Dahua Long Range 4-Port PoE Switch

User's Manual

V1.0.1

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.

Important Safeguards and Warnings

Please read the following safeguards and warnings carefully before using the product in order to avoid damages and losses.

Attentions:

- Do not expose the device to lampblack, steam or dust. Otherwise it may cause fire or electric shock.
- Do not install the device at position exposed to sunlight or in high temperature. Temperature rise in device may cause fire.
- Do not expose the device to humid environment. Otherwise it may cause fire.
- The device must be installed on solid and flat surface in order to guarantee safety under load and earthquake. Otherwise, it may cause device to fall off or turnover.
- Do not place the device on carpet or quilt.
- Do not block air vent of the device or ventilation around the device. Otherwise, temperature in device will rise and may cause fire.
- Do not place any object on the device.
- Do not disassemble the device without professional instruction.
-

Warning:

- Please use battery properly to avoid fire, explosion and other dangers.
- Please replace used battery with battery of the same type.
- Do not use power line other than the one specified. Please use it properly. Otherwise, it may cause fire or electric shock.

Special Announcement:

- This manual is for reference only.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks are the properties of their respective owners.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website for more information.

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1 Product Overview

1.1 Product Introduction

4-port PoE switch is a layer two industrial switch, which supports long distance Ethernet power supply. It provides four 10/100M Ethernet ports, one 1000M Ethernet port and one 1000M fiber port. The product is equipped with three self-adaptive transmission modes which are IEEE, E100 and E10. It supports both twisted-pair transmission and coaxial cable transmission.

1.2 Features

Common features:

- Two-layer industrial PoE switch.
- Support IEEE802.3, IEEE802.3u, IEEE802.3ab/z and IEEE802.3X standards.
- MAC auto study and aging, MAC address list capacity is 8K.
- Support MDI/MDIX self-adaptive.
- Port 1-4 are RJ45 ports which support 10/100M self-adaptive; support IEEE802.3af, IEEE802.3at standard power supply; Port 5 is RJ45 port which supports 10/100/1000M self-adaptive.
- Industrial wide temperature design.
- Adopt metal structure.
- Support DC48-57V power supply.

Individual features:

- The product owns one 100/1000M self-adaptive fiber port, one 10/100/1000M self-adaptive RJ45 port and four 10/100M self-adaptive RJ45 ports.
- The number 4 port supports Hi-PoE 60W power supply.
- It supports three transmission modes, which includes IEEE, E100 and E10. IEEE mode is the standard Ethernet mode when it is transmitted via twisted-pair, which supports max transmission distance up to 100m; E100 mode supports max transmission distance up to 300m and E10 mode supports max transmission distance up to 800m. When it is transmitted via coaxial cable, IEEE mode supports max transmission distance up to 100m, E100 mode supports max transmission distance up to 400m and E10 mode supports max transmission distance up to 1000m.
- The product adopts 96W power adapter.

1.3 Typical Application

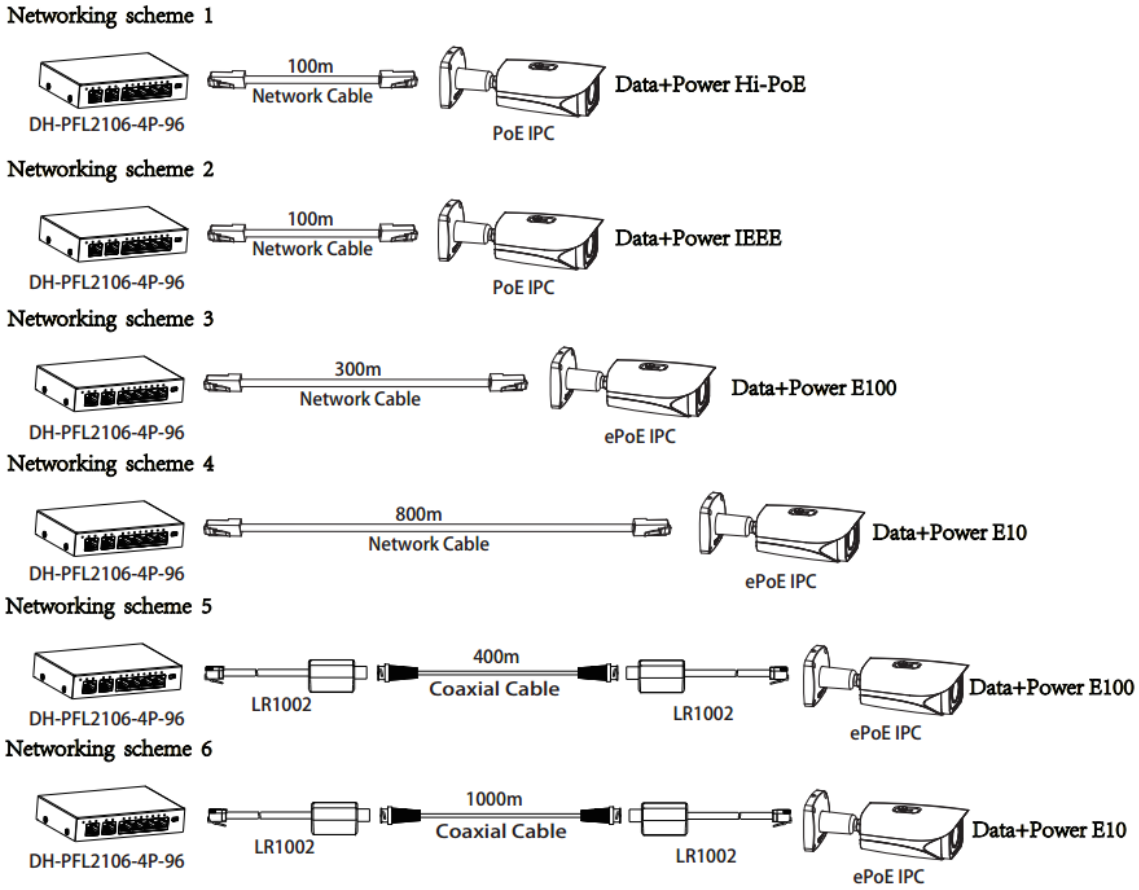
Networking scheme 1
100m
Network Cable
DH-PFL2106-4P-96
PoE IPC
Data+Power Hi-PoE
Networking scheme 2
100m
Network Cable
DH-PFL2106-4P-96
PoE IPC
Data+Power IEEE
Networking scheme 3
300m
Network Cable
DH-PFL2106-4P-96
ePoE IPC
Data+Power E100
Networking scheme 4
800m
Network Cable
DH-PFL2106-4P-96
ePoE IPC
Data+Power E10
Networking scheme 5
400m
Coaxial Cable
LR1002
LR1002
DH-PFL2106-4P-96
ePoE IPC
Data+Power E100
Networking scheme 6
1000m
Coaxial Cable
LR1002
LR1002
DH-PFL2106-4P-96
ePoE IPC
Data+Power E10

Figure 1-1

2 Device Structure

2.1 Front Panel

The front panel is shown in Figure 2-1.

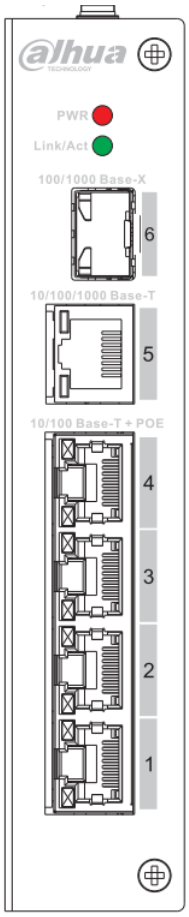

Figure 2-1

Refer to Table 2-1 for more details about the front panel.

SN	Name	Function
1	10/100 Base-T	4* 10/100M self-adaptive PoE power supply ports
2	10/100/1000 Base-T	10/100/1000M self-adaptive RJ45 port
3	100/1000 Base-X	100/1000M self-adaptive fiber port.
4	Link / Act	Fiber port status indicator light.
5	PWR	Power indicator light, used as PoE power supply status indicator light as well, refer to the following sheet for more details.

Table 2-1

The power indicator light can display the current operation status of PoE power supply, which includes three statuses: single port device power on, single port device power off and total device consumption overload. Please refer to Table 2-2 for more details.

SN	Operation Status	Display Mode
1	Single port device power on	Slow flash twice
2	Single port device power off	Quick flash once, slow flash once
3	Total device consumption overload	Quick flash twice

Table 2-2

Port indicator light is to display the status of current transmission mode for the port, which includes IEEE mode, E100 and E10. Please refer to Table 2-3 for more details.

SN	Working mode	Indicator light display
1	IEEE mode	Normally on
2	E100	On for 3 seconds, off for 1 second
3	E10	On for 1 second, off for 1 second

Table 2-3

2.2 Rear Panel

The device power port is shown in Figure 2-2; it supports DC48-57V power supply.

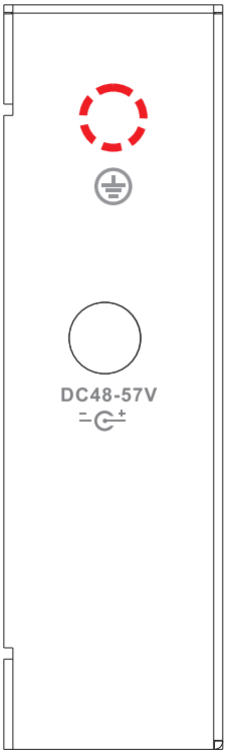

Figure 2-2

2.3 PoE Power Supply

- Three 100M RJ45 ports support IEEE802.3af, IEEE802.3at standard power supply.

- One 100M RJ45 port supports IEEE802.3af, IEEE802.3at standard and Hi-PoE 60W power supply.
- Total power consumption of PoE device is not allowed to exceed the reserve value of device PoE power consumption.

3 Installation Guide

The product supports DIN rail mounting. Lay the switch hook on the rail, press the PoE switch to make the buckle get into the slide, see Figure 3-1.

Note:
4-port PoE switch supports the slide width of 28mm.

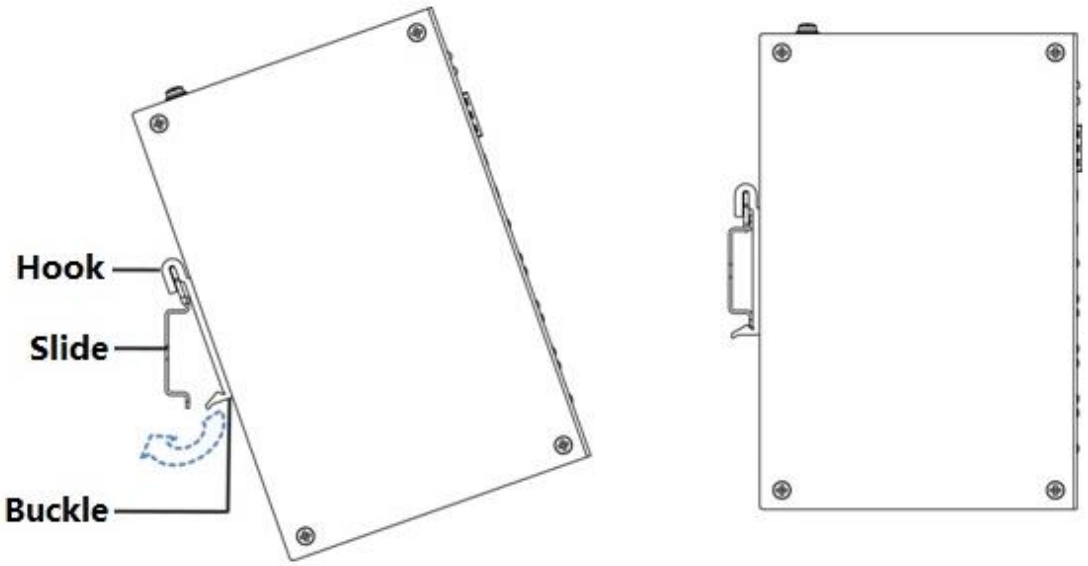

Figure 3-1

4 Appendix Ⅰ Technical Specifications

Technical parameter	DH-PFL2106-4ET-96
Physical interface	
Business Port	1*100/1000 Base-X, 1*10/100/1000 Base-T, 4*10/100 Base-T（POE power supply）
Technical index	
Exchange capacity	6.80Gbps
Packet forwarding rate	3.57Mpps
Exchange mode	Store and forward
MAC study	MAC address auto study, address list capacity 8K
General parameters	
Lightning protection level	Lightning protection level 4
Indicator light	Power indicator light, fiber port status indicator light, RJ45 transmission mode indicator light
Power	DC48-57V power adapter
Power consumption	≤96W
Operation humidity	10%～90%
High and low temperature	－30℃～65℃
Unit weight	480g
Dimension	150mm×100mm×30mm

5 Appendix II ePoE Power Supply Specifications (CAT)

Cable Length (m)	Communication Bandwidth (Mbps)	PoE Max Load Capacity (W)	Hi-PoE Max Load Capacity (W)	Network Operating Mode
100	100	29	53	IEEE/E100
200	100	26	33	E100
300	100	19	19	E100
500	10	13	13	E10
800	10	7	7	E10
ePOE switch power supply voltage is 48V. The cable is CAT5 or CAT6, 100m DC impedance is no more than 10Ω.				
Cable Length (m)	Communication Bandwidth (Mbps)	PoE Max Load Capacity (W)	Hi-PoE Max Load Capacity (W)	Network Operating Mode
100	100	34	60	IEEE/E100
200	100	30	50	E100
300	100	27	32	E100
500	10	20	20	E10
800	10	11	11	E10
ePOE switch power supply voltage is 53V. The cable is CAT5 or CAT6, 100m DC impedance is no more than 10Ω.				

6 Appendix III ePoE Power Supply Specifications

(RG59 Coaxial Cable)

Cable Length (m)	Communication Bandwidth (Mbps)	PoE Max Load Capacity (W)	Hi-PoE Max Load Capacity (W)	Network Operating Mode
100	100	35	58	IEEE/E100
200	100	30	40	E100
300	100	24	26	E100
400	100	19	20	E100
500	10	15	15	E10
800	10	10	10	E10
1000	10	8	8	E10
ePOE switch power supply voltage is 48V. The cable is RG59 coaxial cable, 100m DC impedance is no more than 5Ω.				
100	100	39	63	IEEE/E100
200	100	33	51	E100
300	100	28	37	E100
400	100	23	30	E100
500	10	18	23	E10
800	10	14	18	E10
1000	10	11	13	E10
ePOE switch power supply voltage is 53V. The cable is RG59 coaxial cable, 100m DC impedance is no more than 5Ω.				

Note

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