熙讯科技
SYSOLUTION

Passenger flow statistics RW1A

specification

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Version: V1.3

statement

Dear LED display users, we sincerely appreciate your choice of Shenzhen Xixun Cloud Technology Co., Ltd. (hereafter "Sysolution") products as your LED display control system. This document is designed to help you quickly understand the product specifications and usage. We strive to ensure the accuracy and timeliness of our documentation, which may be updated in real-time. For the latest version, please contact us promptly.

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Update Record

No.	Version	Updates	Revision Date
1	V1.0	initial issue	2022.08.01
2	V1.1	Update size	2023.04.28
3	V1.2	Update content	2025.05.06
4	V1.3	Update product introduction, features, product picture	2025.10.29

Note: The document content changes in real time. Contact the technical staff for updates when needed.

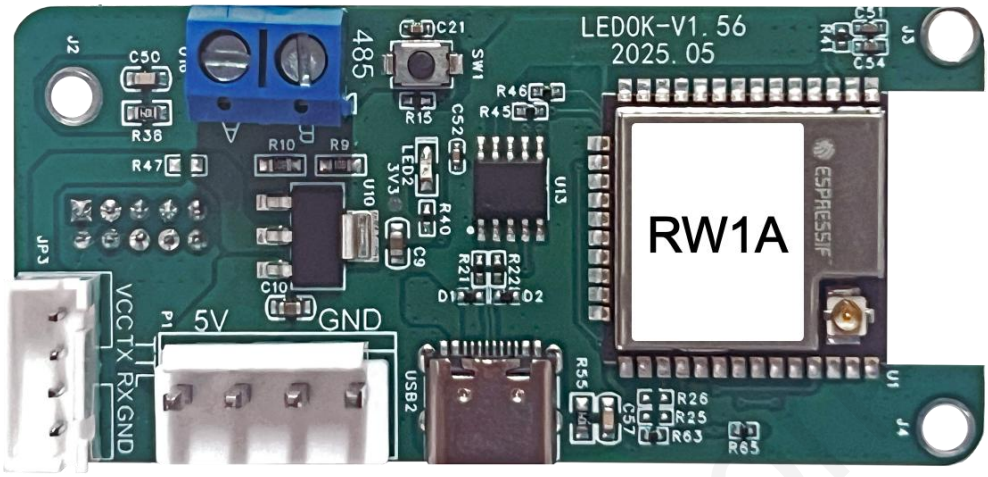
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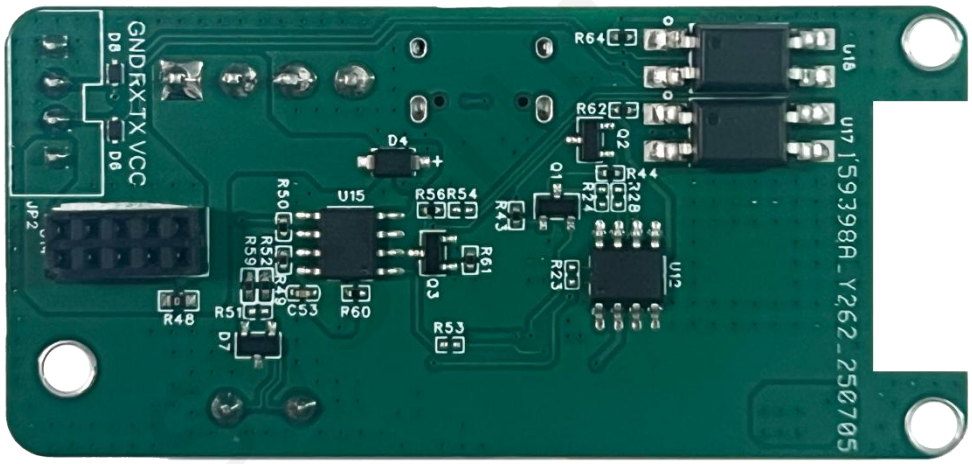
Product Introduction

RW1A, a wireless signal detection-based intelligent passenger flow analysis terminal developed by Sysolution, captures MAC addresses of nearby mobile devices (processed through anonymization) to enable real-time crowd counting, density monitoring, and dwell time analysis. This system empowers media operators to gain deep insights into advertisers' viewing patterns and locations, allowing them to optimize commercial ads and marketing strategies in response to market shifts and evolving advertiser needs. By delivering precise ad targeting, it helps businesses maintain competitive edge in fierce market competition while continuously strengthening their advantages. The solution is suitable for scenarios including in-vehicle media operations, shopping malls, retail stores, exhibition halls, and transportation hubs.

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Product Picture





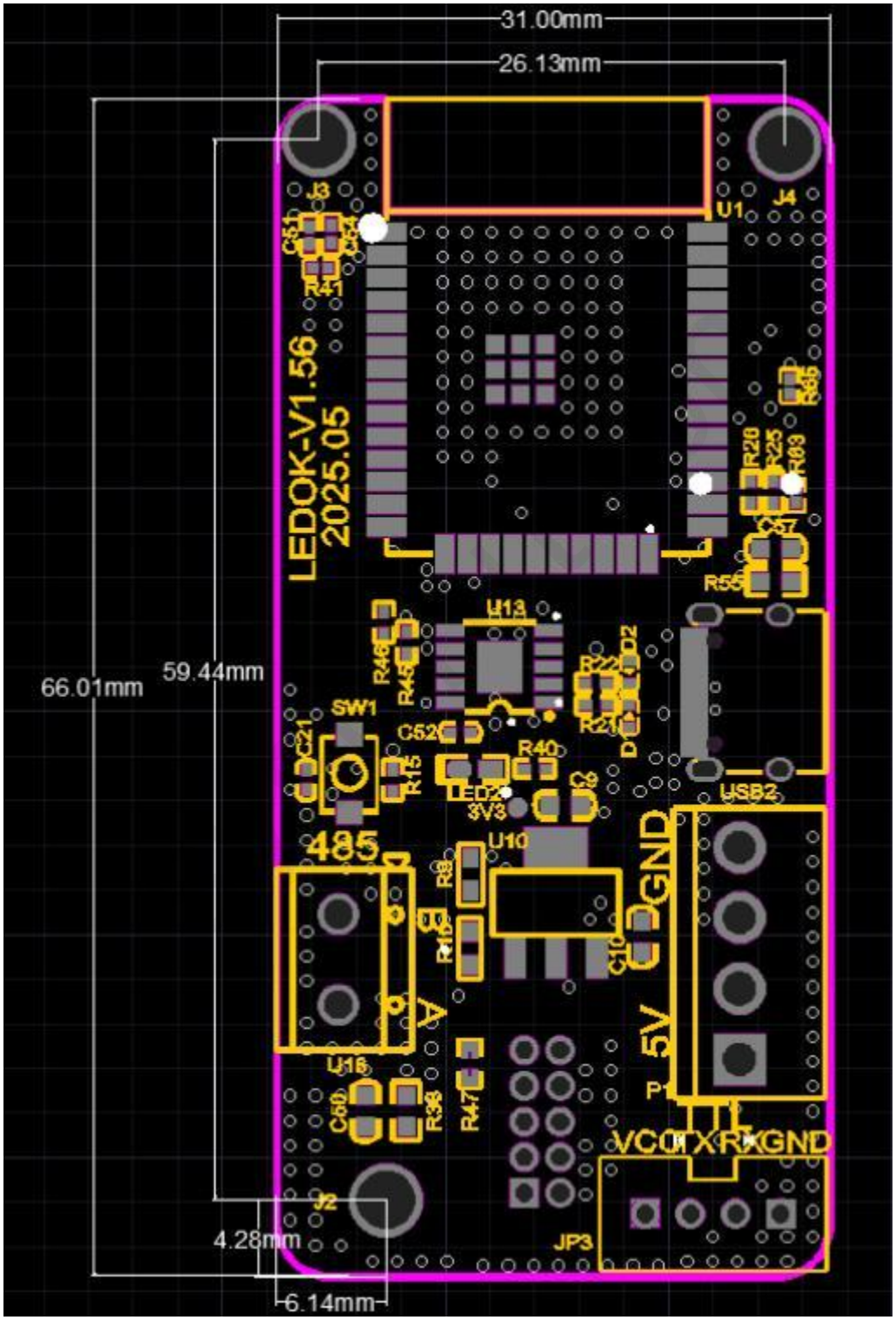
Functional Characteristics

1. Detection range: Effective detection radius 0-50 meters (power can be adjusted according to the scene, default 10-30 meters). The detection distance is optimal in unobstructed environments.
2. Concurrency detection capability: Supports simultaneous signal capture for ≥50 wireless terminals without noticeable lag or data loss.
3. Anonymization: The device performs irreversible encryption (e.g., MD5 hash) on collected MAC addresses locally, without storing the original addresses to ensure privacy and security.
4. Detection sensitivity: ≤-95dBm, can capture weak wireless terminal signals, reduce the detection rate.
5. Statistical indicators: real-time passenger flow, cumulative passenger flow, passenger flow density, average stay time, visitor repetition rate, peak passenger flow period distribution.
6. Data update frequency: 1 minute by default, with customizable settings from 10 seconds to 5 minutes.
7. Data interface: Provides HTTP/HTTPS API and TCP/UDP protocol interfaces, supporting integration with third-party systems (e.g., CMS, management consoles).
8. Management Console: The web-based management console allows remote configuration of device parameters (sensing range, update frequency, interface settings), real-time data viewing, and historical report export.
9. Device management: Unified management of multiple devices, including adding, deleting, and grouping devices, as well as viewing device online status and operation logs.
10. Firmware upgrade: Supports remote firmware upgrade without on-site operation, ensuring functional iteration.
11. Privacy compliance: In accordance with the Personal Information Protection Law and the Cybersecurity Law, it does not collect personal identification information of end users, but only obtains the MAC address broadcast by wireless terminals and anonymizes it.
12. It enables precise filtering of mobile devices while automatically excluding IoT devices (not included in statistics). The system prevents duplicate scans of the same device within one hour to avoid data redundancy. It provides random MAC addresses and RSSI signal strength for scanned devices, with adjustable thresholds for specific filtering ranges. Additionally, it supports remote OTA updates and offers optional 485 and TTL interfaces.

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Dimensional Drawing

front

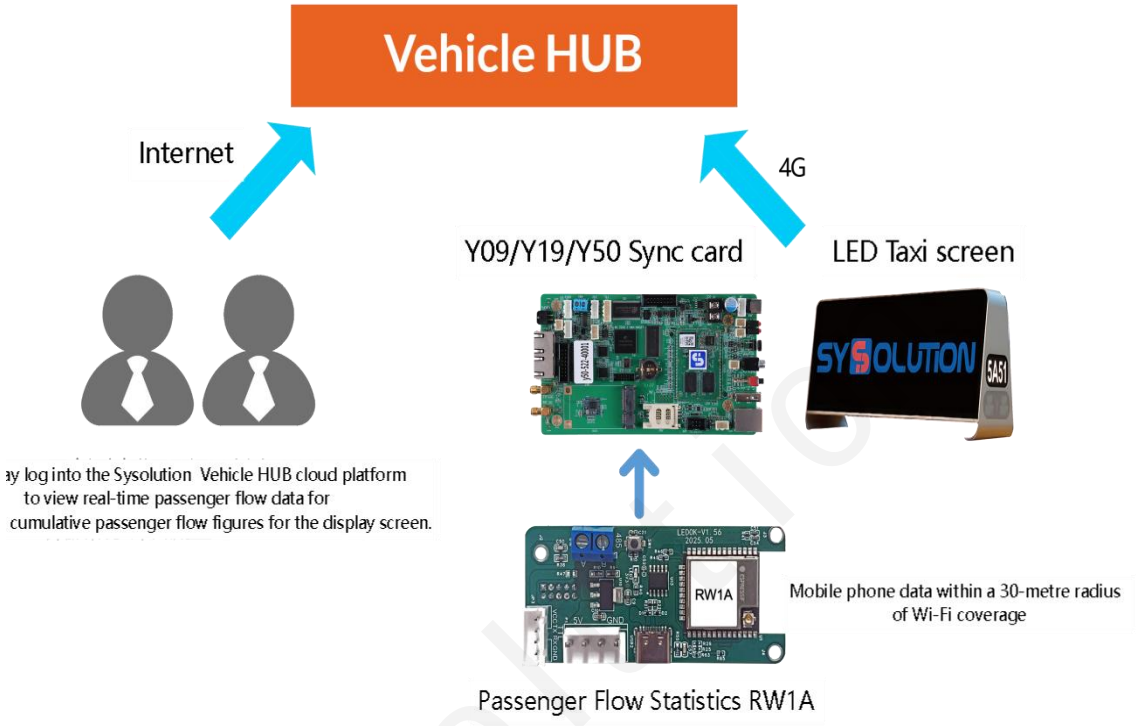


Product Parameter

Product Parameter	
product features	**description**
CUP and on-chip memory	● Built-in ESP32-D0WD-V3 or ESP32-D0WDR2-V3 chips, Xtensa dual-core 32-bit LX6 microprocessor, supports up to 240 MHz clock frequency ● 448 KB ROM ● 520 KB SRAM ● 16 KB RTC SRAM
WiFi	● Supports IEEE 802.11 b/g/n protocol ● 802.11n The data rate in mode is up to 150 Mbps ● Supports A-MPDU and A-MSDU aggregation ● 0.4 μs protection interval ● The working channel center frequency range is 2412 ~ 2484 MHz
going	● Operating voltage/power supply voltage: 5 V ● Average operating current: 80 mA ● Minimum power supply current: 500 mA ● Work environment temperature: -40 to 85 °C
Shipment List	1，One passenger flow detector RW1A; 2，VH2.54 is designated for one 5V power supply line for the device. 3，One RS485 cable connects asynchronous cards such as Y09/Y19/Y59.

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Function Overview



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Parts

Standard Accessories	Size/Quantity
WiFi patch antenna	1.5cm*1

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Notes

1. Power supply is 5V;

2. The antenna WIFI range has been cleared, and metal components may interfere. It is recommended to avoid metal objects nearby.

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