Product Highlights

Robust Design

High EMC endurance, fanless design, and a wide operating temperature range combined with IP40 housing to withstand harsh operating environments.

Industrial Deployment

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

Flexible Availability

16 GE ports and 4 1G SFP port options are available for varying network deployments, in addition to 4 10G SFP+ uplink ports on both models for long distance connections.



DIS-310G-24X

24-Port Industrial L3 Gigabit Managed Switch with 4 10G SFP+

Key Features

Adaptable Application

- 10G SFP+ ports for long distance connections
- Plug-and-play installation

Robust and High-Redundancy Design

- Fanless, passive cooling design
- Industrial grade operating temperature (-40~75°C)
- High EMS endurance
- Durable IP40-rated housing
- Dual power input for redundant power supplies
- Built-in 6 KV surge protection on copper ports

Advanced Features

- Static Route
- RIP/RIPng
- OSPFv2/v3
- IEEE 802.3ah Ethernet Link OAM
- IEEE 802.1ag/ITU-T Y.1731 OAM

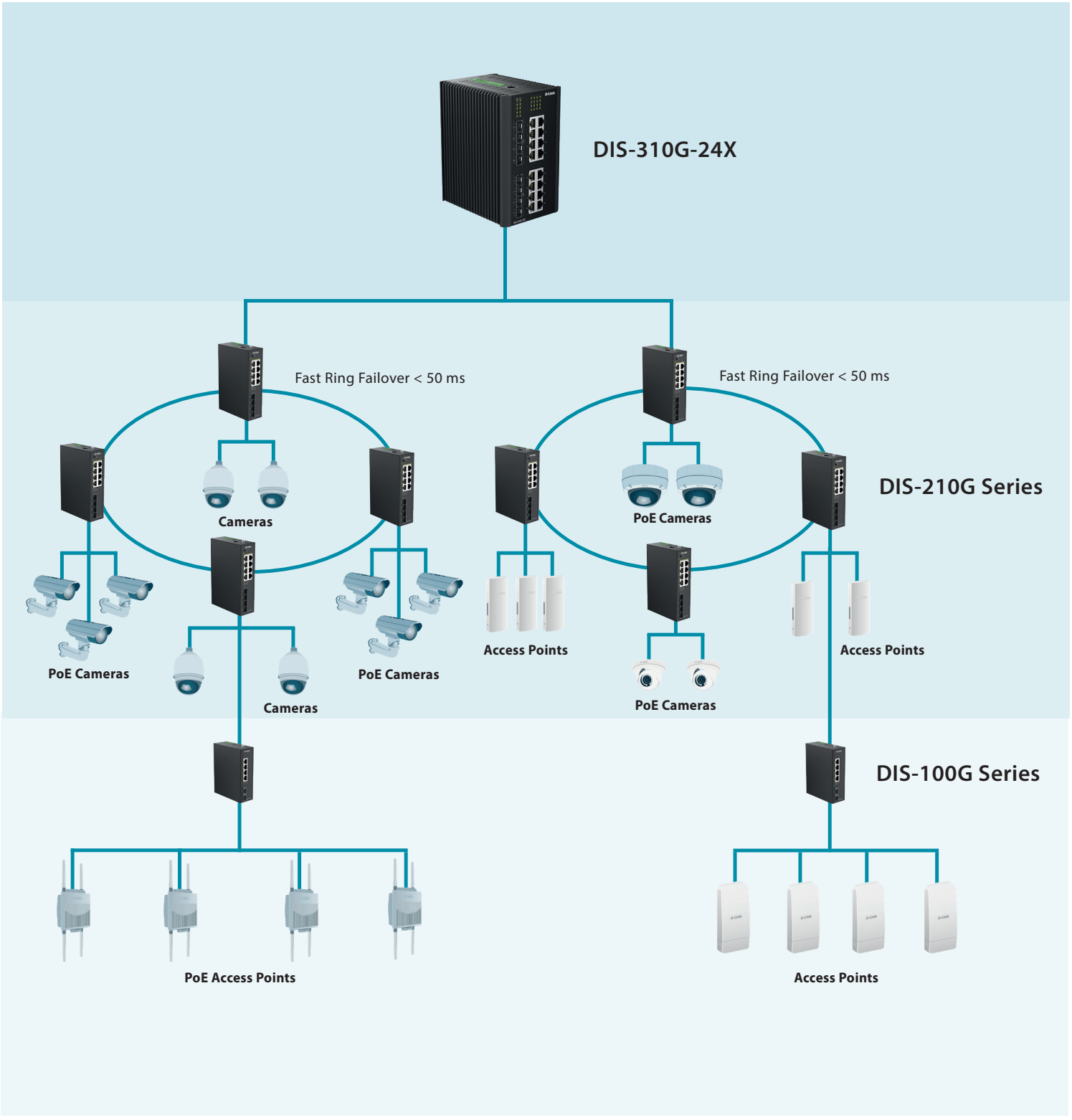
The DIS-310G-24X 24-Port Industrial L3 Gigabit Managed Switch with 4 SFP and 4 10G SFP+ is designed specifically to withstand a wide range in temperature change, vibrations and shock. This rugged yet easy to deploy switch has superior environmental specifications compared to those of commercial network switches. With its hardened design combined with high availability network features, this switch forms vital parts of any network infrastructure facilitating the increasing demand for smart cities, city-wide surveillance and wireless connectivity. With its comprehensive feature set, the DIS-310G-24X managed switch is easy to configure, partition and organise user's network and provide reliable and quality of service. The DIS-310G-24X boasts 16 GE ports with 4 1G SFP and 4 10G SFP+ ports, giving you versatility and speed.

Durable, Reliable, and Efficient

The DIS-310G-24X switch is housed in a highly resistant IP40-rated metal casing to protect the switches from harsh environmental conditions. High electromagnetic susceptibility (EMS) protects the DIS-310G-24X from undesirable effects when operating in environments with strong electromagnetic interference. Meanwhile, the fanless design extends the life of the DIS-310G-24X while also enabling them to operate in a wide temperature range from -20 °C up to 75 °C. With DIN rail mounting capability, the DIS-310G-24X can fit seamlessly into your industrial equipment infrastructure. In addition, the DIS-310G-24X supports dual power input, which allows for a redundant power supply configuration to make sure the switches continue to operate in the event of a primary power supply failure.

Green Ethernet Technology

The DIS-310G-24X features green technology; IEEE 802.3az Energy-Efficient Ethernet (EEE). Energy-Efficient Ethernet reduces the power consumption of the switch when network utilisation is low, effectively lowering the cost of ownership during periods of inactivity.


DIS-310G-24X
Fast Ring Failover < 50 ms
Fast Ring Failover < 50 ms
DIS-210G Series
Cameras
PoE Cameras
PoE Cameras
PoE Cameras
Cameras
PoE Cameras
Access Points
Access Points
PoE Cameras
DIS-100G Series
PoE Access Points
Access Points

Technical Specifications	
Hardware Version	A1
Interfaces	• 16 x GE LAN ports • 4 x 1G SFP ports • 4 x SFP+ ports
Console Port	RJ-45
Port Functions	• IEEE 802.3 for Ethernet • IEEE 802.3ab for Gigabit Ethernet • IEEE 802.3z for Gigabit fibre • IEEE 802.3az Energy-Efficient Ethernet (EEE)
Media Interface Exchange	Auto MDI/MDIX adjustment for all twisted-pair ports
Performance	
Switching Capacity	120 Gbps
Transmission Method	Store-and-forward
MAC Address Table	16 K
Maximum 64 Byte Packet Forwarding Rate	89.82 Mpps
Packet Buffer Memory	1.5 MB
Flash Memory	16 MB
DRAM Size	256 MB
LEDs	
Power (per device)	√
Link/Active/Speed (per RJ-45 port)	√
Link/Active/Speed (per SFP/SFP+ port)	√
Physical	
Power Input	48 to 60 VDC terminal block dual input
Maximum Power Consumption	Maximum: 27.35 W
Standby Power Consumption	Maximum: 14.28 W
Acoustics	--
Heat Dissipation	93.32 BTU/h
MTBF	> 200,000 hours
Operating Temperature	-40 to 75°C
Storage Temperature	-40 to 85°C (-40 to 185°C)
Operating Humidity	5% to 95% relative humidity
Storage Humidity	5% to 95% relative humidity
Material	IP40-rated metal casing
Installation	DIN rail
Dimensions (W x D x H)	100 x 140 x 170 mm
Weight	2.2 kg

Certifications

Safety	• CB • cUL	• CE • BSMI
EMI	• CE Class A • VCCI Class A • FCC Class A	• IC • BSMI • RCM

Software Features

L2 Features	• MAC Address Table
	  • 16K entries
	• IGMP Snooping
	  • IGMP v1/v2/v3 Snooping
	  • 1024 IGMP groups
	  • IGMP Snooping Fast Leave
	  • 1024 static IGMP groups
	  • Per VLAN IGMP Snooping
	  • IGMP Snooping Querier
	• Loopback Detection
	• 802.1AX/802.3ad Link Aggregation
	  • Max. 8 groups per device, 8 ports per group
	• LLDP
	• LLDP-MED
	• Spanning Tree Protocol
	  • 802.1D STP
	  • 802.1w RSTP
	  • 802.1s MSTP
	  • BPDU Filtering
	  • Root Guard
	  • Loop Guard
		• Port Mirroring
		  • One-to-One
		  • Many-to-One
		  • Mirroring for Tx/Rx
		• Flow Control
		  • 802.3x Flow Control
		  • HOL Blocking Prevention
		• MLD Snooping
		  • MLD v1/v2 Snooping
		  • Support 508 MLD Groups
		  • MLD Snooping Fast Leave
		  • Supports 508 static MLD groups
		  • MLD Snooping Querier
		  • Per VLAN MLD Snooping
		• VLAN Mirroring
		• RSPAN
		• L2 Protocol Tunneling
		• Ethernet Ring Protection Switching (ERPS)
		• Jumbo Frames up to 9 K Bytes

VLAN	• 802.1Q
	  • Configurable VID from 1 - 4094
	• GVRP
	  • Max. 4094 dynamic VLAN group
	• Double VLAN (Q-in-Q)
	  • Port-based Q-in-Q
	  • Selective Q-in-Q
		• Port-based VLAN
		• 802.1v Protocol-based VLAN
		• MAC-based VLAN
		• VLAN translation
		• Voice VLAN
		• Auto Surveillance VLAN

Quality of Service (QoS)	• 802.1p
	• 8 queues per port
	• Queue Handling
	  • Strict Priority Queue (SPQ)
	  • Weighted Round Robin (WRR)
	  • SPQ + WRR
	• Bandwidth Control
	  • Port-based (ingress/egress)
	  • Flow-based (ingress/egress)
	  • Queue-based bandwidth control
		• CoS based on:
		  • switch port
		  • Inner/Outer 802.1p Priority
		  • Inner/Outer VID
		  • MAC address
		  • IP address
		  • ToS/IP preference
		  • DSCP
		  • Protocol type
		  • TCP/UDP port number

L3 Features	• IP interface
	  • Supports 64 interfaces
	• IPv6 Neighbor Discovery (ND)
	• Static routing
	• ARP
	• Loopback Interface
	• VRRP
	• Up to 512 IPv4 / 170 IPv6 routing entries
	• Up to 2042 IPv4 / 1700 IPv6 L3 forwarding entries
	• IPv4/IPv6 Static Route
	  • Max. 512 IPv4 entries
	  • Max. 170 IPv6 entries
		• IPv4/IPv6 Default Route
		• PBR (Policy-based Route)
		• Null Route
		• Route Preference
		• Route Redistribution
		• RIPv1/v2/ng
		• OSPF
		  • OSPF v2/v3
		  • OSPF passive interface
		  • Stub area/NSSA
		  • Text/MD5

L3 Routing		

Access Control List (ACL)	• Max. ACL entries:
	  • Ingress
	  • IPv4: 1279
	  • IPv6: 319
		• ACL based on:
		  • 802.1p priority
		  • VID
		  • MAC address
		  • Ether Type
		  • LLC
		  • VLAN
		  • IP preference/ToS
		  • DSCP mask
		  • Protocol type
		  • TCP/UDP port number
		  • IPv6 Traffic Class

Security Features	• Broadcast/Multicast/Unicast Storm Control
	• Traffic segmentation
	• SSH v2
	• TLS v.1.2
	• DoS attack prevention
	• Port Security
	  • Up to 8K MAC addresses per port
	• ARP Spoofing Prevention
	  • Max. 350 entries
	• IP Source Guard
		• Dynamic ARP Inspection (DAI)
		• L3 Control Packet Filtering
		• BPDU Attack Protection
		• DOS Attack Prevention
		• IP-MAC-Port Binding (IMPB)
		• DHCP Snooping
		• Password encryption

AAA	• 802.1X Authentication
	  • Supports port/host-based policy assignment
	  • Identity-driven Policy Assignment
	  • Ingress/Egress Bandwidth Control
	  • ACL Assignment
	• Guest VLAN
	• Trusted Host
		• RADIUS/TACACS+ Accounting
		• Web-based Access Control (WAC)
		• Authentication Database Failover
		• MAC-based Access Control (MAC)
		• MD5 authentication
		• IPv4/IPv6 RADIUS server

OAM (Operations, Administration and Maintenance)	• Cable diagnostics • 802.3ah Ethernet Link OAM • Dying Gasp	• 802.1ag Connectivity Fault Management (CFM) • Y.1731 OAM

Management	• Web-based GUI
	  • IPv4/IPv6 access
	  • SSL (HTTPS)
	• Command Line Interface (CLI)
	• Telnet Server
	• TFTP Client
	• SNMP
	  • v1/v2c/v3
	• SNMP Trap
	• Telnet Server
	• Telnet Client for IPv4/IPv6
	• sFlow
	• DHCP Client
	• DHCP Auto-Configuration
	• DHCP/DHCPv6 Local Relay
	• DHCP Relay Option 82
		• Flash File System
		• Debug command
		• IPv4 SNTP Server
		• Network Time Protocol (NTP)
		• Password recovery/ encryption
		• BootP/DHCP Client
		• System Log
		• SNTP
		• ICMPv6
		• RMON v1/v2
		• Trusted host
		• Dual image
		• Command logging

Green Feature	IEEE 802.3az Energy-Efficient Ethernet (EEE)	
MIBs	• RFC1065, RFC1066, RFC1155, RFC1156, RFC2578 MIB Structure • RFC1212 Concise MIB Definitions • RFC1213 MIBII • RFC1215 MIB Traps Convention • RFC1493, RFC4188 Bridge MIB • RFC1157, RFC2571, RFC2572, RFC2573, RFC2574, RFC2575, RFC2576 SNMP MIB • RFC1442, RFC1901, RFC1902, RFC1903, RFC1904, RFC1905, RFC1906, RFC1907, RFC1908, RFC2578, RFC3418, RFC3636 SNMPv2 MIB • RFC2819 RMON MIB • RFC2021 RMONv2 MIB • RFC1398, RFC1643, RFC1650, RFC2358, RFC2665, RFC3635 Ether-like MIB • RFC2674, RFC4363 802.1p MIB • RFC2233, Interface Group MIB • RFC4133 Entity MIB • Private MIB • RFC3621 Power Ethernet MIB • LLDP-MED MIB • IPv4 Multicast Routing MIB • IP Forwarding Table MIB	

RFC Standards	• RFC791 IP • RFC768 UDP • RFC793 TCP • RFC792 ICMPv4 • RFC2463, RFC4443 ICMPv6 • RFC4884 Extended ICMP to Support Multi-Part Messages • RFC826 ARP • RFC1338, RFC1519 CIDR • RFC2474, RFC3168, RFC3260 Definition of the DS Field in the IPv4 and IPv6 headers • RFC2571 SNMP Framework • RFC1886 DNS extension support for IPv6 • RFC1981 Path MTU Discovery for IPv6 • RFC2460 IPv6 • RFC2461, RFC4861 Neighbor Discovery for IPv6 • RFC2462, RFC4862 IPv6 Stateless Address Autoconfiguration (SLAAC) • RFC2464 IPv6 over Ethernet and definition • RFC3513, RFC4291 IPv6 Addressing Architecture • RFC2893, RFC4213 IPv4/IPv6 dual stack function • RFC2068, RFC2616 • RFC2866 RADIUS Accounting • RFC2574 User-based Security Model for SNMPv3 • RFC854 Telnet • RFC2131 DHCP Client

Optional Accessories

DIS-S301SX	1000BASE-SX, multi-mode, 550 m, -40 to 85 °C operating temperature
DIS-S302SX	1000BASE-SX, multi-mode, 2 km, -40 to 85 °C operating temperature
DIS-S310LX	1000BASE-LX, single-mode, 10 km, -40 to 85 °C operating temperature
DIS-S330EX	1000BASE-EX, single-mode, 30 km, -40 to 85 °C operating temperature

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