

# INJ-IG60-24

## Industrial Gigabit PoE Injector

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

- » 12/24/48VDC Redundant Dual Power Input with Booster for PoE Output
- » Regulate PoE Output Voltage
- » Power Output 15.4W/30W/36W/60W/72W Select by DIP SW
- » Compliant with 10/100/1000Base-T(X) & IEEE802.3af/at PoE
- » EN60950-1, EN50121-4, EN61000-6-2, EN61000-6-4, CE and FCC Certified



The industrial-grade single-port Gigabit PoE injector INJ-IG60-24 securely provides power and data transmission through Ethernet cables, it operates on 24/48VDC power input and compliant with the original IEEE 802.3af-2003 and updated IEEE 802.3at-2009 PoE standards, providing up to 15.4 W and 30W DC power per port. In addition, it can provide up to 60W of power through a special design using 4 pairs of Cat5e cables. It is designed for harsh environments and can be used in industrial networks, traffic monitoring, safety automation applications, urban security, and smart transportation systems. It is also suitable for many military or utility market applications where environmental conditions exceed commercial product specifications.

## Features

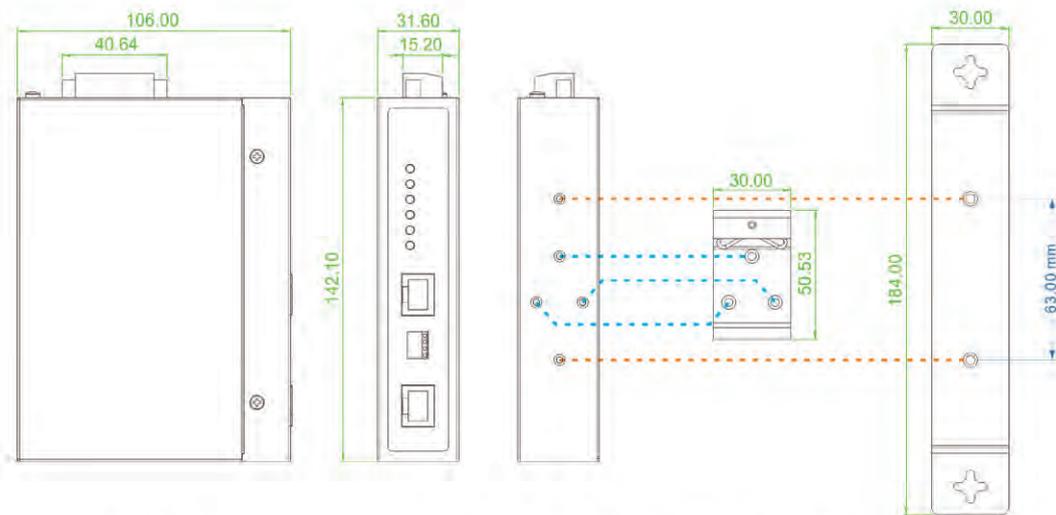
- Provides 1 port IEEE 802.3at/af PoE Injector
- PoE Mode A/B Select by DIP SW
- 4 Pairs (60W/72W) PD handshake mode select by DIP SW (Such as AXIS® IP cam)
- Wide operating temperature -40 ~ 75°C (INJ-IG60-E24)
- IP30 rugged metal housing and fanless

## Specifications

|                                                |                                                                                                                                                             |                             |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <b>Standard</b>                                | 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    |
| <b>PoE Standard &amp; RJ-45 Pin Assignment</b> | RJ-45 supports IEEE 802.3at/af Middle-Span Alternative B mode or End-Span Alternative A mode, set by DIP SW                                                 |                             |
|                                                | End-Span, Alternative A mode<br>Positive (V+): RJ-45 pin 1, 2.<br>Negative (V-): RJ-45 pin 3, 6.<br>Data (1, 2, 3, 6, 4, 5, 7, 8)                           |                             |
|                                                | Middle-Span, Alternative B mode<br>Positive (V+): RJ-45 pin 4,5<br>Negative (V-): RJ-45 pin 7,8<br>Data (1, 2, 3, 6, 4, 5, 7, 8)                            |                             |
| <b>Network Connector</b>                       | 1 RJ-45 for 10/100/1000Base-T Data, and 1 RJ-45 for 10/100/1000Base-T Data with PoE Output power                                                            |                             |
| <b>Network Cable</b>                           | UTP/STP above Cat. 5e cable<br>EIA/TIA-568 100-ohm (100m)                                                                                                   |                             |
| <b>LED</b>                                     | System: Power 1 (Green), Power 2 (Green), Fault (Amber)<br>4/2 Pairs (Green)<br>ON: 4 Pairs PoE Power output for 60/72W PoE / OFF: 2 Pairs PoE Power output |                             |

|                                                                  |                                                                                                                                                                                                                                                                                        |                                                                                                                                    |                                 |                         |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------|
| <b>DIP SW</b>                                                    | 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)<br>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<br>OFF: 2 Pair PoE Pin depend 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<br>(Such as AXIS® Q60 series)<br>OFF: General PD |                                 |                         |
| <b>Reverse Polarity Protection</b>                               | Supported for power input                                                                                                                                                                                                                                                              |                                                                                                                                    |                                 |                         |
| <b>Overload Current Protection</b>                               | Supported                                                                                                                                                                                                                                                                              |                                                                                                                                    |                                 |                         |
| <b>Power Supply</b>                                              | Redundant Dual DC 12/24/48V (10~57VDC) Input power (Removable Terminal Block )<br>Built-in very high efficiency booster(91~96%) to rise up 52VDC for PoE output<br>Regulated PoE output voltage (52VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter |                                                                                                                                    |                                 |                         |
| <b>PoE Power Budget</b>                                          | Maximum Ultra High Power 60W, IEEE 802.3at 30W, IEEE 802.3at High power 36W, IEEE 802.3af 15.4W                                                                                                                                                                                        |                                                                                                                                    |                                 |                         |
| <b>Power Consumption</b>                                         | <b>INJ-IG60-24 in 30W mode (2 Pair)</b>                                                                                                                                                                                                                                                |                                                                                                                                    |                                 |                         |
|                                                                  | <b>Input Voltage</b>                                                                                                                                                                                                                                                                   | <b>Input Power Consumption</b>                                                                                                     | <b>Device Power Consumption</b> | <b>PoE Power Budget</b> |
|                                                                  | 12VDC                                                                                                                                                                                                                                                                                  | 33.9W                                                                                                                              | 1.1W                            | 30W                     |
|                                                                  | 24VDC                                                                                                                                                                                                                                                                                  | 33W                                                                                                                                | 1.4W                            | 30W                     |
|                                                                  | 48VDC                                                                                                                                                                                                                                                                                  | 33.2W                                                                                                                              | 1.9W                            | 30W                     |
|                                                                  | <b>INJ-IG60-24 in 60W mode (4 Pair)</b>                                                                                                                                                                                                                                                |                                                                                                                                    |                                 |                         |
|                                                                  | <b>Input Voltage</b>                                                                                                                                                                                                                                                                   | <b>Input Power Consumption</b>                                                                                                     | <b>Device Power Consumption</b> | <b>PoE Power Budget</b> |
|                                                                  | 12VDC                                                                                                                                                                                                                                                                                  | 67.1W                                                                                                                              | 1.1W                            | 60W                     |
|                                                                  | 24VDC                                                                                                                                                                                                                                                                                  | 65.2W                                                                                                                              | 1.4W                            | 60W                     |
|                                                                  | 48VDC                                                                                                                                                                                                                                                                                  | 64.7W                                                                                                                              | 1.9W                            | 60W                     |
| <b>Alarm Relay Contact</b>                                       | Relay outputs with current carrying capacity of 1A @24VDC                                                                                                                                                                                                                              |                                                                                                                                    |                                 |                         |
| <b>Removable Terminal Block</b>                                  | Provides 2 redundant power, alarm relay contact, 6 Pin                                                                                                                                                                                                                                 |                                                                                                                                    |                                 |                         |
| <b>Operating Temperature</b>                                     | -10 ~ 60°C (INJ-IG60-24)<br>-40 ~ 75°C (INJ-IG60-E24)                                                                                                                                                                                                                                  |                                                                                                                                    |                                 |                         |
| <b>Operating Humidity</b>                                        | 5% to 95% (Non-condensing)                                                                                                                                                                                                                                                             |                                                                                                                                    |                                 |                         |
| <b>Storage Temperature</b>                                       | -40 ~ 85°C                                                                                                                                                                                                                                                                             |                                                                                                                                    |                                 |                         |
| <b>Housing</b>                                                   | Rugged Metal, IP30 Protection and fanless                                                                                                                                                                                                                                              |                                                                                                                                    |                                 |                         |
| <b>Dimensions</b>                                                | 106 x 31.6 x 142mm (D x W x H)                                                                                                                                                                                                                                                         |                                                                                                                                    |                                 |                         |
| <b>Weight</b>                                                    | 0.425kg                                                                                                                                                                                                                                                                                |                                                                                                                                    |                                 |                         |
| <b>Installation Mounting</b>                                     | DIN Rail mounting, or Wall Mounting (Optional)                                                                                                                                                                                                                                         |                                                                                                                                    |                                 |                         |
| <b>MTBF</b>                                                      | 1,403,339 Hours (MIL-HDBK-217)                                                                                                                                                                                                                                                         |                                                                                                                                    |                                 |                         |
| <b>Certification</b>                                             |                                                                                                                                                                                                                                                                                        |                                                                                                                                    |                                 |                         |
| <b>EMC</b>                                                       | CE (EN55024, EN55032)                                                                                                                                                                                                                                                                  |                                                                                                                                    |                                 |                         |
| <b>EMI</b>                                                       | FCC Part 15 Subpart B Class A, CE                                                                                                                                                                                                                                                      |                                                                                                                                    |                                 |                         |
| <b>Railway Traffic</b>                                           | EN50121-4                                                                                                                                                                                                                                                                              |                                                                                                                                    |                                 |                         |
| <b>Immunity for Heavy Industrial Environment</b>                 | EN61000-6-2                                                                                                                                                                                                                                                                            |                                                                                                                                    |                                 |                         |
| <b>Emission for Heavy Industrial Environment</b>                 | EN61000-6-4                                                                                                                                                                                                                                                                            |                                                                                                                                    |                                 |                         |
| <b>EMS<br/>(Electromagnetic Susceptibility) Protection Level</b> | 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                                                                                                                                                                                                                                    |                                                                                                                                    |                                 |                         |
| <b>Safety</b>                                                    | EN60950-1                                                                                                                                                                                                                                                                              |                                                                                                                                    |                                 |                         |
| <b>Shock</b>                                                     | IEC 60068-2-27                                                                                                                                                                                                                                                                         |                                                                                                                                    |                                 |                         |
| <b>Freefall</b>                                                  | IEC 60068-2-32                                                                                                                                                                                                                                                                         |                                                                                                                                    |                                 |                         |
| <b>Vibration</b>                                                 | IEC 60068-2-6                                                                                                                                                                                                                                                                          |                                                                                                                                    |                                 |                         |

## Dimensions



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

## Ordering Information

| Model Name   | Ethernet           |                   | Ethernet with PoE |             | Power Input |           | Certification              |           |          | Operating Temperature |
|--------------|--------------------|-------------------|-------------------|-------------|-------------|-----------|----------------------------|-----------|----------|-----------------------|
|              | 10/100/1000 Base-T | IEEE802.3at (PSE) | Power Budget      | Redundant   | EN60950-1   | EN50121-4 | EN61000-6-2<br>EN61000-6-4 | CE<br>FCC |          |                       |
| INJ-IG60-24  | 1                  | 1                 | 15/30/36/60/72W   | 12/24/48VDC | V           | V         | V                          | V         | -10~60°C |                       |
| INJ-IG60-E24 | 1                  | 1                 | 15/30/36/60/72W   | 12/24/48VDC | V           | V         | V                          | V         | -40~75°C |                       |

## Optional Accessories

### ■ Wall Mount Kit

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

### ■ Industrial Power Supply

MDR-40-48      Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ 70°C (For 30W@2pair application)

NDR-120-48      Industrial Power, Input 90 ~ 264VAC/127 ~ 370VDC, Output 48VDC, 120W, -20 ~ 70°C (For 60W@4pair application)