

SICOM3171 Series Managed Traffic Ethernet Serial Server

Quick Installation Manual



KYLAND Technology Co., Ltd.

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www.kyland.cn

Industrializing the Ethernet
Simplifying Industrial Communication

P/N: 1.12.02.0036-0

1. Packing list

The package list includes the following items:

SICOM3171 Managed Traffic Ethernet Serial Server	1
10pin-RJ45 to DB9 Serial port cable	1
Customer Service Guideline	1
Screw-driver	1
Protective caps for RJ45 ports	5
Quick Installation Manual	1
CD for User's Manual	1

NOTE: After unpacking, please check the accessories and the appearance of the equipment, if anything is missing or damaged, please contact us.

2. Product Overview

SICOM3171 is an ultra low power consumption (less than 3.5Watts), Managed Traffic Ethernet Serial Server. This single slot serial server is designed to slide into an open Detector Chassis Slot of any signal cabinet. This Traffic Serial Server is widely deployed in SCADA and OSS networks around world. This proven ultra low power consumption serial server (Green Product-RoHS) features one 10/100Base-TX Ethernet port, and four serial ports being selectable for RS232, RS422 and RS485 serial connectivity. The SICOM3171 Managed Traffic Ethernet Serial Server is the second of a series of EZ Traffic Networks products from Kyland and a continuation of our "Green Ethernet" product line.

The SICOM3171 Traffic Ethernet Serial Server has COM, TTY or GUI port control and management function, offers

monitoring and diagnostic utility. It enables data security via SSHv2 and SSL/TLS, and variety of IP addressing methods DHCP, RARP, ARP-PING for remote installation. It's the ideal for network enabling and remotely managing variable message signs, loop detectors, ramp meters or any RS232/422/485 serial device. This serial sever can be easily installed into any traffic cabinet with an open dual slot in a detector input chassis. Clean, filtered 12VDC or 24VDC power is provided directly from the back-plane of the detector chassis and eliminates adding to the mess of additional power supplies and power cables within the traffic cabinet.

3. Product Features

Interface

Serial port: 4xRS232/422/485 10-pin RJ45 Serial ports, 50bps-1000Kbps throughput, default baud rate is 9600bps.

Ethernet port: 1x10/100Base-T(X) self-adaptive 8-pin RJ45 port, MDI/MDI-X.

Standards

IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IP, UDP, TCP, ARP, DHCP, FTP, ICMP, LLDP, SNMP, SSH, SSL/TLS, HTTP, HTTPS, TELNET

Cable

Ethernet Twisted pair: 0-100m

RS232 Twisted pair: 15m

RS422/RS485 Twisted pair: 1200m

Power requirements

Power input: 24VDC (9~36VDC)

Power consumption: <3.5W

Physical characteristics

Case: Aluminum case, fanless

Protection class: IP40

Installation: Inserted into a rack through rail slots

Dimensions: (W×H×D): 30 mm×114mm×167.5mm

The depth of the handle is 27.5mm.

Weight: 0.35kg

Environmental Limits

Operating Temperature: -40 to 85°C (-40 to 185°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 0 to 95% (non-condensing)

WARRANTY

5 years

4. Panel Layout

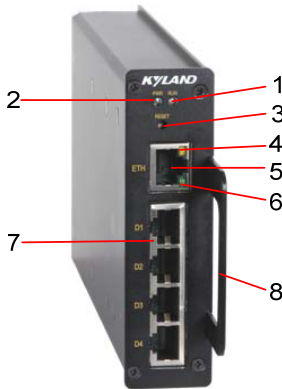


Figure 1 Front panel view

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1. RUN (system operation status LED)
 2. PWR (power status LED)
 3. Reset button
 4. 10/100Base-T(X) RJ45 port SPEED LED
 5. ETH, 1×10/100Base-T(X) RJ45 ports
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- 6. 10/100Base-T(X) RJ45 port LINK/ACT LED
- 7. D1-D4,4x10-pin RJ45 Serial ports

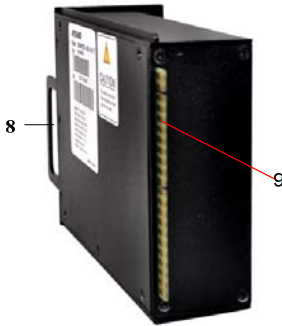


Figure 2 Rear panel view

- 8. Handle
- 9. Golden finger for power connection

5. Ports

10/100Base-T(X) 8-pin RJ45 port

SICOM3171 supports one 10/100Base-T(X) RJ45 port.

Table 1 10/100Base-T(X) RJ45 port pin definition

RJ45 8-Pin Jack	MDI/NIC port Signal Name	MDI-X/Switch port Signal Name
1	Tx+	Rx+
2	Tx-	Rx-
3	Rx+	Tx+
6	Rx-	Tx-

RS232/422/485 10-pin RJ45 serial port

SICOM3171 supports four RS232/422/485 serial ports. Serial port is a Shielded 10-pin RJ45 modular jack .

The standard of serial ports is 3-wire RS232, 4-wire RS422, 2-wire RS485, supplying 10-pin RJ45 plug —DB9F plug console cable ,which connect the serial port with the 9-pin serial port at the computer.

Table 2 RJ45 Connector RS232 pin definition

RJ45 10-Pin Jack	Signal Name	Signal Description
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	TxD	Transmitted Data
6	RxD	Received Data
7	SG	Signal Ground
8	N/A	N/A
9	N/A	N/A
10	N/A	N/A

Table 3 RJ45 Connector RS422/485 pin definition

RJ45 10-Pin Jack	Signal Name		Signal Description
	485	422	
1	N/A	TxD-	Transmitted Data (-)
2	TxD /RxD-	RxD-	Received Data (-)
3	N/A	N/A	N/A
4	N/A	N/A	N/A
5	N/A	TxD+	Transmitted Data (+)
6	TxD /RxD+	RxD+	Received Data (+)
7	SG	SG	Signal Ground

8	N/A	N/A	N/A
9	N/A	N/A	N/A
10	N/A	N/A	N/A

Golden finger for power connection

SICOM3171 has golden finger to connect with plug.12VDC or 24VDC power supply is offered by the cabinet backplane

Table 4 Golden finger Description

Golden finger 22-Pin plug	Signal Name	Signal Description
A	-	INPUT -
B	+ 24VDC	INPUT +
L	GND	Chassis Ground

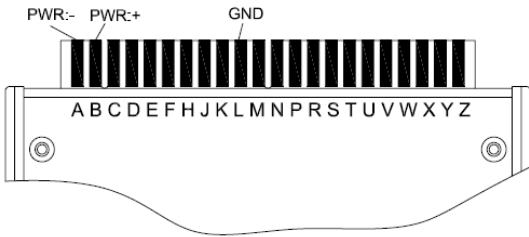


Figure 3 Golden finger for power connection

6. LED indicators

The LED indicators in the front panel of SICOM3171 can indicate system operation status and port status in order to find and settle faults. Table 5 shows the meanings of LEDs in the front panel.

Table 5 LED indicators

LED	State	Description
system status LEDs		
RUN	Blinking	Switch operates normally

(Green)	OFF	Switch does not operate or operate abnormally.
PWR (Green)	ON	Power is connected and operates normally.
	OFF	Power is not connected or operates abnormally.
Ethernet RJ45 port status LEDs		
Each RJ45 Ethernet port has two indicators, a yellow lamp and a green lamp. The yellow lamp indicates port rate, and the green lamp indicates port connection state.		
SPEED (Yellow)	On	100M working state (i.e. 100Base-TX)
	Off	10M working state (i.e. 10Base-T)
LINK/ACT (Green)	On	Effective network connection in the port
	Blinking	Network activities in the port
	Off	No effective network connection in the port

7. Installation

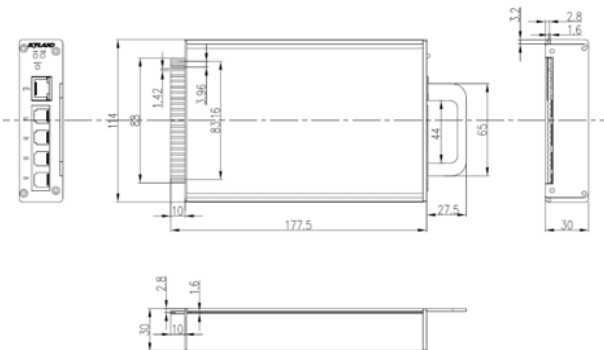


Figure 4 Dimension drawing

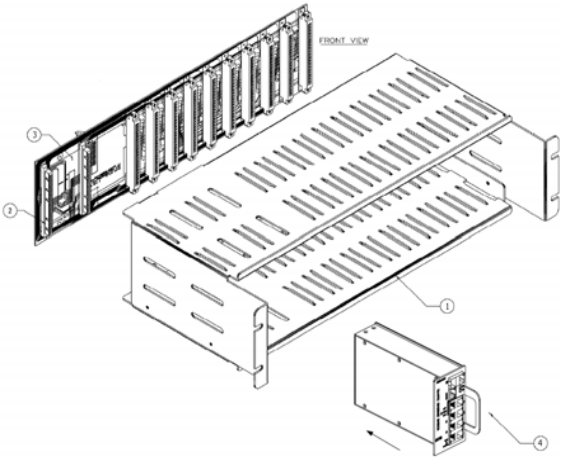


Figure 5 Mounting on the rack

Note: 1: Rack for mounting; 2: Power socket; 3: Back panel;
4: SICOM3171

8. Self inspection

After the equipment is powered on, PWR LED will stay on. The device will begin the initialization process; the RUN LED will blink after the device completes the initialization process after 20 seconds.

9. Log in Telnet management

- 1) Using cross-over cable or straight-through cable to connect an Ethernet port in the server with the network card of PC through Ethernet.
- 2) Type "telnet 192.168.0.3" in "Operation" window in Windows system or MS-DOS command prompt, click "apply".
- 3) Enter the default username "root" and the default password "123", press "Enter" key.
- 4) Please check the detail in "Software Operation Manual".

10. Log in WEB management

1) Using cross-over cable or straight-through cable to connect an Ethernet port in the Server with the network card of PC through Ethernet. Type the IP address of switch in IE browser, such as IP is 192.168.0.3, press “Enter” key, you can see the page as Figure6. Enter the default username “root” and the default password “123”, click “Sign in” to enter the WEB’s main page.

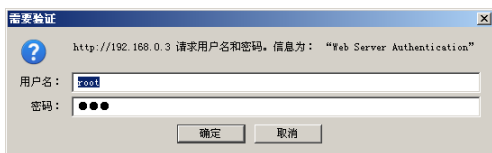


Figure 6 Log in page

2) Telnet serial server and check WEB configuration, obtain WEB user name and password. The operation command is as follows:

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#cat /etc/httpd.conf
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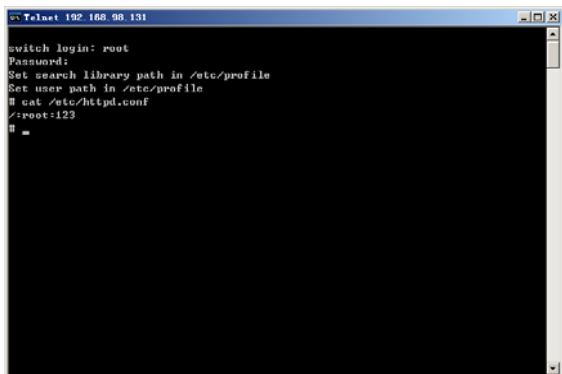


Figure 7 checking by Telnet

11. User Manual

CD for User’s Manual is attached. (PDF Format)

KYLAND

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www.kyland.cn.

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