D-Link
Building Networks for People

Managed L2 Ethernet Switches
Entry-Level SNMP Solution

- **High Port Density 10/100 & PoE Switches**
- **Optimized for Low Cost & Rich Features**
- **4 Gigabit Uplink Capacity**
- **4K VLAN & ACL Support**
- **Secure/Effective Management with RADIUS/TACACS+,**
  Single IP Management, SSH/SSL Support

FEATURES

Flexible Choices of High Port Densities
- 24 or 48 Ethernet Ports
- 802.3af Power Over Ethernet Per Ethernet Port[1]
- 2 10/100/1000BASE-T Ports
- 2 combo 10/100/1000BASE-T/SFP
- SFP Support Gigabit & 100BASE-FX Fiber Connections

Security
- Port Security
- ACL
- 802.1X Port-Based/MAC-Based Access Control
- 802.1X Guest VLAN
- Traffic Segmentation
- 4K VLAN Groups
- CPU Interface Filtering
- D-Link Safeguard Engine

Traffic Monitoring/Bandwidth Control
- Port Mirroring
- Granular Bandwidth Control (Down to 64Kbps Per Port)
- Broadcast Storm Control

Resiliency/Performance
- 802.1D, 802.1w and 802.1s Spanning Tree
- 802.3ad Link Aggregation (Port Trunks)
- Jumbo Frame

Configuration/Management
- Web-Based GUI
- Command Line Interface (CLI)
- Telnet Client/Server
- SNMP v1, v2c, v3 & RMON v1, v2
- D-Link Single IP Management (SIM) v1.6
- Virtual Stacking up to 32 units
- RADIUS/TACACS+ Authentication for Management Access
- SSH v2, SSL v3
- DHCP Relay Option 82
- D-View Management Module Provided

[1] Available on DES-3028P/3052P only.

The DES-3028/3052 series switches are managed Layer 2 Ethernet switches designed as the premium devices in the entry-level network management category. These switches offer very rich functions to let SMB and even enterprises set up a secure and effective departmental network at affordable cost. Outstanding features include high port densities, 4 Gigabit uplinks, Power over Ethernet support[1], comprehensive network security, granular bandwidth control and extensive network management. With these switches, businesses can now optimize their networks at both the function and cost levels for maximum results.

High Port Density & PoE Support. The DES-3028/3052 series provides choices of 24 and 48 Ethernet ports, with or without Power over Ethernet (PoE), in low profile rack-mount cases. Each switch is equipped with 2 Gigabit uplinks, with the SFP supporting both fiber Gigabit and 100BASE-FX fiber connection for specific applications.

Security & Availability. The DES-3028/3052 series supports many security features including Access Control List (ACL), 802.1X Port-Based/MAC-Based Access Control, 802.1X Guest VLAN, and RADIUS/TACACS+ authentication. To prevent malicious attack and virus/worm affection from overwhelming the switch with unnecessary workload, the DES-3028/3052 series provides D-Link Safeguard Engine and CPU Interface Filtering functions to increase the switch's reliability and availability.

Resilience/Performance Enhancement. To enhance network resilience, the DES-3028/3052 series provides Spanning Tree protocols, including 802.1D, 802.1w and 802.1s for redundant bridge paths. 802.3ad Link Aggregation provides the aggregated bandwidth between switches or server, For Quality of Service (QoS), it supports 802.1p Priority Queues and packet classification based on TOS, DSCP, MAC, IPv4, VLAN ID, Protocol type, User Defined Packet Content, enabling Internet voice, video and streaming media applications to run smoothly.

Traffic Monitoring/Bandwidth Control. Network administrators can define throughput levels for each port to manage bandwidth. The bandwidth control feature provides fine granularity with the ability to define limits down to 64Kbps segments. Broadcast storm control can reduce the level of damage that a virus attack can do to the network. The switch provides IGMP snooping to control multicast transmission, and port mirroring to facilitate diagnostics.

Management. The DES-3028/3052 series supports standard-based management protocols such as SNMP, RMON, Telnet, web-based GUI, SSH/SSL security authentication and DHCP Relay Option 82. With DHCP auto-configuration, the administrator can pre-set configurations and save them in a TFTP server; individual switches can boot their IP from the server and load in the pre-set configurations. D-Link Single IP Management simplifies and speeds up management tasks, allowing multiple switches to be configured, monitored and maintained from any workstation running a web browser through one unique IP address. A virtual stack of the DES-3028/3052 switches can be managed as a single object, with all units identified by a single IP address.

Technical Specifications	DES-3028	DES-3028P	DES-3052	DES-3052P

Interface

	DES-3028	DES-3028P	DES-3052	DES-3052P
10/100BASE-TX Ports	24	24	48	48
10/100/1000BASE-T Ports	2	2	2	2
Combo 10/100/1000BASE-T/SFP	2	2	2	2
802.3af PoE Support	-	Per 10/100BASE-TX Port	-	Per 10/100BASE-TX Port
RS-232 Console Port	√	√	√	√

Performance

Switch Capacity	12.8Gbps	12.8Gbps	17.6Gbps	17.6Gbps
64-Byte Packet Forwarding Rate	9.5Mpps	9.5Mpps	13.1Mpps	13.1Mpps
MAC Address Table Size	8k	8K	8K	8K
SDRAM for CPU	64MB	64MB	64MB	64MB
Packet Buffer	512KB	512KB	512KB	512KB
Flash Memory	8MB	8MB	8MB	8MB
Jumbo Frame (2048 Bytes Tagged, 2044 Bytes Un-Tagged)	√	√	√	√

Diagnostic LED Indicators

Power (Per Device)	√	√	√	√
Console (Per Device)	√	√	√	√
Link/Activity (Per Port)	√	√	√	√
Speed Indicator (Per Port)	√	√	√	√
PoE	-	√	-	√

Physical & Environmental

	DES-3028	DES-3028P	DES-3052	DES-3052P
Max. Supplied PoE Power Per Device	-	185W	-	370W
Power Consumption	25W	217W	26W	395W
Power Input	100 to 240 VAC, 50 to 60 Hz Internal Universal Power Supply			
Dimensions	441 (W) x 207 (D) x 44 (H) mm (17.36 x 8.15 x 1.73 inches)	441 (W) x 309 (D) x 44 (H) mm (17.36 x 12.17 x 1.73 inches)	441 (W) x 309 (D) x 44 (H) mm (17.36 x 12.17 x 1.73 inches)	441 (W) x 309 (D) x 44 (H) mm (17.36 x 12.17 x 1.73 inches)
Size	19-Inch Standard Rack-Mount Width, 1U Height			
Weight	2.36kg (5.20lbs)	4.5kg (9.9lbs)	3.85kg (8.48lbs)	5.7kg (12.56lbs)
Ventilation	Fanless	2 DC Fans	Fanless	3 DC Fans
Heat Dissipation	84.23 BTU/Hour	742.7 BTU/Hour	86.96 BTU/Hour	1347 BTU/Hour
MTBF	449,357 Hours	196,033 Hours	292,133 Hours	169,182 Hours
Operating Temperature	0° to 40°C (32° to 104° F)			
Storage Temperature	-40° to 70°C (-40° to 158° F)			
Operating Humidity	5% to 95% Non-Condensing			
EMI/EMC	FCC Class A, CE, C-Tick, VCCI Class A			
Safety	cUL, LVD			

Software Functions

L2 Features
- IGMP Snooping v1, v2 (max. 256 groups)
- IGMP Snooping Fast Leave
- 802.1D Spanning Tree
- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Trees
- BPDU filtering per port
- STP loopback detection
- 802.3ad Link Aggregation
  (8 ports per group/ 6 groups per device)
- Port mirroring (One to One, Many to One)
- Jumbo Frame (max. 2048 bytes)
- HoL Blocking Prevention

VLAN
- Standard: 802.1Q
- Static VLAN groups: 4K
- Dynamic VLAN groups: 200
- GVRP

Quality of Service (QoS)
- 802.1p Priority Queues standard
- Number of 802.1p Priority Queues: 4 queues
- Support WRR/Strict mode
- Packet classification based on:
  - Switch Port
  - VLAN ID
  - TCP/UDP Port number
  - MAC address
  - IPv4
  - 802.1p priority
  - TOS
  - DSCP
  - Protocol type
  - User Defined Packet Content

Access Control List
(Max 256 Profiles/Rules)
- Multi-layer ACL based on:
  - Switch port
  - VLAN ID
  - 802.1p priority
  - MAC address
  - IPv4
  - DSCP
  - Protocol type
  - TCP/UDP port number
  - User Defined Packet Content
  - Time-based ACL

Network Access/Security
- RADIUS/TACACS+ Authentication for Management Access
- RADIUS Accounting for Management Access
- Port security (max. 16 MAC entries per port)
- 802.1X Port-based Access Control
- 802.1X MAC-based Access Control
- 802.1X Guest VLAN
- SSH v2 / SSL v3
- CPU Interface Filtering
- Traffic segmentation
- Broadcast Storm Control
- D-Link Safeguard Engine

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
- Ingress Policer, Egress Shaper

Management
- D-Link Single IP Management (SIM) v1.6
- Web-based GUI
- CLI (Command Line Interface)
- Telnet client/server
- TFTP client
- SNMP v1, v2c, v3
- RMON v1, v2
- BOOTP/DHCP Client
- SNTP
- SYSLOG
- Dual image
- Port description
- Web GUI traffic/CPU monitoring
- SNMP trap on MAC notification
- DHCP Auto Configuration
- DHCP relay
- DHCP relay option 82
- SMTP client (e-mail notification)
- Cable Diagnostics

MIB Support
- MIBII (RFC 1213)
- Bridge MIB (RFC 1493)
- SNMP v2 MIB (RFC 1907)
- RMON MIB (RFC 1757, 2819)
- RMON v2 MIB Probe config group (RFC 2021)
- Ether-like MIB (RFC 1643, 2358, 2665)
- 802.1p MIB (RFC 2674)
- IF MIB (RFC 2233, 2863)
- RADIUS Authentication Client MIB (RFC 2618)
- RADIUS Accounting Client MIB (RFC 2620)
- Ping & TRACEROUTE MIB (RFC 2925)
- Private MIB

Optional Products

Optional Management Software
DS-510S	D-View 5.1 SNMP Network Management Program (standard version)	
DS-510P	D-View 5.1 SNMP Network Management Program (professional version)	

Optional SFP Transceivers
DEM-310GT	(1000BASE-LX, Single-mode, 10km)
DEM-311GT	(1000BASE-SX, Multi-mode, 500m)
DEM-312GT2	(1000BASE-SX, Multi-mode, 2km)
DEM-314GT	(1000BASE-LX, Single-mode, 50km)
DEM-315GT	(1000BASE-LX, Single-mode, 80km)
DEM-210	(100BASE-FX, Single-mode, 15km)
DEM-211	(100BASE-FX, Multi-mode, 2km)

Optional WDM Transceivers
DEM-330T	(1000BASE-LX, wavelength Tx: 1550nm, Rx: 1310nm, Single-mode, 10km)
DEM-330R	(1000BASE-LX, wavelength Tx: 1310nm, Rx: 1550nm, Single-mode, 10km)
DEM-331T	(1000BASE-LX, wavelength Tx: 1550nm, Rx: 1310nm, Single-mode, 40km)
DEM-331R	(1000BASE-LX, wavelength Tx: 1310nm, Rx: 1550nm, Single-mode, 40km)

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