



**POE Evaluation Board
User Manual**

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3 Introduction

This manual is intended to be a guide to using the “POE evaluation board” with Silver Telecom Powered Device (PD) modules.

The POE evaluation board can be powered using the spare pair in the CAT5e cable (pins 4 & 5 and pins 7 & 8) by Midspan equipment. In addition to this the POE evaluation board has on-board magnetics within CN1 (XFVOIP5E-COMBO1-4MS from XFMRs). This can extract the power from the center tap of the data pair (pins 1 & 2 and pins 3 & 6) used by Endspan equipment.

4 Board Description

The POE evaluation board will work with the following products: -

Ag8003	-	Ag8005	-	Ag8012	
Ag8103	-	Ag8105	-	Ag8112	
Ag8205	-	Ag8205	-	Ag8212	
Ag9033	-	Ag9050	-	Ag9120	
Ag9203	-	Ag9205	-		
Ag9403	-	Ag9405	-	Ag9412	- Ag9424
Ag9603	-	Ag9605	-	Ag9612	

The input data and power is supplied to the board through connector CN1. The data is passed through to the peripheral equipment via CN2, with the power from the PD module is supplied via either CN3 & CN4 or CN5 (see Figure 1).

4.1 Input Selection

The POE evaluation board has on-board bridge rectifiers that can be used or bypassed using links LK1 to LK4 (see Figure 1) depending of which PD module is being used.

The Ag8000, Ag9000, Ag9400-2BR and Ag9600-2BR series already have internal bridge rectifiers, so the POE evaluation board rectifiers can be bypassed by setting links LK1 to LK4 to position A.

4.3 Output adjustment

The output voltage of the PD module can be adjusted by connecting the ADJ pin to either GND or +VDC. LK6 can be used to adjust the output voltage (see Figure 1).

On the POE evaluation board R2 and R3 are supplied with a 0 Ohm link to give maximum adjustment, see the output adjustment section in the datasheet for more information.

Ag8000 series

With LK6 link fitted in position A the output voltage will increase.

With LK6 link fitted in position B the output voltage will decrease.

Ag8100 and Ag8200 series

With LK6 link fitted in position A the output voltage will decrease.

With no LK6 link fitted the output voltage will increase.

* See Table 3 in the product datasheet for the nominal resistor value.

Ag9000, Ag9200, Ag9400 and Ag9600

With LK6 link fitted in position B the output voltage will increase.

With LK6 link fitted in position A the output voltage will decrease.

5 Equipment Required

Figure 2 shows the basic set up using the POE evaluation board with a Midspan.

The equipment required: -

- Midspan or Endspan PSE (Power Sourcing Equipment)
- Peripheral (or Test) Equipment
- CAT5e cables
- Output power cable
- Mains cable

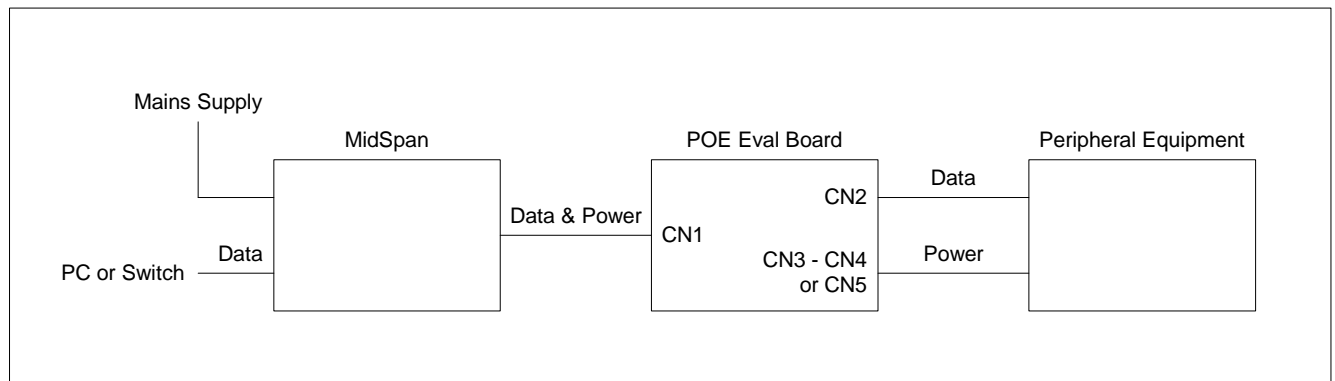


Figure 2: Basic set-up

The POE evaluation board can be powered from a Midspan PSE, an Endspan PSE, or from a 48V power supply with a current limit =>400mA.

6 Using the Board

6.1 Typical Application

Figure 3 shows an example set-up using an Ag9050 powered by a Midspan and supplying +5V to a DLink DCS-900 ethernet camera.

The PC ethernet port is connected to the data input of the Midspan via a short Cat5e patch cable. The Data & Power output from the Midspan is connected to the input of the POE evaluation board (CN1) via a CAT5e crossover cable. The data output of the POE evaluation board is connected to the data port of the ethernet camera via a short CAT5e patch cable. The (+5V) power output from the POE evaluation board (CN5) connects to the dc input of the ethernet camera.

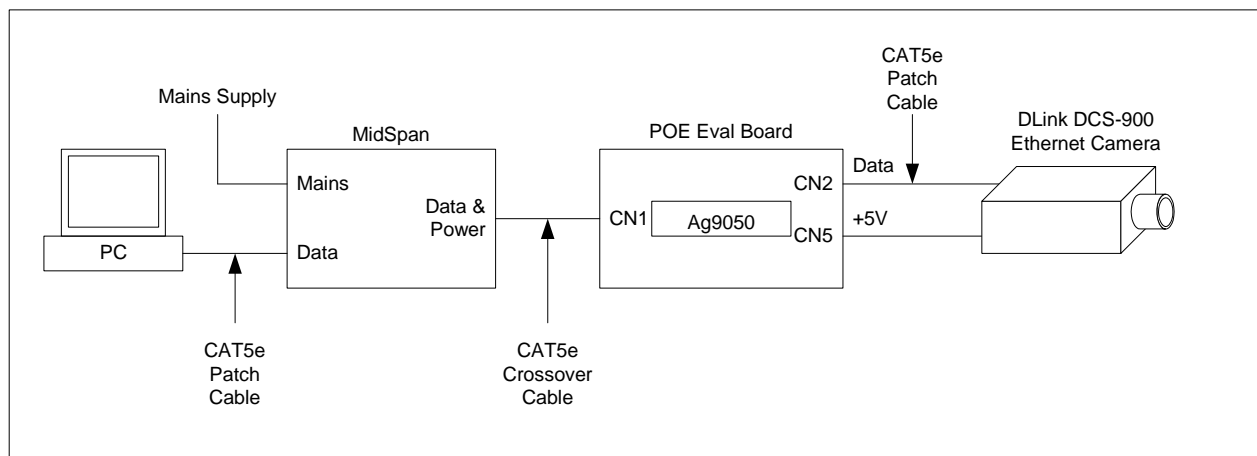


Figure 3: Example set-up

6.2 Using a Standard DC Power Supply

The example shown in Figure 3 uses a Midspan PSE, but the POE evaluation board can be powered directly from an Endspan or from a 48V DC power supply.

Figure 4 shows the connection that need to be made to the POE evaluation board (CN1) to power the board from a DC power supply. The polarity of the 48V supply doesn't matter as the POE evaluation board has on-board bridge rectifiers on both inputs, or the Ag8000, Ag9000, Ag9400-2BR and Ag9600-2BR series have built-in bridge rectifiers.

When using a DC power supply with a current limit, it is important that the current limit is set at 400mA (or higher).

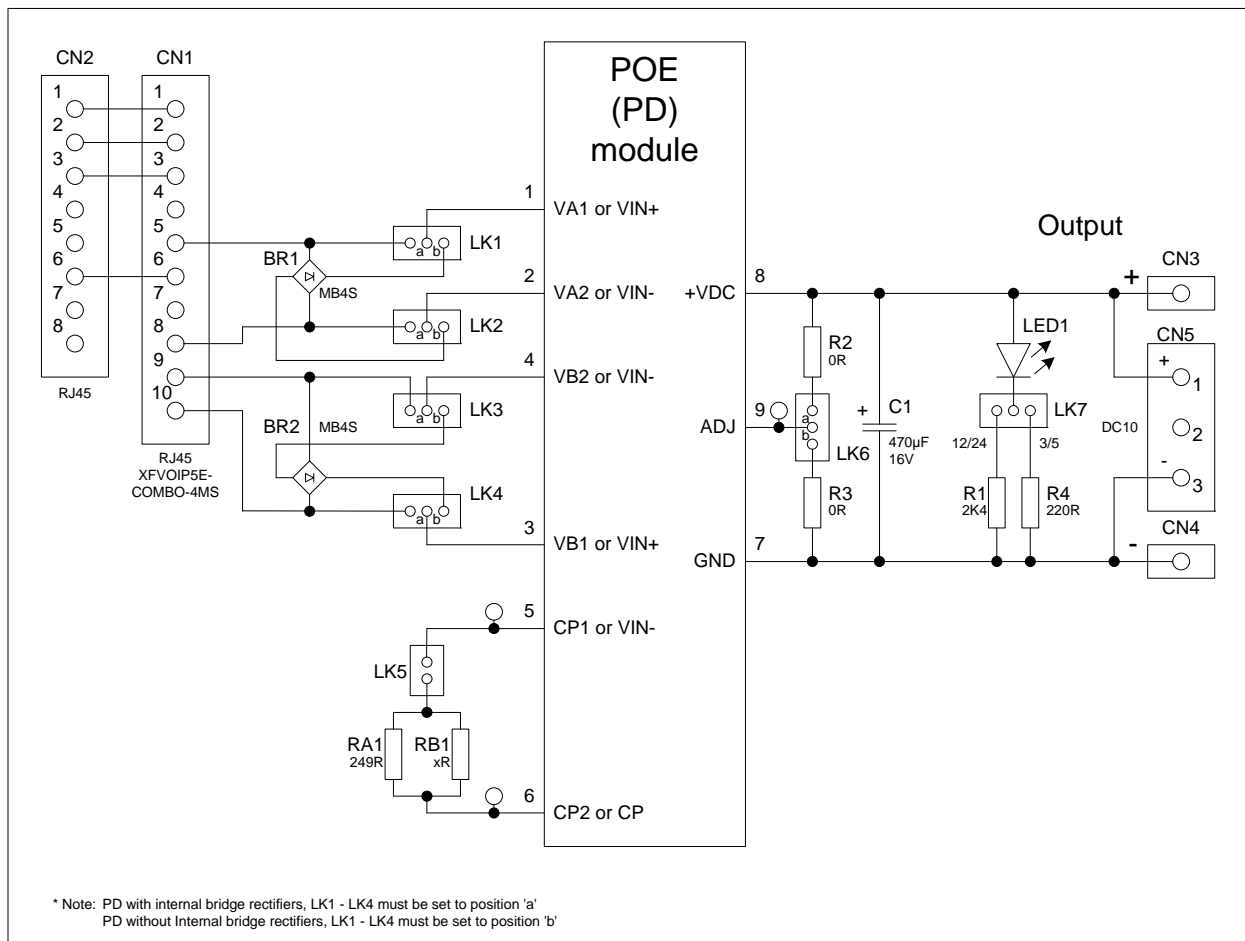


Figure 4: Power Supply set-up