D-Link
Building Networks for People

L2 Ethernet Stack
Access Layer Switch

- **Choices of 24 and 48 Ethernet Ports**
- **2 Combo 1000BASE-T/SFP Gigabit Uplinks Per Switch**
- **Scalable Stack With Single IP Management**
- **Robust Security & L2/L3/L4 Multi-Layer QoS**
- **Redundant Power Supply/AC or DC Power Options**

FEATURES

Flexible Choices
- 24 or 48 10/100BASE-TX Ports
- 2 Combo 1000BASE-T/SFP Gigabit Uplinks
- AC or DC Internal Power Supply for 24-Port Switch

xStack Integration
- Virtual Stack of Up to 32 Units
- Embedded D-Link SIM for Integration With L3 Core Gigabit Switches

Security
- L2/L3/L4 Multi-Layer Access Control
- External RADIUS/TACACS+ Authentication Support
- SSH/SSL Support
- D-Link Safeguard Engine

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 Down to 1Mbps
- Broadcast Storm Control Down to 1pps
- 802.3ad Link Aggregation (Port Trunks)
- GUI Traffic Monitoring
- RMON v1 Support
- Port Mirroring

Configuration/Management
- Web-Based
- Command Line Interface (CLI)
- Telnet Server
- SNMP v1, v2c, v3
- D-Link Single IP Management (SIM) v1.6
- D-View SNMP Network Management Module Provided

XSTACK

The DES-3500 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. Supporting D-Link's Single IP Management, these switches comprise the workgroup access-layer virtual stack for seamless integration with the L3 core Gigabit switches to form part of a multi-level network structured with high-speed backbone and centralized servers.

Cost-Effective Virtual Stack. The DES-3500 series forms an Ethernet workgroup stack with flexible Gigabit uplinks. Traffic running among units in this virtual stack is through the 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 limitations, your stack can comprise units that are located anywhere on the network, minimizing the impact 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, with all units identified by a single IP address. You can see a Tree View of the members of the stack and a network topology showing the locations of the units and their link information. This simple yet powerful web-based management eliminates the need for you to install expensive SNMP network management software. You can add units to up to 32 switches per stack not limited to any specific models. With embedded Single IP Management, you can expand your Ethernet stack to include L3 core Gigabit and chassis-based 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. 802.1w Rapid Spanning Tree with network recovery of less than 15 seconds and redundant power option increase the reliability and availability of your Virtual Stack. 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. 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.

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Product Specifications	DES-3526	DES-3526DC	DES-3550
Interface			
10/100BASE-TX Ports	24	24	48
Combo 10/100/1000BASE-T Ports/SFP Slots	2	2	2
Auto-Negotiation of Network Speeds (RJ-45 Ports)	√	√	√
Auto-MDI/MDIX (RJ-45 Ports)	√	√	√
RS-232 Console Port	√	√	√
Power			
Internal Power Supply	AC to DC	DC to DC	AC to DC
Power Input	100 to 240VAC, 10A, 50 to 60Hz	48 VDC	100 to 240VAC, 10A, 50 to 60Hz
Power Output	12VDC, 5A (max.)	12VDC, 5.4A (max.)	12VDC, 5A (max.)
Power Consumption	23 watts (max.)	23 watts (max.)	40 watts (max.)
Optional Redundant Power Supply	√	-	√
Performance			
Switching Capacity	8.8Gbps	8.8Gbps	13.6Gbps
Max. 64-Byte System Packet Forwarding Rate	6.6Mpps	6.6Mpps	10.1Mpps
MAC Address Table	8K	8K	8K
Packet Buffer Size	16MB	16MB	64MB
Diagnostic LEDs			
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			
Ventilation DC Fans	40 x 40 mm x 1	40 x 40 mm x 1	40 x 40 mm x 2
BTU/Hr.	73.8	73.1	157
Dimensions	441 x 207 x 44 mm	441 x 207 x 44 mm	441 x 309 x 44 mm
Size	19-Inch Standard Rack-Mount Width, 1U Height		
Weight	2.56 kg (5.64 lbs)	2.50 kg (5.51 lbs)	4.40 kg (9.70 lbs)
Operating Temperature	0° to 40℃		
Storage Temperature	-40°to 70℃		
Humidity	5 to 95% Non-Condensing		
EMI	FCC Class A, CE, C-Tick		
Safety	CSA International		
MTBF	53,838 Hours	133,363 Hours	49,414 Hours
Acoustic (Refer to ISO-7779)	< 34dB	< 34dB	< 43dB

CSA60950
UL 60950
IEC 60950
EN 60950
FCC CE
ACN 052 202 838

Software Functions

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

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
- Port security (64 MAC addresses max.)
- 802.1x port-based access control
- 802.1x MAC-based access control
- SSH v.1, v.2
- SSL
- Per port traffic segmentation
- IP-MAC-Port binding: 512 entries

Access Control List
Multi-layer ACL (800 entries) 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
- IP-MAC-Port binding ACL mode

Spanning Tree Protocol
- 802.1D Spanning Tree compatible
- 802.1w Rapid Spanning Tree (ring protection with network recovery time of less than 15 sec.)
- Per port BPDU filter

IP Multicast
- IGMP v1, v2
- IGMP snooping (128 groups)
- Enable definite VLAN for Multicast
- IGMP Fast Leave
- User-definable per-port IP multicast range limit

Port Trunk
- Maximum number of ports per trunk: 8
- Maximum number of trunks per device: 6
- Operation mode: load sharing
- 802.3ad compatible Link Aggregation (LACP) static & dynamic modes on uplink and downlink ports for traffic load balance and redundancy

Performance Enhancement Functions
- Traffic segmentation
- Bandwidth control from 1Mbps to the port's maximum rate (in steps of 1Mbps)
- Broadcast storm control: user-configurable from 1pps (packet per second)
- D-Link Safeguard Engine
- CPU interface filtering

Management Support
- Single IP Management (SIM) v1.6
- CLI (command line interface)
- RMON v1 support
- Telnet client
- Telnet server (up to 8 sessions)
- TACACS+ authentication on switch admin access
- RADIUS authentication on switch admin access
- SYSLOG
- Dual Images
- Web GUI traffic monitoring
- Web-based MAC address browsing
- RFC 2030 SNTP (Simple Network Time Protocol)
- SNMP v1, v2c, v3
- SSH/SSL v2
- Bootp/DHCP client
- DHCP relay option 82
- STP loopback detection
- Password recovery

MIBs
- 802.1Q Q-BRIDGE-MIB (RFC 2674)
- 802.1p P-BRIDGE-MIB (RFC 2674)
- MIB-II (RFC 1213)
- Bridge MIB (RFC 1493)
- RMON MIB (RFC 1757) group 1, 2, 3, 9 (Alarm, Statistics, History, Event)
- IGMP MIB (RFC 2833)
- IF MIB (RFC 2233)
- Ethernet-like MIB (RFC 1643)
- PING-MIB and TRACEROUTE-MIB (RFC 2925)
- ICMP Ping by MIB
- Rate limiting by MIB
- Save configuration by MIB
- 802.1w setting and read by MIB
- Port interface MIB-II trap (RFC 1215)
- D-Link enterprise MIB

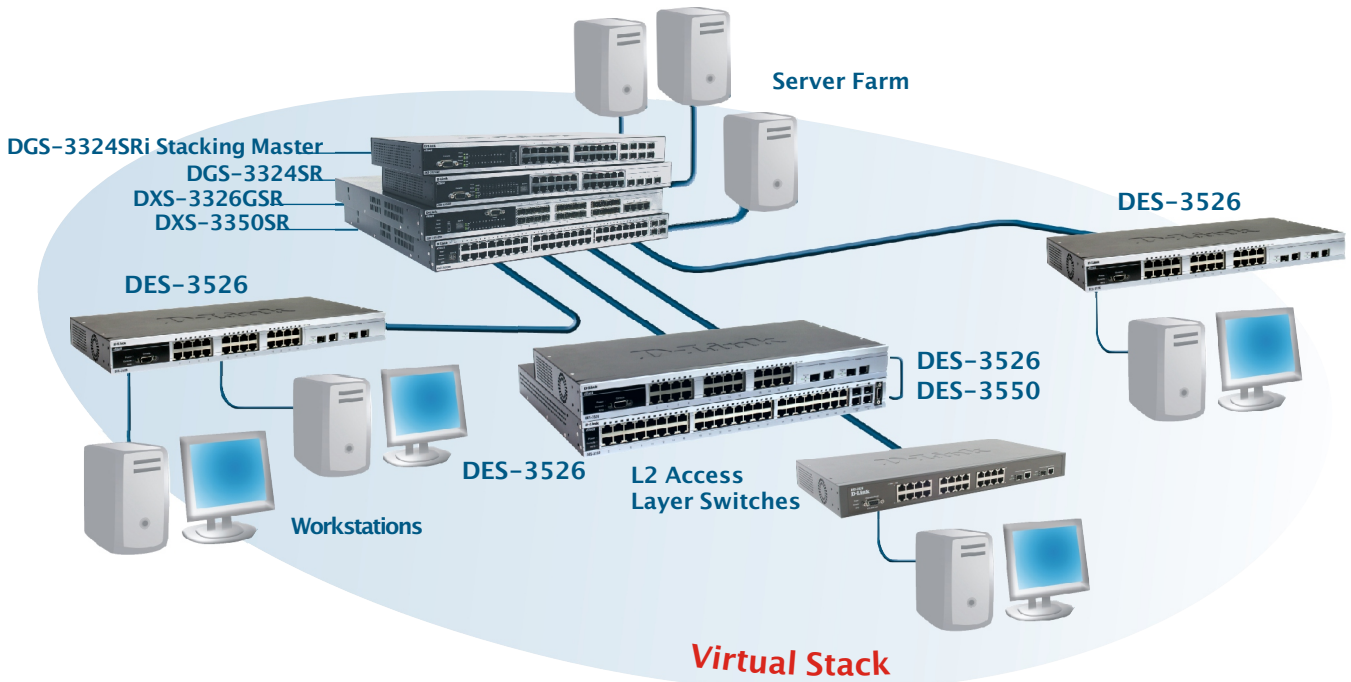### Firmware Upgrade
TFTP remote upgrade

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-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

Optional Redundant Power Supply
DPS-200	60-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

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DGS-3324SRi Stacking Master
DGS-3324SR
DXS-3326GSR
DXS-3350SR

Server Farm

DES-3526

DES-3526

DES-3526
DES-3550

DES-3526

L2 Access
Layer Switches

Workstations

Virtual **Stack**

Stacking With Single IP Management