



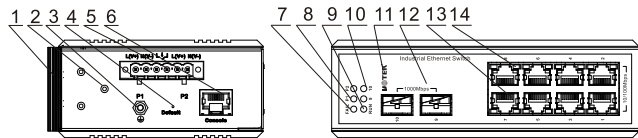
UT-62208F Series Managed Ethernet Switch User Manual

I. Overview

UT-62208F series are managed industrial Ethernet switches. It supports various combinations of 100Mbps RJ-45/fiber ports; it also supports Gigabit fiber ports, plug & play; the console port provides CLI management; and it supports industrial field Ethernet layer 2 protocol, this ensure the network stability. This switch is low power consumption; the fanless design prevents it from noise interference. The operating temperature range is from -40~85 °C; together with EMC compatibility, 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

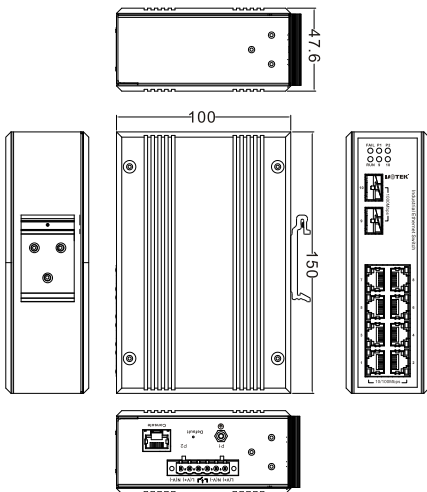
Here take UT-62208F-8T-2GP-MNF real panel & top panel as example:



- 1. DIN-Rail
- 2. Hanger
- 3. Ground screw
- 4. Default setting
- 5. Power & relay alarm input terminal block
- 6. Console port
- 7. Relay alarm indicator
- 8. Power input indicator
- 9. System running indicator
- 10. 1000Base-X port status indicator
- 11. logo
- 12. 1000Base-X port
- 13. 10/100Base-T(X) Ethernet port
- 14. 10/100Base-T(X) Ethernet port indicator

Remarks: Port 1-4 is 100M copper port, port 5-8 is optional with 100M fiber port or cooper port.

Dimension(unit: mm)



III. Features

Data control: supports 802.3X full-duplex flow control, network storm relieving
 Redundant network: supports STP/RSTP/MSTP, UT-Ring network
 Multicast management: supports IGMP Snooping v1/v2/v3
 VLAN: supports IEEE 802.1Q VLAN
 Link aggregation: supports link static/dynamic aggregation
 QoS: supports COS, DSCP, 4 queues, WRR, SP control mode
 Safety management: supports ACL, 802.1X, user level management
 Management function: supports CLI, WEB, SNMP
 Monitoring maintenance: supports port mirror, port status monitoring, log management

IV. Hardware Specification

4.1 Standards & protocols

IEEE 802.3u, IEEE 802.3z, IEEE 802.3, IEEE 802.1D, IEEE 802.1W, IEEE 802.1s, IEEE 802.3x, IEEE 802.1Q, IEEE 802.1p, IEEE 802.1x

4.2 Ports

Fiber port: 100Base-FX (SC/FC/ST)
 1000Base-X (SC/FC/ST/SFP)

RJ-45 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 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 size: 8K

Buffer size: 1Mb

Switching bandwidth: 7.6G

Max. frame length: 1632B

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: 400mA@24Vmax (check details on label)

4.7 Mechanical Characteristics

IP rating: IP40

Installation: DIN-Rail

4.8 Dimension

Size (W × H × D) : 47.6mm × 150mm × 100mm

4.9 Environment

Operating temperature: -40°C~85°C

Storage temperature: -40°C~85°C

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(EN)61000-4-8

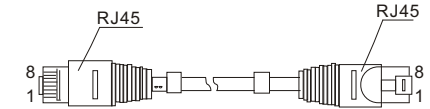
IEC 60068-2-27(Shock)

IEC 60068-2-32(Freefall)

V. Port definition

5.1 10/100Base-T(X) Ethernet port

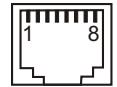
This series provide with 10/100Base-T(X) ports, auto MDI/MDI-X. Please connect the switch with other Ethernet terminal devices via CAT 5e STP. The pin assignment of the electrical port is as below:



Ethernet cable

RJ-45 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, 6 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 transmit data, "RX±" is receive data, "-" is empty

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

This series switch provides 100/1000Base-(F)X fiber ports; when using RJ-45 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 or 10 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 enters 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.

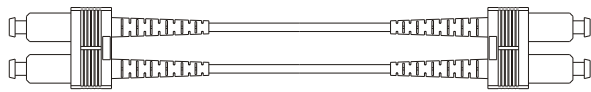
SC port: SC port is a standard square style port; it adopts engineer plastics, high temperature resistance, hard to oxidate.

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

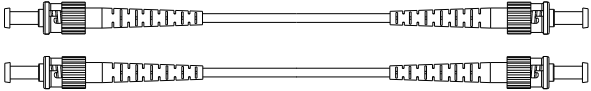
ST port: ST port is a clip-on round port.

5.2.3 Fiber patch cord use

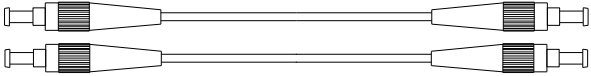
SC port to SC port fiber patch cord



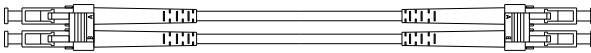
ST port to ST port fiber patch cord



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
RUN	green light blinking	system running regular
	green light on/off	system running breakdown
P1~P2	green light on	power normal
	green light off	power breakdown or no power
Ethernet port	RJ45 green light Speed on	100M data communication rate
	RJ45 green light Speed off	100M data communication rate or connection breakdown
	RJ45 yellow light Act/Link on	link connection normal
	RJ45 yellow light Act/Link blinking	10/100M link communication normal
	RJ45 yellow light Act/Link off	link without connection or breakdown
5~10 (please refer to the actual product ports)	green light on	link connection normal
	green light blinking	link communication normal
	green light off	link without connection or breakdown
FAIL	red light on	with alarm signal output
	red light off	without alarm signal output

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

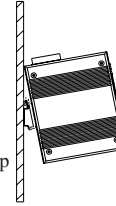
7.2 DIN-Rail installation

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;

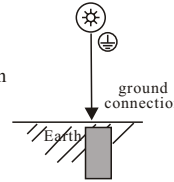
Step 2: rotate the fix screw of the rail from center to both sides in turn tightly, to make the guide rail plying-up the vertical install cover slightly.

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



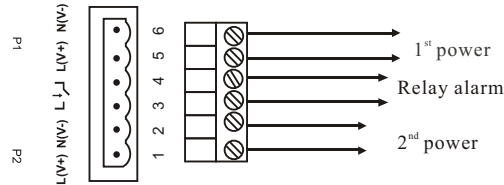
7.3 Ground connection

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))

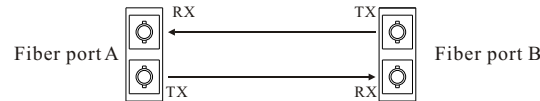


7.5 Alarm relay connection

Relay alarm is 2-pin of the terminal block; it provides power breakdown alarm output; when the powers are in normal connection, $\text{L} \downarrow \text{L}$ means "open circuit", when one of the powers is breakdown, $\text{L} \uparrow \text{L}$ means "short circuit".

7.6 Network port connection

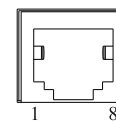
Connect the fiber cord or network cable with relative network port, please pay attention on RX & TX when fiber connection; the relative indicators will be on or blinking.



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

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



IX. Packing list

Item	Qty(unit)
Switch	1PCS
Hanger	2PCS
Screw	6PCS
User manual	1PCS
CD	1PCS
Warranty card	1PCS
Certificate of approval	1PCS

X. Ordering

Model No.	Port description			Fiber port type	
	100 Base-FX	1000 Base-X	10/100 Base-TX	100 Base-FX	1000 Base-X
UT-62208F-8T2GSC-MNF	-	2	8	-	SC
UT-62208F-8T-MNF	-	-	8	-	-
UT-62208F-8T2GP-MNF	-	2	8	-	SFP
UT-62208F-4T4SC-MNF	4	-	4	SC	-
UT-62208F-4T2SC-2GSC-MNF	2	2	4	SC	SC
UT-62208F-6T2SC-MNF	2	-	6	SC	-
UT-62208F-6T2SC-2GSC-MNF	2	2	6	SC	SC

1. Single-mode SC port is a standard configuration for products above mentioned, with optional ST/FC.
2. The suffix "F" in "MNF" 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.