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Building Networks for People

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 it's 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 include PoE switches that 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. The 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

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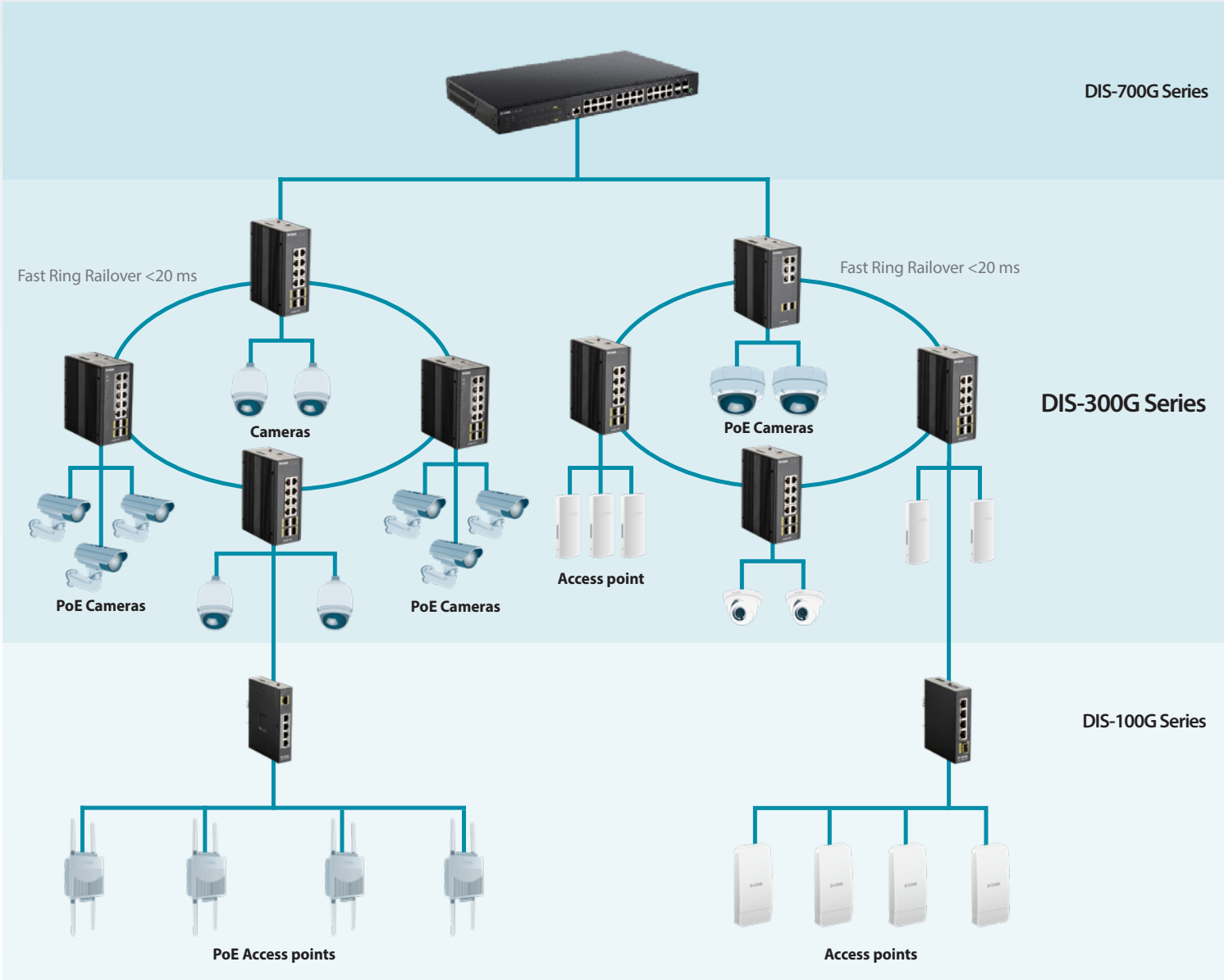
Deployment Scenario



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DIS-300G Series Industrial Gigabit Managed Switches

Technical Specifications	DIS-300G-12SW	DIS-300G-8PSW	DIS-300G-14PSW
Ethernet			
Ethernet Interfaces	8 x 100/1000BaseT ports 4 x 100/1000BaseSFP slots	4 x 100/1000BaseT PoE ports 2 x 100/1000BaseT ports 2 x 100/1000BaseSFP slots	8 x 100/1000BaseT PoE ports 2 x 100/1000BaseT ports 4 x 100/1000BaseSFP slots
Operating Mode	Store and forward, L2 wire-speed/non-blocking switching engine		
MAC Addresses	8K		
Jumbo Frames	9K Bytes		
Copper RJ45 Ports			
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		
PoE			
PoE Standartd		802.3af, 802.3at, 60W (DIS-300G-14PSW port 1 and 2 only)	
PoE Power Budget		120 W	240 W
SFP/SFP+ (pluggable) Ports			
Port Types Supported	SFP (pluggable) Ports 100/1000BaseSFP slot Support 100FX SFP transceiver 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)		
Network Redundancy			
Fast Failover Protection Rings	Link loss recovery < 20ms 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)		
Bridge, Virtual Local Area Networks (VLANs) & Protocols			
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 Protocol-based VLANs. IEEE 802.1Q tag-based VLANs RADIUS-assigned VLAN IEEE 802.1ad Double Tagging (Q in Q)		
Multicast Protocols	IGMP v1, v2 with up to 255 multicast groups IGMP snooping and querying Immediate leave and leave proxy Throttling and filtering		
LLDP	IEEE 802.1ab Link layer Discovery Protocol (LLDP)		
Traffic management & QoS			
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		
Security			
Port Security	IP and MAC-based access control IEEE 802.1X authentication Network Access Control Authentication via local database, RADIUS or TACACS+ AAA (Authentication, Accounting and Authorization)		
Storm Control	Multicast/Broadcast/Flooding Storm Control		

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Management			
User Management Interfaces	Industrial-like CLI (command line interface) WEB-based Management SNMP v1, v2c, v3 Telnet (5 sessions)		
Management Security	HTTPs, SSH Radius Client for Management		
Upgrade & Restore	FTP for Configuration Import/Export, FTP for Firmware Upgrade		
Diagnostic	Syslog Per VLAN mirroring Ethernet Copper connection diagnostic tool 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	
Power			
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 Max 265W with 240W PSE power delivered	
Compatible Power Supplies	DIS-H30-24, DIS-H60-24, DIS-N240-48, DIS-N480-48	DIS-N240-48, DIS-N480-48	
Indicators			
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		
Alarm			
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		
Environmental and Compliances			
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		
Mechanical			
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		

DIS-300G Series Industrial Gigabit Managed Switches

Accessories	
SFP Transceivers	
DIS-S301SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 550 m • -40~85°C operating temperature
DIS-S302SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 2 km • -40~85°C operating temperature
DIS-S310LX	1-port Mini-GBIC SFP to 1000BaseLX Single-Mode Fibre Transceiver • up to 10 km • -40~85°C operating temperature
Power Supplies	
DIS-H30-24	30W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
DIS-H60-24	60W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
DIS-N240-48	240W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature
DIS-N480-48	480W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature

For more information: www.dlink.com

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