

Ruggedized 8-Port Ethernet Switch for Process Automation

DS108H

Industrial 8-port Unmanaged Ethernet Switch

DS108H, the 8-port 10/100Mbps industrial Ethernet switch, adopting a housing reminiscent of PLC designs, is ideal for Din-Rail installations in automation control cabinets.

Engineered to withstand harsh conditions, the protection level of DS108H aligns with railway communication standards, with support for both low voltage 9V to 27Vac and wide range 10V to 36V DC power inputs, while enduring wide temperatures from -40~75 °C.

Additionally, it incorporates broadcast storm filtering, Quality of Service (QoS), and Port-Based VLAN features to ensure optimal network performance. The switch forwarding mechanism, enables seamless communication for a wider range of industrial protocols such as Profit-Net, Ethernet/IP, and Modbus/TCP, essential for automation control systems.



Features & Benefits

Broadcast Storm Protection

- Auto-drop incoming broadcast packets over the threshold to ensure network reliability
- Enable/Disable by Dip Switch

QoS Service for Time-Sensitive Applications

- Enable/Disable by Dip Switch for VLAN Tag High/ Low priority ID, 16:1 scheduling scheme

Port-Base VLAN Isolation

- Enable/Disable Port-Based VLAN with Uplink port #8 by Dip Switch
- VLAN Group: Port 8 -1, Port 8-2, Port 8-3. Port 8-4, Port 8-5, Port 8-6, Port 8-7

Industrial Protocol

Modbus/TCP, Ethernet/IP, ProfitNet

Long Packet Size Forwarding

- 64~1536 Bytes for double-tag VLAN

Hardened System Design

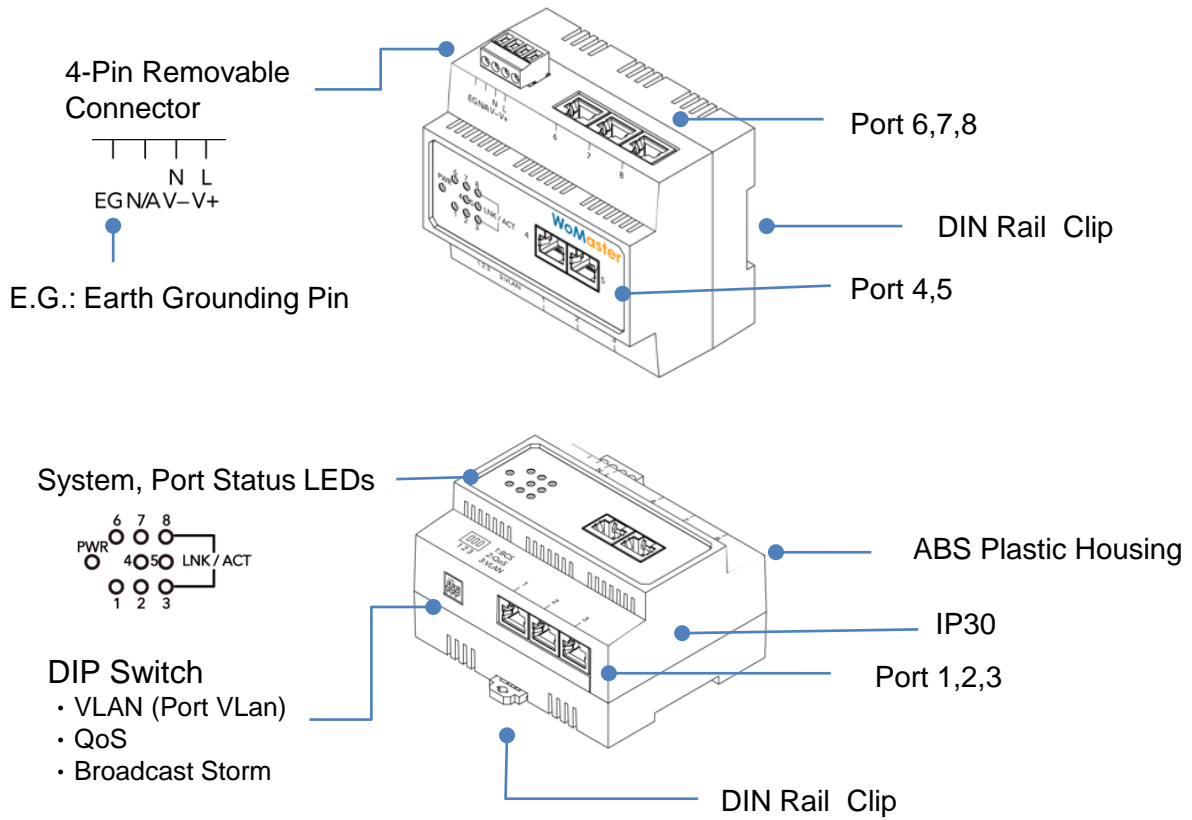
- Wide operation temperature from -40 to 75°C
- Wide Range Redundant Power Inputs, DC 10~36V or AC 9~27V
- IP30 Ingress Protection

Vertical Application

- Process Automation – Real Time Machine Communication
- Low AC Voltage for Building Automation

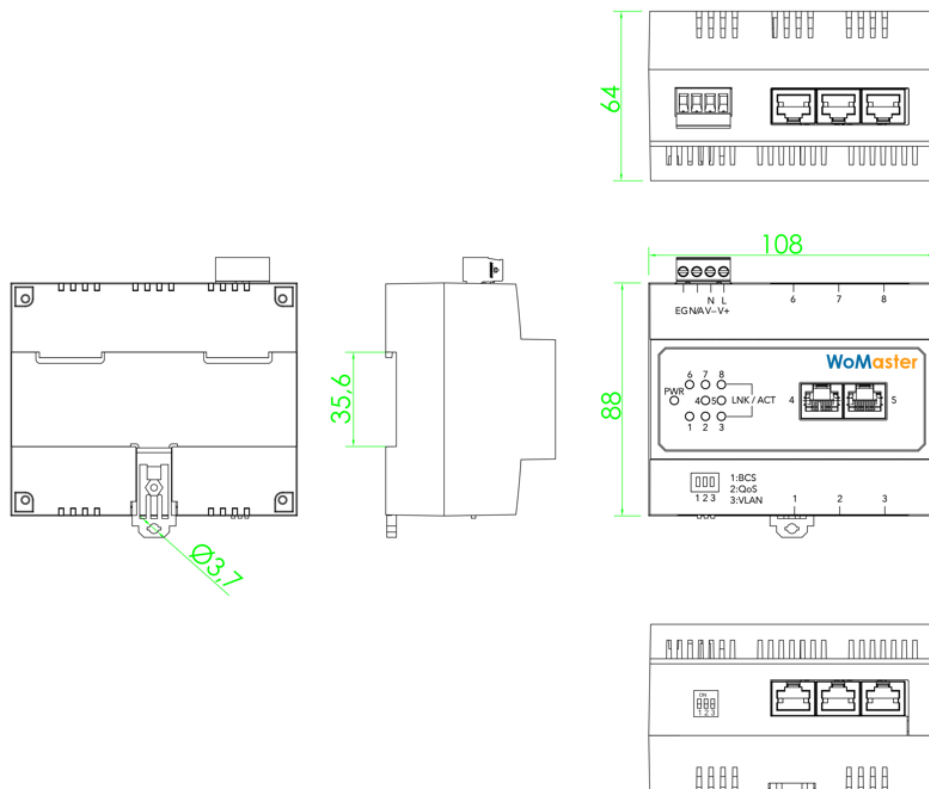


Interfaces



Dimensions

Dimension (mm): 108 x 64 x 88 (W x H x D)



Technology	
Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3x Flow Control and back-pressure
	IEEE 802.1p Class of Service (CoS)
	IEEE 802.1Q Quality of Service
Performance	
Switch Technology	Store and Forward Technology
MAC Address Table	1K
Packet Buffer	448K bits
Transfer performance	10Base-T: 14,880pps, 100Base-TX: 148,800pps
Forwarding Packet	64~1536 Bytes
Broadcast Filtering	DIP Switch Configurable. (DIP Switch -1) Broadcast Storm Packet Filtering Threshold: 100Mbps Link Speed: 600 Packets/ Per Second 10Mbps Link Speed: 60 Packets /Per Second Default Setting (Off)
Quality of Service	DIP Switch Configurable. (DIP Switch -2) Compliance with IEEE 802.1p class of service with Tag Based Priority. Each port support 2 priority queues, the output queue scheduling with 16 (High):1(Low) scheme. Default Setting (Off)
Port Based VLAN	DIP Switch Configurable. (DIP Switch -3) Port VLAN Grouping Rule: Port 8-1 / Port 8-2 / Port 8-3 / Port 8-4 / Port 8-5/ Port 8-6/ Port 8-7 (Port 8 Uplink Port) Default Setting (Off)
Interface	
Ethernet Port	8 x 10/100Base-TX RJ45, Auto Negotiation , Auto MDI/MDI-X
System LED	1 x Power: Amber
Ethernet Port LED	RJ-45:Link (Green On), Activity (Green Blinking)
DIP Switch	DIP Switch -1: Broadcast Storm Protection Control (Default Disable/ Off) DIP Switch -2: QoS Control (Default Disable/ Off) DIP Switch -3: Port Based VLAN (Default Disable/ Off)
Power input	4-Pin Removable Terminal Connector with Polarity Auto Reverse <ul style="list-style-type: none"> • V+ (L): DC + or Live wire • V- (N): DC - or Naught wire • N/A: Not Applicable • E.G: Earth Grounding, connects to System chassis ground
Hi-Pot Insulation	AC 1.5KV : Ethernet Port to Port, Ethernet Port to Power, Ethernet to Chassis Ground, Power to Chassis
Power Requirement	
Input Voltage	DC 24V, Rating 10~36Vdc, Power Input with Auto Polarity Reverse function Low AC Voltage 9~27Vac for the Building Automation Control
Auto Polarity Reverse	Yes
Power Consumption	3 watts (Maximum) / DC 24V Power Input
Mechanical	
Installation	DIN Rail
Enclosure Material	ABS+PC, Anti-U/V
Dimension	108 mm (W) x 88 mm (H) x 64 mm (D) / with DIN Rail Clip
Protection	IP30 Ingress Protection, compliance with Pollution Degree 2
Weight	300g without package

Environmental	
Operating Temperature & Humidity	-40°C~75°C , 0%~95% Non-Condensing
Storage Temperature	-40°C~80°C
MTBF	>200,000 hours
Hi-Pot Insulation	AC1.5 KV for Power- Chassis Ground, Power – Ethernet, Chassis Ground- Ethernet, Ethernet – Ethernet
Warranty	5 years

Standard	
EMC	EN61000-6-2/ EN61000-6-4 *; EMC test severity up to the requirement of railway trackside.
EMI	CISPR 22, FCC part 15B Class A
EMS	EN61000-4-2 ESD: 8KV(Air), 6KV(Contact), Criteria B EN61000-4-3 RS: 20V/m(80M~1GHz), 10V/m(1.4G~2.1GHz), 5V/m(2.1G~2.5GHz)*, Criteria A EN61000-4-4 EFT: 2KV (Power), 2kV (Signal Port), Criteria A EN61000-4-5 Surge: L-N 1KV, L/N-E 2KV, Criteria B EN61000-4-6 CS: 10Vrms(Power, Signal Port)* , Criteria A EN61000-4-8 PFMF: 100A/m continues, 300A for 1~3s*, Criteria A



Ordering Information

Model Name	Description
DS108H	Industrial 8-port Fast Ethernet Switch, 24Vdc
	Package List
	1 x Product Unit
	1 x 4-pin Removable Terminal Connector
	1 x Quick Installation Guide



Optional Accessory

Model Name	Description
PSD5-24	5W/24VDC DIN-rail power supply