

Business and Enterprise Solutions

DES-3828



XSTACK™

Multilayer Managed Fast Ethernet Switch

Stackable 24-Port 10/100Mbps + (2) Combo 1000BASE-T/SFP + (2) 1000BASE-T Switch

FEATURES

High Performance Switching:

- Stack Up to 32 Units Per Stack using SIM
- Optional Redundant Power Support
- Jumbo Frames up to 9K
- IPv6 Aware¹

Advanced Metro Switching:

- 802.1p Priority (8 Queues)
- Double VLAN Tagging¹
- Bandwidth Control
- QoS based on L2/3/4 DiffServ
- 802.3ad (Link Aggregation)
- 802.1w (Rapid Spanning Tree)
- 802.1s (multiple Spanning Tree)¹
- 802.1x (Port Based Authentication)
- 802.1x (MAC Based Authentication)
- Web-based Authentication
- 802.1q VLANs (Up to 4000 Groups)
- Guest VLAN¹
- IP/MAC Address binding

Advanced Dynamic L3 Routing:

- RIP v1/2
- OSPF/OSPF NSSA¹
- OSPF Passive Interface/Equal Cost Route¹
- Multi Path Routing¹
- DVMRP/VRRP
- Multiple IP per VLAN¹
- Floating Static Route
- Policy Based Routing¹
- IGMP v1/2/3¹
- PIM-DM/SM¹

Network Management:

- Console/Telnet/Web GUI
- SNMPv1/v2/v3 / RMON (4 Groups)
- SSH2, TACACS+, SSL
- ACL L2/L3/L4

For the SMB requiring a cost effective core switching solution, as well as for larger Enterprise and Metropolitan Service Providers (MSP) environments needing a managed, feature rich switch capable of uplinking to backbone switches, the xStack DES-3828 is designed to meet the needs of the most demanding departmental and enterprise connectivity applications. The D-Link xStack DES-3828 Switch is a fully managed Layer 3 switch that provides (24) 10/100Mbps Fast Ethernet ports and (2) Combo SFP/1000BASE-T Gigabit Ethernet ports. In addition, (2) fixed 1000BASE-T ports in the back-panel can provide a dedicated trunk connection between devices or core switches. The xStack DES-3828 also provides virtual stacking functionality via D-Link SIM technology allowing up to 32 units to be managed via a single IP address. With support for Q-in-Q Double VLAN tagging¹, IPv6 aware¹, Dynamic Layer 3 Routing, IEEE802.1s¹, and bandwidth control, the xStack DES-3828 incorporates advanced features suitable for the MSP as well as the SMB and Enterprise size network.

Metro Switching

Service provider networks are moving from circuit-based access to newer packet-based access that will require highly reliable intelligent switching, and at the same time demand resiliency and dependability. The xStack DES-3828 meets this demand by supporting industry standards for 802.1s (multiple spanning tree), 802.3ad link aggregation for up to 32 groups, bandwidth rate limiting down to 64k, and support for an external redundant power option for added peace of mind. In addition the xStack DES-3828 offers Double VLAN Q-in-Q tagging¹, which adds on an additional tag to a VLAN tag, expanding the VLAN space and allowing service providers to deploy their service quickly and securely. The xStack DES-3828 also incorporates advanced QoS support such as the ability to filter and forward traffic based on Layer 2/3/4, making it an ideal choice for VOIP, video, and audio services targeting business class customers.

Advanced L3 Routing

The xStack DES-3828 is a high performance Layer 3 switch that provides an ideal solution by offering advanced Layer 3 routing features such as RIP, OSPF¹, VRRP, up to 5 IP addresses per VLAN¹, and floating static routes. Policy Based routing¹ (which forwards traffic based on L3/L4 SA/DA) and Multi-Path Routing¹ (which is the method of establishing multiple paths between given source-destination nodes within a network.) are also features supported on the xStack DES-3828. These added routing features provide redundancy, improve network utilization, and provide load balancing for the network.

¹ Available in future firmware upgrade

Technical Specifications

Product specifications	
DES-3828	Managed Layer 2/3/4 Switch with (24) 10/100 Mbps Ports, (2) Combo SFP/1000BASE-T Ports, & (2) Built-in 1000BASE-T Uplinks
Packet Buffer	32MB
MAC address Table	16K
IP Address Table	4K
IP Routing	128 static/ 16k total
Aggregated Bandwidth	12.8Gbps
Transmission Method	Store-and-Forward
Forwarding Rate	14,880pps (10M), 148,800pps (100M), 1,488,000pps (1000M)
VLANs Support	up to 4K static, 255 dynamic 802.1p VLAN Groups
Priority Queues	8 Queues - Strict Priority or Weight Round Robin Queue Scheduling
Classification ACLs	MAC Address, IP Address, TCP/UDP Port Number & payload, physical port, DSCP, 802.1p, VLAN, protocol type
Classification QoS	MAC Address, IP Address, TCP/UDP Port Number, physical port, DSCP, ToS
Multicast Support	IGMP v1/2/3*, IGMP Snooping
Jumbo Frames	up to 9K
Number of IP Interfaces	50
Multicast Duplication	Hardware packet replication on 8 VLANs on FE ports and 32 VLANs on GE ports ¹
Port Security	Supports 16 MAC addresses per port
Broadcast Storm Bandwidth Control	Minimum Granularity: 128pkt/s
MAC-IP Binding	Supports 500 entries per device
CPU Protection	Protect CPU from Broadcast/Multicast/Unicast flooding
CPU Monitoring	utilization via Web/CLI/SNMP. Trap /Logging notification when configurable threshold reached.
0.0.0.0 IP Setting	Prevents device from occupying an IP address

Interface Options

RJ-45	10BASE-T, 100BASE-TX & 1000BASE-T
LC	With optional Standard Small Form-Factor Pluggable (SFP) Gigabit Transceivers
RPS	Redundant Power Option Via Optional (DPS-200)

Network Management

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 Client, IEEE 802.3 Ethernet, 802.3u Fast Ethernet, 802.3ab Gigabit Ethernet, 802.3z Gigabit Ethernet, 802.1d Spanning Tree, 802.1w Rapid Spanning Tree, 802.1p Priority Tags, 802.1q VLANs (4K static/ 255 dynamic), 802.3ad Link Aggregation (32 Groups/8 ports), 802.3x Flow Control, 802.1x Port-based /MAC based Authentication, 802.1s (Multiple Spanning Tree, WRED congestion control, STP loopback prevention ¹ , GVRP, Guest VLAN1, Per port limit IP multicast address range ¹ , Web GUI Traffic Monitoring, Web MAC address Browsing, SNMP Trap on MAC Notification, DHCP Relay Option, DHCP Auto-configuration, Trap/Alarm/Log Severity Control, Dual Image, Dual Configuration, Port Description, Editable Login Banner, Editable System prompt, Virtual Interface/Loopback Interface ¹ , CPU Interface Filtering (Software ACL)
IETF	RFC 1157 SNMP, RFC 1112/2236 IGMPv1/2 IGMPv3 ¹ , RFC 1757/2021/2819 RMON (4 Groups), RFC 1493 Bridge MIB, RFC 1213 MIB II, RFC 793 TCP, RFC 826 ARP, RFC 854 Telnet, and DiffServ, RFC 1724 RIP v1/2, RFC 1850 OSPF1, DVMRP, RFC 2934 PIM-DM, PIM-SM, RFC 2932 Multicast Routing, RFC 2787 VRRP, RFC 2096 IP Forwarding Table, RFC 2618/2620 RADIUS Client, RFC 2863 IF MIB, RFC 2674 802.1p MIB, RFC 2668 802.3 MAU MIB, RFC 2665 ether-like MIB, SSH, SSL, TACACS+

Electrical & Emissions Summary

Emissions	CE Class A, FCC Class A, VCCI Class A, C-Tick Class A
Power Supply	AC Input: 100 - 240 VAC, 50/60 Hz Internal universal power supply
Power Consumption	24 Watts

Safety Agency Certifications and Environmental

Safety	CSA International, CB Report
Physical and Environmental Temperature	Operating: 0° - 40° C (32° - 104° F) Storage: -40° - 70° C (-40° - 158° F)
Humidity	Operating: 10% to 85% RH, Non-Condensing Storage: 5% to 95% RH, Non-Condensing

Physical Specifications

Dimensions (W x D x H)	12.16 x 17.36 x 1.73in (33.88 x 44.09 x 4.39cm) 1U Rack-mount size
Weight	8.6lbs (3.9kg)

Warranty and Support Information

Warranty	Limited lifetime
Support	Free Technical Support

Ordering Information

<i>Part Number</i>	<i>Description</i>
DES-3828	Managed Layer 2/3/4 Switch with (24) 10/100 Mbps Ports, (2) Combo SFP/1000BASE-T Ports, & (2) Built-in 1000BASE-T Uplinks
DEM-310GT	Mini-GBIC/SFP 1000BASE-LX (up to 10Km)
DEM-311GT	Mini-GBIC/SFP 1000BASE-SX (up to 550m)
DEM-312GT2	Mini-GBIC/SFP 1000BASE-SX+ (up to 2Km)
DEM-314GT	Mini-GBIC/SFP 1000BASE-LH (up to 50Km)
DEM-315GT	Mini-GBIC/SFP 1000BASE-ZX (up to 80Km)
DPS-200	Redundant Power Supply
DPS-800	2 slot Redundant Power Supply unit Chassis support for DPS-200