



16-port switch (model number DES-1016F) with 14 auto-sensing 10/100Mbps ports and 2 100BASE-FX fiber ports (top), 24-port switch (model number DES-1024F) with 22 auto-sensing 10/100Mbps ports and 2 100BASE-FX fiber ports installed in the expansion slot (bottom). 2 MDI uplink ports are located next to the fiber ports.

16/24-port Unmanaged 10/100Mbps Switches with Advanced Features

These unmanaged 10/100Mbps switches are designed to enhance workgroup performance while providing a high level of flexibility. Powerful yet easy to use, these devices allow users to simply plug any port to either a 10Mbps or 100Mbps network to multiply bandwidths, boost response time and satisfy heavy load demands.

Choices of 16 and 24 Ports

Each switch comes with either 16 or 24 ports. The 10/100Mbps ports auto-sense the connected node speed, allowing for flexible connection and Ethernet/Fast Ethernet integration. These intelligent ports detect the network speed and auto-negotiate between 100BASE-TX and 10BASE-T, as well as full- and half-duplex.

2 Secure Fiber Links

With a built-in slot, users can configure the switches with 2 fiber ports to establish 2 secure, long-distance fiber links between 2 switches or between a switch and a server. Capable of running at full-duplex, these ports serve well in high EM interference environments, providing cable distances of up to 2 km.

2 Uplinks for Easy Expansion

2 MDI uplink ports supporting 10/100Mbps connection are provided, allowing easy cascading to 2 other switches to expand the port density. Both uplink ports support full-duplex speed of 200Mbps.

High-bandwidth Port Trunking

Up to 4 ports can be combined into 1 high-bandwidth, full-duplex 800Mbps switch-to-switch or switch-to-server connection. Port trunking uses currently available technology to attain near Gigabit speeds on multiple load-sharing connection, eliminating the need to upgrade to new Gigabit devices.

VLANs for Performance and Security

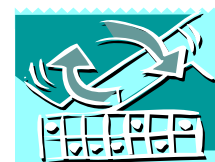
The switches support up to multiple port-based VLANs to extend the broadcast domain, segment network traffic and improve performance and manageability. This allows adds, moves and changes to be easily carried out. It also provides security by limiting broadcast domains, traffic in different segments and subnets can be separated for maximum throughput and secure networking.

Plug-and-Play with Easy Configuration

The switches provide plug-and-play connection to mixed bandwidth workgroups while letting the administrator easily set up port trunking and VLAN groups via a built-in console port.

Key Features

- 16 or 24 ports per switch
- 10/100Mbps ports support full/half-duplex
- 1 expansion slot for 2 optional fiber ports
- Dynamic buffer allocation for each port
- 4 trunks for 16-port switch, 6 trunks for 24-port switch
- Up to 800Mbps full-duplex (4 ports) per trunk
- Wire-speed filtering/forwarding rates
- Auto-learning of network configuration
- Auto-correction of reverse twisted-pair polarity
- Config port for configuration setup



Unmanaged Switches

Technical Specifications

General

Standards

- IEEE 802.3 10BASE-T Ethernet
- IEEE 802.3u 100BASE-TX, 100BASE-FX Fast Ethernet
- ANSI/IEEE 802.3 NWay auto-negotiation

Protocol

CSMA/CD

Data Transfer Rates

- Ethernet:
 - 10Mbps (half duplex)
 - 20Mbps (full duplex)
- Fast Ethernet:
 - 100Mbps (half duplex)
 - 200Mbps (full duplex)

Topology

Star

Network Cables

- 10BASE-T:
 - 2-pair UTP Cat. 3, 4, 5 (100 m)
- 10BASE-T, 100BASE-TX:
 - EIA/TIA-586 100-ohm screened twisted-pair (STP) (100 m)
- 100BASE-TX:
 - 2-pair UTP Cat. 5 (100 m)
- 100BASE-FX:
 - 62.5/125 micron multimode fiber-optics (2 km)

Number of Ports

- DES-1016: 10/100Mbps port x 16
- DES-1024: 10/100Mbps port x 24
- DES-1016F: 10/100Mbps port x 14, 100BASE-FX port x 2
- DES-1024F: 10/100Mbps port x 22, 100BASE-FX port x 2

Media Interface Exchange

MDI RJ-45 x 2 (shared with 2 10/100Mbps ports)

Twisted-pair Rx Reverse Polarity

- Auto-correction

LED Report

Per device:

- Power

Per port:

- 100Mbps speeds
- Full duplex
- Link/activity

Performance

Transmission Method

- Store-and-forward

Filtering Address Table

- 1K entries per device

MAC Address Learning

- Automatic update
- Max Age: fixed

Packet Filtering Rates

- 10BASE-T: 14,880 pps per port (half-duplex)
- 100BASE-TX, 100BASE-FX: 148,800 pps per port (half-duplex)

Packet Forwarding Rates

- 10BASE-T: 14,880 pps per port (half-duplex)
- 100BASE-TX/100BASE-FX: 148,800 pps per port (half-duplex)

RAM Buffer

- 3MB per device
- Dynamic allocation for each port

Port Trunks

Number of Ports per Trunk

Up to 4 ports (800Mbps at full-duplex)

VLAN

Number of Ports per VLAN

- 16-port switches: 16 ports max.
- 24-port switches: 24 ports max.

Number of VLANs per Switch

- Up to switch's total number of ports
- Port overlapping in different VLANs permitted

Physical & Environmental

AC Input

100 - 240 VAC, 50/60 Hz
Internal universal power supply

Power Consumption

50 watts (max.), 5V/8Amp.

Ventilation

40 x 40 mm DC fan x 2

Operating Temperature

0° - 50 °C
(32° - 122 °F)

Storage Temperature

-30° - 60 °C
(-22° - 140 °F)

Humidity

5% - 95% non-condensing

Dimensions

442 x 207 x 54 mm
(17.4 X 8.15 X 2.125 inches)
19-inch rack-mount width, 1.25 U height

Weight

4 kg (8.8 lb.) approx.

Emission (EMI)

- FCC Class A
- CE Mark
- C-Tick Class A
- VCCI Class A

Safety

- UL (UL 1950)
- CSA (CSA950)
- TUV/GS (EN60950)



Ordering Information

Ethernet/Fast Ethernet Switches

DES-1016	16 auto-sensing 10/100Mbps ports
DES-1016F	14 auto-sensing 10/100Mbps ports, 2 100BASE-FX fiber ports
DES-1024	24 auto-sensing 10/100Mbps ports
DES-1024F	22 auto-sensing 10/100Mbps ports, 2 100BASE-FX fiber ports

Optional Modules

DES-116	2 auto-sensing 10/100Mbps ports
DES-116F	2 100BASE-FX fiber port

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