

# Serial Device Server Module Hardware Installation Manual

Publication Data: Dec. 2014

Version: V1.0

No.: 112020078

***KYLAND***

## **Serial Device Server Module Hardware Installation Manual**

**Disclaimer:** Kyland Technology Co., Ltd. tries to keep the content of this manual as accurate and as updated as possible. This document is not guaranteed to be error-free, and we reserve the right to amend it without notice to users.

### **All rights reserved.**

No part of this documentation may be excerpted, reproduced, translated, annotated or duplicated, in any form or by any means without the prior written permission of KYLAND Corporation.

**Copyright © 2014 Kyland Technology Co., Ltd.**

# Notice for Safety Operation

The product performs reliably as long as it is used according to the guidance. Artificial damage or destruction of the device should be avoided. Before using the device, read this manual carefully for personal and equipment safety. Please keep the manual for further reference. Kyland is not liable to any personal or equipment damage caused by violation of this notice.

- Do not place the device near water sources or damp areas. Keep the ambient relative humidity within the range from 5% to 95% (non-condensing).
- Do not place the device in an environment with high magnetic field, strong shock, or high temperature. Keep the working and storage temperatures within the allowed range.
- Install and place the device securely and firmly.
- Please keep the device clean; if necessary, wipe it with soft cotton cloth.
- Do not place any irrelevant materials on the device or cables. Ensure adequate heat dissipation and tidy cable layout without knots.
- Wear antistatic gloves or take other protective measures when operating the device.
- Avoid any exposed metal wires because they may be oxidized or electrified.
- Install the device in accordance with related national and local regulations.
- Before power-on, make sure the power supply is within the allowed range of the device. High voltage may damage the device.
- Power connectors and other connectors should be firmly interconnected.
- Do not plug in or out the power supply with wet hands. When the device is powered on, do not touch the device or any parts with wet hands.
- Before operating a device connected to a power cable, remove all jewelry (such as rings, bracelets, watches, and necklaces) or any other metal objects, because they may cause electric shock or burns.
- Do not operate the device or connect or disconnect cables during an electrical storm.
- Use compatible connectors and cables. If you are not sure, contact our sales or technical support personnel for confirmation.
- Do not disassemble the device by yourself. When an anomaly occurs, contact our sales or technical support personnel.
- If any part is lost, contact our sales or technical support personnel to purchase the substitute. Do not purchase parts from other channels.
- Dispose of the device in accordance with relevant national provisions, preventing environmental pollution.

In the following cases, please immediately shut down your power supply and contact your Kyland representative:

- Water gets into the equipment.
- Equipment damage or shell damage.
- Equipment operation or performance has abnormally changed.
- The equipment emits odor, smoke or abnormal noise.

# Contents

1 Product Overview	1
2 Structure and Interface	1
3 Mounting	2
3.1 Dimension Drawing	2
3.2 Mounting Modes and Steps	3
3.2.1 Installing Mounting Brackets	3
3.2.2 Inserting a Serial Port Module into the Upper Slot	3
3.2.3 Inserting a Serial Port Module into the Lower Slot	4
3.2.4 Dismounting	5
4 Connection	6
5 Reset	7
6 LEDs	8
7 Access	8
7.1 Access through Telnet	8
7.2 Access through Web	10
8 Basic Features and Specifications	10

# 1 Product Overview

Serial device server module is a serial port module developed by Kyland Technology Co., Ltd. specifically for the power industry. The module, compact and light, can be managed through Telnet or Web. With four RS232/RS422/RS485 serial ports on the front panel, the module can be inserted into the slots of SICOM3028GPT series industrial Ethernet switches. The Reset button provides one-touch recovery function. For details, see the following table.

Table 1 Models

Models	Description
SM6.6-4D-232/422/ 485-0.5U	Serial port module without RTS Carrier Control, supports four RS232/RS422/RS485 serial ports
SM6.6-4D-A-4RS232/ 422/485-0.5U	Serial port module with RTS Carrier Control, supports four RS232/RS422/RS485 serial ports



## Note:

We reserve the right to amend the product information without notice. To obtain the latest information, contact our sales or technical support personnel.

# 2 Structure and Interface



## Caution:

It is recommended to purchase the port dustproof shield (optional) to keep ports clean and ensure module performance.

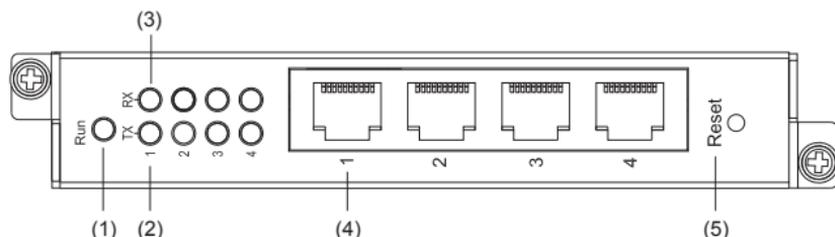


Figure 1 Serial Port Module

- (1) Running LED (2) TX LEDs for serial ports (3) RX LEDs for serial ports  
(4) Four RS232/RS422/RS485 serial ports (5) Reset button

## 3 Mounting

### 3.1 Dimension Drawing

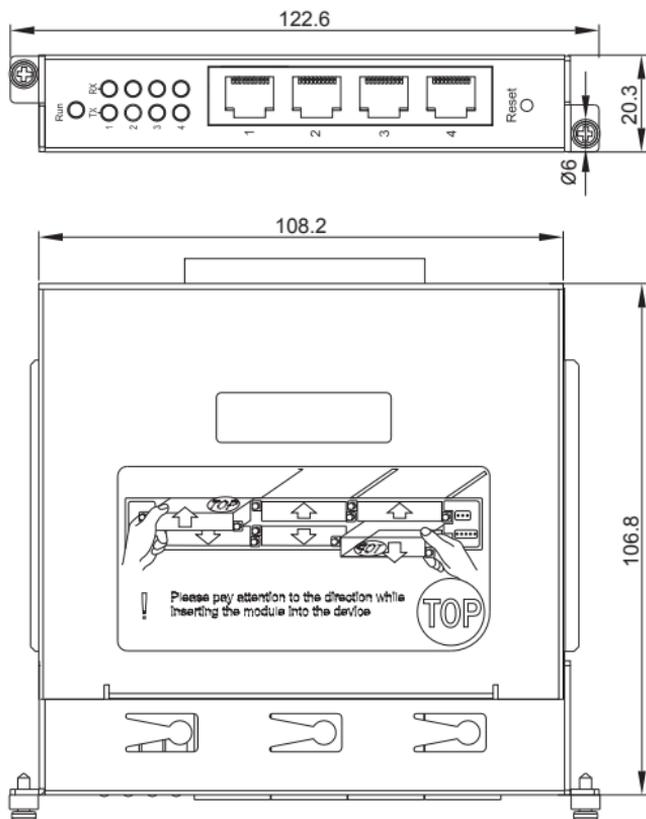


Figure 2 Dimensions (unit: mm)



**Caution:**

The figures in this manual are only for reference.

## 3.2 Mounting Modes and Steps



### Caution:

Power off the switch before you install or remove a serial port module.

SICOM3028GPT series industrial Ethernet switches provide one 1U slot and six 0.5U slots on the rear panel. You can insert the serial port module into the 0.5U slot.

### 3.2.1 Installing Mounting Brackets

Before inserting a serial port module into an upper or lower slot, install mounting brackets on the module as follows:

Insert two mounting brackets into the screw holes at both sides of the module. Push the brackets in direction 1 until the brackets are firmly secured to the module.

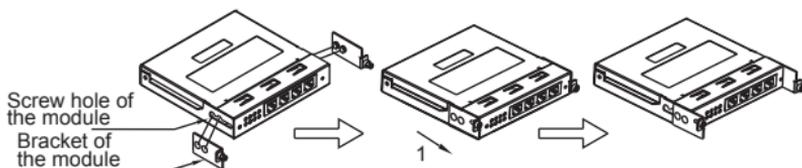


Figure 3 Installing Mounting Brackets

### 3.2.2 Inserting a Serial Port Module into the Upper Slot

Step 1: Insert the guide rail of the serial port module into the guide rail slot with "TOP" facing up. Then push the module into the slot along the guide rail slot until it is in position.



### Caution:

- To insert a serial port module into an upper slot, keep the "TOP" identifier on the module facing up.
- If the module cannot be pushed into place, do not force it, because too much force may cause damage to the module. In this case, remove the module and check the guide rail slot for any foreign materials or deformation. If the fault cannot be rectified, contact our sales or technical support personnel.

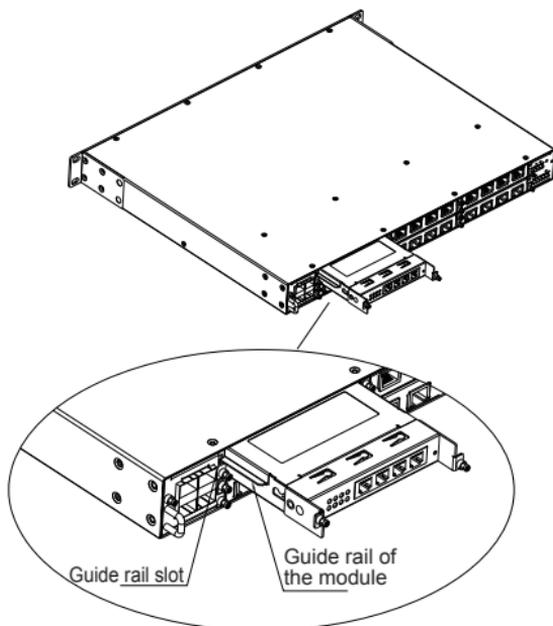


Figure 4 Inserting a Serial Port Module into the Upper Slot

Step 2: Push the mounting brackets into the slot completely. Insert two captive screws (M2.5×6) into the screw holes of the switch to secure the serial port module to the switch.

### 3.2.3 Inserting a Serial Port Module into the Lower Slot

Step 1: Insert the guide rail of the serial port module into the guide rail slot with "TOP" facing down. Then push the module into the slot along the guide rail slot until it is in position.



**Caution:**

- To insert a serial port module into a lower slot, keep the "TOP" identifier on the module facing down.
- If the module cannot be pushed into place, do not force it, because too much force may cause damage to the module. In this case, remove the module and check the guide rail slot for any foreign materials or deformation. If the fault cannot be rectified, contact our sales or technical support personnel.

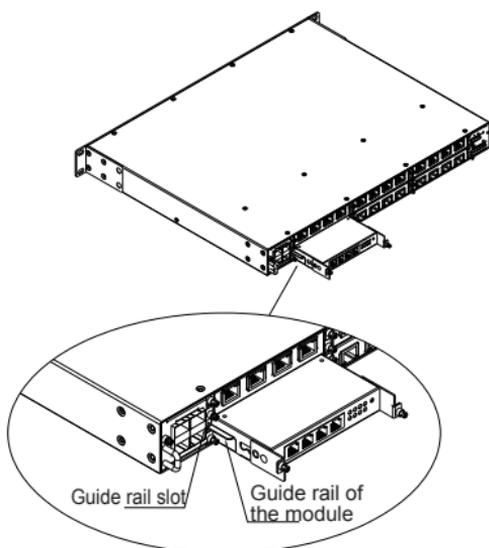


Figure 5 Inserting a Serial Port Module into the Lower Slot

Step 2: Push the mounting brackets into the slot completely. Insert two captive screws (M2.5×6) into the screw holes of the switch to secure the serial port module to the switch.

### 3.2.4 Dismounting

The steps for removing a serial port module from an upper slot and a lower slot are the same. Detailed steps are as follows:

Step 1: Remove the two screws securing the serial port module to the switch.

Step 2: Pull out the mounting brackets.

Step 3: Remove the module from the switch by holding the brackets.

Step 4: Remove the brackets from the module, as shown in the following figure.

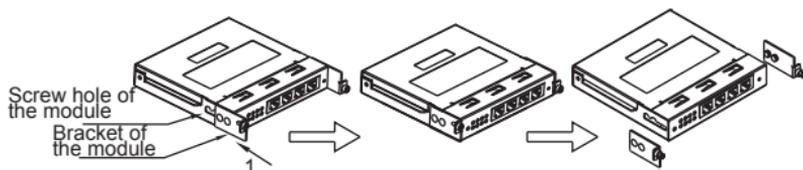


Figure 6 Removing Mounting Brackets

## 4 Connection

The serial port module provides four serial data ports equipped with RJ50. They support RS232, RS422, and RS485 modes. You can configure the specific mode as needed. Only one mode can be configured for each port at the same time.

- Pin Definition

The following figure shows the pin numbers of the serial port.

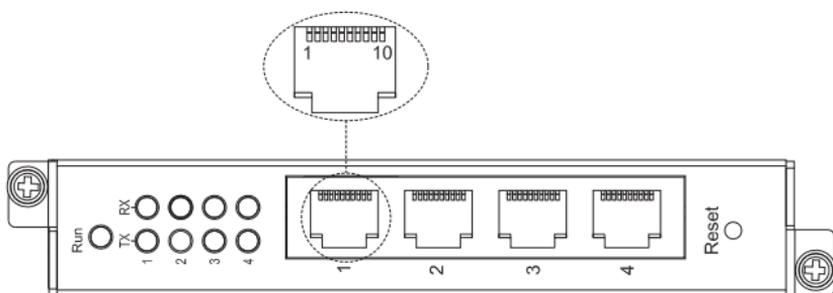


Figure 7 Serial Port

The following table lists the pin definitions of serial port.

Table 2 Pin Definitions of Serial Port

SM6.6-4D-232/422/485-0.5U:			
Pin	RS232 (Full-duplex)	RS422 (Full-duplex)	RS485 (Half-duplex)
1	--	TXD-	--
2	--	RXD-	Data-
4	GND	GND	GND
5	TXD	TXD+	--
6	RXD	RXD+	Data+
3, 7, 8, 9, 10	Unused		

Continued on the table

<b>SM6.6-4D-A-4RS232/422/485-0.5U:</b>			
<b>Pin</b>	<b>RS232 (Full-duplex)</b>	<b>RS485 (Half-duplex)</b>	<b>RS422 / RS485 (Full-duplex)</b>
1	--	--	TXD-
2	TXD	--	TXD+
3	RXD	Data+	RXD+
4	--	Data-	RXD-
5	GND	GND	GND
6	--	--	RTS-
7	RTS	--	RTS+
8	CTS	--	CTS+
9	--	--	CTS-
10	GND	GND	GND

 **Note:**

- You can configure the RS232, RS422, or RS485 through Web as needed. For details, refer to the Web operation manual in the delivered CD.
- Two connected data ports must work in the same mode. For example, if the local port is in RS232 mode, the peer port must be configured to work in RS232 mode.

## 5 Reset

The serial port module provides a Reset button on the front panel. The button can be used to restart the device or restore factory default settings.

You can restart the device by pressing and holding the button for less than five seconds. Before pressing the button, make sure you have saved all required configuration; otherwise, unsaved configuration will be lost after restart.

You can restore factory default settings (including the IP address) by pressing and holding the button for five seconds or more.

## 6 LEDs

Table 3 LEDs

LED	State	Description
Running LED	Blinking	The module CPU operates properly.
	Off	The module CPU does not start up.
TX LED	Blinking	The serial port is transmitting data.
	Off	The serial port is not transmitting data.
RX LED	Blinking	The serial port is receiving data.
	Off	The serial port is not receiving data.



### Caution:

When the serial port module is inserted into the slots of SICOM3028GPT series switches, the corresponding indicators of the fourth group on the switch front panel run based on the state of 10/100Base-T(X) port.

## 7 Access

You can access the serial port module in either of the following ways:

### 7.1 Access through Telnet

Step 1: Connect the network port of a PC to the Ethernet port of a SICOM3028GPT series switch with a network cable.

Step 2: On the Windows desktop, click Start and Run. The Run dialog box is displayed. Enter "telnet *IP address*". For example, if the IP address of the serial port module is 192.168.0.3 (default IP address of the module), enter "telnet 192.168.0.3" in the dialog box.

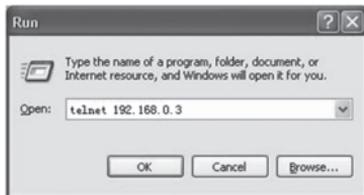


Figure 8 Access through Telnet

Step 3: Click OK. The Telnet CLI is displayed. You can log in by default user name "admin" and password "123". Then you can run the following commands to perform operations.



Figure 9 Telnet CLI

Table 4 Commands

Command	Operation
[admin@system /admin]#channelc -c [channel-id] --show	Query the settings of a serial port. [channel-id] indicates the ID of the serial port. The value ranges from 1 to 4.
[admin@system /admin]#ifconfig	Display the IP address and MAC address of the serial port module.
[admin@system /admin]#cat /etc/version	Query the version of the device.
[admin@system /admin]#reboot	Restart the device.
[admin@system /admin]#loadfactory.sh	Restore the factory default settings (including the IP address).
 <b>Caution:</b>	After running the [admin@system /admin]#loadfactory.sh command, you need to restart the switch or serial port module.

## 7.2 Access through Web

Step 1: Connect the network port of a PC to the Ethernet port of a SICOM3028GPT series switch with a network cable.

Step 2: Enter the IP address of the serial port module in the address box of the browser. The user login interface is displayed. You can log in to the Web UI by default user name "admin" and password "123".



### Note:

- IE8.0 or a later version is recommended.
- For details about how to access the serial port module and other operations, refer to the Web operation manual in the delivered CD.

## 8 Basic Features and Specifications

<b>Rated Power Consumption</b>	
Rated power consumption	2.5W
<b>Physical Characteristics</b>	
Housing	Metal, fanless
Installation	To be inserted into the slots of SICOM3028GPT series industrial Ethernet switches
Dimensions (W×H×D)	122.6mm×20.3mm×106.8mm (excluding the connector)
Weight	0.3Kg
<b>Environmental Limits</b>	
Operating temperature	-40°C~+85°C
Storage temperature	-40°C~+85°C
Ambient relative humidity	5%~95% (non-condensing)
<b>Warranty</b>	
Warranty	5 years



## ***KYLAND***

FAX: +86-10-88796678

Website: <http://www.kyland.com>

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

For more information about KYLAND products,  
please visit our website:

<http://www.kyland.com>