

Introduction

The **IGMC-111GP** is a cost-effective solution for conversion between 10/100/1000Base-T(X) and 100/1000Base-X SFP interfaces, allowing you to extend communication distance by optical fiber. The device supports MDI/MDIX auto detection, so you don't need to use crossover wires. It also supports LFP (Link Fault Pass-through). When one side of the link fails, the other side continues to transmit packets and will wait for a response that never arrives from the disconnected side. LFP can be easily enabled using the DIP switch. Once enabled, the link will shut down as soon as it is notified that the other link has failed, giving the application software a chance to react to the situation. The **IGMC-111GP** has a wide operating temperature range from -40~75°C and a wide voltage range between 12~48 VDC, so it is suitable for harsh operating environments.

Package Contents

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

Contents	Pictures	Number
IGMC-111GP		X 1
DIN-rail Kit		X 1
Wall-mount Kit		X 2
QIG		X 1
4-pin terminal block		X 1

Preparation

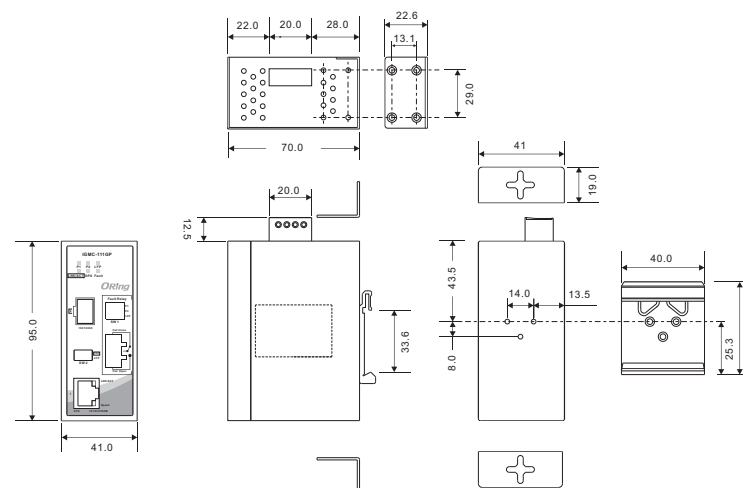
Before installation, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

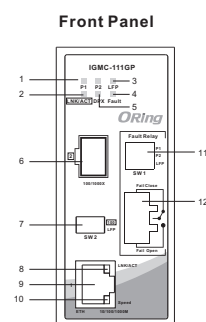
- Elevated Operating Ambient:** If installed in a closed cabinet, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
- Reduced Air Flow:** Installation of the equipment should be such that the amount of air flow required for safe operation of the equipment is not compromised.

- Mechanical Loading:** Mounting of the equipment in the din-rail should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension (Unit: mm)

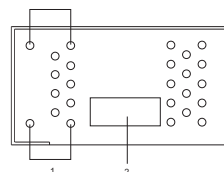


Panel Layouts



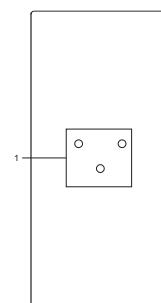
1. Power LED
2. LNK/ACK LED for SFP port
3. LFP status LED
4. Fault LED
5. Duplex LED for Giga port
6. SFP port
7. DIP-switch 2
8. Giga port LNK/ACT LED
9. Giga port
10. Giga port speed LED
11. DIP-switch 1
12. Faulty terminal

Top Panel



1. Wall-mount screw holes
2. Terminal block

Rear Panel

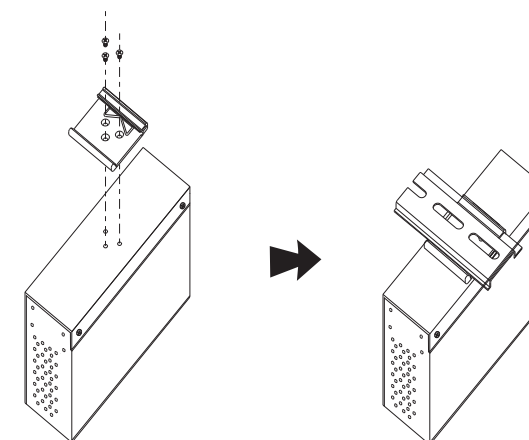


1. Din-rail screw holes

Installation

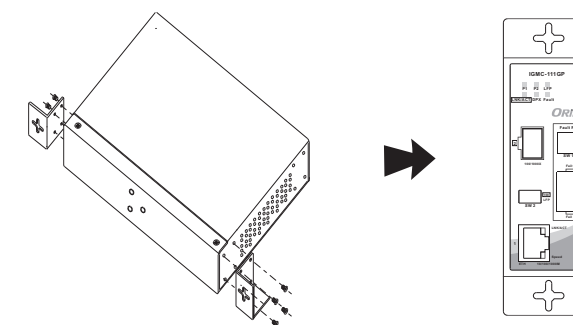
DIN-rail Installation

- Step 1:** Slant the switch and screw the Din-rail kit onto the back of the switch, right in the middle of the back panel.
- Step 2:** Slide the switch onto a DIN-rail from the Din-rail kit and make sure the switch clicks into the rail firmly.



Wall-mounting

- Step 1:** Screw the two pieces of wall-mount kits onto both sides of the switch. A total of eight screws are required, as shown below.
- Step 2:** Use the switch, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
- Step 3:** Insert four screw heads through the large parts of the keyhole-shaped apertures, and then slide the switch downwards. Tighten the four screws for added stability.



● Network Connection

The device has a standard Ethernet port. According to the link type, the device uses CAT 3, 4, 5, 5e UTP cables to connect to any other network devices (Pcs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
10Base-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	M12
100Base-T(X)	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	M12
1000BASE-T	Cat. 5/Cat. 5e 100-ohm UTP	UTP 100 m (328ft)	M12

For pin assignments for different types of cables, please refer to the following tables.

10/100Base-T(X) RJ-45		1000 Base-T RJ-45	
Pin Number	Assignment	Pin Number	Assignment
1	TD+	1	BI_DA+
2	TD-	2	BI_DA-
3	RD+	3	BI_DB+
4	Not used	4	BI_DC+
5	Not used	5	BI_DC-
6	RD-	6	BI_DB-
7	Not used	7	BI_DD+
8	Not used	8	BI_DD-

DIP Switch Setting

3-PIN DIP-Switch 1			Description	
DIP-Switch No.	Function	DIP-Switch Status		
1	Power-1 failure detection	ON	When power-1 failure, enable relay output	
		OFF	Disable power-1 failure detection	
2	Power-2 failure detection	ON	When power-2 failure, enable relay output	
		OFF	Disable power-2 failure detection	
3	LFP warning detection	ON	LFP signals when detected, enable relay output	
		OFF	Disable LFP signals detection	

3-PIN DIP-Switch 2			Description	
DIP-Switch No.	Function	DIP-Switch Status		
1	100/1000Base-FX mode selection	ON	100Base-FX mode	
		OFF	1000Base-FX mode	
2	LFP function	ON	Enable LFP function	
		OFF	Disable LFP function	

● Wiring

The switch supports dual redundant power supplies which are located on the 4-pin terminal block.

STEP 1: Insert the negative/positive wires into the V-/V+ terminals, respectively.



STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

▣ Configurations

After installing the device and connecting cables, the green power LED should turn on. Please refer to the following tablet for LED indication.

● LED indication table

LED	Color	Status	Description
PW1	Green	On	DC power module 1 activated
PW2	Green	On	DC power module 2 activated
Fault	Amber	On	An unexpected event occurred
10/100/1000 Base-T(X) RJ45 Port			
LNK/ACT	Green	On	Port is linked
		Blinking	Acting
		Off	Port is disconnected
Speed	Amber	On	Port running at 100Mbps
		Off	Port running at 10Mbps
		Green	Port running at 1000Mbps
Duplex	Green	On	Full-Duplex
		Off	Half-Duplex
SFP Port			
LNK/ACT	Green	On	Port is linked
LFP			
Status	Amber	On	LFP function failed

▣ Specifications

ORing Media Converter Model	IGMC-111GP
Physical Ports	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	1
100/1000Base-X SFP port	1
Technology	
Ethernet standards	IEEE 802.3i for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3ab for 1000Base-T IEEE 802.3z for 1000Base-X
Jumbo Frame	9K Bytes (1G mode only)
Fault contact	
Relay	Relay output to carry capacity of 1A at 24VDC at pin terminal block
Power	
Input power	Dual 12 ~ 48 VDC voltage power inputs in 4 pin terminal block
Power consumption(Typ.)	4 Watts
Overload current protection	Present
Reverse polarity protection	Present on terminal block
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	41 (W) x 70 (D) x 95 (H)mm (1.61 x 2.76 x 3.74 inch)
Weight (g)	289g

Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 75°C (-40 to 167°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
MTBF	1,116,093hrs
Warranty	5 years

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