

Managed L2 Ethernet Switches

Entry-Level SNMP Solution

- Powerful Switching Capacity
- Per-Port Bandwidth/Broadcast Storm Control Down to 64Kbps
- Gigabit Fiber Uplinks for Backbone Attachment
- Versatile Single IP Management/Traffic Monitoring

FEATURES

Workgroup/Departmental Connections

- Cost-Effective Ethernet Managed Desktops
- Gigabit Uplinks for Server/Backbone Attachments

Flexible Choices

- Selection of Port Densities
- Desktop and Rack-Mount Sizes
- Open Slots for Optional Uplink Modules *
- Choices of Ethernet and Gigabit Copper/Fiber Uplinks

Security

- Port Security
- 802.1X Guest VLAN
- 802.1X Port-Based/MAC-Based Access Control
- IP-MAC-Port Binding Access Control
- CPU Interface Filtering

Traffic Monitoring/Bandwidth Control

- Traffic Segmentation
- 802.3ad Link Aggregation (Port Trunks)
- GUI Traffic Monitoring
- RMON v1 Support
- Port Mirroring
- Per-Port Bandwidth/Broadcast Storm Control

Configuration/Management

- Web-Based
- Command Line Interface (CLI)
- SNMP v1, v2c, v3 Standard
- D-Link Single IP Management (SIM) v1.6
- Virtual Stack of Up to 32 Units
- DHCP Auto Configuration
- D-View SNMP Network Management Module Provided
- Telnet Client/Server

* Available on DES-3018 and DES-3026 only.

The DES-3000 series consists of high-performance managed Layer 2 switches that provide an ideal solution for workgroups and departments. Originally designed as an entry-level management solution for the SMB, these switches have evolved into more advanced devices with many added functions. Businesses looking for an advanced yet affordable solution can deploy these switches to manage their desktops. In addition to offering many versatile software functions, these switches also provide fiber uplinks to connect together small groups of users such as in different classrooms or departments spread across on a campus or between buildings.

Affordable Enterprise Features. The DES-3000 series includes many features not found in other switches of the same class, such as IP-MAC-port binding user access screening, traffic segmentation and up to 255VLAN (802.1Q). In addition, it also supports 802.1x port-based/MAC-based access control. To prevent hackers from overwhelming the switch with unnecessary workload, the DES-3000 provides the CPU Interface Filtering function to filter out vicious packets before they reach the CPU. For Quality of Service, it supports 802.1p Priority Queues and packet classification based on TOS, DSCP and MAC DA.

To enhance network resilience, the DES-3000 provides 802.1D Spanning Tree/802.1w Rapid Spanning Tree, STP loopback detection, and broadcast storm control. It provides 802.3ad Link Aggregation port trunks for load sharing/redundancy backup in a switch cascading or server attachment configuration.

Bandwidth Control. Network administrators can define throughput levels for each port to manage bandwidth. The bandwidth limiting feature provides fine granularity with the ability to define limits down to 64Kbps segments. When applied to control of broadcast storms infected with virus, this feature can limit the level of damage a virus attack can do to the network. The switch provides IGMP snooping to control multicast transmission, and port mirroring to facilitate diagnostics.

Versatile Management Support. The DES-3000 supports standard-based management protocols such as SNMP, RMON, BOOTP, Telnet and web-based HTTP. With DHCP auto-configuration, the administrator can pre-set configurations and save them in a TFTP server, and individual switches can boot their IP from the server and load in the pre-set configurations.

Virtual Stacking. With D-Link Single IP Management support, the DES-3000 simplifies and speeds up management tasks. Multiple switches can be configured, monitored and maintained from any workstation running a web browser through one unique IP address. The stack is managed as a single object, with all units identified by a single IP address. Administrators can see a Tree View of the members of the stack and a network topology showing the locations of the units and their link information. This simple yet powerful web-based management eliminates the need to install expensive SNMP network management software. Up to 32 units can be added to a stack without limitation to any specific switch models.



Technical Specifications

DES-3010G

DES-3010F

DES-3010FL

DES-3018

DES-3026



Physical & Hardware	Size	Desktop Size, 1U Height	Desktop Size, 1U Height	Desktop Size, 1U Height	Rackmount Width, 1U Height	Rackmount Width, 1U Height
	Interfaces	8 10/100BASE-TX Ethernet 1 1000BASE-T Gigabit 1 SFP	8 10/100BASE-TX Ethernet 1 1000BASE-T Gigabit 1 100BASE-FX Ethernet	8 10/100BASE-TX Ethernet 1 1000BASE-T Gigabit 1 100BASE-FX Ethernet	16 10/100BASE-TX Ethernet 2 Open Slots	24 10/100BASE-TX Ethernet 2 Open Slots
	Stacking Topology	Virtual Stacking via SIM	Virtual Stacking via SIM	Virtual Stacking via SIM	Virtual Stacking via SIM	Virtual Stacking via SIM
Performance	Switching Capacity	5.6 Gbps	3.8 Gbps	3.8 Gbps	7.2 Gbps	8.8 Gbps
	64-Byte Packet Forwarding Rate	4.2 Mpps	2.8 Mpps	2.8 Mpps	5.4 Mpps	6.6 Mpps
	MAC Address Table Size	8 K	8 K	8 K	8 K	8 K
	SDRAM for CPU	32 MB	32 MB	32 MB	32 MB	32 MB
	Packet Buffer	256 KB	256 KB	256 KB	256 KB	256 KB
Flash Memory	4 MB	4 MB	4 MB	4 MB	4 MB	
Diagnostic LEDs	Power (Per Device)	✓	✓	✓	✓	✓
	Console (Per Device)	✓	✓	✓	✓	✓
	Link/Activity (Per Port)	✓	✓	✓	✓	✓
	Speed Indicator (Per Port)	✓	✓	✓	✓	✓
MTBF (Hours)		247,500 hours	239,160 hours	220,196 hours	130,465 hours	123,925 hours
Heat Dissipation		50.47 BTUs per hour	51.15 BTUs per hour	50.47 BTUs per hour	51.83 BTUs per hour	57.97 BTUs per hour
Power Input	100 to 240 VAC, 50 to 60 Hz Internal Universal Power Supply					
Dimensions	280 (W) x 180 (D) x 44(H) Desktop Size, 1U Height				441 (W) x 207 (D) x 44(H) 19-inch Rack Mount Width, 1U Height	
	Ventilation DC Fan: Fanless					
Operating Temperature	0°C to 40°C					
Storage Temperature	-40°C to 70°C					
Operating Humidity	5% to 95% non-condensing					
EMI	FCC Class A, CE, C-Tick, VCCI					
Safety	CSA International					

Software Functions

L2 Features

- IGMP Snooping
- IGMP Snooping fast leave
- 802.1D Spanning Tree
- 802.1w Rapid Spanning Tree
- BPDU filtering per port
- Loopback detection
- 802.3ad Link Aggregation (4 ports per group/ 3 groups per device) (2 groups for Fast Ethernet ports, 1 group for Gigabit ports)
- Port mirroring
- Broadcast Storm Control

VLAN

- Standard: 802.1Q
- Maximum number of VLAN: 255
- VLAN type: static only

Quality of Service (QoS)

- 802.1p Priority Queues standard
- Number of 802.1p Priority Queues supported: 4 queues
- Packet classification based on:
 - Port number
 - MAC DA
 - TOS
 - DSCP

Network Access/Security

- Port security with trap/log (maximum 10 MAC entries per port)
- 802.1X port-based Access Control
- 802.1X MAC-based Access Control (8 entries)
- IP-MAC-Port binding (500 entries)
- CPU Interface Filtering
- Traffic segmentation
- 802.1X Guest VLAN

Bandwidth Control

- Rate limit according to network speed:
 - Under 2Mbps: in step of 64KB
 - Under 100Mbps: in step of 1MB
 - Above 100Mbps: in step of 8MB

Management

- D-Link Single IP Management (SIM) v1.6
- Web-based GUI
- CLI (Command Line Interface)
- Telnet client/server
- TFTP
- SNMP v1, v2c, v3
- RMON v1
- BOOTP/DHCP Client
- SNTP
- SYSLOG

- Web GUI traffic monitoring
- Web-based MAC Address Browsing
- SNMP trap on MAC notification
- DHCP Auto Configuration
- SMTP client (e-mail notification)

MIB Support

- RFC 1213 MIB II
- RFC 1493 Bridge
- RFC 1757 RMON
- RFC 1643 Ether-like MIB
- RFC 2358 ETHERLIKE_MIB
- RFC 2674 802.1p
- RFC 1213 - 2233 IF MIB
- Private MIB



5 Port Densities

Depending on your network size, you can select to deploy a switch with a different port density and size to handle your particular requirement. All switches in the series are completely function-compatible and interoperable.

DES-3010G FOR SMALL WORKGROUP	DES-3010F FOR SMALL WORKGROUP	DES-3010FL FOR SMALL WORKGROUP	DES-3018 FORMID-SIZED WORKGROUP	DES-3026 FOR LARGE WORKGROUP
■ 8 10/100Mbps Ethernet Ports	■ 8 10/100Mbps Ethernet Ports	■ 8 10/100Mbps Ethernet Ports	■ 16 10/100Mbps Ethernet Ports	■ 24 10/100Mbps Ethernet Ports
■ Copper Gigabit Port	■ Copper Gigabit Port	■ Copper Gigabit Port	■ 2 Open Slots for Optional Fiber & Gigabit Uplinks	■ 2 Open Slots for Optional Fiber & Gigabit Uplinks
■ SFP Gigabit Slot	■ Fiber Ethernet Port (SC Connector)	■ Fiber Ethernet Port (SC Connector)	■ RS-232 Console Port	■ RS-232 Console Port
■ RS-232 Console Port	■ Multi-Mode Fiber Max. Distance 2 km	■ Single-Mode Fiber Max. Distance 30 km	■ Rack-Mount Size	■ Rack-Mount Size
■ Desktop Size	■ RS-232 Console Port	■ RS-232 Console Port		
	■ Desktop Size	■ Desktop Size		



4 Optional Uplink Modules

4 user-selectable optional uplink modules are available for installation in the open slots of switch models DES-3018 and DES-3026.

DEM-301T COPPER GIGABIT MODULE	DEM-301G SFP GIGABIT MODULE	DEM-201F FIBER ETHERNET MODULE	DEM-201FL FIBER ETHERNET MODULE
■ 10/100/1000BASE-T Gigabit Port	■ SFP Slot	■ 100BASE-FX Ethernet Port (SC Connector)	■ 100BASE-FX Ethernet Port (SC Connector)
		■ Multi-Mode Fiber Max. Length 2 km	■ Single-Mode Fiber Max. Length 15 km



Optional SFP Transceivers

DEM-310GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10km, 3.3V operating voltage
DEM-311GT	SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. distance 550m, 3.3V operating voltage
DEM-312GT2	SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. distance 2km, 3.3V operating voltage
DEM-314GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 50km, 3.3V operating voltage
DEM-315GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 80km, 3.3V operating voltage
DEM-330T	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm
DEM-330R	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm
DEM-331T	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 40 km, 3.3V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm
DEM-331R	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 40 km, 3.3V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm

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