1. Package Contents

Thank you for purchasing PLANET 1-port IEEE 802.3at PoE++ to 4-port IEEE 802.3af Gigabit PoE Extender, POE-E304. "Gigabit PoE Extender" mentioned in this manual refers to the POE-E304. Open the box of the Gigabit PoE Extender and carefully unpack it. The box should contain the following items:

- Gigabit PoE Extender x 1
- User's Manual x 1
- Rubber Feet x 4

2. Product Features

- **Package Contents**

  - 1-port data + power input
  - 4-port data + power output

- **Power over Ethernet**

  - 1-port data + power input
  - Complies with IEEE 802.3at PoE++ PD
  - Supports PoE input power up to 95 watts
  - 4-port data + power output
  - Supports PoE power up to 32 watts for each PoE port
  - Auto detects powered device (PD)
  - Extends the range of PoE to an additional 100 meters (328ft.)
  - Forwards both Ethernet data and PoE power to remote device

- **Layer 2 Features**

  - Hardware-based 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X
  - Integrates address look-up engine, supporting 2K absolute MAC addresses
  - 9K jumbo packet support
  - Features Store-and-Forward mode with wire-speed filtering and forwarding rates
  - IEEE 802.3x flow control for full duplex operation and backpressure for half duplex operation

- **Automatic address learning and address aging**

  - No external power cable installation required
  - Made of metal, desktop size design
  - Wall-mountable, Plug-and-Play installation
  - 0 ~ 50 degrees C operating Temperature

- **Power Requirements**

  - PoE In: IEEE 802.3at or 4-pair 802.3at PoE++ compliant with voltage within 50-56V DC
  - External DC: 50-56V DC
  - Power Consumption:
    - 0.9 watts/3.1BTU (System on)
    - 74 watts/252.48BTU (Full loading with PoE function)

- **PoE Standard**

  - PoE In Port:
    - IEEE 802.3at Power over Ethernet Plus Plus end-span and mid-span PD class 4 PD
  - PoE Out Port:
    - IEEE 802.3at Power over Ethernet Plus plus-end-span PD
  - PoE In Port:
    - IEEE 802.3af Power over Ethernet end-span PSE
  - PoE Power:
    - 50-56V DC, max. 95 watts input
  - Per PoE Out Port:
    - 50-55V DC, max. 32 watts output
  - Power Pin Assignment:
    - Per PoE Out Port:
      - 1/2 (-), 3/6 (+), end-span (Type A)
  - PoE Power Budget:
    - 65 watts (max.) @ IEEE 802.3at PoE++ Type 4 PSE input
    - 32 watts (max.) @ IEEE 802.3at PoE+ PSE input

- **Network Cable**

  - IEEE 802.3at Power over Ethernet Plus Plus End-span and Mid-span PD
  - IEEE 802.3af Power over Ethernet End-span PSE
  - IEEE 802.3bt Power over Ethernet Plus Plus End-span PD

3. Product Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>POE-E304</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hardware Specifications</strong></td>
<td></td>
</tr>
<tr>
<td>PoE In Port: 4 x 10/100/1000BASE-T Ethernet with IEEE 802.3at PoE++ &quot;Data + DC&quot; in, auto MDI/MDI-X, auto-negotiation R45 connector</td>
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<tr>
<td>PoE Out Port: 4 x 10/100/1000BASE-T Ethernet with IEEE 802.3at PoE++ &quot;Data + DC&quot; out, auto MDI/MDI-X, auto-negotiation R45 connector</td>
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4. Hardware Introduction

4.1 Three-View Diagram

The three-view diagram of the Gigabit PoE Extender consists of one PSE (power sourcing equipment) and four PD (powered device) connected to a PoE++/UPOE/PoH Ethernet switch.

4.2 Ports Connection

- **PoE IN Port**
  - Connect the PoE IN port from the following 802.3at PoE++ PD devices through a Cat5e/6 UTP cable:
    - IEEE 802.3at PoE++/UPOE/PoH Ethernet switch
    - 802.3at PoE++/UPOE/PoH injector hub

- **PoE OUT Port**
  - Connect the PoE OUT port to the following 802.3at/af PD devices through a Cat5e/6 UTP cable:
    - IEEE 802.3at/af PoE++/UPOE/PoH Ethernet switch

4.3 LED Indicators

- **802.3at PoE In Port**

<table>
<thead>
<tr>
<th>LED Color</th>
<th>Function</th>
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<tbody>
<tr>
<td>Green</td>
<td>Lights to indicate the link through port is successful at 10/100/1000Mbps. Blink to indicate the port is actively sending or receiving data.</td>
</tr>
</tbody>
</table>
5. Connecting POE-E304 to PD
Step 1: Connect the additional Cat5e/6 cable that will be used to connect to the remote PD to the “PoE Out” port of the Gigabit PoE Extender.
Step 2: The “PoE Out” port is also the power injector which transmits DC voltage to the Cat5e/6 cable and transfers data and power simultaneously between the PSE and PD.
Step 3: Once the Gigabit PoE Extender detects the existence of an IEEE 802.3af/at device, the “PoE-In-Use” LED indicator will be lit steadily, showing it is providing power.
1. If the connected device is not fully complying with IEEE 802.3af/at standard or in-line power device, the PoE-in-Use LED indicator of the Gigabit PoE Extender will not be lit steadily.
2. According to IEEE 802.3af/at standard, the Gigabit PoE Extender will not inject power to the cable if not connected to a standard IEEE 802.3af/at device.

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