

# Quick Installation Guide

## INJ-101GT++-60W

## Industrial Gigabit PoE++ Injector

### Introduction

The INJ-101GT++ PoE Injector series is not only an IEEE802.3at compliant device but also an advanced high power PoE injector. It is intelligent detection that provided 1-ports 10/100/1000Base-T (X) PoE outputs. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached downstream on the Ethernet cable. This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable. Therefore, only an IEEE 802.3at/802.3af compliant device can be powered with the INJ-101GT++ PoE Injector. Typically in Gigabit networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. The INJ-101GT++ PoE Injector can function with any PoE P.D. equipment which is fully compliant with the IEEE 802.3af/at PoE standards, and provide the DIP switch configurator for High power PoE management.





**Note1:** (1) By default, the output value of the high power PoE++ is in sync mode which supports PoE af/at-compliant P.D. devices.  
(2) If you cannot enable the 60W PTZ camera, please set the DIP switch to Async mode and reconnect power. This mode only supports Dual P.D. mode. You may not connect to an af/at-compliant P.D. device with this mode.

### Features

- > PoE++ Injector for 1x10/100/1000Base-T(X)
- > Fully compliant with IEEE802.3at/802.3af standard
- > Auto protection for Over Voltage Power Input and over current output
- > Supports totally Power Output up to 60 Watts for all ports usage.
- > Provided DIP switch configurator for PoE mode management
- > High reliability and rigid IP-30 housing
- > DIN-Rail and wall-mount enabled

### Package Contents





The device 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
INJ-101GT++-60W		X 1
QIG		X 1
DIN-rail kit		X 1
Wall-Mount Kit		X 2

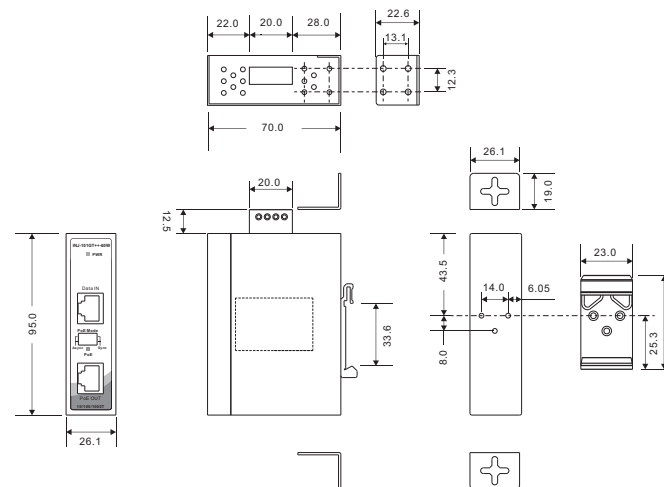
### Preparation

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

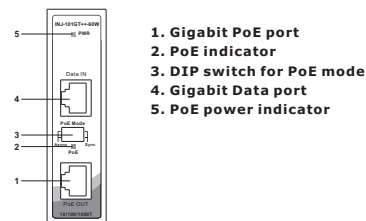
-  **Elevated Operating Ambient:** If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (T<sub>ma</sub>) specified by the manufacturer.
-  **Reduced Air Flow:** Make sure the amount of air flow required for safe operation of the equipment is not compromised during installation.
-  **Mechanical Loading:** Make sure the mounting of the equipment is not in a hazardous condition 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

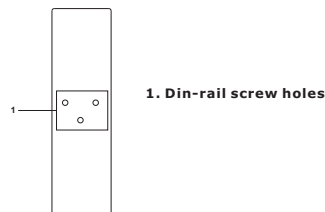


### Panel Layouts

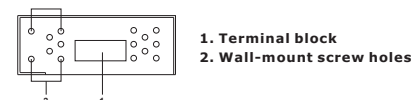
#### Front Panel



#### Rear Panel



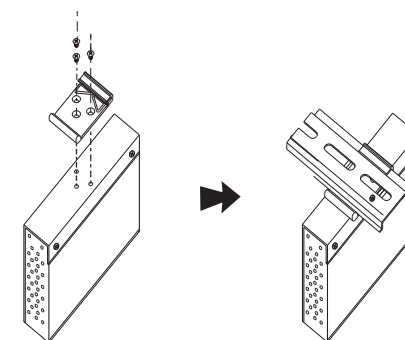
#### Top Panel



### Installation

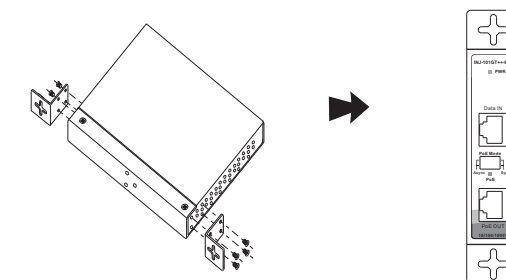
#### DIN-rail

- Step 1:** Slant the device and screw the Din-rail kit onto the back of the device, right in the middle of the back panel.
- Step 2:** Slide the device onto a DIN-rail from the Din-rail kit and make sure the device 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 standard 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). Please refer to the following table for cable specifications.

Cable	Type	Max. Length	Connector
10BASE-TX	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
1000BASE-T	Cat. 5/Cat. 5e 100-ohm UTP	UTP 100 m (328ft)	RJ-45

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

**1000 Base-T**

RJ-45 Input (Data Only)			RJ-45 Output (Data and Power)	
Pin	Symbol	Description	Symbol	Description
1	BI_DA+	Data BI_DA+	BI_DA+ (Vdc1+)	Data BI_DA+ and Feeding Power(+)
2	BI_DA-	Data BI_DA-	BI_DA- (Vdc1+)	Data BI_DA- and Feeding Power(+)
3	BI_DB+	Data BI_DB+	BI_DB+ (Vdc1-)	Data BI_DB+ and Feeding Power(-)
4	BI_DC+	Data BI_DC+	BI_DC+ (Vdc2+)	Data BI_DC+ and Feeding Power(+)
5	BI_DC-	Data BI_DC-	BI_DC- (Vdc2+)	Data BI_DC- and Feeding Power(+)
6	BI_DB-	Data BI_DB-	BI_DB- (Vdc1-)	Data BI_DB- and Feeding Power(-)
7	BI_DD+	Data BI_DD+	BI_DD+ (Vdc2-)	Data BI_DD+ and Feeding Power(-)
8	BI_DD-	Data BI_DD-	BI_DD- (Vdc2-)	Data BI_DD- and Feeding Power(-)

**10/100 Base-TX**

RJ-45 Input (Data Only)			RJ-45 Output (Data and Power)	
Pin	Symbol	Description	Symbol	Description
1	Rx+	Data Receive	Rx+ (Vdc1+)	Data Receive and Feeding power(+)
2	Rx-	Data Receive	Rx- (Vdc1+)	Data Receive and Feeding power(+)
3	Tx+	Data Transmit	Tx+ (Vdc1-)	Data Transmit and Feeding power(-)
4	NC	Not Connected	NC (Vdc2+)	Not Connected Feeding power(+)
5	NC	Not Connected	NC (Vdc2+)	Not Connected Feeding power(+)
6	Tx-	Data Transmit	Tx- (Vdc1-)	Data Transmit and Feeding power(-)
7	NC	Not Connected	NC (Vdc2-)	Not Connected Feeding power(-)
8	NC	Not Connected	NC (Vdc2-)	Not Connected Feeding power(-)

**Configurations**

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

LED	Color	Status	Description
Power	Green	On	Power is on and functioning Normally
		Off	PoE Device Link
PoE (*Note2)	Blue	Off	None PoE Device Detected
		Blink	Overload present

\*Note2: The high power PoE++ output default is Sync mode.  
If you don't power up the 60W PoE PTZ camera,  
please switch the DIP 1/2 to off and re-power on the injector.

**Specifications**

ORing Injector Model	INJ-101GT++-60W
<b>Physical Ports</b>	
RJ-45 Ethernet Port Input	1
RJ-45 Ethernet Port with P.S.E. Output	1
<b>Operating Voltage</b>	
Input Voltage	50 ~ 57 VDC on 4-pin terminal block
<b>DIP Switch</b>	
DIP Switch 1/2	DIP Switch 1/2 (OFF): PoE P.S.E set to master and Asynchronize mode. DIP Switch 1/2 (ON) : PoE P.S.E set to synchronize mode(default)
<b>Power</b>	
Input Power	50 ~ 57 VDC on 4-pin terminal block
Power Consumption	1 Watts (Not include PD's device)
PoE Power Budget	60 Watts max
<b>Protection</b>	
Short Circuit Protection	Present
Over Load Protection	Present
<b>Physical Characteristic</b>	
Enclosure	IP-30
Dimension (W x D x H)	26.1(W)x70(D)x95(H)mm (1.03 x 2.76 x 3.74 inch)
Weight (g)	188g
<b>Environmental</b>	
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
<b>Regulatory Approvals</b>	
EMC	EN 55032, EN 55024 (CE EMC), FCC Part 15 B, EN 61000-3-2, EN 61000-3-3
EMI	CISPR 32, EN 55032, FCC Part 15 B 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 (PFMF), EN61000-4-11 (DIP)
Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN60950-1
MTBF	3923869 hrs
Warranty	5 years

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