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GPEM-R Industrial SW Installation Manual

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Description: This document serves as an installation guide for industrial switches. It covers the installation methods, cabling procedures, LED behavior, and interface descriptions applicable to multiple industrial switch models. Supported features may vary by product. Please refer to your specific model for accurate information.

1. Precautions

To avoid equipment damage or personal injury caused by improper use, please observe the following precautions:

(1) Ensure the switch operates under a correct and stable voltage.

(2) Before using the switch, be sure to connect the ground via the grounding screw.

(3) Always unplug the switch's power cord before cleaning it. Do not wipe the switch with a damp cloth or use any liquid to clean the switch.

(4) Do not open the switch chassis while the switch is operating. Even when the switch is not powered on, do not open the chassis arbitrarily.

Description : This is a Class A device. In a domestic environment, this product may cause radio interference. In such cases, the user may be required to take practical measures to mitigate the interference.

2. Installing the Device

Industrial switches can be classified into rack-mount and DIN-rail types based on their installation method. Rack-mount industrial switches support both desktop installation and cabinet (rack) installation. DIN-rail industrial switches support both desktop installation and DIN-rail mounting. The following sections describe the installation procedures for each method. Supported installation methods may vary by device model. Please choose the appropriate installation method based on your actual conditions.

2.1. Rack (Cabinet) Installation

For switches that require rack installation, please prepare a 19- inch standard rack. Please note: The mounting ears are not load- bearing; they serve only to secure the device. When installing the device in a rack, a shelf (fixed to the rack) must be placed under the switch chassis to support the device:

(1) Check the grounding and stability of the 19-inch standard rack.

(2) Use screws to attach the mounting ears to both sides of the switch front panel.

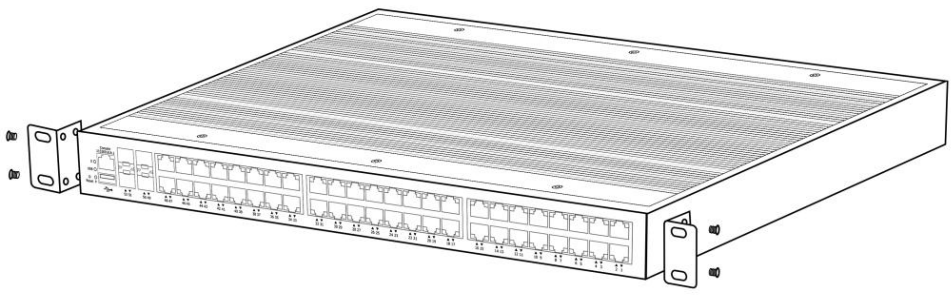


Figure 1-1 Mounting ear installation

(3) Place the switch on a shelf inside the rack. Move the switch along the rack guide grooves to the appropriate position.

(4) Use screws to secure the mounting ears to the fixing guide grooves on both sides of the rack, ensuring that the switch is stably installed on the shelf in the rack slot.

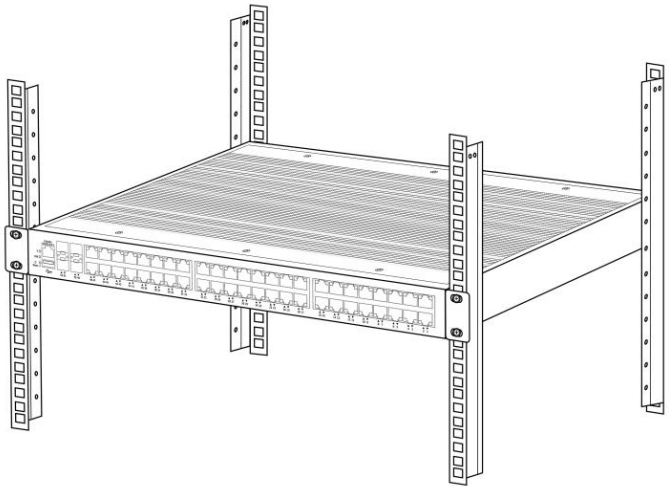


Figure 1-2 Mounting the switch into the cabinet/rack.

2.2. DIN Installation

(1) DIN Rail Mounting

Hook the upper part of the DIN rail clip onto the DIN rail. Press down slightly on the upper part of the device and rotate it inward so that the lower part of the clip also engages the DIN rail.

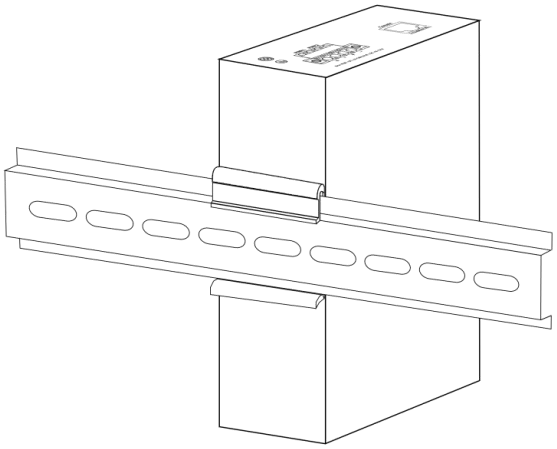


Figure 1-3 Mounting On to a DIN Rail

(2) DIN Rail Removal

Press down slightly on the upper part of the device and rotate it outward to disengage the lower part of the DIN rail clip from the rail. Then lift the device upward to remove it from the DIN rail.

3. Connecting Cables

3.1. Connecting the Configuration Cable (Available only on managed switches)

The procedure for connecting the configuration cable is the same for both DIN-rail industrial switches and rack-mount industrial switches. A rack-mount industrial switch is used as an example here. When configuring the switch via a terminal, the steps for connecting the configuration cable are as follows:

(1) Connect the USB connector of the configuration cable to the USB port on the computer.

(2) Connect the RJ45 end of the configuration cable to the Console port on the switch.

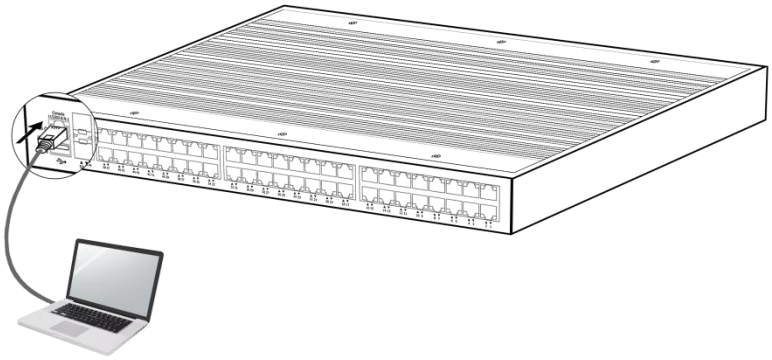


Figure 1-4 Configuration cable connection

3.2. Connecting the AC Power Cord

The installation procedure is as follows:

(1) Securely connect one end of the power cord to the AC power jack or Phoenix terminal on the device.

(2) Connect the other end of the power cord to an external AC power outlet.

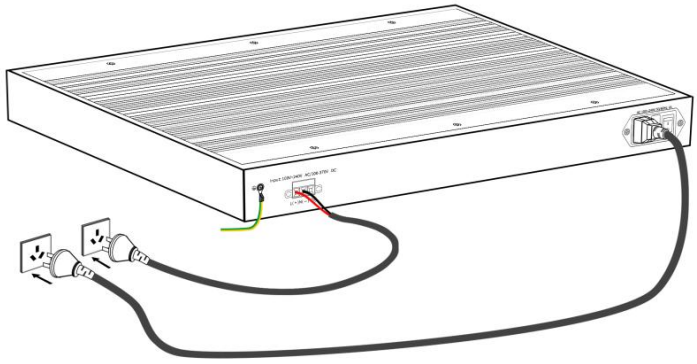


Figure 1-5 Connecting the AC power cord

3.3. Connecting the DC Power Cord

The installation procedure is as follows:

(1) Ensure that the device is disconnected from the power source.

(2) Connect one end of the protective grounding cable to the grounding screw on the device, and securely connect the other end to a nearby ground point.

(3) Connect the DC power wires to the positive and negative terminals of the Phoenix terminal (red wire to the positive terminal (+) and black wire to the negative terminal (-)). Tighten the screws on both sides of the Phoenix terminal using a screwdriver to secure the connections, as shown in Figure 1- 6 below.

(4) Turn on the power and check the power indicator on the front panel of the device. If the indicator lights up, the power supply is normal.

Description: The DIN-rail industrial switch is equipped with two DC power interfaces, PWR1 and PWR2. In practice, either one or both interfaces may be connected. When both are connected, they serve as redundant backups for each other.

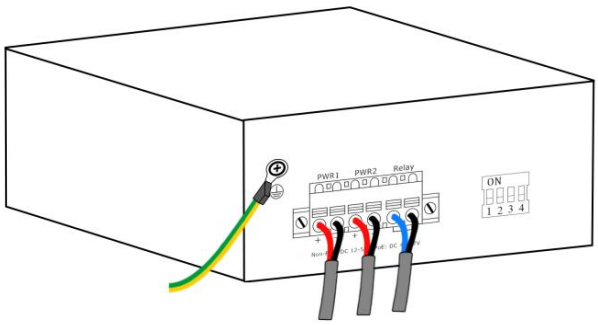


Figure 1-6 Phoenix terminal power supply

4. Logging In to the Device

There are two ways to log in to a managed industrial switch: WEB login management and Console login management.

(1) WEB Login Management

① Open a browser (Recommend Google) and enter 172.16.10.10 in the address bar.

② Enter the username and password: admin / admin.

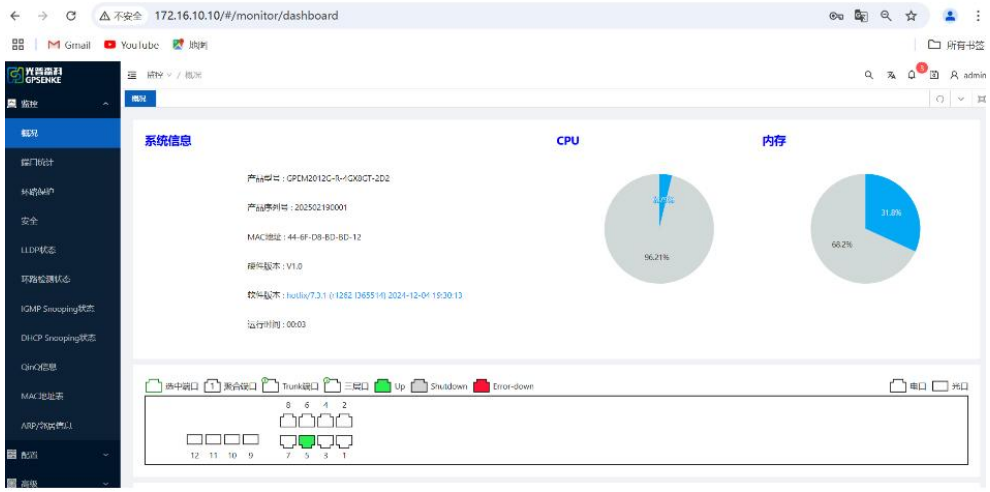


Figure 1-7 Web Login Successful

(2) Console Login Management

Common serial port software includes SecureCRT and PuTTY. SecureCRT is used as an example here.

① Open SecureCRT and select "New Session".

② Select the protocol "Serial" and click Next.

③ Select the appropriate COM port, set the baud rate to "115200", and deselect "RTS/CTS" in the flow control options. Click Next, then click Finish.

④ Press Enter, then enter the username "admin" and password "admin". The login interface is shown in Figure 1-8.

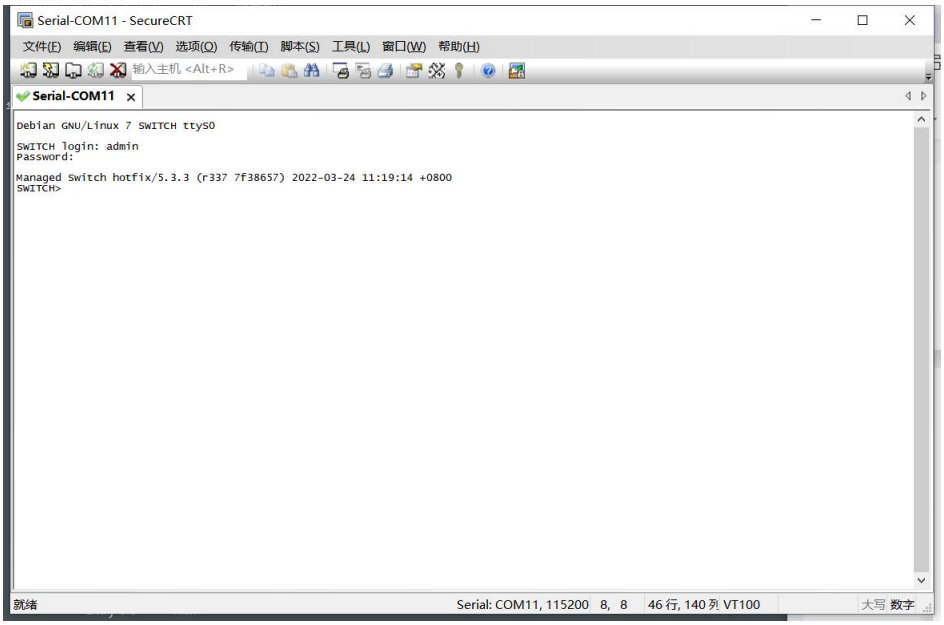


Figure 1-8 Console Login Successful

Description: The configuration of managed industrial switches is relatively complex. It is recommended that users contact GPSENKE for configuration documents before proceeding. Two documents are available: a WEB configuration document and a CLI configuration document.

5. LED Indicator Descriptions

5.1. Device LED indicators are described in the following table.

LED Indicator		Status	Definition
P/PWR	Power Status	Steady On	Power channel is supplying power normally
		Off	No power supply to the power channel
S/SYS	Non-managed System Alarm–Red	Steady On	PoE model: Load power exceeds 90% of rated power Non-PoE model: Chip read/write error
		Blinking	PoE model: Load power exceeds 50% but is less than 90% of rated power
		Off	PoE model: Load power is less than 50% of rated power Non-PoE model: No device alarm

	Managed System Run – Green	Steady On	Device is operating normally
		Blinking	Device is initializing
		Off	Device is not powered on or has malfunctioned
USB	USB Status	Steady On	USB flash drive detected
		Blinking	Device is reading data from the USB flash drive
		Off	No USB flash drive inserted or device failed to detect it
FLT/ALM	Fault Status	Steady On	Relay alarm output active
		Off	Device is operating normally
Ring	ERPS Indicator	Steady On	ERPS configuration is active
		Off	No ERPS configured
RJ-45 Gigabit Ethernet Port	Green Link/act	Steady On	Port Link UP
		Off	Port Link DOWN
		Blinking	Data transmission on the port
	Yellow Speed	On	Port is operating at 1000M
		Off	Port is operating at 10/100M
	Yellow (PoE)	On	Port PoE is operating normally
		Off	Port PoE is not supplying power
RJ-45 Fast Ethernet Port	Green Link/act	Steady On	Port Link UP
		Off	Port Link DOWN
		Blinking	Data transmission on the port
	Yellow Speed	Steady On	Port is operating at 100M
		Off	Port is operating at 10M
	Yellow (PoE)	Steady On	Port PoE is operating normally
		Off	Port PoE is not supplying power
SFP Interface	Green	Steady On	Port Link UP
		Off	Port Link DOWN
		Blinking	Data transmission on the port

Table 1-1 LED Status Description

5.2. Device silk screen markings are described in the following table.

Silk Screen		Definition
RS485	A	Data positive line
	B	Data negative line
G	G	Ground

DI	+	+: Data input signal + (State "1": open circuit or -30~+1V) Max input current: 8mA
	-	-: Data input signal - (State "0": +12V~+30V)
Relay		Normally Open
		Normally Closed

Table 1-2 Device Silk Screen Description

6. DIP Switch Descriptions

6.1. Fast Ethernet media converter DIP switch description

Type	Port Configuration	1	2	3	4
Non-PoE Model	1 Fiber + 1 ETH	LFP	Flow Control	Broadcast Storm Suppression	10K Bytes Jumbo Frame
	1 Fiber + 2 ETH	Port Isolation			
	2 Fiber + 2 ETH	Fiber Port 1+1 Redundancy			
PoE	1 Fiber + 1 ETH	LFP	Flow Control	250m Long-distance Transmission	Remote PD Auto Reboot
	1 Fiber + 2 ETH	Port Isolation			
	2 Fiber + 2 ETH	Fiber Port 1+1 Redundancy			

Table 1-3 Fast Ethernet DIP Switch Description

6.2. Gigabit Ethernet media converter DIP switch description

Type	Port Configuration	1	2	3	4
Non-PoE Model	1 Fiber + 1 ETH	LFP	Flow Control	Broadcast Storm Suppression	Fiber Port Speed Switch (ON=100M, OFF=1000M)
	1 Fiber + 2 ETH	Port Isolation			
	2 Fiber + 2 ETH	Fiber Port 1+1 Redundancy			Fiber Port Speed Switch (ON=Auto-negotiation, OFF=1000M)
PoE Model	1 Fiber + 1 ETH	LFP	Fiber Port Speed Switch (ON=100M, OFF=1000M)	250m Long-distance Transmission (Port 1)	Remote PD Auto Reboot
	1 Fiber + 2 ETH	Port Isolation			
	2 Fiber + 2 ETH	Fiber Port 1+1 Redundancy	Fiber Port Speed Switch (ON=Auto-negotiation, OFF=1000M)		

Table 1-4 Gigabit Ethernet DIP Switch Description

6.3. The DIP switch description for the switch is shown in the table below.

Type	1	2	3	4
Non-PoE	Port Isolation	Flow Control	QoS (Ports 1-2)	Broadcast Storm Suppression
PoE	Port Isolation	250m Long-distance Transmission	QoS (Ports 1-2)	Remote PD Transparent Reboot

Table 1-5 Fast Ethernet Switch DIP Switch Description

Type	Port	1	2	3	4
Non-PoE	1/2 Fiber + 4 ETH	Port Isolation	Flow Control	QoS (Ports 1-2)	Broadcast Storm Suppression
	5/8 ETH				
	1/2 Fiber + 8 ETH				
	2/4 Fiber + 8 ETH	Port Aggregation			
	16 ETH				
	2 Fiber + 16 ETH				
PoE	1/2 Fiber + 4 ETH	Port Isolation	250m Long-distance Transmission (Ports 1-2)	QoS (Ports 1-2)	Remote PD Transparent Reboot
	5 ETH				
	8 ETH		250m Long-distance Transmission (Ports 1-4)		
	1/2 Fiber + 8 ETH				
	2/4 Fiber + 8 ETH	Port Aggregation	250m Long-distance Transmission (Ports 1-4)		
	16 ETH				
	2 Fiber + 16 ETH				

Table 1-5 Gigabit Ethernet Switch DIP Switch Description

Important Note: Please be sure to install and configure the device correctly in accordance with this guide to ensure optimal performance. If you encounter any issues during installation, configuration, or operation, please feel free to contact our technical support team at any time.

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