

Dial-in Ethernet Switch User's Guide



1. Product Introduction

Package Checklist

After opening the package, please check the following equipment and accessories, if any problems, please contact us.

NO.	Name	Quantity
1	Ethernet switch	1
2	AC Power adapter	1
3	User's Manual	1
4	Product warranty card	1
5	Product certification	1

1.1 Product description

This product is for the network of high-definition monitoring, network engineering and other needs of the development of Ethernet switches. The product provides high-speed packet forwarding capability and ample backplane bandwidth to ensure clear and smooth image transmission. Embedded in static electricity, surge protection circuit, improve product stability. Support a key VLAN configuration mode, the configuration can achieve VLAN and suppression of network storm function, play a protection information security, to prevent the spread of viruses and network attacks have to fully meet the network video surveillance system, network engineering needs.

1.2 Product Features

Ports: Provide one 100(or 1000)Mbps fiber port(SC、ST、FC or SFPslot) and four(or eight) 100(or 1000)Mbps electrical port, electrical port support 10/100/1000Mbps auto-adaptive;

Features: port isolation; one to one isolation; long distance mode.

Power characteristics: 100-240V AC wide voltage input

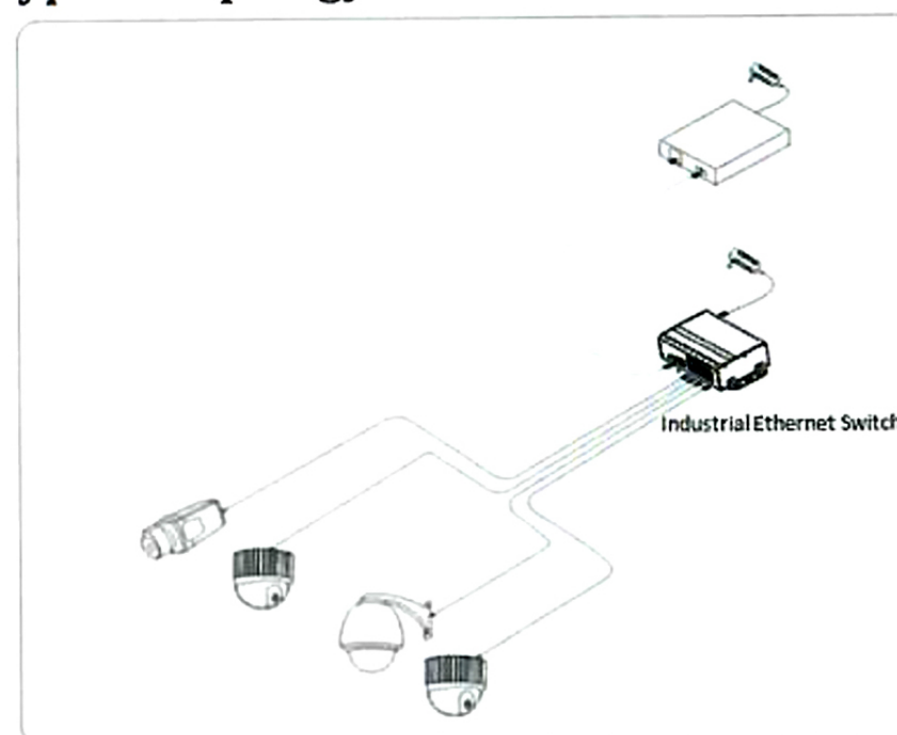
Transmission distance: when the electrical port with 100/1000Mbps it can transmission 0-100 meters, when the port 10Mbit/s it can transmission 0-330 meters; The upper optical interface is based on the performance of the optical module.

Support standards: IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3z;

Security immunity: Excellent Surge protection, anti-static and EMC, support 1 relay alarm output;

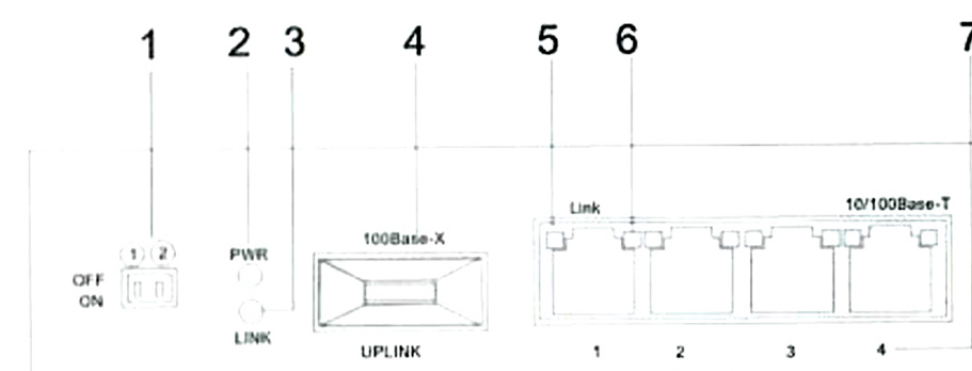
Appearance structure: IP30 protection, high-strength aluminum, DIN rail mounting, fanless, low-power design;

1.3 Typical Topology

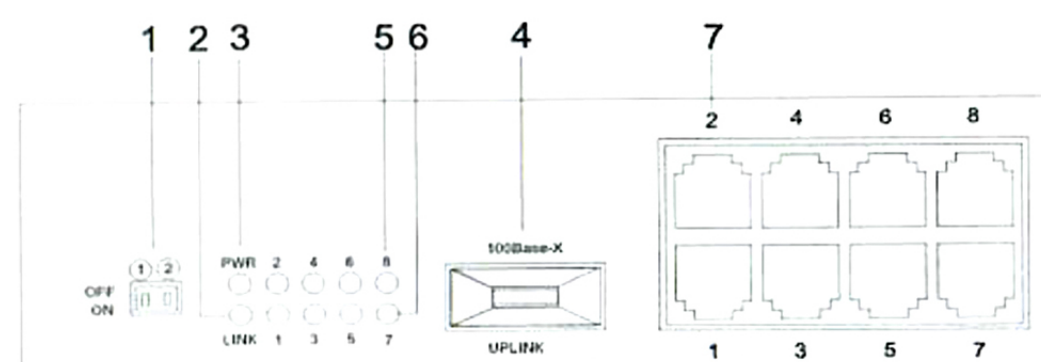


1.4 Switch panel

Front panel



1: DIP 2: Power LED 3: Fiber Link LED 4: Fiber Port 5: Ele-port Link LED
6: Electric port rate LED 7: Electric port LED



1: DIP 2: Fiber Link LED 3: Power LED 4: Fiber Port 5-6: Ele-port Link LED
7: Electric port LED

Rear panel



1: AC power input terminal

1.5 Specifications

Project		Description
Power part	Power supply	AC
	Adapt to the voltage range	AC 100~240V
	Power consumption	<10W
Port parameters	Ports	1~4 (8) Electrical interface: 10/100 (1000) Mbps Fiber interface: 100 (1000) Mbps
	Transmission distance	Electrical interface: Normal mode, 0-100m Long-distance mode, 0-330m Fiber interface: 20km
Switching Specification	Network standards	IEEE 802.3/802.3u/802.3z/802.3ab
	Packet cache	512Kbits (5 ports switch) 1Mbits (9 ports switch)
	MAC-Address capacity	1K
Status Indicator	Power LED	1 (green)
	SPD LED L/A LED	SPD: On is 100M(1000M), Off is 10M(10/100M) L/A: On is Link, Off is Down, Flash is Act
	Fiber LED	1 (green)
Certification standards	FCC Part 15/CISPR22 (EN55022)	Class A
	IEC61000-4-4 (EFT)	Power ±4kV; Datalines: ±2kV
	IEC61000-4-2 (ESD)	±6kV touch, ±8kV air
	IEC61000-4-5 (Surge)	Power: CM±4kV; Datalines: ±2kV
Environmental Limits	Operating Temperature	-20°C~60°C
	Storage Temperature	-40°C~85°C
	Ambient Relative Humidity	5-95%
Physical Characteristics	Dimensions	109mm×125mm×32mm (5 Port Switch) 160mm×115mm×40mm (9 Port Switch)
	Housing	Aluminum shell, IP30 protection
	Color	black
	Weight	0.43kg(5 Port Switch) 0.6kg(9 Port Switch)
	Installation	DIN-rail mounting, wall mounting (with optional kit)
Reliability	MTBF	≥500000h
	Warranty	3 years

1.6 LED Indicator

LED	status	Description
PWR	on	Power Operating normally
	off	PWR is not connected or is not operating properly
Link	on	Port link UP
	flash	Port forwarding data
	off	Port link DOWN or not connect
10/100Base-T (Fastethernet switch)	on	100Base-T
	off	10Base-T
10/100/1000Base-T (Gigabit switch)	on	1000Base-T
	off	10/100Base-T


1.7 DIP switch

The switch defaults to the standard network mode at the factory, and the dial keys ① and ② are in the off position. After the device is power on, all of ports are interoperable.

one-to-one isolation: Dial key ① to on position, dial key ② default off position. After the device is power on, it starts the one-to-one isolation mode configuration and implements the corresponding ports of the two ports. In this case, the ports on the same device can not be forwarded to each other. They can only communicate with the corresponding port on the peer device.

Port Isolation : Dial key ② to on position, Dial key ① default off position. After the device is power on, port isolation is achieved. The switch electrical port can not be carried out with each other data forwarding, only to the optical port to communicate.

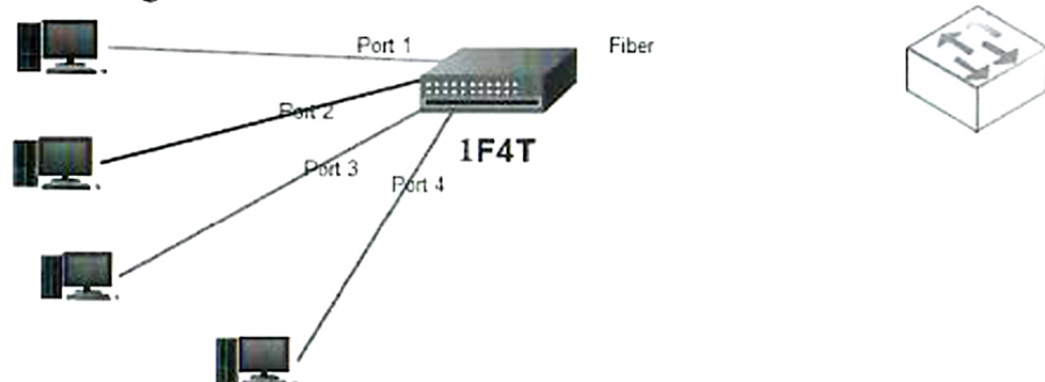
Long distance mode: Dial key ① and ② to on position. After the device is power on, the long distance mode configuration is enabled and the electrical port rate is 10Base-T. The transmission distance of the electrical port is increased. At this time the device port transmission distance of 0-330 meters.

 <p>Notes</p>	<p>1 to 1 isolation mode must require two identical switches, through the optical port docking network can be used.</p>
---	---

2 Important function

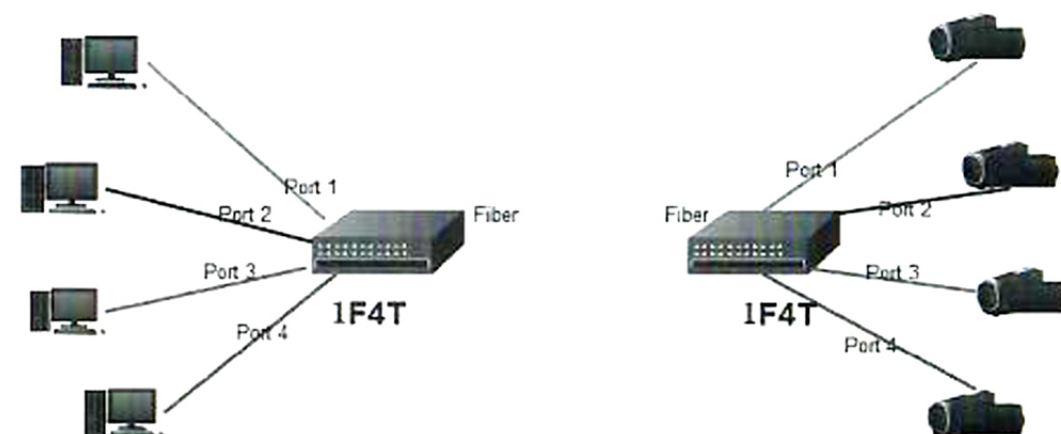
【Port Isolation】

The switch can not carry out data transfer between each other, only to the optical port to communicate, so the data conversion more efficient, the system is running more secure.



【One-to-one Isolation】

When two switches A and B are connected through the optical interface, the A switch port 1 can only communicate with the B switch port 1. Similarly, A switch port 2 can only communicate with B switch port 2, and so on. The establishment of A, B switch electrical interface one by one correspondence mode (requires two types of switches must be the same port interface). Thereby inhibiting the network storm, eliminating the hidden problems caused by paralysis of the system.



【Long distance mode】

By default, the switch electrical port transmission distance of 0-100 meters, open long distance mode, the electrical port for 10Mbit/s, to meet the high-definition video transmission bandwidth while increasing the maximum transmission distance of 330 meters. Thus enabling the ability to install IP cameras at the front of the field.


3 Installation

3.1Precautions

- When placing the switch, please pay attention to stability, drop will cause serious consequences.
- Should be in the correct power supply to work properly, please confirm before using the power supply and switch the power requirements specified in line.
- To reduce the risk of electric shock, do not open the case when the switch is working, even if it is not charged, do not open it yourself.
- When the switch works, the network cable can be inserted or pulled out at the port without interrupting the work of the switch.
- Before cleaning the switch, pull the switch's power plug first, wipe it with a moisturizing fabric, and do not use liquid cleaning.
- Do not place the switch in a watery or humid place and prevent water and moisture from entering the switch housing.
- When placing the switch, please avoid dusty and strong areas of electromagnetic interference

3.2Install style

There are two install methods that can be installed on the desktop and wall mounted.

 <p>Notes</p>	<p>This product does not contain other fixed accessories other than fixed mounting screws; When installing or moving, please unplug the power cord.</p>
--	---

3.2.1 Install to the desktop

You can place this product directly on a clean, solid, grounded desk. The installation process is as follows:

- (1) Be careful to reverse the device. With a soft cloth to clean the equipment on the bottom of the chassis screen silk screen inside the side, Paul no oil or dust adsorption;
- (2) Be careful to place the device on the table.

3.2.2 Wall mounted

You can also place this product on a clean, solid vertical wall. The installation process is as follows:

- (1) Fix the mounting brackets with screws;
- (2) the hole on the wall of a firm hole, will be installed into the capsule;
- (3) the installation of the screw into the plug hole, screw exposed 3-5mm or so, the product hanging on the waist of the waist-shaped fixed hole on the exposed part of the screw, fixed firmly. as the picture shows.



Figure 3.2.2 Product wall chart

3.3 Connect the cable

- (1) Before installation, please turn off the power of each signal source and the device to be displayed. The installation of the power supply may cause damage to the transmission equipment.
- (2) Use the network cable to connect the network camera and the 1-4(8) Electrical port of the device respectively;
- (3) connecting the optical fiber interface of the device with the optical fiber interface of the uplink equipment using the optical fiber line;
- (4) to connect the power supply equipment;
- (5) Check whether the installation is correct, equipment damage, to ensure that all connections are reliable, to the system power;
- (6) to confirm whether the network equipment, power supply, work is normal.

4 Appendix - Port Properties

4.1Electrical port properties

	Description
Interface Type	RJ45
Speed	10M/100Mbps(Fastethernet switch) 10/100/1000Mbps(Gigabit switch)
Duplex mode	Half-duplex, full-duplex, adaptive
Cable standard	MDI/MDI-X
Support standards	IEEE 802.3/802.3u
Cable type	10Base-T: 3/4/5 twisted pair, supports a maximum transmission distance of 300m 100/1000Base-TX: 5/6 twisted pair, supports a maximum transmission distance of 100m

4.2 Fiber port properties

	Description
Interface Type	SC (ST、FC) or SFP slot
Speed	100Mbit/s(Fastethernet switch) 1000Mbit/s(Gigabit switch)
Duplex mode	Full-duplex
Support standards	IEEE802.3u、IEEE802.3z
Media and transmission distance	50/125um multimode fiber, supports 550m transmission distance 62.5/125um multimode fiber, supports 270m transmission distance 9/125um single-mode fiber, supports 1-120km transmission distance

