



DES-1316

## 16-Port PoE 10/100Mbps Smart Switch

*The DES-1316 16-port Smart Switch combines 10/100Mbps Ethernet switching with 802.3af standard remote power on network cabling of up to 100 meters. This switch presents a cost-effective solution for the small and medium business, delivering the perfect combination of functionality, ease of use and affordable pricing. With integral power sourcing capability and inherent support including VLAN, Priority Queues, port trunks and simplified management, this switch is the ideal PoE choice that offers security, Quality of Service, low infrastructure cost and easy deployment.*

### 16 Ethernet Ports, 8 With PoE

The DES-1316 Smart Switch provides 16 10/100Mbps Ethernet ports, of which 8 ports supporting PoE for device connection, and the other 8 ports without PoE for workstation/server attachment. Complying with industry standard 802.3af Power over Ethernet (PoE), the PoE ports provide power over the normally unused pairs of the Ethernet cables, which makes it very valuable for deployment of VoIP phones, remote surveillance cameras and wireless access points. In addition to PoE, the DES-1316 auto-senses Ethernet speeds and negotiates for full/half duplex transmission while supporting auto MDI/MDIX for easy, plug-and-play network connection.

### Designed for Business and Hot Spots

Suitable for installation at offices, factories, hospitals and schools, the DES-1316 can also be used for public Wi-Fi deployments requiring multiple access points, such as in hotels, airports, and marinas. For offices with VoIP, each phone must be individually powered, and a power failure in a building can leave phone service disrupted without an uninterruptible power supply (UPS) on each phone. For surveillance and wireless networks, cameras and access points typically need to be located in out-of-the-way locations such as on the ceilings or rooftops for maximum coverage, where wall AC outlets are inaccessible and providing power to these locations is difficult and expensive. By transmitting remote power through the standard network cabling, the DES-1316 provides a centralized power source for IP phones, cameras and wireless AP, eliminating the need for individual power sources for these devices.

### Centralized Power Provision, Easy Deployment

In addition to eliminating the need for additional, separate wiring to power devices, the DES-1316 is also more cost-effective than deploying an Ethernet switch and multiple single-port PoE injectors. Add a central UPS to the DES-1316, and you can maximize uptime for all connected devices. This switch can simplify your installation while minimizing costs by eliminating UPS for each individual device. It has a rugged metal case, comes with an internal universal power supply, and can be mounted in a standard size equipment rack along with a centralized UPS.

### Port Trunks for Aggregated Bandwidths

Up to 4 non-PoE ports on the DES-1316 can be combined together to create a multi-link load-sharing aggregated bandwidth to a server or a network backbone. You can also make use of the port trunk to eliminate bottlenecks between 2 cascaded switches.

### VLANs for Enhanced Security & Performance

The DES-1316 supports Virtual LANs (VLAN) to let you implement security and improve bandwidth utilization. VLANs limit broadcast domains and confine intra-group traffic within their segments. To segment up the network, you can group devices, workstations and servers on the network into different VLANs, using 802.1Q standard VLAN tagging.

### Quality of Service Support

The DES-1316 provides Layer 2 802.1p control for prioritized network packet transmission. Classification of network data priorities can be based on Priority Queues. This QoS support allows you to run bandwidth-intensive and delay-sensitive applications, and is of particular importance to IP phone and Internet server cameras attached to your network.

### Port Mirroring

The DES-1316 supports port mirroring to assist network traffic monitoring. Your 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. Port

mirroring can be managed locally or remotely. Your administrator places a protocol analyzer on the port receiving the mirrored data to monitor each segment separately. The analyzer captures and evaluates the data without affecting the client on the original port.

### Easy Management

The DES-1316 is designed as an affordable solution for business to implement security, QoS and power sourcing without having to go through complex SNMP network management. All functions can be configured for the switch from any network station via an Internet browser, dispensing you of the need to set up consoles and connect console cables.

### Functions & Features

- 16 10/100BASE-TX Ethernet ports (8 PoE ports, 8 non-PoE ports)
- Complies to 802.3af Power over Ethernet standard
- Supplies up to 15.4 watts per PoE port
- Auto-detection of network devices needing PoE
- Active circuit protection with auto-disable of PoE in case of over current
- PoE ports operate with all 802.3af compliant and non-compliant devices (DWL-P50 required for non-compliant devices)
- Auto MDI/MDIX cross over for all ports
- 802.3x Flow Control for protection against data loss
- Port mirroring for traffic monitoring
- Port trunk for server/network backbone attachment
- 802.1Q VLAN to enhance security/network performance
- 802.1p Priority Queues, port-based QoS
- Easy configuration through web-based management
- Standard rack-mount size

## DES-1316

### Technical Specifications

#### General

##### Port Standards & Functions

- IEEE 802.3af Power over Ethernet (PoE)
- IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)
- IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)
- ANSI/IEEE 802.3 NWay auto-negotiation
- IEEE 802.3x Flow Control
- Port mirroring

##### Number of Ports

16 10BASE-T/100BASE-TX ports (8 PoE ports, 8 non-PoE 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

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

##### Media Interface Exchange

Auto MDI/MDIX adjustment for all ports

##### LED Indicators

- Power (per device)
- CPU (per device)
- Link/Act, Speed (per port)
- 100Mbps (per port)
- PoE (per PoE port)

##### PoE

###### PoE Ports

Port 1 to Port 8

##### Power Supplied

Up to 15.4 watts per port

##### Auto-Detection

Automatic recognition of connected Powered Device (PD) and sending power to PD

# DES-1316

## Technical Specifications

## PoE 10/100Mbps Smart Switch

### Auto-Disable

Automatically disables the port in case port current is over 350mA

### Active Circuit Protection

Automatically disables the port in case of is a short

### PoE Pinouts

Pins 1, 2, 3, and 6 of Cat. 5 cable

### Software

#### VLAN

- Standard: IEEE 802.1Q
- Maximum number of VLAN: 64 per device
- Supports up to 512 VIDs

#### Quality of Service (QoS)

- Standard: IEEE 802.1p
- Maximum number of queues: 2
- Port-based

### Port Trunks

- Standard: IEEE 802.3ad
- Max. 4 ports per trunk
- 1 port trunk per device

### Configuration/Management Methods

- Web-based configuration
- Windows-based utility
- Configuration reset through software or hardware (reset button)

### Configuration/Management Functions

- Port speed/full/half duplex setting
- Port power setting
- Switch auto-discovery

### Performance

#### Switch Fabric

3.2Gbps

#### 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

512KB per device

### Physical & Environmental

#### AC Input

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

#### Power Consumption

- Maximum 9 watts per device (without any PoE devices connected)
- Maximum 130 watts per device (when all 8 PoE devices are connected)

#### Dimensions

440 (W) x 140 (D) x 44 (H) mm  
19-inch standard rack mount width, 1 U height

#### Weight

2.15 kg

#### Operating Temperature

0° to 55°C

#### Storage Temperature

-10° to 70°C

#### Operating Humidity

10% to 90% RH

#### Storage Humidity

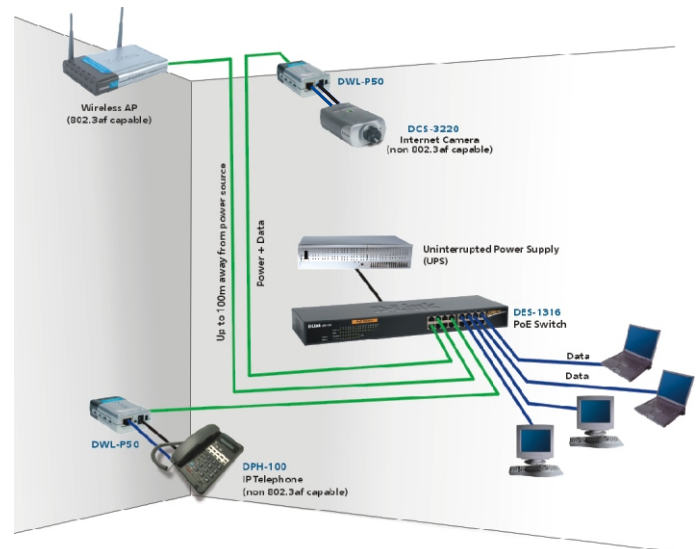
5% to 90% RH

### Emission (EMI)

- FCC Class A
- CE Class A
- VCCI Class A

### Safety

- UL
- CUL
- TUV



### Ordering Information

#### PoE 10/100Mbps Smart Switch

**DES-1316** 16-port PoE 10/100Mbps Smart switch  
**DES-1316K** PoE switch kit (1 DES-1316 PoE switch, 2 DWL-P50 PoE adapters)

#### PoE Injector

**DWL-P50** 5VDC/12VDC 802.3af PoE Adapter



Specifications subject to change without prior notice.  
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