



DES-1218F

DES-1218F Smart switch with 16 built-in 10/100Mbps ports and an open slot for installation of 2 optional Fast Ethernet fiber ports.

## 10/100Mbps Smart Switch With Optical Fiber Module

The DES-1218F is a 10/100Mbps Smart Switch designed for departmental connection. It provides 16 10/100Mbps ports and an open slot for optional Fast Ethernet fiber ports. This Switch Offers advanced features that include port trunking, VLANs and priority queues, allowing a department to effectively deploy a bottleneck-free switching network that can also be easily integrated into a larger enterprise or campus network.

### 16 10/100Mbps Ports

The switch provides 16 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-II/MDI-X uplink, 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.

### Fast Ethernet Fiber Ports

Optional Fast Ethernet fiber ports can be installed in the open slot. Transferring data at 200Mbps full duplex over the fiber cable, these ports can be used to connect servers over the reliable fiber cable, or to attach the switch to the network fiber backbone.

### Flow Control to Prevent Packet Loss

The switch supports standard IEEE 802.3x Flow Control. Working in conjunction with buffer overrun auto-detection, this data transfer mode provides protection against possible data loss for 802.3x supported servers directly connected to the switch.

### Port Trunks for Aggregated Bandwidths

With low cost per port, port trunking provides an easy and economical alternative solution for server connection to attain Gigabit bandwidth. Up to 4 10/100Mbps ports can

be combined together to create a multi-link load-sharing aggregated bandwidth to a server. You can also configure the port trunk to have redundant backup links, with stand-by links taking over in case of a fail-over of the active links. The switch can support up to 9 port trunks.

### 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, workstations connected to the switch can be grouped into different Virtual LANs (VLANs). Up to 18 VLANs can be configured for the switch.

### Priority Queues for QoS

The switch supports Layer 2 802.1p Priority Queue control. Each packet going through the switch can be assigned a queue priority number (in the priority bit). Packets with a higher priority number are allowed to pass first. This function support allows you to attach IP telephony devices or video servers to the switch to run delay-sensitive applications like video conference and voice over the Internet.

### 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.

### Key Features

- 16 built-in 10/100Mbps ports
- Open slot for 2 optional Fast Ethernet fiber ports
- Automatic MDI-II/MDI-X uplink for all twisted-pair ports
- Secure store-and-forward switching scheme
- Port-based VLANs
- 802.1p Priority Queues bandwidth control
- Flow control (full duplex), back pressure (half duplex)
- Port mirroring
- Port trunking
- Port enable/disable
- RS-232 console port for switch configuration

# DES-1218F

## Technical Specifications

### General

#### Standards

- IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)
- IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)
- IEEE 802.3u 100BASE-FX Fast Ethernet (fiber)
- ANSI/IEEE 802.3 NWay auto-negotiation
- IEEE 802.3x Flow Control
- IEEE 802.1p Priority Queues

#### Number of Built-in Ports

16 10/100Mbps Fast Ethernet ports

#### 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)
  - EIA/TIA-586 100-ohm STP (100 m)
- 100BASE-TX, 1000BASE-T:
  - UTP Cat. 5 (100 m max.)
  - EIA/TIA-568 100-ohm STP (100m max.)
- 100BASE-FX:
  - 50, 62.5/125 micron multi-mode fiber-optics (2 km max.)

#### Full/half Duplex

- Full/half duplex for 10/100Mbps twisted-pair
- Full duplex only for Fast Ethernet fiber

#### Media Interface Exchange

MDI-II/MDI-X auto uplink for all twisted-pair ports

#### Twisted-pair Rx Reverse Polarity

Auto-correction

#### Flow Control

- IEEE 802.3x Flow Control in full-duplex
- Back pressure in half-duplex

### Performance

#### Switch Fabric

3.6 Gbps

#### Transmission Method

Store-and-forward

#### MAC Address Table

At least 6K entries per device

#### MAC Address Learning

- Dynamic entries: automatic update
- Static entries: none

#### Packet Filtering/Forwarding Rates (half duplex)

- Ethernet: 14,880 pps per port
- Fast Ethernet: 148,810 pps per port

#### RAM Buffer

- 384KBytes per device (excluding optional modules)

### Configuration

#### VLAN

- Port-based VLAN
- Number of VLANs: 18 per device (max.)

#### Priority Queues

- Standard: IEEE 802.1p
- Number of queues: 2

## 10/100Mbps Smart Switch

#### Port Trunks

- Number of ports per trunk: 4 (max.)
- Number of trunks per switch: 9 (max.)
- Operation modes: load sharing or redundant backup (per trunk)
- Supported port type: 10/100Mbps ports

#### Port Access

Enable/disable (per port)

#### Console Port

DB-9 RS-232 DCE

### Physical & Environmental

#### LED Indicators

- Per 10/100Mbps port: 100Mbps speed, Link/Act
- Per device: Power

#### AC Input

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

#### Power Consumption

22 watts (max.)

#### Ventilation

40 x 40 mm DC fan x 1

#### Dimensions

441 x 207 x 44 mm (17.36 x 8.15 x 1.73 inches)  
19-inch rack-mount width, 1 U height

#### Weight

2.6 kg (5.73 lb.)

#### Operating Temperature

0° - 50°C (32° - 122° F)

#### Storage Temperature

-25° - 55° C (13° - 131° F)

#### Humidity

5% - 95% non-condensing

## Ordering Information

#### 10/100Mbps Smart Switch

DES-1218F 16 10/100Mbps ports

#### Optional Module

DES-122F 2 100BASE-FX multi-mode fiber port (SC type Connector) (supporting 2 km cable distance)

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