level one ®

IGP-0104

ndustrial Gigabit POE Injector, 802.3at PoE+, 60W, 24 to 56 VDC

User Manual

FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment   is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

Trademarks:
All trade names and trademarks are the properties of their respective companies.

NOTE:

Always make sure the total length of the TX cable DOES NOT exceed 100meter. Total length is defined as length A + length B

Length A + Length B < 100 meter

A

B

PD

Remote Switch

Maximum total cable length is 100meter.

During 100Mbps transmission, the maximum total cable length is 100 meter.

During 1000Mbps speed transmission, recommend maximum cable length less than 90 meter is more desired.

POE signal attenuates every meter, the built-in transformer allows the attenuation to reach 100 meter long to follow IEEE802.3af / at standard. the higher quality of PD you connected to, the more reliable the network will be. When connect to a poor quality PD, it can not generate strong signal to send to remote switch. Always make sure you have a high quality PD to perform a desired network.

Installation package

This unit can be installed by din-rail mounted or wall-mounted. Din-rail brackets and wall-mounted bracket are included.

Wall mount bracket x 2

Din Rail Bracket x 1

4 pin Terminal Block x1
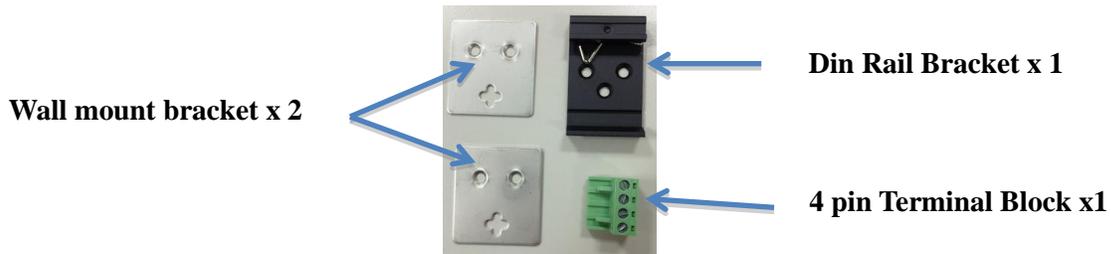
Power connection

This unit is equipped with Voltage booster feature which allow low input voltage 24VDC to be boost up to 55VDC for 30w POE power. The provided 4 pin terminal block can be connected with 24VDC to 56VDC power source. Always Make sure your input voltage is within this supported voltage range.

To make power connection – Follow the printed polarity for V+, V-, Ground. Connect positive wire to V+ , connect negative wire to V-, also connect neutral wire to ground. This unit can be connected to two power input.
+V1- is for power input one connection,
+V2-(SW) is for power input two connection
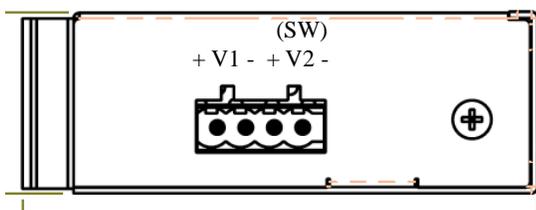
Connecting procedure
STEP 1 –
Take out 4 pin terminal block located in the included mounting kit package.
STEP 2 –
Connect power wire to +V1- or Connect +V2- (SW) as shown above
STEP 3 –
Plug into terminal block socket shown above. Polarity needs to match the V+ and V-

WARNING -- Always SHUTS OFF power source to connect power wire.
WARNING – any exceeded input voltage will not make this unit function and may damage this unit.

LED indicator

PW1 PW2

Mode A Mode B 4 Pair

P   er 2

Industrial Gigabit POE Injector
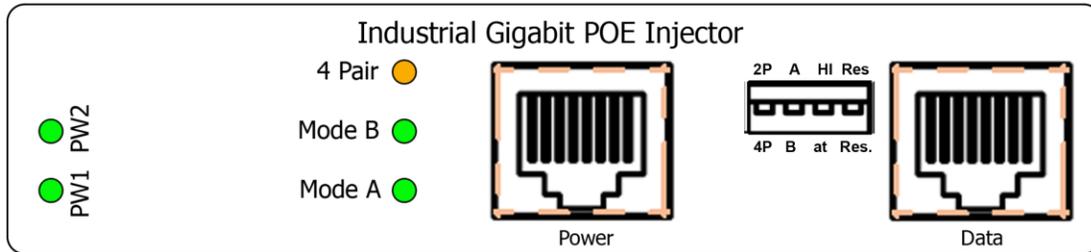
Power

Data

4P B   at Res.

2P A   HI Res

Mode A Green LED ON --
For End-Span POE power 1,2,3,6

4 Pair amber LED ON –
Both 4 pair are delivering POE
power. for 60Watts application
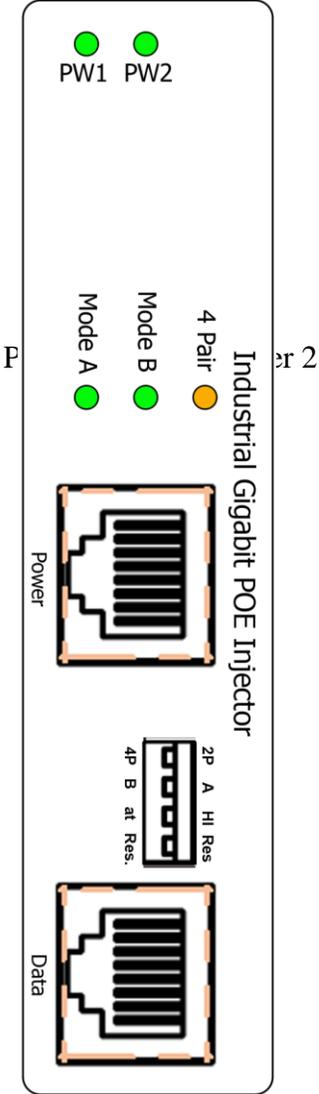
Dip Switch setting

This unit is equipped with 4 pin dip switches which allows users to set the desired POE power setting to meet your desired POE network. Refer to the setting shown below:

2P	2 pair 30W is selected
4P	4 pair 60W is selected (DEFAUT)
A	Mode A End-Span is selected (DEFAULT)
B	Mode B Mid-Span is selected
HI	High power 36W is selected (DEFAULT)
at	IEEE802.3at 30W is selected
Res	Reserved (DEFAULT)
Res	Reserved

Specification:

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE802.3af for POE IEEE802.3at for POE+
Network Connector :	1xRJ-45 10/100/1000BaseT(X) Data 1xRJ-45 10/100/1000BaseT(X) PSE with POE Output power
Network Cable	UTP/STP above Cat.5e Cable EIA/TIA-568 10-ohm (100m)
Protocol	CSMA/CD
LED	PW1(power 1) Green: ON- power good, OFF-power failed PW2(power 2) Green: ON- power good, OFF-power failed Mode A : ON- End Span PD detected Mode B: ON – Mid Span PD detected 4 Pair: ON – 60W PSE in active mode. OFF – 30W PSE in active mode.
POE Pin Assignment	Default: Mode A (End Span) V+, V+, V-, V- for pin 1, 2, 3, 6 DIP switch setting can be changed to Mode B, V+, V+, V-, V- for pin 4, 5, 7, 8
DIP Switch	To select 2 pair (30/36Watts) or 4 pair (60/72Watts) To select Mode A, or Mode B To select standard IEEE802.3at 30watts or high power POE 36Watts
Reverse polarity protection	Present
Overload current protection	Present
Power Supply	2 Redundant power source 24V-56V VDC Power Input,
Power Consumption	1 W@24/48 VDC full load, Without POE
POE power	Maximum POE power 72watts at 24/48VDC input

Removable Terminal Block	Provide 4 pin terminal block Wire range: 0.34mm^2 to 2.5mm^2 Solid wire (AWG):12-24/14-22 Stranded wire(AWG): 12-24/14-22 Torque:5lb-In/0.5Nm/0.56Nm Wire Strip length: 7-8mm
Operating Temperature	-40℃~75℃ fully tested.
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40℃~85℃
MTBF (mean time between failure)	510,304 hrs (MIL-HDBK-217F) at 25℃
Housing	Rugged Metal ,IP30 Protection
Case Dimension (L X W X D)mm	103.5mmx32mmx81.5mm (LxWxD)
Installation mounting	DIN Rail mounting and Wall Mounting
Certifications:	
EN55022/24	ITE equipment
Safety	IEC EN60950-1
EMC/EMS	CE, FCC, VCCI
EMI	FCC Part 15 Subpart B Class A, CE EN 55022 Class A
EN 50155 / EN 60068-2-6	Vibration
EN 50155 / EN 60068-2-27	Shock
EN 50155 / EN 60068-2-32	Free Fall

Housing Dimension

Zone	Mark	Description	Date	Sign