

User Manual

Industrial Gigabit Switch
4-Port 802.3at PoE
with 2-port SFP slot

v1.0

P/N: 41NE-IPG402A0-A00

FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

Trademarks:

All trade names and trademarks are the properties of their respective companies.

Introduction

This rugged design Industrial 6 port POE switch, complied with IEEE802.3af and IEEE802.3at, and pass many rigorous environmental test. The uplink 2 SFP port can extend to a wild area connection. With its multi-purpose design, that can also be used for Din-Rail or wall-mounted. This is an idea unit for IP surveillance, traffic monitoring and security application in critical environment that can be tolerate -40°C to 75°C to perform a reliable situation.

Key Features

- Supports P.S.E. based on IEEE 802.3at up to 30 Watts per port
- SFP port supports 100Base-FX and 1000Base-X speed
- Support 48~56VDC power inputs for power redundancy
- Support overload current protection
- Support reserve polarity protection
- Supports auto-negotiation and auto-MDI/MDI-X
- Supports store and forward transmission
- Supports flow control
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled
- Built-in power DIN for 110/240VAC environment
- Support Wide Operating Temperature -40°C~75°C

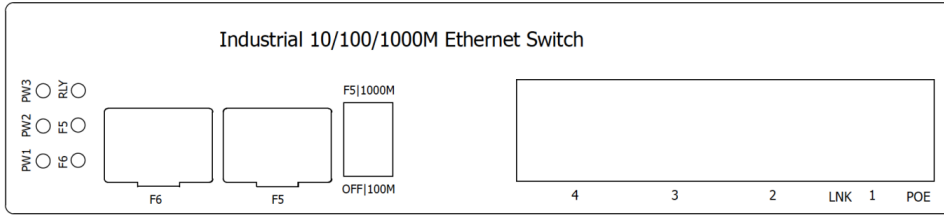
Package Contents

- 1 x Industrial Switch
- 1 x User Manual
- 1 x 6 pin Terminal Block
- 2 x Wall Mounting Bracket and 4 x Screws
- 1 x Din Rail Bracket

Compare the contents of the industrial switch with the standard checklist above. If any item is damaged or missing, please contact the local dealer for service.

LED Indicators

For definitions of LED indicators, please refer to the following table:



LED	Status	Indication
PW1	Green	when V1+, V1- is connected
	OFF	Power is off
PW2	Green	when V2+, V2- is connected
	OFF	Power is off
PW3	Green	Power DIN is connected
	OFF	Power DIN is disconnected
RLY	Amber	Alarm Relay is connected
	OFF	Alarm Relay is disconnected
LNK	Green	TX link is detected
	OFF	TX port is not detected
	Flashing	TX port is active
PoE	Amber	POE functioning
	OFF	POE off
P1,P2,P3,P4	Green	PD is detected on designated port in 2 pair mode, 30 watts or less.
	Amber	PD is detected on designated port in 4 pair mode, 30 watts range
	OFF	no PD is detected
F5	Green	port 5 SFP fiber is detected
	OFF	port 5 SFP fiber is not detected.
	Flashing	port 5 SFP fiber is active
F6	Green	port 6 SFP fiber is detected
	OFF	port 6 SFP fiber is not detected.
	Flashing	port 6 SFP fiber is active

Dip switch function

This unit is equipped with dip switches, located on the front panel. Adjusting the dip switches will change the default function of this unit. This unit has set to manufacturer default as Port 5 SFP, and the speed are set to 1000M for both port 5 and port 6 SFP ports. The detail setting as shown below:

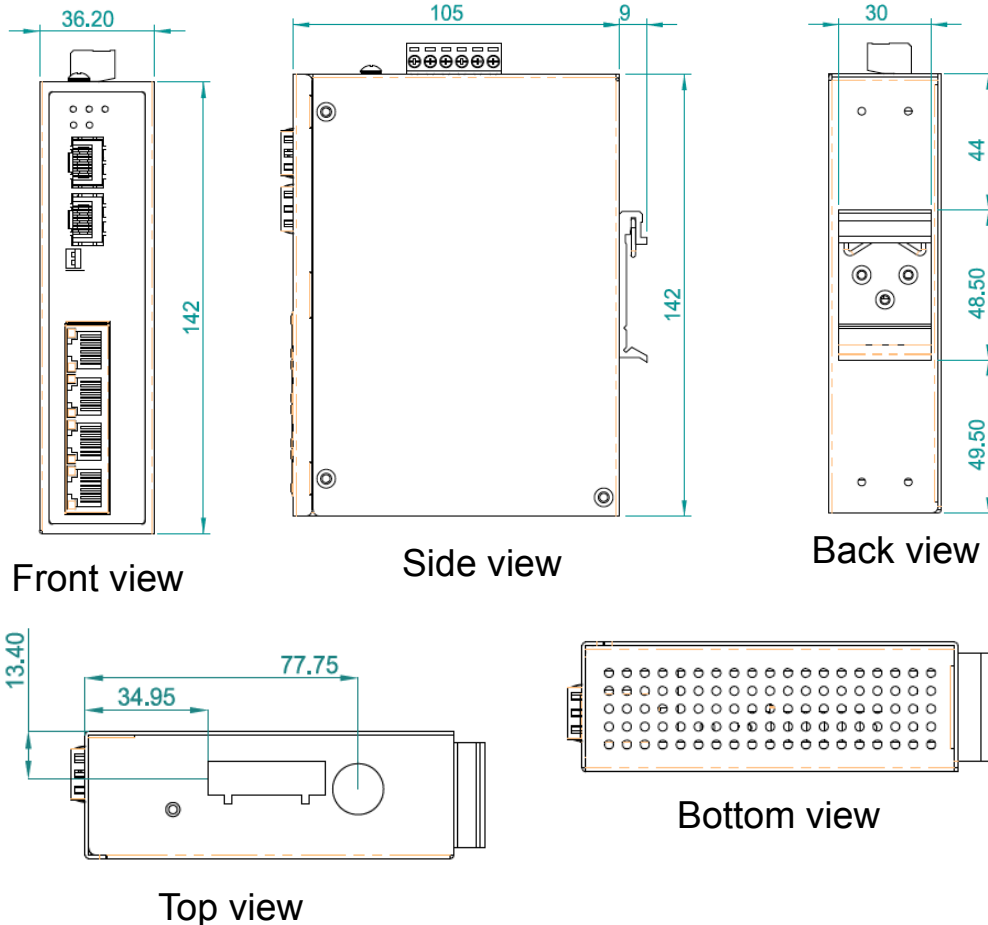
OFF

	DIP1 to select port 5 SFP	ON	F5 OFF
		OFF	F5 ON (default)
	Dip 2 to select SFP speed	ON	100M
		OFF	1000M(default)

Warning:

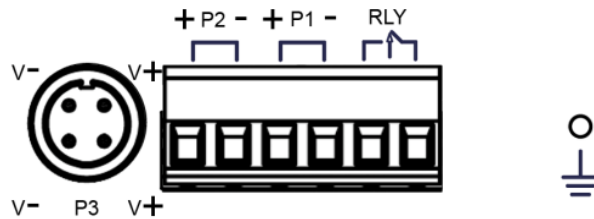
Dip switch function will not work if it is changed when power is connected. Always turn off or disconnect power supply to change dip switch settings.

Physical Dimension



Power connection

This product provides 6 pin terminal blocks. The POE port can be operated from 48-56VDC power source. The VDC power range can be 48VDC only or lower, or wide range from 48-56VDC. Please always to make sure your input voltage is the supported voltage range for each model.



WARNING:

Any exceeded input voltage will not make this unit function and may damage this unit.

To make power connection –

Follow the printed polarity for V1+, V1-, V2+, V2-, and ground. Connect positive wire to V+, connect negative wire to V-, and also connect neutral wire to the ground screw as shown.

Relay –

You may use 24V@1A relay connection to your external device for special purpose. When 2 powers are connected, the relay is in OPEN mode. While any power source fails, the relay will change to SHORT status.

Power connecting procedure:

STEP 1 – Pull out 6 pin terminal block.

STEP 2 – Connect wire to V1+, V1-, or V2+, V2-, and Ground the neutral wire to the ground screw.

STEP 3– Plug back 6 pin terminal block to its place.

WARNING –

Always ground the power source to remain a clean power input. Too many inexpensive power supplies produce noise, and will cause the fluctuation. To avoid this, always ground the power source to gain a clean power input.

Specification

Standards	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet IEEE802.3x Flow Control and Back Pressure, IEEE802.3af for POE IEEE802.3at for POE+
Interface	5 RJ-45 Port: 10/100/1000BaseT(X) auto negotiation, 4 Giga POE+ 802.3at/af PSE port, Auto MDI/MDI-X function, Full/Half duplex 2 SFP slots: 100/1000M Base-X
Switch Architecture	Back-plane (Switching Fabric): 12Gbps
Data Processing	Store and Forward
Flow Control	IEEE 802.3x Flow Control and Back Pressure
Jumbo Frame	9KB
MAC Table Size	1K
Packet Buffer Size	1Mbits
Network Cable	UTP/STP above Cat.5e Cable, EIA/TIA-568 100-ohm (100m) Fiber Cable (Multi-mode):50/125um,62.5/125um Fiber Cable (Single-mode): 9/125um
Protocol	CSMA/CD
LED indicator	PW1(Green), PW2(Green), PW3(Amber), RLY(Amber) TX/RJ-45 port: LNK (Green), PoE(Amber) SFP (Green)
DIP Switch	DIP 1: OFF: Port 5 SFP (Default) ; ON: Port 5 TX DIP 2: OFF: SFP 1000M ; ON: SFP 100M
Reserve polarity protection	Present
Overload current protection	Present
Power Supply	Redundant Dual DC 48V-56V Power Input POE input 48-56VDC
Power Consumption	5.76W@48 VDC full load, Without POE
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC, Relay in "OPEN" circuit mode when PW1 and PW2 are connected. in "SHORT" circuit mode when only one power supply is connected
PoE power budget	POE power per port 30watts. Maximum 36Watts Maximum total power 120Watts, Supports IEEE802.3af/at
Removable Terminal Block	Provide 2 Redundant power, Alarm relay contact, 6 Pin. And circular POWER DIN for power adapter Wire range: 0.34mm ² to 2.5mm ² Solid wire (AWG):12-24/14-22 Stranded wire(AWG): 12-24/14-22

	Torque:5lb-In/0.5Nm/0.56Nm Wire Strip length: 7-8mm
Operating Temperature	-40°C ~75°C
Storage Temperature	-40°C~85°C
Operating Humidity	5% to 95% (Non-condensing)
Housing	Rugged Metal ,IP30 Protection
Dimension	142 x 43 x 105mm (LxWxD)
Installation mounting	DIN Rail mounting and Wall Mounting
EMC/EMS	CE, FCC
EMI	FCC Part 15 Subpart B Class A CE EN 55022 Class A
Safety	IEC EN60950-1
Vibration	EN 50155 / EN 60068-2-6
Shock	EN 50155 / EN 60068-2-27
Free Fall	EN 50155 / EN 60068-2-32