

XSTACK

FEATURES

L3 IP Routing for Workgroups/Departments

- Cost-Effective IP Packet Routing From Desktops
- Alleviates Traffic Burden on Backbone/Servers
- Complete L2/L3 Features
- 24 or 48 Ethernet Connections for Desktops
- Four 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

VLAN

- 4k VLANs support
- Double VLAN (Q-in-Q)
- 802.1v Protocol VLAN

Security

- L2/L3/L4 Multi-Layer Access Control
- External RADIUS/TACACS+ Authentication Support
- SSH/SSL Support
- Guest VLAN
- Web-Based Access Control (WAC)
- MAC-Based Access Control (MAC)
- IP-MAC-Port Binding with DHCP Snooping
- D-Link Safeguard Engine
- Support Microsoft® NAP
- D-Link ZoneDefense

Quality of Service

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

Traffic Monitoring/Bandwidth Control

- Traffic Segmentation
- Granular Bandwidth Control Down to 64Kbps Per Port
- Granular Broadcast Storm Control Down to 1pps Per Port
- 802.3ad Link Aggregation (Port Trunks)
- RMON Support
- Port Mirroring

Configuration/Management

- Web-Based GUI
- Command Line Interface (CLI)
- SNMP v1, v2c, v3 Standard
- D-Link Single IP Management (SIM) Virtual Stack
- D-View SNMP Network Management Module Provided
- Telnet Server/Client
- Dual Images/Configurations

L3 Ethernet Stack

Multi-Layer Routing Switch

- 24 or 48 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

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 Single IP Management for seamless integration with a core Gigabit xStack attached to an optional 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 of 32 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, which includes L2/3/4 and Packet Content Access Control Lists (ACL), storm control and IP-MAC-Port Binding with DHCP Snooping. Authentication mechanisms such as 802.1x Guest VLAN, Web-based Access Control (WAC) and MAC-based Access Control (MAC) provide extra flexibility for user identity control. The DES-3800 also provides central management for administration access via TACACS+ and RADIUS. In addition, built-in Safeguard Engine protects DES-3800 against abnormal traffic from virus or worm scanning. 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, Q-in-Q, GARP/GVRP and 802.1v Protocol VLAN to enhance network security and performance. Bandwidth control allows users to set traffic limit for each port or flow to control the traffic volume from the edge of the network. The DES-3828, DES-3828P and DES-3852 support redundant power option to maximize network uptime. Other features include 802.3ad Link Aggregation, 802.1d Spanning Tree, 802.1w Rapid Spanning Tree and 802.1s Multiple Spanning Tree and Loopback detection to increase network reliability and availability of a Virtual Stacking network structure.

Multi-layer Quality of Service (QoS). The DES-3800 series implements a robust set of multilayer (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, IPv4/v6 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 traffic burden to the network.



Technical Specifications

DES-3828

DES-3828DC

DES-3828P

DES-3852



Interface

10/100BASE-TX Ports	24	24	24	48
10/100/1000BASE-T Ports	2	2	2	2
Combo 10/100/1000BASE-T Ports/SFP Slots	2	2	2	2
Auto-Negotiation of Network Speeds	√	√	√	√
RS-232 Console Port	√	√	√	√

Power

Internal Power Supply	AC to DC	DC to DC	AC to DC	AC to DC
Power Input	100 to 240VAC, 1A, 50 to 60Hz	DC 60W, 48VDC	100 to 240VAC, 10A, 50 to 60Hz	100 to 240VAC, 1A, 50 to 60Hz
Power Consumption	24 watts (max.)	24 watts (max.)	395.2 watts (max.)	47 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

Switching Capacity	12.8Gbps	12.8Gbps	12.8Gbps	17.6Gbps
64-Byte System Packet Forwarding Rate	9.5mpps	9.5mpps	9.5mpps	11.7mpps
IP Routing Table	2K	2K	2K	2K
MAC Address Table	16K	16K	16K	16K
Packet Buffer Size	32MB	32MB	32MB	32MB
Max. Jumbo Frame Size	9KBytes	9KBytes	9KBytes	9KBytes

Diagnostic LED

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

BTU/Hr.	81.72	81.72	1159.2	158.4
Dimensions	441 x 310 x 44 mm	441 x 310 x 44 mm	441 x 369 x 44 mm	441 x 310 x 44 mm
Size	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)	4.25 kg (9.44 lbs)
Operating Temperature	0° to 40°C	0° to 40°C	0° to 40°C	0° to 40°C
Storage Temperature	-40° to 70°C	-40° to 70°C	-40° to 70°C	-40° to 70°C
Humidity	5% to 95% Non-Condensing	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	FCC Class A, CE, C-Tick
Safety	CSA International, CB	CSA International, CB	CSA International, CB	CSA International, CB
MTBF	123,027 Hours	133,105 Hours	168,110 Hours	102,737 Hours
Acoustic (Refer to ISO-7779)	<51dB	<52dB	<51dB	<53dB

Software Features

Stackability

- Virtual Stacking
- Support D-Link Single IP Management
- Up to 32 Devices per Virtual Stack

L2 Features

- MAC Address Table: 16K
- Flow Control
 - 802.3x Flow Control
 - HOL Blocking Prevention
- Jumbo Frame up to 9K Bytes
- IGMP Snooping
 - IGMP v1/v2/v3 Snooping
 - Support 256 Groups
 - Host-based IGMP Snooping Fast Leave
- Spanning Tree
 - 802.1D STP
 - 802.1w RSTP
 - 802.1s MSTP
- Per port / per device BPDU Filtering
- 802.3ad Link Aggregation
 - Max. 32 Groups per device / 8 Ports Per Group
- Port Mirroring
 - One-to-One
 - Many-to-One
 - Flow-based Mirroring
- MLD Snooping
 - MLD v1/v2 Snooping
- Loopback Detection

VLAN

- VLAN Group
 - Max. 4K Static VLAN Group
 - Max. 4K Dynamic VLAN Groups
- 802.1Q Tagged VLAN
- GVRP
- Double VLAN (Q-in-Q)
- 802.1v Protocol VLAN

L3 Features Management

- 128 Static Routing Entries
- RIP v1/v2
- OSPF
 - Support OSPF v2
 - OSPF Passive Interface
 - OSPF Equal Cost Route
- 2K Hardware Routing Entries
- 4K Hardware L3 Forwarding Entries
- RRRP
- 64 IP Interfaces
- ARP Proxy

Multicast

- IGMP v1, v2, v3
- DVMRP v3
- PIM-DM
- PIM-SM
- PIM Sparse-Dense Mode

QoS

- Bandwidth Control:
 - Port Based (Ingress/Egress, Min. Granularity 64Kbps)
 - Flow Based (Ingress/Egress, Min. Granularity 64Kbps)
- 802.1p Class of Service
- 8 Queues
- Queue Handling
 - Strict
 - Weighted Round Robin (WRR)
 - Strict + WRR
- CoS Based on
 - Switch Port
 - MAC Address
 - TOS
 - DSCP
 - IP Address
 - TCP/UDP Port

ACL (Access Control List)

- Up to 800 Access Rules
- ACL Based on Port
 - MAC Address
 - 802.1p Priority
 - VLAN ID
 - DSCP
 - IPv4/v6 Address
 - Protocol Type
 - TCP/UDP Port Number
 - User Defined Packet Content
 - IPv6 Traffic Class
 - IPv6 Flow Label
- CPU Interface Filtering

Security

- SSH v1.5/v2
- SSL v2/v3
- Port Security up to 16 MAC Addresses per port
- Broadcast/Multicast/Unicast Storm Control
- Traffic Segmentation
- IP-MAC-Port Binding
 - Support 500 Address Binding Entries per Device
 - Support ARP/ACL/Auto (DHCP Snooping) Mode
- D-Link Safeguard Engine
- D-Link ZoneDefense

AAA

- 802.1X
 - Port-Based Access Control
 - Host-Based Access Control
 - Dynamic VLAN Assignment
- Web-Based Access Control (WAC)
 - Port-Based Access Control
 - Dynamic VLAN Assignment
- MAC-Based Access Control (MAC)
 - Port-Based Access Control
 - Dynamic VLAN Assignment
- Microsoft[®] NAP
- Guest VLAN
- RADIUS Accounting
- RADIUS and TACACS+ Authentication for SwitchAccess
- 3-Level User Account

Management

- Web-Based GUI
- Command Line Interface (CLI)
- Telnet Server/Client
- TFTP Client
- SNMP v1, v2c, v3
- SNMP Trap
- RMON v1
 - Support 1,2,3,9 Groups
- RMON v2
 - Support ProbeConfig Group
- BootP/DHCP Client
- DHCP Auto-configuration
- DHCP Relay Option82
- DHCP Server
- System Log
- Dual Image
- Dual Configuration
- CPU Monitoring
- SNTP

MIB

- RFC 1213 MIB-II
- RFC 1493 Bridge MIB
- RFC 1907 SNMP v2MIB
- RFC 1757 and 2819RMON MIB
- RFC 1643, 2358 and 2665 Ether-like MIB
- RFC 2674 802.1p MIB
- RFC 4363 Bridge MIB
- RFC 2233 and 2863IF MIB
- RFC 2618 RADIUS Authentication Client MIB
- RFC 2620 RADIUS Accounting Client MIB
- RFC 1724 RIP v2MIB
- RFC 1850 OSPF v2MIB
- RFC 2096 IP Forwarding Table MIB (CIDR)
- RFC 2787 VRRP MIB
- RFC 2932 IPv4 Multicast Routing MIB
- RFC 2934 PIM MIB for IPv4
- Private MIB

Optional SFP Transceivers

- DEM-310GT** SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 10km, 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 2km, 3.3V
- DEM-314GT** SFP transceiver for 1000BASE-LHX, single-mode fiber, max. distance 50km, 3.3V
- DEM-315GT** SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 80km, 3.3V
- DEM-330T** SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 10 km, 3.3V, WDM (Tx: 1550 nm, Rx: 1310 nm)
- DEM-330R** SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 10 km, 3.3V, WDM (Tx: 1310 nm, Rx: 1550 nm)
- DEM-331T** SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 40 km, 3.3V, WDM (Tx: 1550 nm, Rx: 1310 nm)
- DEM-331R** SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 40 km, 3.3V, WDM (Tx: 1310 nm, Rx: 1550 nm)

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

