



High-Performance Switching:

- + 24 Ports IEEE 802.3af PoE
- + Up to 15.4 Watts per Port
- + CPU DoS Protection
- + 8K MAC Address Table
- + IGMP Snooping Support
- + 802.1D Spanning Tree
- + Link Aggregation (6 groups / 8 ports)
- + 256 802.1Q VLANs
- + 802.1P QoS (4 Queues)
- + 802.1x Port-based Authentication
- + Broadcast Storm Control
- + Static MAC Address
- + DHCP Client
- + Active Circuit Protection

Network Management:

- + GUI Management
- + SNMP v1
- + Port Mirroring (one-to-one & many-to-one)
- + "Smart Console" Management Utility

(24) Port 10/100Mbps + (4) 1000BASE-T + (2) Combo Ports & PoE

The DES-1228P Web Smart Switch from D-Link is a cost-effective solution for the small and medium business that requires basic management features like VLAN segmentation, QoS prioritization, and secure 802.1x login and authentication, showcased in a low-cost, easy-to-configure, and GUI managed 'smart' business solution. The DES-1228P comes with 24 10/100BASE-TX Fast Ethernet ports, 4 1000Base-T ports and 2 combo ports for flexible copper/fiber Gigabit connections to storage area network devices, servers, or core switching solutions. It supports 24 ports of PoE up to 15.4 watts to power PD devices such as APs, phones, and cameras. The Graphical User Interface allows you to implement Quality of Service (QoS), VLANs and security without having to go through complex command line management usually found in other managed switches.

D-Link Safeguard Engine

The DES-1228P incorporates advanced mechanisms to detect an attack against the central processing unit of the switch and to take corrective action on the attacking interface. When a Denial of Service (DoS) attack is waged against the DES-1228P, the D-Link Safeguard Engine detects the threat and prevents overload of the central processor thus insuring network integrity and helping to maintain open network bandwidth channels.

IEEE 802.3af PoE

The DES-1228P features 24 10/100BASE-TX ports that support IEEE 802.3af PoE protocol. Each of the 24 PoE ports can supply up to 15.4 Watts, a total PoE-budget of 170 Watts, allowing users to attach any IEEE 802.3af compliant device to the DES-1228P without needing additional power. This eliminates the need of having to place networking devices within close proximity of a power outlet and minimizes cable clutter in awkward places such as ceilings or walls. For devices that are not IEEE 802.3af compliant, a PoE adapter, such as D-Link's DWL-P50 can be used to enable the non-compliant device to receive power through the DES-1228P.

Port Trunking

The DES-1228P supports static port trunking of up to 6 groups of 8 ports per device. Ports can be combined together to create multi-link loadsharing aggregated trunks to a server or a network backbone. To expand the network, you can also make use of link aggregation to eliminate bottlenecks between the cascaded switches.

802.1Q VLANs

The DES-1228P provides support for 802.1Q VLANs for improved security and bandwidth utilization. VLANs work by segmenting broadcast domains thus reducing network congestion due to constant network broadcasting. In addition VLANs provide a means of securing each broadcast domain from all others. This in turn prevents users on one VLAN from gaining access to resources on other network segments. VLANs can be configured to segment departmental resources. For example, VLANs can be implemented on an SMB network to prevent the Marketing department from gaining access to secure resources in the Accounting department.

SNMP Management

The DES-1228P supports SNMP v1. SNMP is a useful tool in managing and controlling SNMP supported network devices. SNMP enables the DES-1228P to be polled to provide valuable information about the status of the unit and send traps on abnormal events. This sharing of vital management information saves time and money.

802.1p Priority Tagging

Like 802.1Q VLAN tagging, 802.1p places a tag in a frame to indicate the priority of the frame. A tag will represent a priority of 0-7 and an 802.1Q compliant switch can read this tag and prioritize traffic accordingly. This differs from port based QoS in that in Port-Based QoS all traffic entering a specific port is prioritized the same way with the same value. In 802.1P a port can receive frames with varying priority tags and classify them based on these tags. A VoIP phone that supports 802.1P can assign a priority to its VoIP traffic and when it enters the switch the switch can give it a higher priority so that voice traffic is always clear and jitter-free.



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802.1D Spanning Tree

Spanning Tree provides protection from unintentional cabling loops forming within a network infrastructure. Loops are dangerous in that they create an unending circle where broadcast and multicast traffic propagate across the network in an endless loop. This creates a storm of traffic that overwhelms the network and brings traffic to a crawl. 802.1D Spanning tree detects and breaks these loops ensuring network uptime.

IGMP Snooping

IGMP Snooping allows for the forwarding of multicast packets such as streaming audio, video, without increasing network broadcast congestion. By snooping IGMP registration information within a frame, a list of workstations who have joined the multicast group is created. This list then allows the switch to intelligently forward packets to only the appropriate member workstations.

802.1x Authentication

802.1x Authentication 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 workstation attached to the DES-1228P to provide a username and password before gaining access to the local area network.

Operational Simplicity

The DES-1228P supports a wide array of plug-in-play features:

- 10/100Mbps auto-negotiation
- Universal UTP cable recognition for auto straight-through or crossover cable detection
- Full/Half duplex support
- IEEE standards support

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 graphic pictures, diagrams and easy to understand navigation menus, configuring the DES-1228P with the features you require is as easy as surfing the net. The DES-1228P supports many of today's most sought after features like 802.1P priority queuing, 802.1Q VLANs, port trunking, 802.1x authentication, port mirroring, SNMP, spanning tree, link aggregation, IGMP Snooping, broadcast storm control, and more.

Technical Specifications

Product Specifications

Forwarding Mode	Store and Forward
Switching Capacity	12.8 Gbps
MAC Address	8K MAC Address Table
IGMP snooping	Support 64 multicast groups
802.1D Spanning Tree	Support per device STP & BPDU forwarding.
Static Port Trunk	Support max 6 groups per device and 8 ports per group
Flow Control	802.3x supported flow control
Port mirroring	Support one-to-one or many-to-one port mirroring Support TX,RX and Both mode
IEEE 802.1Q VLAN Group	Support 256 static VLAN groups, able to configure VID from 1-4094
IEEE 802.3af	Power over Ethernet
IEEE 802.1p support	4 Queues
IEEE 802.1x Port-based Access Control	Default 802.1x forwarding
Broadcast Storm Control	Allow specifying the per device threshold in terms of 8K - 4096K Bytes per second
Static MAC Address	Support 256 Static MAC entries
D-Link Safeguard Engine	Protect 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, support SNMP Trap
DHCP client	Supports ability to function as a DHCP client
Switch Discovery/Management Utility	Up to 256 agents/switches
Port Setting	Can set Speed, Duplex mode, flow control
Configuration & Firmware Backup/Restore, Reboot	Via Web GUI
Firmware Upgrade	Via Smart Console Utility

Interface Options

RJ-45 (24 x 10/100BaseTX 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 Half-Duplex mode
	IEEE 802.3ab compliance
SFP (2 combo 1000Base-T/SFP ports)	IEEE 802.3z compliance
	IEEE 802.3u compliance
	IEEE 802.3x Flow Control support for Full-Duplex mode, Back Pressure when Half-Duplex mode

Network Management

In & Out of Band	HTTP, SNMP v1, Port Mirroring
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Physical & Environmental

AC input	100-240 VAC, 50/60Hz, internal universal power supply
Operation Temperature	0° - 40°C (32° - 104° F)
Storage Temperature	-10° - 70°C (14° - 158° F)
Humidity	Operation: 10%-90% RH - Storage: 5% ~ 90% RH
Power consumption:	222 watts (maximum)
Heat Dissipation:	757.51 (btu/hr)
Dimension (WxDxH)	19-inch, 1U Rack-mount size, 432mm x 108mm x 44mm (17" x 4.25" x 1.73")
Weight	7.18 lbs (3.3 kg)
PoE Budget	170 watts
PoE Power	Sent over data pairs
PoE Ports	Ports 1 - 24 up to 15.4 watts

Emission (EMI) and Safety Certifications

EMI-EMC Compliance	FCC class A, CE Class A, VCCI Class A
Safety Compliance	cUL, UL

Ordering Information

Part Number	Description
DES-1228P	Web Smart (24) Port 10/100Mbps + (4) 1000BASE-T + (2) Combo Ports & PoE
DEM-310GT	1000Base-LX SFP/Mini Gigabit Interface converter (up to 10km)
DEM-311GT	1000Base-SX SFP/Mini Gigabit Interface converter (up to 550m)
DEM-211	100BASE-FX 155 Mbps Multi-Mode 2km SFP Transceiver