DATASHEET

ON-S0016EP-2G-F

16 Port Fast Ethernet PoE Switch

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Features

16-Port 10/100Mbps, 2-port 10M/100M/1000M and 1-port 1000Base-X IEEE 802.3af/at/u/ab/az PoE Switch (End-Span PSE)

- Comply with IEEE802.3, IEEE802.3ab/u/az, IEEE802.3af/at standards
- Support IEEE802.3x full-duplex flow control; support Auto MDI/MDIX
- 16-Port support 48V-56V DC power to PoE powered devices
- PSE devices provide up to 15.4W or 30W of power
- PD devices receive up to 12.95W or 25.5W accordingly
- 200/250-wa s PoE budget
- Built-in 53V /3.8A switching power supply
- Extra 2-Port 10/100/1000Mbps UPLINK RJ-45 port and 1x 1000Mbps, fiber SFP Uplink port
- PoE data & power transmission distance up to 100meters
- Port based VLAN for Enhancing Security
- Backplane Bandwidth: 9.2 Gbps
- Excellent an -thunder, an -sta c and an -interference ability
- Surge Protec on: 4KV
- Easy and convenient to use, plug & play, no need to configure
- Galvanized housing for stable and durable working life

Overview

The ON-S0016EP-2G-F provides 16-port 10/100Mbps IEEE 802.3af/at Power over Ethernet with a total of 200/250wa s of PoE budget, which is an ideal solu on to fulfill the demand of sufficient PoE power for network applica ons. It is able to drive 16 IEEE 802.3af/at compliant powered devices.

The ON-S0016EP-2G-F is an ideal solu on for securing IP surveillance infrastructure. It provides both 802.3af/at PoE func ons along with 16 x 10/100Base-TX ports featuring 15.4-wa 802.3af/30-wa 802.3at PoE in RJ-45 interfaces and extra 2 x 10/100/1000Mbps UPLINK RJ-45 ports & 1 x SFP 1000Base-X to keep a cascade connec on with another switch or NVR. For instance, one ON-S0016EP-2G-F can be combined with one 16-Channel NVR and sixteen PoE IP cameras as a kit for the administrators to centrally and efficiently manage the surveillance system in the local LAN and the remote site via Internet.

The ON-S0016EP-2G-F RJ-45 interfaces support 10/100Mbps Auto-Nego a on at downlink port from 1 to 16 and uplink port from 1 to 2 for op mal speed detec on through RJ-45 Category 6, 5e or 5 cables. It also supports standard Auto-MDI/MDI-X that can detect the type of connec on to any Ethernet device without requiring special straight or crossover cables.

The ON-S0016EP-2G-F supports port-based VLAN func on, which effec vely prevent the whole system from internet broadcast storm to make the data transfer much safer. When the VLAN mode is enabled, the data cannot be forwarded among DOWNLINK RJ-45 ports, but DOWNLINK ports and UPLINK RJ-45 & SFP ports can communicate with each other. The bandwidth of DOWNLINK RJ-45 port is forced to 10Mbps mode to adapt to long distance transmission of max 250 meters. The bandwidth of UPLINK RJ-45 port is s ll 1000Mbps and UPLINK SFP port is also 1000Mbps.

With data and power over Ethernet formed one unit, the ON-S0016EP-2G-F reduces cabling requirements and eliminates the need for dedicated electrical outlets on the wall, ceiling or any unreachable place. A wire that carries both data and power can lower the installa on costs, simplify the installa on effort and eliminate the need for electricians or extension cords. Providing 16 PoE interfaces, the ON-S0016EP-2G-F is ideal for small businesses and work-groups which requiring deploying the PoE for the wireless access points, IP-based surveillance IP phones in any place easily, efficiently and cost-effec vely.

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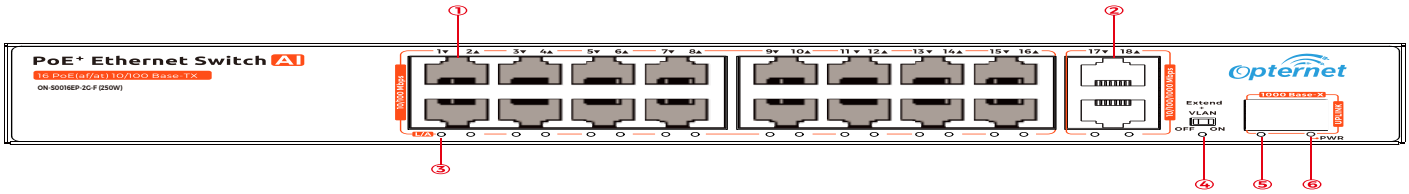
Front panel



① Downlink Port: Transfer data from other IP devices to the switch
② Uplink Port: Transfer data from PoE ports to other devices (NVR/Switch/ADSL)

No.	LED light type	Light color	State	Descriptions
③	Link/ Act Indicator	Yellow &green	Light on	Indicates that this port is connected
			Blinks	Indicates that this port is sending/receiving Ethernet frames
			Light off	Indicates that this port is disconnected
④	VLAN Indicator	Yellow &green	Light on	VLAN and extension mode starts
			Light off	VLAN and extension function stops
⑤ ⑤	Fiber Port Indicator	Yellow &green	Light on	Fiber Port Indicator is connected
			Light off	Fiber Port is disconnected
⑥	Power Indicator	Yellow &green	Light on	Power on
			Light off	Power off

Rear panel

① Ground Connection
② Input: AC 100~240V

■ Quick Setup Guide

Package Contents

1) ON-S0016EP-2G-F: 1pc 3) Manual: 1pc) AC power cord: 1pc)mounting ears: 1set

Step 1: Begin with all input/output devices turned off and power cables are removed. Step 2: Connect RJ-45 port of PoE cameras with Downlink port of PoE switches over standard Cat 5e/6 cables.
Step 3: Connect Uplink port of PoE switches with RJ-45 port of NVR or computer or other devices over standard Cat 5e/6 cables.
Step 4: Connect AC power cable with PoE switches.
Step 5: Make sure above connections are properly finished, then turn on the power.

■ AI Watchdog Function Introduction

PoE webcam is 24 hours of continuous work, when the PoE camera crashes abnormally, or does not communicate, it needs to be manually checked on the spot and manually restarted. But with our intelligent watchdog function, there is no need for personnel to go to the scene to view when the PoE switch can not receive the network data packets of the camera, it will start timing when the cumulative time exceeds three minutes, the camera will be automatically powered off and restarted, to achieve the purpose of remote intelligent monitoring.

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VLAN Introduction

At present, applications of Ethernet switch are very wide. To satisfy the needs of various customers, it is urgent for network services to solve the problems of broadcast domains, bandwidth and security, so a new kind of technology of VLAN emerged.

Each DOWNLINK RJ-45 port and UPLINK RJ-45 port form a separate workstation respectively. In the same VLAN workstation, regardless of which switch they are actually connected to, the communication between them is as if they were on a separate switch. Broadcasts in the same VLAN can only be heard by members of the VLAN, but not in other VLANs, which can control the generation of unwanted broadcast storms. At the same time, if there is no routing, different VLANs cannot communicate with each other, which increases the security of different departments in the enterprise network.

When the VLAN mode is enabled, the data cannot be forwarded among DOWNLINK RJ-45 ports, but DOWNLINK ports and UPLINK RJ-45 port can communicate with each other. The bandwidth of DOWNLINK RJ-45 port is forced to 10Mbps mode to adapt to long distance transmission of max 250meters. The bandwidth of UPLINK RJ-45 port is 1000Mbps, which keeps a cascade connection with another switch or NVR.

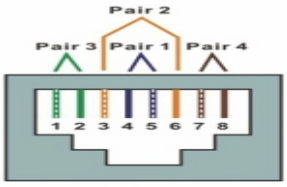
Note:
1. After you turned on VLAN button, please press reset button or reboot the device, then VLAN mode is enabled.
2. The maximum extended distance up to 250 meters. The actual extended distance will vary according to the quality of the cable, specific camera and on-site environment.

How to make a network cable

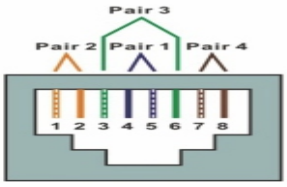
To create a network cable, you will fi t need the equipment listed below.

1. Cat5e, Cat6, or Cat7 cable
2. RJ-45 connectors
3. Crimping tool
4. Wire stripper or knife

The wire sequence of RJ45 connector must comply with interna onal standard of EIA/TIA 568A or EIA/TIA 568B.



T568A



T568B

	1	2	3	4	5	6	7	8
T568A	White Green	Green	White Orange	Blue	White Blue	Orange	White Brown	Brown
T568B	White Orange	Orange	White Green	Blue	White Blue	Green	White Brown	Brown

1) We recommend stripping at least half an inch of the cable to expose the inner wires.
2) Separate the wires within the cable after the network cable jacket has been removed so that they can be put into the RJ-45 connector.
3) The CAT5 twisted-pair cable consists of four twisted wires, each color coded; 8 wires must be correctly lined as the standards of EIA/TIA 568A or EIA/TIA 568B.
4) Cut thread residue and leave 1.5cm wire exposed outside the insula ng layer and ensure 8 wires are straighten and neat.
5) Place the cable into the RJ-45 connector and then use the crimping tool to a ach the connector.
6) Repeat above steps for the other end of the cable; the wire sequence of both ends of the cable is suggested to be iden cal.
7) Make sure to test the cables before installing them once both ends of the cable have been completed.

Note:
1. All RJ-45 Ports of this device support Auto MDI/MDIX, so the different wire sequence of both ends of the cable is allowed.
2. Up to two units can be cascaded.

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Technical Specifications

Model	ON-S0016EP-2G-F
Product Name	16-Port 10/100Mbps IEEE 802.3af/at PoE Switch (End-Span PSE)
Power Supply	
Power Supply Mode	AC Power Supply
Voltage Range	AC100~240V
Power Consumption	The device <10W PoE power supply ≤200/250W
Network Port Parameter	
Network Port	Ethernet Downlink RJ-45 Port: 16*10/100Mbps Uplink RJ-45 Port: 2*10/100/1000Mbps & SFP Port: 1x1000Based-X
Transmission Distance	1~16 Ethernet Downlink RJ-45 Port: 100m Uplink RJ-45 Port: 100m, Fiber port: maximum 120km （Depends on Fiber module)
Transmission Medium	1~16Ethernet Downlink RJ-45 Port: Cat5e/6 standard cable Uplink Port: Cat5e/6 standard cable
PoE Standards	IEEE802.3af/at
PoE Power Supply Mode	End-span method
PoE Power Supply Wattage	Each port ≤30W Whole device≤200/250W
Network Switch Specification	
Network Standards	IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/FX, IEEE802.3ab, 1000BASE-T IEEE802.3az, 1000-BASE-X
Swap Mode	Store-and-forward
Data-Caching Mechanism	3.25Mb
MAC Address List	2K
Backplane Bandwidth	9.2Gbps
Forwarding Capacity	6.848Mpps
Fast Ethernet Uplink Port	LED on: link up, off: link down, blinks: data transferring
PoE Network Port Indicator	1~16port indicators blink while data transferring
VLAN Button	Turn on VLAN button: VLAN and extension function starts Turn off VLAN button: VLAN and extension function stops
Protection Level	
Surge Protection	4KV (common mode), 10/700us IEC61000-4-5
Electrostatic Protection	Contact Discharge: ±4KV Air Discharge: ±6KV Standard: IEC61000-4-2
Reliability	
Mean time between failures	> 50000h
Mechanical	
Dimensions (L*W*H)	270mmx180mmx45mm
Housing	Galvanized
Body Color	Black
Net Weight	1200g
Environmental	
Operating Temperature	0~55℃
Storage Temperature	-40~85℃
Relative Humidity	0~95% (non-condensing)

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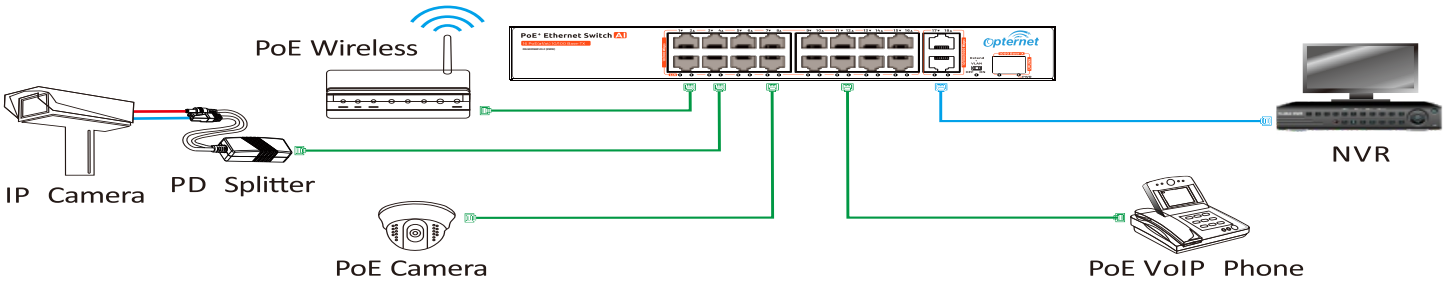
Application Diagram

Power Cable
UTP Cable
PoE Cable



After-sales Service

For breakdown caused by product quality, we guarantee product return within 15 days, exchange within 30 days and free warranty within 1 year.
The guarantee period counts from the date of purchase.