



CJG-100GEBT



Introduction

Overview

The CJG-100GEBT (extended temperature) and CJG-100GBT (standard temperature) are Gigabit Ethernet Power over Ethernet injectors especially designed for industrial applications. It supports regulated PoE output voltage (55VDC) to stabilize PoE device and built-in very high efficiency 12/24V power boost technology. These injectors come in IP30 rated enclosure protection and provide wide range input power of 12/24/48VDC (20~57VDC). The excellent design guarantees delivery PoE power distance up to 100 meters.

CJG-100GEBT can provide up to 60/72W through the non-standard use of all 4 pairs of category 5/5e or above cables. The original IEEE 802.3af PoE standard provides up to 15.4W of DC power to each device while IEEE 802.3at (PoE+) can provide up to 30W of power. The PoE operation Mode A/B, power feeding via 2/4 pairs and power output can be configurable via DIP switch which allows compatibility with any powered devices.

Features

High Performance Network Switching Technology

- Complies with IEEE standards
- Provides 1 x 10/100/1000Base-T(X) with RJ-45 connector as data port
- Provides 1 x 10/100/1000Base-T(X) with RJ-45 connector as PoE injector port
- Supports DIP switches to select PoE power output at 15.4W/30W/36W/60W/72W
- Supports DIP switches to select PoE operating mode A or B
- Supports DIP switches to select PoE power feeding via 2 or 4 pairs cable of RJ-45

Reliable Power Design

- Equipped with redundant power inputs
- Supports 12/24/48VDC power input

- Power reverse polarity protection and overload current protection
- Built-in high efficiency power booster to cater for the PoE/PoE+ requirement

Robust Industrial Design

- EN 61000-6-2 and EN 61000-6-4 certified to use in heavy industrial environment
- EN 50121-4 certified for Railway Applications (Track Side)
- Robust industrial design case complies with IP30 housing standard
- Supports operating temperature -10 to 60°C & extended temperature -40 to 75°C
- DIN-Rail or optional wall mounting installation

Specifications

Hardware Specifications

Interface

Total Ports: 2 ports

RJ-45 Ports: 2 x 10/100/1000Base-T(X) auto-negotiation speed, Full/Half duplex, auto MDI/MDI-X

LEDs: System: Power 1 (Green), Power 2 (Green), Fault (Amber)

Alt A/PoE & Alt B/PoE: When PD is connected and getting power from injector (Green)

DIP Switch:

DIP 1: OFF (Alt A): PoE operation mode alternative A

ON (Alt B): PoE operation mode alternative B

DIP 2: OFF (STD): PoE 802.3af (15.4W), 802.3at (30W)

ON (High): High Power PoE power output at 36W

DIP 3: OFF (2 Pair): PoE power feeding via 2 pairs of RJ-45

ON (4 Pair): PoE power feeding via 4 pairs of RJ-45, ultra-high power output 60W/72W

DIP 4: OFF (PD-A): This mode will be use in most of the PD

ON (PD-B): This mode will be use with particular PD devices at high-power 4 pair mode installation (Eg. AXIS® Q60 series.)

Alarm Contact: 1A@24VDC

Power Requirements

Power Input: 12/24/48VDC (10 to 57VDC), redundant dual inputs

Power Consumption:

Operate in 30W mode (2 pair):

12VDC: 33.9W (Full load with PoE), 1.1W (Without PoE), Booster Efficiency 91.46

24VDC: 33W (Full load with PoE), 1.4W (Without PoE), Booster Efficiency 94.90%

48VDC: 33.2W (Full load with PoE), 1.9W (Without PoE), Booster Efficiency 95.80%

Operate in 60W mode (4 pair):

12VDC: 67.1W (Full load with PoE), 1.1W (Without PoE), Booster Efficiency 90.90%

24VDC: 65.2W (Full load with PoE), 1.4W (Without PoE), Booster Efficiency 94.10%

48VDC: 64.7W (Full load with PoE), 1.9W (Without PoE), Booster Efficiency 95.50%

Power Protection: Reverse polarity protection, overload current protection

PoE

PoE Power Budget:

Maximum Ultra High Power 60W

IEEE802.3at 30W

IEEE802.3at High Power 36W

IEEE802.3af 15.4W

PoE Pin Assignment

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)

Physical

Dimensions: IP30 standard, 31.6mm (W) x 142.1mm (H) x 106mm (D)

Installation: DIN-Rail or optional wall mounting

Environmental

Operating Temperature: Regular: -10 to 60°C, Extended: -40 to 75°C

Storage Temperature: -40 to 85°C

Operating Humidity: 5% to 95% RH (Non-condensing)

Technical

Standard:

IEEE 802.3 10Base-T Ethernet

IEEE 802.3u 100Base-TX/100Base-FX

IEEE 802.3ab 1000Base-T

IEEE 802.3x Flow Control

IEEE 802.3af/at Power over Ethernet (PoE/PoE+)

Protocol Technology: CSMA/CD

Switching Architecture: Store and Forward

Regulatory Approvals

EMC: CE, EN 61000-6-2, EN 61000-6-4

EMI: FCC Part 15 Subpart B Class A, CE EN55022 Class A

EMS: EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6,

EN 61000-4-8

Railway Application (Track Side): EN 50121-4 (Certified)

Shock: IEC 60068-2-27

Vibration: IEC 60068-2-6

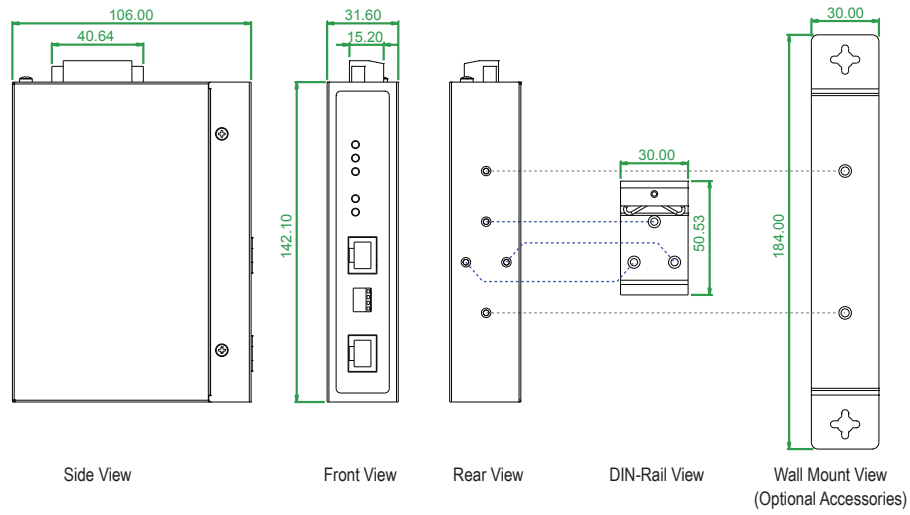
Free Fall: IEC 60068-2-32

Environmental: WEEE, RoHS

MTBF: 1,403,339 hours based on Mil-Hdbk-217F, GB

Warranty: 5 years

Dimensions (unit=mm)



Ordering Information

CJG-100GBT	Industrial Gigabit Ethernet High Power PoE/PoE+ Injector, -10 to 60°C
CJG-100GEBT	Industrial Gigabit Ethernet High Power PoE/PoE+ Injector, -40 to 75°C

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