

Managed L2 Ethernet Switches

Workgroup/Departmental Connections

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

Flexible Options

- + Desktop and Rack-Mount Sizes
- + Open Slots for Optional Uplink Modules *
- + 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 GUI
- + 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 6.0 SNMP Network Management Software
- + DHCP Relay/Option 60, 61
- + Telnet Server

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

The DES-3000 series consists of high-performance managed Layer 2 switches, an ideal solution for SMB and enterprise market. Designed as an entry-level management solution for the SMB, these switches have progressed further with enriched advanced features. The DES-3000 series provides a rich set of switching features that can be deployed for growing business networks. The DES-3000 series is a cost-effective Gigabit connectivity solution which is suitable for business applications that require superior performance with options for expansion. In addition, the switches offer fiber uplinks for faster server connections that connect to different group users, such as classrooms or departments spread across campus or buildings.

Affordable Enterprise Features

The DES-3000 series includes many features which cannot be found in other switches of the same class, such as IP-MAC-Port Binding (IMPB) user access management and Traffic Segmentation. It implements 802.1x port-based and MAC-based network access control that enable user authentication and flexibility for each network access. The DES-3000 series supports the CPU Interface Filtering function to filter out malicious packets before it reaches the CPU. This also helps prevent the switch from unnecessary workload. It supports 802.1p priority queuing and packet classification based on TOS, DSCP, MAC DA and switch ports. The other features include 802.1D Spanning Tree (STP), 802.1w Rapid Spanning Tree (RSTP), Loopback Detection (LBD), and Broadcast Storm Control that enhance network resilience. For load sharing and redundancy backup in switch cascading/server attachment configuration the DES-3000 series provides the dynamic 802.3ad Link Aggregation port trunking. It also features IGMP Snooping for multicast transmission and Port Mirroring for that help track network errors.

Bandwidth Control

With the DES-3000 Network administrators can manually define throughput-levels for each port, to manage the bandwidth. This bandwidth control feature provides fine granularity by defining the limits down to 64Kbps. When Broadcast Storms occur, this feature can significantly limit down the damage caused and ensure the ability of network access.

Versatile Management Support

The DES-3000 series supports standard-based management protocols such as SNMP, RMON, BOOTP, telnet and web-based GUI. With Cable Diagnostic feature, designed primarily for administrators or customer service representatives to verify and test copper cables; it can rapidly determine the types of error and the quality of the cables.

Virtual Stacking

With D-Link's Single IP Management (SIM) web-based management support, the DES-3000 series simplifies management tasks and speeds up the process. Multiple switches can be configured, monitored and maintained from any workstation through a unique IP address. Using this web-based management tool, switches can be added to the stack and managed as a single unit. Up to 32 units can be added to a stack without limiting to a specific switch model. The tree-view allows administrators to view the stacked units and a network topology displays the locations of the units with link information.



Managed L2 Ethernet Switches

Technical Specifications	DES-3010G	DES-3010F/3010FL	DES-3016	DES-3018	DES-3026
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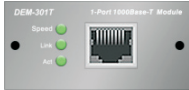
Physical & Hardware	Size	Desktop Size,1U Height	Desktop Size, 1U Height	Rackmount Width, 1U Height	Rackmount Width, 1U Height	Rackmount Width, 1U Height
	Interface	8 10/100BASE-TX Ethernet 1 1000BASE-T Gigabit 1SFP	8 10/100BASE-TX Ethernet 1 1000BASE-T Gigabit 1 100BASE-FX Ethernet	16 10/100BASE-TX Ethernet	16 10/100BASE-TX Ethernet	24 10/100BASE-TX Ethernet
	Port Options	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
	Console Ports	RS-232 Console Port	RS-232 Console Port	RS-232 Console Port	RS-232 Console Port	RS-232 Console Port
	Fiber Cable Distance	—	Multi-mode Fiber Max Distance 2km / Single-mode Fiber Max Distance 15km	—	—	—
	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	3.2 Gbps	7.2 Gbps	8.8 Gbps
	64-Byte Packet Forwarding Rate	4.2 Mpps	2.8 Mpps	2.3 Mpps	5.4 Mpps	6.6 Mpps
	MAC Address Table Size	8K	8K	8K	8K	8K
	DRAM 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	100,511 hours	130,465 hours	123,925 hours
Heat Dissipation		50.47 BTUs per hour	51.15 BTUs per hour / 50.47 BTUs per hour	34.54 BTU 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				
Power consumption		14.8W	15W / 14.8W	11W	15.2W	17W
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				

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.

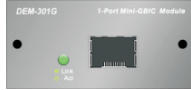
DEM-301T COPPER GIGABIT MODULE

- + 10/100/1000BASE-T Gigabit Port



DEM-301G SFP GIGABIT MODULE

- + SFP Slot



DEM-201F FIBER ETHERNET MODULE

- + 100BASE-FX Ethernet Port (SC Connector)
- + Multi-Mode Fiber Max. Length 2 km



DEM-201FL FIBER ETHERNET MODULE

- + 100BASE-FX Ethernet Port (SC Connector)
- + Single-Mode Fiber Max. Length 15 km



Optional SFP Transceivers

Optional SFP Transceivers

DEM-310GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 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

Software Functions

L2 Features

- + IGMP Snooping
 - IGMP v1/v2 Snooping
 - Support 256 Groups
 - Port-based IGMP Snooping Fast Leave
- + Spanning Tree
 - 802.1D STP
 - 802.1w RSTP
- + BPDU Filtering
- + Loopback Detection (LBD)
- + 802.3ad Link Aggregation
 - Max. 3 groups per device, 4 ports per group (2 groups for Fast Ethernet ports, 1 group for Gigabit ports)
- + Port Mirroring:
 - Support One-to-One, Many-to-One

VLAN

- + 802.1Q Tagged VLAN
- + VLAN Group
 - Max. 255 VLAN
- + VLAN type: Static only

Quality of Service (QoS)

- + 802.1p Quality of Service
 - 4 Queues

+ CoS Based on:

- MAC DA
- Switch Port
- TOS
- DSCP
- + 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

Security

- + Port Security up to 10 MAC address per port
- + IP-MAC-Port Binding (IMPB)
 - Support ARP mode
 - Support 500 Address Binding Entries per Device
- + Traffic Segmentation
- + Broadcast/Multicast/Unicast Storm Control
- + CPU Interface Filtering

AAA

- + 802.1X
 - Port-Based Access Control
 - MAC-Based Access Control
 - Dynamic VLAN Assignment
- + Guest VLAN

Management

- + D-Link Single IP Management (SIM) v1.6
- + Web-based GUI
- + Command Line Interface (CLI)
- + Telnet Server
- + TFTP Client
- + SNMP v1/v2c/v3
- + DHCP Relay
- + DHCP Relay Option 60, 61
- + Cable Diagnostic
- + SNMP Traps
- + DHCP Auto-Configuration
- + BOOTP/DHCP Client

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
- + RFC 2869 RADIUS extension standard



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