Product Datasheet

IoT Intelligent Communication Box

(ONV-IoT9000-TX)

OVERVIEW

ONV-IoT9000-TX series intelligent communication box is a powerful, easy to install intelligent network transmission and power control system independently developed by ONV. This communication box is based on the L2+ managed industrial switch with 4*RJ45 ports and 2*SFP ports as the core, it provides a wealth of industrial network management functions, while providing multiple groups of remote monitoring and control of DC power / PoE power output. The uplink optical port can realize optical fiber transmission and ring network networking (spanning tree and ERPS) with multiple typologies. Highly stable power control and lightning protection, supporting integrated management and operation and maintenance of cloud platforms. It can be used for public security safe city monitoring, communication industry base stations, integrated computer rooms, and other monitoring needs, to improve the reliability of unattended sites. It is applicable to the construction of smart security IoT, such as safe city, intelligent transportation, country town monitoring, road checkpoint monitoring, infrastructure, and environmental management, natural disaster monitoring and control, water conservancy monitoring, and communication base station monitoring.

FEATURE

- Built-in lightning protection module, Air Circuit-breaker, input voltage detection, input voltage overload/underload alarm, lightning strike count indication.
- Centralized the power supply, automatic reclosing, voltage short circuit trip, self-recovery power supply. More than 1 set AC220V power output, 3 set DC12V output.
- Remote PoE power supply and management, multi-channel UTP network connection, fiber connection, link alarm, supporting fiber optic splice trays and fiber optic adapter.
- Power failure detection, remote monitoring of the 12VDC power supply in the communication box, real-time reporting of the detection results, equipment installation location query, accurate positioning of the equipment installation location through the cloud platform, and online map.
- A mechanical lock is installed in the communication box to alarm when the box is opened, and the operation and maintenance platform actively warns.
- The network management data support Ethernet output and can transmit key operation and maintenance data through the optical fiber and IoT transmission modules.
- Centralize operation and maintenance management cloud platform, through the cloud platform software, User can manage the front-end devices, remotely view the status devices in real-time, and operate the power supply status. when the front-end devices are abnormal, it can be notified of sound and light, pop-up windows, etc. The user at the same time forms a QR code to send work orders, maintenance personnel to receive work orders under the application view, timely troubleshooting. The centralize management cloud platform has alarm records, history records, fault statistics analysis reports, and operation log records.

PRODUCT INNOVATION

- Automatic reclosing lightning protection, IP55 protection, mobile application operation, and maintenance personnel online operation.
- Remote center management platform fault dispatch, equipment online management, safety

protection, 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.

- Distinguish whether the power supply, the power supply of the IP camera and fill light is normal. The power of the remote control output power, power off IP camera, power on, and restart.
- The IoT communication box will be uploaded alarm message to the management center platform in time when the box door is accidentally opened or broken.

MAIN FUNCTION MODULE TECHNICAL SPECIFICATION

Model	ONV-IoT9000-TX
Power Configuration	
220V AC Power Air Circuit-breaker	1 set, 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 output current: 10A Electric leakage protection / action time: 300mA/≤0.1S Over voltage protection / action time: AC275V/2-5S Under voltage protection / action time: AC145V/2-5S Over current protection / action time: 16A/2-5S Short circuit protection/ action time: 3 times input current/≤0.1S Detection function before closing, with remote control function
DC12V Power Output	3*DC12V/2A output, DC power supply with total power of 60W

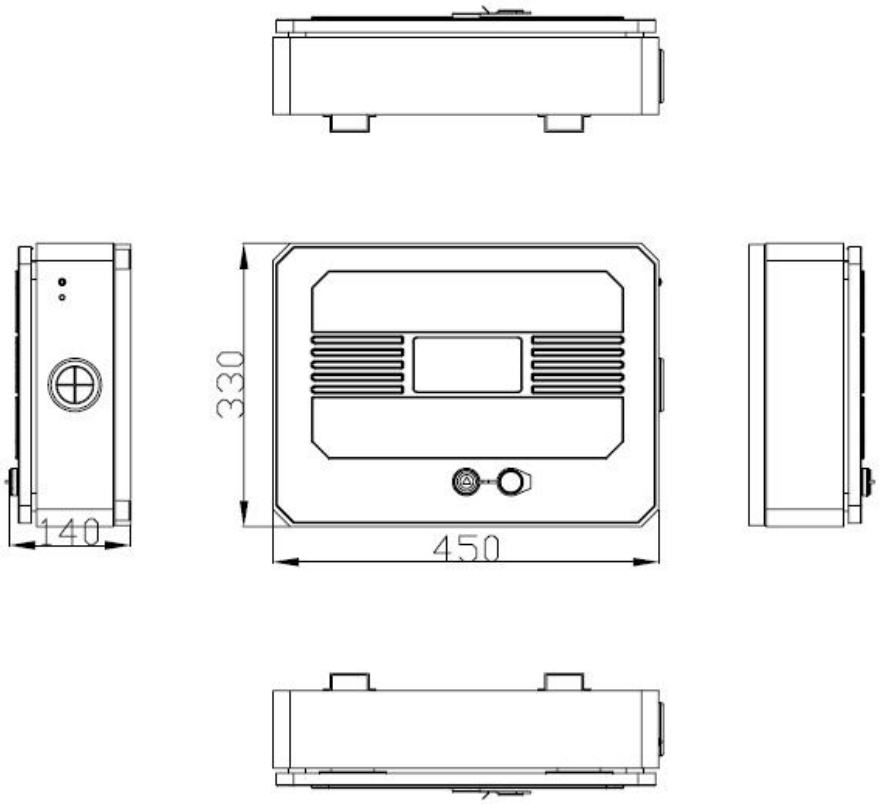
Power Consumption	Standby<10W, Full Load<1500W
PoE Power Supply Network Transmission Unit	
Fixed Port	4*10/100/1000Base-T PoE ports (Data/Power) 2*100/1000Base-X uplink SFP fiber slot ports (Data) 1*Console RS232 port (115200,N,8,1)
Ethernet Port	Port 1-4 can support 10/100/1000Base-T auto-sensing,Full/half duplex MDI/MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)
Optical Fiber Port	Gigabit SFP optical fiber port, default not matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode:850nm/ 0~500m, Single-mode:1310nm/ 0~40km,1550nm /0~120km.
Chip Parameter	
Network Management Type	L2+
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	128Gbps (non-blocking)
Forwarding Rate@64byte	8.93Mpps
MAC	8K
Buffer Memory	4M
Jumbo Frame	9.6K
LED Indicator	Power: PWR (green), system:SYS (green), network:Link (yellow), PoE:

	PoE (green), Fiber port : L/A (green)
Reset Switch	Yes, Long press for 10S and release to restore factory settings
PoE & Power	
PoE Port	Port 1 to 4
PoE Management	PoE working status Delay start of power supply PoE output priority configuration Scheduling of PoE operation and time Total power limit of PoE power supply PoE output power allocation, off& af &at
Power Supply Pin	Default: 1/2 (+), 3/6 (-)
Max Power Per Port	30W, IEEE802.3af/at
Total PWR / Input Voltage	120W/52VDC
Power Consumption	Standby<6W, Full Load<120W
Network Management Features	
Interface	IEEE802.3X (Full-duplex) Port temperature protection setting Port green Ethernet Energy-saving setting Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.
Layer 3 Features	L2+ network management, IPV4/IPV6 management L3 software routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs
VLAN	VLAN based on MAC VLAN based on the protocol Voice VLAN, QinQ configuration 4K VLAN based on port, IEEE802.1q

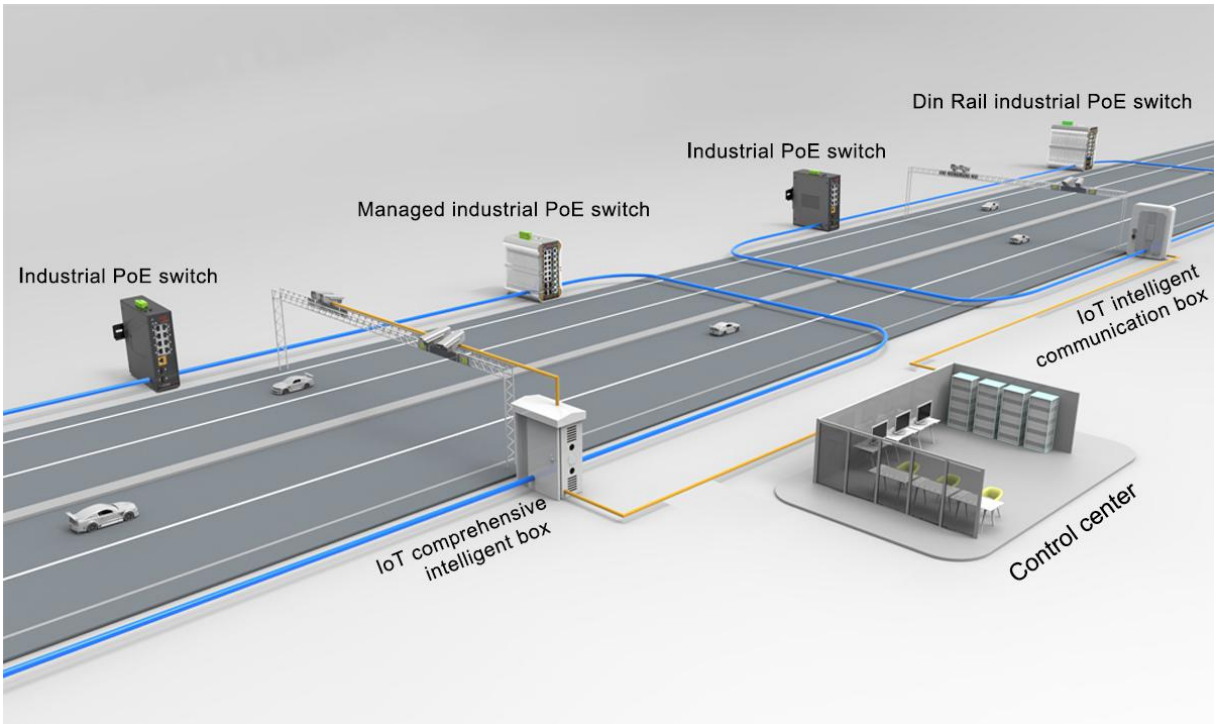
	Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP(IEEE802.3ad), Static aggregation Max 3 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Industrial Ring Network Protocol	G.8032 (ERPS),Recovery time less than 20ms 250 Ring at most, Max 250 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS,Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL,ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	IP-MAC-VLAN-Port binding ARP inspection,Anti-DoS attack AAA & RADIUS,MAC learning limit Mac black holes,IP source protection IEEE802.1X & MAC address authentication Broadcast storm control,Backup for host datum SSH 2.0,SSL,Port isolation,ARP message speed limit User hierarchical management and password protection
DHCP	DHCP Client,DHCP Snooping, DHCP Server,DHCP Relay
Management	One-key recovery

	Cable Diagnose,LLDP Web Management (HTTPS) NTP,System work log,Ping Test CPU instant utilization status view Console/AUX Modem/Telnet/SSH2.0 CLI Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3 ONV NMS - smart network management system platform(LLDP+SNMP)
Physical Parameter	
Operation TEMP / Humidity	-40~+75°C,5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+80°C,5%~95% RH Non condensing
MTBF	>100,000 hours
Dimension (L*W*H)	450*330*140mm
Net /Gross Weight	<10kg / <15kg
Installation	Pole hoop mount
Certification & Warranty	
Lightning Protection / Protection Level	Lightning protection: 6KV 8/20us; Protection level: IP55
Certification	CCC, CE mark, commercial, CE/LVD EN60950, FCC Part 15 Class B, RoHS
Warranty	2 years, lifelong maintenance.

DIMENSION



APPLICATION



+86 755 33376606
Optical Network Video Technologies (Shenzhen) Co., Ltd.

PACKING LIST

	CONTENT	QTY	UNIT
PACKING LIST	IoT intelligent communication box	1	SET
	User guide	1	PC
	Warranty card	1	PC

Note: The SFP optical module is not included by default and needs to be purchased separately.

IoT Intelligent Communication Box Series Configuration Details (Default Configuration)

ONV-IoT9000-TX-HI			
No.	**Model**	**Product Name**	**Description**
1	IoT90-Box-TXX	Seiko chassis	1.2mm thickness Seiko chassis Dimension: 450*330*140mm
2	IoT90-175275-16A	Advanced automatic reclosing	working voltage: 175-275VAC 50-60Hz, 16A
3	IoT90-SPD-220AC	AC power SPD	1*power SPD, 220V max: 40kA
4	IoT90-4PoE-06	4-port PoE network management transmission unit	L2+ managed PoE switch with 4*10/100 /1000M PoE ports and 2*100 /1000MSFP fiber ports
5	IoT90-Data-TXX	Data acquisition control unit	3 DC12V power output acquisition and control 1 RS485 data interface 1 door switch alarm switch interface
6	IoT90-PWR-DC52/12	DC52V&12V dual DC power output unit	DC52V/3A, 120W output connected to POE power DC12V/5A, 60W output connected to DC12V

			power
7	IoT90-ODF2	2-port disk fiber box and adapter	2 in and 2 out disk fiber box and adapte
8	IoT90-OMS	O&M management software	Cloud platform integrated management platform, consisting of personal computer and application operation and maintenance

ONV-IoT9000-TX-SI			
No.	**Model**	**Product Name**	**Description**
1	IoT90-Box-TXX	Seiko chassis	1.2mm thickness Seiko chassis Dimension: 450*330*140mm
2	IoT90-175275-16A	Advanced automatic reclosing	working voltage: 175-275VAC 50-60Hz, 16A
3	IoT90-SPD-220AC	AC power SPD	1*power SPD, 220V max: 40kA
4	IoT70-SW4G2F	4*RJ45 ports and 2*SFP ports gigabit network management transmission unit	L2+ managed Ethernet switch with 4*10/100 /1000Base-T RJ45 ports and 2*100 /1000Base-X SFP fiber ports
5	IoT90-Data-TXX	Data acquisition control unit	3 DC12V power output acquisition and control 1 RS485 data interface 1 door switch alarm switch interface
6	IoT90-PWR-DC12	DC12V power output unit	DC12V/5A, 60W output connected to DC12V power
7	IoT90-ODF2	2-port disk fiber box and adapter	2 in and 2 out disk fiber box and adapte
8	IoT90-OMS	O&M management	Cloud platform integrated management

		software	platform, consisting of personal computer and application operation and maintenance

OPTICAL MODULE INFORMATION

Product	Model	Description	Unit
1.25G Optical Module	ONV-2630	SFP optical module, 1.25G, multi mode dual fiber 850nm, transmission distance: 550m, LC interface, support DDM, hot plug and pull.	PC
	ONV-2632	SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM, hot plug and pull.	PC
	ONV-2612-T	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface,support DDM, hot plug and pull.	PC
	ONV-2613-R	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface,support DDM, hot plug and pull.	PC
	ONV-2612-T-SC	SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface,support DDM, hot plug and pull.	PC
	ONV-2613-R-SC	SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface,support DDM, hot plug and pull.	PC
Power Module	ONV-2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC

CONTACT US

Optical Network Video Technologies (Shenzhen) Co., Ltd.

Tel: 0086-755-33376606

Fax: 0086-755-33376608

Email: onv@onv.com.cn

Website: www.onvcom.com

Zip: 518000

Headquarter Address: Room 1003, Block D, Terra Building, Futian District, Shenzhen,China

Factory Address:The 4-6th Floor, No. 59, Huaning Road, Xinwei Community, Dalang Street, Longhua District, Shenzhen, China