3onedata
Make network communication more reliable

ICS5428 Series
Layer 3 Industrial Ethernet Switch
Quick Installation Guide

3onedata Co., Ltd.

Address: 3/B, Zone 1, Baiwangxin High Technology Industrial Park, Xili, Nanshan District, Shenzhen

Website: www.3onedata.com

Tel: +86 0755-26702688

Fax: +86 0755-26703485

【Package Checklist】

Please check the integrity of package and accessories while first using the switch.

1. Industrial Ethernet switch
2. Serial port line
3. Power line x2 (AC products only)
4. Foot pad x4
5. Rack-mounting lug x2
6. Warranty card
7. Certification

If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

This series are managed Layer 3 industrial Ethernet switches. The models are:

Model I. ICS5428-16GT8GC4XS-2P220 (4 10GbE SFP (10 Gigabit/Gigabit Self-adaption) + 16 Gigabit Copper Ports + 8 Gigabit Combo + 2 220VAC Power Supplies)

Model II. ICS5428-16GT8GC4XS-2P48 (4 10Gigabit SFP (10 Gigabit/Gigabit Self-adaption) + 16 Gigabit Copper Ports + 8 Gigabit Combo + 2 48VDC Power Supplies)

Model III. ICS5428-16GT8GC4XS-2P24 (4 10Gigabit SFP (10 Gigabit/Gigabit Self-adaption) + 16 Gigabit Copper Ports + 8 Gigabit Combo + 2 24VDC Power Supplies)

Model IV. ICS5428-16GP8GC4XS-2P48 (4 10GbE SFP (10 Gigabit/Gigabit Self-adaption) + 16 Gigabit PoE + 8 Gigabit Combo + 2 48VDC Power Supplies)

Model V. ICS5428-16GT4GS8GC-2P220 (4 Gigabit SFP + 16 Gigabit Copper Ports + 8 Gigabit Combo + 2 220 VAC Power Supplies)

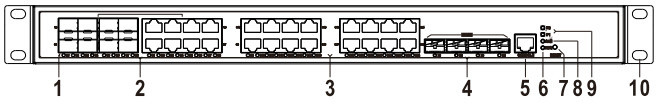
Model VI. ICS5428-16GT4GS8GC-2P48 (4 Gigabit SFP + 16 Gigabit Copper Ports + 8 Gigabit Combo + 2 48VDC Power Supplies)

Model VII. ICS5428-16GT4GS8GC-2P24 (4 Gigabit SFP + 16 Gigabit Copper Ports + 8 Gigabit Combo + 2 24VDC Power Supplies)

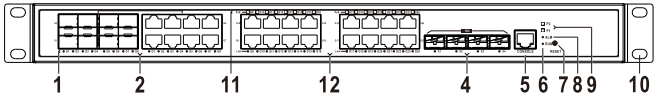
Model VIII. ICS5428-16GP4GS8GC-2P48 (4 Gigabit SFP +16 Gigabit PoE + 8 Gigabit Combo + 2 48VDC Power Supplies)

【Panel Design】

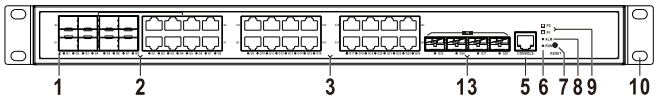
➢ **Front panel**



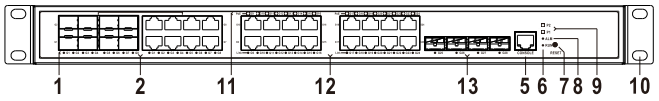
Model I, Model II, Model III



Model IV

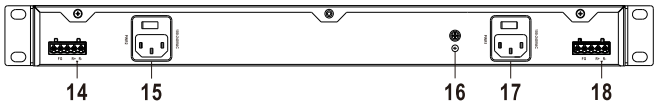


Model V, Model VI, Model VII

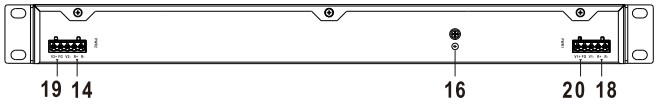


Model VIII

➢ **Rear panel**



Model I, Model V



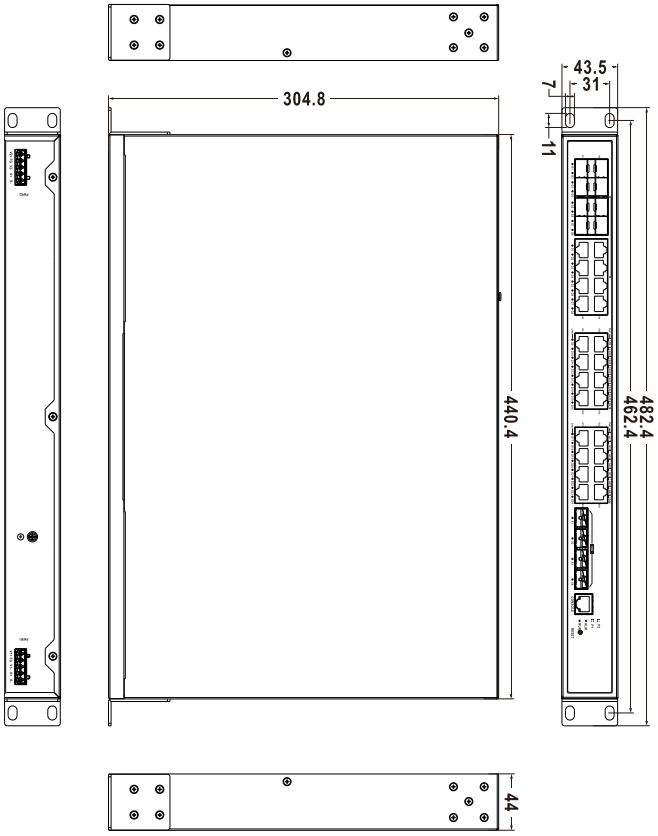
Model II-IV, Model VI-VIII

1. Ethernet port indicator (G1-G24, X1-X4)
2. Gigabit Combo port (G1-G8)
3. Gigabit Ethernet copper port (G9-G24)
4. 10 Gigabit SFP + port (10Gigabit / Gigabit self-adaption)
5. Console port
6. Device running state indicator (RUN)
7. Restore default settings(RESET)
8. Alarm indicator (ALM)
9. Power indicator (P1/P2)
10. Lugs
11. PoE indicator (G9-G24)
12. Gigabit PoE port (G9-G24)
13. Gigabit SFP interface (G25-G28)
14. Terminal blocks 2 for relay output
15. AC power supply input (PWR2)
16. Grounding screw
17. AC power supply input (PWR1)

18. Terminal blocks 1 for relay output
19. DC power supply input (PWR2)
20. DC power supply input (PWR1)

【Mounting Dimension】

This series of products have the same structure size, the structure size of Model VI is shown in the following figure. Unit: mm



Notice Before Mounting:

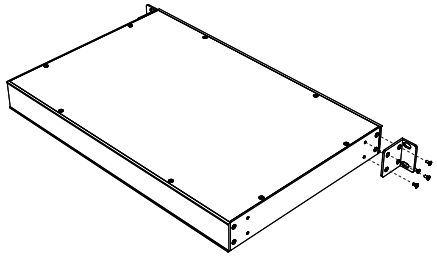
- Don't place or install the device in area near water or moist, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before power on, first confirm the supported power supply specification to avoid over-voltage damaging the device.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【Rack-mounted】

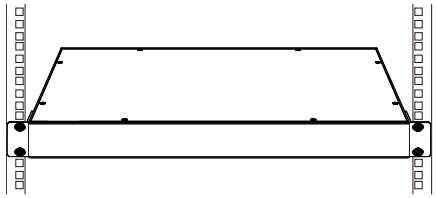
This product adopts rack-mounting, mounting steps as below:

Step 1 Select the device mounting location to ensure enough size.

Step 2 Adopt 4 bolts to install the mounting lugs in the device position as figure below.



Step 3 Place the device in the rack; adopt 4 bolts to fix two sides mounting lugs in the rack.



Step 4 Check and confirm the product is mounted firmly on the rack, mounting ends.

【Disassembling Device】

Step 1 Power off the device.

Step 2 Adopt screw driver to loosen the 4 bolts fixed on the mounting lugs in the rack.

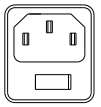
Step 3 Shift out the device from rack, disassembling ends.

Notice before power on:

- Power ON operation: First insert the power supply terminal block into the device power supply interface, then plug the power supply plug contact and power on.
- Power switch "—" means power ON, "O" means power OFF.
- Power OFF operation: First, put the powers switch to the "O" side and then disconnect the power supply. Finally disconnect the connector between the device and the power cord. Please notice the operation order above.
- Please be aware of the power input range supported by the device before powering on. Use the recommended voltage of the device to avoid device damage.

【Power Supply Connection】

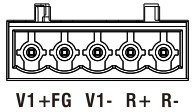
➢ **AC power supply**



Model I, V of this device provide 2 AC power supply access interfaces which come with a switch.

Voltage range: 220VAC (100~240VAC/DC)

➢ **DC power supply**



Model II, III, IV,VI,VII, VIII of this device provide 2 DC power supplies which are 5-pin 5.08mm pitch terminal blocks.The power supply occupies 3 pins on the left side and supports anti-reverse connection.

- Power supply range of Model II, VI: 48VDC (36~72VDC).
- Power supply range of Model III, VII: 24VDC(18~72VDC)
- Power supply range of Model IV, VIII (PoE device) : 48VDC , supports 240W PoE output.

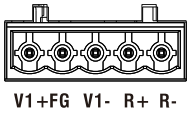
【Restore Default Settings】

RESET is restoring default settings button. Device Restoring default settings steps as follows: press and hold the RESET button, power on the device again, wait for about 3~4

seconds to restore the factory settings.

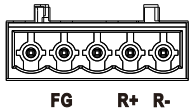
【Relay Connection】

- **DC products**



Model II, III, IV, VI, VII, VIII of this device support 2 relay alarm information outputs which are 5-pin 5.08mm pitch terminal blocks. The relay occupies 2 pins on the right side and R+ and R- are relay alarm output parts. They are open circuit in normal non alarm state, closed when any alarm information occurs. The relay can externally connect to alarm lights or alarm buzzer or other switching value collecting device in order to timely notify operators when the alarm occurs.

- **AC products**



The Model I, V of this device support 2 relay alarm information outputs which are 5-pin 5.08mm pitch terminal blocks. R+ and R- are relay alarm output parts. They are open circuit in normal non alarm state, closed when any alarm information occurs. The relay can externally connect to alarm lights or alarm buzzer or other switching value collecting device in order to timely notify operators when the alarm occurs.

【Console Port Connection】

The device provides 1 program debugging port based on RS-232 serial port which can conduct device CLI command management after connecting to PC. The interface adopts RJ45 port, the RJ45 pin definition is as follows:

Pin No.	2	3	5
Pin Definition	TXD	RXD	GND

【Checking LED Indicator】

The series product provides LED indicators to monitor the device working status with a comprehensive simplified troubleshooting; the function of each LED is described in the table as below:

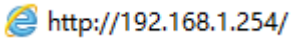
LED	Indicate	Description
P1	ON	PWR is connected and running normally
	OFF	Power supply is disconnected or running abnormally
P2	ON	PWR is connected and running normally
	OFF	Power supply is disconnected or running abnormally
RUN	Blinking	The system is running normally
	OFF	The system is not running or running abnormally
	ON	System is running abnormally
ALM	ON	Power supply or port link has alarm
	OFF	Power supply, port link without alarm
PoE （G9-G24）	ON	POE port is powering other PD devices normally
	OFF	POE port is not powering other PD devices
Link (G1-G28, X1-X4)	ON	Port has established valid network connection
	Blinking	Port is in a network communication status
	OFF	Port hasn't established valid network connection.

【Logging in to WEB Interface】

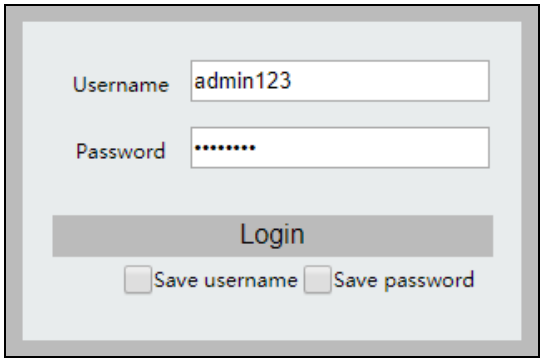
This device supports WEB management and configuration. Computer can access the device via Ethernet interface. The way of logging in to device's configuration interface via IE browser is shown as below:

Step 1 Configure the IP addresses of computer and the device to the same network segment, and the network between them can be mutually accessed.

Step 2 Enter device's IP address in the address bar of the computer browser.



Step 3 Enter device's username and password in the login window as shown below.



Step 4 Click "Login" button to login to the WEB interface of the device.

Note:

- The default IP address of the device is "192.168.1.254".
- The default username and password of the device are "admin123".
- If the user name or password is lost, user can restore it to factory settings via restoring factory setting button or management software; all modified configurations will be cleared after restoring to factory settings, so please backup configuration file in advance.
- Please refer to user manual for specific configuration method of logging in to WEB interface and other configurations about network management function.

【Specification】

Panel

10GbE interface	10GbE SFP+ port (10Gigabit / Gigabit self-adaption)
Gigabit SFP	100/1000Base-X self-adaptive SFP+ slot
1000M Combo port	10/100/1000Base-T(X) RJ45 or 100/1000 Base-X SFP interface (optional)
Gigabit copper port	10/100/1000 Base-T(X) self-adapting RJ45 port, half/full duplex self-adapting or specified working mode, support MDI/MDI-X self-adaption
Gigabit PoE port	10/100/1000base-T(X), RJ45, automatic flow rate control, full/half duplex mode, MDI/MDI-X autotunning; The maximum capacity of a single port is 30W PoE power supply output. Pin 1 and 2 of PoE power supply are positive, while Pin 3 and 6 are negative
Console port	CLI command management port (RS-232), RJ45
Alarm interface	5-pin 5.08mm pitch terminal block (R+/R-), support 2 relay alarm information outputs
Indicator	Power indicator, system alarm indicator, device running status indicator, interface connection/running status indicator, PoE indicator
Switch Property	
Backplane bandwidth	128G
Packet buffer size	12Mbit
MAC Address Table	16K

Power Supply	
Input power supply	● Model I, V: 220VAC (100~240VAC/DC) dual power supply ● Model II, VI: 48VDC (36~72VDC) dual power supply ● Model III, VII: 24VDC (18~72VDC) dual power supply ● Model IV, VIII: 48VDC dual power supply
Access terminal block	AC supports single-phase socket with rocker switch and DC supports 5-pin 5.08mm pitch terminal blocks
Power Consumption	
Model I	No-load: 10.5W@220VAC Full-load: 25.3W@220VAC
Model III	No-load: 21.7W@48VDC Full-load: 242.6W@48VDC
Working Environment	
Working temperature	-40~75℃
Storage temperature	-40~85℃
Working humidity	5%～95% (no condensation)
Protection grade	IP30(metal shell)

【Disposal of Waste Electrical and Electronic Equipment (WEEE 2012/19/EU)】

(Applicable in the EU-member states)

The crossed-out wheeled bin symbol on the equipment or its packaging indicates that the product, at the end of its service life, shall not be mixed with unsorted municipal waste but should be collected separately, in accordance with local laws and regulations.

A proper separate collection of end-of-life equipment for the subsequent recycling, treatment and environmentally compatible disposal, will help prevent potential damage to the environment and human health, facilitating the reuse, recycling and/or recovery of its component materials.

Private users should contact their vendor or municipal waste management service and ask for disposal information.

Professional users should contact their suppliers and check the terms of their selling agreement.

This product must not be disposed of with other commercial waste.

Users' cooperation in the correct disposal of this product will contribute to saving valuable resources and protecting the environment.