INJ-IG60-24

Industrial Gigabit IEEE802.3af/at PoE Injector (15.4/30/36/60/72W, 12/24/48VDC)

- 12/24/48VDC redundant dual input power with booster for PoE output
- Regulate PoE output voltage
- Power output 15.4W/30W/36W/60W72W select by DIP SW
- Compliant with 10/100/1000Base-T(X) & IEEE802.3af/at PoE
- Railway EN50121-4, Heavy industrial, EN61000-6-2, EN61000-6-4, CE, FC certified

INJ-IG60-24 is an industrial grade, single port, gigabit Ethernet PoE (Power over Ethernet) injector with power boost technology. PoE describes a system to pass electrical power safely, along with data, on Ethernet cabling. The original IEEE 802.3af-2003 PoE standard provides up to 15.4 W of DC power to each device. The updated IEEE 802.3at-2009 PoE standard also known as PoE+ or PoE plus, provides up to 30 W of power. Additionally, INJ-IG60-24 can provide up to 36/60/72W through the non-standard use of all 4 pairs of category 5 cable. Housed in a rugged DIN rail or wall mountable enclosure, this product is designed for harsh environments, such as industrial networking, security, intelligent transportation systems (ITS) and is also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications (See Figure 1). Standard operating temperature range models (-10 to 60°C) and wide operating temperature range models (-40 to 75°C) fulfill the special needs of industrial automation applications.

Features

- Provides 1 port IEEE 802.3at/af PoE Injector
- PoE Mode A/B Select by DIP SW
- 4 Pairs (60W/72W) PD handshake mode select by DIP SW (Such as AXIS® IP cam)
- Wide operating temperature -40 ~ 75°C (INJ-IG60-E24)
- IP30 rugged metal housing and fanless

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3ab 1000Base-T Gigabit Ethernet
	IEEE 802.3at Power over Ethernet+, PoE+
	IEEE 802.3af Power over Ethernet, PoE
PoE Standard	IEEE 802.3at, IEEE 802,3af
PoE Standard & RJ-45 Pin Assignment	RJ-45 support IEEE 802.3at/af Middle-Span Alternative B mode or End-Span Alternative A mode, set by DIP SW
	End-Span, Alternative A mode Positive (V+): RJ-45 pin 1, 2. Negative (V-): RJ-45 pin 3, 6. Data (1, 2, 3, 6, 4, 5, 7, 8)
	Middle-Span, Alternative B mode Positive (V+): RJ-45 pin 4,5 Negative (V-): RJ-45 pin 7,8 Data (1, 2, 3, 6, 4, 5, 7, 8)
Network Connector	1 RJ-45 for 10/100/1000Base-T Data, and 1 RJ-45 for 10/100/1000Base-T Data with PoE Output power
Network Cable	UTP/STP above Cat. 5e cable
	EIA/TIA-568 100-ohm (100m)
LED	Per unit: Power 1 (Green), Power 2 (Green), Fault (Amber)
	4/2 Pairs (Green) ON: 4 Pairs PoE Power output for 60/72W PoE OFF: 2 Pairs PoE Power output
DIP SW	SW1 ON: Alt B mode (4,5,7,8) OFF: Alt A mode (1,2,3,6)
	SW2 ON: Hi Power PoE 36W(in 2 pair), or 72W (in 4 pair) OFF: Standard PoE 15.4W/30W (in 2 pair), or 60W (in 4 pair)
	SW3 ON: 4 Pair PoE Pin Ultra-High Power 60W/72W PoE Output OFF: 2 Pair PoE Pin depand on DIP SW 1,2
	SW4 ON: For Particular PD in 4 pair mode, PoE Handshake by pin 1,2,3,6,4,5,7,8 (Such as AXIS® Q60 series) OFF: General PD
Reverse Polarity Protection	Supported for power input
Overload Current Protection	Supported
Power Supply	Redundant Dual DC 12/24/48V (10~57VDC) Input power (Removable Terminal Block)
	Built-in very high efficiency booster(91~96%) to rise up 52VDC for PoE output
	Regulated PoE output voltage (52VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter (Figure 2)

PoE Power Budget	Maximum Ultra High Power 60W, IEEE 802.3at 30W, IEEE 802.3at High power 36W, IEEE 802.3af 15.4W
Power Consumption	INJ-IG60-24 in 30W mode (2 Pair)

Input Voltage	Input Power Consumption	Device Power Consumption	PoE Power Budge	Boost Efficiency
12VDC	33.9W	1.1W	30W	91.46%
24VDC	33W	1.4W	30W	94.90%
48VDC	33.2W	1.9W	30W	95.80%

INJ-IG60-24 in 60W mode (4 Pair)

Input Voltage	Input Power Consumption	Device Power Consumption	PoE Power Budge	Boost Efficiency
12VDC	67.1W	1.1W	60W	90.90%
24VDC	65.2W	1.4W	60W	94.10%
48VDC	64.7W	1.9W	60W	95.50%

Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC
Removable Terminal Block	Provides 2 redundant power, alarm relay contact, 6 Pin
Operating Temperature	-10 ~ 60°C (INJ-IG60-24) -40 ~ 75°C (INJ-IG60-E24)
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40 ~ 85°C
Housing	Rugged Metal, IP30 Protection and fanless
Dimensions	106 x 31.6 x 142 mm (D x W x H)
Weight	0.425kg
Installation Mounting	DIN Rail mounting, or Wall Mounting (Optional)
MTBF	1,403,339 Hours (MIL-HDBK-217)
Warranty	5 years
Certification	
EMC	CE (EN55024, EN55032)
EMI	FCC Part 15 Subpart B Class A, CE
Railway Traffic	EN50121-4
Immunity for Heavy Industrial environment	EN 61000-6-2
Emission for Heavy industrial environment	EN 61000-6-4

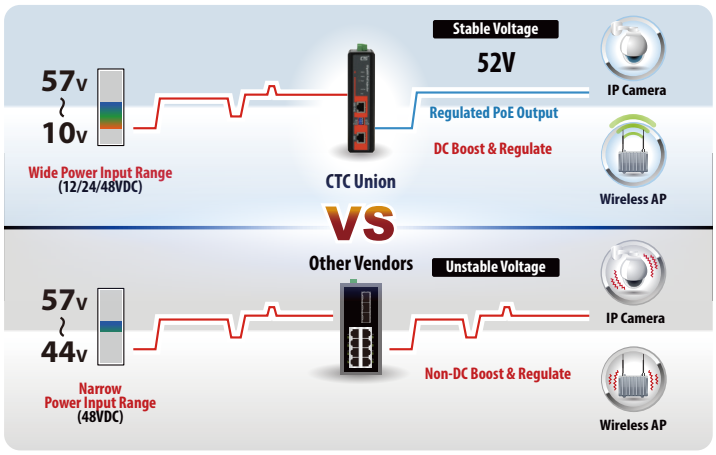
EMS (Electromagnetic Susceptibility) Protection Level	EN61000-4-2 (ESD) Level 3, Criteria B
	EN61000-4-3 (RS) Level 3, Criteria A
	EN61000-4-4 (EFT) Level 3, Criteria A
	EN 61000-4-5 (Surge) Level 3, Criteria B
	EN 61000-4-6 (CS) Level 3, Criteria A
	EN61000-4-8 (PFMF) Field strength 300A/m Criteria A

Safety	EN60950-1
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Application

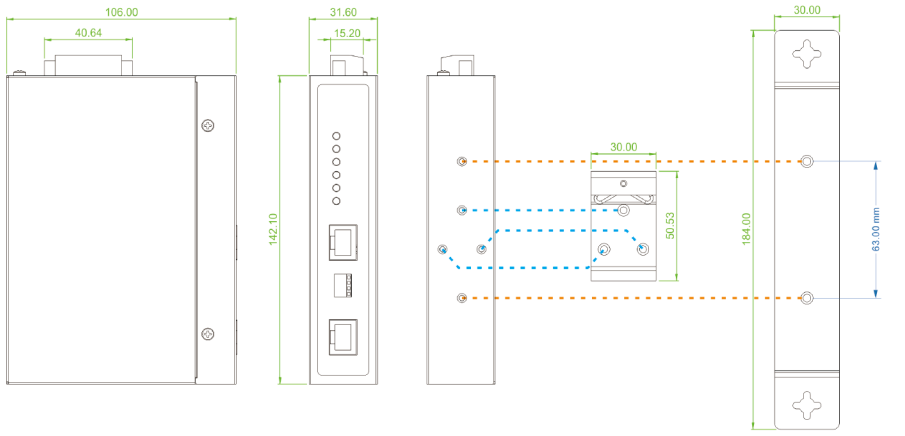
Figure 1 : INJ-IG60-24 Giagabit Ethernet PoE Injector

Figure 2 : Very high efficiency boost technology for PoE



- Regulated PoE output voltage (52VDC) to stabilize PoE device
- Guarantee delivery PoE power distance to 100 meter
- Wide range input power 12/24/48VDC (10~57VDC)
- Built-in very high efficiency (91~96%) to boost PoE output voltage

Dimensions



Side View | Front View | Rear View | DIN-Rail Kit View | Wall-Mount Kit View (Optional accessory)

Ordering Information

Model Name	Ethernet	PoE Port		Power input	Certification				Operating Temperature
	10/100/1000 Base-T	IEEE 802.3at (PSE)	Power Budget	Redundant	Safety EN60950-1	Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC	
INJ-IG60-24	1	1	15/30/36/60/72W	12/24/48VDC	V	V	V	V	-10~60℃
INJ-IG60-E24	1	1	15/30/36/60/72W	12/24/48VDC	V	V	V	V	-40~75℃

Model Naming Rule

INJ - IG - 60 - E24

- INJ: Inector
- IG: Industrial Gigabit Ethernet
- 60: 60W
- E24: 24V Booster-40~75℃
- 24: 24V Booster-10~60℃

Package List

- INJ-IG60-24 device
- Din Rail with screws
- Terminal block

Optional Accessories

Wall mount kit Accessories

IND-WMK01	Wall Mount kit for Industrial product, 184 x 30mm