

16-port Managed PoE Ethernet Switch

Layer 2 PoE, PoE+, Hi-PoE, and PoE++ Switch



PoE2.0

System Overview

The 16-port managed desktop switch is designed for field transmission applications and for high-definition video. The switch is equipped with a high-performance switching engine, a large buffer, low transmission delay, and high reliability. In addition to the 16 PoE ports, the switch offers two (2) gigabit uplink combo ports with a PoE budget of 240 W. The switch also delivers powerful network management functions including CLI, iLinksView, and Web and network management software based on SNMP. The switch is housed in a sealed, metal case that offers low power consumption.

Functions

Intelligent PoE

The switch features Intelligent PoE power consumption management to help keep the power and the data flowing, even when the switch experiences a power fault. Intelligent PoE monitors the power consumption of the connected devices, and in the event of large power fluctuations the switch shuts down one port at a time rather than shutting down all ports. Unlike typical switches that shut down all ports at once, this switch shuts down the highest number port first, then the next highest number until the switch detects the power consumption is below the PoE budget. For example, if the switch has eight PoE ports and each port is connected to a network camera, the switch disables port number 8 first, then subsequent ports until the power budget is below the threshold wattage.

- Layer 2 Network Management PoE Ethernet Switch
- Intelligent PoE for Power Consumption Management
- Long-distance PoE Transmission Distance, up to 250.0 m (820.21 ft)
- PoE Watchdog Function Monitors Network
- High-capacity Data Cache (4-megabit) for Real-time Transmission with smooth video
- Supports IEEE802.3af, IEEE802.3at, Hi-PoE, and IEEE802.3bt Standards
- New Limited Lifetime Warranty¹

PoE Watchdog

The switch automatically monitors each port for an active connection with the associated camera. If the switch detects a camera failure it powers off then restarts the PoE connection to restart the camera.

PoE++

The switch supports IEEE 802.3bt technology that delivers 90 W via a PoE port and drives high-power infrastructure for smart building systems, safe cities, thin clients, and many more applications. With this standard, the switch can power IT and IoT devices that demand increased power consumption resulting in lower installation and wiring costs.

Long-distance PoE Transmission

The switch extends PoE transmission distance to 250.0 m (820.21 ft), a significant improvement over typical switches.

Environmental

The switch is designed to operate in severe environments and in temperatures ranging from -10°C to $+55^{\circ}\text{C}$ (14°F to 131°F). The switch includes a professional-grade surge protection circuit that offers 4 kV (common mode) and 2 kV (differential mode) all-port surge protection. This protection reduces damage to the network from a lightning storm. The switch meets the Class B EMC standard and is suitable for residential, commercial, and light-industrial applications.

Technical Specification

Ethernet Ports	Ports 1 through 16: 10/100 Mbps, RJ45 Ports 17 and 18: 10/100/1000 Mbps (uplink), RJ45 Ports 17 and 18: SFP 1000 Mbps (uplink combo)
PoE Power Consumption	Ports 1 and 2: ≤ 90 W (IEEE802.3bt) Ports 3 through 16: ≤ 30 W (IEEE802.3at) Total Power Consumption: ≤ 240 W
PoE Protocol	PoE (IEEE802.3af), PoE+ (IEEE802.3at), Hi-PoE, PoE++ (IEEE802.3bt)
PoE PIN Assignment	1, 2, 4, 5 (V+), 3, 6, 7, 8 (V-);
PoE Management	Power consumption management Power on and power off Power down for overload Green PoE Legacy support
PoE Transmission Distance ²	250.0 m (820.21 ft)
Switching Capacity	8.8 Gbps
Packet Forwarding Rate	5.36 Mpps
Packet Buffer Memory	2.75 Mb
MAC Table Size	4K
Standards Compliance	IEEE802.3; IEEE802.3u; IEEE802.3x; IEEE802.3ab; IEEE802.3z
Power Input	100 VAC to 240 VAC
Power Consumption	Idle: 10 W PoE Full Load: 240 W
Operating Temperature	-10° C to 55° C (14° F to 131° F)
Operating Humidity	10% to 90%, Relative
Electrostatic Discharge	Air Discharge: 8 kV Contact Discharge: 6 kV
Surge Protection	Common Mode: 4 kV Differential Mode: 2 KV Class B Electromagnetic Compatibility Standard
Dimensions (L x W x H)	
Product	440.0 mm x 300.0 mm x 44.0 mm (17.32 in. x 11.81 in. x 1.73 in.)
Packaging	527.0 mm x 412.0 mm x 110.0 mm (20.75 in. x 16.22 in. x 4.33 in.)
Weight	4.62 kg (10.19 lb)
Installation	Rack-mount (rack-mount ears included)

Certifications

Safety	EN 62368-1:2014 + A11:2017
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 subpart B EN55032:2015, EN61000-3-2:2014, EN61000-3-3:2013, EN55024:2010+A1:2015, EN55035:2017, EN50130-4:2011+A1:2014

Service Specification

Spanning Tree	IEEE802.1d (STP); 802.1w (RSTP)
VLAN	IEEE802.1Q Standard VLAN
Flow Control	Supports IEEE802.3x (full duplex flow control) and back pressure flow control (half duplex)
Link Aggregation	Static, LACP
Port Mirroring	One-to-One and Many-to-One Port Mirroring
Multicast	IGMP snooping based on port
DHCP	DHCP Client
Security Features	Hardware supports IP and MAC binding based on port, MAC filtering based on port, and IEEE802.1x port authentication
Quality of Service	<ul style="list-style-type: none"> High and low priority WRR 802.1P DSCP Priority based on protocol

Transmission Distances³

Via CAT5E/CAT6 Ethernet Cable

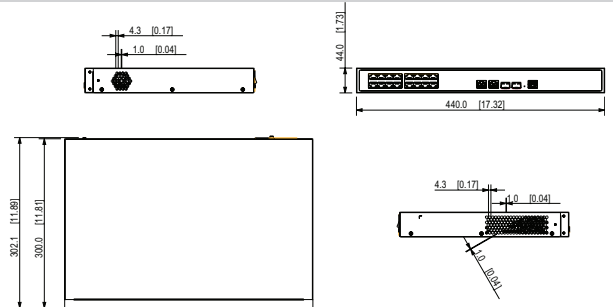
Switch power supply voltage 53 V
Maximum DC resistance < 10 Ω/100 m

Cable Length, m (ft)	Bandwidth, Mbps	Load Capacity W		
		IEEE802.3bt (90 W)	Hi-PoE (60 W)	IEEE802.3at (30 W)
100 (328)	100	71.3	53	25.5
150 (492)	10	62	50	25.5
200 (656)	10	51	47	25.5
250 (820)	10	40	37	25.5

Ordering Information

Type	Part Number	Description
PoE Switch	DH-PFS4218-16ET2GF-240	Layer 2 16-port Managed PoE Switch
Accessories, optional	GSFP-850-MMF	1.25 GB, 850 nm, 500 m, LC, Multi-mode
	GSFP-1310T-20-SMF	1.25 GB, 1310/1550 nm, 20 km, LC, Single Mode
	GSFP-1310R-20-SMF	1.25 GB, 1550/1310 nm, 20 km, LC, Single Mode

Dimensions



1. New switch warranty period is extended to two years after end of sale date.
2. Enabling 100 m (328.08 ft) to 250 m (820.21 ft) transmission distance will lower the transmission data speed from 1 Gbps to 10 Mbps.
3. This data was collected by Dahua test labs and for reference only. Environmental and application factors may cause differences in lab test results and field applications.