Smart Full Gigabit Ethernet Switch with ERPS Fiber Ring Backup



DS406 series

Industrial 4G+2G SFP Managed Ethernet Switch

DS406 is an industrial L2 smart managed Ethernet switch equipped with 4 Gigabit Ethernet ports with 2 100M/1000M fiber SFP ports. The NetMaster configuration utility and USB port for configuration file can help mass installation and site support. DS306 supports latest ERPS v2 ring standard and is fully compatible with 3rd party devices for flexible network planning. Wide operation temperature design (-40~70ºC) can withstand critical industrial environment. All switches pass 4 hours 60ºC stress test before delivery to ensure utmost quality.

IEC61000-6-2
IEC61000-6-4
ERPS G.8032v2

Features & Benefit

High Throughput Ethernet Switching

- 4 **Gigabit Ethernet port and 2 SFP slots**
- 8K MAC address table
- Stores and Forwards with non-blocking Switch Fabric

Rugged Design for IP Surveillance

- Robust design protects from mechanical deformation
- Wide operating temperature and humidity range **-40~70ºC, 95%humidity**
- Wide operating voltage range **12~48VDC**
- IEC 61000-6-2/4 Heavy Industrial Environment

Management Features

- Various configuration paths, including WebGUI, CLI, Telnet, SNMP V1/V2c/V3/trap
- LLDP topology control
- USB for easy field side configuration and firmware update
- *IEEE 1588v1/2 PTP time management
- Software utility interface for LAN devices management
- *NMS system for individual component monitoring

ITU-T G.8032 v1/v2 ERPS Ring Redundancy

- An ITU standard Ring redundancy Protocol
- Provide sub-50ms protection and recovery switching for Ethernet traffic
- Interoperate with 3rd party industrial switch and still remain fast recovery time
- Interoperate with commercial switch instead of STP/RSTP
- Efficient network interconnection and topology with ERPS Chain, multiple chain

Interfaces

System LED
- 2 x Power
- 1 x System Status
- 1 x DO
- 2 x Fiber Port
- 2 x Ring Status

Easy System Management
- USB for Configuration/Firmware update



Gigabit Ethernet
- 4-port 100/1000MBase-T

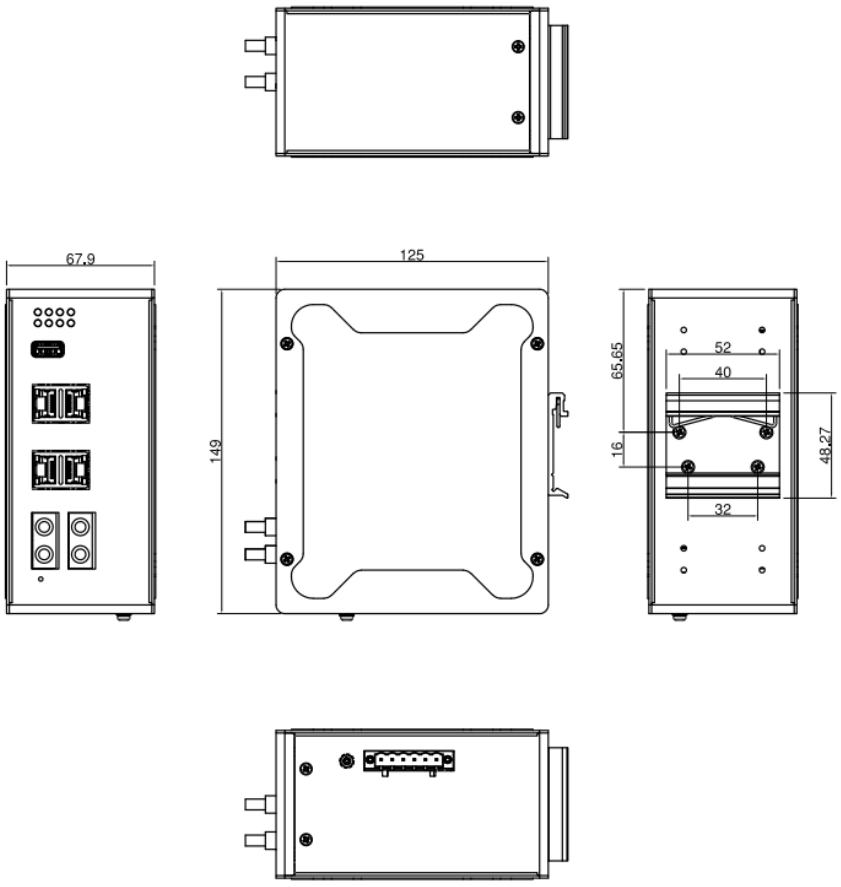
DIN Clip

Fiber Ethernet
- 2 100M/1000M SFP

Integrated Power Connector
- 1 x 6-pin terminal block
  4 pin for redundant power input
  2 pin DO

Dimensions

(mm)



Specifications

Technology	
Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3ab 1000Base-T Gigabit Ethernet copper
	IEEE 802.3u 100Base-FX Fast Ethernet Fiber
	IEEE 802.3x Flow Control and back-pressure
	IEEE 802.3ab 1000Base-T Gigabit Ethernet copper
	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
	IEEE 802.1p Class of Service (CoS)
	IEEE 802.1Q VLAN
	ITU-T G.8032 Ethernet ring protection switching (ERPS)
	IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
	IEEE 1588 Precision Time Protocol v1/2
Interface	
Ethernet Port	4 x 100/1000MBase-T RJ45, Auto Negotiation 2 x 100/1000M SFP
System LED	2 x Power: Green On 1 x SYS: Ready: (Green On), Firmware Updating: (Green Blinking) 1 x DO: Red On 2 x Fiber: Link (Green On), Activity (Green Blinking) 1 x Ring: Off: Ring disabled, Green On: Ring normal (Not RPL Owner), Green Blinking: Ring normal (RPL Owner) 1 x Ra: Green On: Ring abnormal, Green Blinking: Ring port fail
Ethernet Port LED	Link (Green On), Activity (Green Blinking)
Reset	System Reset(2~6 Seconds) / Default Settings Reset(over 7 Seconds)
USB	1 x USB for Configuration/Firmware Update
Power Input, Digital Output	6-Pin Removable Terminal Block Connector 4 Pin for Redundant Power 2 Pin for DO (Relay Alarm) DO: Dry Relay Output with 0.5A/24V DC
Power Requirement	
Input Voltage	24VDC(12~48VDC)
Reverse Polarity Protect	Yes
Input Current	0.3A@24VDC
Power Consumption	Max 7.2W@24VDC full loading, suggest to reserve 15% tolerance
Software	
Management Interface	CGI WebGUI, Command Line Interface (CLI), Telnet, SNMP
Time Management	NTP, *IEEE 1588 Precision Time Protocol v1/2
Network Management	IPv4, SNMP v1/v2c/v3/Trap, MIBs, LLDP, DHCP server/client, TFTP, System Log, SMTP
Traffic Management	Flow Control, VLAN, Class of Service, QOS, Rate Control, Port Mirror
Security	Management IP, SSH, SSL
Redundancy	Rapid Spanning Tree Protocol (RSTP) ITU-T G.8032 v1/v2 Ethernet Ring Protection Switching (ERPS)

Mechanical	
Installation	DIN Rail
Enclosure Material	Steel Metal with Aluminum
Dimension	67.9 x 149 x 125 mm(W x H x D) / without DIN Rail Clip
Ingress Protection	IP30
Weight	Around 765g without package
Environmental	
Operating Temperature & Humidity	-40°C~70°C , 5%~95% Non- Condensing
Storage Temperature	-40°C~85°C
MTBF	>200,000 hours
Warranty	5 years
Approval	
Safety	EN60950-1 Compliance
EMC	EN61000-6-2/EN61000-6-4
EMI	CISPR 22, FCC part 15B Class A
EMS	EN61000-4-2 ESD, EN61000-4-3 RS, EN61000-4-4 EFT, EN61000-4-5, EN61000-4-6 CS, EN61000-4-8 Magnetic Field

*Functions by request.

Ordering Information

Model Name	Description
DS406	Industrial 4G+2GF Managed Ethernet Switch
	Package List
	1 x Product Unit
	1 x 6-pin Removable Terminal Connector
	1 x Attached Din Clip
	1 x Quick Installation Guide

Optional Accessory

Item	
SFPGEM05	SFP, 1000Mbps, LC, multi, 550M, 0~70°C
SFPGEM05T	SFP, 1000Mbps, LC, multi, 550M, -40~85°C
SFPGEM05D	SFP, 1000Mbps, LC, multi, DDM, 550M, 0~70°C
SFPGEM05DT	SFP, 1000Mbps, LC, multi, DDM, 550M, -40~85°C
SFPGEM2	SFP, 1000Mbps, LC, multi, 2KM, 0~70°C
SFPGEM2T	SFP, 1000Mbps, LC, multi, 2KM, -40~85°C
SFPGEM2D	SFP, 1000Mbps, LC, multi, DDM, 2KM, 0~70°C
SFPGEM2DT	SFP, 1000Mbps, LC, multi, DDM, 2KM, -40~85°C
SFPGES10	SFP, 1000Mbps, LC, single, 10KM, 0~70°C
SFPGES10T	SFP, 1000Mbps, LC, single, 10KM, -40~85°C
SFPGES10D	SFP, 1000Mbps, LC, single, DDM, 10KM, 0~70°C
SFPGES10DT	SFP, 1000Mbps, LC, single, DDM, 10KM, -40~85°C
SFPGES30	SFP, 1000Mbps, LC, single, 30KM, 0~70°C
SFPGES30T	SFP, 1000Mbps, LC, single, 30KM, -40~85°C
SFPGES30D	SFP, 1000Mbps, LC, single, DDM, 30KM, 0~70°C
SFPGES30DT	SFP, 1000Mbps, LC, single, DDM, 30KM, -40~85°C
SFPGES40	SFP, 1000Mbps, LC, single, 40KM, 0~70°C
SFPGES40T	SFP, 1000Mbps, LC, single, 40KM, -40~85°C
SFPGES40D	SFP, 1000Mbps, LC, single, DDM, 40KM, 0~70°C