

# Slim size Industrial Switch for Automation

## DS105A series

### Industrial 5-port Unmanaged Ethernet Switch

The DS105A industrial Ethernet switch is designed with network features for the industrial automation application. With the Broadcast filtering, VLAN and CoS function, it enhances the network transmission performance. The 10~60Vdc wide range power input or low voltage 18~30Vac can be used for building automation control. The wide operation temperature -40~75°C and heavy industrial EMC design makes DS105A suitable for any industrial application.



### Features & Benefits

#### Broadcast Storm Protection

- Auto drop incoming broadcast packets which are over the threshold to ensure network reliability
- Fast enable/disable through DIP Switch for customer requirement

#### QoS Service for Time-Sensitive Applications

- Easy DIP Switch Configuration
- VLAN Tag Hi/ Low priority ID, 16:1 scheduling scheme

#### Pre-defined High Performance VLAN Group

- Member port individual grouping with Uplink port #5
- Easy DIP Switch Configuration
- VLAN Group: Port 5 -1, Port 5-2, Port 5-3. Port 5-4

#### Easy DIP switch Configuration

- QoS Control
- Port Based VLAN / Port Isolation
- Broadcast Storm Protection

#### Long Packet Forwarding

- 64~1536 Bytes for double-tag VLAN

#### Hardened System Design

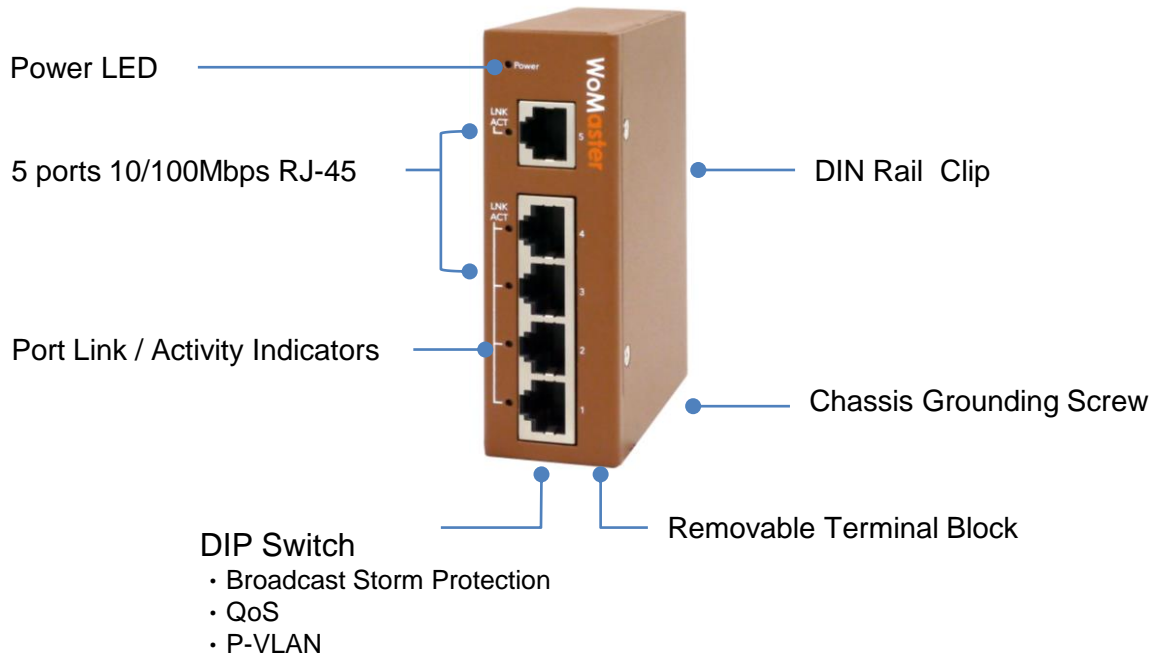
- Operates Under -40 ~75°C Environment
- Wide Range Redundant Power Input, DC 9.6~60V or AC18~30V
- Ingress Protection – IP31

#### Special Vertical Market Application

- Factory Automation – Real Time Machine Communication
- Railway Track Side – PLC Communication
- Low AC Voltage application – AC18~30V Building Automation

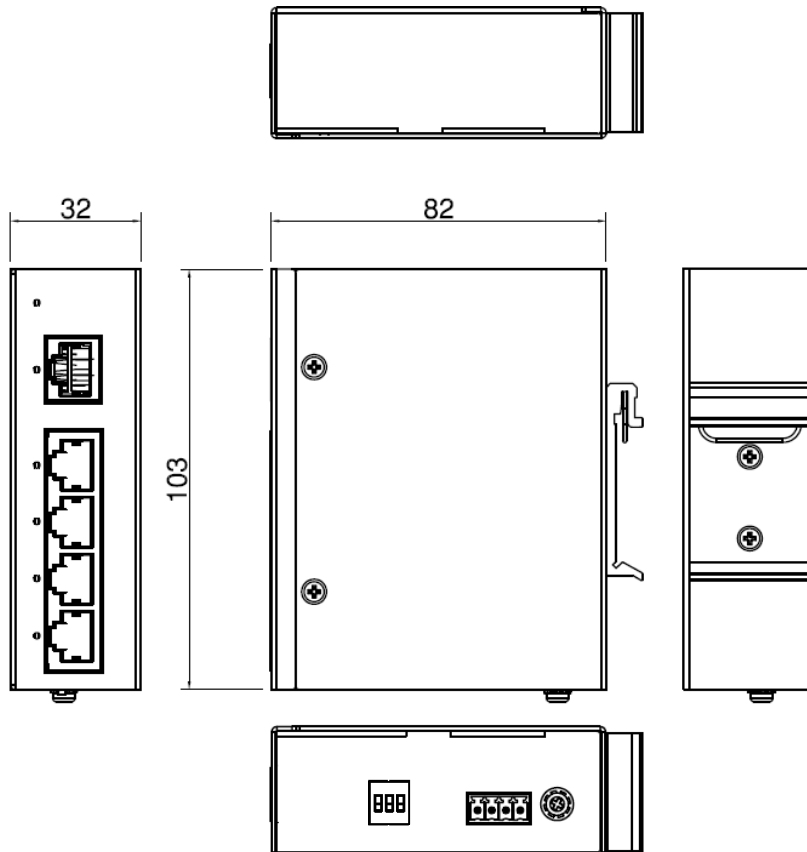


## Interfaces



## Dimensions

Dimension (mm): 32x 103x 82 (W x H x D)



Technology	
<b>Standard</b>	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	
<b>Switch Technology</b>	Store and Forward Technology
<b>MAC Address Table</b>	1K
<b>Packet Buffer</b>	448K bits
<b>Transfer performance</b>	10Base-T: 14,880pps, 100Base-TX: 148,800pps
<b>Forwarding Packet</b>	64~1536 Bytes
<b>Broadcast Filtering</b>	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)
<b>Quality of Service</b>	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)
<b>Port Based VLAN</b>	DIP Switch Configurable. (DIP Switch -3) Port VLAN Grouping Rule: Port 5-1 / Port 5-2 / Port 5-3 / Port 5-4 (Port 5 Uplink Port) Default Setting (Off)
Interface	
<b>Ethernet Port</b>	<b>DS105A:</b> 5 x 10/100Base-TX RJ45, Auto Negotiation , Auto MDI/MDI-X
<b>System LED</b>	1 x Power: Green On
<b>Ethernet Port LED</b>	RJ-45:Link (Green On), Activity (Green Blinking)
<b>DIP Switch</b>	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)
<b>Power input</b>	4-Pin Removable Terminal Connector with Power Redundancy, Polarity Auto Reverse <ul style="list-style-type: none"> <li>• V+ (L): DC + or Live</li> <li>• V- (N): DC - or Neutral</li> <li>• Negative DC Power Input Supported ( -48V or -24V Power System)</li> </ul>
Power Requirement	
<b>Input Voltage</b>	DC 24V, Rating 9.6~60Vdc, Redundant Power Input with Auto Polarity Reverse function Low AC Voltage 18~30Vac for the Building Automation Control
<b>Auto Polarity Reverse</b>	Yes
<b>Power Consumption</b>	<b>DS105A:</b> 3 watts (Maximum) / DC 24V Power Input
Mechanical	
<b>Installation</b>	DIN Rail
<b>Enclosure Material</b>	Steel Metal
<b>Dimension</b>	32mm (W) x 103mm (H) x 82mm (D) / without DIN Rail Clip
<b>Ingress Protection</b>	IP31
<b>Weight</b>	305g 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	AC1.0 KV for Power- Chassis Ground, Power – Ethernet, Chassis Ground- Ethernet, Ethernet - Ethernet
Warranty	5 years

Standard	
EMC	EN61000-6-2/ EN61000-6-4
EMI	CISPR 22, FCC part 15B Class A
EMS	EN61000-4-2 ESD: 8KV(Air), 6KV(Contact) EN61000-4-3 RS: 20V/m(80M~1GHz), 10V/m(1.4G~2.1GHz), 5V/m(2.1G~2.5GHz) EN61000-4-4 EFT: 2KV (Power), 1kV (Signal Port) EN61000-4-5 Surge: Power: 2KV/1KV(Line to Ground/Line to Line), Signal Port: 2KV(Line to Ground) EN61000-4-6 CS: 10Vrms(Power, Signal Port) EN61000-4-8 Magnetic Field: 30A/m continues /300A for 1~3s

## Ordering Information

Model Name	Description
DS105A	Industrial 5-port Fast Ethernet Switch, 24V DC/AC
	<b>Package List</b>
	1 x Product Unit
	1 x 4-pin Removable Terminal Connector
	1 x Attached Din Clip
	1 x Quick Installation Guide

## Optional Accessory

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