

DWL-3140AP  
(Sold Separately)



DES-1228P

### High-Performance Switching:

- + Non-blocking Architecture
- + 24 10/100Mbps Ethernet Ports with 802.3af PoE
- + D-Link® Safeguard Engine™
- + Unified Wireless Switching
- + IGMP Snooping Support
- + 802.1D Spanning Tree
- + Static Link Aggregation
- + Port Mirroring
- + 802.1Q VLANs
- + 802.1p QoS (4 queues)
- + DSCP-based QoS
- + Broadcast Storm Control
- + 802.1x Authentication
- + SNMP v1
- + D-Link Smart Console Utility Management
- + Web-based Management Interface
- + Port Setting (Speed, Availability, Flow Control)
- + DHCP Client
- + 802.1ab LLDP
- + Management VLAN (with DWL-3140AP)

### Wireless Features

- + WEP, WPA™, WPA2™
- + Access Point Group Management
- + Centralized Firmware Upgrade
- + Access Point Monitoring Alert
- + Access Point Load Balancing
- + Access Point Auto-discovery
- + 802.11g Wireless Connectivity
- + Supports 802.3af PoE
- + Up to 108Mbps (Turbo Mode)
- + WLAN Partition

## Web Smart 24-Port 10/100 PoE Wireless Switch, 4 Gigabit Copper, 2 Combo SFP

The DES-1228P Web Smart™ Switch from D-Link® is a cost-effective solution for small and medium businesses that require basic management features, showcased in a low cost, easy to configure, and GUI-managed 'smart' business solution. The DES-1228P comes with 24 10/100Base-TX PoE ports, 4 1000Base-T copper interfaces for uplinking to Storage Area Network (SAN) devices, servers, or core switching solutions, and 2 combo SFP fiber slots for long haul uplinking via optional 100Base-FX or 1000Base-X transceivers. The DES-1228P is more versatile than ever with integrated wireless switching features. Whether the end nodes are a wired PC workstation or a wireless client, such as the Web Smart DWL-3140AP, the entire network can be managed via a single unified wired/wireless platform.

### Security

The DES-1228P incorporates advanced mechanisms that detect attacks against the switch's central processing unit and take corrective action on the attacking interface. When a Denial of Service attack is waged against the DES-1228P, the D-Link Safeguard Engine™ prevents overload of the central processor, ensuring network integrity and maintaining open network bandwidth channels. The DES-1228P also supports 802.1x Authentication, which provides a secure means to allow users to log onto your network. When used in conjunction with a RADIUS server, 802.1x requires each user to provide their username and password before accessing the local area network.

### Unified Wireless and Wired<sup>1</sup>

With no additional costs or license purchasing necessary, administrators can monitor wired and wireless nodes via a central web interface. Supporting WEP, WPA, and WPA2 authentication, the DES-1228P can manage up to 24 access points and up to 200 clients. The unified Web Smart Switch provides access point configuration with the click of a button, even with multiple access points!

The Web Smart Switch provides wireless connectivity through the 802.11g Web Smart Access Point (DWL-3140AP). This AP has a discrete, ceiling-mount, smoke detector form

factor for easy deployment. All of your D-Link Web Smart Switches and Web Smart Access Points are automatically discovered with the included web-based browser utility, allowing network topology and layout generation in seconds at no additional cost.

### Link Aggregation

The DES-1228P supports static link aggregation to combine port bandwidth in data-intensive applications. You can combine up to 8 ports for a total of six aggregate groups. Ports can be combined together to create multi-link load sharing groups to a server or a network backbone. To expand the network, you can also make use of link aggregation to eliminate bottlenecks between cascaded switches.

### 802.1Q VLANs

The DES-1228P provides support for 802.1Q VLANs, improving security and bandwidth utilization. VLANs segment broadcast domains to reduce network congestion caused by constant network broadcasting. VLANs also provide a means of securing one broadcast domain from all others. This in turn prevents users on one VLAN from gaining access to resources on another VLAN.

### Asymmetric VLANs

The Web Smart Switch also supports asymmetric VLANs. With this feature enabled, VLAN groups will be able to send information to each other without the traffic going through a router or a Layer 3 switch. This eliminates the need to purchase an additional routing device or burdening the router with internal communications, maximizes network efficiency, and securely segments the group via the VLAN.

### 802.1p Priority Tagging

Like 802.1Q VLAN tagging, 802.1p places a tag in a frame to indicate frame priority. The tag represents a priority of 0-7, which 802.1Q-compliant switches use to prioritize traffic. Unlike port-based QoS, which prioritizes all traffic entering a



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port with the same value, 802.1p classifies incoming frames through these sets of priorities. This means your 802.1p VoIP phone can be granted higher priority than other traffic, resulting in phone calls that are clear and jitter-free.

#### SNMP Management & 802.1D Spanning Tree

The DES-1228P utilizes SNMPv1 to manage and control SNMP-supported network devices. SNMP enables the DES-1228P to provide valuable status information and send traps on abnormal events. This sharing of vital management information saves time and money. The DES-1228P also supports Spanning Tree Protocol, which provides protection from unintentional cabling loops within a network infrastructure. Loops can dangerously create an unending circle where broadcast and multicast traffic propagates across the network. This storm of traffic overwhelms the network and brings traffic to a crawl, but 802.1D Spanning Tree detects and breaks these loops ensuring network uptime.

#### IGMP Snooping

The DES-1228P uses IGMP Snooping to analyze data packets and forward them through only where appropriate. This means that multicast packets, such as streaming audio and video or other bandwidth hogs, get through without creating extra network congestion. This smart packet management also reduces the workload of other devices further down the line, making your entire network function more efficiently.

#### Smart Console Utility

Included with every DES-1228P is a D-Link exclusive software utility that can manage all D-Link Web Smart Switches and DWL-3140AP with the click of a button.

Managing the DES-1228P has never been easier. Using its built-in, browser-based management interface, configuring the switch takes only minutes. With full color graphics and easy to understand navigation menus, configuring the DES-1228P is as easy as surfing the web.

## Technical Specifications

### Product Specifications

Switching Capacity	12.8Gbps
Number of PoE Ports	24
Forwarding Mode	Store and Forward
Packet Buffer memory	1MB
SDRAM for CPU	8MB
Flash Memory	Prom 2MB
MAC Address	8K MAC Address Table
IGMP Snooping	Supports 64 multicast groups. Support default flooding for non-joined multicast traffic
802.1D Spanning Tree	Supports per device STP & BPDU forwarding
Static Port Trunk	Supports up to six 8-port groups
Flow Control	Enabled and disabled
Port Mirroring	Support one-to-one or many-to-one port mirroring
802.1Q	Support 256 static VLAN groups
VLAN Group	Be able to configure VID from 1-4094
802.1p support	4 Queues
802.1x Port-based Access Control	Default 802.1x forwarding
Broadcast Storm Control	Allow specifying the per device threshold in terms of 8Kb ~ 4096Kb per second
Static Mac	Support 256 Static Mac entries
D-Link Safeguard Engine	Protects the CPU from Broadcast/Multicast/Unicast flooding



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Web-based GUI	Compatible with IE, Netscape, Mozilla, Firefox, Opera, Safari browsers
SNMP v1	Configurable Community setting, SNMP Trap
DHCP client	Supports DHCP IP Address for System Interface
802.1ab LLDP	Enabled and disabled
Switch Discovery	Up to 256 agents/switches
Port Setting	Can set Speed, Duplex mode, Flow Control
Configuration Backup/Restore	Via Web Graphic User Interface
Reboot	Via Web Graphic User Interface

#### Wireless Switching Features

Central AP Management	Monitor AP status and wired ports in the same graphic interface
AP Group Management	Simplifies wireless network management with multiple APs
Log	System log; Operator action log; SNMP trap log of AP and switch
Syslog Alert	BSD syslog client; adjust send syslog frequency and syslog condition
Central Firmware Upgrade	Select multiple APs and upgrade their firmware at the same time
Alert	Summarize abnormal status in the alert window
AP Topology Monitor	List monitored devices; periodic update on device status
Zero Configuration	One-click technology to restore broken AP's setting onto its replacement AP
AP Life Check	Real time tracking monitors APs status
AP User Statistics	Maintain all wireless clients connection history and depict statistics in diagrams
AP Traffic Statistics	Displays all APs traffic history and statistics in diagrams
AP Load Balance	Allow to set a group of managed APs to share their loading
WLAN Partition	WLAN clients are not allowed to exchange data through the DWL-3140AP

#### Interface Options

RJ-45 (24 x 10/100BASE-TX ports & 4 1000BASE-T ports)	IEEE 802.3 compliance
	IEEE 802.3u compliance
	IEEE 802.3x Flow Control support for Full-Duplex mode, Back Pressure when in Half-Duplex mode
SFP LC	IEEE 802.3z/IEEE 802.3u compliance

#### Network Management

In & Out of Band	HTTP, SNMP v1
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#### Physical & Environment

AC Input	100-240 VAC, 50/60Hz Internal universal power supply
Operation Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	14°F to 158°F (-10°C to 70°C)
Humidity	Operation: 10% ~ 90% RH
	Storage: 5% ~ 90% RH
Power consumption	222 Watts Maximum
PoE Budget	170 Watts Maximum



### Web Smart 24-Port 10/100 PoE Wireless Switch, 4 Gigabit Copper, 2 Combo SFP

Heat Dissipation	757.5 BTU/hr Max
Dimension (W x D x H)	17in x 4.3in x 1.7in (431.8 mm x 108 mm x 43.9mm) 19-inch, 1U Rack-mount size
Weight	7.2 lbs (3.3 kg)

#### Emission (EMI) Summary

EMI-EMC Compliance:	FCC class A, CE Class A, VCCI Class A
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#### Safety and Environmental

Safety Compliance	cUL, UL
Environmental	RoHS

#### Warranty Information

Warranty	Limited Lifetime <sup>2</sup>
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#### Ordering Information

<i>Part Number</i>	<i>Description</i>
DES-1228P	Web Smart 24-Port 10/100 PoE Wireless Switch, 4 Gigabit Copper, 2 Combo SFP
DES-1228P-TAA	TAA-Compliant Version of DES-1228P
DEM-310GT	1000Base-LX SFP Module up to 10km
DEM-311GT	1000Base-SX SFP Module up to 550m
DEM-211	100BASE-FX Multi-Mode LC SFP Transceiver, up to 2km
DWL-3140AP	Web Smart PoE Thin Access Point, 802.3af, 802.11g, for DES-1228P

<sup>1</sup> Firmware v.1.20.08 and later

<sup>2</sup> Available only in the USA and Canada

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. Specifications contained herein are based on Hardware version A1/A2.