Product Datasheet

IoT Comprehensive Intelligent O&M Box

(ONV-IoT9000-ZH-HI-P)

OVERVIEW

The ONV-IoT9000-ZH-HI-P comprehensive intelligent operation and maintenance (O&M) box is an intelligent network transmission and power control system independently developed by ONV. It adopts a modular structure and provides multiple power outputs and remote monitoring and control. At the same time, different transmission modules can be selected according to application requirements to realize optical fiber transmission of various topologies. It can be integrated with a PoE power supply network transmission module, network port lightning protection module, power supply control module, etc. according to actual project requirements. The main control board is a high-performance and high-stability power control core with an embedded intelligent control unit, providing practical, detailed, stable, and advanced automatic control functions. It can realize the detection and centralized monitoring and management of equipment such as environmental

quantity, power supply, temperature control, and communication link in the box. It has rich interfaces and powerful functions. It can be used for public security safe city monitoring, communication industry base stations, integrated computer rooms, and other scenes with corresponding monitoring needs. It is widely used in the construction of smart security IoT projects including safe cities, smart transportation, road checkpoint monitoring, municipal facilities and environmental management, natural disaster monitoring and monitoring, water conservancy facilities monitoring and monitoring, and communication base station monitoring.

FEATURE

- ◇ The IoT intelligent box related information can be managed by the QR code in the box to record all status information and logs of the device.
- ◇ Built-in lightning protection module, Air circuit breaker, input voltage detection, input voltage overload/underload alarm, and lightning strike count indication.
- ◇ Remote PoE power supply and management, multi-channel UTP network connection, fiber connection, link alarm, supporting fiber optical splice trays, and fiber optical adapter.
- ◇ The mechanical lock installed in the box provides the function of preventing the box from being disassembled, and when the box door is opened, the operation and maintenance platform actively gives an alarm prompt (Optional).
- ◇ Power failure detection, voltage, current monitoring, on-site recording and remote viewing of device name and model, voltage output, real-time reporting of detection results, positioning of equipment through cloud platform and online map.
- ◇ Modular design, centralized power supply, automatic reclosing, automatic power supply restoration when voltage short circuit trips: supports no less than 2*AC220V power output, 4*DC12V controllable output, 2*AC24V controllable output.
- ◇ The network management data is output through Ethernet, and the key data of operation and maintenance is transmitted through the optical fiber and the IoT transmission module, and transmitted through the 4th generation mobile communication technology and WIFI signals.
- ◇ The centralized operation and maintenance management cloud platform software can be used to manage front-end equipment, remotely view the operation of front-end equipment in real-time, and operate the power supply status of equipment. When the front-end equipment is

abnormal, the management personnel will be notified through various forms such as sound, light, and pop-up windows, and a QR code work order will be generated. The work order can be viewed through the APP and troubleshooting can be carried out in time. The platform has alarm records, historical operation records, fault statistical analysis reports, and operation log recording functions.

PRODUCT INNOVATION

- ◇ According to the requirements of the application environment, customize the working.
- ◇ Automatic reclosing lightning protection, IP55 protection, mobile application operation, and maintenance personnel online operation.
- ◇ The box is with LED lighting for maintenance personnel to operate at night. The data control unit provides an LED display. The installation or inspection personnel can check whether the various monitoring signals and status of the smart box are working properly through the display.
- ◇ Distinguish whether the power supply, the power supply of the IP camera, and the fill light are normal. The power of the remote control output power, power off the IP camera, power on, and restart.
- ◇ The IoT intelligent box will upload an alarm message to the management center platform in time when the box door is accidentally opened or broken.
- ◇ Remote center management platform fault dispatch, equipment online management, safety protection, equipment use location BDS/GPS positioning (optional), open box alarm design, centralized power supply design, efficient early warning mechanism, voltage and current, temperature detection, water leakage detection, remote Poe control, remote network control and restart, etc.
- ◇ temperature of the IoT intelligent box. When the ambient temperature is higher than the set value, start the fan for heat dissipation. When it is lower than the set temperature, the heating module will automatically start the heating until the temperature returns to the set value, to ensure that the equipment in the box works in the best condition and extend the service life of the machine.

TECHNICAL SPECIFICATION

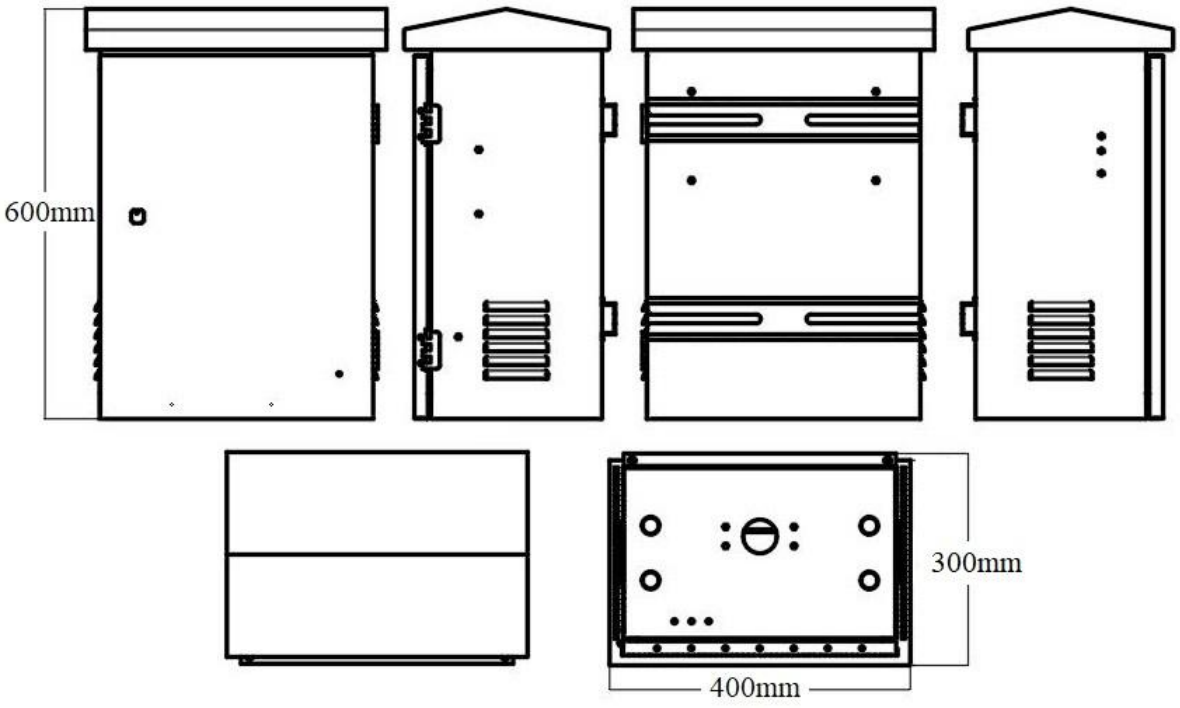
Model	ONV-IoT9000-ZH-HI-P
Power Configuration	
220V AC Power Air Circuit Breaker	1*220V/20A
220V AC Power SPD	1*power SPD: 220V max: 40kA, In: 10KA. Voltage protection Level ≤1.1kV Adding 1.2/50us (8-20us) combined wave of L-N, 2KV does not cause to malfunction, 6KV is non-damaged, the upper limit is 10KV.
Auto-reclosing	Working voltage: 175-275VAC 50-60Hz, Rated power: 16A Over current protection/ action time: 16A/2-5S Over-voltage protection/ action time: AC275V/2-5S Under voltage protection/ action time: AC145V/2-5S Electric leakage protection/ action time: 30mA/≤0.1S Short circuit protection/ action time: 3 times input current/≤0.1S Detection function before closing, with remote control function
AC24V Power Output	2*AC100-264V input, AC24V/2.5A output, 60W AC power supply unit
DC52V Power Output	1*AC100-264V input, DC52V/4.8A output, 250W DC power supply unit
DC12V Power Output	4*AC100-264V input, DC12V/7A output, Total power 80W DC power supply unit
Power Consumption	Standby<50W, Full Load<1500W
Data Control Unit	
Main Control Board Parameter	Flash: 4GByte, DDR: 512MByte, CPU: ARM 600MHz
Data Port	1*RS232 data, 1*RS485 data, 2*switch interface
Extended Function Port	1*automatic heating control, 1*fan control, 1*Water leak detection control, 1*lighting control
Alarm Output Port	1*alarm output, 1*status indicator output, 1*door status output, 1*automatic lighting status output
Controlled Power Supply	4*12VDC output, 2*24VAC output, 2*220VAC output, Support remote control

Ethernet Port	1*10/100Base-TX adaptive RJ45 port for transmitting control signals
Ethernet Standard	IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX
Screen Display	A status display LCD screen, used to display the address of the device, query the status of various control switches
Door Alarm Switch	Unpacking alarm signal output
PoE Power Transmission Unit	
Fixed Port	1*Console RS232 port (115200,N,8,1) 2*1000Base-X uplink SFP fiber ports (Data) 1*10/100/1000Base-T uplink RJ45 ports (Data) 7*10/100/1000Base-T PoE ports (Data/ Power)
Ethernet Port	Port 1-8 can support 10/100/1000Base-T auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)
Optical Fiber Port	Gigabit optical fiber port, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm /0-120km.
Chip Parameter	
Network Management Type	L2
Network Protocol	IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	20Gbps (non-blocking)
Forwarding Rate @64byte	14.88Mpps
MAC	4K

Buffer Memory	2M
Jumbo Frame	9.2K
LED Indicator	Power/System: SYS (Green), PoE: PoE(Green), Fiber port: L/A (Green), Network: Link (Yellow)
Reset Switch	Press for 6 seconds and then release to restore to factory settings Short press twice (1 second interval) to switch to unmanaged state
PoE & Power Supply	
PoE Port	Port 2-8
PoE Management	Port PoE output on/off, Port PoE real-time power view
Power Supply Pin	1/2 (+) 3/6 (-)
Max Power Per Port	30W, IEEE 802.3af/at
Power Consumption	Standby<8W, Full Load<240W
Physical Parameter	
Operation Temp/ Humidity	-20~+55°C, 5%~90% RH Non condensing
Storage Temp/ Humidity	-40~+75°C, 5%~95% RH Non condensing
Dimension (L*W*H)	600*400*300mm
Net /Gross Weight	<17kg/ <20kg
Installation	Pole hoop mount
Certification & Warranty	
Lightning Protection	Lightning protection: 6KV 8/20us, Protection level: IP55
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	2 years, lifelong maintenance.
Network Management Feature	
Interface	EEE Energy-saving and green Ethernet function Port traffic statistics, IEEE 802.3x flow control (Full-duplex) Port status display, Port duplex/ negotiation rate configuration
VLAN	Port-based IEEE802.1Q VLAN configuration (4K)
Port Aggregation	Static aggregation

Loop Protection	Loop protection function
Multicast	IGMP Snooping v1/v2
Port Mirroring	Basic port traffic mirroring
QoS	Diff-Serv QoS, Priority Mark/ Remark 8*Output queues of each port, 802.1p/DSCP priority mapping
Security	Broadcast storm control, Port Isolation, Port speed limit
DHCP	DHCP Snooping
Management	Mobile APP operation and maintenance management One-key recovery, Cable Diagnose, Web Management (https) ONV-NMS platform management (Local platform/ Cloud platform)
System	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable TCP/IP, network adapter, and network operating system (Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable

DIMENSION



DEFAULT CONFIGURATION DETAILS

ONV-IoT9000-ZH-HI-P			
No.	Model	Product Name	Description
1	IoT90-Box-ZHX	Galvanized steel box	1.2mm galvanized steel box Dimension: 600*400*300mm
2	IoT90-CZ250-10A	3-hole socket	3-hole socket 10A/250V
3	IoT90-KK2P250-16A	2P Air Circuit breaker	2P bipolar Air Circuit-breaker 16A/400V, rated short circuit: 6KA
4	IoT90-CH175275-16A	Auto-reclosing	Working voltage: 175-275VAC 50-60Hz, Rated power: 16A
5	IoT90-SPD-220AC	AC Power SPD	2P Power SPD 220V max: 40kA
6	IoT90-Data-ZH-S224	Data management control unit A	Realize status collection, switch control, and remote management.
7	IoT90-PWR80-DC12	DC12V power supply unit	Rated input AC100-240V, 50-60Hz Output DC12V/7A/80W power supply unit
8	IoT90-LED	LED lighting+Fan	LED lighting automatically turns on when the box is opened and turns off when the box is closed.
9	IoT90-ODF2	Fiber optical cable tray and adapter	2 input and 2 output fiber optical cable tray 2*LC/LC or SC/SC fiber optical adapters
10	IoT90-7PoE-10E	PoE network transmission unit (Easy managed)	Easy managed PoE switch with 2*1000M SFP fiber ports and 1*10/100/1000M RJ45 port and 7*10/100/1000M PoE ports
11	IoT90-PWR250-DC52	DC52V power supply unit	Rated input AC100-240V, 50-60Hz, Output DC52V/4.8A/250W
12	IoT90-PWR60-AC24	AC24V power supply unit	Rated input AC100-240V, 50-60Hz, Output AC24V/2.5A/60W
13	IoT90-6SPD-1000	Network lightning	6 input 6 output Gigabit network lightning arrester,

		protection unit	working voltage 6V, max continuous voltage 8V, Max current capacity: 6KV/2.5KA, Voltage protection level x-PE≤0.6kV

PACKING LIST

Packing List	Content	Qty	Unit
	IoT comprehensive intelligent O&M box	1	Set
	User Guide	1	PC
	Warranty Card and Certificate of Conformity	1	PC
Note: The optical module is not included and needs to be purchased.			

OPTICAL MODULE

Product	Model	Description	Unit
1.25G Optical Module	2630	SFP optical module, 1.25G multi-mode dual fiber 850nm, transmission distance: 550m, LC interface. supports DDM function and hot plugging.	PC
	2632	SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2612-T	SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2613-R	SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2612-T-SC	SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, SC interface.	PC

		supports DDM function and hot plugging.	
	2613-R-SC	SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, SC interface. supports DDM function and hot plugging.	PC
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

CONTACT US

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