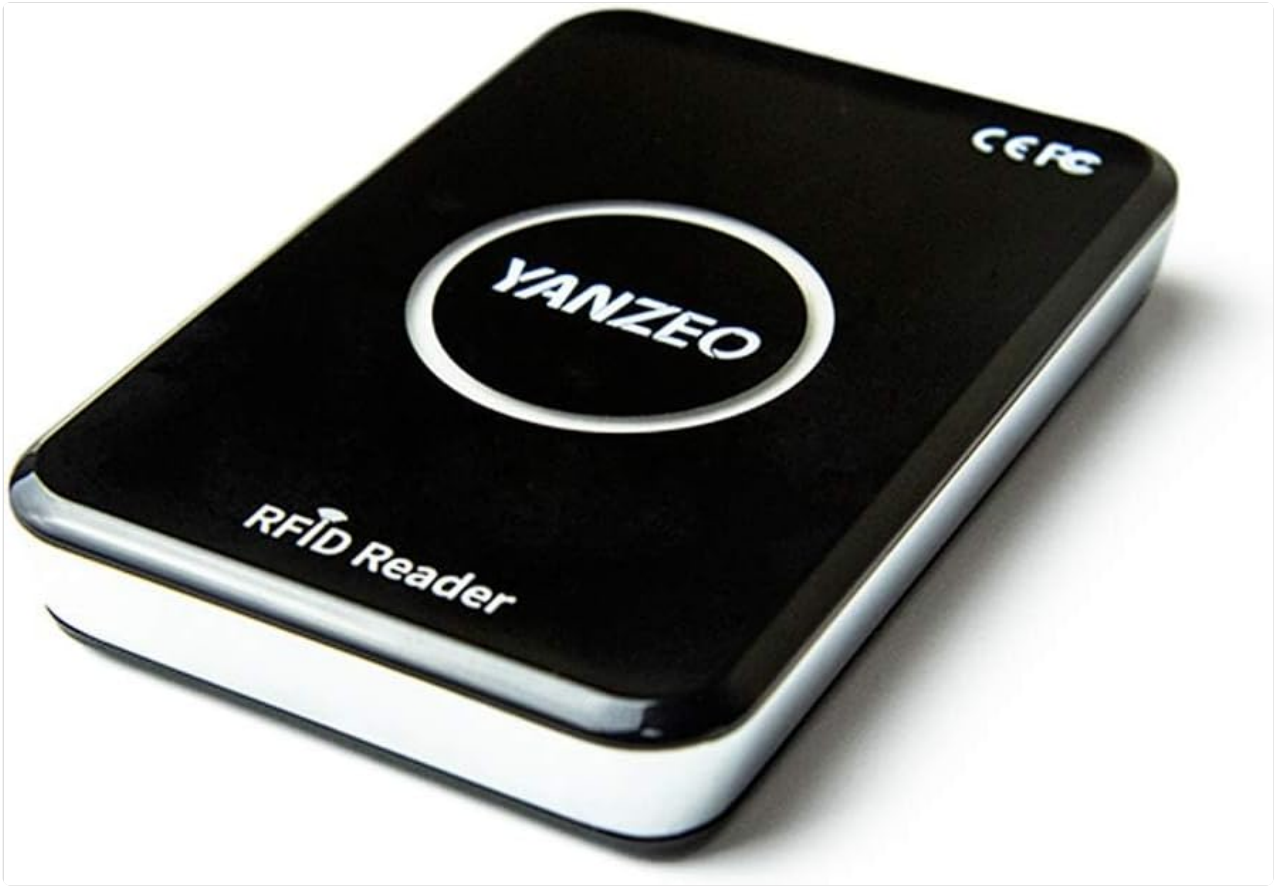


Figure 1: Yanzeo R15 SR2 UHF RFID Reader/Writer

2. Product Features

The Yanzeo R15 SR2 boasts several key features designed for high performance and versatility:

- **Compact Design:** Small and square shape, ideal for desktop use in indoor environments.
- **Fast Data Read Rate:** Enables quick and efficient reading of RFID tags.
- **Multi-Zone and Multi-Label Reading:** Capable of reading multiple tags simultaneously across different zones.
- **Multi-Protocol Compatibility:** Supports ISO18000-6C (EPC GEN2) and other frequency standards.
- **Built-in Antenna:** Features a 2dBi circularly polarized antenna.
- **Adjustable Output Power:** Output power from 12.5dBm to 26dBm, adjustable via software.
- **Flexible Interface:** USB connectivity for virtual keyboard input or virtual serial port.
- **Included Accessories:** Comes with a USB cable and a free Software Development Kit (SDK).

Figure 2: Key features including LED indicator, built-in antenna, and USB interface.

Figure 3: Multi-protocol compatibility with ISO 18000-6C and frequency range.

3. Setup

Follow these steps to set up your Yanzeo R15 SR2 RFID Reader/Writer:

1. **Unpack the Device:** Carefully remove the R15 SR2 reader and the included USB cable from its packaging.
2. **Connect to Power and Data:** Insert the smaller end of the USB cable into the USB port on the R15 SR2 reader. Connect the standard USB-A end of the cable to an available USB port on your computer (Desktop or Laptop). The device is powered via USB (DC +5V).
3. **Driver Installation (if necessary):** For most modern operating systems (e.g., Windows), the device will be recognized automatically as a virtual keyboard input or virtual serial port. If prompted, allow the system to install necessary drivers.
4. **Download SDK:** For advanced configuration and software integration, download the free SDK from the official Yanzeo website: yanzeo.com/UHF_RFID_DEMO.zip.
5. **Software Configuration:** Refer to the SDK documentation for instructions on configuring the reader's parameters, such as output power and operation mode, and integrating it with your specific application.

Figure 4: Side view of the R15 SR2 showing the USB interface.

4. Operating Instructions

The Yanzeo R15 SR2 supports various operating modes for reading and writing UHF RFID tags:

4.1. Reading Tags

Once connected and configured, the reader can automatically detect and read compatible UHF RFID tags within its reading range. The maximum reading range is approximately 0.5 meters, which may vary depending on the specific tag type and environmental conditions.

4.2. Writing Tags

The R15 SR2 also supports writing data to compatible UHF RFID tags. The maximum writing range is approximately 0.2 meters. Writing operations typically require specific software commands sent via the virtual serial port interface, as detailed in the SDK documentation.

4.3. Working Modes

The device supports the following working modes:

- **Active Mode:** The reader continuously scans for tags.
- **Passive Mode:** The reader waits for a command to scan for tags.
- **Answer Mode:** (Not recommended for general use) Specific mode for certain applications.

Figure 5: Illustration of typical reading and writing ranges.

5. Applications

The Yanzeo R15 SR2 RFID Reader/Writer is versatile and can be applied in various scenarios:

- **Logistics and Warehouse Management:** Efficiently track inventory, manage shipments, and optimize warehouse operations.
- **Parking Control Systems:** Automate vehicle access and management in parking facilities.
- **Manufacturing Management:** Monitor production lines, track work-in-progress, and manage assets.
- **Products Anti-Counterfeiting Detection:** Verify authenticity of products to combat counterfeiting.
- **Other Fields:** Includes applications in club management, library systems, student school rolls, attendance management, and swimming pool systems.

Figure 6: Diverse application scenarios for the RFID reader.

Figure 7: Example of the reader's use in warehousing.

6. Specifications

Detailed technical specifications for the Yanzeo R15 SR2 RFID Reader/Writer:

Parameter	Description
Working Frequency	CN standard (920-925MHz), US standard (902-928MHz), Other frequency standards (customized)
Protocol	ISO18000-6C (EPC GEN2)
Operation Mode	Fixed Frequency, FHSS, or Software Programmable
Antenna Parameter	2dBi circularly polarized antenna (built-in)
Output Power	12.5dBm-26dBm (Adjustable by software)

Parameter	Description
Reading Range (Max)	0.5m (related to the card or the environment)
Writing Range (Max)	0.2m (related to the card or the environment)
Working Modes	Active mode, Passive mode, Answer mode (Not recommended)
Voltage	DC +5V
Data Interface	USB to virtual keyboard input, USB to virtual serial port (Customized)
Working Temperature	-20℃ to 55℃ (-4℉ to 131℉)
Storage Temperature	-40℃ to 85℃ (-40℉ to 185℉)
Dimensions (L×W×H)	104mm × 70mm × 15mm (4.09 × 2.76 × 0.59 inches)
Net/Gross Weight	150g / 250g (5.29 oz / 8.82 oz)
Accessories	USB cable, Free SDK

7. Maintenance

To ensure the longevity and optimal performance of your Yanzeo R15 SR2 RFID Reader/Writer, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Avoid using abrasive cleaners, solvents, or harsh chemicals, as they may damage the surface.
- **Storage:** When not in use, store the device in a cool, dry place, away from direct sunlight, extreme temperatures, and high humidity. Refer to the storage temperature specifications.
- **Handling:** Handle the device with care. Avoid dropping it or subjecting it to strong impacts, which could damage internal components.
- **Cable Care:** Ensure the USB cable is not bent sharply or placed under heavy objects, which can cause internal wire damage.

8. Troubleshooting

If you encounter issues with your Yanzeo R15 SR2, consider the following common troubleshooting steps:

- **Device Not Recognized:**
    - Ensure the USB cable is securely connected to both the reader and the computer.
    - Try connecting to a different USB port on your computer.
    - Restart your computer.

    - Verify that necessary drivers are installed. For virtual serial port mode, check Device Manager for COM port assignment.

- **Unable to Read Tags:**
    - Ensure the tags are compatible UHF RFID tags (EPC C1G2, ISO 18000-6C).
    - Check that the tags are within the specified reading range (max 0.5m).
    - Verify that the reader's output power is set appropriately via the SDK software.
    - Ensure no metallic objects or strong electromagnetic interference are present near the reader or tags, as these can affect performance.
- **Unable to Write Tags:**
    - Ensure tags are within the writing range (max 0.2m).
    - Confirm that the software application is sending correct writing commands.
    - Some tags may be write-protected; ensure the tag is writable.
- **Intermittent Connection:**
    - Try using a different USB cable.
    - Avoid placing the device near other electronic equipment that might cause interference.

If these steps do not resolve the issue, please contact Yanzeo customer support for further assistance.

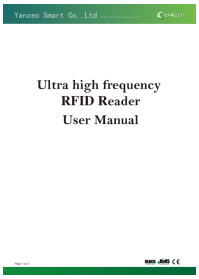
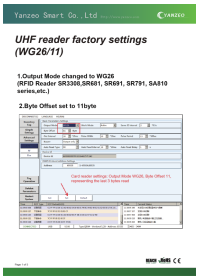
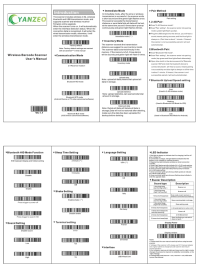
9. Support and Warranty

For technical support, software development assistance, or any inquiries regarding your Yanzeo R15 SR2 RFID Reader/Writer, please refer to the following resources:

- **SDK and Documentation:** The free SDK and accompanying documentation provide comprehensive details for software integration and advanced configuration. Download it from: yanzeo.com/UHF_RFID_DEMO.zip.
- **Online Resources:** Visit the official Yanzeo website or product page for updated information, FAQs, and additional support materials.
- **Customer Support:** For direct assistance, please contact Yanzeo customer support through the contact information provided on their official website.

Warranty Information: Specific warranty terms and conditions for the Yanzeo R15 SR2 are typically provided at the point of purchase or can be found on the official Yanzeo website. Please retain your proof of purchase for warranty claims.

Related Documents - R15 SR2

	[Yanzeo SA Series UHF RFID Integrated Machine User Manual] Comprehensive user manual for the Yanzeo SA Series Ultra High Frequency Integrated Machine, covering installation, operation, software configuration, and advanced settings for RFID readers.
	[Yanzeo Ultra High Frequency RFID Reader User Manual] User manual for the Yanzeo Ultra High Frequency RFID Reader, detailing its parameters, applications, wiring, installation, and software operation.
	[Yanzeo UHF RFID Reader Factory Settings Guide (WG26/11)] This guide details the factory settings for Yanzeo UHF RFID readers, specifically focusing on WG26 output mode and byte offset configurations. It covers common reader models like SR3308, SR681, SR691, SR791, SA810, and DM02 DR201, providing instructions for setting output modes, byte offsets, and troubleshooting connection issues.
	[Yanzeo AR180 User Manual: RFID Tag Scanner for Animal Management] User manual for the Yanzeo AR180, a low-frequency RFID tag scanner supporting EMID and FDX-B(ISO11784/85) tags. Learn about its features, operation, scanning, data uploading, and charging.
	[E9820i Wireless Barcode Scanner User's Manual] User's manual for the E9820i Wireless Barcode Scanner, detailing its features, connectivity options (2.4G, Bluetooth, USB), pairing procedures, operational modes, LED indicators, and buzzer descriptions.
	[Yanzeo C2000 & S100 Wired 2D Barcode Scanner Instruction Manual] Comprehensive instruction manual for Yanzeo C2000 and S100 wired 2D barcode scanners. Learn about product features, technical specifications, configuration settings, troubleshooting, and maintenance.