24V Booster

INJ-IG60-24

Gigabit Ethernet PoE + Injector
IEEE802.3at/af, 15.4/30/36/60/72W

CE FC EN50121-4 EN61000-6-2 EN61000-6-4 PoE Regulated

INJ-IG60-24 is an industrial grade, single port, gigabit Ethernet PoE (Power over Ethernet) injector. PoE technology 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. 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 IEEE802.3at/af PoE Injector
- Power output 15.4W, 30W, 36W, 60W, 72W select by DIP SW
- 24/48VDC (20~57VDC) redundant dual input power with built-in very high efficiency booster (94~96%) to rise up 55 VDC for PoE output
- Constant and regulated PoE output voltage at 55VDC
- 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)
- UL60950-1, CE, FCC, Railway traffic EN50121-4 certification
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- 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, IEEE802.3af
PoE Standard	IEEE802.3at, IEEE802,3af
PoE 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)
	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)
	4/2 Pairs (Green) ON: 4 Pairs PoE Power output for 60W PoE OFF: 2 Pairs PoE Power output
DIP SW	SW1 Reserved
	SW2 ON: Hi Power 36W 36W PoE output OFF: Standard PoE 802.3af (15.4W), 802.3at (30W)
	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: Alternative B mode PoE Power Pin 4, 5, 7, 8 (When DIP SW 3 Off) OFF:Alternative A mode PoE Power Pin 1, 2, 3, 6 (When DIP SW 3 Off)
Reserve Polarity Protection	Present
Overload Current Protection	Present

Power Supply	Redundant Dual DC 24/48V (20~57VDC) Input power (Removable Terminal Block)
	Built-in very high efficiency booster(97~99%) to rise up 55 VDC for PoE output
PoE Power Output	Maximum Ultra High Power 60W, IEEE802.3at 30W, IEEE802.3at High power 36W, IEEE802.3af 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
24VDC	33W	1.4W	30W	94.90%
48VDC	33.2	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
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	Provide 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 and Wall Mounting
MTBF	763,725Hrs
Warranty	5 years

Certification	
EMC	CE
EMI	FCC Part 15 Subpart B Class A, CE EN55022 Class A
Railway Traffic	EN50121-4
Immunity for Heavy Industrial environment	EN 61000-6-2
Emission for Heavy industrial environment	EN 61000-6-4

EMS	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	UL60950-1 (pending)
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Application

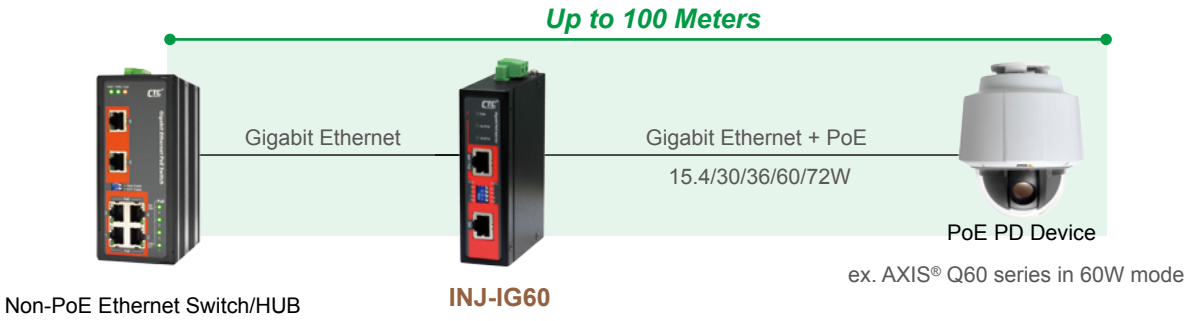
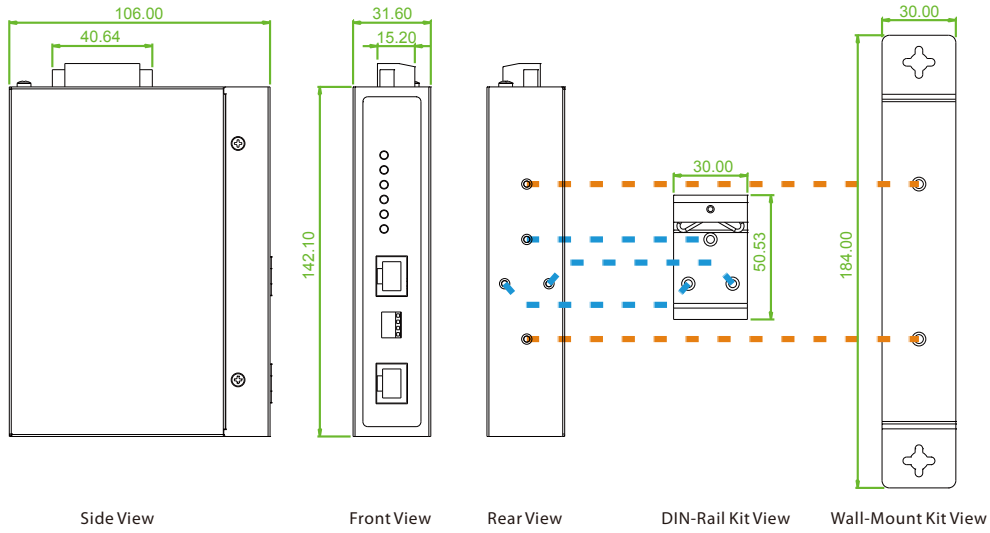


Figure : INJ-IG60-24 Gigabit Ethernet PoE Injector

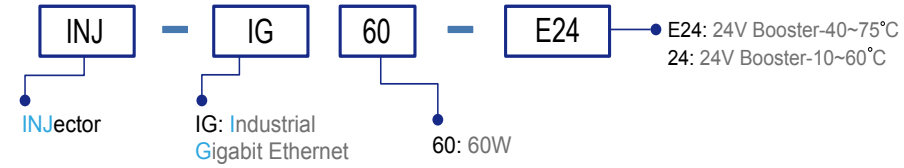
Dimensions



Ordering Information

Model Name	Ethernet	PoE Port		Input Voltage (Boost)	Certification			Operating Temperture
	10/100/1000 Base-T	IEEE802.3at (PSE)	Power Budget		Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC	
INJ-IG60-24	1	1	15/30/36/60/72W	24/48VDC	V	V	V	-10~60 C
INJ-IG60-E24	1	1	15/30/36/60/72W	24/48VDC	V	V	V	-40~75 C

Model Naming Rule



Accessories

DR-120-24	Industrial Power, Input 88 ~ 132VAC / 176 ~ 264VAC, Output 24VDC, 120W, -10 ~ +60℃
DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50℃
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70℃
MDR-60-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 60W, -20 ~ +70℃

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