

# DH-HS4420-16GT-190

20-Port Managed Hardened Gigabit Switch with 16-Port PoE



## System Overview

Hardened PoE Switch is a managed switch with a high-performance switch engine and large cache. It provides smooth transmission of video streams. With its full metal and fanless design, the switch has great heat dissipation and can operate in temperatures ranging -30°C to 65°C. It offers EMC and has protection against overvoltage, overcurrent, static electricity, lightning strikes, pulses and other types of interference. The redundant power supply ensures that the switch performs stably, and the red port provides up to 90 W. The switch supports long distance PoE, intelligent PoE and PoE watchdog, meeting the needs of security monitoring. It also offers powerful network management functions such as IGMP snooping, link aggregation, QoS, LLDP, STP, RSTP and web management.

## Functions

### BT 90W (Red Port)

The red ports support IEEE802.3af, IEEE802.3at, IEEE802.3bt and Hi-PoE standards, with a maximum output power consumption of 90W per port. Suitable for powering high-power devices.

### Long Distance PoE

The transmission distance of a PoE port can be up to 250 m, meeting the requirement of wired transmission (bandwidth reduced to 10 Mbps).

- Meets the requirements of IEEE802.3, IEEE802.3u, IEEE802.3x, IEEE802.3ab standards
- Meets the requirements of IEEE802.3af, IEEE802.3at, Hi-PoE, and IEEE802.3bt power supply standards.
- Manages PoE power consumption and PoE power on/off. Supports Intelligent PoE.
- A wide operating temperature range and a full metal casing that is fully-enclosed and dust-proof.



### PoE Watchdog

Adopts the innovative PoE Watchdog. It enables the switch to automatically detect port status and restart the failed ports to recover connection in case of IPC connection exception. This enables intelligent operation and maintenance management in its true sense and effectively reduces manual maintenance costs.

### Spanning Tree Protocol (STP)

Uses algorithms that calculate the best loop-free path through a Layer 2 network while providing path redundancy to prevent the occurrence of broadcast storms and enhance the stability of operations and services.

### Wide Operating Temperature (-30 °C to +65 °C)

Supports working at ambient temperatures of -30 °C to +65 °C, and has built-in professional lightning-proof circuits that effectively reduce the impact of thunderstorms on network systems and improve system robustness, allowing the device to adapt to harsh environments.

## Scene

Suitable for scenes such as houses, factories and offices.

## Technical Specification

### Basic

Switching Capacity	40 Gbps
Packet Forwarding Rate	29.76 Mpps
Description of Function Slots	Port 1-16: 16 × RJ-45 10/100/1000 Mbps (PoE) Port 17-20: 4 × SFP 1000 Mbps (uplink)
PoE Power	Port 1-2 ≤ 90 W, Port 3-16 ≤ 30 W, total ≤ 190 W
Layer	Layer 2
Management Type	Yes
Operating Temperature	-30 °C to +65 °C (-22 °F to +149 °F)
Operating Humidity	5%–95% (RH), non-condensing
Power Consumption	Idling: ≤5 W ; Full load: 212 W
Power Supply	External power supply: 53 VDC, 3.77 A
Statics Protection	Air discharge: 8 kV; Contact discharge: 6 kV
Lighting Protection	Common mode: 4 kV; Differential mode: 2 kV
Net Weight	0.99 kg (2.18 lb)
Product Dimensions	171 mm × 123.4 mm × 64.8 mm (6.73" × 4.86" × 2.55") (L × W × H)

### Hardware

Included Power Adapter	Yes
PoE	Yes
Ethernet Port	16
Ethernet Port Speed	10/100/1000 Mbps
Optical Port Uplink Speed	1 Gbps
Reset Button	1
Storage Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Storage Humidity	5%–95% (RH), non-condensing

### Performance

Packet Buffer Size	4 Mbit
Jumbo Frame	15K Byte
MAC Table Size	8K
VLAN Number	32
Communication Standard	IEEE802.3; IEEE802.3u; IEEE802.3x; IEEE802.3ab

### Feature

PoE Protocol	IEEE802.3af; IEEE802.3at; Hi-PoE; IEEE802.3bt
PoE Power Consumption Management	Yes
PoE Pin Assignment	1,2,4,5 (V+), 3,6,7,8 (V-)
Long Distance PoE Transmission	Yes

Spanning Tree Protocol	STP/RSTP
VLAN Function	Port-based VLAN
IEEE 802.3x Flow Control	Yes
DHCP Function	DHCP Client
Equipment Management	Web management

### General

Gross Weight	2.1 kg (4.62 lb)
Packaging Dimensions	311.5 mm × 251.5 mm × 128.5 mm (12.26" × 9.90" × 5.06") (L × W × H)
Casing Material	Sheet metal
Installation	Desktop mount; DIN-Rail mount

### Transmission Performance:

Switch power supply voltage 53V.  
CAT5E/CAT6. Max. DC resistance < 10 Ω/100 m

Cable(m)	Load Capacity(W)	Bandwidth(Mbps)
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#### IEEE802.3bt 90 W

100	71.3	1000
150	62	10
200	51	10
250	40	10

#### Hi-PoE 60 W

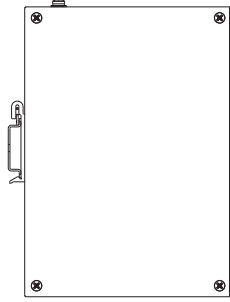
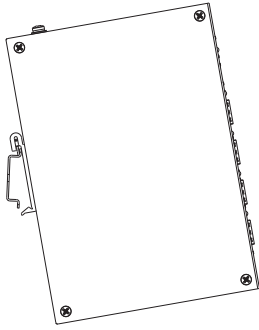
100	53	1000
150	50	10
200	47	10
250	37	10

#### IEEE802.3at 30 W

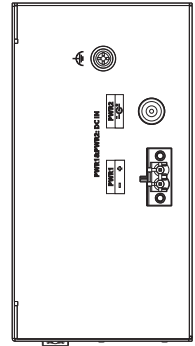
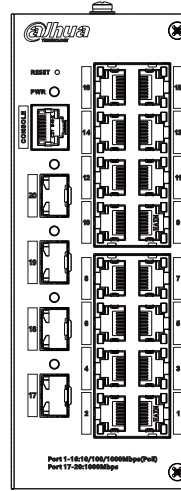
100	25.5	1000
150	25.5	10
200	25.5	10
250	25.5	10

Note: Data from this table was collected by Dahua test lab and is for reference only .  
The actual transmission distance may vary due to power consumption of connected devices or the cable type and status.

## Installation



## Panels



## Dimensions (mm[inch])

