D-Link®

Single IP Management

Business & Enterprise SOLUTIONS

DES-3526

DES-3550

24/48-Port 10/100Mbps Stackable Switches

With 2 Combo 1000BASE-T/SFP Gigabit Ports

The D-Link DES-3500 series of 10/100Mbps Stackable Switches are mutually stackable switches that feature D-Link's state-of-the-art Single IP Management technology. Equipped with 24 to 48 10/100BASE-TX ports and 2 combo 1000BASE-T/SFP Gigabit in a low-profile rack-mount box, these switches are designed for secure and flexible connection. Simple to deploy and easy to manage, these switches comprise the departmental access-layer devices that can be easily stacked and configured with any switches supporting D-Link's Single IP Management, including the L3 core switches, to form part of a multi-level network structured with backbone and centralized high-speed servers.

Cost-Effective Virtual Stacking

Basically, the DES-3500 series switches form a departmental stack providing 10/100Mbps speed with flexible Gigabit uplinks. Traffic running among the stacked units is through the fast full-duplex Gigabit interfaces and your usual network wires, doing away with the costly and cumbersome stacking cables. Without any stacking cable, cable distance barrier and physical stacking method limitations, your stack can comprise units that are located anywhere on the network, eliminating the possibility of any single point of failure.

Single IP Management

The DES-3500 series simplifies and speeds up your management tasks, as 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, and all stacked units are identified by a single IP address. Through the built-in web manager, you can have a Tree View with clear information about the members of the stacks, and your Network Topology that shows the locations of the stacked units and their link information. This simple yet powerful web-based management eliminates the need for you to install expensive SNMP network management software.

Easy Expansion to 32 Units per Stack

From an access-level departmental stack, you can easily add units to up to 32 switches per stack not limited to any specific models. Your Virtual Stack's support for any switch models with embedded Single IP Management means that you can expand your stack to include L3 core switches, chassis-based switches or any other switches, to accommodate your network growth.

Comprehensive Security

The DES-3500 series provides a complete set of security features for connectivity and access control. This set includes Access Control Lists (ACLs) based on MAC address, switch port, IP address, and/or TCP/UDP port numbers, 802.1x user authentication and MAC address control. The DES-3500 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-3500 series switches provide extensive VLAN support including GARP/GVRP, 802.1Q and asymmetric VLAN 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. The switches supports 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-3500 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. 4 priority queues for 802.1p/TOS/DiffServ are supported, with classification and marking based on MAC SA/DA, IP SA/DA, and/or TCP/UDP port numbers.

Key Features

- Choices of 24 and 48 10/100BASE-TX ports per switch
- 2 combo 1000BASE-T/SFP Gigabit uplinks per switch
- Virtual stacking of up to 32 units per stack
- Up to 13.6Gbps backplane bandwidth
- Complete network access management solution
- Multi-layer (L2, L3, L4) Quality of Service

- Advanced Access Control Lists (ACL), enhanced TACACS+ and RADIUS authentication *
- 802.3ad LACP Link Aggregation port trunks
- IGMP snooping for multimedia applications
- CLI, Web-based and SNMP management, RMON monitoring
- Optional redundant power support

* RADIUS support available in future firmware upgrade

DES-3526/3550
Technical Specifications

Hardware

Number of Ports
- DES-3526: 24 10/100BASE-TX ports, 2 combo 1000BASE-T/SFP
- DES-3550: 48 10/100BASE-TX ports, 2 combo 1000BASE-T/SFP

Port Standard/Function Support
- IEEE 802.3 10BASE-T/802.3u 100BASE-TX
- IEEE 802.3ab 1000BASE-T/802.3z 1000BASE-SX/LX
- ANSI/IEEE 802.3 NWay auto-negotiation
- IEEE 802.3x Flow Control
- Auto MDI/MDIX

SFP Support
- IEEE 802.3z 1000BASE-LX (DEM-310GT transceiver)
- IEEE 802.3z 1000BASE-SX (DEM-311GT transceiver)
- IEEE 802.3z 1000BASE-LH (DEM-314GT transceiver)
- IEEE 802.3z 1000BASE-ZX (DEM-315GT transceiver)

Software

VLAN
- IEEE 802.1Q Tagged VLAN
- Port-based VLAN
- GARP/GVRP
- Maximum number of VLANs per device: 255 static VLANs

Priority Queues (CoS)
- Standard: IEEE 802.1p
- Number of queues: 4

Traffic Classification (CoS)
Can be based on user-definable application types:
- TOS
- Diffserv (DSCP)
- Port-based
- MAC address
- IP address
- TCP/UDP port number

Access Security
- 802.1x port-based access control
- 802.1x MAC-based access control
- Port security
- SSH v.1, v.2 *
- SSL *

* Functions available in future firmware upgrade

Access Control List
Multi-layer ACL based on:
- Port number
- TOS
- Diffserv (DSCP)
- MAC address
- IP address
- Packet protocol type
- TCP/UDP port number (user-definable application types)
- TCP/UDP payload (user-definable packet content)
- Per port ACL definition

Spanning Tree Protocol
- 802.1D Spanning Tree compatible
- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree *

* Function available in future firmware upgrade

IP Multicast
- IGMP Snooping
- IGMP v.3 *

* Function supported in future firmware upgrade

Port Trunk
- Maximum number of ports per trunk: 8
- Maximum number of trunks per device: 6 (DES-3526), 6 (DES-3550)
- Operation mode: load sharing
- 802.3ad compatible Link Aggregation (LACP) static & dynamic modes

Performance Enhancement Functions
- Traffic segmentation
- Bandwidth control

Performance

Switch Fabric
- DES-3526: 8.8Gbps
- DES-3550: 13.6Gbps

Packet Forwarding Rate
- DES-3526: 6.6Mpps
- DES-3550: 10.1Mpps

Transmission Method
Store-and-forward

MAC Address Table
- DES-3526: 8K entries per device
- DES-3550: 8K entries per device

MAC Address Learning
- Dynamic entries: automatic update
- Static entries: user-defined

Packet Buffer Memory
- DES-3526: 16Mbytes per device
- DES-3550: 64Mbytes per device

Configuration & Management

Management Support
- Single IP Management v.1
- SNMP v.1, v.2c, v.3
- Web-based management
- Web GUI traffic monitoring
- Web-based MAC address browsing
- CLI (command line interface)
- RMON monitoring
- Telnet server (up to 8 sessions)
- TACACS+ authentication on switch admin access
- RADIUS authentication on switch admin access *
- SYSLOG
- DHCP/Bootp relay
- DNS relay
- Dual Images
- Back-Door function
- Web GUI traffic monitoring
- Web MAC address browsing
- Port description
- CPU utilization monitoring

* Function available in future firmware upgrade

MIBs
- MIB-II (RFC 1213)
- Bridge MIB (RFC 1493)
- RMON MIB (RFC 1757)
- 802.1p Priority Queues (RFC 2674)
- 802.1Q VLAN MIB (RFC 2674)
- IGMP MIB (RFC 2833)
- IF MIB (RFC 2233)
- Ethernet-like MIB (RFC 1643)
- D-Link enterprise MIB

RMON Groups
1, 2, 3, 9 (Alarm, Statistics, History, Event)

IP Number Self-identification
Through DHCP client, Bootp client

Firmware Upgrade
TFTP

Console Port
DB-9 RS-232 DCE

Physical & Environmental

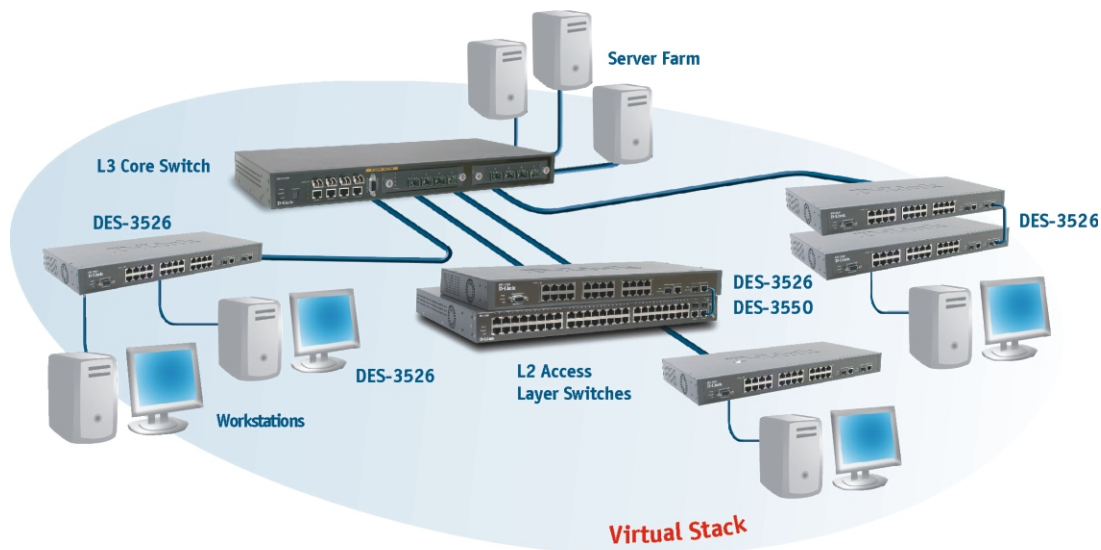**LED Indicators**
Per Device:
- Power
- Console
- RPS
Per Port:
- 10/100Mbps
- GE

DES-3526/3550

Technical Specifications

Virtual Stacking With Single IP Management

Power Supply
100 to 120 VAC, 200 to 250 VAC, 50 to 60 Hz
Internal universal power supply

Redundant Power Backup Support
Connector to external RPS

Power Consumption
- DES-3526: 23 watts (max.)
- DES-3550: 40 watts (max.)

Ventilation
- DES-3526: 40mm x 40mm DC fan x 1
- DES-3550: 40mm x 40mm DC fan x 2

Dimensions
- DES-3526: 441 x 207 x 44 mm (device only)
- DES-3526: 441 x 309 x 44 mm (device only)
19-inch rack-mount width, 1U height

Weight
- DES-3526: 2.56 kg (device only)
- DES-3550: 4.4 kg (device only)

Operating Temperature
0° to 40 °C

Storage Temperature
-40° to 70 °C

Humidity
5% to 95% non-condensing

Emission (EMI)
- FCC Class A
- CE Class A
- C-Tick

Safety
CSA International

Ordering Information

L2 Stackable Switches	
DES-3526	24 10/100BASE-TX ports, 2 combo 1000BASE-T/SFP
DES-3550	48 10/100BASE-TX ports, 2 combo 1000BASE-T/SFP

Optional SFP Transceiver	
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-314GT	SFP transceiver for 1000BASE-LHX, single-mode fiber, max. distance 50km, 3.3V
DEM-315GT	SFP transceiver for 1000BASE-ZX, single-mode fiber, max. distance 80km, 3.3V

Optional Redundant Power Supply	
DPS-200	60-watt redundant power supply

D-Link®

RECYCLABLE
Rev. 01 (Mar. 2004)