Product Datasheet

IoT Intelligent O&M Module

(IoT7000-G530-DG)

OVERVIEW

The IoT7000-G530-DG intelligent O&M module is a highly integrated, powerful, and easy-to-use and install data acquisition and control module. It adopts a DIN rail structure and can be installed in a security monitoring box, power control box, traffic control box, and light pole control box. It has intelligent monitoring functions, which can realize mains electricity power failure detection, power consumption monitoring, temperature-controlled fans, remote power control, network transmission monitoring, box temperature monitoring, monitoring box anti-theft, and other functions. It interacts with the monitoring center operation and maintenance platform in real-time through the network to report the on-site situation. When there is a network interruption, equipment damage, mains electricity interruption, equipment power consumption status change, box temperature is too high, and the box door is forced to open, it will actively notify the monitoring center.

The IoT7000-G530-DG has rich ports and powerful functions. It is used for the intelligent transformation and upgrading of old monitoring boxes and the establishment of IoT systems. It can effectively improve the reliability and stability of unattended systems at low cost, simplify maintenance methods, and improve operation and maintenance efficiency. It is suitable for the

construction of smart security IoT projects including safe cities, smart transportation, smart cities, natural disaster monitoring, water conservancy facilities monitoring, and communication base station monitoring.

FEATURE

■ **Power consumption monitoring**

◇ Support 5*AC220V, 2*AC24V, and 3*DC12V output voltage and current monitoring to upload power consumption status and fault information to the management platform in real-time. It can distinguish between front-end reclosing (input) power failure and back-end (output) power failure.

◇ Support backup power failure alarm function, 1*AC220V backup power output, automatically switches to built-in UPS power supply when the mains electricity is cut off, ensuring that the equipment sends power failure information back to the monitoring center in time.

■ **Network communication monitoring**

◇ Support 1*10/100M RJ45 communication monitoring, uploads network connectivity status, and fault information to the management platform in real-time, supports network watchdog function, can automatically analyze and judge network status, and can automatically restart switch port power supply when network port communication is abnormal, and reset and repair network status.

■ **Remote control**

◇ Support remote restart of camera/switch/PON device power supply to achieve remote fault repair. Support timing control, can run offline locally, does not rely on the monitoring center, and can still be executed as planned in the case of network interruption.

■ **Fan control**

◇ The temperature linkage value can be set remotely. When the temperature reaches the set value, the fan will automatically start working, and the working status of the fan will be monitored in real-time. A fault report will be issued when the fan works abnormally.

■ **Lighting control**

◇ The operation and maintenance controller has a built-in light-sensing control circuit. When the door is opened and the external light is low and insufficient, the LED lighting in the box will automatically turn on, which is convenient for equipment inspection and maintenance. At the same time, the platform can monitor the working status of the lighting in real-time, and the on/off status of the lighting is synchronized on the platform.

■ **Door tamper detection**

◇ The operation and maintenance module can be connected to the door detection on/off to detect the door status of the box to prevent the equipment box from being opened abnormally and the equipment inside the box from being stolen. Support arming, disarming, automatic disarming, and other modes.

■ **Real-time status query**

◇ The operation and maintenance module is equipped with an OLED display screen, which can directly query the status of the box environment variables (on/off, fan, temperature/humidity), power supply working status, network communication status, and other information, and quickly detect the working status of the box.

■ **Efficient operation and maintenance**

◇ When the equipment is online, you only need to use the operation and maintenance APP mobile to scan the code to automatically enter the management platform system, no configuration, simple and convenient.

◇ After connecting to the network, you can link with the platform in real-time, remotely manage and view the operation of the front-end equipment, operate the power supply status of the equipment, view the installation location of the equipment, realize fault alarm, fault location, remote control, automatic work order, etc., monitor the operation status of the equipment box in real-time, and realize intelligent, automated and efficient operation and maintenance.

◇ When the front-end equipment is abnormal, the alarm information will be reported to the platform or the management personnel will be notified. The platform will intelligently classify

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whether a maintenance work order is generated and form a QR code work order. The maintenance personnel can view the dispatched work order through the APP and troubleshoot the problem in time. The centralized management cloud platform has alarm records, historical operation records, fault statistical analysis reports, and operation log recording functions.

TECHNICAL SPECIFICATION

Model	IoT7000-G530-DG
Power Input	
Input Working Voltage	1*AC24V input, 2P industrial terminal connection 1*AC220V 50-60Hz input, 3P industrial terminal connection 1*DC12V input, 2P industrial terminal connection (collection control board working voltage)
Power Output	
AC220V Power Output	4*AC220V/1A output, max load 220W, support voltage current detection, remote on/off control, 2P industrial terminal connection
AC220V UPS Backup Power Output	1*AC220V UPS backup power output, support voltage current detection, remote on/off control, 2P industrial terminal connection
AC24V Power Output	2*AC24V/2.5A output, max load 60W, support voltage current detection, remote on/off control, 2P industrial terminal connection
DC12V Power Output	3*DC12V/2A output, max load 24W, support voltage current detection, remote on/off control, 2P industrial terminal connection
Power Consumption	Standby<15W, Full Load<2000W
Data Control Unit	
Master Chip	CPU: ARM 108MHz, RAM: 1M+64KByte, Flash: 512Byte
Data Port	3*RS485 (Optional 1*RS232)
Controlled I/O port	1*Power-off alarm I/O control port 1*Lighting I/O control port, 1*Door status I/O detection port 1*Fan I/O control port, 1*RS485 reclosing communication port

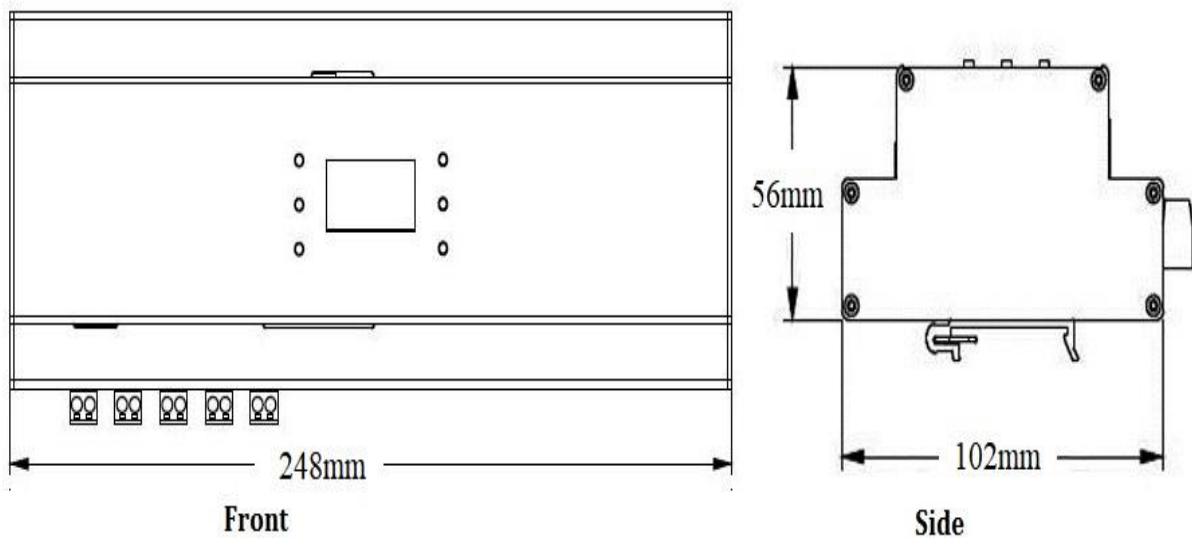|	
Environment Variable	Temperature/ humidity monitoring, light intensity monitoring, OLED display screen status check
Ethernet Port	1*10/100Base-TX RJ45 adaptive port
Ethernet Standard	IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX
LED Indicator	Power (Green), Operation(Green), Fault(Red)
Physical Parameter	
Operation Temp/ Humidity	-40~+70°C, 5%~90% RH Non condensing
Storage Temp/ Humidity	-40~+85°C, 5%~95% RH Non condensing
MTBF	>100,000H
Dimension (L*W*H)	248*102*56mm
Net /Gross Weight	<1.3kg/ <2.0kg
Installation	DIN Rail
Certification & Warranty	
Lightning Protection	Lightning protection: 6KV 8/20us, Protection level: IP40
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	2 years, lifelong maintenance.

PRODUCT INTERFACE

Model	IoT7000-G530-DG
Function & Interface	
1*AC220V Input	Y
1*AC24V Input	Y
1*DC12V Input	Y
4*AC220V Output	Y
1*AC220V UPS Output	Y

2*AC24V Output	Y
3*DC12V Output	Y
2*RS485	Y
1*RS485/RS232	Y
1*10/100M RJ45 Port	Y
1*Fan I/O Port	Y
1*Lighting I/O Port	Y
1*Box Door I/O Port	Y
Power-off Alarm	Y
1*Reclosing RS485 Port	Y
1*OLED Display	Y

Note: DC12V input power, AC24V input power, and AC220V input power need to be provided separately. The module must provide DC12V voltage to work normally. The module has no power supply.

DIMENSION

Front

Side

248mm

56mm

102mm

OPTIONAL ACCESSORIES

Model	Description
IoT7000-UPS220-DG	1*Power-off alarm signal port. Super capacitor design, no battery replacement. Aluminum alloy housing, super heat dissipation, and sturdy and durable. Rated input AC100-240V, 50-60Hz, two backup power outputs DC12V, AC220V. Built-in intelligent balancing protection circuit, supports output overload, overvoltage, and short circuit protection.

PACKING LIST

	Content	Qty	Unit
Packing List	IoT intelligent O&M module	1	Set
	User Guide	1	PC
	Warranty Card and Certificate of Conformity	1	PC

CONTACT US

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7

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