ISM2005D Series Managed Industrial Ethernet Switch

Key Features:

- ☑ IP40 protection class, fully enclosed type metal cabinet
- ☑ Passed industrial class IV EMC test
- ☑ Wide temperature range design, with working temperature at -40～+85 ℃
- ☑ Support G.8032v2 ring network protocol
- ☑ Support iRing, STP/RSTP protocol
- ☑ Support SNMP, RMON protocol
- ☑ DIN- rail or wall mounting optional

Product Overview

ISM2005D series products are of 5 ports DIN-rail Managed Industrial Ethernet Switch, especially designed for applications in the field of electric power, transportation, industrial control and in other severe industrial environment. This series, which could work normally under the temperature between -40 and 85℃, has integrated convenient security management features, enterprise-class link-speed forwarding performance, strong cabinet, protected industrial circuit and other industrial features. All this series products support ITU-T G.8032v2 protocol (self-recovery time less than 5ms), iRing protocol, STP/RSTP ring network redundancy protocol and enhanced network management protocol, all of which could satisfy reliability requirement under severe industrial environment.

Product Features

➲ **Strong and reliable industrial quality**
- Fault-free and reliable operation under electric power station, transportation and industrial control environment
- Excellent electromagnetic/radiation/electrostatic protection capacity and zero packet loss under intensive electromagnetic interference
  - ☑ Excellent EMC electromagnetic compatibility and anti-radiation performance
  - ☑ Real industrial-class design, with working temperature at -40～85 ℃
  - ☑ Redundant power input and industrial-class surge protection
  - ☑ Industrial grade power output I/O terminal, support high-power
  - ☑ Strong metal cabinet with corrosion-proof coating
  - ☑ Fanless design, effectively reduce the equipment failure rate
  - ☑ Provided with IP40 seal protection, and dust proof, stain proof and debris proof

● **Abundant network redundant features**
■ Ensure fast recovery when faults happen
■ Provided with linear data forwarding to ensure real time performance
    ☑ Support international standard ITU-T G.8032v2 redundancy ring protocol，recovery time<5ms，support single ring, double ring, tangent ring, cross ring network, meet the requirement of high reliability, real-time, complex network of the industry network
    ☑ Support iRing fast self-healing ring network protocol, recovery time<20ms, provide simple, reliable, cost-effective networking scheme with the ISF series switches
    ☑ Support RSTP/STP，recovery time<200ms，meet the application requirements of different brands of compatibility
    ☑ Support LACP（Link aggregation），Increasing bandwidth and link redundancy
    ☑ Support LLDP layer 2 link detection function, Layer link state information real-time detection

● **Convenient security management features**
■ Encryption environment, security configuration management characteristics
■ Rich, convenient network management characteristics, operation and maintenance is very suitable for industrial environment
    ☑ Rich LED panel indication lamp, visually and clearly display switch working status
    ☑ Support configuration way of CLI, WEB
    ☑ Support secure login way base on SSH(128 bit encryption)
    ☑ Support RADIUS、TACACS+ authentication mechanism
    ☑ Support IEEE 802.1x，to strengthen the access control function
    ☑ Support IGMP Snooping and GMRP, the multicast filtering savings bandwidth to meet the application requirements of the terminal dynamically join multicast group
    ☑ Support VLAN and GVRP protocol, effective suppression of broadcast storms and security isolation of business data , improve bandwidth utilization and data transmission security
    ☑ Support QoS, preferentially transfer key business data
    ☑ Support I/O relay terminal alarm output and mail alarm output, automatically report accident
    ☑ Support network management protocol base on SNMPv1/v2c/v3, provide standard MIB, Compatible with standard network management software
    ☑ Support RMON, effectively improve the remote network monitoring and fault early warning capability
    ☑ Support port mirroring, convenient to analyze data of port and rapidly diagnose faults
    ☑ Support local log and remote log server function, easy to troubleshoot faults
    ☑ Support import / export configuration backup file and restore factory settings
   ☑ Support local and remote firmware update function

Product Specification

Item		ISM2005D
Interface	RJ45 port	10/100Base-T(X) self-adaptive RJ45 port
	FX fiber port	100Base-FX port (SC/ST/FC port)
	Console port	RS232(RJ45 port)
	LED indication	PWR1, PWR2, STAT, FAULT, FX
Mechanical structure	Housing	IP40 protection class, fully enclosed and seamless type metal cabinet, PCB protection coating available
	Dimensions (WxHxD)	62mm ×162mm ×127.5mm
	Weight	0.88 kg
	Heat dissipation mode	Fanless heat dissipation
	Installation mode	Guide rail and wall mounting (kit optional)
Power source	Input voltage	24VDC(12~48VDC), Support redundant input (standard specification)
		48VDC(36~72VDC), support redundant input (optional)
	Interface terminal	5-pin pluggable screw connection terminal
	Overload protection	Available
	Reverse polarity protection	Available
	Power consumption	<6w
Working environment	Working temperature	-40 ~ +85 ℃
	Storage temperature	-40 ~ +85 ℃
	Relative humidity	5%～95% (free of condensation)
Switching performance	Forwarding inherent time delay	<4us
	Backplane bandwidth	1Gbps
	MAC address table	8k
	Data package buffer	1Mbit
Function features	Ethernet standard	IEEE 802.3 for 10Base-T
		IEEE 802.3u for 100Base-T(X)and 100Base-FX
		IEEE 802.3x for flow control
		IEEE 802.1D for Spanning Tree Protocol
		IEEE 802.1D for MAC Bridges
		IEEE 802.1D for GMRP
		IEEE 802.1w for Rapid STP
		IEEE 802.1Q VLAN Tagging
		IEEE 802.1p for Class of Service
		IEEE 802.1X for access control base on port and MAC address
		IEEE 802.3adis suitable for Port Trunk with LACP
	Industrial protocol conversion	Support Modbus/TCP, OPC
	Multicast features	The maximum number of IGMP group is 256
		Support GMRP
		IGMP Snooping multicast filtering

Item		ISM2005D
	Port mirroring	Support multiple port mirroring function
	Broadcast storm limiting	Support
	QoS priority queue	4
	VLAN function	Port Based VLAN
		The max number of VLAN is 255
		VLAN ID range:1~4094
		Support GVRP
High reliability	Ring protocol	Support base on international standard ITU-T G.8032v2 ring network protocol (recovery time <5 ms)
		Support iRing protocol
		Support STP、RSTP protocol
		Support single ring, double ring, tangent ring, cross ring
	LLDP	Support layer 2 link status information detection
	Link aggregation	Support multiple link aggregation base on LACP function
Device maintenance	Management way	Support command line interface（CLI）、WEB configuration way
		Support Telnet，SSH login
		Support RADIUS、TACACS+
	Network manage protocol	Support SNMPv1/v2c/v3
		Support RMON
	Alarm output	Rated capacity：5A 250V AC，5A 30V DC
		Maximum permissible power：1250VA，150W
		Maximum permissible voltage：380V AC，125V DC
		Maximum permissible current：5A AC，5A DC
	Email alarm output	Support email alarm output
		Support email sever address, port, username and password configuration
		Support encryption output of alarm information
		Support multiple alarm email destination address
	System status display	Support CPU load statistics
		Support memory usage status display
		Support host online time status display
		Support firmware version information display
		Support the model serial number host name display
	Backup/Restore	Support import/export backup configuration file and restore the factory settings.
	System log	Support local log and remote log server function, convenient to troubleshoot
	System upgrade	Support local/remote firmware upgrade function
	Installation	Support DIN-rail(standard), wall mounting (optional)
	MTBF	35 years
Industrial standard	Electromagnetic compatibility	IEC 61000-4-2 （Electrostatic discharge）　　　　　　class 4
		IEC 61000-4-3 （Radiated, radio-frequency, electromagnetic field） class 4
		IEC 61000-4-4 （Electrical fast transient/burs） class 4

Item		ISM2005D
		IEC 61000-4-5（surge)） class 4
		IEC 61000-4-6（Immunity to conducted disturbances, induced by radio-frequency fields） class 3
		IEC 61000-4-8（Power frequency magnetic field） class 5
	Impact	IEC60068-2-27
	Free fall	IEC60068-2-32
	Vibration	IEC60068-2-6
Warranty period	Warranty period	5 years

Dimensions
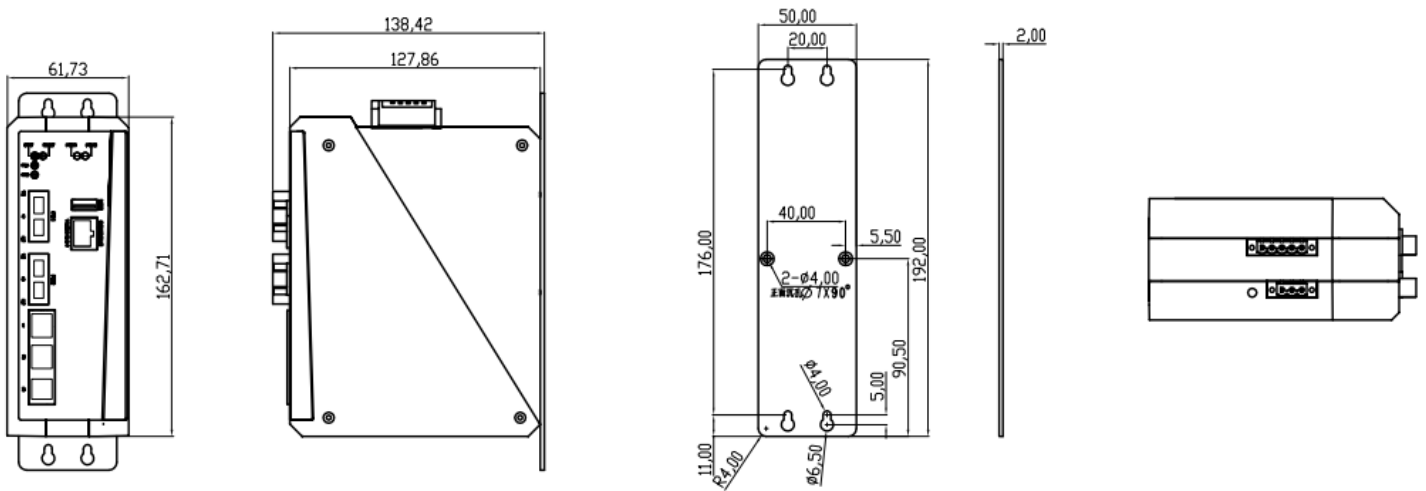
Wall mounting diagram
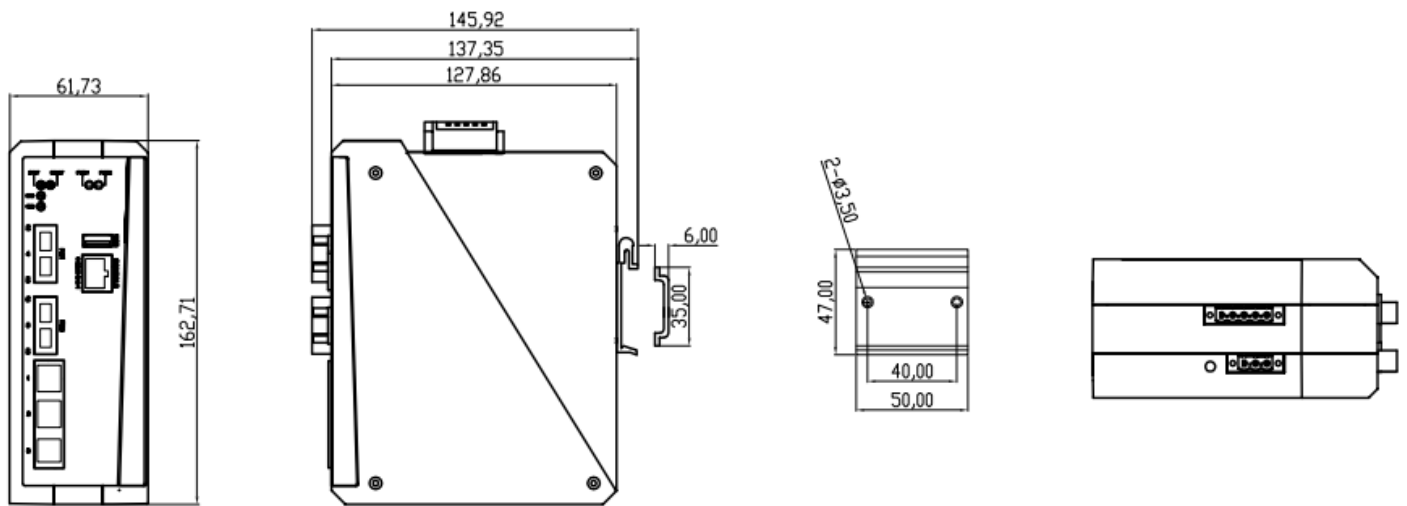
DIN-rail mounting diagram

Ordering Information

Product Model	Port			
	10/100Base-TX	100BaseFX optical port（SC/ST/FC）		
		Multimode dual fiber	Single mode dual fiber	Single mode single fiber
ISM2005D-5T-24	5	-	-	-
ISM2005D-3T-2M-24	3	2	-	-
ISM2005D-3T-2S-24	3	-	2	-
ISM2005D-3T-2B-24	3	-	-	2

Note：

☑ Multimode dual fiber support 0.5km；Single mode dual fiber20/40/80/120KM；Single mode single fiber support0.5/20/40/60/80/120KM

☑ The default configuration DC24V low-voltage power supply

Beijing InHand Networks Technology Co., Ltd.

Beijing InHand Networks Technology Co., Ltd focuses its energy upon development of equipment network (M2M) technology and products, for the purpose of providing safe, reliable, intelligent and advanced network equipment for customers in the fields of electric power, industrial control, finance, medical and other industries. Industrial-class products and equipment monitoring software platforms developed by InHand have been used by a number of well-known big customers, and have stood the test of large-scale field applications for a long time.

InHand hopes to contribute her efforts to the transition process of Chinese manufacturing industry to high value-added products through constant innovation of equipment network solutions.

Many well-known commercial organizations at home and abroad have confirmed development and achievement of InHand. InHand has been awarded the honor of Top-50 High-tech Development Enterprise consecutively by Deloitte (China) since 2007 and was awarded Top-200 Innovative Enterprise in Asia and Top-100 Innovative Enterprise in Asia in 2007 and 2008 respectively by the famous business media "Red Herring" of USA.

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