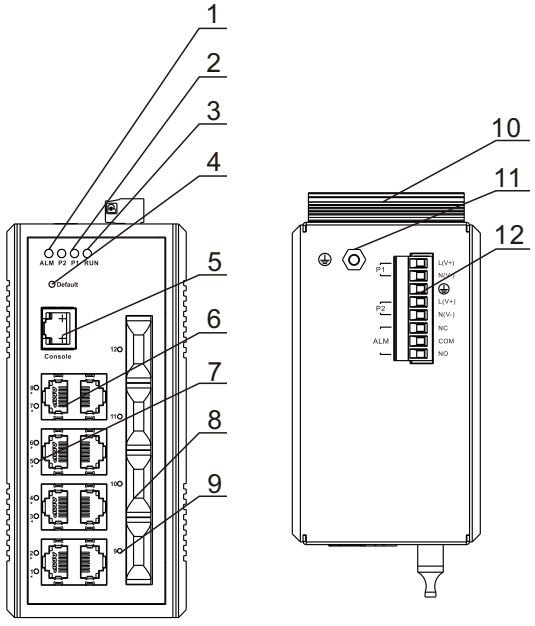
UT-62408F Series Managed Ethernet Switch User Manual

Ⅰ. Overview

UT-62408F series are managed industrial Ethernet switches. It supports various combinations of fast Ethernet RJ45 & fiber ports, which up to 12 ports (contains 4 Gigabit fiber ports). This switch supports port mirroring, VLAN, igmp, QoS, stp/Rstp and other layer 2 management modes, such as Console, Telnet, Web, SNMP & relay output. these make the switch works stable under poor environment, which provides safe and reliable solution for industrial automation, intelligent transportation, video monitoring, and other industrial application networking access.

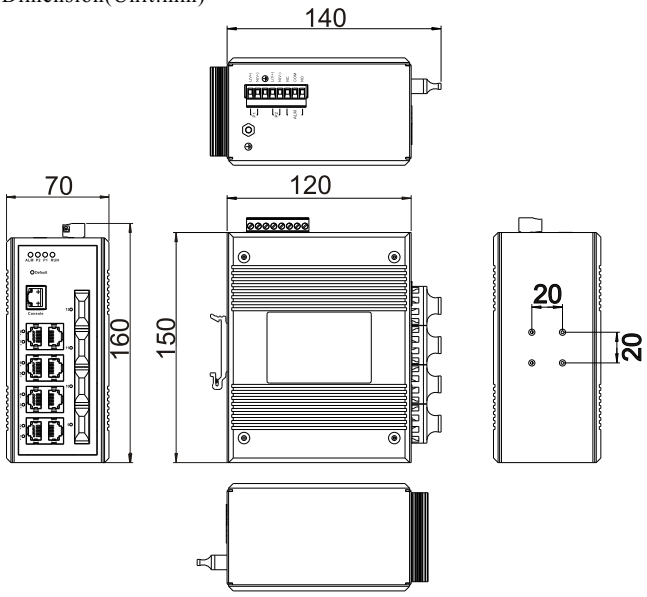
Ⅱ.Panel Description

Here take UT-62408F-8T4SC-BNF real panel & top panel as example:



1. Alarm indicator
2. Power input indicator
3. System running indicattor
4. Default setting
5. Console port
6. 10/100Base-T(X) Ethernet port
7. 10/100Base-T(X) Ethernet port status indicator
8. 100/1000Base-(F)X fiber port
9. 100/1000Base-(F)X fiber port status indicator
10. DIN-Rail
11. Ground screw
12. Power & relay alarm terminal block input

Dimension(Unit:mm)



Ⅲ. Features

◎ Supports different Ethernet & fiber ports combination (with optional ST/FC/SC/SFP slot)
◎ Supports IGMP Snooping & GMRP multicast packets filter
◎ Supports port-based VLAN, IEEE 802.1Q VLAN & GVRP protocol
◎ Supports QoS(IEEE 802.1p/1Q) & TOS/DiffServ
◎ Supports stp/Rstp, SNMP V1/V2/V3
◎ Supports RMON, improves network monitor forecast ability
◎ Supports UT-Ring(includes single ring & intersecting ring)
◎ Supports port mirroring, convenient for online debug
◎ Supports port transmission limitation, broadcast storm, multicast storm, uncertain unicast storm suppression
◎ Supports power, port, temperature, UT-Ring abnormal status relay output alarm
◎ Supports operating temperature -40℃~85℃

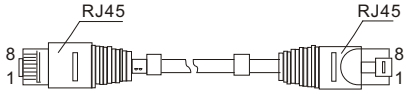
Ⅳ.Hardware Specification

4.1 Standards & protocols
Standards: IEEE802.3, IEEE802.3u, IEEE802.3x, IEEE802.3z, IEEE802.3ad, IEEE802.1Q, IEEE802.1p, IEEE802.1D, IEEE802.1W
Protocols: ICMP, TCP, HTTP, HTTPS, Telnet, STP/RSTP/MSTP, LLDP, IGMP, SNMPv1/v2c/v3, DHCP Server, NTP, RMON, Syslog
Flow control: IEEE 802.3x flow control, back-pressure flow control
4.2 Ports
Fiber port: 100Base-FX (SC/FC/ST)
1000Base-X (SC/FC/ST/SFP)
RJ45 ports: 10/100Base-T(X), auto MDI/MDI-X

4.3 Transmission Distance
Cat. 5e: 100m
Fiber module
Single-mode: 1,310nm 20/40/60Km
1,550nm 20/40/60/80/100/120Km
Multi-mode: 1,310nm 2Km
4.4 Switching Performance
Forwarding rate:
100M ports: 148,810pps
1000M ports: 1,488,095pps
Transmission mode: store-and-forward
MAC address buffer: 8K
Switching bandwidth: 9.6G
4.5 Power Requirement
Voltage input: 12/24/48VDC(10.8~52.8VDC), supports redundant dual power input
4.6 Power Consumption
Max. input power consumption: 625mA@24Vmax(check details on label)
4.7 Mechanical Characteristics
IP rating: IP40
Weight: <2000g
Installation: DIN-Rail
4.8 Dimension
Size (W × H × D) : 70mm × 150mm × 100mm
4.9 Environment
Operating temperature: -40℃~85℃
Storage temperature: -40℃~85℃
Relative humidity: 0~95% (non-condensing)
4.10 Industrial Standards
EMI :
FCC Part 15, CISPR (EN55022) class A
EMS:
IEC(EN)61000-4-2(ESD)
IEC(EN)61000-4-3(RS)
IEC(EN)61000-4-4(EFT)
IEC(EN)61000-4-5(Surge)
IEC(EN)61000-4-6(CS)
IEC 60068-2-27(Shock)
IEC 60068-2-32(Freefall)

Ⅴ. Port definition

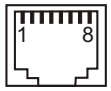
5.1 10/100Base-T(X) Ethernet port
This series switch 10/100Base-T(X) ports support auto MDI/MDI-X. User can build the connection between RJ45 port of switch and other Ethernet terminal devices via cable (direct or cross connection). RJ45 pin assignment is as below.



Ethernet cable

RJ45 ports support auto MDI/MDI-X, it can be connected with PCs, servers, other switches or hubs by MDI. When use MDI connection, relative pin 1, 2, 3, 4, 5, 6, 7, 8 to be connected directly. For MDI-X port of switch or hub, it adopts cross connection: 1->3, 2->6, 3->1, 6->2. 10/100Base-T(X) MDI/MDI-X pin assignment is as below:

Pin No.	MDI Signal	MDI-X Signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4、5、7、8	-	-



Remarks: "TX±" is "data transmit", "RX±" is "data receive", "-" is empty

5.2 100/1000Base-F(X) fiber port

This series switch provides 100/1000Base-(F)X fiber ports; when using RJ45 ports, it can be connected with other Ethernet terminal devices through fiber port by fiber patch cord.

5.2.1 Fiber patch cord

According to the transmission mode of light on fiber, there are multi-mode fiber and single-mode fiber. The central glass core of multi-mode fiber is thick (50 or 62.5μm); it can transmit light in different mode. The chromatic dispersion is big, and this causes limitation on frequency of transmission digital signal. With this, the transmission distance of multi-mode fiber is short (mostly few kms). The central glass core of single-mode is thin(9 or10 μm), and it can transmit single mode light. The chromatic dispersion is small, it is good for long distance communication. Normally, the orange cable is multi-mode; the yellow cable is single-mode.

5.2.2 Fiber port

Fiber port is a physical interface for fiber cable connection. It adopts the principle that when light enter optically thinner medium from optically denser medium, the light will total reflection. There are four types fiber port:

FC port: FC port is a round port with thread, metal style; it adopts metal cover outside, use thread and nut to match and fix.

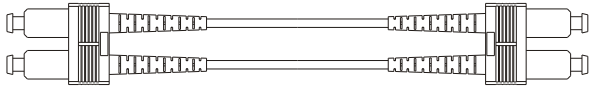
SC port: SC port is a standard square style port; it adopts engineer plastics, high temperature resistance, hard to oxidate.

LC port: LC port is similar to SC port, but smaller than SC port; it adopts modular jack, easy to operate.

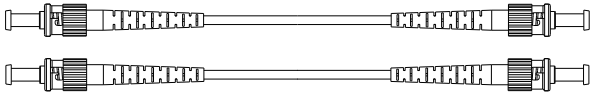
ST port: ST port is a clip-on round port.

5.2.3 Fiber patch cord use

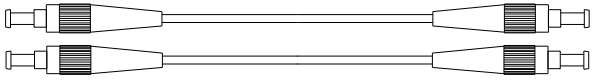
SC port to SC port fiber patch cord



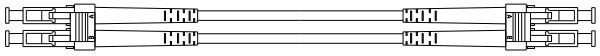
ST port to ST port fiber patch cord



FC port to FC port fiber patch cord



LC port to LC port fiber patch cord



Remarks: please don't bend the fiber patch cord when using.

VI. LED indicator

LED	Status	Description
P1~P2	green light on	power normal
	green light off	power breakdown or no power
Network port indicator	green light on	link connection normal
	green light blinking	link communication normal
	green light off	link without connection or breakdown
ALM	red light on	with alarm signal output
	red light off	without alarm signal output
RUN	green light blinking	system running regular
	green light on/off	system running breakdown

VII. Installation

7.1 Attention

To avoid device damage causing by wrong operation and personal injury, please follow below steps:

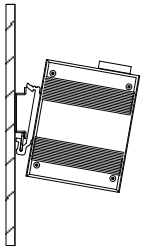
◎ To avoid device damage by falling down, please put the device on stable surface.

◎ When the device is ready to power on, please make sure the voltage input is wide voltage range, and the positive/negative anodes of the power.

◎ To avoid the electric shock, make sure the device is in good ground connection when operating.

◎ Please do not open the device case at any time.

◎ Please keep away from dusty and strong electromagnetism interference environment.



7.2 DIN-Rail installation

Install the switch on guide rail, and then follow below steps:

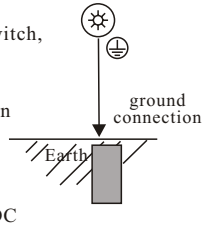
Step 1: Check the rail stability; put the switch rail slot into the guide rail;

Step 2: rotate the fix screw of the rail from center to both sides in turn tightly, to make the guide rail plying-up the vertical install cover slightly.

Step 3: Fix the rail on the guide rail by screw, make sure the rail and the switch is vertical and stable.

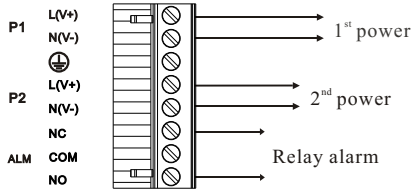
7.3 Ground connection

Fix the ground wire on the ground screw of the switch, make sure good connection.



7.4 Power input

Plug the power wire into the right position of 6-pin terminal block, then plug the terminal block into standard power input port (1st power is P1 L(V+), N(V-) input, 2nd power is P2 L(V+), N(V-) input, supports V+, V- power voltage range 12/24/48VDC (10.8~52.8VDC))

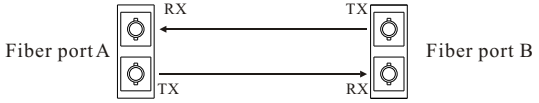


7.5 Relay alarm

Relay alarm is 3-pin of the terminal block; it provides power breakdown alarm output. NC is normally close; when the device is breakdown, NC means "short circuit"; otherwise it means "open circuit". NO is normally open; when the device is breakdown, NO means "open circuit"; otherwise it means "short circuit".

7.6 Network port connection

Connect the fiber cord or network cable with relative network port, please pay attention on RX & TX when fiber connection; the relative indicators will be on or blinking.



Notice: when connect fiber port A with fiber port B by fiber patch cord, please connect TX of fiber port A with RX of fiber port B, and connect RX of fiber port A with TX of fiber port B.

VIII. Management system log in

This switch provides 1 debug port which base on serial management system. It adopts RJ45 port, which in the front panel. It can be connected with PC by the cable in the package for setting.

1. Console port: 115200 8-N-1
   PIN3—TXD PIN4/5—GND PIN6-RXD
2. Web: IP address: 192.168.1.254
   User name: admin Password: admin

IX. Packing list

Item	Qty(unit)
Switch	1PCS
User manual	1PCS
CD	1PCS
Warranty card	1PCS
Certificate of approval	1PCS

X. Ordering

Ordering	Port description			Fiber port type	
	100 Base-FX	1000 Base-X	10/100 Base-T(X)	100 Base-FX	1000 Base-X
UT-62408F-8T2SC-BNF	2	-	8	SC	-
UT-62408F-8T4SC-BNF	4	-	8	SC	-
UT-62408F-8T4GSC-BNF	-	4	8	-	SC
UT-62408F-8T4GP-BNF	-	4	8	-	SFP

1. Single-mode dual fiber SC port/SFP slot is a standard configuration for products above mentioned, with optional ST/FC.
2. The suffix "F" in "BNF" means 12/24/48VDC（10.8~52.8VDC） power input.
3. If there is no model under requirement, or any questions about the models, please contact UTEK.