

ASHATA ASHATAwmza30rte1

ASHATA RS485-HUB-8P 8-Port Isolated RS485 Hub Instruction Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ASHATA RS485-HUB-8P 8-Port Isolated RS485 Hub. This industrial-grade device is designed to expand, relay, and isolate RS485 networks, enhancing communication reliability and protecting connected equipment.

2. SAFETY INFORMATION

- Ensure the power supply voltage (DC9-24V) matches the device requirements before connection.
- Do not expose the device to moisture, extreme temperatures, or corrosive environments.
- All wiring should be performed by qualified personnel to prevent electrical hazards.
- Disconnect power before performing any installation, maintenance, or troubleshooting.
- Avoid placing the device near strong electromagnetic fields.

3. PRODUCT OVERVIEW

The ASHATA RS485-HUB-8P is an industrial-grade RS485 hub designed for robust network expansion and protection. It converts one master RS485 port into eight isolated slave RS485 ports.

3.1 Key Features

- **Industrial Grade Design:** Ensures reliable performance in demanding environments.
- **8-Port Expansion:** Expands one RS485 master port to eight isolated slave ports.
- **Optoelectronic Isolation:** Provides protection against potential differences, static electricity, and lightning strikes.
- **Wide Baud Rate Support:** Supports communication rates from 300 to 460800bps (self-adaptive).
- **Rail Type Installation:** Facilitates easy and quick mounting.
- **Applications:** Suitable for data acquisition, Internet of Things (IoT), security IoT, and intelligent instrument monitoring.

3.2 Product Diagram

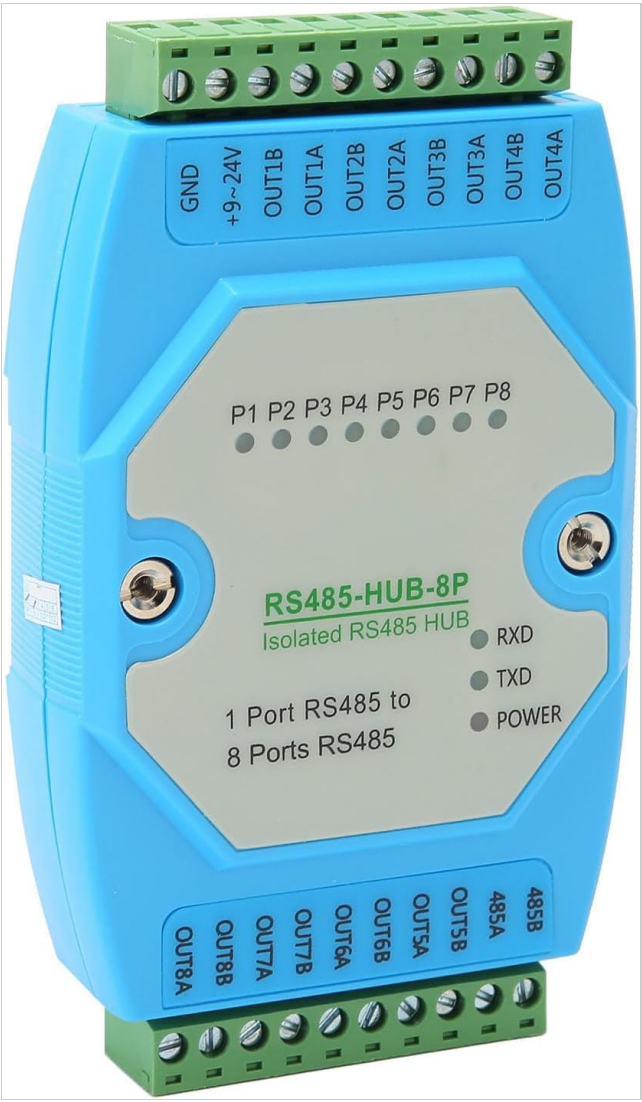


Figure 1: Front view of the ASHATA RS485-HUB-8P, showing the power input, GND, and eight output RS485 terminal blocks, along with RXD, TXD, and Power indicator LEDs.

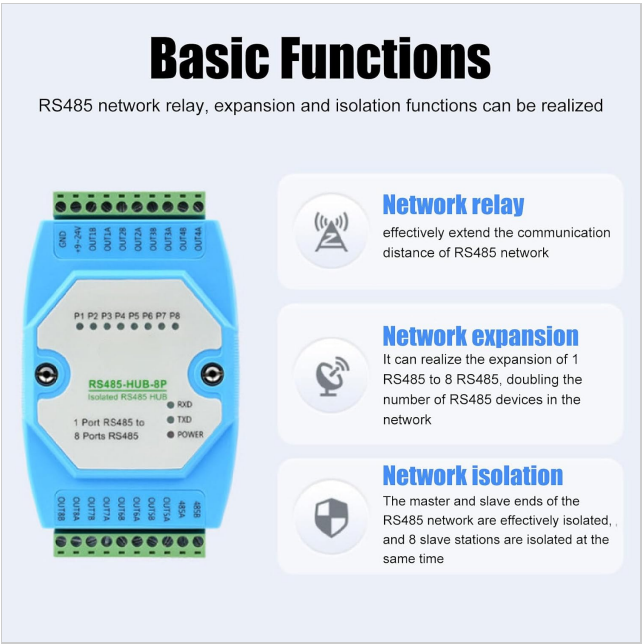


Figure 2: Diagram illustrating the basic functions of the RS485-HUB-8P, including network relay, network expansion (1 to 8 ports), and network isolation.

4. SPECIFICATIONS

Interface Standard	Meets RS485 Standard
Physical Port	RS485 Wiring Terminal
Communication Rate	300 to 460800bps (Self Adaptive)
Nodes Supported	Up to 32 nodes per RS485 port
Communication Distance	1200m (at 9600bps); distance decreases with higher baud rates
Working Mode	RS485 Two Wire (A, B), Half Duplex Transparent
Supply Voltage	DC9 to 24V
Operating Temperature	-45°C to +85°C
Ambient Humidity	Less Than 95%RH
Medium	Ordinary Parallel/Twisted Pair
Item Weight	6.9 ounces
Package Dimensions	6.3 x 4.33 x 1.97 inches
Compatible Devices	RS485 devices

5. SETUP AND INSTALLATION

The ASHATA RS485-HUB-8P is designed for easy installation using its rail-type mounting mechanism.

5.1 Mounting the Device

1. Identify a suitable DIN rail in your control cabinet or enclosure.
2. Align the rail-mount clip on the back of the RS485 hub with the DIN rail.
3. Press the device firmly onto the rail until it clicks into place, ensuring it is securely fastened.



Figure 3: Back view of the RS485 hub, showing the integrated rail-mount clip for DIN rail installation.

5.2 Wiring Connections

Refer to the terminal labels on the device for correct wiring. Ensure all connections are secure to prevent intermittent communication or damage.

- **Power Input:** Connect your DC9-24V power supply to the '+9-24V' and 'GND' terminals.
- **Master RS485 Port:** Connect your master RS485 device to the '485A' and '485B' terminals.
- **Slave RS485 Ports:** Connect your eight slave RS485 devices to the 'OUT1A/B' through 'OUT8A/B' terminals. Each pair (A/B) represents an isolated RS485 output port.



Figure 4: Top view of the RS485 hub, clearly showing the labeled terminal blocks for power input, master RS485, and the eight isolated slave RS485 outputs.

6. OPERATING INSTRUCTIONS

1. After completing all wiring connections as described in Section 5.2, apply power to the device.
2. Observe the indicator LEDs:
 - **POWER LED:** Should illuminate when power is supplied.
 - **RXD LED:** Flashes when data is being received by the hub.
 - **TXD LED:** Flashes when data is being transmitted by the hub.
3. The hub operates in a half-duplex transparent mode, automatically adapting to baud rates between 300 and 460800bps. No manual configuration of baud rate is typically required on the hub itself.
4. Ensure that all connected RS485 devices are configured to compatible communication parameters (e.g., baud rate, data bits, stop bits, parity) with the master device.
5. Each of the eight output ports can support up to 32 RS485 nodes, allowing for significant network expansion.

7. MAINTENANCE

- Keep the device clean and free from dust. Use a soft, dry cloth for cleaning.
- Regularly inspect wiring connections for looseness or damage.
- Ensure adequate ventilation around the device to prevent overheating, especially in enclosed spaces.
- No user-serviceable parts are inside. Do not attempt to open the casing.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No Power LED illumination	No power supply; incorrect voltage; faulty wiring.	Check power source, verify voltage (DC9-24V), inspect power wiring.
No data communication (RXD/TXD LEDs off)	Incorrect RS485 wiring (A/B reversed); incompatible baud rates; faulty master/slave device.	Verify A/B wiring polarity; ensure all devices use compatible communication parameters; test master/slave devices independently.
Intermittent communication	Loose wiring connections; excessive cable length; electromagnetic interference.	Secure all terminal connections; ensure cable length is within limits (1200m at 9600bps); use shielded twisted pair cables if interference is suspected.
Device not mounting securely on rail	Incorrect rail type; clip not engaged properly.	Ensure standard DIN rail is used; press firmly until the clip locks.

9. PACKAGE CONTENTS

- 1 x ASHATA RS485-HUB-8P
- 1 x Instruction Manual (this document)

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the

official ASHATA website. Keep your purchase receipt for warranty claims.

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question