ZLAN9100

Industrial Fiber Optical Transceiver

User Manual

Single-Mode Single-Fiber

----10M/100M Ethernet Converter

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2013-10-20	Rev.1	ZL DUI 20131020.1.0	Release

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Contents

1. Summary

ZLAN9100 optical transceiver is a photoelectric conversion device for converting 10M/100M Ethernet electrical signals into optical signals or optical signal into 10M/100M Ethernet signal. Through converting electrical signals into optical signal then transmission in single-mode fiber, it breakthroughs the limitation of the cable short distance, makes the Ethernet can use fiber medium to achieve the long distance transmission of several kilometers to hundreds of kilometers in guarantee under the premise of high bandwidth transmission.

Figure 1 ZLAN9100 Front View

ZLAN9100 has two special advantages:

1) Design for industrial applications. Power supply can be plug or two-wire terminal, the input voltage can achieve 9 ~ 24V wide voltage input.

2) Single-mode single-fiber fiber connection. This can be compared with the dual-fiber converter, you can save fiber costs of long-distance transmission.
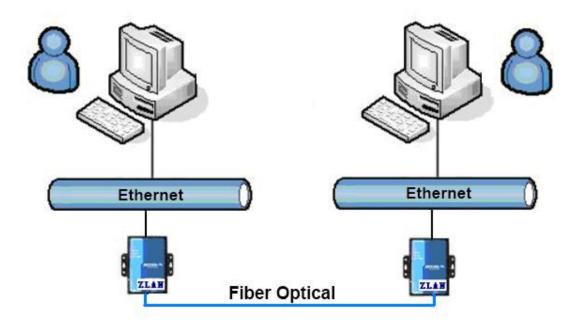

Figure 2 Connection Diagram

The ZLAN9100 can be applied to: a variety of applications that require to extend the distance of industrial Ethernet transmission via fiber; it can also be used in areas where Ethernet devices and optical switch devices need to be connected.

Note: ZLAN9100 is divided into two sub-models: ZLAN9100-3 (A-terminal) and ZLAN9100-5 (B-terminal), these two must be used in pairs. That is: A-terminal device connect to B-terminal device; B-terminal device connect to A-terminal; the same port can not be connected. When the ZLAN9100 connect with optical switch connection, please ask the optical switch is the A- terminal or B- terminal, if the A- terminal select ZLAN9100-5 otherwise select ZLAN9100-3.

2. Feature

1) 1 Ethernet port RJ45 and a single fiber SC optical port, to achieve the photoelectric signal conversion between twisted pair and optical fiber;

2) In line with IEEE802.3 10Base-T and IEEE802.3u 100Base-TX, 100Base-FX standard, can be interconnected with other products;

3) With 10M / 100M adaptive capacity;

4) Electrical port can be adaptive straight line/cross-line connection;

5) Support full duplex/half duplex mode;

6) Support IEEE802.3X full-duplex flow control and half-duplex back pressure flow control;

7) Built-in efficient exchange kernel, to suppress broadcast storms, to achieve flow control, CRC error check;

8) Twisted pair up to 100 meters; single-mode fiber up to 20 km;

3. Technical Parameters

Figure		
Interface:	Fiber Interface: Optical SC pluggable interface	
Power Supply:	5.5mm, Inside positive outside negative, standard outlet/terminal	
Size:	L x W x H =9.4cm×6.5cm×2.5cm	
Communicate Interface		
Ethernet:	10M/100M, 2KV surge protection	
Optical Fiber (9163):	Single-mode Single-fiber, double transferring	
Optical Fiber Parameters		
Sub-Model:	Emission (TX) Wavelength	Receiving (RX) Wavelength
ZLAN9100-3（A-end）	1310nm	1550nm
ZLAN9100-5（B-end）	1550nm	1310nm
Optical Fiber Transmission Distance:	20Km	Optical Communication Interface:	SC
Power		
Power:	9～24V DC，165mA@9V	
Environment		
Running temperature:	-40~85℃	
Storage temp:	-45~165℃	
Humidity:	5~95%RH	

4. Hardware Instruction

ZLAN9100 serial server fiber interface as shown in Figure 3: ZLAN9100 using black

anti-radiation SECC board. Left and right are with two "ears" to facilitate the installation. If need to install the rails, you can be equipped with installation rails accessories.

Figure 3 Fiber Interface

Figure 4 Indicator

Figure 5 Ethernet port and power port

Table 1 Interface and Board Instruction

Item	Name	Function
1	SC Fiber Interface	Fiber Interface
2	Fiber Link	Optical port link/status indicator; light on that has fiber access; light off that no fiber access.
3	Ethernet Link	Network status indicator; light on that there is a connected network; light off that no connection.
4	Power	Power indicator
5	RJ45	Ethernet Port
6	DC Plug	Power interface; Outer diameter 5.5mm, inner diameter 2.1mm
7	DC Terminal	Power Interface: 5.08mm terminal

5. Purchase Guidance

Table 2 Model Choice

Models	Instruction
ZLAN9100-3	A-terminal device
ZLAN9100-5	B-terminal device
optical fiber patch cord	SC Interface, 1 m. Not standard equipped.
Power Adapter	9V1A, 220V input. Standard equipped.

6. After-service

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