D-Link
Building Networks for People

L3 Ethernet Stack

Multi-Layer Routing Switch

- **24 Ethernet Ports/4 Gigabit Uplinks Per Switch**
- **Scalable Stack With Single IP Management**
- **Robust Security With Enhanced Performance/Availability**
- **L2/L3/L4 Multi-Layer QoS**
- **Redundant Power Supply/802.3af Power Over Ethernet**

FEATURES

L3 IP Routing for Workgroups/Departments
- Cost-Effective IP Packet Routing From Desktops
- Alleviates Traffic Burden on Backbone/Servers
- Complete L2/L3 Features
- 28 Ethernet Connections for Desktops
- Gigabit Uplinks for Server/Backbone Attachments

3 Flexible Choices
- With Internal AC Power Supply for General Installation Sites
- With Internal DC Power Supply for Deployment in Central Computer Room
- With 802.3af Power Over Ethernet for Special Installation Sites

Security
- L2/L3/L4 Multi-Layer Access Control
- ARP Storm Control
- External RADIUS/TACACS+ Authentication Support
- SSH/SSL Support

Quality of Service
- 802.1p Priority Queues/Multi-Layer CoS
- IP Multicast Support for Bandwidth-Intensive Applications

Traffic Monitoring/Bandwidth Control
- Traffic Segmentation
- Bandwidth Control Up to 64Kbps
- Broadcast Storm Control Up to 128pps
- 802.3ad Link Aggregation (Port Trunks)
- GUI Traffic Monitoring
- RMON Support
- Port Mirroring

Configuration/Management
- Web-Based
- Command Line Interface (CLI)
- SNMP v.1, v.2c, v3 Standard
- D-Link Single IP Management (SIM) v1.5
- D-View SNMP Network Management Module Provided
- Telnet Server

XSTACK

The DES-3800 series is a member of the D-Link xStack family of next generation switches that deliver performance, flexible expansion, robust security, multi-layer Quality of Service (QoS), Power Over Ethernet and redundant power option. The DES-3800 series forms a cost-effective Ethernet virtual stack for workgroup connection. It incorporates L3 packet routing and many functions typically found in a chassis-based solution. The DES-3800 series provides the state-of-the-art Single IP Management for seamless integration with a core Gigabit xStack attached to an optional ultra high-speed 10Gigabit backbone.

L3 Virtual Stack. Simple to deploy and easy to manage, the DES-3800 series comprises the departmental access-level devices that can be easily stacked and configured with any switches supporting D-Link's Single IP Management, including the D-Link xStack core switches, to form part of a multi-level network structured with backbone and centralized high-speed servers. Without any stacking cable, cable distance barrier and physical stacking method limitations, a DES-3800 stack can comprise units that are located anywhere on the same network domain, eliminating the possibility of any single point of failure. Ideal for deployment at the network edge, the DES-3800 blends L2 packet switching with dynamic L3 IP routing to relieve the network backbone and servers of any unnecessary traffic.

Comprehensive Security. The DES-3800 series provides a complete set of security features for connectivity and access control. This set includes L2/3/4 Access Control Lists (ACLs) based on MAC address, switch port, IP address, and/or TCP/UDP port numbers, ARP storm control and MAC address control. The DES-3800 also provides central management for administration access via TACACS+ and RADIUS. Together with network application control, this security ensures that not only proper user access is served, but malicious traffic is also prevented from being spread across the network.

Enhanced Network Performance & Availability. The DES-3800 series provides extensive VLAN support including 4K VLAN entries, GARP/GVRP and 802.1Q to enhance network security and performance. Bandwidth control allows you to set traffic limit for each port to control the traffic volume from the edge of the network. DES-3828 and 3828P support redundant power option to maximize network uptime. Other features include 802.3ad Link Aggregation, 802.1d Spanning Tree and 802.1w Rapid Spanning Tree to increase network reliability and availability of your Virtual Stack.

Multi-layer Quality of Service (QoS). The DES-3800 series implements a robust set of multi-layer (L2, L3, L4) QoS/CoS features to ensure that critical network services like VoIP, ERP, Intranet and video conference are served with proper priority. 8 priority queues for 802.1p/TOS/DiffServ are supported, with classification and marking based on MAC SA/DA, IP SA/DA, DSCP, and/or TCP/UDP port numbers. With IP Multicast support, the DES-3800 is also ideal for high-bandwidth applications, such as MPEG video, delivering traffic to multiple receivers without adding any additional burden on the source or the receivers while using the least network bandwidth.

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Technical Specifications	DES-3828	DES-3828DC	DES-3828P

Interface

	DES-3828	DES-3828DC	DES-3828P
10/100BASE-TX Ports	24	24	24
10/100/1000BASE-T Ports	2	2	2
Combo 10/100/1000BASE-T Ports/SFP Slots	2	2	2
Auto-Negotiation of Network Speeds	√	√	√
RS-232 Console Port	√	√	√

Power

	DES-3828	DES-3828DC	DES-3828P
Internal Power Supply	AC to DC	DC to DC	AC to DC
Power Input	100 to 240VAC, 10A, 50 to 60Hz	DC 60W, 48VDC	100 to 240VAC, 10A, 50 to 60Hz
Power Output	50VDC, 7.5A (max.)	12V, 5.4A (UMEC: UM 65S02)	12VDC, 10.5A (max.)
Power Consumption	24 watts (max.)	24 watts (max.)	395.2 watts (max.)
Optional Redundant Power Supply	√	-	√
802.3af Power Over Ethernet	-	-	√
Number of PoE Capable Ports	-	-	24
PoE Auto-Discovery	-	-	√
PoE Auto-Disable (Per Port)	-	-	√
PoE Active Circuit Protection	-	-	√

Performance

	DES-3828	DES-3828DC	DES-3828P
Switching Capacity	12.8Gbps	12.8Gbps	12.8Gbps
64-Byte System Packet Forwarding Rate	9.5mpps	9.5mpps	9.5mpps
IP Address Table	2K	2K	2K
MAC Address Table	16K	16K	16K
Packet Buffer Size	32MB	32MB	32MB
Max. Jumbo Frame Size	9KBytes	9KBytes	9KBytes

Diagnostic LED

	DES-3828	DES-3828DC	DES-3828P
10Mbps or 100Mbps Speed (Per Ethernet Port)	√	√	√
10/100Mbps or 1000Mbps Speed (Per Gigabit Port)	√	√	√
Link/Activity (Per Port)	√	√	√
Power, Console, RPS (Per Device)	√	√	√

Physical/Environmental

	DES-3828	DES-3828DC	DES-3828P
BTU/Hr.	81.72	81.72	1159.2
Dimensions	441 x 310 x 44 mm	441 x 310 x 44 mm	441 x 369 x 44 mm
Size	19-Inch Standard Rack-Mount Width, 1U Height	19-Inch Standard Rack-Mount Width, 1U Height	19-Inch Standard Rack-Mount Width, 1U Height
Weight	4.24 kg (9.35 lbs)	4.24 kg (9.35 lbs)	6.02 kg (13.27 lbs)
Operating Temperature	0° to 40℃	0° to 40℃	0° to 40℃
Storage Temperature	-40°to 70℃	-40°to 70℃	-40°to 70℃
Humidity	5% to 95% Non-Condensing	5% to 95% Non-Condensing	5% to 95% Non-Condensing
EMI	FCC Class A, CE, C-Tick	FCC Class A, CE, C-Tick	FCC Class A, CE, C-Tick
Safety	CSA International, CB	CSA International, CB	CSA International, CB
MTBF	123,027 Hours	133,105 Hours	168,110 Hours

Software Features

L2 Features
- IGMP Snooping: Supports 256 Multicast Groups
- 802.1D Spanning Tree
- 802.1w Rapid Spanning Tree
- 802.1s Multiple STP
- 802.3ad Link Aggregation: 32 Groups, 8 Ports Per Group
- One-to-One/Many-to-One Port Mirroring

VLAN
- 802.1Q
- Maximum VLAN Groups: VLAN 4K (4K Static VLANs, 255 Dynamic VLANs)

L3 Features
- Static Routing: 128 Routers
- RIP v.1/v.2
- OSPF
- IPv4 Hardware Routing Table: 2K
- L3 Hardware Forwarding Table: 4K
- VRRP
- Number of IP Interfaces: 64
- Multiple IP Per VLAN: 2

Multicast
- IGMP v.1
- IGMP v.2
- DVMRP v.3
- PIM DM

QoS
- Bandwidth Control: Per Port Granularity 64Kb/s
- Broadcast Storm Control
- 802.1p Priority Queues
- Number of Queues Per Port: 8
- CoS Based on Port
- CoS Based on MAC Destination and Source Addresses
- CoS Based on TOS
- CoS DSCP
- CoS Based on IP Destination and Source Addresses
- CoS Based on TCP/UDP Port

Access Control List (ACL)
- 800 Rules Per Device
- Based on Port
- Based on MAC Address
- Based on 802.1p Priority Queues
- Based on VLAN
- Based on DSCP
- Based on IP Address
- Based on Protocol Type
- Based on TCP/UDP Port
- Based on TCP/UDP Payload (Packet Content)

Security
- RADIUS Authentication for Management Access
- TACACS+ Authentication for Management Access
- SSH v.2
- SSL v.2
- Port Security: 16 MAC Addresses Per Port
- 802.1x Port-Based Access Control
- 802.1x MAC-Based Access Control
- Traffic Segmentation
- IP-MAC Binding: 500 entries Per Device

Management
- Single IP Management v1.5
- Web-Based GUI
- CLI
- Telnet Server
- TFTP Client
- SNMP v.1
- SNMP v.2c
- SNMP v.3
- SNMP Trap on MAC Notification
- RMON v.1: 4 Groups (Statistics, History, Alarms, Events)
- Bootp/DHCP Client
- DHCP Relay Option 82
- SYSLOG
- Dual Image

MIB
- RFC 1213 MIB-II
- RFC 1493 Bridge MIB
- RFC 1907 SNMP v.2 MIB
- RFC 2819 RMON MIB
- RFC 2665 Ether-like MIB
- RFC 2674 802.1p MIB
- RFC 2863 IF MIB
- RFC 2618 RADIUS Authentication Client MIB
- RFC 2620 RADIUS Accounting Client MIB
- RFC 1724 RIP v.2 MIB
- RFC 1850 OSPF v.2 MIB
- RFC 2096 IP Forwarding Table MIB (CIDR)
- RFC 2787 VRRP MIB
- RFC 2932 IP v.4 Multicast Routing MIB
- RFC 2934 PIM MIB for IP v.4
- Private MIB

Optional SFP Transceivers
DEM-310GT	SFP transceiver for 1000BASE-LX, single-mode fiber, max. Distance 10 km, 3.3V
DEM-311GT	SFP transceiver for 1000BASE-SX, multi-mode fiber, max. Distance 550m, 3.3V
DEM-312GT2	SFP transceiver for 1000BASE-SX, multi-mode fiber, max. Distance 2 km, 3.3V
DEM-314GT	SFP transceiver for 1000BASE-LHX, single-mode fiber, max. Distance 50 km, 3.3V
DEM-315GT	SFP transceiver for 1000BASE-LX, single-mode fiber, max. Distance 80 km, 3.3V

Optional Redundant Power Supply
DPS-200	60-watt redundant power supply
DPS-600	500-watt redundant power supply
DPS-800	2-slot redundant power supply chassis
DPS-900	8-slot redundant power supply chassis

Management Software
DS-510	D-View 5.1 SNMP Network Management Program

ACN 052 202 838

CSA60950
UL 60950
IEC 60950
EN 60950

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