D-Link®

Smart ™

DES-1250G

48-Port 10/100Mbps Smart Switch

With 2 Combo Copper Gigabit/SFP

The DES-1250G Smart Switch presents a cost-effective solution for the small and medium business to implement Ethernet packet switching with easy fine-tuning of network performance and security. This switch comes with high port density of 48 10/100BASE-TX Ethernet ports and 2 combo 1000BASE-T/SFP for flexible copper/fiber Gigabit connection. Port trunks are provided for server deployment and network backbone attachment, while functions important for bandwidth-intensive applications such as Priority Queues and VLANs are supported to enable you to implement Quality of Service (QoS) and security without having to go through complex network management usually found in other managed switches.

High Density With 48 10/100Mbps Ports

The switch provides 48 10/100Mbps ports in a low-profile rack-mountable housing. These ports support auto-sensing and auto-negotiation of network speeds and full/half duplex for connection to workstations and print servers, giving each a dedicated bandwidth. All ports support auto MDI/MDIX crossover, allowing you to connect to any node without the need to change your usual straight-through twisted-pair cables.

2 Combo 1000BASE-T/SFP for Flexible Gigabit Connection

2 combo 1000BASE-T/SFP are provided for flexible copper or fiber Gigabit connection. You can select to install optional transceivers in the SFP slots for short, medium or long-distance fiber backbone attachment. Use of the SFP will disable their corresponding built-in 1000BASE-T connections.

Port Trunks for Aggregated Bandwidths

Ports can be combined together to create multi-link load-sharing aggregated bandwidths to a server or a network backbone. To expand the network, you can also make use of the port trunks to eliminate bottlenecks between the cascaded switches. The switch allows you to combine multiple ports into a trunk, and to create multiple trunks per switch.

VLANs for Enhanced Security & Performance

The switch support VLANs to let you improve security and bandwidth utilization by limiting the broadcast domains and confining intra-group traffic within their segments. To segment up the network, VLAN-supported workstations and servers that are connected to the switch can be grouped into different Virtual LANs (VLANs).

Quality of Service Support

The switch supports Layer 2 802.1p Priority Queue control to prioritize network packets. Classification of users' data priorities can be based on a data packet Priority Queue. This QoS function support allows you to run bandwidth-intensive and delay-sensitive applications and to attach video servers to the switch for videoconference.

Port Mirroring

The switch supports port mirroring to assist network traffic monitoring. The network administrator can use this function as a diagnostic tool or debugging feature, especially when fending off an attack. It enables you to keep close track of switch performance and alter it if necessary.

Network Management/Monitoring

The switch provides easy web-based switch configuration and network management/monitoring from any networked station that does away with the need for consoles and console cables. Network devices are auto-discovered and displayed on a network topology, and you can receive traps of system events and port errors while monitoring the network status and statistics from any workstation.

Key Features

- 48 10/100BASE-TX Ethernet ports for workstations
- 2 combo 1000BASE-T/SFP for flexible copper/fiber Gigabit connection
- Auto MDI/MDIX cross over for all twisted-pair ports
- 802.3x Flow Control for protection against data loss
- Port mirroring for traffic monitoring

- Port trunks for server/network backbone attachments
- 802.1Q VLAN to enhance security/network performance
- 802.1p Priority Queues, port-based QoS
- Easy web-based switch configuration/management and network monitoring
- Standard rack-mount size

DES-1250G
Technical Specifications

General

Port Standards & Functions
- IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)
- IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)
- IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)
- ANSI/IEEE 802.3 NWay auto-negotiation
- IEEE 802.3x Flow Control
- Port mirroring

Number of Ports
- 48 10BASE-T/100BASE-TX ports
- 2 combo 10/100/1000BASE-T/SFP *

* Use of the SFP will disable their corresponding 10/100/1000BASE-T connections.

SFP Support
- IEEE 802.3z 1000BASE-SX multi-mode fiber (DEM-311GT transceiver)
- IEEE 802.3z 1000BASE-SX multi-mode fiber (DEM-312GT2 transceiver)
- IEEE 802.3z 1000BASE-LX single-mode fiber (DEM-310GT transceiver)
- IEEE 802.3z 1000BASE-LH single-mode fiber (DEM-314GT transceiver)
- IEEE 802.3z 1000BASE-ZX single-mode fiber (DEM-315GT transceiver)
- IEEE 802.3ab 1000BASE-T Cat. 5 twisted-pair (DGS-712 transceiver)

Protocol
CSMA/CD

Data Transfer Rates
- Ethernet:
  10Mbps (half duplex)
  20Mbps (full duplex)
- Fast Ethernet:
  100Mbps (half duplex)
  200Mbps (full duplex)
- Gigabit Ethernet:
  2000Mbps (full duplex)

Topology
Star

Network Cables
- UTP Cat. 5, Cat. 5e (100 m max.)
- EIA/TIA-568 100-ohm STP (100 m max.)

Full/half Duplex
- Full/half duplex for 10/100Mbps speeds
- Full duplex for Gigabit speed

Media Interface Exchange
Auto MDI/MDIX adjustment for all twisted-pair ports

LED Indicators
- Per device: Power/CPU
- Per 10/100BASE-TX port: Link/Act, 10/100Mbps Speed
- Per 10/100/1000BASE-T port: Link/Act, 100/1000Mbps Speed
- Per SFP: Link/Act

Software

VLAN
- 802.1Q VLAN Tagging
- Maximum 64 VLANs per device

Quality of Service (QoS)
- 802.1p Priority Queues
- Maximum number of queues: 2

Port Trunks
- Up to 6 10/100Mbps port trunks per device
  (2, 4 or 8 10/100BASE-TX ports per trunk)
- 1 Gigabit port trunk per device (2 1000BASE-T ports per trunk)

Management & Configuration
- Web-based configuration
- Auto-discovery utility
- Configuration reset through software or hardware (reset button)

Performance

Switch Capacity
13.6Gbps

Transmission Method
Store-and-forward

MAC Address Table
4K entries per device

MAC Address Learning
Automatic update

Packet Filtering/Forwarding Rates (half duplex)
Maximum 1,488,095 pps per port

RAM Buffer
1.536MBytes per device

Physical & Environmental

AC Input
100 to 240 VAC 50/60Hz internal universal power supply

Power Consumption
28 watts (max.)

Ventilation
40 x 40 mm DC fan x 1

Operating Temperature
0° to 40 °C

Storage Temperature
-10° to 70 °C

Operating Humidity
10% to 90% non-condensing

Storage Humidity
5% to 90% non-condensing

Dimensions
441 (W) x 309 (D) x 44 (H) mm
19-inch standard rack mounting size

Weight
4.4 kg

Emission (EMI)
- FCC Class A
- CE Class A
- C-Tick

Safety
UL

CE FC ACN 052 202 838 UL LISTED ITE E141136 66F9

Ordering Information

10/100Mbps Smart Switch	
DES-1250G	48 10/100BASE-TX ports, 2 combo 1000BASE-T/SFP
Optional SFP Transceiver	
DEM-310GT	1000BASE-LX SFP transceiver, single-mode fiber, max. distance 10km, 3.3V
DEM-311GT	1000BASE-SX SFP transceiver, multi-mode fiber, max. distance 550m, 3.3V
DEM-312GT2	1000BASE-SX SFP transceiver, multi-mode fiber, max. distance 2km, 3.3V
DEM-314GT	1000BASE-LHX SFP transceiver, single-mode fiber, max. distance 50km, 3.3V
DEM-315GT	1000BASE-ZX SFP transceiver, single-mode fiber, max. distance 80km, 3.3V
DGS-712	1000BASE-T SFP transceiver, Cat. 5 twisted-pair, Max. distance 100m, 3.3V

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