

## 24/48-Port Ethernet Switch

### Web Smart Switch

- 4 Gigabit Uplinks & Combo 1000BASE-T/SFP Support
- Versatile Management Through "SmartConsole" or Web-Based GUI
- VLAN Traffic Segmentation & Priority Queue QoS
- Network Access Security
- Built-in MIB for SNMP Management
- 802.3af Power Over Ethernet Option for Special Installation Sites \*

#### FEATURES

- **Choices of 24 and 48 10/100BASE-TX Ethernet Ports**
- **Per-Port 802.3af Power Over Ethernet \***
- **2 10/100/1000T Gigabit Ports**
- **2 Combo 10/100/1000T/SFP Gigabit Ports**
- **Up to 6 Port Trunks for Server Connection/Switch Cascading**
- **802.1Q VLAN Tagging for Traffic Segmentation**
- **802.1p Priority Queues for QoS**
- **Access Security With 802.1x Port-Based Authentication**
- **Broadcast Storm Control for Bandwidth Management**
- **Safeguard Engine Feature for Guaranteed Switch Performance**
- **Versatile Management Through SmartConsole or Web-Based GUI**
- **SNMP Management Support**
- **19-Inch Standard Rack-Mount Size**

\* For switch model DES-1228P only

**Smart**<sup>™</sup>

**D**-Link's next generation Web Smart Ethernet switch series blends plug-and-play simplicity with exceptional value and reliability for small and medium-sized business (SMB) networking. Each switch is housed in a new style rack-mount metal case with easy-to-view front-panel diagnostic LEDs, and provides advance features including 4 Gigabit uplinks, combo 1000BASE-T/SFP, network security, traffic segmentation, QoS and versatile management.

*Choices of 24 and 48 ports.* Two port densities are available for selection: 24 Ethernet ports and 48 Ethernet ports. Supporting auto-detection of MDI/MDIX, these switches bring inexpensive and easy Ethernet connection to the desktops. Each switch provides 4 Gigabit uplinks connection to a Gigabit backbone or servers.

*Power Over Ethernet Option.* Switch model DES-1228P provides built-in 802.3af Power over Ethernet for network sites needing to run power over the network cables. Each the 24 10/100BASE-TX Ethernet ports of this switch provides up to 15.4 watts power for connected wireless access points, IP phones and other PoE-supported devices, allowing them to be deployed at difficult places such as on high walls and ceilings, where AC power outlets are not readily available.

*Extensive Layer 2 Features.* Implemented as complete L2 devices, these switches include functions such as IGMP snooping, port mirroring, Spanning Tree, port trunks and 802.3x Flow Control to enhance performance and network resiliency.

*Traffic Segmentation and QoS.* The switches support 802.1Q VLAN Tagging for traffic segmentation by groups to enhance network security and performance. They also support 802.1p Priority Queues, enabling users to run bandwidth-sensitive applications such as streaming multimedia and VoIP on the network. These functions allow the switches to work seamlessly with managed VLAN and 802.1p traffic on the network.

*Network Security.* The switches provide MAC address filters screen access to the network. They support 802.1x port-based authentication, allowing the network to be configured with external RADIUS servers. Additional features like D-Link Safeguard Engine protect the switches against traffic flooding caused by virus/worm outbreaks.

*Versatile Management.* Switch configuration and management is through the SmartConsole Utility or a web-based GUI. SmartConsole is an easy way to access the switch from a local PC; users do not have to type in any IP address or subnet, and all switches connected on the network are displayed on the screen for instant access. The web-based GUI allows switch access from any location on the network or from a remote site, using a web-browser. It allows extensive switch configuration setting, which can be backed up for duplication in other switches.

In addition, users can also use the built-in MIB to poll the switches for information about their status and send traps of abnormal events. MIB support allows users to integrate the switches with other third-party devices for management in an SNMP environment.



**Technical Specifications**

DES-1228

DES-1228P

DES-1252



<b>Interface</b>	10/100BASE-TX Ports	24	24 (With Per Port 802.3af PoE)	48
	10/100/1000BASE-T Ports	2	2	2
	Auto-Negotiation of Network Speed	✓	✓	✓
	Auto-MDI/MDIX	✓	✓	✓
	802.3x Flow Control	✓	✓	✓
	Combo 10/100/1000BASE-T/SFP	2	2	2
<b>Performance</b>	Switch Fabric	12.8Gbps	12.8Gbps	17.6Gbps
	Packet Forwarding Rate	9.52Mpps	9.52Mpps	13.1Mpps
	Packet Buffer	128KB	128KB	128KB
	MAC Address Table	8K Entries	8K Entries	8K Entries
<b>Power</b>	Supplied PoE Power Per Port	-	15.4 Watts	-
	Total Supplied PoE Power Per Device	-	170 Watts	-
	Power Supply	100 to 120VAC, 200 to 240VAC, 50/60Hz, Internal Power Supply		
	Power Consumption (Max.)	18.35 Watts	222 Watts	26.2 Watts
<b>Physical &amp; Environmental</b>	BTU/Hr.	62.75	757.51	86.95
	Ventilation	Fanless	4 40 x 40mm DC Fans	Fanless
	Dimensions	440 x 140 x 44 mm (17.32 x 5.51 x 1.73 inches)	440 x 209 x 44 mm (17.32 x 8.23 x 1.73 inches)	440 x 310 x 44 mm (17.32 x 12.20 x 1.73 inches)
	Size	19-Inch Rack-Mount Width, 1U Height		
	Weight	2.08 kg (4.58 lbs)	3.20 kg (7.05 lbs)	3.72 kg (8.20 lbs)
	Operating Temperature	0°C to 40°C (32°F to 104°F)		
	Storage Temperature	-10°C to 70°C (14°F to 158°F)		
	Operating Humidity	10% to 90% RH		
	Storage Humidity	5% to 90% RH		
	EMI	FCC Class A, CE, VCCI, C-Tick		
Safety	cUL			



## Software Functions

### General

#### L2 Features

- IGMP snooping: supports 64 multicast group
- Default flooding for non-joined multicast traffic
- 802.1D Spanning Tree
- Port trunk (Link Aggregation): up to 6 groups per device, up to 8 ports per group
- Port mirroring

#### VLAN

- 802.1Q VLAN standard (VLAN Tagging)
- Up to 256 static VLAN groups

#### QoS (Quality of Service)

- 802.1p Priority Queues standard
- Up to 4 queues per port
- Supports WRR mode in queue handling

#### Security

- 802.1x port-based access control
- Broadcast Storm Control: threshold of 8K, 16K, 32K, 64K, 128K, 512K, 1024K, 2048K, 4096K bytes per second
- D-Link Safeguard Engine to protect CPU from broadcast/multicast/unicast flooding

#### Management

- Web-based GUI or SmartConsole Utility
- SNMP support

- DHCP client
- Trap setting for destination IP, system events, fiber port events, twisted-pair port events
- Port access control
- Web-based configuration backup/restoration
- Web-based firmware backup/upload
- Firmware upgrade using SmartConsole Utility
- Reboot

#### MIB

- RFC 1213 MIB-II
- D-Link Enterprise Private MIB

#### Optional SFP Transceivers

DEM-211	SFP transceiver, 100BASE-FX standard, multi-mode fiber, max. 2 km distance, 3.3V operating voltage	DEM-312GT2	SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. 2 km distance, 3.3V operating voltage
DEM-210	SFP transceiver, 100BASE-FX standard, single-mode fiber, max. 15 km distance, 3.3V operating voltage	DEM-314GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. 50 km distance, 3.3V operating voltage
DEM-310GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. 10 km distance, 3.3V operating voltage	DEM-315GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. max. 80 km distance, 3.3V operating voltage
DEM-311GT	SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. 550 m distance, 3.3V operating voltage	DEM-330T	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. 10 km distance, 3.3V operating voltage, 1550 nm Tx wavelength, 1310 nm Rx wavelength
		DEM-330R	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. 10 km distance, 3.3V operating voltage, 1310 nm Tx wavelength, 1550 nm Rx wavelength
		DEM-331T	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. 40 km distance, 3.3V operating voltage, 1550 nm Tx wavelength, 1310 nm Rx wavelength
		DEM-331R	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. 40 km distance, 3.3V operating voltage, 1310 nm Tx wavelength, 1550 nm Rx wavelength

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