

# **ZLAN9480A**

# **RS485 HUB**

# **User Manual**

**1 channel RS485 to 8 channels**  
**RS485 Hub**

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# 1. Summary

ZLAN9480A is an 8 ports industrial isolation RS485 hub, can extending 8 channels RS485 slave ports through 1 channel RS485 master port. It can effectively implement relay, extension and isolation of RS485 network.



**Figure 1 ZLAN9480A appearance**

The master-port end of ZLAN9480A provides isolation RS485, the slave-port end extends 8 channels isolation RS485 interface.

The main port of ZLAN9440 provides isolation two interface RS485 and RS232 at the same time, the sub-ports extend 4 channels isolation RS485 interface.

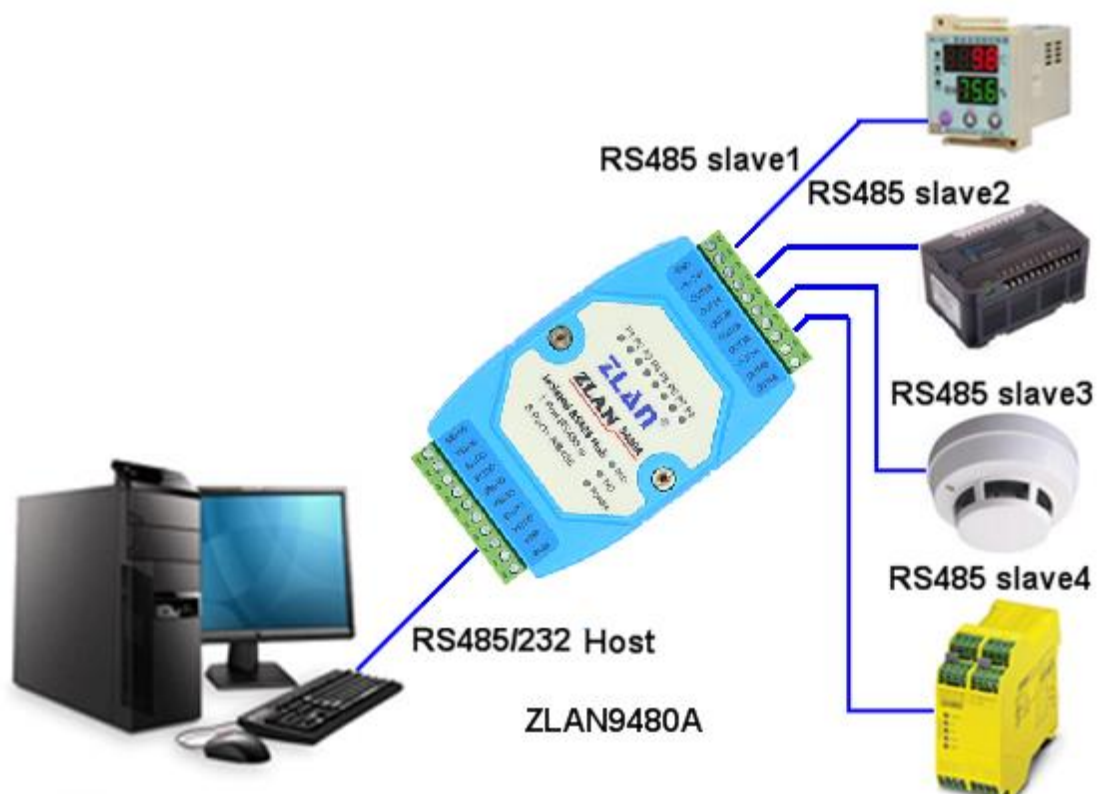
Generally the RS485 wiring require hand-in-hand wiring style, need avoid star connection of master station as center. But sometimes need star connection, in this case using RS485 hub can effectively isolate connection interference between

multi-RS485.

ZLAN9480A is active isolation RS485 hub, the product are specially designed for industrial scene in harsh environment, is especially suitable for situations requiring high reliability and safety. The photoelectric isolation function can effectively make master and sub devices separate from each other, avoid damage from ground potential difference of master-slave devices and static, lightning, surge to devices, also can avoid damage from ground loop current caused by ground potential difference.

ZLAN9480A has 3 main application styles:

- 1) Isolation: effectively isolate master and slave ends of RS485 network; meanwhile isolate 8 slave stations.
- 2) Relay: can effectively extend communication distance of RS485 network.
- 3) Extension: can implement 1 channel RS485 extending to 8 channels RS485, multiply the numbers of RS485 devices in the network.



**Figure 2 ZLAN9480A connection diagram**

## 2. Feature

- 1) RS485 master port and slave port have opto-isolator protection.
- 2) Support high baud rate 460800bps.
- 3) The power supply isolate from master RS485 power supply and slave RS485 power supply.
- 4) The back is equipped with guide installation card slot, suitable for guide installation.
- 5) 9~24V wide range input.

## 3. Technical parameter

Interface Standard	meet EIA/TIA RS232/RS485 standard
Physical Interface	RS485: Terminal
Serial Port Type	RS485: two-line (A, B)
Communication Rate	300~460800bps baud rate ( self-adaptive )
Support Qty.	each RS485 port support up to 32 node
Communication Distance	1200m (9600bps); higher rate shorter distance
Operation Mode	half-duplex transparent transmission
Input Voltage	DC 9~30V
Work Temperature	-45℃~+85℃
Environment Humidity	<95%RH
Transmission Medium	normal parallel lines or twisted-pair
Size	L×W×H=12.2cm×7.2cm×3.4cm

## 4. Hardware



**Figure 3 ZLAN9480A Interface Diagram**

The front view of ZLAN9480A is shown as figure 3, the interface instructions are as below:

Name	Instruction
GND, +9~24V	Power supply terminal input
OUT1A~OUT8A, OUT1B~OUT8B	RS485 slave port 1~8
485A, 485B	RS485 main port

The instructions of panel indicator are as below:

P1~P8	Receiving data from 1~8 port
RXD	Main 485 receiving data
TXD	Main 485 sending data
POWER	Power indicator

## 5. Usage

- 1) Extension usage: when master RS485 device need connect 8 RS485 slave stations through star-type, connect master station with 9480A master port, slave station connect 9480A slave port, it can prevent interference between RS485 as effectively isolation.
- 2) Isolation: connect one end of RS485 wire to the RS485 master port, the other end connect to any of the RS485 slave ports, so the RS485 wire is isolated effectively, can be lightning protection and anti-interference. Effectively protect the RS485 device in other end from damage by big voltage and strong current.
- 3) Relay: when RS485 wire exceeds 1200m, the signal will attenuate and the interference will increase. 9480A is adopted to extend the communication distance.

## 6. After-service

Shanghai ZLAN Information Technology Co., Ltd.

Address: 12 floor, D building, No. 80 CaoBao road, Xuhui District, Shanghai, China

Phone: 021-64325189

Fax: 021-64325200

Web: <http://www.zlmcu.com>

Email: [support@zlmcu.com](mailto:support@zlmcu.com)