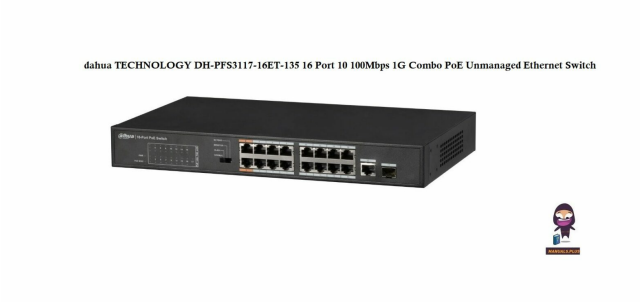

dahua TECHNOLOGY DH-PFS3117-16ET-135 16 Port 10 100Mbps 1G Combo PoE Unmanaged Ethernet Switch User Manual

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dahua TECHNOLOGY DH-PFS3117-16ET-135 16 Port 10 100Mbps 1G Combo PoE Unmanaged Ethernet Switch

Specifications

- **Model:** DH-PFS3117-16ET-135
- **Ports:** 16 x 10/100Mbps Ethernet ports, 1 x 1G Combo port
- **Power over Ethernet** (PoE) support
- **Unmanaged** switch

Product Usage Instructions

Installation

1. Choose a suitable location for the switch near power outlets and network devices.
2. Connect the Ethernet cables from your network devices to the corresponding ports on the switch.
3. If using PoE devices, connect them to the PoE-enabled ports on the switch.
4. Connect the power adapter to the switch and plug it into a power source.

Configuration

The switch is unmanaged, so no configuration is required. It operates plug-and-play, automatically detecting and connecting devices on the network.

Troubleshooting

1. Check all cable connections to ensure they are secure.
2. Restart the switch by disconnecting and reconnecting the power source.
3. If using PoE, ensure that the PoE devices are receiving power correctly.

FAQ

Q: Can I connect non-PoE devices to the PoE ports?

- **A:** Yes, you can connect non-PoE devices to the PoE ports without any issues. The switch will only supply power to devices that require it.

Q: How can I reset the switch to factory defaults?

- **A:** To reset the switch to factory defaults, locate the reset button on the device and hold it down for at least 10

seconds. The switch will reboot with default settings.

Q: What is the maximum power budget for the PoE ports?

- **A:** The maximum power budget for the PoE ports is 135W, allowing you to power multiple PoE devices simultaneously.

Foreword General

- This user's manual introduces the functions and operations of 16-Port 10/100Mbps + 1G Combo PoE Unmanaged Ethernet Switch devices. Read carefully before using the device, and keep the manual safe for future reference.

Models DH-PFS3117-16ET-135

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
DANGER	Indicates a high potential hazard which, if not avoided, will result in death or s erious injury.
WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
CAUTION	Indicates a potential risk that, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
TIPS	Provides methods to help you solve a problem or save time.
NOTE	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.2	Modified address.	August 2023
V1.0.1	Delete specifications	June 2019
V1.0.0	First release.	May 2018

Privacy Protection Notice

- As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license plate number.
- You need to comply with your local privacy protection laws and regulations to protect the legitimate rights and

interests of other people by implementing measures that include but are not limited to providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code, or visit our official website.
- The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual.
- Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations, and technical data. If there is any doubt or dispute, we reserve the right to a final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks, and company names in the manual are properties of their respective owners.
- Please visit our website, and contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right to a final explanation.

Important Safeguards and Warnings

- This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage.
- Read carefully before using the device, and comply with the guidelines when using it.

Electrical safety

- All installation and operation here should conform to your local electrical safety codes.
- The product must be grounded to reduce the risk of electric shock.
- We assume no liability or responsibility for all the fires or electrical shocks caused by improper handling or installation.

Transportation security

- Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation

Installation

- Keep upwards. Handle with care.
- Do not apply power to the Device before completing installation.
- Do not place objects on the Device.

Qualified engineers needed

- All the examination and repair work should be done by the qualified service engineers. We are not liable for any problems caused by unauthorized modifications or attempted repair.

Environment

- The Device should be installed in a cool, dry place away from conditions such as direct sunlight, inflammable substances, and explosive substances.

Accessories

- Be sure to use all the accessories recommended by the manufacturer.
- Before installation, please open the package and check all the components are included.
- Contact your local retailer ASAP if something is broken in your package.

Battery

- Improper battery use might result in fire, explosion, or personal injury.
- When replacing the battery, please make sure you are using the same type. Risk of explosion if the battery is replaced by an incorrect type.
- Dispose of used batteries according to the instructions.
- Please make sure to use the same battery model if possible.
- We recommend replacing the battery regularly (such as one year) to guarantee system time accuracy.
- Before replacement, please save the system setup, otherwise, you may lose the data completely.

Introduction

Overview

- The Switch provides a seamless network connection. Based on Gigabit Ethernet Technology, it is essential to help solve network bottlenecks that frequently develop as more advanced computer users and newer applications continue to demand greater network resources. Can be configured to automatically switch the normal working mode, port isolation (VLAN) mode, monitoring mode, network extend mode, flexible and extensible family.
- The Switch 16 × port supports IEEE802.3bt/at/af PoE standard, 16 × 100 Mbps ports have PoE power supply function, 1 to 2 port single power output maximum support 60 W, internal 150 W power supply.
- It can be used as an Ethernet power supply device. It can automatically detect and identify the electrical equipment that meets the standard and power it through the network cable.
- The product is highly integrated design, simple operation, a variety of models optional, suitable for a variety of

applications, especially for security monitoring occasions.

Product Features

- Compliant IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3x standards.
- Supports IEEE802.3af, IEEE802.3at, IEEE802.3bt standards.
- Supports normal working mode, port isolation (VLAN) mode, monitoring mode, and network extend mode.
- supports Store-and-Forward.
- 16 × 10 / 100 Mbps ports, 1 × Gigabit Combo port, support port auto flipping (Auto MDI /MDIX).
- 1 to 2 single PoE support the maximum power of 60 W, PoE output total power up to 135 W.
- Supports IEEE802.3x flow control for Full-duplex Mode and backpressure for Half-duplex Mode.
- 4K entry MAC address table with auto-learning and auto-aging.
- LED indicators for monitoring power, link, and activity.

External Component Description

Front Panel

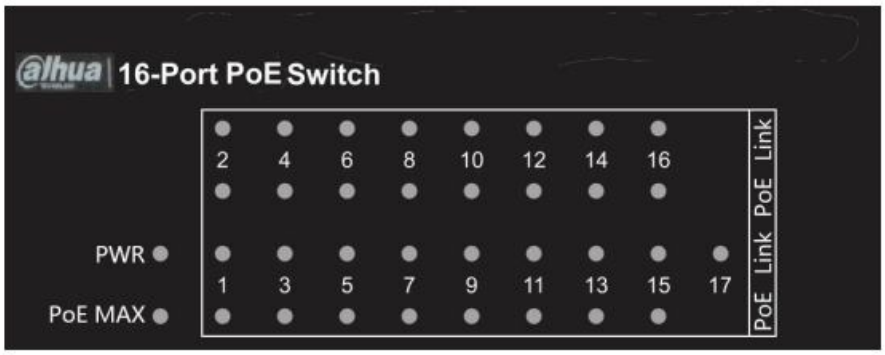
- The front panel of the Switch consists of a series of LED indicators, one Mode Switch,16 x 10/100 Mbps RJ-45 ports, and one Combo (RJ45/SFP) port.

Figure 1-1 Front panel

LED indicators:

- The LED Indicators will allow you to monitor, diagnose, and troubleshoot any potential problem with the Switch, connection, or attached devices.

Figure 1-2 LED indicator



- The following chart shows the LED indicators of the Switch along with an explanation of each indicator.

Table 1-1 Description of the indicator

LED Indicator	Faceplate Marker	Status	Indication
Power Indicator	PWR	Off	Power Off
		Solid green	Power On
MAX indicator	PoE MAX	Off	The PoE load value is normal
		Solid red	The PoE load value reaches the set limit value which i s (130 W~135 Wmax), and the load quota can no long er be increased
10/100 BASE-T adap tive Ethernet port ind icators (1- 16,17)	Link	Off	The port is NOT connected.
		Solid green	The port is connected, but no data is transmitted or rec eived.
		Blinking	The port is transmitting or receiving data.
PoE status indicators (1-16)	PoE	Off	No PD is connected to the corresponding port, or there is a breakdown.
		Solid yellow	A Powered Device is connected to the port, which supplies power successfully.

Mode Control:

- You can select the switch mode.
- **Normal mode (NORMAL):** Switch all ports can communicate with each other
- **Port isolation mode (VLAN):** 1 to 16 cannot communicate with each other, but can communicate with the uplink Combo port 17.
- **Monitoring mode (MONITOR):** 1 to 8 ports support port priority, optimize port cache, and switch all ports can communicate with each other.
- **Network extend mode(EXTEND):** 1 to 8 port rate down to 10 Mbps, the farthest transmission distance of up to 250 meters, all ports can communicate with each other.
- The mode control needs to be moved to the correct position.
- In Extend Mode, the transmission distance of the PoE port is up to 250 m but the transmission rate drops to 10 Mbps.
- The actual transmission distance might vary due to the power consumption of connected devices or the cable type and status.

10/100 Mbps RJ-45 ports (1 to 16):

- Designed to connect to the device with a bandwidth of 10 Mbps, and 100 Mbps. Each has a corresponding Link and PoE indicator.

10/100/1000Mbps RJ45 port 17:

- Designed to connect to the device with a bandwidth of 10 Mbps, 100 Mbps, or 1000 Mbps. Each has a corresponding Link LED.

1000Mbps SFP port 17:

- Designed to install the SFP module. The Switch features one SFP transceiver slots that are shared with one associated RJ45 port.
- An SFP port and an associated RJ45 port are referred to as “Combo” ports, which means they cannot be used simultaneously, and only the SFP port works or only the RJ45 port works at the same time.

Rear Panel

- The rear panel of the Switch contains one Grounding Terminal, Heat vent, and AC power connector shown below.

Figure 1-3 Rear panel

Grounding Terminal:

- Located on the left side of the power supply connector, use wire grounding for lightning protection. Heat vent:
- The Heat vent is located in the middle position of the rear panel of the switch. It is used for heat dissipation and ventilation. Do not cover it.

AC Power Connector:

- Power is supplied through an external AC power adapter. It supports 100–240 VAC, 50/60 Hz.

Package Contents

- Before installing the Switch, make sure that the following “packing list” is listed OK. If any part is lost or damaged, please contact your local agent immediately.
- In addition, make sure that you have the tools to install switches and cables by your hand.
- One 16-Port 10/100 Mbps + 1-Port Gigabit Combo Base-T SFP multi-mode PoE Switch.
- One Installation Component.
- One AC power cord.
- One User’s Manual.

Installation and Connection

This part describes how to install your PoE Ethernet Switch and make connections to it. Please read the following topics and perform the procedures in the order being presented.

Installation

- Please follow the following instructions to avoid incorrect installation causing device damage and security

threats.

- Put the Switch on a stable place or desktop in case of falling damage.
- Make sure the Switch works in the proper AC input range and matches the voltage labeled on the Switch.
- To keep the Switch free from lightning, do not open the Switch's shell even in a power failure.
- Make sure that there is proper heat dissipation from and adequate ventilation around the Switch.
- Make sure the cabinet is to enough back up the weight of the Switch and its accessories.

Desktop Installation

- Sometimes users are not equipped with the 13-inch standard cabinet. So when installing the Switch on a desktop, please attach these cushioning rubber feet provided on the bottom at each corner of the Switch in case of external vibration.
- Allow adequate space for ventilation between the device and the objects around it.

Rack-mountable Installation in a 13-inch Cabinet

The Switch can be mounted in an EIA standard-sized, 19-inch rack, which can be placed in a wiring closet with other equipment.

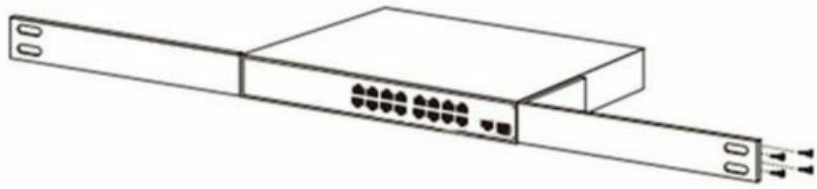
To install the Switch, please follow these steps:

- Attach the mounting brackets on the Switch's side panels (one on each side) and secure them with the screws provided.

Figure 2-1 Bracket installation

- Use the screws provided with the equipment rack to mount the Switch on the rack and tighten it.

Figure 2-2 Rack installation



Powering on the Switch

- The Switch is powered on by the 100-240 VAC 50/60 Hz internal high-performance power supply. Please follow the next tips to connect:

- **AC Electrical Outlet:** It is recommended to use a single-phase three-wire receptacle with a neutral outlet or a multifunctional computer professional receptacle.
- Please make sure to connect the metal ground connector to the grounding source on the outlet.
- **AC Power Cord Connection:** Connect the AC power connector in the back panel of the Switch to the external receptacle with the included power cord, and check whether the power indicator is ON or not.
- When it ON, it indicates the power connection is OK.

Connecting the Computer (NIC) to the Switch

Please insert the NIC into the computer, after installing the network card driver, please connect one end of the twisted pair to the RJ-45 jack of your computer, the other end will be connected to any RJ-45 port of the Switch, the distance between the Switch and computer is around 100 meters. Once the connection is OK and the devices are powered on normally, the LINK status indicator lights the corresponding ports of the Switch.

Switch connection to the PD

1-16 ports of the Switch have PoE power supply function, the switch port 1 and port 2 support IEEE802.3bt standard 60 W high power output, other PoE port power maximum support 30 W, it can make PD devices, such as internet phones, network camera, wireless access point work. You only need to connect the Switch PoE port directly connected to the PD port by network cable.

Appendix 1 Cybersecurity Recommendations

- Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet.
- IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks.
- Below are some tips and recommendations from Dahua on how to create a more secure security system.

Mandatory actions to be taken for basic device network security:

1. **Use Strong Passwords**
    - Please refer to the following suggestions to set passwords.
    - The length should not be less than 8 characters.
    - Include at least two types of characters; character types include upper and lower case letters, numbers and symbols.
    - Do not contain the account name or the account name in reverse order.
    - Do not use continuous characters, such as 123, abc, etc.
    - Do not use overlapped characters, such as 111, aaa, etc.
2. **Update Firmware and Client Software in Time**
    - According to the standard procedure in Tech-industry, we recommend to keep your device (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the device is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
    - We suggest that you download and use the latest version of client software.

Nice to have" recommendations to improve your device network security:

1. **Physical Protection**
    - We suggest that you perform physical protection to device, especially storage devices. For example, place the device in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable device (such as USB flash disk, serial port), etc.
2. **Change Passwords Regularly**
    - We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.
3. **Set and Update Passwords Reset Information Timely**
    - The device supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.
4. **Enable Account Lock**
    - The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.
5. **Change Default HTTP and Other Service Ports**
    - We suggest you to change default HTTP and other service ports into any set of numbers between 1024–65535, reducing the risk of outsiders being able to guess which ports you are using.
6. **Enable HTTPS**
    - We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.
7. **MAC Address Binding**
    - We recommend you to bind the IP and MAC address of the gateway to the device, thus reducing the risk of ARP spoofing.
8. **Assign Accounts and Privileges Reasonably**
    - According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.
9. **Disable Unnecessary Services and Choose Secure Modes**
    - If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.
    - If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:
    - **SNMP:** Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
    - **SMTP:** Choose TLS to access the mailbox server.
    - **FTP:** Choose SFTP, and set up strong passwords.
    - **AP hotspot:** Choose WPA2-PSK encryption mode, and set up strong passwords.
10. **Audio and Video Encrypted Transmission**
    - If your audio and video data contents are very important or sensitive, we recommend that you use an encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

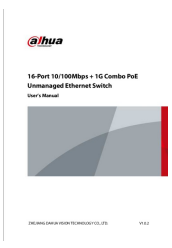
- **Reminder:** encrypted transmission will cause some loss in transmission efficiency.

11. **Secure Auditing**
    - **Check online users:** we suggest that you check online users regularly to see if the device is logged in without authorization.
    - **Check device log:** By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.
12. **Network Log**
    - Due to the limited storage capacity of the device, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.
13. **Construct a Safe Network Environment**
    - To better ensure the safety of the device and reduce potential cyber risks, we recommend:
    - Disable the port mapping function of the router to avoid direct access to the intranet devices from the external network.
    - The network should be partitioned and isolated according to the actual network needs.
    - If there are no communication requirements between two sub-networks, it is suggested to use VLAN, network GAP, and other technologies to partition the network, to achieve the network isolation effect.
    - Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.
    - Enable the IP/MAC address filtering function to limit the range of hosts allowed to access the device.

More information

- Please visit Dahua's official website Security Emergency Response Center for security announcements and the latest security recommendations.
- **ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.**
- **Address: No. 1399, Binxing Road, Binjiang District, Hangzhou, P. R. China**
- **Website: www.dahuasecurity.com**
- **Postcode: 310053**
- **Email: dhoverseas@dhvisiontech.com**
- **Tel: +86-571-87688888 28933188**

Documents / Resources

	dahua TECHNOLOGY DH-PFS3117-16ET-135 16 Port 10 100Mbps 1G Combo PoE Unmanaged Ethernet Switch [pdf] User Manual DH-PFS3117-16ET-135 16 Port 10 100Mbps 1G Combo PoE Unmanaged Ethernet Switch, DH-PFS3117-16ET-135, 16 Port 10 100Mbps 1G Combo PoE Unmanaged Ethernet Switch, PoE Unmanaged Ethernet Switch, Unmanaged Ethernet Switch, Ethernet Switch

References

- **User Manual**