



### High Performance Switching:

- + Stack Up to 32 Units Per Stack Using SIM
- + Optional Redundant Power Support
- + Jumbo Frames up to 9KB
- + IPv6 Aware<sup>1</sup>

### Advanced Dynamic L3 Routing:

- + RIP v1/2
- + OSPF
- + OSPF Passive Interface
- + DVMRP/RRRP
- + Multiple IP per VLAN<sup>1</sup>
- + Floating Static Route
- + IGMP v1/2/3
- + PIM-DM/PIM-SM<sup>1</sup>

### Advanced Switching:

- + IEEE 802.1p Priority (8 Queues)
- + Double VLAN Tagging
- + Bandwidth Control
- + QoS based on L2/3/4
- + 802.3ad (Link Aggregation)
- + 802.1D/w/s (Spanning Tree)
- + 802.1x (Port and Mac Based Authentication)
- + 802.1Q VLANs (Up to 4000 Groups)
- + IP/MAC Address binding
- + Guest VLAN

### Network Management:

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

## 48-port 10/100 Switch + (4) 1000BASE-T + (2) Combo SFP

### Overview

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 D-Link xStack DES-3852 is designed to meet the needs of the most demanding departmental and enterprise connectivity applications. The xStack DES-3852 Switch is a fully managed Layer 3 switch that provides (48) 10/100Mbps Fast Ethernet ports and (2) Combo SFP/1000BASE-T Gigabit Ethernet uplinks. 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-3852 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 tagging, IPv6 aware<sup>1</sup>, Dynamic Layer 3 Routing, IEEE802.1s, and bandwidth control, the xStack DES-3852 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-3852 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-3852 offers Double VLAN Q-in-Q tagging, 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-3852 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-3852 is a high performance Layer 3 switch that provides an ideal solution by offering advanced Layer 3 routing features such as RIP, OSPF, VRRP, up to 10 IP addresses per VLAN, and floating static routes. Policy Based routing<sup>1</sup> (which forwards traffic based on L3/L4 SA/DA) and Multi-Path Routing<sup>1</sup> (which is the method of establishing multiple paths between given source-destination nodes within a network) are also features supported on the xStack DES-3852. These added routing features provide redundancy, improve network utilization, and provide load balancing for the network.

### Comprehensive Security

The xStack DES-3852 incorporates an advanced portfolio of security features designed to protect your network from malicious attacks. SSH & SSL encrypted management guarantee secure private configuration and monitoring when using the Graphical User Interface and Command Line. IP to MAC binding prevent unauthorized devices from accessing network resources. 802.1x port and MAC based authentication help provide added network security by requiring all users attempting to connect to your network, provide a username and password. This username and password must then be authenticated on a RADIUS or TACACS+ server thus insuring only authorized users have access to the network. Access control lists based on Layers 2/3/4, Rate Limiting, and Guest VLANs provide even more control over what and how users access the network. Finally with D-Link's CPU Safeguard Engine, the DES-3852 is protected from Broadcast, Multicast, and Unicast flooding which in turn guarantees the DES-3852 is not crippled by DoS attacks.



## 48-port 10/100 Switch + (4) 1000BASE-T + (2) Combo SFP

### Technical Specifications

#### Product specifications

DES-3852	Managed Layer 2/3/4 Switch with (48) 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	17.6Gbps
Transmission Method	Store-and-Forward
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 9KB
Number of IP Interfaces per VLAN	50
Multicast Duplication	Hardware Packet Replication on 8 VLANs on FE Ports and 32 VLANs on GE Ports <sup>1</sup>
Port Security	Supports 16 MAC Addresses per Port. Radius and TACACS+ Authentication, SSH v2, SSL v2, 802.1x port/MAC-based
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
802.3ad Link Aggregation	Up to 32 Groups, 8 Ports per Group
Stacking	Single IP Management up to 32 Units
LED Status Lights	Per Device: Power, Console (to indicate login through RS-232 port), RPS, Link/Act/Speed

#### 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 (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/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 control, 802.1s (Multiple Spanning Tree), WRED Congestion Control <sup>1</sup> , STP Loopback Detection <sup>1</sup> , GVRP, Guest VLAN <sup>1</sup> , Per Port Limit IP Multicast Address Range <sup>1</sup> , Web GUI Traffic Monitoring, Web MAC Address Browsing, SNMP Trap on MAC Notification, DHCP Relay Option 82, DHCP Auto-configuration, Trap/Alarm/Log Severity Control, Dual Image, Dual Configuration <sup>1</sup> , Port Description, Editable Login Banner, Editable System Prompt, Virtual Interface/ Loopback Interface <sup>1</sup> , CPU Interface Filtering (Software ACL), Port Mirroring ACL Mode
-----------------------	--



## 48-port 10/100 Switch + (4) 1000BASE-T + (2) Combo SFP

IETF	RFC 1157 SNMP, RFC 1112/2236 IGMPv1/2 IGMPv3 <sup>1</sup> , 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 OSPF, DVMRP, RFC 2934 PIM-DM, PIM-SM <sup>1</sup> , 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	47 Watts

### Safety Agency Certifications

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
BTU	81.72 BTUs per Hour

### Physical Specifications

Dimensions (D x W 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

<u>Part Number</u>	Description
DES-3852	Managed Layer 2/3/4 Switch with (48) 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)
DPS-200	Redundant Power Supply
DPS-800	2 Slot Redundant Power Supply Unit Chassis Support for DPS-200

<sup>1</sup> Future firmware release