ES1024

Fast Ethernet Switch

User Manual

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【Introduction】

ES1024 is a type of plug-and-play industrial unmanaged Ethernet switch, which supports 24 10/100M Ethernet ports. No fan, low consumption and industrial grade design. More steadily work capability. To satisfy applications in different industrial environments, can provide economical solution for your Ethernet connection. ES1024 can also provide wide temperature type in accommodation with limit temperature (0~70°C) and we have got CE, FCC approvals.

【Packing list】

The Ethernet switch is shipped with the following items. If any of these items are missing or damaged, please contact your customer service representative for assistance.

- Ethernet switch x 1
- User manual x 1
- Rackmount ears x 2
- Power cords x 1

【Features】

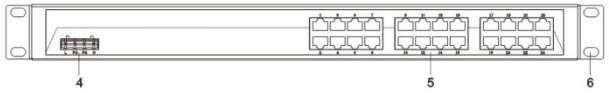
- Support 24 10/100M Ethernet ports
- Support IEEE802.3/802.3u /802.3x
- Support 10/100M, half/full duplex, MDI/MDI-X
- Support 8K MAC address table
- 0~70℃ working temperature
- 100～240VAC/DC Power input
- No fan, low consumption
- IP30 protection, metal shell,
- 1U 19 inch rack mount

【Panel layout】

Front panel



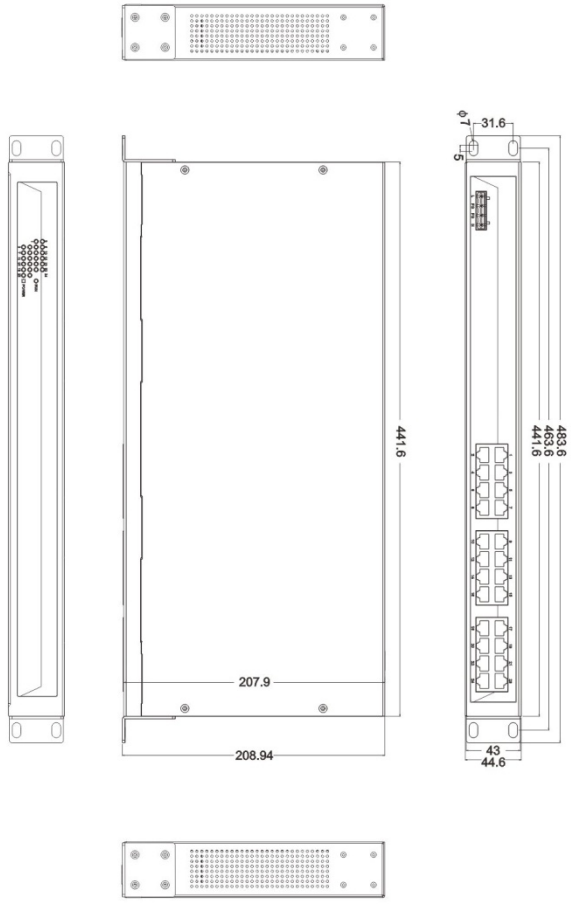
Rear panel



1. Link/ACT LED
2. The power LED
3. Systems running LED
4. Power input terminal block
5. 10/100BaseT(X) (RJ45) ports
6. Rackmount ears

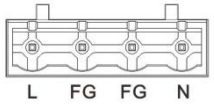
【Dimension】

Unit (mm)



【Power supply input】

The product rear panel provides 4 bit wiring terminal for 100~240VAC/DC power entered. Terminal diagram is as follows:（L/+, FG/GND, N/-）



Important notice:

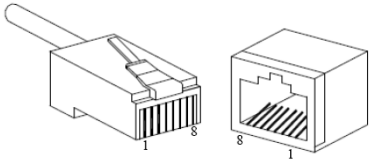
1. Power ON operation: first of all, insert power cable's terminal block into device's power port, then insert power supply plug into power source

2. Power OFF operation: First off all, unpin power plug, then strike the terminal block, please take care of operation sequence.

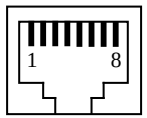
【Communication connector】

10/100BaseT(X) Ethernet port

The pinout define of RJ45 port display as below, connect by UTP or STP. The connect distance is no more than 100m. 100Mbps is used 120Ω of UTP 5, 10Mbps is used 120Ω of UTP 3, 4, 5.



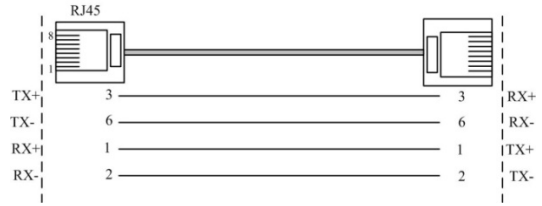
RJ 45 port support automatic MDI/MDI-X operation. Can connect the PC, Server, Converter and HUB .Pin 1,2,3,6 Corresponding connections in MDI. 1→3, 2→6, 3→1, 6→2 are used as cross wiring in the MDI-X port of Converter and HUB. 10Base-T/100Base-TX are used in MDI/MDI-X, the define of Pin in the table as below.



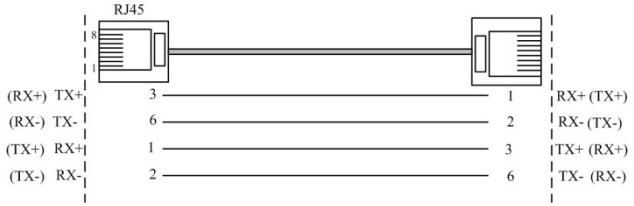
NO.	MDI signal	MDI-X signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4, 5, 7, 8	—	—

Note：“TX±”transmit data±, “RX±”receive data±, “—”not use.

10/100Base-T(X) MDI (straight-through cable)



10/100Base-T(X) MDI-X (Cross over cable)



MDI/MDI-X auto connection makes switch easy to use for customers without considering the type of network cable.

【LED Indicator】

LED indictor light on the front panel of product, the function of each LED is described in the table as below.

LED system statue		
LED	Statue	Description
PWR	ON	PWR connect and running normal
	OFF	Power supply have no connection or unwonted
RUN	ON/OFF	System is not running well
	Blinking	System is running well
Link/ACT	ON	Port made effective connection
	Blinking	Port is in active statue
	OFF	Port did not make effective connection

【Installation】

Before installation, confirm that the work environment meet the installation require, including the power needs and abundant space. Whether it is close to the connection equipment and other equipments are prepared or not.

1. Avoid in the sunshine, keep away from the heat fountainhead or the area where in intense EMI.
2. Examine the cables and plugs that installation requirements.
3. Examine whether the cables be seemly or not (less than 100m) according to reasonable scheme.
4. Power: 100-240VAC/DC power input
5. Environment: working temperature: 0～70℃
   Storage Temperature: -40～75℃
   Relative humidity 5%～95%

Rack mount installation

In most of industrial application, it is convenience to use rack mount installation, the step of installation is as follows:

1. Check if have rack mount installation tools and components (The package provided parts of components)
2. Check installation place strong or not, have the place to install the device or not.
3. Put the device into rack, aim at the screw hole of device and rack, fixed it in strong screw. Easy and convenience to operation.

Wiring Requirements

Cable laying need to meet the following requirements,

1. It is needed to check whether the type, quantity and specification of cable match the requirement before cable laying;
2. It is needed to check the cable is damaged or not, factory records and quality assurance booklet before cable laying;
3. The required cable specification, quantity, direction and laying position need to match construction requirements, and cable length depends on actual position;
4. All the cable cannot have break-down and terminal in the middle;
5. Cables should be straight in the hallways and turning;

6. Cable should be straight in the groove, and cannot beyond the groove in case of holding back the inlet and outlet holes. Cables should be banded and fixed when they are out of the groove;
7. User cable should be separated from the power lines. Cables, power lines and grounding lines cannot be overlapped and mixed when they are in the same groove road. When cable is too long, it cannot hold down other cable, but structure in the middle of alignment rack;
8. Pigtail cannot be tied and swerved as less as possible. Swerving radius cannot be too small (small swerving causes terrible loss of link). Its banding should be moderate, not too tight, and should be separated from other cables;
9. It should have corresponding simple signal at both sides of the cable for maintaining.

【Specification】

Technology

Standard: IEEE802.3, IEEE802.3u, IEEE802.3x

Flow control: IEEE802.3x flow control, back press flow control

Exchange attribute

100M forward speed: 148810pps

Transmit mode: store and forward

System exchange bandwidth: 12.8G

MAC address table: 8K

Memory: 2.5M

Interface

RJ45 Ports: 10/100BaseT(X) auto connection, Full /Half duplex or force work mode, and support MDI/MDI-X connection

LED indicator

Run indicator: Run

Interface indicator: Link (1~24)

Power supply indicator: PWR

Transfer distance

Twisted cable: 100M (standard CAT5/CAT5e cable)

Power

Input power: 100～240VAC/DC

Input type: 4 bits terminal block

No-load consumption: 3.4W

Full-load consumption: 6.7W

Over voltage protection

Working environment

Working temperature: 0～70℃

Storage temperature: -40～75℃

Relative Humidity: 5%~95% (no condensation)

Mechanical Structure

Shell: IP30 protect grade, metal shell

Installation: 19” 1U rack

Size (W×H×D): 441.6mm×44.6mm×208.9mm

Approvals

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), Level 4

EN61000-4-4 (EFT), Level 4

EN61000-4-5 (Surge), Level 4

Shock: IEC 60068-2-27

Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Certification

CE, FCC, RoHS, UL508 (Pending)

Warranty: 3 years