D-Link®

—— DES-3250TG

48-Port Managed 10/100Mbps Switch
With 2 Combo 1000BASE-T/SFP Gigabit

This SNMP managed switch provides 48 10/100BASE-TX ports, plus 2 combo 1000BASE-T/SFP (mini GBIC) Gigabit ports, allowing cost-effective and flexible connection to 48 workstations and servers. Advanced features like port trunking, VLANs and priority queues are provided, allowing a department to effectively deploy a bottleneck-free switching network for easy integration with a larger enterprise or campus network.

48 10/100BASE-TX Ports for Workstations

The switch provides 48 10/100Mbps ports supporting auto-sensing and auto-negotiation of network speeds and full/half duplex. These ports can connect to workstations and print servers, giving each a dedicated bandwidth. All ports support auto MDI/MDIX plug-and-play, allowing you to connect to workstations, servers, or other switches from any port without the need to change your usual straight-through twisted-pair cables.

2 Flexible Gigabit Connections

The switch provides 2 combo 1000BASE-T/SFP (mini GBIC) for flexible Gigabit connection on your existing Cat. 5 twisted-pair cable or the fiber optics. For fiber connection, you can select to install an optional transceiver in the SFP slots for short, medium or long distance fiber backbone attachment. Use of the SFP will disable their corresponding built-in copper 10/100/1000BASE-T connections.

VLANs for Enhanced Security & Performance

VLANs improve security and bandwidth utilization by limiting the broadcast domains and confining intra-group traffic within their segments. To segment up the network, nodes supporting IEEE 802.1Q VLAN Tagging connected to the switch can be grouped into different Virtual LANs (VLANs). The switch also supports GARP and GVRP (GARP VLAN Registration Protocol) for automatic VLAN configuration distribution.

Advanced QoS Support

The switch supports not only Layer 2 802.1p Priority Queue control, but also a variety of ways to prioritize network packets. Multi-layer information from L2 to L4 can be used to classify packet priorities. This function support allows you to attach IP telephony devices or video servers to the switch to run delay-sensitive applications like video conference.

IGMP Snooping for Broadcast Control

The switch listens to IGMP (Internet Group Management Protocol) messages to build mapping table and associate forwarding filters. It dynamically configures the switch ports to forward IP multicast traffic only to those ports associated with multicast hosts.

Port Mirroring

This function allows you to mirror adjacent ports for the purpose of analyzing incoming and outgoing packets where packet patterns can be studied.

Port Trunks for Aggregated Bandwidths

Port trunks provide an economical alternative for server connection to attain Gigabit bandwidth. Up to 8 10/100BASE-TX ports can be combined together to create a multi-link load-sharing aggregated bandwidth to a server.

Features

- 48 10/100BASE-TX ports
- 2 combo 1000BASE-T/SFP (mini GBIC) Gigabit ports
- Auto MDI/MDIX for all twisted-pair ports
- 802.3x Flow Control for protection against data loss
- 802.1Q and asymmetric VLANs for enhanced performance and security
- QoS with 802.1p Priority Queues for multimedia applications
- 802.1x port-based/MAC-based authentication and Access Control List (ACL)

- IGMP snooping (multicasting) for multimedia application support
- 802.3ad LACP supported port trunks
- 802.1D and 802.1w Rapid Spanning Tree for redundant backup bridge paths
- SNMP v.1, v.2C, v.3 management, RMON monitoring, Telnet support, log file
- IP filtering on management interface
- SYSLOG

DES-3250TG

Technical Specifications

General

Standards
- IEEE 802.3 10BASE-T Ethernet
- IEEE 802.3u 100BASE-TX Fast Ethernet
- IEEE 802.3ab 1000BASE-T Gigabit Ethernet
- IEEE 802.3z Gigabit Ethernet
- ANSI/IEEE 802.3 NWay auto-negotiation

Number of Ports
- 48 10/100BASE-TX ports
- 2 combo 10/100/1000BASE-T/SFP (mini GBIC)

* Use of the SFP will disable their corresponding 1000BASE-T ports

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)

Network Cables
- **10BASE-T:**
  UTP Cat. 3, 4, 5 (100 m max.)
  EIA/TIA-586 100-ohm STP (100 m max.)
- **100BASE-TX, 1000BASE-T:**
  UTP Cat. 5, Cat. 5e (100 m max.)
  EIA/TIA-568 100-ohm STP (100 m max.)
- IEEE 802.3z: Single-mode and multi-mode fiber

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

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

LED Indicators
- Per 10/100Mbps port: Link/Act
- Per Gigabit port: Link/Act
- Per device: Power, Console

Software

VLAN
- 802.1Q Tagged VLAN
- Asymmetric VLAN
- GARP/GVRP
- Number of VLANs: 255 per device (max.)

Traffic Classification (CoS)
- 802.1p-based Priority Queues (4 queues)
- TOS-based
- DSCP (Diffserv)
- MAC SA/DA-based

Spanning Tree
- 802.1D Spanning Tree compatible
- 802.1w Rapid Spanning Tree

Multicast
IGMP Snooping

Access Security
- MAC based: user-specified MAC addresses
- VLAN based: ingress checking enable/disable
- 802.1x port-based/MAC-based authentication
- RADIUS client for 802.1x support
- Disable MAC address learning per port *

* Disables MAC address learning on one or more ports for security purposes. If MAC address learning is disabled, only broadcast traffic and packets destined to a permanent MAC address matching that port number, are forwarded. The default setting is enabled.

Port Trunk
- Up to 8 ports per trunk
- Operation mode: load sharing
- 802.3ad LACP link aggregation support

Performance

Transmission Method
Store-and-forward

MAC Address Table
8K entries per device

MAC Address Learning
- Automatic update
- Disable MAC address learning per port

Packet Filtering/Forwarding Rates (half duplex)
- Ethernet: 14,880 pps per port
- Fast Ethernet: 148,810 pps per port
- Gigabit Ethernet: 1,488,100 pps per port

RAM Buffer
64Mbytes per device

Configuration & Management

Management Support
- SNMP v.1, v.2C, v.3
- RMON monitoring
- Telnet
- Command Line Interface (CLI)
- Log file

MIBs
- MIB-II (RFC 1213)
- Bridge MIB (RFC 1493)
- RMON MIB (RFC 1757)
- Ethernet-like MIB (RFC 1643)
- 802.1p MIB (RFC 2674)
- D-Link enterprise MIB

RMON Groups
1, 2, 3, 9 (Alarm, Statistics, History, Event)

IP Number Self-identification
Through DHCP client, Bootp client

Firmware Upgrade
TFTP

Console Port
DB-9 RS-232 DCE

Physical & Environmental

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

Power Consumption
30 watts (max.)

Operating Temperature
0 ° to 40 °C

Storage Temperature
-40° to 70 °C

Humidity
5% to 95% non-condensing

Dimensions
441 (W) x 309 (D) x 44 (H) mm (device only)
19-inch standard rack-mount width, 1 U height

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

Safety
CSA International

Ordering Information

10/100Mbps Managed Switch

DES-3250TG   48 10/100BASE-TX ports
2 combo 10/100/1000BASE-T/SFP (mini GBIC)

Optional SFP Transceiver

DEM-310GT   SFP transceiver for 1000BASE-LX,
single-mode fiber, max. distance 10km, 3.3V

DEM-311GT   SFP transceiver for 1000BASE-SX,
multi-mode fiber, max. distance 550m, 3.3V

DEM-314GT   SFP transceiver for 1000BASE-LHX,
single-mode fiber, max. distance 40km, 3.3V

DEM-315GT   SFP transceiver for 1000BASE-ZX,
Single-mode fiber, max. distance 80km, 3.3V

D-Link®

RECYCLABLE
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