

Full Gigabit PoE Switch with ERPS v2 Fiber Ring

DP406 series

Industrial 4G+2G SFP Managed PoE Switch

DP406 is an industrial L2 smart managed PoE switch equipped with 4 Gigabit PoE af/at ports and 2 100M/1000M fiber SFP ports. The 4 Gigabit PoE/PoE+ ports can feed IP cam or wireless AP up to 30W/port. The DP406 designs with the latest ERPS v2 ring which is fully compatible with 3rd party devices for flexible network upgrade. The USB port for configuration file can help mass installation and site support. 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. The NMS NetMaster supports network management for up to 2000 nodes.



NetMaster



Features & Benefit

High Throughput Ethernet Switching

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

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

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
- NetMaster- NMS system for individual node monitoring
- ViewMaster- Remote configuration software utility for distributed management

Enhanced Cyber Security for Critical Application

- Firewall for traffic classification
- DMZ, port forwarding, NAT for LAN protection
- OpenVPN, Ipsec, L2TP for secure connection
- Port Security
- HTTPs/SSH secure login, TACACS+

Cloud Management Service

- Support Amazon AWS & Microsoft Azure cloud service
- Support proprietary ThingsMaster cloud service
- Interactive monitoring dashboard and map shows the status, signal strength, location etc.

Extreme PoE Capability

- Provides 4-port IEEE 802.3af/at compliance PoE, up to **30W** per port
- Up to 120W PoE power budget
- Complete PoE management including per-port Power Budget Control, PoE Scheduling and PoE Status

Rugged Design for Wayside Surveillance, ITS Application

- NEMA TS2 compliance for ITS application
- Effective heat dissipation design for operating in **-40~75°C** environments
- Railway EMC: **EN50121-4** compliance
- CE Marking
- IEC61000-6-2/IEC61000-6-4 heavy industrial EMC
- Emission: FCC part 15 B Class A



Interfaces

System LED

- 2 x Power
- 1 x System Status
- 1 x DO
- 2 x Fiber Port
- 1 x Ring
- 4 x PoE

Easy System Management

- USB for Configuration/Firmware update

Gigabit Ethernet

- 4-port 100/1000M RJ45
- IEEE 802.3af/at

Fiber Ethernet

- 2 100M/1000M SFP



DIN Clip

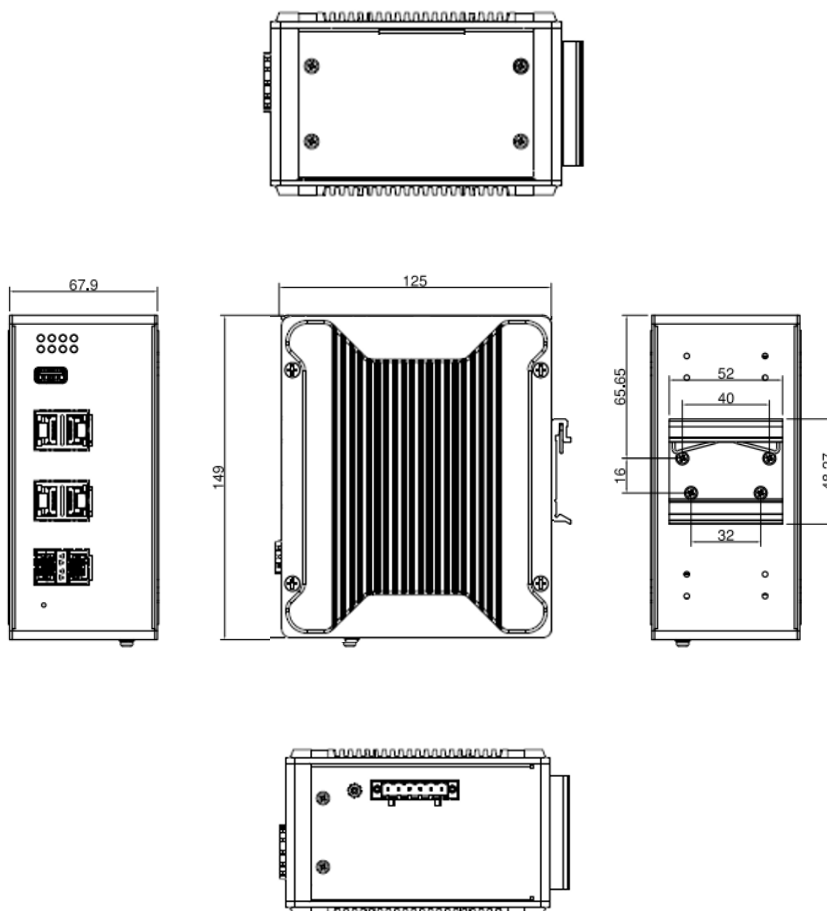
Integrated Power Connector

- 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 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) 4 x PoE status: Green On |
| 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 | 48VDC(46~57VDC, 50~57VDC suggested for IEEE802.3at) |
| Reverse Polarity Protect | Yes |
| Input Current | 2.5A@54VDC |
| Power Consumption | Max 8.5W @54VDC full traffic without PD 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) |
| PoE | |
| Power forwarding mode | Alternative A |
| PoE Power Budget | System: Max. 120W@75°C Per Port: Max. 30W |
| PoE Standard | IEEE 802.3af/at |
| Management | System/Port Power Budget Control, PD Alive Check, PoE Scheduling, PoE Status |

| Mechanical | |
|----------------------------------|---|
| Installation | DIN Rail |
| Enclosure Material | Steel Metal with Aluminum |
| Dimension | 78.5 x 149 x 125 mm(W x H x D) / without DIN Rail Clip |
| Ingress Protection | IP30 |
| Weight | Around 800g |
| 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 |
|------------|--|
| DP406 | Industrial 4G+2GF Managed PoE 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 |