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INS-8408A

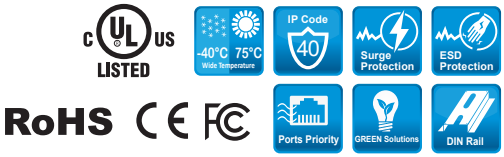
Unmanaged 8 x 10/100/1000 RJ45 Industrial Switch

Description

INS-8408A is an unmanaged industrial Gigabit Ethernet switch with 8 auto-negotiation 10/100/1000 Mbps downlink ports for communication between controllers and devices in automation settings. The device can be used with multi-axis robots and their peripherals such as PLCs, HMIs, and legacy devices.

The switch offers various in-built traffic optimization and network performance features to prioritize and prevent the loss of data during communication, like flow control, VLAN Passthru and per-port Quality of Service to ensure the delivery of high priority data.

This networking device is built with industrial grade components to protect it from hazards like vibration, shock, free fall, interference, and extreme temperatures that make it resistant to harsh industrial environments. The device also uses a Redundant Power Supply and Alarm System to ensure it works uninterruptedly, even during power outages and alert technicians if one power source fails, or if a port is disconnected.



Features Highlight

Ruggedized Components Designed for Harsh Industrial Environments

Built with industrial-grade components, good thermal conductivity, and enclosed in an IP40 metal case, this Ethernet switch is resistant to extreme environments, vibration, EMI (electromagnetic interference), ESD (electrostatic discharge), power surge, over-voltage, over-current, and reverse polarity. It withstands operation at extreme temperatures between -40°C~75°C (-40°F~167°F). It follows international safety standards like CE, FCC, and ROHS for safe operation.

Quick and Convenient Installation with Auto-negotiation

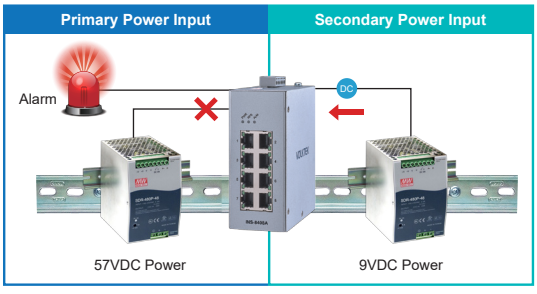
INS-8408A works as soon as it is connected and makes installation convenient. Two 9~57VDC power supplies and an alarm can connect to the 6-pin terminal block for power and notifications. The 10/100/1000 Mbps ports use auto MDI/MDI-X connection for auto-negotiation to work with other network devices quickly after plugged and at the required speed without extra software installation needed. The LED signals show when the device is in operation. Its versatile compact design allows it to fit in cabinets and other areas with limited space and can be fixed to a standard TH35 DIN rail for stable installation.

Traffic Control Mechanisms to Optimize Bandwidth Usage

Traffic control mechanisms regulate excessive traffic to avoid delay, data loss and connection issues between devices. INS-8408A uses Flow Control to prevent devices from overwhelming each other during the exchange of data hence keeping devices working within their capacity.

Redundant Power Supply and Alarm System

Two power supplies and one alarm connect to the 6-pin terminal block of this device to ensure it is powered all the time. When one of the connected power supplies stops working or in case of power outage, the device feeds power from the alternative power source and switches the alarm on. The alarm also alerts when a port is disconnected. The Alarm signal on the LED panel lights up. The alarm notifications can be activated through the DIP switch on its physical interface.



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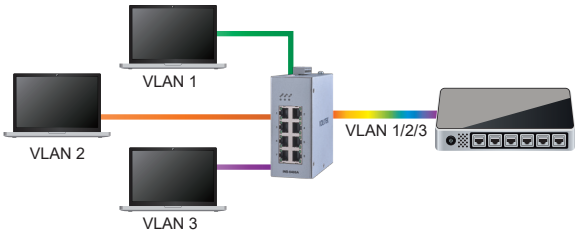
Features Highlight

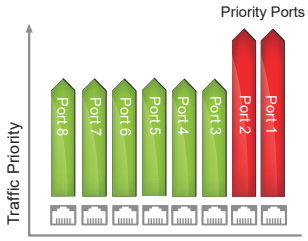
Intelligent VLAN Data Forwarding

INS-8408A unmanaged switch is aware enough to read the source and destination of VLAN tagged data packets. This switch delivers VLAN packets without changing or dropping them assuring operational data in industrial fields is delivered safely across devices.



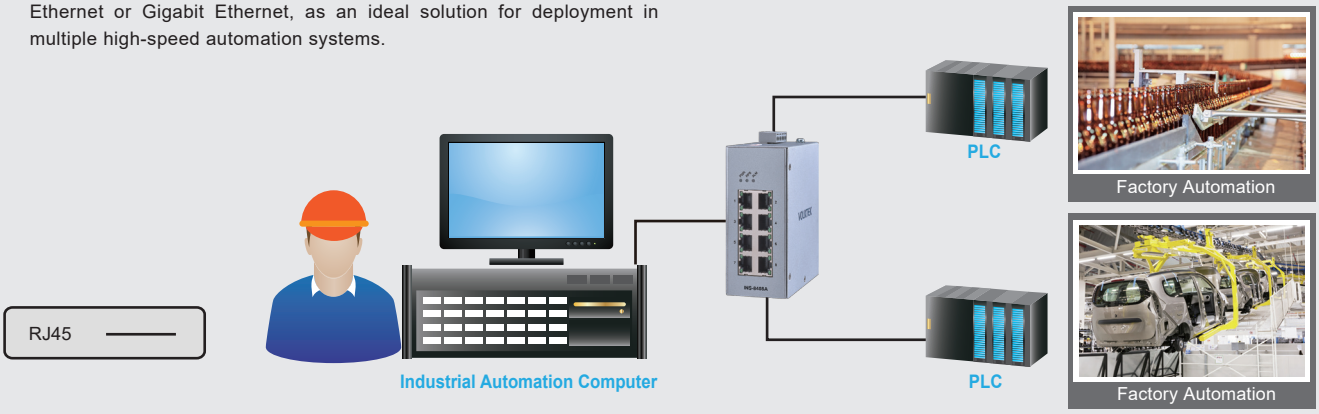
Critical Data Transmission Priority

INS-8408A streamlines the execution of time-sensitive applications with the 802.1p Tag QoS by classifying data into high and low priority. Additionally mission-critical applications in industrial automation like manufacturing and monitoring can be done without delay through port priority on ports #1 and #2 even during high traffic.

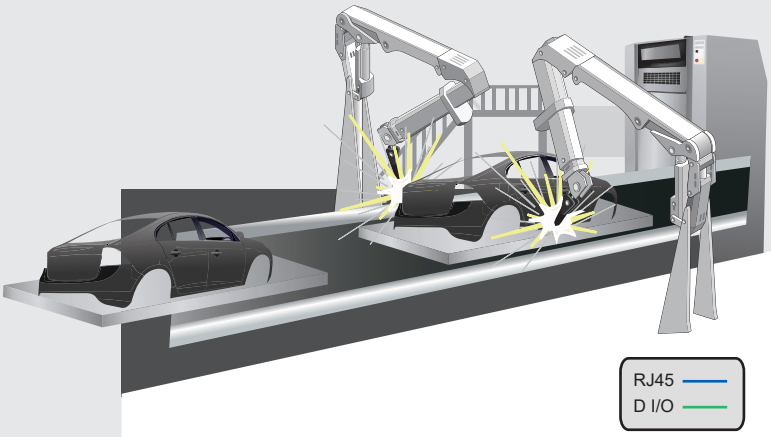


Applications

The INS-8408A is compatible with 10/100/1000Mbps through RJ45 transceivers to guarantee a strong, stable connection of Ethernet, Fast Ethernet or Gigabit Ethernet, as an ideal solution for deployment in multiple high-speed automation systems.

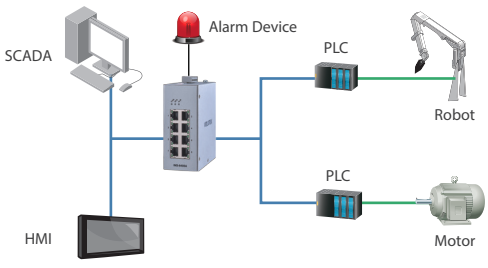


Factory Automation



Relay Output Alarm for Power Failure

The INS-8408A is built with relay contact outputs that trigger alarms to notify network engineers in the event of power failure, and enables them to quickly respond and resolve high priority issues.



Redundant Power input

The INS-8408A has dual power inputs to provide a redundant system against power supply disruptions. In case of one power source failure, the other acts as a backup to remain continuous network power for critical industrial applications.

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Specifications

Standards	
IEEE 802.3	10BASE-T
IEEE 802.3u	100BASE-TX
IEEE 802.3ab	1000BASE-T
IEEE 802.3	Nway Auto-negotiation
IEEE 802.3x	Flow Control
IEEE802.3az	Energy Efficient Ethernet (EEE)
Interface	
Ports	8 x 10/100/1000Base-T (RJ45)
Connectors	Terminal Block
DIP Switch	Primary/Redundant (PWR/RPS) power voltage drop alarm setting
LED Panel	PWR, RPS, ALM, 1000M, LNK/ACT
Features	
Performance	MAC Table size: 4K
	Throughput: 14,880 pps to 10 Mbps ports
	148,800 pps to 100 Mbps ports
	1,488,000 pps to 1000 Mbps ports
	Switch Fabric: 16Gbps
Power	
Input Voltage	Primary inputs: 9~57VDC
	Redundant inputs: 9~57VDC
Connection	Terminal Block
Power Consumption	5W
Alarm Relay	One relay output, 1 A @ 24V DC
ESD protection	8KV / 15KV
Surge protection	3KV / 6KV (RJ45 Ports Line to ground)
Reverse Polarity	Present
Overload current	Present
Mechanical and Environment	
Housing	Metal (IP40 protection)
Mounting	DIN-Rail
Operating Temperature	-40°C~75°C (-40°F~167°F)
Storage Temperature	-40°C~85°C (-40°F~185°F)
Operating Humidity	5 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	480 g (1.0 lb)
Dimension (WxHxD)	50 x 116 x 100 mm (1.97 x 4.57x 3.93 in)

Standards and Certifications		
CE	EMI	FCC Part 15 Subpart B class A EN 55032
	EMS	EN 55035 EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (Burst) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock Test		IEC 60068-2-27
Freefall Test		IEC 60068-2-32
Vibration		IEC 60068-2-6
Safety		UL 61010-1, UL 61010-2-201
Ordering Information		
INS-8408A		Unmanaged 8 x 10/100/1000 RJ45 Industrial Switch
Optional Accessories		
Power Supply		SDR-120-48: 120W DIN-Rail 48VDC Industrial Power Supply, -25°C~70°C (-13°F~158°F)

Notice:

** The highest degree of temperature operation certified by UL is -40°C~60°C (-40°F~140°F).*

** Specifications subject to change without notice.*

Dimension