

SM6.6-4D-232/422/485-0.5U Serial Port Module

Hardware Installation Manual

KYLAND

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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.

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Notice for Safety Operation

The product performs reliably as long as it is used according to the guidance. Artificial damage or destruction of the serial port module should be avoided. Before using the serial port module, read this notice 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 serial port module near water sources or damp areas. Keep the ambient relative humidity within the range from 5% to 95% (non-condensing).
- Do not place the serial port module 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 serial port module securely and firmly.
- Please keep the serial port module clean; if necessary, wipe it with a soft cotton cloth.
- Do not place any irrelevant materials on the serial port module or cables. Ensure adequate heat dissipation and tidy cable layout without knots.
- Wear antistatic gloves or take other protective measures when operating the serial port module.
- Avoid any exposed metal wires because they may be oxidized or electrified.
- Install the serial port module in accordance with related national and local regulations.
- Power connectors and other connectors should be firmly interconnected.
- Do not plug in or out the power supply with wet hands. When the serial port module is powered on, do not touch the serial port module or any parts with wet hands.
- Before operating a serial port module, 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 serial port module 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 serial port module 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 serial port module 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.

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1 Product Overview

SM6.6-4D-232/422/485-0.5U 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 SICOM3000GPT and SICOM6000GPT series industrial Ethernet switches. The Reset button provides one-touch recovery function.

**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.

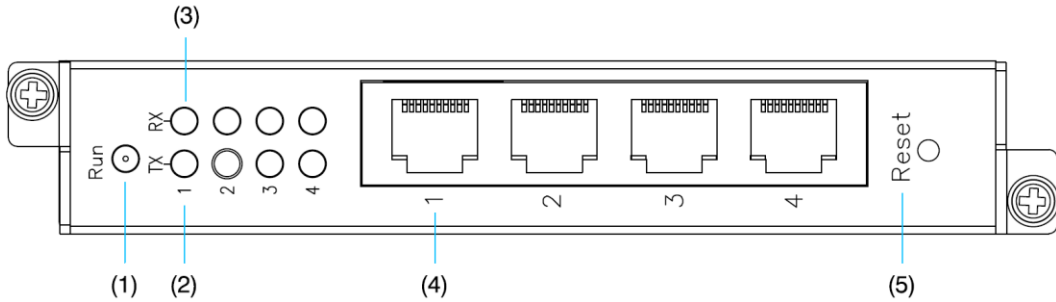


Figure 1 SM6.6-4D-232/422/485-0.5U Serial Port Module

Table 1 Description of SM6.6-4D-232/422/485-0.5U Serial Port Module

No.	Identifier	Description
(1)	Run	Running LED
(2)	TX, 1-4	TX LEDs for serial ports
(3)	RX, 1-4	RX LEDs for serial ports
(4)	1-4	Four RS232/RS422/RS485 serial ports
(5)	Reset	Reset button

3 Mounting

3.1 Dimension Drawing

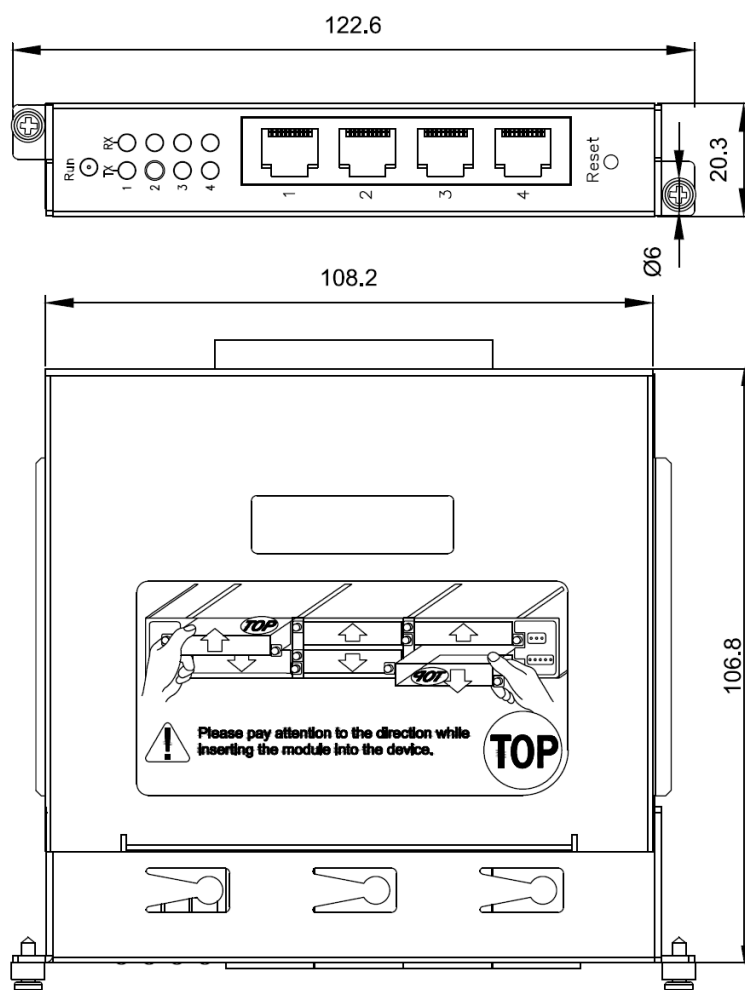


Figure 2 Dimensions (unit: mm)



Caution:

The figures in this manual are only for reference.

3.2 Mounting Modes and Steps



Caution:

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

SICOM3000GPT and SICOM6000GPT 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.

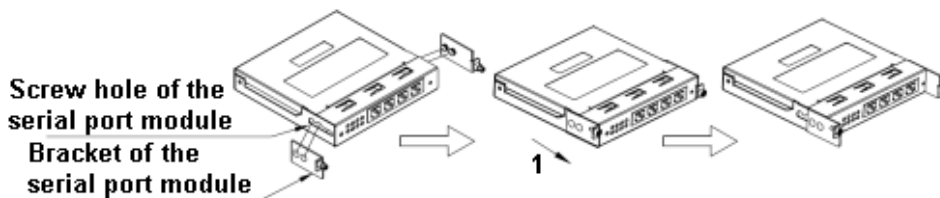


Figure 3 Installing Mounting Brackets

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.

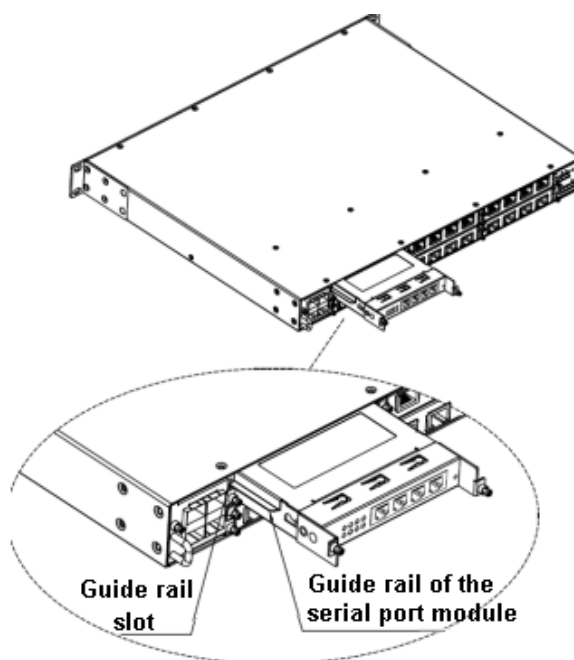


Figure 4 Inserting a Serial Port Module into the Upper Slot



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.

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.

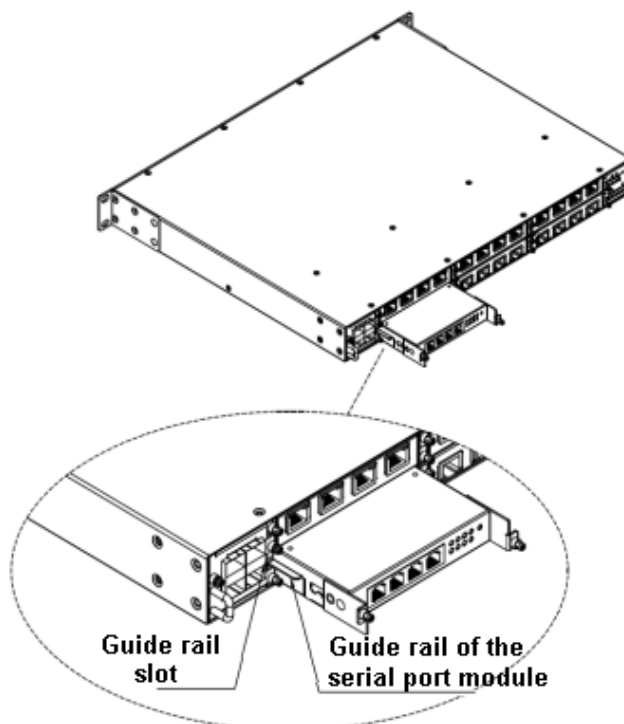


Figure 5 Inserting a Serial Port Module into the Lower Slot



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.

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.

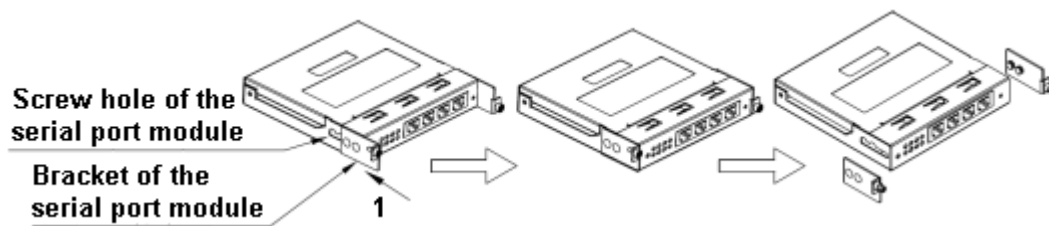


Figure 6 Removing Mounting Brackets

4 Connection

SM6.6-4D-232/422/485-0.5U (RJ45, 10-pin) serial port module provides four serial data ports. 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.

In RS232 or RS422 mode, the four serial ports can transmit and receive data (full duplex) at the same time. In RS485 mode, the four ports can only transmit or receive data (half duplex) at the same time.

- Pin Definition

The following figure shows the pin numbers of the RS232/RS422/RS485 serial port.

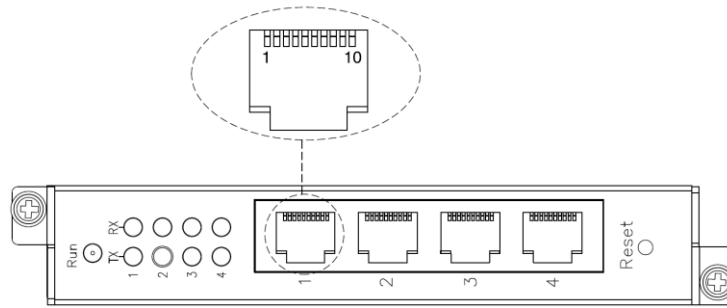


Figure 7 RS232/RS422/RS485 Serial Port (RJ45, 10-pin)

The following table lists the pin definitions of the RS232/RS422/RS485 serial port (RJ45, 10-pin).

Table 2 Pin Definitions of RS232/RS422/RS485 Serial Port

Pin	RS232	RS422	RS485
1	--	TXD-	--
2	--	RXD-	Data-
4	GND	GND	GND
5	TXD	TXD+	--
6	RXD	RXD+	Data+
3, 7, 8, 9, 10	Unused		



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 Front Panel LEDs

LED	State	Description
Running LED	Blinking	The CPU operates properly.
	Off	The 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.

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 SICOM3000GPT and SICOM6000GPT 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.

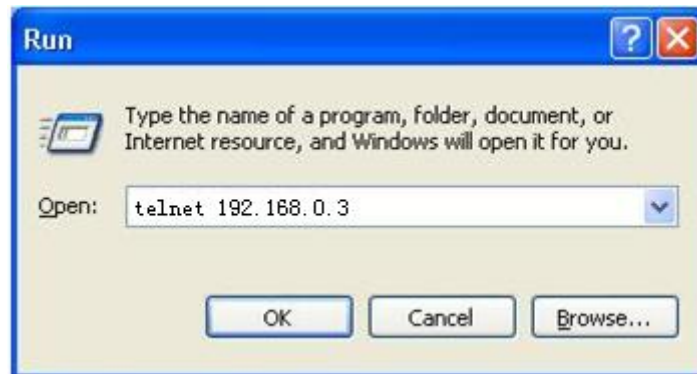


Figure 8 Access through Telnet

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]# 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).



Caution:

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 SICOM3000GPT and SICOM6000GPT 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

Rated Power Consumption

Rated power consumption	2.5W
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Physical Characteristics

Housing	Metal, fanless
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Installation	To be inserted into the slots of SICOM3000GPT and SICOM6000GPT series industrial Ethernet switches
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Dimensions (W×H×D)	122.6mm×20.3mm×106.8mm
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Weight	0.3Kg
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Environmental Limits

Operating temperature	-40℃~+85℃
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Storage temperature	-40℃~+85℃
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Ambient relative humidity	5%~95% (non-condensing)
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Warranty

Warranty	5 years
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For more information about KYLAND products, please visit our website: <http://www.kyland.com>