

**MIGE2210G-2GF-8GT**

**Full Gigabit Din-rail mount Industrial  
Ethernet Switch**

**User Manual**

(Edition: V1.0)

Wuhan Maiwe Communication Co., Ltd.

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**Statement**

Due to continuous update and improvement of products and technology, the contents of this document may not be completely consistent with the actual products, appreciate for your understanding. If necessary to inquiry the updates of the product, please check our official website or contact our representative directly.

**Revision history:**

Version	Date	Reason
V1.0	2017.11	Document creation

## Safe Use Instruction

This product performance is excellent and reliable in the designed range of use, **but it's necessary to avoid man-made damage or destroy for the equipment.**

- Read the manual carefully and keep this manual for reference if need afterwards.
- Do not put the device close to the water sources or damp places.
- Do not put anything on the power cable, it should be placed out of reach.
- To avoid causing fire, do not knot or wrap the cable.
- Power connector and other device connectors should be firmly connected with each other, frequently inspection is needed.
- Please keep the fiber socket and plug clean. Do not look directly at the fiber section when the equipment is working.
- Please keep the equipment clean and wipe it with a soft cotton cloth if necessary.
- Please do not repair the equipment by yourself, unless there is clear instructions in the manual.

Under the following circumstances, please cut off power immediately and contact us.

- Equipment water damage.
- The equipment is broken or the casing is broken.
- The equipment works abnormally or the performance has completely changed.
- The equipment produces odor, smoke or noise.

Statement: Information requiring explanation in use of the managed software.

Attention: Matters requiring specific attention in the use of the managed software.

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# 1. System outline

## 1.1. Product Introduction

The MIGE2210G-2GF-8GT is a high performance unmanaged industrial Ethernet switch with total 10 Gigabit Ethernet ports. It has 2x1000Base-X SFP fiber ports and 8x10/100/1000Base-T RJ45 ports, which is suitable for the big bandwidth Ethernet communications.

The product has a power failure alarm output function which is helpful for field engineers to discover and deal with faults in time. It adopts standard 35mm pitch DIN rail installation method and very suitable for industrial field installation applications.

## 1.2. Product Characteristic

### 1.2.1. Industrial network features

- Store-and-forward switch with 20G bandwidth
- Support 2x1000Base-X SFP ports for fiber connection.
- 8x 10Base-T/100Base-TX/1000Base-T adaptive port, automatic MDI/MDI-X connection.
- According to the IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3x standard.
- Stably work in strong electromagnetism environments.

### 1.2.2. Industrial-grade power supply design

- Provide different power supply application options:  
DC power supply range: DC12~48V(redundant dual power input supported)  
DC/AC power supply range: DC110~370V and AC85V~264V(only single power input)
- Reliable EMC protection and over-current/ over-voltage protection.
- With relay alarm output function and can be connected to other sound and light alarm equipment.

### 1.2.3. Solid exterior design

- Single-ribbed aluminum chassis cooling surface design, efficient heat dissipation without fan, the system can work reliably at -40 °C ~ +85 °C environment.
- Closed high-strength aluminum casing, enabling the system to work reliably in harsh and hazardous industrial environments.
- Standard DIN-Rail mounted installation and it is also ok to provide accessories required for other installation methods.

### 1.3. List

The product package of MIGE2210G-2GF-8GT contains the following items. If any of the items is lost or damaged, please contact the agent or the customer service center of Wuhan Maiwe Communication Co., Ltd., they will assist you to replace or supplement.

Chart 1-1 Industrial Ethernet Switch Product Packing List Table

Item	Quantity
MIGE2210G-2GF-8GT switch	1
User manual	1
Certificate and warranty card	1

### 1.4. Product election

The MIGE2210G-2GF-8GT switch provides two types of AC and DC products for customers to choose. The product model list is shown in Table 1-2.

Table 1-2 MIGE2210G-2GF-8GT switch product model list

Optional model	Port		Power supply range
	Fiber port	Copper port	
Standard model			1:DC power supply 12~48V 2:AC power supply:
MIGE2210G-2GF-8GT	2	8	DC110~370V or AC85~264V adaptive

## 2. Technical Index

Content	MIGE2210G-2GF-8GT
Ports quantity	2x1000Base-X SFP socket 8x10Base-T/100Base-TX/1000Base-T RJ45 port
System parameter	Standard support: IEEE802.3,IEEE802.3u, IEEE802.3ab,IEEE802.3x MAC address table:4K Switch method: storage and forward
Fiber port parameter	GF:1000Base-X Wavelength: 1310nm or 1550nm (Single mode); 850nm (Multimode) Transmission Distance: 10~80Km optional (Single mode) ;550m (Multi mode) Converter type: shielded SFP socket Transport rate: 1.25Gbps
RJ45 parameter	Physical port:RJ45 (shielded) RJ-45 port: 10Base-T/100Base-TX/1000Base-T,auto-negotiation Transmission distance:100m (standard CAT5, CAT5e network cable)
Power parameter	Voltage input: a.DC power:DC12~48V(redundant dual power input supported) b.DC/AC power: DC110~370V/AC85V~264V(only single power input) Power consumption: 5.2@DC24V (full load) Overcurrent protection: built-in
Mechanical parameter	Shell: Metal with no fan Dimensions(H×W×D):138mm×110mm×54mm(not include the DIN rail equipment dimensions) IP grade:IP40 Installation:din-rail mounting
Working environment	Working Temperature: -40℃~+85℃(AC power supply model: -25℃~+70℃) Storage temperature: -40℃~+85℃ Humidity: 5~95% (no condensation)

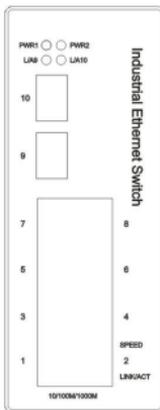
### 3. Hardware installation and testing

#### 3.1. Hardware structure

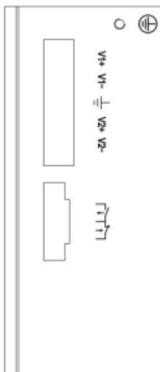
##### 3.1.1. Product configuration

The MIGE2210G-2GF-8GT uses Din rail mount installation and whole machine with six sides fully enclosed structure. The dimensions(not including DIN rail size) are: 136mm×54mm×110mm (height×width×depth).

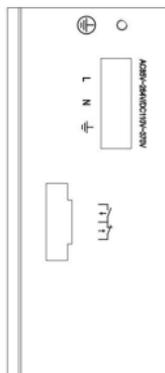
##### 3.1.2. Front panel and side panel



Front panel



Side panel of DC12~24V model



Side panel of DC/AC model

### 3.2. Power supply

The DC power supply model of the MIGE2210G-2GF-8GT switch supports DC12~48V power supply, dual power input, and the two power supplies are mutually backup. Use 5-ways lockable 5.08mm pitch terminal, as shown in the figure below:

V1+ V1-  $\perp$  V2+ V2-



The MIGE2210G-2GF-8GT has a 3-ways lockable 5.08mm pitch terminal and the DC/AC power model supports DC110~370V and AC85~264V power supply, as shown in the figure below:

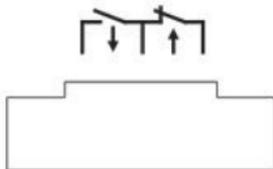
AC85V~264V/DC110V~370V



L N  $\perp$

Power failure alarm relay:

This switch supports the power failure alarm relay function and normally closed node and normally open node. As shown below:



When the switch works well, the normally open relay is closed, and the normally closed relay is off. When the device power off, the normally open relay is off, and the normally closed relay is closed. Recommended load capacity of the relay switch is 1A (24VDC). The user can connect other sound and light alarm devices with the output of relay contacts.

### 3.2.1. LED indicator lights

The LED indicator on the front panel can show the status of the system and port operation, easy to find and solve the stoppages. The below table shows the LED indicator lights functions:

LED indicator lights

LED	Status	Function
<b>System Status LED</b>		
PWR1 (Red)	On	Power 1 input is correct
	Off	Power 1 input is not working
PWR2 (Red)	On	Power 2 input is correct
	Off	Power 2 input is not working
<b>RJ45 Port Status LED</b>		
10M/100M/100M (Yellow)	On	1000M state (1000Base-T)
	Off	10/100M state (10Base-T/100Base-TX)
LNK/ACT (Green)	On	Link is active
	Blinking	Data is being transmitted
	Off	Link is inactive
<b>SFP fiber port LED</b>		
1000M (Green)	On	Link is active
	Off	Link is inactive

## 3.3. Hardware installation

### 3.3.1. Din-rail installation

Most of the industrial applications use 35mm standard DIN-Rail installation. The DIN-Rail plate should be fixed to the back panel of the switch when you take it out of the box. Before you install the switch on the din-rail, please check the DIN-Rail is situated and notice following two contents:

- Checking DIN-Rail is fixed firm and whether there is enough space for

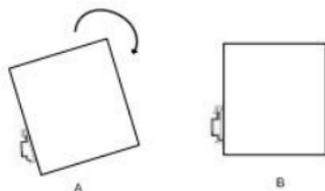
the installation of the switch.

- Checking if there was suitable power supply for the switch.

Please select the correct position for the switch. Install switch on DIN-RAIL as following steps:

- Insert the upper part of the DIN rail into the slot on the upper part of the DIN rail connection base with the circlip. Slightly push down on the top panel of the switch and rotate the device as below picture.

- Insert DIN-rail into DIN-Rail slot and confirm the switch reliable installed on the DIN-rail.



### 3.3.2. Cable connection

After the switch is correctly installed , you can install and connect the cables,which mainly include cable connections of the following interfaces.

- Operation port

The terminal equipment interfaces are Gigabit and 100M Ethernet RJ45 interfaces and gigabit optical ports, so it can be connected to terminal equipment or network equipment by using direct network cables and optical fiber cables

- Power connect

The switch use power according to the instructions on the product label. When all other cables are connected, you can connect to the power supply.

### 3.3.3. Fiber connection

This product has two full-duplex 1000Base-X single mode / multi mode fiber interface and use hot-pluggable SFP during the optical interface using LC connectors. Optical interface to be used in pairs (TX and RX as a pair), TX port is the optical transmitting end,which is connected to the optical receiving end RX of the another remote switch optical interface; RX ports is the optical receiving end which is connected to the optical transmitting end TX of the same remote switch optical interface. Two remote switches optical interfaces can be connected by using 2 redundant 1000Base-X optical fiber interfaces at the same time.

SFP optical module shown in the figure :



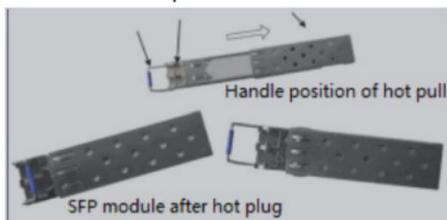
Hot-pluggable SFP modules as follows:

Hot-plug procedure:

- Observe the end with PCB gold finger during SFP
- Insert the golden finger end into the metal shielding cage of the SFP, and hear a clicking sound to indicate that the device has been inserted in place, and then put the SFP plug-in handle on the normal position parallel to the interface. Then it means we can use it.

Hot pull steps:

- First pull the SFP's plug handle perpendicular to the interface, the optical device should be disconnected from the hook of the SFP shielding cage at this time.
- Pull out the SFP module in parallel



## Notice

This switch uses lasers to transmit signals on fiber optic cables. The laser meets the requirements of Class 1 laser products and normal operation is harmless to eyes. However, when the equipment is powered on, do not look directly at the optical transmission port and the end face of the optical fiber terminator.

The steps to connect the pluggable fiber optic module are as follows:

- Remove and keep the rubber cover of the ST/SC/FC. When not use, put on a rubber sleeve to protect the optical fiber terminator .
- Check the optical fiber terminator if it is clean. Slightly moisten a clean paper towel or cotton ball, and gently wipe the cable plug. Dirty optical fiber terminator will reduce the quality of optical transmission and affect port

performance

- Connect one end of the optical cable to the optical interface, and the other end to the optical interface of another device
- After connection is completed, check the corresponding LINK/ACT indicator of the fiber port on the front panel. If the indicator is on, the connection is valid.

## 3.4. Simple test

### 3.4.1. System self-examination

When the device is powered on, all the indicator lights on the front panel will flash once. When the RUN indicator flashes, the switch starts to work normally.

### 3.4.2. RJ45 port testing

As picture show below, power on the switch, connect any two RJ45 ports to the network port of two test computers through a direct-connected network cable, and send Ping commands to each other. Both can correctly ping each other without packet loss. At the same time, the yellow light on the corresponding port should be always on (computer network card is working in 1000M state) or always off (computer network card is working in 10M/100M state), and the green light on the corresponding port should flash. It means that the hardware of the tested two RJ45 ports is working normally.



## 3.5. Fiber port testing

Combine the equipment with optical fiber interface into the optical fiber chain network shown in Figure 3-10 (TX connects to another RX, RX connects to another TX). Any RJ45 port of each device is connected to the test computer through a direct-connected network cable and sends Ping commands to each other. Both parties can correctly ping each other without packet loss. At the same time, the LINK lights corresponding to the optical ports should flash, indicating that the two optical ports under test are working normally. Figure 3-8

is a schematic diagram of the optical port test in the MIGE2210G-2GF-8GT switch.



Figure 3-8 Schematic diagram of optical port test

## 4. Maintain and service

The switch has 5 years' guarantee according to the product specifications of Maiwe, we will maintain or replace the product for free if has any problem during the guarantee. However, the above commitment does not cover damage caused by improper use, accidents, natural disasters, incorrect operation or incorrect installation.

To ensure the customer's benefit, we also provide some methods to help the customer and solve their problem as followings:

Service on line

Call technical support office

Maintain or replace

### 4.1. On-line service

In our website, you can get more useful product information and usage methods in the part of technical support.

### 4.2. Call for technical support service

when you have any problem, please contact our technical support department at any time. Our engineer will give you reply and solve your problem at first time.

### 4.3. Warranty Policy

As for product maintenance, replacement or return, you should first confirm with the technical staff and then contact the sales and get the problem resolved. The above should be handled in accordance with the processing procedures of Wuhan Maiwe Communication Co., Ltd.

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