# 1. Package Contents

Thank you for purchasing PLANET compact industrial 100/1000X to 10/100/1000T Media Converter, IGT-815AT. In the following section, the term **"Industrial Media Converter"** means the IGT-815AT.

Open the box of the Industrial Media Converter and carefully unpack it. The box should contain the following items:

| Industrial Media Converter x 1 | User's Manual x 1 | Wall-mount Kit x 1 |
|---|---|---|
| DIN-rail Kit | RJ45 Dust Cap x 1 | SFP Dust Cap x 1 |

If any of these are missing or damaged, please contact your dealer immediately; if possible, retain the carton including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair.

# 2. Product Specifications

| Model | IGT-815AT |
|---|---|
| Hardware Specifications | |
| Copper Port | 10/100/1000BASE-T Ethernet TP interface. Maximum distance of 100m Auto-negotiation, auto MDI/MDI-X |
| SFP Slot | 1000BASE-SX/LX/BX SFP interface Compatible with 100BASE-FX SFP |
| Flow Control | Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode |
| Maximum Frame Size | 9K |
| LED | System: Power (green) Fiber 100/1000BASE-X: LNK/ACT (green) TP 10/100/1000BASE-T: LNK/ACT, 1000 (amber) |
| Dimensions (W x D x H) | 30 x 70 x 104 mm |
| Weight | 238g |
| Power Requirements | DC 9~48V, supports reverse polarity protection AC 24V |

| Power Consumption | System ON without loading DC 9V: 0.54W/1.8BTU DC 24V: 0.24W/0.8BTU DC 48V: 0.24W/0.8BTU Full loading DC 9V: 1.98W/6.7BTU DC 24V: 1.92W/6.5BTU DC 48V: 1.92W/6.5BTU |
|---|---|
| DIP Switch | Link Fault Passthrough Enable/Disable |
| Enclosure | IP30 metal case |
| Installation | DIN-rail kit and wall-mount ear |
| ESD Protection | 6KV DC |
| Cables | 10/100/1000BASE-T: 2-pair UTP Cat. 3, 4, 5, 5e, 6 (maximum 100 meters) EIA/TIA-568 100-ohm STP (maximum 100 meters) 100BASE-FX/1000BASE-SX/LX: Multi-mode: 50/125μm or 62.5/125μm optical fiber Single-mode: 9/125μm optical fiber |

| Standards Conformance | |
|---|---|
| Regulatory Compliance | FCC Part 15 Class A, CE |
| Protocols and Standards Compliance | IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet over Fiber Optic IEEE 802.3x Flow Control IEEE 802.3az Energy Efficient Ethernet (EEE) |
| Stability Testing | IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration) |
| Environment | |
| Temperature | Operating: –40~75 degrees C Storage: –40~85 degrees C |
| Humidity | Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing) |

# 3. Hardware Introduction

## 3.1 Three-View Diagram

The three-view diagram of the Industrial Media Converter consists of Ethernet interfaces and one **removable 2-pin terminal block**. The LED indicators are also located on the front panel.
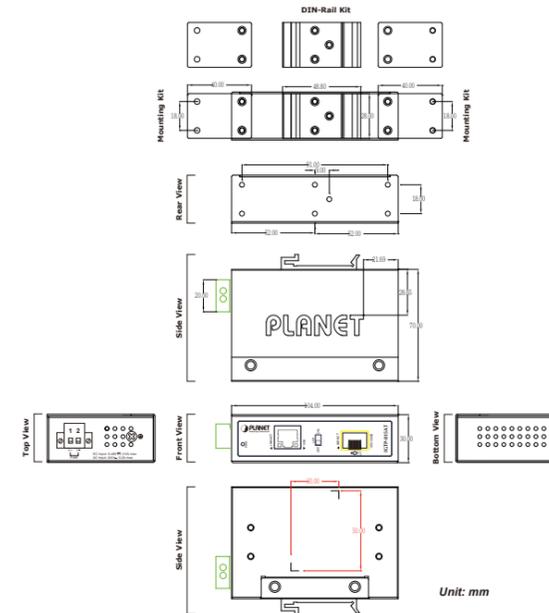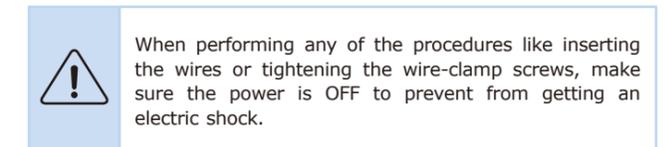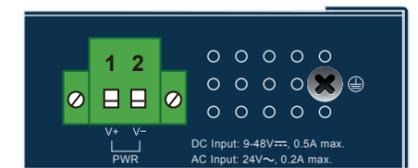


**Figure 1:** IGT-815AT Three-View Diagram

➢ **Front View**



**Figure 2:** IGT-815AT Front View

## 3.2 LED Definition:

➢ **System**

| LED | Color | Function |
|---|---|---|
| PWR | Green | Lights to indicate the Industrial Media Converter has power. |

➢ **Gigabit TP Interface**

| LED | Color | Function |
|---|---|---|
| TP LNK/ ACT | Green | Lit: Indicates that the Copper Port is successfully connecting to the network at 10/100/1000Mbps. |
| | | Blinks: Indicates the Copper Port is receiving or sending data. |
| 1000 | Amber | Lit: Indicates the Copper Port is successfully connecting to the network at 1000Mbps. |
| | | Off: Indicates the link through that port is successfully established at 10/100Mbps. |

➢ **Gigabit Fiber Interface**

| LED | Color | Function |
|---|---|---|
| Fiber LNK/ ACT | Green | Lit: Indicates the link through that port is successfully established at 100/1000Mbps. |
| | | Blinks: Indicates the fiber optical port is receiving or sending data. |

## 3.3 Wiring the Power Inputs

The 2-contact terminal block connector on the top panel of Industrial Media Converter is used for 9~48V DC power inputs or 24V AC power inputs. Please follow the steps below to insert the power wire.

⚠ When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER.
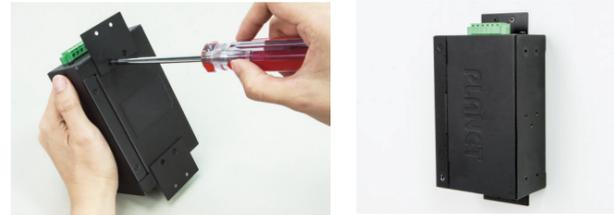
2. Tighten the wire-clamp screws for preventing the wires from loosening.

```
1  2
Power
+  -
```
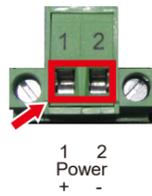
**Note**

1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. The DC power input range is 9V ~ 48V DC or 24V AC.

## 4.3 Side Wall-mount Plate Mounting

**Caution** You must use the screws supplied with the wall-mounting brackets. Damage caused to the parts by using incorrect screws would invalidate your warranty.

## 4.4 Grounding the Device

User MUST complete grounding wired with the device; otherwise, a sudden lightning could cause fatal damage to the device. EMD (Lightning) DAMAGE IS NOT CONVERED UNDER WARRANTY.

⏚ **Earth Ground**

```
1  2
V+  V-
PWR
DC Input: 9-48V⎓, 0.5A max.
AC Input: 24V∿, 0.2A max.
```

---
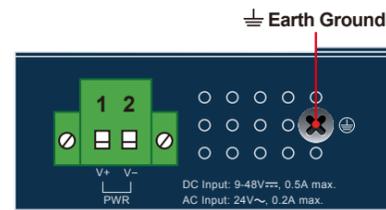
## 4. Hardware Installation

This section describes the functionalities of the Industrial Media Converter's components and guides you to installing it on the DIN rail and wall. Please read this chapter completely before continuing.

**Note** This following picture tells the user how to install the device, and the device is not IGT-815AT.
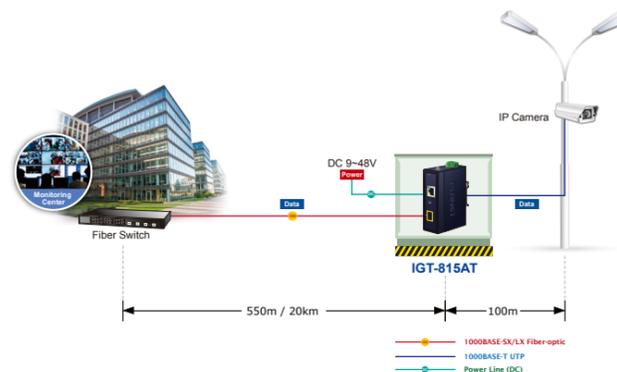
### 4.1 DIN-rail Mounting Installation

### 4.2 Wall-mount Plate Mounting

## 5. Fiber and Copper Installation

The IGT-815AT is flexible enough to extend the distance from 220m to 120km. It depends on the 1000BASE-X or 100BASE-FX SFP transceivers. The SFP transceivers are hot-pluggable and hot-swappable. You can plug in and out the transceiver to/from any SFP port without having to power down the Industrial Media Converter

```
IP Camera
DC 9~48V Power
Data          Data
Fiber Switch
IGT-815AT
550m / 20km        100m
━━━ 1000BASE-SX/LX Fiber-optic
━━━ 1000BASE-T UTP
━━━ Power Line (DC)
```

## 6. Link Fault Passthrough

The LFP function includes Link Loss Carry Forward (LLCF), Link Loss Return (LLR) and the DIP switch design. LLCF and LLR can immediately alarm administrators the issue of the link media and provide efficient solution to monitor the net. The DIP switch provides the disabling or enabling of the LFP function.

```
Remote Link Normal
Monitoring Center   Copper Cable    Fiber Cable    Copper Cable    IP Camera
LFP Enabled                         LFP Enabled

Remote Link Broken
Monitoring Center   Copper Cable    ③ Fiber Link Down    ① Copper Link Broken   IP Camera
⑤ Copper Link Down                  Fiber Cable
④ LFP disconnects Copper Link   LFP Enabled    LFP Enabled   ② LFP disconnects Fiber Link
━━━ 1000BASE-SX/LX Fiber-optic
━━━ 1000BASE-T UTP
```

**Note** LFP function is turned off by default. This feature can also be turned on via the DIP switch. If you are not familiar with the network installation and for diagnostic purpose (i.e. check which end is broken), you can turn it on. Otherwise, please remain it in the default position.

## PLANET
Networking & Communication

*www.PLANET.com.tw*

**Compact Industrial 100/1000BASE-X SFP to 10/100/1000BASE-T Media Converter**
▶ **IGT-815AT**

CE ♻ EAC

## Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource on PLANET web site first to check if it could solve your issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQs:
http://www.planet.com.tw/en/support/faq.php

Switch support team mail address:
support_switch@planet.com.tw