CJ-4DI4DO4AI

4×AI + 4×DI + 4×DO + 1×RS485 4G CAT-1 Remote I/O



- 4×DI channels with both dry and wet contact wiring, including PNP/NPN in wet mode
- 4×relay DO channels, rated 5A at 250 V AC or 5A at 30 V DC
- 4×AI channels, each configurable for 0~10 V or 4~20 mA, with accuracy better than ±1%
- 1×RS485 interface, enabling device local software-based control
- Support 4G CAT-1 cellular connectivity, enabling remote control
- Support Modbus TCP/RTU protocol conversion
- Hardware watchdog for 24/7 stable operation
- DC 12~36V wide input voltage
- -20℃~+70℃ operating temperature range
- Level 4 EMC protection

Product Description

CJ-4DI4DO4AI is a wireless industrial I/O module designed for remote monitoring and control over LTE Cat-1 cellular networks. The device integrates 4 digital inputs, 4 relay outputs, and 4 analog input channels, enabling flexible data acquisition and on-site control in industrial environments.

With remote control as its core capability, this remote I/O controller allows users to easily build cloud-based or distributed control systems via Cat-1 networks, significantly reducing on-site maintenance and wiring costs. The module supports Modbus RTU protocol for data processing and provides automatic Modbus TCP/RTU protocol conversion, ensuring seamless integration with existing industrial control systems.

CJ-4DI4DO4AI supports both master and slave operating modes. In slave mode, it can be queried and controlled by remote servers or local RS485 masters. In master mode, the RS485 interface allows cascading multiple Modbus RTU devices, enabling centralized management of field equipment.

To meet long-term industrial deployment requirements, this industrial I/O is equipped with a hardware watchdog for 24/7 stable operation, comprehensive electrical protection, and high-level EMC immunity. It is well-suited for applications such as production line monitoring, equipment start/stop control, quantity counting via sensors, and remote industrial automation projects.

Product Features

- 4 × relay output channels, rated 5A at 250 V AC or 5A at 30 V DC
- 4 × digital input channels supporting both dry and wet contact wiring, including PNP and NPN
- 4 × analog input channels, each configurable for 0~10 V voltage or 4~20 mA current, with accuracy better than ±1%
- Flexible DO power-up behavior, configurable to retain last state or reset to OFF after reboot
- LTE Cat-1 cellular connectivity
- 1×RS485 interface, baud rate 300 bps~230400 bps, surge protection up to 2 kV
- Modbus RTU protocol for data processing. Automatic Modbus TCP / Modbus RTU protocol conversion
- Selectable master/slave operating modes. Default slave mode supports control via LTE Cat-1 or local RS485, while master mode enables RS485 cascading of multiple Modbus RTU devices.
- Support TCP Client socket connections to remote servers
- Support active data reporting
- Support up to 8 conditional control commands for simplified logic control
- Support FTP remote firmware upgrade
- Support local RS485 firmware upgrade
- Built-in hardware watchdog, ensuring 24/7 stable operation without system hang
- Compact industrial enclosure with multiple status LEDs
- Wide DC 12~36 V power input, over-current, over-voltage, and reverse polarity protection
- High EMC protection
- Operating temperature: -20℃~+70℃

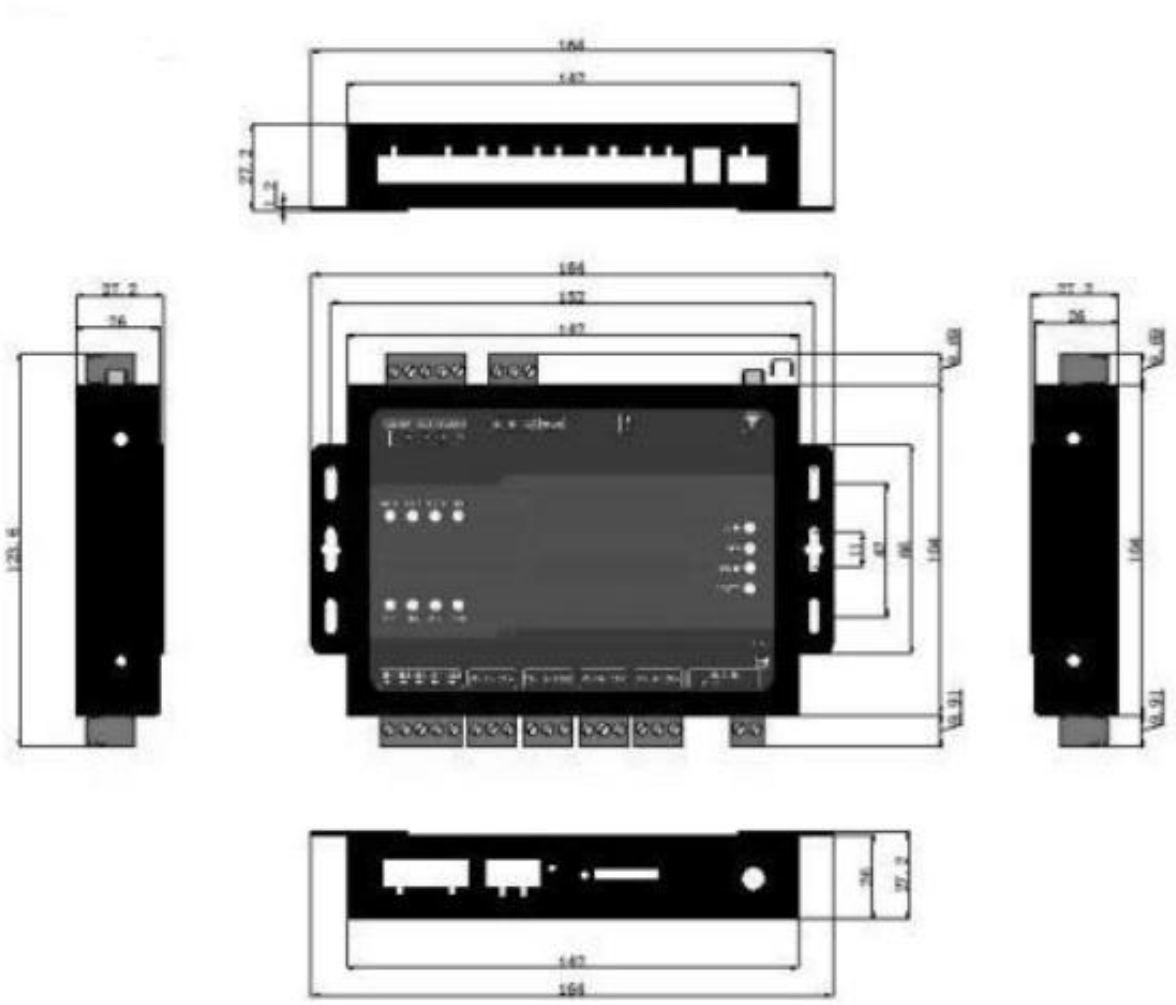
Technical Specifications

Wireless Parameters	Wireless Network	LTE Cat-1
Technical Specifications	TD-LTE	3GPP Release 13, Cat-1 Downlink up to 7.5 Mbps, Uplink up to 1 Mbps
	FDD-LTE	3GPP Release 13, Cat-1 Downlink up to 10 Mbps, Uplink up to 5 Mbps
Standard Frequency Bands	TD-LTE	Band 34/38/39/40/41
	FDD-LTE	Band 1/3/5/8
Transmit Power	TD-LTE Band 38/39/40/41	+23 dBm (Power class 3)
	FDD-LTE Band 1/3/5/8	+23 dBm (Power class 3)
Hardware Parameters	Data Interface	RS485:300~230400bps
	DI Input	Dry/wet, PNP/NPN Powered via the device power terminal or an external power source, with a voltage range of 9~32 V. A switch or PNP/NPN sensor can be connected in series between COM and DI-x to control the input power circuit.
	DO Output	AC 250V 5A
		DC 30V 5A
	Operating Voltage	12~36V
	Operating Current	159mA (average)/222mA (max) @12V
	Voltage Acquisition Range	0~10V (error less than 1%)
	Current Acquisition Range	4~20mA (error less than 1%)
	Operating Temperature	-20℃~+70℃

	Storage Temperature	-40℃~+85℃
	Operating Humidity	5%~95% (non-condensing)
	Storage Humidity	1%~95% (non-condensing)
	Dimension	142.7×114×28 mm
Software Parameters	Wireless Network Type	LTE Cat-1
	Operating Mode	Master mode, slave mode
	Setup Command	Modbus RTU
	Network Protocol	Modbus TCP, Modbus RTU
	Customer Application Software	Support configuration software
Software Functions	Domain Name Resolution DNS	Support
	Transmission Method	Supports TCP client
EMC Level	ESD	IEC61000-4-2, Level 4
	Surge	IEC61000-4-5, Level 3
	Burst Pulse	IEC61000-4-4, Level 3

Dimensions

Unit: mm



Ordering Information

Model	DI	DO	AI	RS485	Cellular	Input Voltage
CJ-4DI4DO4AI	4	4	4	1	4G	DC12~36V

Contact Us

COME-STAR COMMUNICATION(WUHAN) CO., LTD.

Address: Puneng Industrial Park, Fenghuang Garden 1st Road, East Lake High-Tech Development Zone, Wuhan, China.

Tel: +86-027-59257958

Mail: info@come-star.com

Official site: www.come-star.com

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