

ZLAN2110 Serial Server User Manual

RS232 to TCP/IP Solution

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1. Summery

ZLAN2110 Serial Server is a kind of RS232 to TCP/IP protocol converter produced by Shanghai Zorlan information technology Co., Ltd. This type of Serial Server can conveniently let your legend serial device connect to Ethernet and Internet, and upgrade the serial device with networking.

Comparing with ZLAN2110, ZLAN2110 doesn't support functions as: DHCP, DNS, multi-TCP connections. But ZLAN2110 is more chipper and is very suitable for application in subnet. It also support Virtual Serial Port, so your legend software of serial port need not change to network software.



Figure 1 ZLAN2110 serial server

It can be applied to:

- CNC machine communication
- building/e-guard system/security system;
- bank/medical automation system;

- dealing in securities system;
- industry automation system;
- Point of Sells (POS) system;
- Intelligent home.

The typical application is showed in 图 2. The previous serial device is connected to ZLAN2110, and then connects ZLAN2110 to Ethernet through networking cable. From now on, any data sending from serial device will transparently transformed to PC specified by this serial server; and the data sending by PC to serial server will also be transparently transform to serial device.

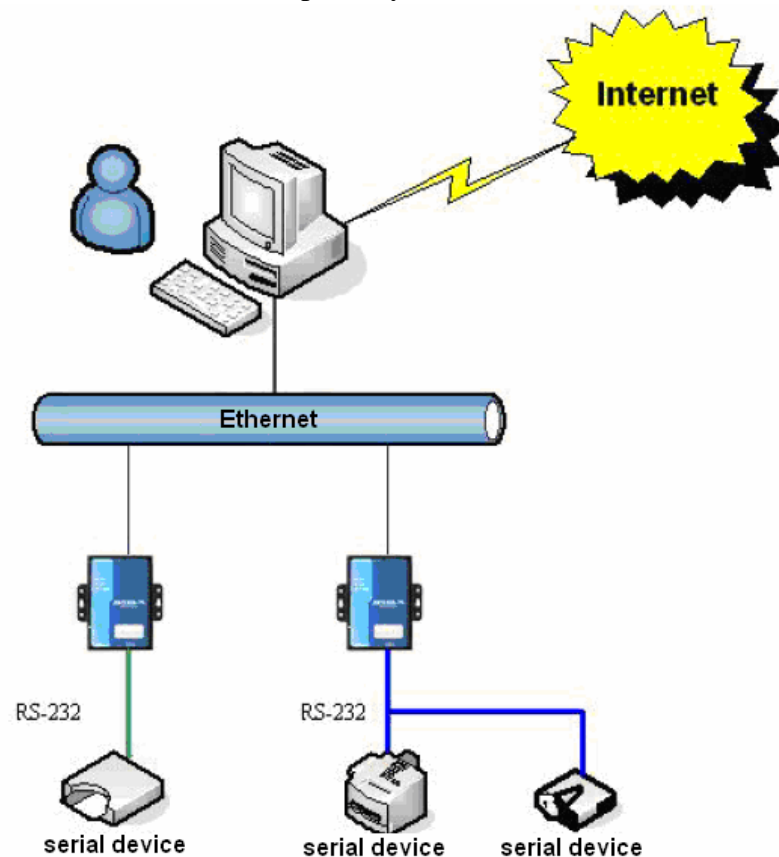


图 2

2. Feature

1. Support full duplex, high speed converting, and no packet lost.

ZLAN2110 is the first type of full duplex, continuous, and low cost serial server

in industry. It support simultaneously converting between Ethernet &Serial with large bulk of data with no pause, and also no data is lost.

2. Hight cost performance.

ZLAN2110 is designed by concept of intensification, after ensure the stability. It highly takes the cost of networking upgrading in count.

3. Support TCP Server, TCP Client, UDP mode, UDP group.

4. Support band rate1200~460800bps, data size 5~8bits, parity of None, Odd, Even, Mark, Space. Support CTS/RTS hardware flow control. Xon/Xoff software flow control.

5. Equipped freely with our Windows Virtual Serial & Device Management Tool ZLVirCom. It supports virtual serial and searching device or modifying parameters with ZLVircom.

6. Provide device management library (Window DLL library). It will help user to develop program with VC, VB, Delphi, C++ Builder. User need only use read() or write() function to communicate with ZLAN2110.

7. The innovative disconnecting detecting method. Whether it running in TCP Server mode or TCP Client mode, once network is disconnected by some reason, the disconnecting detecting method will detected it and reestablished the connecting.

8. With build-in Web server, its parameters can be modified by web browser.

9. Low power consumption. The max power is 0.25mW.

10. Flexible serial data framing setting. It fulfills all kinds of serial data frame requirement.

11. UDP mode support dynamic destination address mode. It helps for multi-user mange one serial server.

12. Real Com Driver mode support using the 9-th bit to facilitate communication with milt-device. (the 9-th bit being 0 means data frame and 1 means address frame).

13. Support searching serial servers and modifying parameters through Internet remotely

14. Support parameter modifying protection, preventing modifying by accident.

Support running with default parameters.

15. Build-in 2 KV electrical plus protection in RJ45.
16. High protection of electromagnetic interference, with its high electromagnetic interference protection SECC external shell.

3. Technical Parameters

Figure			
Interface:	Serial DB9 Male; RJ45 Networking connector; Power plug-in or terminal		
Size:	L x W x H = 9.4cm x 6.5cm x 2.5cm		
Communicate interface			
Ethernet:	10M/100M, 2KV electrical plus protection		
Serial	RS232 x 1:RXD,TXD,GND, CTS, RTS		
Serial parameters			
Band rate:	1200~460800bps	Parity:	None, Odd, Even, Mark, Space
Data size:	5~9	Flow control:	RTS/CTS,NONE,Xon/Xoff
Software			
protocol:	ETHERNET, IP, TCP, UDP, HTTP, ARP, ICMP, ,		
Setting method :	ZLVirCom, WEB browser, device management library		
Net communication method:	Socket, Virtual serial , device management library		
Work mode			
TCP server, TCP client, UDP, Real Com Driver			
Power			
Power:	9V DC,< 30 mA		
Environment			
Running	Commercial	0~70℃	

temperature:	industry	-45~85℃
Storage temp:	-45~165℃	
Humidity:	5~95%RH	

4. Hardware description

The top view of ZLAN2110 is show in Figure 3

Panel:

1. ACT: the ACT light indicates if there is data transform between serial and Ethernet.
2. LINK: LINK light indicates if TCP connection is established or in UDP mode.
Only when LINK led is lighted, serial & Ethernet transform is possible.
3. POWER.



Figure 3

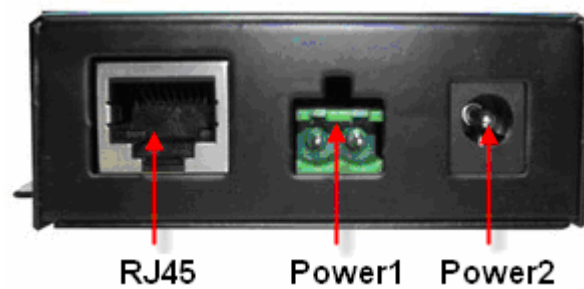


Figure 4

The front view is show in Figure 4.

1. Power2 is a power terminal(right pin is positive); Power1 is a standard power plug-in (inner pin is positive).
2. RJ45 networking interface.

The back view is show in 图 5:

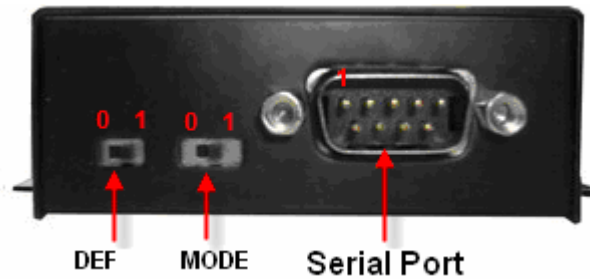


图 5

1. DEF switch: When DEF is push to 1, serial server will start with default parameter (default IP is 192.168.1.254)
2. Serial port: The line sequence is show in Table 1:

Table 1

Pin number	Name	Function
2	RXD	Receiving pin
3	TXD	Sending pin
5	GND	GND
7	RTS	If flow control is enabled, this pin is 0 for serial server can receive data from serial device.
8	CTS	If flow control is enabled, this pin must is 0 for serial server send data to serial device.

5. Application Notes

Refer to document “ZLSN2000(ZLSN2020)en.pdf”。

6. Support

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