

ISM2016D Series Managed Industrial Ethernet Switch



- ☑ IP40 protection class, fully enclosed metal cabinet
- ☑ Pass EMC 3 electromagnetic compatibility test
- ☑ Wide temperature range design, with working temperature at -40~+75 °C
- ☑ Support G.8032v2 ring network protocol
- ☑ Support iRing, STP/RSTP protocol
- ☑ Support SNMP, RMON protocol
- ☑ DIN- rail or wall mounting optional

Product Overview

ISM2016D series products are of 16 ports DIN-rail Managed Industrial Ethernet Switch, especially designed for applications in the field of electric power, transportation, and industrial control and in other severe industrial environment. This series, which could work normally under the temperature between -40 and 75°C, has integrated convenient security management features, enterprise-class high-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 -40~75 °C
 - ☑ 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 and 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 SNTP time synchronization
 - ☑ 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 stadard 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 analyse 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

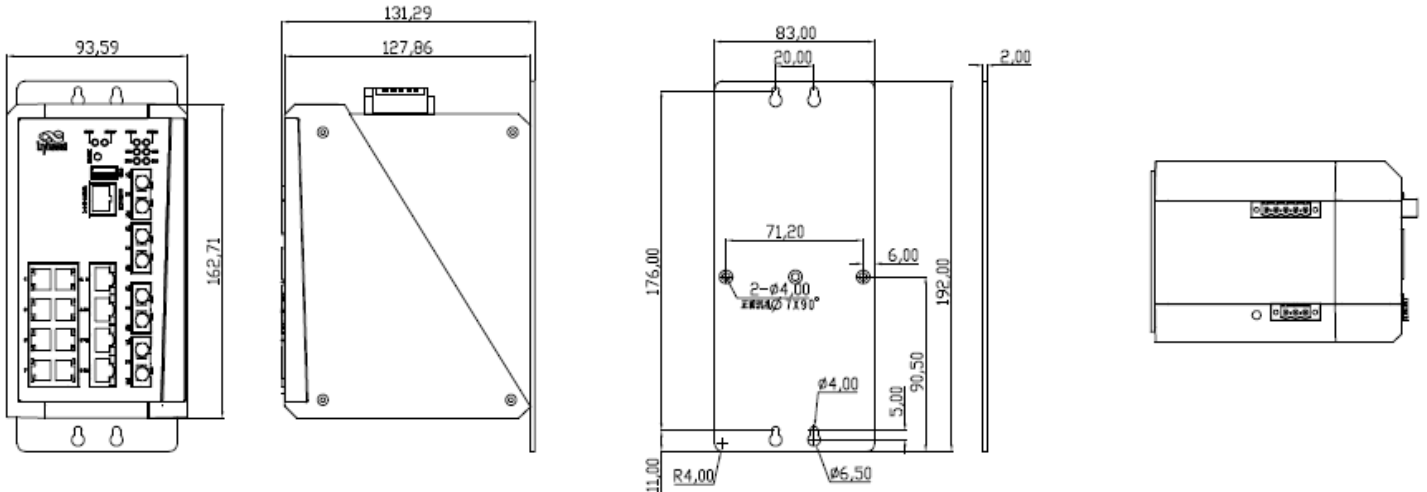
Product Specification

Item		ISM2016D
Interface	RJ45 port	10/100Base-T(X) self-adaptive RJ45 port, support full / half-dual and adaptive MDI/MDI-X
	Fiber port	100Base-FX port (SC/ST/FC port)
	Console port	RS232(RJ45 port)
	LED indication lamp	PWR1, PWR2, STAT, FAULT, FX
Mechanical structure	Housing	IP40 protection class, fully enclosed and seamless type metal cabinet, PCB protection coating available
	Dimensions (WxHxD)	93.6mm x 162mm x 127.5mm
	Weight	1.2 kg

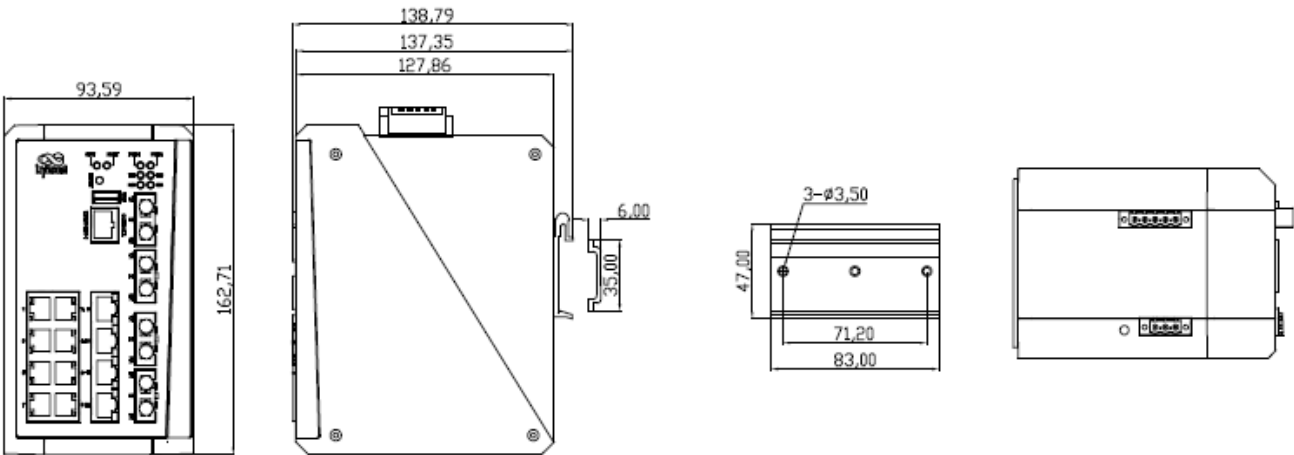
Item		ISM2016D
	Heat dissipation mode	Fanless heat dissipation
	Installation mode	Guide rail and wall mounting (kit optional)
Power source	Input voltage	24VDC(18~36VDC), Support redundant input (standard specification) 48VDC(36~48VDC), support redundant input (optional)
	Interface terminal	5-pin pluggable screw connection terminal
	Overload protection	Available
	Reverse polarity protection	Available
	Power consumption	<10w
	Working environment	Working temperature
Storage temperature		-40 ~ +75 °C
Relative humidity		5%~95% (no condensation)
Switching performance	Backplane bandwidth	3.2Gbps
	MAC address table	8k
	Data package buffer	1Mbit
Function features	Ethernet standard	IEEE 802.3, suitable for 10Base-T
		IEEE 802.3u, suitable for 100Base-T(X)and 100Base-FX
		IEEE 802.3x, suitable for flow control
		IEEE 802.1D is suitable for Spanning Tree Protocol
		IEEE 802.1D is suitable for MAC Bridges
		IEEE 802.1Dis suitable for GMRP
		IEEE 802.1w is suitable for Rapid STP
		IEEE 802.1Q is suitable for VLAN Tagging
		IEEE 802.1p is suitable for Class of Service
		IEEE 802.1X is suitable for access control base on port and MAC address
		IEEE 802.3ad is 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
Port mirroring	Support multiple port mirroring function	
Broadcast storm suppression	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)

Item		ISM2016D
Device maintenance		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
	Management way	Support command line interface(CLI), WEB configuration way
		Support Telnet, SSH
	Network management 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) level 3
		IEC 61000-4-3(Radiated, radio-frequency, electromagnetic field) level 3
		IEC 61000-4-4(Electrical fast transient/burs) level 3
		IEC 61000-4-5(surge) level 3
		IEC 61000-4-6(Immunity to conducted disturbances, induced by radio-frequency fields) level 3
		IEC 61000-4-8(Power frequency magnetic field) level 4
	Impact	IEC60068-2-27
	Freefall	IEC60068-2-32
Vibration	IEC60068-2-6	
Certifications	CE, UL	
Warranty	5 years	

Dimensions



Wall Mount



DIN-Rail Mount

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
ISM2016D-16T-24	16	-	-	-
ISM2016D-14T-2M-24	14	2	-	-
ISM2016D-14T-2S-24	14	-	2	-
ISM2016D-14T-2B-24	14	-	-	2

- Note:
- Multimode dual fiber support 2km; Single mode dual fiber/ Single mode single fiber support 20/40/80/120KM;
 - Power supply standard/wide range available, 24DC by default;
 - Standard Voltage:24DC(18-36VDC),optional
 - Standard Voltage:48DC(36-72VDC) ,optional
 - Wide Voltage:24DCW (9.5-36VDC) ,optional

- Wide Voltage:48DCW(18-72VDC),default

InHand Networks

InHand Networks provides reliable, secured and intelligent M2M solution for electric power, industrial automation, commercial and medical devices. Recognized by world class customers and partners. Proven by a large install base, Expanding with intensive investments in research and development, and Enduring for long-term support.

InHand Networks has become leader in industrial grade network technology by providing industrial cellular routers, industrial Ethernet switches, wireless sensor network devices and cloud based M2M platforms.

Connecting devices, enabling services.



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