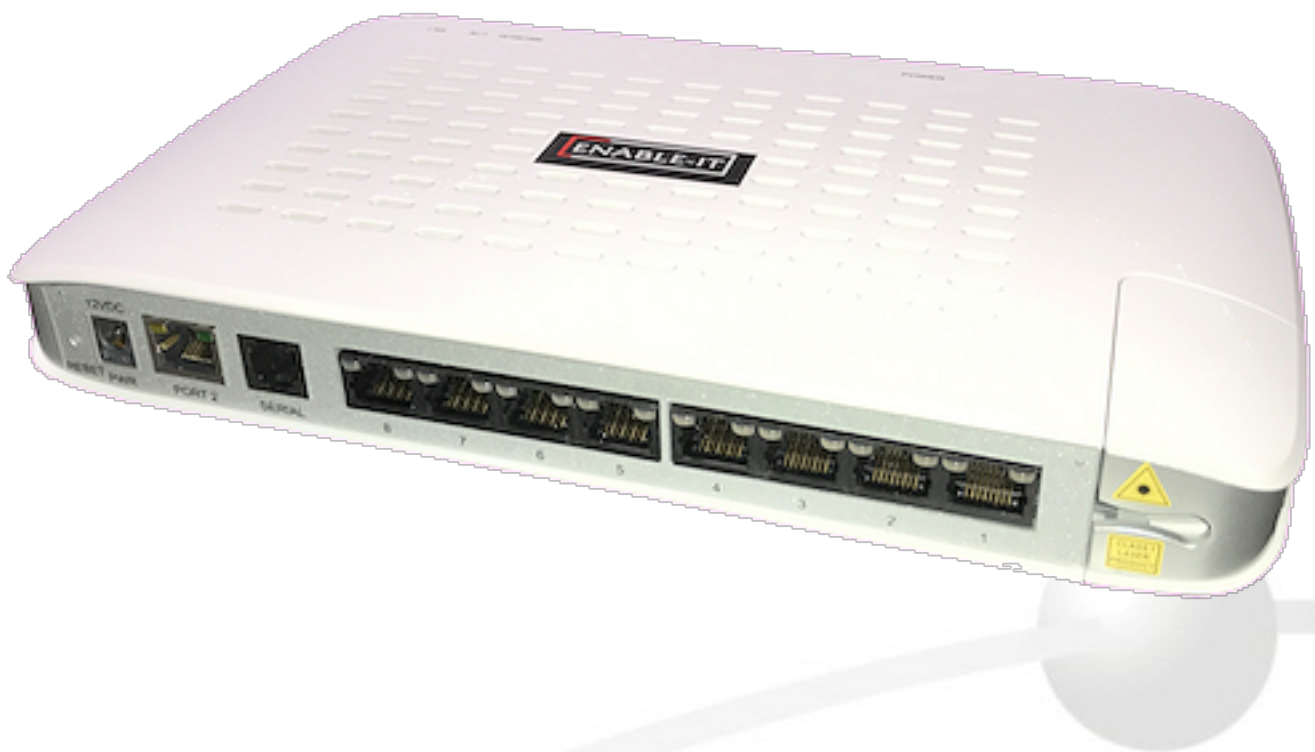




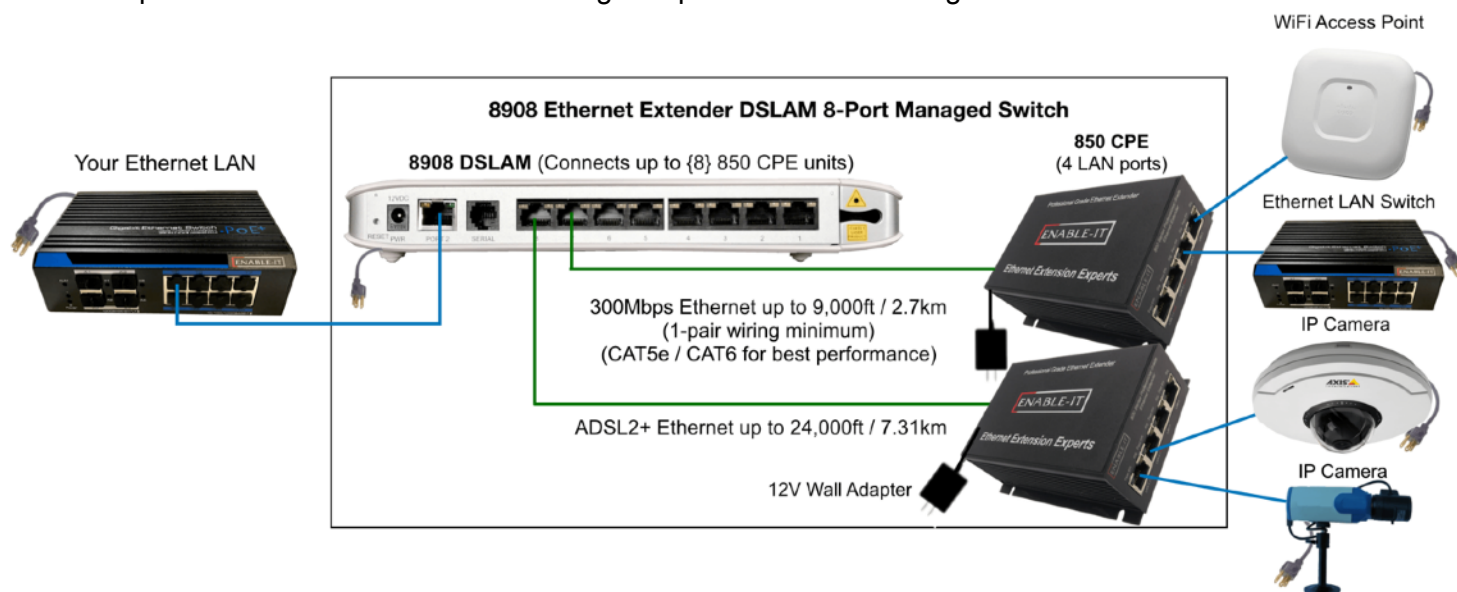
**ETHERNET EXTENSION EXPERTS**

# **Enable-IT 8908 - 8 Port Extended Gigabit Ethernet DSLAM Quickstart Guide**



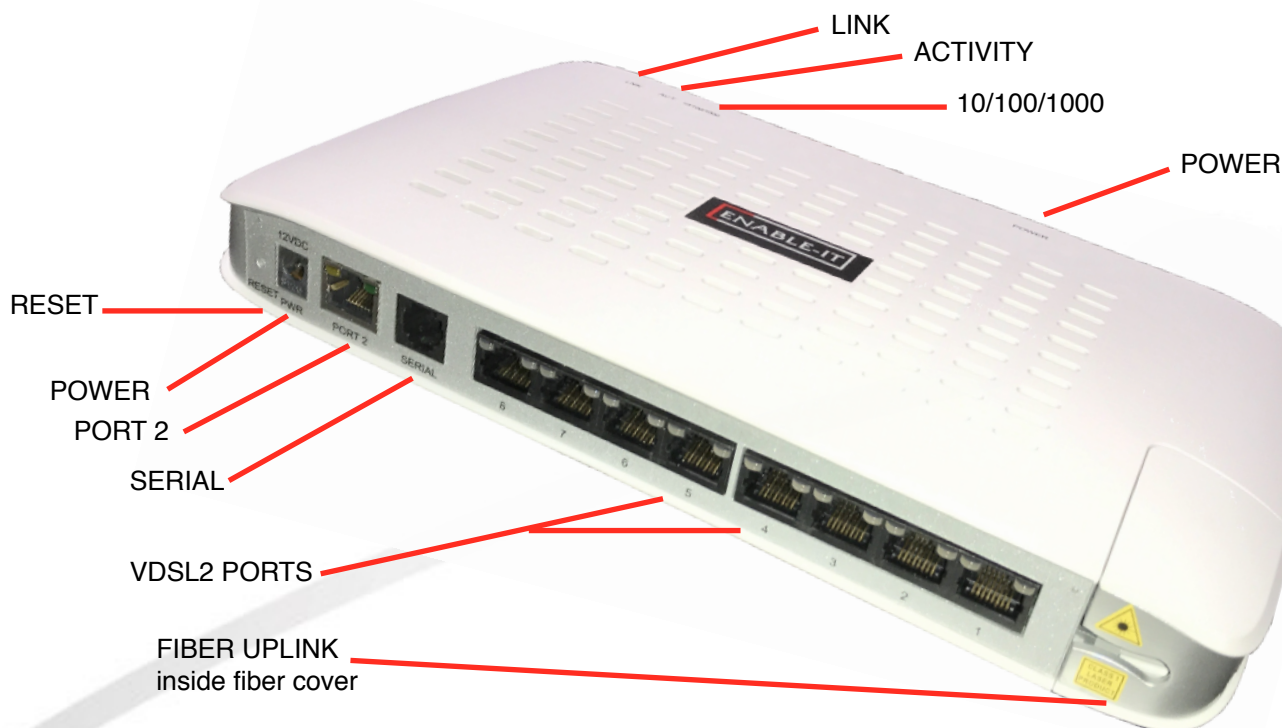
# INSTALLING THE 8908 ETHERNET DSLAM - 8 PORT

The Enable-IT 8908 Extended Gigabit Ethernet DSLAM is designed to deliver dedicated high speed Ethernet up to 24,000ft (7.31km) over 1-pair wiring from 8908 to 850 CPE. Therefore a site survey of the wiring and installation planning are highly recommended. For highest performance use CAT5e rated or higher spec for interlink wiring.



The Overview Diagram: This diagram shows the contents of the product box inside the rectangle. Devices outside the rectangle above are your equipment that can be attached.

**We recommend that you perform a quick out of the box test to ensure the working order of your Enable-IT 8908 and 850 CPE Ethernet Extender solution prior to installing. This will also serve to familiarize you with how easy the process should be.**



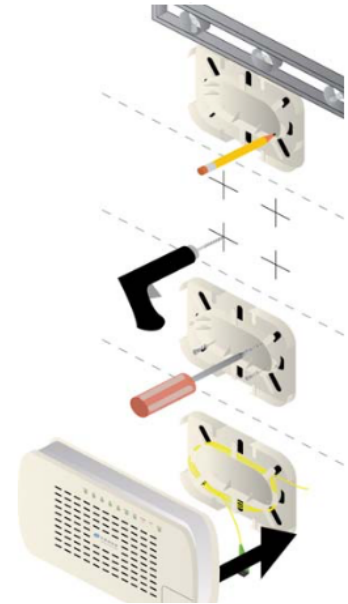
## Mounting Options – If using a fiber tray

If wall mounting the unit with a fiber tray, hold the bracket level in the desired location and mark the hole positions. For hardwood or steel surfaces, drill 5/64-inch (2-mm) pilot holes at the marked hole positions. Fasten the bracket using screws appropriate for the surface. Use screw anchors when attaching to drywall or other soft materials.

For both desktop and wall mount options, wrap extra fiber around the fiber spools in a counter clockwise direction.

### – Wall mount without fiber tray

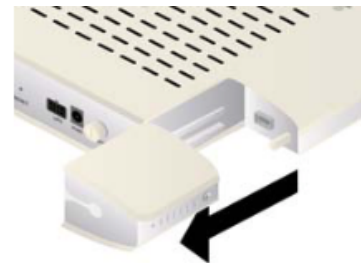
Prepare the surface for mounting and mark wall on a level horizontal line 13 cm apart (a little less than 5 1/8 inches). Drill the holes and attach screws appropriate for the surface, leaving enough space from being flush to mount unit.



## Step 1 – Connect to the Network and Power

### - Optical fiber to the network using SFP

Remove the fiber service cover by removing the fiber screw and then pulling the fiber service cover forward (toward the connection panel of the 8908). Plug in your SFP module. Plug in the fiber to the SFP to connect the 8908 to the network and reattach the fiber service cover onto the 8908 including the fiber service screw.



### - Connect to the network using RJ-45

**Note: PORT 2 may be used for management**

Plug the RJ-45 connector of your uplink into the RJ-45 jack PORT 2.

Plug the round two pin 12V 2A DC power connector of the power adapter into the 8908 power port and to a live AC outlet. Verify that the STATUS LED on the 8908 is solid or blinking green indicating local power is on and the voltage is good. See the LED descriptions for a complete description of the LEDs.



## Step 2 – Custom setup the Enable-IT 8908 DSLAM

The Enable-IT 8908 may be managed from a Web UI (PORT 2) or serial CLI (Serial). Launch a browser or telnet session and point it to **192.168.10.1**

Username: **admin**

Password: **zhone**

For security the password should be changed on first login.

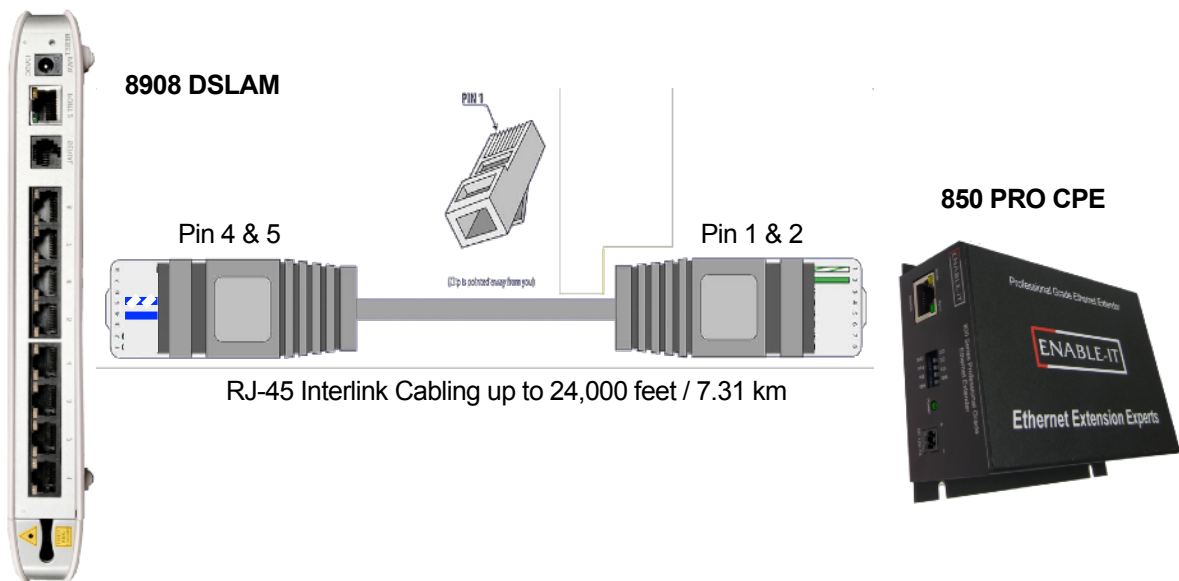
### Step 3 – Connecting the Enable-IT 850 CPE

Connect a 1-pair or better Interlink cable from your Enable-IT 850 CPE RJ-45 Interlink port to 1 of the 8 Ports on the Enable-IT 8908 DSLAM.

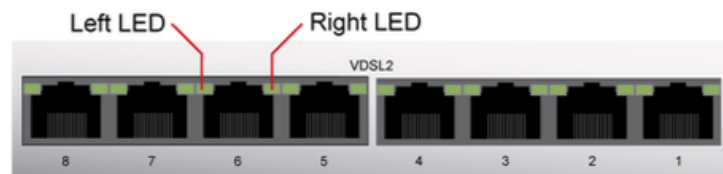
Power up the Enable-IT 850 CPE with the provided 12V - 1A power adapter into a live AC outlet.

The Green Power LED on the 850 CPE will be lit once powered on and the Green Sync LED will start to blink slowly once powered on.

The Enable-IT 8908 DSLAM and 850 CPE Interlink and VDSL2 LEDs will flicker fast once they are communicating with one another. After about 30 seconds or less the 8908 DSLAM and 850 CPE Interlink / VDSL2 Ports should have a solid Green Sync LED once the units are synced and ready to pass Ethernet LAN data up to 24,000ft.



### 8908 DSLAM Status LEDs



Location	Color	Behavior	Indicates
Left	Yellow	On	Shows activity on the uplink (1-1-3-0/eth, SFP uplink in fiber cover)
Right	Green	Off	Activity on the uplink (1-1-3-0/eth, SFP uplink in fiber cover)

## 850 CPE Status LEDs

The following 850 CPE LED indicators will provide visual operational status of the 850 CPE connectivity.

**Mode** – Yellow Solid LED    On = CPE unit  
   Off = CO unit

**Sync** – Green slow to fast flicker LED on power up  
          – Green solid LED indicates link established  
          and rapid pulse is LAN traffic

**LAN/Act** – Yellow LED  
                  Off = No device attached or detected  
  
                  On = Solid, indicates the presence of local LAN  
                  On = Blinking, indicates the presence of local LAN traffic

**Power** – Green Solid LED indicates the unit is receiving power



**NOTE:** Slots and openings in the housing are provided for ventilation. To ensure reliable operation of the 8908 DSLAM and to protect it from overheating, these slots and opening must not be blocked or covered. This unit is also certified to operate effectively under the following conditions: 32°F to 122°F (0°C to 50°C).

Do NOT look into the ends of the optical fibers. Exposure to invisible laser radiation may cause serious retinal damage or even blindness. Verify the optical source is disabled through the use of an optical power meter before handling optical fibers.

## Troubleshooting

First examine the 850 CPE wiring run and make sure you have solid connections. The 850 CPE should be receiving power and the Interlink Sync LED will be lit solid Green with rapid pulsing to show proper connection with the 8908. If the Interlink Sync LED Link is flashing slow to fast and never goes solid... Then follow the steps below:

- 1) Make sure your wiring is straight through and not connected to any Telco punch down blocks; If so remove from the block and use Telco gel/butt clips to bridge wire. We recommend using Category rated cabling - CAT5, CAT5e, CAT6, CAT6, etc.
- 2) Check for a firm connection of the RJ-45 connections in each 850 CPE unit, and power is applied to the 850 CPE units and 8908 DSLAM.
- 3) **You can easily isolate any issue by performing an Out Of The Box Test (OOTBT). This test will confirm the correct working order of your Enable-IT 8908 and 850 CPE units.**



## 850 CPE Performance Settings (DIP Switch)

If you are experiencing performance issues with your Ethernet connection you may use the following DIP switch settings to adjust to your application. The 850 CPE can be controlled from the 8908 management web control for a centralized point for all 850 CPE.



- Switch 1: Always use in CPE Mode

**CPE Mode – Down / On Position**

- Switch 2: Error Correction Mode

Interleaved Error Correction Enabled – Up / Off Position – degrades performance

**Fast Channel – Down / On Position (Default)**

Interleaved Error Correction works better for file transfers, where the delivered data must be error free but latency incurred by the retransmission of error packets is acceptable. Fast channel is preferred for streaming multimedia, where an occasional dropped bit is not noticeable or acceptable.

- Switch 3: 17a (over 1,500ft) / 30a (under 1,500ft) Mode

17a Mode – Up / Off Position

17a mode is only used for Interlink runs over 1,500ft to 24,000ft.

**30a Mode – Down / On Position (Default)**

**30a mode is only enabled for Interlink runs under 1,500ft.**

- Switch 4: Signal-to-noise Noise Ratio (SNR)

9dB – Up / Off Position

**6dB – Down / On Position (Default)**

Signal-to-noise ratio is a measurement that refers to how much noise is in the output of a device, in relation to the signal level. If you experience issues of noise bleeding over the lines, or high interference in your environment, it is suggested that you switch to 6dB SNR. This may help clean up any noise bleeding over your cabling.

## Enable-IT 8908 Web Console

The 8908 Gigabit IP DSLAM allows users to manage and change its configurations with web browsers. Users are able to login the web management system with any standard web browser, such as, Internet Explorer, Firefox, etc.

**Default IP Address:** 192.168.10.1    **Username:** admin    **Password:** zhone

Note: Please make sure the IP address is correct once the IP of the management web site is changed. Please download the full 8908 manual here for detailed setup.

<https://ethernetextender.com/wp-content/uploads/2017/11/Enable-IT-8908-DSLAM-Installation-Manual.pdf>

## 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

<https://support.enableit.com>

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Enable-IT warrants to the original purchaser of the Product ("you" or the "End User") that, for the limited lifetime 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.

**Electrical or water damage is not 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 <https://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:

RMA Warranty Repair Processing Facility  
16027 Brookhurst St, Suite i 272  
Fountain Valley, CA 92708-1551

### 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.

# ENABLE-IT, INC. LIMITED LIFETIME WARRANTY

Enable-IT, Inc. warrants this described product solely pursuant to the following terms and conditions.

## 1.ENABLE-IT PRODUCT WARRANTY.

### a. Express Warranty.

Enable-IT warrants to the original purchaser of the Product ("you" or the "End User") that, for the limited lifetime 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.

**Electrical or water damage are not covered under this warranty, extended warranties or Advanced Replacement Program (AREP).**

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### 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.

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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 7:00 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).



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