



Advanced Switching Features

- + Triple Fiber XFP 10G Uplinking (Optional)
- + Dual Copper CX4 10G Uplinking (Optional)
- + Up to 48Gbps Total Stacking Bandwidth
- + Physical Redundant Stacking
- + Up to 8 Units Per Stack
- + Redundant Power Support (Optional)
- + Up to 32 Static IP Routes
- + IEEE 802.3ad (Link Aggregation)
- + IEEE 802.1v (Protocol-based VLANs)
- + IEEE 802.1p Priority (8 WRR)
- + DiffServ QoS
- + IEEE 802.1X Authentication
- + 4000 IEEE 802.1q VLANs
- + IGMP Snooping
- + ACL L2/L3/L4
- + SNMPv1/v2/v3
- + IEEE 802.3af Power over Ethernet

Unified Wired/Wireless Platform

- + 256 Wireless VLANs
- + Up to 50 APs per Switch/Stack
- + Up to 600 Simultaneous WLAN Users per Switch/Stack
- + Supports 802.11a/b/g Standards
- + Seamless Wireless Roaming
- + Supports 10, 25, or 50 AP License
- + Industry Standard Encryption: WEP, WPA™, WPA2™
- + Supports up to 16 SSIDs per AP
- + Centralized AP Management
- + GUI WLAN Monitoring & Logging
- + Automatic Channel Assignment
- + Dynamic WLAN Load Balancing
- + Rogue AP Detection & Containment

xStack® Managed 24-Port Gigabit Stackable L2+ PoE Switch with 4 Combo SFP, 1 Fixed XFP Slot, and 2 10-Gigabit Slots

Overview

The D-Link® xStack® 3200 Series switches are designed to provide effortless wireless convergence with traditional Layer 2 data access switching, emphasizing security, performance, and resiliency. Featuring the latest stacking technology, the DXS-3227P can stack up to eight units, providing up to 200 Gigabit ports. It can stack with other D-Link switches, such as the DXS-3250 and DXS/DWS-3227, providing extraordinary flexibility. It provides 24 built-in copper Gigabit ports that support the 802.3af PoE protocol, including four combo SFP slots for easy, flexible connection to fiber-based Gigabit media. The DXS-3227P is also equipped with two module slots that support 10-Gigabit Ethernet for both copper CX-4 and fiber XFP connections, as well as one fixed 10-Gigabit XFP slot. When stacking through CX-4 interfaces, a stacking bandwidth of 48Gbps can be achieved, for a total switching fabric capacity of up to 120Gbps. In addition, the DXS-3227P supports IP static routing, 4000 VLANs, up to 64 trunk groups, and is wireless-ready, providing wireless roaming, centralized AP management, and rogue AP detection in a single switching solution.

Unified Wired/Wireless Ready

In a mixed network of wired and wireless environments, predictable coverage and security become paramount. The need for a switching solution capable of addressing these needs in both the wired and wireless environment becomes key. The DXS-3227P is capable of meeting this demand and more. With a simple, optional firmware upgrade, the DXS-3227P transforms from a standard Layer 2 switch into an integrated wired and wireless switching solution capable of providing powerful wireless security, easy deployment, the ability to detect rogue access points, and centralized management for all compatible WLAN components. Centralized management is crucial for wireless technologies used in real-time inventory, data mining, and an array of personal electronics that

demand mobility and seamless integration such as PDA and 3G/VoIP mobile phones. With an optional software upgrade, the DXS-3227P becomes a wireless switch, providing secure, seamless roaming between access points and ensuring clear, uninterrupted data and voice communication throughout your wireless network infrastructure.

DNA Stacking Architecture

Distributed Networking Architecture (DNA) technology embedded in the DXS-3227P is a D-Link exclusive: Switches built with DNA are easily stackable with little or no system downtime for expansion. They self-heal by quickly discovering failures in the stack and re-route traffic to automatically avoid the failed device and discover the new topology. The flexibility of DNA lets network designers choose the right topology for connecting their devices whether it be through a 10 GbE interface or a 1000Base-X port to connect between wiring closets. The switch can be used in a number of topologies, such as ring or chain stacking. When changes are made to the stack, DNA automatically discovers the new topology and reconfigures the system to accommodate the changes. In the unlikely event of equipment failure, the switches rapidly reconfigure the stack to avoid the failed switch, resulting in extremely fast failover times and little to no downtime. In addition, the DXS-3227P allows the network administrator to maintain transparency of system features such as Port Mirroring, VLANs, and Link Aggregation across the stack. Unlike other stacking solutions, this feature allows an administrator to add and remove ports from VLANs without having to configure each switch or the inconvenience of creating VLAN trunks between devices. Combined with port mirroring, you can monitor any port throughout the stack without having to be physically connected to the same device, meaning better troubleshooting, faster configuration, and a lower risk of configuration errors.



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Comprehensive Security

The DXS-3227P handles many security vulnerabilities previously delegated to standalone firewalls. It supports Access Control Lists (ACLs) based on MAC address, switch port, IP address, and/or TCP/UDP port numbers. The DXS-3227P also features 802.1X Authentication, Guest VLAN, and RADIUS and TACACS+ for strict access control over the network. Additionally, port-based security can help to protect network integrity. Port numbers can be pre-programmed for specific applications, allowing these applications to provide faster service and reduce load on the CPU.

High Availability

The DXS-3227P supports “Shortest-Path” switching, which improves resiliency, uptime and network efficiency. It includes support for 802.3ad Link Aggregation, and 802.1w Rapid Spanning Tree for increased network reliability and availability. It also supports an optional Redundant Power Supply.

Network Management

The DXS-3227P features a variety of network management options: Console CLI, Telnet, Web GUI, SNMPv1/v2/v3, and RMON. It also supports a variety of advanced traffic management options, including: Layer 3 Static Routing, Bandwidth Control, Broadcast Storm Control, Private VLANs, and support for IGMP Snooping. The D-Link-exclusive DNA stacking technology also allows up to eight DXS-3227P switches to be stacked together and managed as a single unit, regardless of the environment.

Advanced QoS

The DXS-3227P provides a robust and consistent set of QoS/CoS, supporting eight priority queues for 802.1p/ToS/DiffServ, with classification and marking based on MAC SA/DA, IP SA/DA, and/or TCP/UDP. It also provides extensive support for GARP/GVRP, 802.1q, and port-based VLANs for up to 4000 groups per device.

Power over Ethernet IEEE802.3af

Wherever the location—factory, campus, small office, or enterprise facility—the challenge and cost of running power to difficult-to-reach locations in order to meet network design can become a disruption to business and a drain on resources. To solve this problem, the DXS-3227P is equipped with 24 10/100/1000BASE-T ports that support the 802.3af PoE protocol. The DXS-3227P is designed to inject up to 15.4 watts of power on each port. The DXS-3227P provides amazing security and flexibility when utilizing the DXS-3227P’s wireless switching features. When used to power IEEE 802.3af-compliant wireless access points, such as the DWL-2230AP or DWL-7230AP, this wireless-ready switch transforms into a complete wireless enterprise solution. For devices that are not 802.3af-compliant, the D-Link DWL-P50 PoE adapter can be used to supply power to the device making it fully compatible with any 802.3af compliant switch. The DXS-3227P is ideal for today’s popular PoE applications. Best of all, with 15.4 watts of total power per port, the DXS-3227P is capable of providing power to future 802.3af devices, ensuring a future-proof network for years to come.

Wireless AP License

The xStack DXS-3227P provides secure, seamless roaming between access points to ensure clear, uninterrupted data and voice communication throughout your wireless network. The DXS-3227P supports an optional 10, 25, or 50 client AP license and is capable of supporting up to 50 APs per switch/stack with up to 600 WLAN clients.

Unified Wireless Switching¹

Centralized AP Management

The xStack DXS-3227P can also centrally manage compatible wireless access points. No longer will each access point need to be configured independently. Your entire wireless network can be managed through a single interface. The DXS-3227P includes support for automatic discovery of APs with real-time monitoring, providing visibility into utilization and performance of all WLAN users and devices.

Wireless Security

The DXS-3227P provides enhanced wireless security features to protect your data. Support for WEP, WPA[™] and WPA2[™] encryption guarantees your network’s privacy. Rogue AP detection and containment ensure that only the APs you install function on your network. AP detection classifies APs as “known” and “rogue”. The switch uses the APs to continuously scan radio channels, identifying unauthorized WLAN nodes transmissions and jamming rogue signals.

Seamless Wireless Roaming

When roaming between different broadcast domains, a user’s IP address may become invalid. This means the user’s device (laptop, PDA, VoIP phone) will need to change its IP address and break the active session. With “always connected” devices such as VoIP phones and PDAs, this can create a huge problem. The need to provide seamless roaming between APs on different subnets becomes essential to maintaining active sessions and VoIP calls.

The DXS-3227P brings AP configuration and support directly to the switch. This allows the user to move between access points seamlessly. The move appears as if it were between APs on a single broadcast domain. The user’s device retains its VLAN membership and IP address for uninterrupted communication.

Inter-switch Roaming

The xStack DXS-3227P supports roaming between access points attached to different switches. Seamless inter-switch roaming allows a station’s VLAN membership (IP subnet) and QoS parameters to be retained when roaming between APs connected to multiple switches throughout the network. Inter-switch roaming is extremely beneficial in a large WLAN environment, such as a campus or multi-floor office. Inter-switch roaming allows complete freedom to roam between switches located in different buildings or on different floors without disconnection or need for re-authentication.



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Technical Specifications

Product Specifications

DXS-3227P	xStack Managed 24-Port Gigabit Stackable L2+ PoE Switch, 4 Combo SFP, 1 Fixed XFP Slot, 2 10-Gigabit Slots
MAC Address Table	16K
Aggregated Bandwidth	108Gbps
VLANs	Supports up to 4K VLAN Groups (Port-based, 802.1Q, GARP/GVRP, 802.1v Protocol-based Q-in-Q Tagging)
Priority Queues	8 Queues (802.1p/TOS/DiffServ) – Strict Priority or Weighted Round Robin Queue Scheduling
Classification QoS/ACLs	Based on: MAC, IP, TCP/UDP, Payload, Port, DSCP, 802.1p
Routing	32 Static Routes
Multicast Support	IGMP Snooping, Multicast TV VLAN
End to End Flow Control	Flow Control Across Packet Processors
Link Aggregation Balancing	Based on MAC SA/DA, Based on IP SA/DA
MAC Table Search	Search MAC/IP to reveal source Unit/Port
Port Utilization	Measure Traffic, Total Port Capacity
Single Port Stacking	Chain Ring Topology

Interface Options

RJ-45	10Base-T, 100Base-TX, & 1000Base-T
LC	With Optional Standard Small Form-Factor Pluggable (SFP) Gigabit Transceivers With Optional 10Gigabit XFP Transceivers
CX-4	With Optional 10GBASE-CX-4 Module
RPS	Redundant Power Supply Via Optional DPS-600

Wireless Switching

AP License	Supports optional 10, 25 and 50 AP license
Max Allowed APs	50 APs per switch or 50 APs per stack (with optional license)
WLAN Encryption	WPA [™] , WPA2 [™] , WEP (64 & 128 bit)
WLAN Security	802.1X Authentication
Rogue AP Detection	Port-based & Radio-based
Supported Roaming	Intra-switch, Inter-band, Inter-switch
802.11 Support	802.11a, 802.11b, 802.11g (based on supporting AP)
Max Users per AP	30 WLAN simultaneous users, 600 max per switch / stack
Wireless VLANs	256
SSIDs	16 concurrent SSIDs per AP
WLAN Management	HTTP, HTTPS, Telnet, SSH, SNMP
SYSLOG Events	Connection success / failure, Station roaming / AP connection, Error rates above threshold, Encryption errors
Logging Filters	Errors only, all events, per station, per AP
Additional Features	Automatic Channel Assignment, Dynamic Load Balancing



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Network Protocols and Standards

In Band & Out of Band	Telnet, CLI/Console, RMON, Web-based HTTP, SNMPv1/v2/v3, Syslog, Port Mirroring, TFTP Client, BootP Client, DHCP Client, BootP/DHCP Relay Agent, and DNS Client
IEEE	802.3 Ethernet, 802.3u Fast Ethernet, 802.3ab Gigabit Ethernet, 802.3z Gigabit Ethernet, 802.3ak 10GBASE-CX-4, 802.3ae 10GbE, 802.1D Spanning Tree, 802.1w Rapid Spanning Tree, 802.1p Priority Tags, 802.1q VLANs, 802.3ad Link Aggregation, 802.3x Flow Control, 802.1X Port-based Authentication, 802.1X MAC-based Authentication, 802.1s Multiple Spanning Tree, 802.1v protocol-based VLANs
IETF	RFC 1157 SNMP, RFC 1112/2236 IGMPv1/2, RFC 1757 RMON (4 Groups), RFC 1493 Bridge MIB, RFC 1213 MIB II, RFC 793 TCP, RFC 826 ARP, RFC 854 Telnet, Diffserv

Electrical & Emissions Summary

Emissions	CE Mark & FCC Class A
Power Supply	100-240VAC, 50/60 Hz Internal Universal
Power Consumption	60 Watts + PoE (370 Watts)
PoE Budget	370 Watts

Safety Agency Certifications and Environmental

Safety	CE/LVD, UL Listed (UL1950)/CUL
Temperature	Operating: 32° to 122°F (0° to 50°C)
	Storage: 14° to 149°F (-10° to 65°C)
Humidity	Operating: 10% ~ 85% RH, Non-condensing
	Storage: 0% ~ 95% RH, Non-condensing

Physical Specifications

Dimensions (W x D x H)	17.3in x 16.9in x 1.8in (439.9mm x 430mm x 45mm)
Height	1U
Weight	14.6 lbs (6.6 kg)

Warranty Information

Warranty	Lifetime ²
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Ordering Information

<u>Part Number</u>	<u>Description</u>
<u>Switch</u>	
DXS-3227	xStack Managed 24-Port Gigabit Stackable L2+ Switch, 4 Combo SFP, 1 Fixed XFP Slot, 2 10-Gigabit Slots
DXS-3227-TAA	xStack Managed 24-Port Gigabit Stackable L2+ Switch, 4 Combo SFP, 1 Fixed XFP Slot, 2 10-Gigabit Slots, (TAA Compliant)
DXS-3227P	xStack Managed 24-Port Gigabit Stackable L2+ PoE Switch, 4 Combo SFP, 1 Fixed XFP Slot, 2 10-Gigabit Slots
DXS-3250	xStack Managed 48-Port Gigabit Stackable L2+ Switch, 4 Combo SFP, 2 10-Gigabit Slots
DXS-3250-TAA	xStack Managed 48-Port Gigabit Stackable L2+ Switch, 4 Combo SFP, 2 10-Gigabit Slots, (TAA Compliant)
DWS-3227	xStack Managed 24-Port Gigabit Stackable L2+ Wireless Switch, 4 Combo SFP, 1 Fixed XFP Slot, 2 10-Gigabit Slots, 10-AP License



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Access Points

DWL-2230AP	xStack 3200 Series PoE Access Point, 802.11g
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Modules

DEM-411X	1-Port 10-Gigabit XFP Module for DXS-3227/DXS-3250
DEM-411T	1-Port 10-Gigabit CX4 Module for DXS-3227/DXS-3250
DEM-411S	Stacking Kit (2 DEM-411T Modules & 1 0.5m CX4 Cable) for DXS-3227/DXS-3250

Transceivers

DEM-310GT	1000BASE-LX SFP Module, up to 10Km
DEM-311GT	1000BASE-SX SFP Module, up to 550m
DEM-421XT	10GBASE-SR Multimode XFP, up to 300m
DEM-422XT	10GBASE-LR Singlemode XFP, up to 10Km

Redundant Power

DPS-600	Redundant Power Supply Unit, 500 Watt RPSU
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AP License

DS-710	10 Access Point License, xStack Wireless Switching
DS-725	25 Access Point License, xStack Wireless Switching
DS-750	50 Access Point License, xStack Wireless Switching

¹ With purchase of AP license.

² Lifetime warranty available only in the USA and Canada if purchased on or after March 30, 2009. Visit www.dlink.com for warranty details.

All references to speed are for comparison purposes only. Product specifications, size, and shape are subject to change without notice, and actual product appearance may differ from that depicted herein.