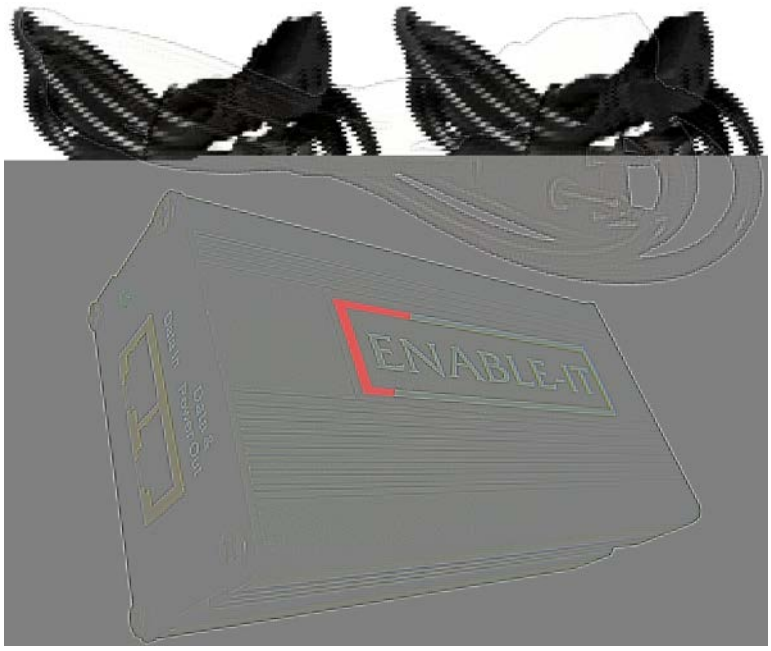
ENABLE-IT ETHERNET EXTENSION EXPERTS™

Enable-IT 375 Gigabit Power over Ethernet Injector User Manual



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ABOUT THIS USER MANUAL

This product User Manual provides all the information needed to install and use the Enable-IT 375 Gigabit Power Over Ethernet Injector. This User Manual is intended for use by technicians who are responsible for installing and setting up network equipment. Consequently, it is assumed that the installer has a basic working knowledge of LANs (Local Area Networks), PoE (Power-over-Ethernet) and voice telecom wiring.

Most Enable-IT documents are available in Adobe Acrobat Reader Portable Document Format (PDF) or HTML on the Enable-IT's website under the Support tab.

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INTRODUCING THE ENABLE-IT 375 GIGABIT 56V – 75W POWER OVER ETHERNET INJECTOR

Congratulations on purchasing the Enable-IT's 375 Gigabit High Power over Ethernet Injector — the simplest to enable your Power over Ethernet devices.

The Enable-IT 375 Gigabit Power over Ethernet Plus Injector offers a low cost single port solution in a simple design for rapid install using existing Ethernet cabling.

This chapter contains introductory information about The Enable-IT 375 Gigabit Power over Ethernet Injector and how it can be used in your network. It covers the following topics:

- About the Enable-IT 375 Gigabit Power over Ethernet Injector
- Key Benefits
- Summary of Features
- Typical Applications

About the Enable-IT 375 Gigabit Power Over Ethernet Injector

The Enable-IT 375 Gigabit Power over Ethernet Injector solves the problem of high costs associated with adding additional electrical outlets in hard to reach places for your LAN equipment such as Wireless Access points or security cameras.

The Enable-IT 375 is a Compact Gigabit Ethernet IEEE 802.3AT standard Power over Ethernet Plus Injector which provides 56 VDC - 75W over any wiring and up to unexpected extended distance. The units are fully compatible with industry-standard IEEE 802.3AT Power-over-Ethernet (PoE) devices and 10/100/1000 Base-T Ethernet networks, providing both Ethernet data pairs as well as the PoE DC power feed.

PoE 2-pair standard - 56 Volts are applied on pins 4, 5, 7 and 8 in separate lines not bridged and PoE 4-pair standard – 56 Volts applied on the data pairs as well with detection. The units are compatible with both normal and inverted polarity voltage PoE equipment.

For maximum distance, PoE Plus travels very far down any type of wiring. Voltage drops over distance using wires. At 200M, you lose maybe 4 or 6 volts. At 56VDC, that leaves you with 45 volts. You can determine the amount of voltage drop over a distance by finding the resistance of the cable for a specific temperature (given in ohms/1000ft) from the cable manufacturer or electrical wholesaler. If you know the largest amount of current that will flow in the cable, when use the formula: Vdrop = Current X Distance (Ft) X 2 X Ohms per 1000Ft.

As a rule of thumb you will lose 2V per every 100′ - 200′ of wiring, depending on the gauge. Lower power also means more amperage means more heat and perhaps issues with the 24 gauge wires in CAT5. You may need to use 18 gauge wiring. For all intents and purposes, any cable longer than 400′ should use a 56V PoE Injector.

Keep in mind that Ethernet data has a limit of 328ft or 100m. You can easily solve this issue by using the Enable-IT 375 PoE Plus Injector with an Enable-IT 865 PoE Ethernet Extender kit. Using the 865 kit will drive your PoE and data up to 3,500ft.

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Key Benefits

The following list identifies the Enable-IT 375 Gigabit Power over Ethernet Plus Injector key benefits.

- High Power 56V - 75W IEEE 802.3AT Gigabit Power Over Ethernet Midspan Injector.
- Provides 75W - 56VDC PoE to any IEEE802.3AT devices at great distances*.
- Rapid installation with small box profile; no programming and no firmware to upgrade. Maintains existing RJ-45 Ethernet Data.

The Enable-IT™ 375 75W - 56VDC Power over Ethernet Plus Injector is a single port IEEE 802.3AT compliant Midspan solution that is compact and easy to install with RJ-45 Ethernet cabling. This elegant unit is ideal for installing any WiFi Wireless Access Point, security camera or other PoE powered equipment. It eliminates the need for an external power supply and its associated AC/DC power cabling, providing a compact, affordable, safe and reliable power solution over your wiring or existing Ethernet infrastructure.

Summary of Features

- High Power 56V - 75W IEEE 802.3AT Gigabit Power Over Ethernet Midspan Injector.
- Fully Compliant detection, disconnect and voltage control IEEE 802.3AF & IEEE 802.3AT.
- PoE 2-Pair or 4-Pair RJ-45 Pin output - supports high end 4-Pair PoE IP Cameras.
- Ruggedized Professional Business Grade casing for harsh environments.
- Network Equipment independence - Transparent to protocols, applications and MAC addresses.
- FCC Class B Part 15 and EN55022 (CISPR 22) Class B.
- Immunity ESD: EN61000-4-2 level.
- Immunity RS : EN61000-4-3 level.
- Immunity CS : EN61000-4-6 level.

Product Specifications

- Power

  Input Voltage 120V to 260V AC Outlet. Inrush current is rated up-to 40A
  Output Voltage 83% Efficiency - 56VDC @1.33A (75W) on RJ-45 Pin assignments comply with IEEE 802.3 PoE 2-pair or 4-pair.
  PoE PD Detection disabled for maximum distance and output
- Data Rate

  10/100/1000Mbps full-duplex
- Interface

  (2) Ethernet RJ-45 jacks standard
- Dimensions

  Height 1.75" (44mm) Depth 4.75" (120mm) Width 2.75" (70mm)
- Environment

  Operational Temperature: -13° to 176°F (-25° to 80°C)

  Humidity: 5%-95%, non-condensing
- Enclosure

  Ruggedized Aluminum Extreme Temperature Enclosure.

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Typical Applications

Enable-IT 375 Gigabit Power over Ethernet Plus Injector unit is very lightweight and compact for most all applications and use. These units are easy to install with plug and play RJ-45 Ethernet jacks. Insert your wiring and go.

As an 802.3AT compliant device, the Enable-IT 375 75W - 56VDC Power over Ethernet Plus Injector uses 4 wires in a category rated wiring bundle, i.e. CAT5e run. As with all PoE supplies, voltage drops over distance. As a rule of thumb you will loose 2V per every 100′- 200′ of wiring, depending on the gauge. Lower power also means more amperage which means more heat and perhaps issues with the 24 gauge wires in CAT5. You may need to use 18 gauge wiring. The Enable-IT 375 is a 56V power injector to maximize your distance and output.

The Enable-IT 375 Gigabit Power over Ethernet Plus Injector is suited for the following key environments:

- **Commercial Buildings (Multi-Tenant Units)**
- **Business Parks (Multi-Tenant Units)**
- **Apartments (Multi-Residential Units)**
- **Hotels (Multi-Hospitality Units)**
- **Business Suites (Multi-Hospitality Units)**
- **School Campuses (University, K-12)**
- **College Housing (Multi-Residential Units)**

Figure 1 Enable-IT 375 included with the 865PTZQ PoE & Ethernet Extender Kit

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INSTALLING THE ENABLE-IT 375 GIGABIT POWER OVER ETHERNET INJECTOR

Unpacking the Enable-IT 375 Gigabit Power over Ethernet Plus Injector

Carefully remove the Enable-IT 375 Gigabit Power over Ethernet Plus Injector from all packing materials in the box. Verify that the items listed below are present. Make sure that the equipment supplied matches what you ordered. If any items are missing or damaged, please contact your Enable-IT or your distributor for assistance.

- (1) The Enable-IT 375 Gigabit Power over Ethernet Plus Injector
- (1) US Type B 120VAC power cord
- Enable-IT 375 Gigabit Power Over Ethernet Injector User Manual (this manual)

Performing the On-Site Installation

❶ Locate the power source for connecting the supplied power cord and attach this power cord to Enable-IT 375. You can apply power to the unit.

❷ Insert a standard Ethernet patch cord to the Data/PoE out port - the other end of the Ethernet Patch cord is for your PoE equipment or Enable-IT 865 PoE and Ethernet Extender (Data/PoE in port)

❸ Insert a standard Ethernet patch cord into the Data In port and connect the other end of the Ethernet Patch cord to your Local LAN device such as a switch.

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TECHNICAL SUPPORT

Enable-IT, Inc.'s Customer Care Team support is available directly to customers and distributors. All support requests are processed through the online support portal. This allows us to provide assigned support ticket numbers in order to bring closure to any technical issues.

Online Technical Services

The Enable-IT Support Portal is available 24/7 to open a ticket or check the status of one. Please use this support website as your first source for help as it contains an on-line knowledge base of articles, documentation, FAQ's and other problem-solving resources. This web-based support resource provides the quickest solution to the most common technical support issues.

World Wide Web Site

http://support.enableit.com

Returning Products for Warranty Repair

Enable-IT, Inc. warrants to the original purchaser of the Product ("you" or the "End User") that, for the four (4) year period commencing on the date the Product was purchased (the "Warranty Period"), the Product will be substantially free from defects in materials and workmanship under normal use and conditions. **Electrical damage is not an item that is covered under this warranty, extended warranties or Advanced Replacement Program (AREP).**

In order to obtain an authorized RMA approval, the End User must complete the required information online located at http://support.enableit.com. If you have questions or difficulty completing this information you may contact the Customer Care Team at 888-309-0910 between the hours of 8:00 a.m. and 5:00 p.m. PT.

Please ship Authorized RMAs to:

Enable-IT Processing Facility
16600 Harbor Blvd, Suite I
Fountain Valley, CA 92708-1363

Returning Products for Refund

Enable-IT, Inc. offers a generous 45-Day refund on a single Ethernet Extender Kit only, and is subject to a 15% Restocking Fee. Shipments without a valid or authorized RMA number, or sent to our corporate Las Vegas address, can be refused and / or billed for additional shipping.

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ENABLE-IT, INC. LIMITED WARRANTY

Enable-IT, Inc. warrants the Enable-IT 375 Gigabit Power Over Ethernet Injector solely pursuant to the following terms and conditions.

1. PRODUCT WARRANTY.

a. Express Warranty.

Enable-IT warrants to the original purchaser of the Product ("you" or the "End User") that, for the four (4) year period commencing on the date the Product was purchased (the "Warranty Period"), the Product will be substantially free from defects in materials and workmanship under normal use and conditions. This warranty does not apply to Products, which are resold as used, repaired or reconditioned, or consumables (such as batteries) supplied with the Product. **Electrical damage is not an item that is covered under this warranty or extended warranties.** Enable-IT does not make any warranty with respect to any third party product, software or accessory supplied with or used in connection with the Product and such third party products, software and accessories, if any, are provided "AS IS." Warranty claims related to such third party products, software and accessories must be made to the applicable third party manufacturer.

b. Remedies for Breach of Warranty.

In the event of a breach of the foregoing warranty, Enable-IT will, in its sole discretion and at its cost, and subject to the terms of the following paragraph, repair the non-conforming Product, replace the non-conforming Product with a new or reconditioned Product or refund the purchase price for the Product. Any new or reconditioned Product provided pursuant to this paragraph is warranted as provided herein for the remainder of the original Warranty Period. THE REMEDY SET FORTH IN THIS PARAGRAPH SHALL BE THE END USER'S SOLE AND EXCLUSIVE REMEDY FOR BREACH OF THE FOREGOING WARRANTY.

c. Conditions for Warranty Qualification.

If authorized by Enable-IT to return a Product which does not conform to the warranty set forth above, the End User must: (1) obtain a return materials authorization (RMA) number from Enable-IT by contacting the Customer Service Dept. at 888-309-0910 between the hours of 8:00 a.m. and 5:00 p.m. PST and otherwise fully comply with Enable-IT's then-current RMA policy; (2) return the Product to Enable-IT in its original packaging freight pre-paid; and (3) provide to Enable-IT the original receipt or bill of sale establishing the date on which the Product was purchased. Products returned to Enable-IT without an RMA number will be returned to the End User. Enable-IT shall not be responsible for damage or loss during shipment of the returned Product to Enable-IT.

d. Voiding of Warranty.

The express warranty set forth above shall not apply to failure of the Product if the Product has been subjected to: (i) physical abuse, misuse, improper installation, abnormal use, power failure or surge, or use not consistent with the operating instructions provided by Enable-IT; (ii) modification (including but not limited to opening the Product housing) or repair by any party in any manner other than as approved by Enable-IT in writing; (iii) fraud, tampering, unusual physical or electrical stress, unsuitable operating or physical conditions, negligence or accidents; (iv) removal or alteration of the Product serial number tag; (v) improper packaging of Product returns; or (vi) damage during shipment (other than during the original shipment of the Product to the End User from Enable-IT, if applicable).

e. Warranty Disclaimers.

THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, EXPRESS OR IMPLIED. ENABLE-IT

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