

## Product Highlights

### Rugged, Hardened Design

Design to operate in wide temperature ranges, vibration, shock, allowing the switches to be deployed in enclosures or cabinets in outdoor locations

### High Availability

Comprehensive network redundancy features with fast fault recovery, together with advanced security features provides industrial-grade reliability and protection

### Flexible Options

Wide selection of port density, media and PoE provides customer with the flexibility to choose the right switch that best fits their requirement



## DIS-300G Series

# Industrial Gigabit Managed Switches

## Features

### IP-30 Ingress Protection

### Operating Temperature

- -40°to 75°C

### Power source

- Redundant Dual Power Inputs
- Reverse Polarity Protection
- Overload Current Protection

### Din-Rail and Wall mounting options

### Ring Protection with < 20ms

### Environmental Test

- Shock - IEC 60068-2-27
- Freefall - IEC 60068-2-32
- Vibration - IEC 60068-2-6

### Safety Certifications

- UL 60950-1
- CE/FCC

### Fan-less design

The DIS-300G Series Industrial Gigabit Managed Switches are designed specifically to withstand wide temperature range, vibrations and shock. These rugged, yet easy to deploy, switches have superior environmental specification compared to those of commercial network switches. With its hardened design combined with high availability network features, these switches form vital parts of any network infrastructure facilitating the increasing demand for smart cities, city-wide surveillance and wireless connectivity.

With its comprehensive feature set, DIS-300G managed switches are easy to configure, partition and organise user's network and provide reliable and quality of service. The DIS-300G-8PSW and DIS-300G-14SPW switches are PoE switches which are compliant with both IEEE 802.3af and IEEE 802.3at PoE standards and delivering up to 30 watts power per port along with data on standard Ethernet cabling. These switches can be used to power any IEEE 802.3af/at compliant PoE PD devices, which eliminates the need for additional wiring. They also provide additional PoE power management features which can greatly reduce the deployment effort of planning PoE power budget.

## Customers

The DIS-300G Series family of switches is ideal for customers looking for cost-effective and customisable networking solutions with redundancy and security, designed for industrial environments.

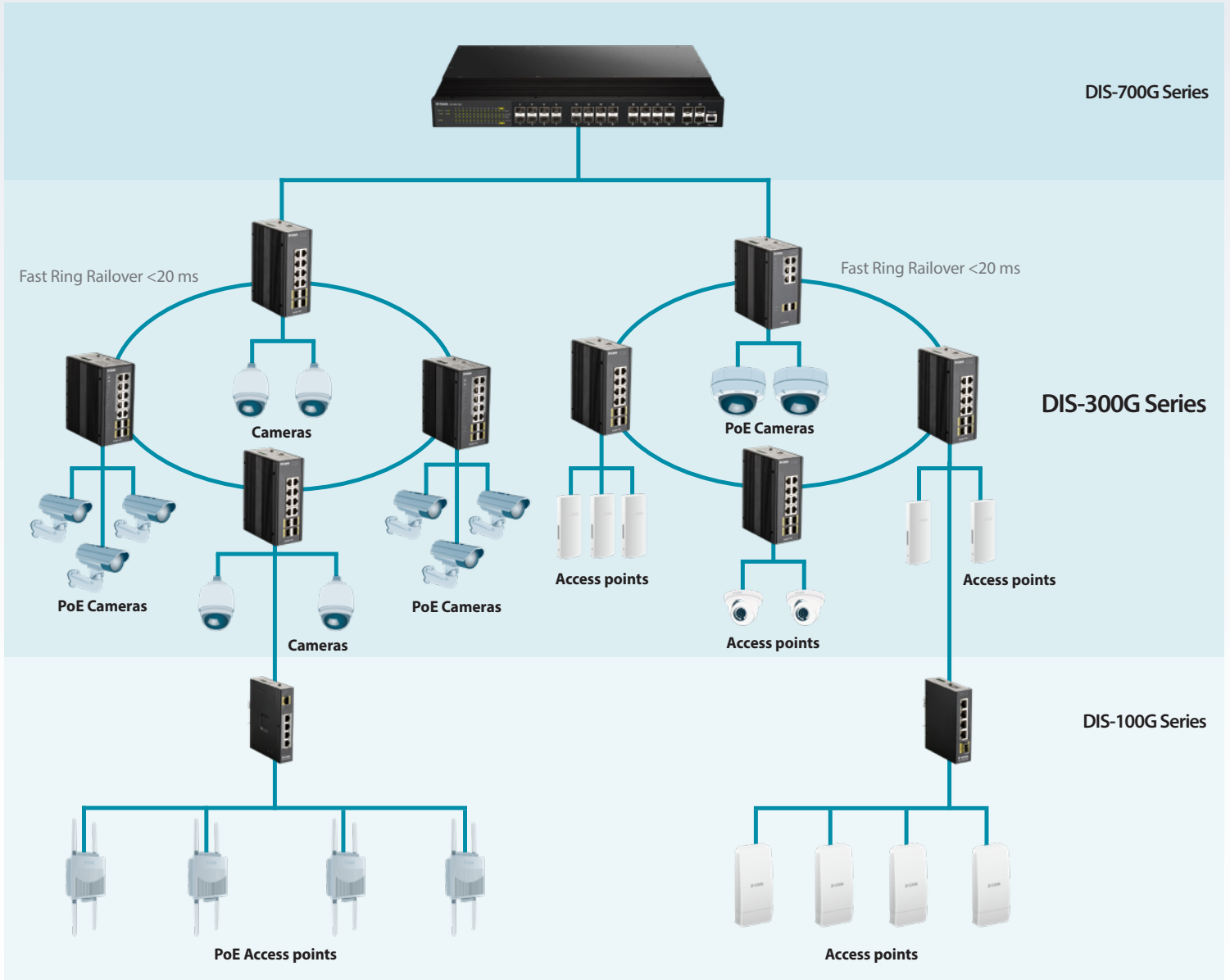
## Application

- Challenging environmental conditions
- High-end network redundancy topologies
- High ambient temperatures

## Market

- Heavy industrial / factory automation
- Intelligent transport system (ITS) / railway applications
- City surveillance / smart cities

## Deployment Scenario



| Technical Specifications   | DIS-300G-12SW   | DIS-300G-8PSW   | DIS-300G-14PSW  |
|--|---|---|---|
| <b>Ethernet</b>  |   |   |   |
| Ethernet Interfaces  | 8 x 100/1000BaseT ports<br>4 x 100/1000BaseSFP slots  | 4 x 100/1000BaseT PoE ports<br>2 x 100/1000BaseT ports<br>2 x 100/1000BaseSFP slots | 8 x 100/1000BaseT PoE ports<br>2 x 100/1000BaseT ports<br>4 x 100/1000BaseSFP slots |
| Operating Mode   | Store and forward, L2 wire-speed/non-blocking switching engine  |   |   |
| MAC Addresses  | 8K  |   |   |
| Jumbo Frames   | 9K Bytes  |   |   |
| <b>Copper RJ45 Ports</b>   |   |   |   |
| Speed  | 10/100/1000 Mbps  |   |   |
| MDI/MDIX Auto-Crossover  | Support straight or cross wired cables  |   |   |
| Auto-Negotiating   | 10/100/1000 Mbps speed auto-negotiation; Full and half duplex   |   |   |
| <b>PoE</b>   |   |   |   |
| PoE Standard   | 802.3af, 802.3at, 60W (DIS-300G-14PSW port 1 and 2 only)  |   |   |
| PoE Power Budget   | 120 W   |   | 240 W   |
| <b>SFP/SFP+ (pluggable) Ports</b>                                  |   |   |   |
| Port Types Supported   | SFP (pluggable) Ports 100/1000BaseSFP slot<br>Support 100FX SFP transceiver<br>Support 100/1000BaseT SFP transceiver  |   |   |
| Fibre Port Connector   | LC typically for fibre (depends on module)  |   |   |
| Optimal Fibre Cable  | Typical 50 or 62.5/125 µm for multimode (mm); Typical 8 or 9/125 µm for single mode (sm)  |   |   |
| <b>Network Redundancy</b>  |   |   |   |
| Fast Failover Protection Rings                                     | Link loss recovery < 20ms<br>Support Single & Multiple rings; Ring coupling; Dual-homing; Chain   |   |   |
| Spanning Tree Protocol   | IEEE 802.1D STP, IEEE 802.1w RSTP, IEEE 802.1s MSTP   |   |   |
| IEEE 802.3ad Port Trunk with LACP                                  | Static trunk or Dynamic via LACP (Link Aggregation Control Protocol)  |   |   |
| <b>Bridge, Virtual Local Area Networks (VLANs) &amp; Protocols</b> |   |   |   |
| Flow Control   | IEEE 802.3x (Full Duplex) and Back-Pressure(Half Duplex)  |   |   |
| Max VLANs  | 256   | 1024  |   |
| VLAN Types   | Port-based VLANs; MAC-based VLANs; IP Subnet-based VLANs<br>Protocol-based VLANs.<br>IEEE 802.1Q tag-based VLANs<br>RADIUS-assigned VLAN<br>IEEE 802.1ad Double Tagging (Q in Q)                |   |   |
| Multicast Protocols  | IGMP v1, v2 with up to 255 multicast groups<br>IGMP snooping and querying<br>Immediate leave and leave proxy<br>Throttling and filtering  |   |   |
| LLDP   | IEEE 802.1ab Link layer Discovery Protocol (LLDP)   |   |   |
| <b>Traffic management &amp; QoS</b>                                |   |   |   |
| Priority   | IEEE 802.1p QoS   |   |   |
| Number of Queues per Port  | 8   |   |   |
| Scheduling Schemes   | SPQ, WRR  |   |   |
| Traffic Shaper   | port-based shaping  |   |   |
| RADIUS QoS   | RADIUS-assigned QoS Class   |   |   |
| <b>Security</b>  |   |   |   |
| Port Security  | IP and MAC-based access control<br>IEEE 802.1X authentication Network Access Control<br>Authentication via local database, RADIUS or TACACS+ AAA (Authentication, Accounting and Authorization) |   |   |
| Storm Control  | Multicast/Broadcast/Flooding Storm Control  |   |   |

| Technical Specifications             | DIS-300G-12SW  | DIS-300G-8PSW   | DIS-300G-14PSW                   |
|--------------------------------------|--|---|----------------------------------|
| <b>Management</b>                    |  |   |                                  |
| User Management Interfaces           | Industrial-like CLI (command line interface)<br>WEB-based Management<br>SNMP v1, v2c, v3<br>Telnet (5 sessions)            |   |                                  |
| Management Security                  | HTTPs, SSH<br>Radius Client for Management   |   |                                  |
| Upgrade & Restore                    | FTP for Configuration Import/Export, FTP for Firmware Upgrade  |   |                                  |
| Diagnostic                           | Syslog<br>Per VLAN mirroring<br>Ethernet Copper connection diagnostic tool<br>SFP with DDM (Digital Diagnostic Monitoring) |   |                                  |
| MIBs                                 | RFC 1757 RMON 1,2,3,9; RFC 2674 Q-Bridge MIB RFC-1213 MIB-II; RFC-1493 Bridge MIB; RFC 2233 IF MIB                         |   |                                  |
| DHCP                                 | Client, Server, Relay, Snooping, Option 82   |   |                                  |
| NTP/SNTP                             | Yes  |   |                                  |
| System Status                        | Device info/status; Ethernet port status   | Device info/status; Ethernet port status; PoE status                    |                                  |
| PoE Management                       |  | Scheduling; power control; PoE PD power consumption                     |                                  |
| <b>Power</b>                         |  |   |                                  |
| Power Input                          | Redundant Input Terminals  |   |                                  |
| Input Voltage Range                  | 12-58 VDC  | 48-58 VDC (54~58V VDC for IEEE802.3at PoE/PSE application)              |                                  |
| Reverse Power Protection             | Yes  |   |                                  |
| Transient Protection                 | > 15,000 watts peak  |   |                                  |
| Power Consumption                    | Max. 17W   | Max. 14W without PD connected<br>Max 265W with 240W PSE power delivered |                                  |
| Compatible Power Supplies            | DIS-H30-24, DIS-H60-24,<br>DIS-N240-48, DIS-N480-48  | DIS-N240-48, DIS-N480-48  |                                  |
| <b>Indicators</b>                    |  |   |                                  |
| Power Status                         | Indication of power input status   |   |                                  |
| Ethernet Port                        | Link & Speed   |   |                                  |
| PoE Status                           |  | Indication of PoE Power applying  | Indication of PoE Power applying |
| System Alarm                         | Profile-defined System Alarm   |   |                                  |
| <b>Alarm</b>                         |  |   |                                  |
| Alarm Relay Output                   | Relay output with current carrying capacity of 0.5A @ 24 VDC   |   |                                  |
| Alarm Notification                   | Configurable alarm profile to enable Alarm LED, Alarm relay & SNMP traps   |   |                                  |
| <b>Environmental and Compliances</b> |  |   |                                  |
| Operating Temperature Range          | -40 to +75°C   |   |                                  |
| Storage Temperature Range            | -40 to +85 °C  |   |                                  |
| Humidity (Non-Condensing)            | 5 to 95% RH  |   |                                  |
| Vibration, Shock & Freefall          | Vibration: IEC60068-2-6; Shock: IEC60068-2-27; Free Fall: IEC60068-2-32  |   |                                  |
| Certification Compliance             | UL 60950-1, CE, FCC  |   |                                  |
| EMC                                  | FCC Part 15, EN 61000-6-2, EN 61000-6-4, EN 61000-4-2, -3, -4, -5, -6  |   |                                  |
| RoHS & WEEE                          | RoHS (Pb free) and WEEE compliant  |   |                                  |
| MTBF                                 | > 25 years   |   |                                  |
| <b>Mechanical</b>                    |  |   |                                  |
| Ingress Protection                   | IP30   |   |                                  |
| Dimensions                           | 61 x 154 x 109 mm  | 77 x 154 x 128 mm   |                                  |
| Weight                               | 1.086 kg   | 1.308 kg  | 1.41 kg                          |
| Installation Options                 | DIN-Rail mounting, Wall mounting   |   |                                  |

**Accessories**

**SFP Transceivers**

|            |  |
|------------|--|
| DIS-S301SX | 1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver <ul style="list-style-type: none"> <li>• up to 550 m</li> <li>• -40~85°C operating temperature</li> </ul>  |
| DIS-S302SX | 1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver <ul style="list-style-type: none"> <li>• up to 2 km</li> <li>• -40~85°C operating temperature</li> </ul>   |
| DIS-S310LX | 1-port Mini-GBIC SFP to 1000BaseLX Single-Mode Fibre Transceiver <ul style="list-style-type: none"> <li>• up to 10 km</li> <li>• -40~85°C operating temperature</li> </ul> |

**Power Supplies**

|             |   |
|-------------|---|
| DIS-H30-24  | 30W 24VDC Ultra Slim DIN Rail PSU <ul style="list-style-type: none"> <li>• Input: 85 ~ 264VAC</li> <li>• Output: 21.6 ~ 29V DC</li> <li>• Din rail TS-35/7.5 or 15 mountable</li> <li>• -30~70°C operating temperature</li> </ul> |
| DIS-H60-24  | 60W 24VDC Ultra Slim DIN Rail PSU <ul style="list-style-type: none"> <li>• Input: 85 ~ 264VAC</li> <li>• Output: 21.6 ~ 29V DC</li> <li>• Din rail TS-35/7.5 or 15 mountable</li> <li>• -30~70°C operating temperature</li> </ul> |
| DIS-N240-48 | 240W 48VDC DIN Rail PSU <ul style="list-style-type: none"> <li>• Input: 90 ~ 264VAC</li> <li>• Output: 48 ~ 55V DC</li> <li>• Din rail TS-35/7.5 or 15 mountable</li> <li>• -20~70°C operating temperature</li> </ul>             |
| DIS-N480-48 | 480W 48VDC DIN Rail PSU <ul style="list-style-type: none"> <li>• Input: 90 ~ 264VAC</li> <li>• Output: 48 ~ 55V DC</li> <li>• Din rail TS-35/7.5 or 15 mountable</li> <li>• -20~70°C operating temperature</li> </ul>             |



**For more information: [www.dlink.com](http://www.dlink.com)**

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