



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)
- + Link Aggregation (64 groups/8 ports)
- + IEEE 802.1p Priority (8 WRR)
- + DiffServ QoS
- + 802.1X (Port-based Authentication)
- + 4000 IEEE 802.1q VLANs
- + IGMP Snooping
- + ACL L2/L3/L4
- + SNMPv1/v2/v3

Unified Wired/Wireless

- + 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 Licenses
- + 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+ 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 from D-Link, the DXS-3227 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-3227P) for extraordinary flexibility. It provides 24 built-in copper Gigabit ports, including four combo SFP slots for easy, flexible connection to fiber-based Gigabit media. The DXS-3227 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 for a total switching capacity of up to 108Gbps. In addition, the DXS-3227 supports IP static routing, 4000 VLANs, up to 64 trunk groups, and is wireless-ready, making the DXS-3227 the most feature-rich, high-capacity switching solution in its class.

Unified Wired/Wireless Ready

In a network made up of wired and wireless nodes, reliable coverage for both connection types is key. The DXS-3227 meets this demand and more. With a simple firmware upgrade, the DXS-3227 becomes an integrated wired and wireless switching solution capable of providing powerful wireless security, easy deployment, and centralized management. 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. Additional software upgrades provide secure, seamless roaming between access points, ensuring uninterrupted data and voice communication throughout your wireless network.

DNA Stacking Architecture

The Distributed Network Architecture (DNA) technology embedded in the DXS-3227 is a D-Link exclusive. Switches built with DNA are easily stackable with little or no system downtime for expansion. The flexibility of DNA allows network administrators to use a number of topologies, such as ring or chain stacking, to connect anything up to 10GbE. Using DNA, the DXS-3227 provides system transparency with Port Mirroring, VLANs, and Link Aggregation across the stack. Unlike other stacking solutions, this allows VLANs to be added and removed without switch reconfiguration or VLAN trunks between devices. Port mirroring allows for the studying of all packets from a specific port anywhere in the stack, providing for superior troubleshooting and faster configuration with fewer errors.

DNA technology makes the DXS-3227 self-healing. This is how the switch can automatically detect new stack topologies and reconfigure the system for maximum performance. Failures within a stack are quickly discovered and traffic re-routed around failed devices. In the unlikely event of equipment failure, DNA provides for rapid reconfiguration, resulting in extremely fast failover times and little to no downtime.

Comprehensive Security

The DXS-3227 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-3227 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.



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High Availability

The DXS-3227 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 (DPS-500).

Network Management

The DXS-3227 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 allows up to eight DXS-3227 switches to be stacked together and managed as a single unit, regardless of the environment.

Advanced QoS

The DXS-3227 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.

Wireless AP License

The xStack DXS-3227 provides secure, seamless roaming between access points to ensure clear, uninterrupted data and voice communication throughout your wireless network. The DXS-3227 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 DXS-3227 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-3227 includes support for automatic discovery of APs with real-time monitoring, providing visibility of all WLAN users and devices.

Wireless Security

The DXS-3227 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 identifies APs as “known” and “rogue”. The switch uses the APs to continuously scan radio channels, identifying transmissions of unauthorized WLAN nodes and jamming rogue signals.

Seamless Wireless Roaming

When roaming between 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-3227 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 DXS-3227 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-3227 | xStack Managed 24-Port Gigabit Stackable L2+ Switch, 4 Combo SFP, 1 Fixed XFP Slot, 2 10-Gigabit Slots |
| MAC Address Table | 16K |
| Switch Fabric | 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 |
| 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

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|-------|---|
| 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 Via Optional DPS-500 |

Wireless Switching

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|---------------------|--|
| AP License | Supports optional 10, 25 and 50 AP Licenses |
| Max Allowed APs | 50 APs per switch or 50 APs per stack |
| 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, eEncryption 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

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|-------------------|---|
| Emissions | CE Mark & FCC Class A |
| Power Supply | 100-240VAC, 50/60 Hz Internal Universal |
| Power Consumption | 60 Watts |

Safety Agency Certifications and Environmental

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|-------------|---|
| 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

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|------------------------|--|
| Dimensions (W x D x H) | 17.3in x 16.9in x 1.8in (439.9mm x 430mm x 45mm) |
| Height | 1U |
| Weight | 14.3 lbs (6.5 kg) |

Warranty Information

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|----------|-----------------------|
| 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 |
| <u>Access Points</u> | |
| DWL-2230AP | xStack 3200 Series PoE Access Point, 802.11g |

