D-Link®

DIS-200G Series

Industrial Gigabit Smart Managed Switches

Features

Flexible Availability

- Available in PoE and non-PoE models
- Industrial model variations with wider operating temperature ranges
- Supports long range PoE to connect and power cameras up to a distance of 250 metres[2]

Robust and High-Redundancy Design

- Fanless, passive cooling design
- High EMC endurance
- Built-in 6 kV surge protection on copper ports
- Ethernet Ring Protection Switching (ERPS)
- Dual power input for redundant power supplies
- Shock - IEC 60068-2-27, Freefall - IEC 60068-2-32, Vibration - IEC 60068-2-6 certified

Layer 2 Features

- IEEE 802.1Q and port-based VLAN
- IEEE 802.1p Quality of Service (QoS)
- STP/RSTP/MSTP
- Port mirroring
- Link aggregation
- Bandwidth control
- Broadcast storm control
- IGMP/MLD Snooping

Advanced Features

- Auto-Surveillance VLAN 2.0 (ASV 2.0)

The DIS-200G Series Industrial Gigabit Smart Managed Switches are equipped with 10 x 10/100/1000BASE-T ports (8 x PoE-enabled on DIS-200G-12PS) and 2 x SFP ports. These switches feature a robust design making them ideal for deployment in industrial and outdoor cabinet, capable of withstanding harsh environments. The DIS-200G Series furthermore integrates advanced management and security functions to provide a complete industrial networking solution.

Durable and Reliable Design

The DIS-200G Series switches are housed in a highly resistant IP30-rated metal casing to protect them from harsh environmental conditions and withstand wide temperature range, vibrations and shock. The high electromagnetic compatibility (EMC) protects the DIS-200G Series from unwanted effects when operating in environments with strong electromagnetic interference. Meanwhile, the fanless design extends the life of the DIS-200G Series while also being able to operate in a wider temperature range of up to 65 °C. For increased flexibility, the DIS-200G Series can be mounted on a DIN rail or wall-mounted.

Additionally, the DIS-200G Series features high-capacity 6 kV surge protection on all copper ports to help prevent damage to the switch and connected devices caused by sudden power surges and lightning strikes. The built-in surge protection of up to 6 kV can mitigate the damage to the switch from both indoor and outdoor devices and network connections by absorbing the excess energy while still letting through the amount of power required for the switch to operate normally. This increases network reliability, reduces repair costs, and removes the need for replacement hardware in the event of an electrical surge or lightning strike.

High Redundancy and Reliability

The DIS-200G Series supports ERPS quick failover recovery for ring topologies that ensures minimal downtime and avoids any loss of data in mission-critical deployment settings. Meanwhile, the dual power input allows for a redundant power supply to make sure the device continues to operate in the event of a primary power supply failure.

Surveillance Traffic Optimisation

The DIS-200G Series supports the Auto-Surveillance VLAN (ASV) feature. This automatically detects surveillance devices and puts them into a dedicated surveillance VLAN, segmenting this type of traffic from the rest of the network. This provides increased security of surveillance data, and gives the traffic a higher priority through the switch, minimising the disruption or delays on video streams. A single switch can be used for both surveillance and data networks, removing the need for dedicated surveillance hardware while simultaneously reducing maintenance costs.
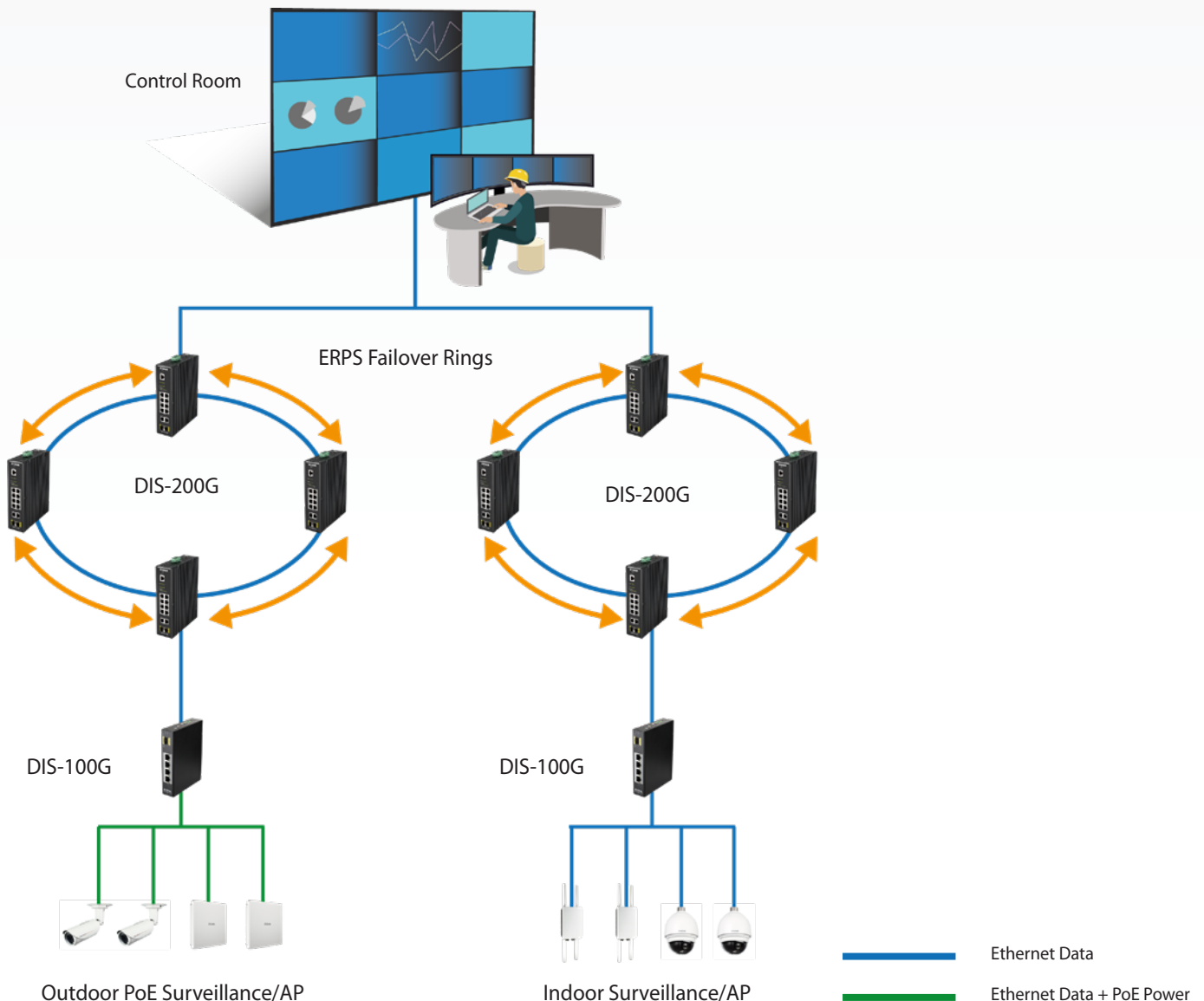
Easy Troubleshooting

The DIS-200G Series features loopback detection and cable diagnostics to help network administrators find and solve network problems quickly and easily. Loopback detection is used to detect loops created by a specific port and automatically shuts down the affected port. Cable diagnostics helps network administrators quickly examine the quality of the copper cables, recognize the cable type, and detect cable errors.

Power over Ethernet Support

The DIS-200G-12PS SW is PoE-ready with a total PoE budget of 240 W[1], capable of supplying up to 30 W of power per port to connected PoE-enabled devices. Furthermore, specialised hardware enables the switch delivery power and data to cameras up to 250 metres away via a standard Ethernet cable[2]. This effectively reduces deployment times, reduces cable clutter, and eliminates the need for dedicated power supplies to allow PoE-devices to be installed in remote locations.

Deployment Scenario

Control Room

ERPS Failover Rings

DIS-200G

DIS-200G

DIS-100G

DIS-100G

Outdoor PoE Surveillance/AP

Indoor Surveillance/AP

— Ethernet Data

— Ethernet Data + PoE Power

Technical Specifications

Ethernet	DIS-200G-12S	DIS-200G-12PS
Number of Ports	• 10 x 10/100/1000BASE-T ports • 2 x SFP ports • 1 x RJ-45 Console port	• 8 x 10/100/1000BASE-T PoE ports • 2 x 10/100/1000BASE-T ports • 2 x SFP ports • 1 x RJ-45 Console port
Port Functions	• IEEE 802.3 for Ethernet • IEEE 802.3u for Fast Ethernet • IEEE 802.3ab for Gigabit Ethernet • IEEE 802.3z for Gigabit fibre • IEEE 802.3af/at Power over Ethernet (DIS-200G-12PS) • IEEE 802.3az-compliant	
Media Interface Exchange	• Auto-MDI/MDIX adjustment for all twisted pair ports	

Performance

Switching Capacity	• 24 Gbps	
Maximum Forwarding Rate	• 17.85 Mpps	
MAC Address Table Size	• Up to 8K entries	
Transmission Method	• Store-and-forward	

PoE

	DIS-200G-12S	DIS-200G-12PS
PoE Standards	• N/A	• IEEE 802.3af/at
PoE Capable Ports	• N/A	• Ports 1 to 8
PoE Power Budget	• N/A	• Max. 240 W[1]
Long Range PoE Support		• Up to 250 m[2]

Physical

	DIS-200G-12S	DIS-200G-12PS
Diagnostic LEDs	• SYS, ALM, PWR1/2/3, Link/Activity/Speed	• SYS, ALM, PWR1/2/3, Link/Activity/Speed, PoE status, PoE budget
Power Input	• 12 to 48 V DC terminal block dual input • 12 V DC 4-pin DIN single power input	• 48 to 54 V DC terminal block dual input • 54 V DC 4-pin DIN single power input
Power Consumptions	• Maximum: 10.26 W • Standby: 5.94 W	• Maximum: 260 W (PoE on) • Maximum: 10.8 W (PoE off) • Standby: 7.02 W
Alarm Relay	• 1 A at 24 V	
Heat Dissipation	• 35.01 BTU/hr	• 887.16 BTU/hr (PoE on) • 36.85 BTU/hr (PoE off)
Weight	• 1.63 kg (3.59 lbs)	• 1.76 kg (3.88 lbs)
Dimensions	• 210 x 171.2 x 53 mm	
Ventilation	• Fanless	
Operating Temperature	• -40 to 65 °C (-40 to 149 °F)	
Storage Temperature	• -40 to 85 °C (-40 to 185 °F)	
Operating Humidity	• 0% to 95% RH, non-condensing	
Storage Humidity	• 0% to 95% RH, non-condensing	
Material	• IP30-rated metal casing	
Installation	• DIN rail/wall mountable	
MTBF	• 276,773 hours	• 213,112 hours
Certifications	• CE, FCC, BSMI	
Safety	• UL60950-1	
EMI	• CISPR 22, FCC Part 15B Class A	
EMS	• EN 61000-4-2 ESD, EN 61000-4-3 RS, EN 61000-4-4 EFT, EN 61000-4-5, EN 61000-4-6 CS, EN 61000-4-8	
Environmental Tests	• IEC 60068-2-27 Shock, IEC 60068-2-32 Freefall, IEC 60068-2-6 Vibration	

Software Features

VLAN	• IEEE 802.1Q tagged VLAN
	• Port-based VLAN
	• Auto-Surveillance VLAN 2.0 (ASV 2.0)
	• Voice VLAN
	• Asymmetric VLAN
		• VLAN group
		  • Supports 128 static VLAN groups
		  • Max. 4094 VIDs
		• GVRP

L2 Features	• Flow Control
	  • IEEE 802.3x Flow Control
	  • HDL Blocking Prevention
	• Jumbo frames up to 9600 bytes
	• IGMP Snooping
	  • IGMP v1/v2/v3
	  • Supports up to 256 IGMP snooping groups (shared with MLD snooping)
	  • IGMP Snooping Querier
	• MLD Snooping
	  • MLD snooping v1/v2
	  • Supports up to 256 MLD snooping groups (shared with IGMP snooping)
	  • MLD Snooping Querier
	• IEEE 802.3ad Link Aggregation
	  • Supports 6 groups per device, 8 ports per group
	• Ethernet Ring Protection Switching (ERPS)
	  • G.8032 ERPSv1 single ring
		• Loopback detection
		• LLDP
		• Port mirroring
		  • One-to-One
		  • Many-to-One
		• Statistics
		  • Tx Ok
		  • Tx Error
		  • Rx Ok
		  • Rx Error
		• Spanning Tree Protocol (STP)
		  • IEEE 802.1D STP
		  • IEEE 802.1w RSTP
		  • IEEE 802.1s MSTP

Quality of Service (QoS)	• IEEE 802.1p Quality of Service (QoS)
	  • 4 queues per port
	  • Queue handling
	  • Strict Priority Queue (SPQ)
	  • Weighted Round Robin (WRR)
	  • Port-based bandwidth control (rate limiting)
	    • Ingress: 100 kbps	

Security	• D-Link Safeguard • Traffic segmentation • Broadcast/Multicast/Unknown Unicast Storm Control • DoS attack prevention	• SSL • SSH • Port security
AAA	• IEEE 802.1x Port-based access control • Web-based access control	• RADIUS
Management	• Web-based UI (supports IPv4/IPv6) • Client-based D-Link Network Assistant (DNA) • Industry-standard CLI • SNTP • SNMP v1/v2c/v3 • SNMP trap • Telnet server	• System Log • DHCP client • TFTP client • LLDP • D-Link Discovery Protocol (DDP) • Dual images • Dual configurations
OAM	• Cable diagnostics	• Optical transceiver Digital Diagnostics Monitoring (DDM)

Green Technology	• Power saving by:
	  • Link status detection
	  • LED shut-off
	  • Port shut-off
	  • System hibernation
	  • IEEE 802.3az Energy-Efficient Ethernet (EEE)	

MIB/RFC Standards	• RFC768 UDP • RFC791 IP • RFC792 ICMP • RFC793 TCP • RFC826 ARP • RFC1213 MIB II • RFC1493 Bridge MIB	• RFC1907 SNMPv2 MIB • RFC2668 802.3 MAU MIB • RFC4133 Entity MIB • RFC4363 IEEE 802.1p MIB • ZoneDefense MIB • Private MIB

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

[1] The actual available PoE budget depends on the power supply connected to the switch. 240W PoE budget when powered by DIS-N480-48. 227W PoE budget when powered by DIS-N240-48..
[2] Compatible with a wide selection of D-Link PoE-enabled cameras. Please check with your local D-Link customer service for more information. Up to 250 metres connectivity may be affected by cabling quality. We recommend customers to test compatibility before actual physical deployment.

For more information: www.dlink.com

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