MEDIA CONVERTER INDUSTRIAL

ORing

Quick Installation Guide

ITGMC-111GP+   Industrial Gigabit Media Converter

Introduction

The **ITGMC-111GP+** is a cost-effective solution for interface conversion between 1G/10GBase-T and 1G/10GBase-X SFP+ socket. It allows you to extend communication distance of Gigabit copper port with optical fiber. The **ITGMC-111GP+** supports MDI/MDIX auto detection, so you don't need to use crossover wires. With a wide operating temperature range from -20~60℃ and a wide voltage range from dual 12~48 VDC power inputs, the **ITGMC-111GP+** is suitable for harsh operating environments. Therefore, the **ITGMC-111GP+** is one of the most reliable media converters in harsh industrial 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.

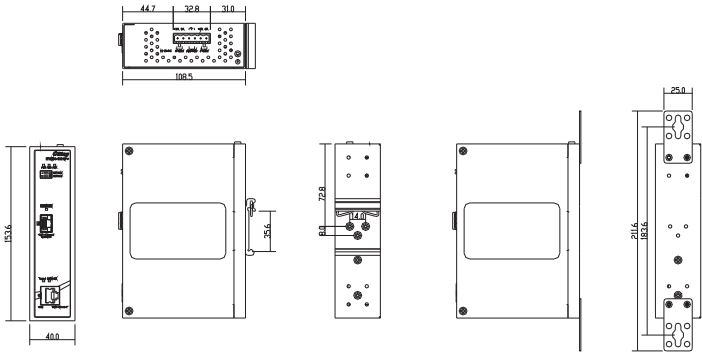| Contents	Pictures	Number
ITGMC-111GP+		X 1
QIG		X 1
DIN-rail kit		X 1
Wall-Mount Kit		X 2

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.
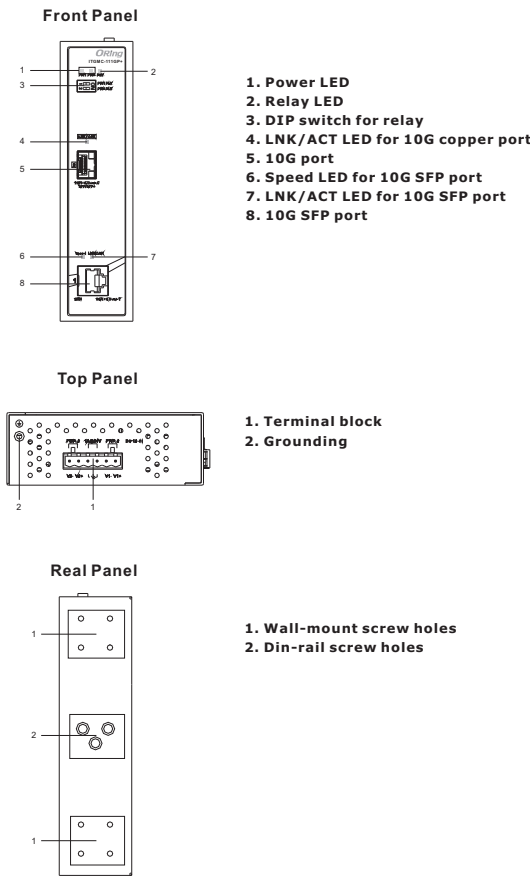
Safety & Warnings

⚠ **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 (Tma) 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

Front Panel

1. Power LED
2. Relay LED
3. DIP switch for relay
4. LNK/ACT LED for 10G copper port
5. 10G port
6. Speed LED for 10G SFP port
7. LNK/ACT LED for 10G SFP port
8. 10G SFP port

Top Panel

1. Terminal block
2. Grounding

Real Panel

1. Wall-mount screw holes
2. 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.
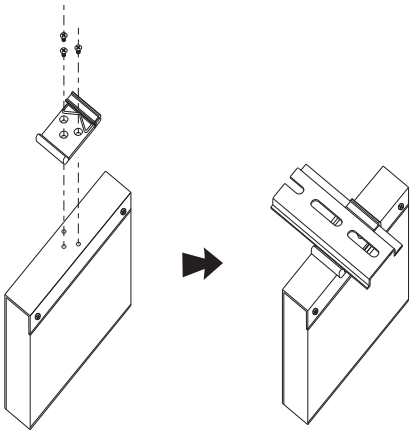
Wall-mount

Step 1: Screw the two pieces of wall-mount kits to the top and bottom panels of the device. A total of eight screws are required, as shown below.
Step 2: Use the device, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
Step 3: Insert a screw head through middle of the keyhole-shaped aperture on the plate, and then slide the device downwards. Tighten the screw head for added stability.
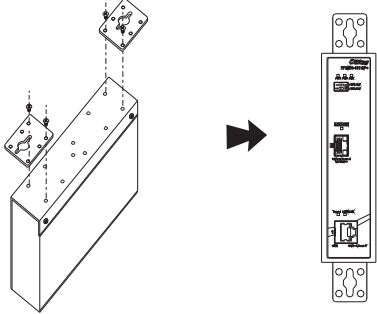
Network Connection

The device has two 10/100Base-T(X) Ethernet ports. According to the link type, the AP uses CAT 3, 4, 5, 5e, 6 UTP cables to connect to any other network device (PCs, servers, switches, routers, or hubs).

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45

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

1G/10G Base-T(X) RJ-45 Pin Assignments	
Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	Not used
5	Not used
6	RD-
7	Not used
8	Not used

1G/10G Base-T MDI/MDI-X Pin Assignments		
Pin Number	MDI port	MDI-X port
1	TD+(transmit)	RD+(receive)
2	TD-(transmit)	RD-(receive)
3	RD+(receive)	TD+(transmit)
4	Not used	Not used
5	Not used	Not used
6	RD-(receive)	TD-(transmit)
7	Not used	Not used
8	Not used	Not used

Fiber Cables

The device comes with a SFP fiber optical port. The fiber optical ports are in multi-mode (0 to 550M, 850 nm with 50/125 m, 62.5/125 m fiber) and single-mode with LC connectors. Please remember that the TX port of Switch A should be connected to the RX port of Switch B.

Switch A

Switch B

Fiber cord
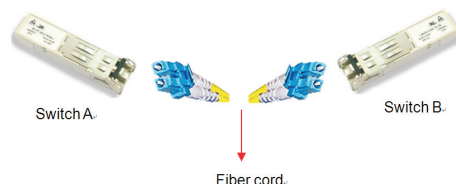
Wiring

Power Input

The switch supports triple redundant power supplies which are located on a 7-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.

V1+ V1- Relay V2+ V2-
└PWR-1┘ └ ┘ └PWR-2┘
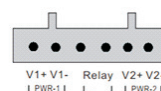
Configurations

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
Relay	Amber	On	Relay activated (closed)
		Off	Relay de-activated (opened)
LED for SFP Port			
LNK/ACT	Green	On	Port is linked
LED for RJ45 Port			
LNK/ACT	Green	On	Port is linked
Speed	Green	On	Port is running at 10Gbps
	Amber	On	Port is running at 1Gbps

Specifications

ORing Media Converter Model	ITGMC-111GP+
Physical Ports	
1G/10GBase-T in RJ45 Auto MDI/MDIX	1 (*Note)
100/1000Base-X SFP port	1
Technology	
Ethernet standards	IEEE 802.3ae for 10Gigabit Ethernet IEEE 802.3an for 10GBase-T IEEE 802.3ab for 1000Base-T IEEE 802.3z for 1000Base-X
Jumbo Frame	10K
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 6 pin terminal block
Power consumption(Typ.)	8.6 Watts
Overload current protection	Present
Reverse polarity protection	Present on terminal block
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	40 (W) x 108 (D) x 154 (H)mm (1.57 x 4.25 x 6.02 inch)
Weight (g)	437g
Environmental	
Storage Temperature	-40 to 85℃ (-40 to 185℉)
Operating Temperature	-20 to 60℃ (-4 to 140℉)
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
MTBF	TBD
Warranty	5 years

*Note : 10GBase-T must use shielding twisted pair cable of Cat6a or above.

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RoHS FC CE

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