

Smart Gigabit Ethernet Switch with ERPS Fiber Ring Backup

DS306 series

Industrial 6-port Managed Ethernet Switch

DS306 is an industrial L2 smart managed Ethernet switch equipped with 4 Gigabit Ethernet ports with 2 100M ST/SC single-mode/multi-mode fiber transceivers for up to 30KM distance. 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 (-40~70°C) can withstand critical industrial environment. All switches pass 4 hours 60°C stress test before delivery to ensure utmost quality.



Features & Benefit



High Throughput Ethernet Switching

- 6-port Ethernet, including 4 **Gigabit Ethernet port and 2 standard ST fiber connectors**
- 8K MAC address table
- Stores and Forwards with non-blocking Switch Fabric

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

Rugged Design for IP Surveillance

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

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

Fiber Ethernet

- 2-port 100M SC/ST Connector



DIN Clip

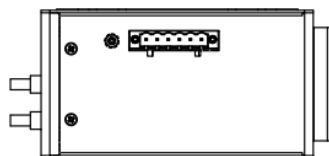
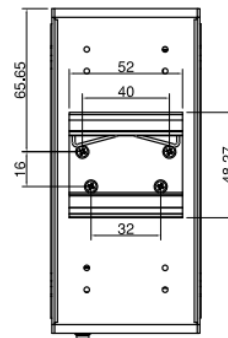
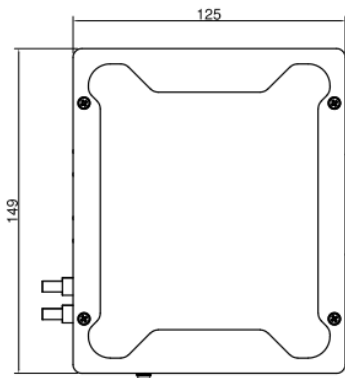
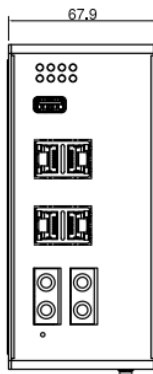
Integrated Power Connector

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



Dimensions

(mm)



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 100BaseFX, ST or SC Connector				
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				
Optical Fiber					
	Distance	Wavelength	TX Range	RX Range	Link budget
Single-Mode	30KM	1310 (1280~1340)	-8~-15dBm	-3~-34dBm	19dB
Multi-Mode	2KM	1310 (1260~1360)	-10~-20dBm	-3~-32dBm	12dB
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
DS306-SS-SC-30	Industrial 6-port Managed Ethernet Switch, single-mode, 30km/1310nm, SC
DS306-SS-ST-30	Industrial 6-port Managed Ethernet Switch, single-mode, 30km/1310nm, ST
DS306-MM-SC-2	Industrial 6-port Managed Ethernet Switch, multi-mode, 2km/1310nm, SC
DS306-MM-ST-2	Industrial 6-port Managed Ethernet Switch, multi-mode, 2km/1310nm, ST
	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
