

Silvertel

**PoH EVAL Kit
User Manual**

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3 Kit Contents

- Ag5600 Evaluation Board
- Ag5600 PD Module
- Ag6600 Evaluation Board
- Ag6600 PSE Module

4 Introduction

This manual is intended to be a guide to using the “EVALAg5600 evaluation board” and the “EVALAg6600 evaluation board”, with the following Silver Telecom Power over HDBaseT (PoH) modules: -

Ag5600

Ag6600

4.1 EvalAg6600

The EVALAG6600 evaluation board can be powered from a 52V to 57V power supply suitable of delivering 3A. This supply is connected via JP1 (+Vin) and JP2 (-Vin) and when ON, LED1 will be illuminated.

Data is input into the EVALAG6600 through the connector J2 and is passed through the data transformer T1 to be output from connector J3. The Ag6600 output power is added to the output centre taps of the data transformer T1, to output on to J3 with the data (see Figure 1). When the Ag6600 module output is ON, LED2 will be illuminated.

4.2 EvalAg5600

The EVALAG5600 evaluation board can be powered from the EVALAg6600 evaluation board. Data and power are input through the connector J1 (see Figure 2). Data is passed through the data transformer (T1) to the data output connector J2. The power is extracted from the input centre taps of T1 and passed to the input of the Ag5600 after going through the polarity protection module U1.

The output power from the Ag5600 is supplied to the connectors JP1, JP2 and JP3 (see Figure 2), where JP2 provides the positive +24Vdc and JP3 provides the 0V return path.

When there is power connected to the EVALAg5600 board, then LED1 will be illuminated. LED2 will be illuminated when the Ag5600 module outputs +24Vdc.

5 Evaluation Board Description for Ag6600

5.1 Input

The EVALAG6600 evaluation board should be powered using a DC Power supply delivering between +52V to +57V. The positive supply should be connected to either JP1 or pin 1 of J1 and 0V to either JP2 or pin 2 of J1. If LED1 is illuminated then there is power going to the Ag6600 input.

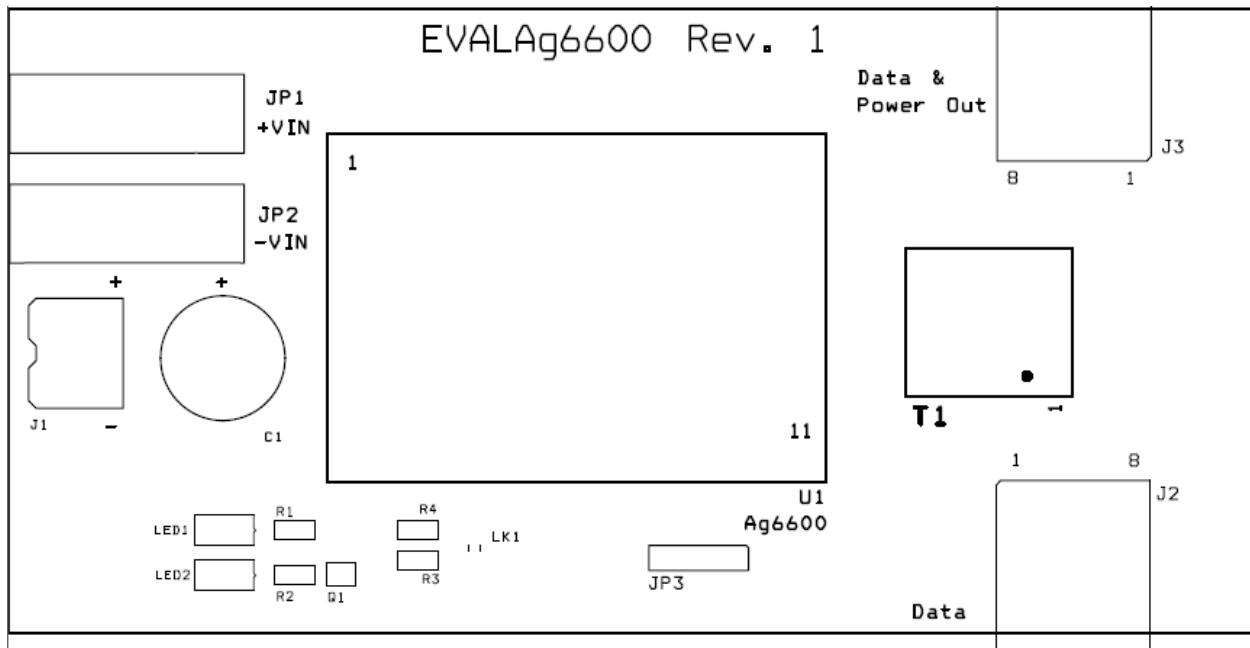


Figure 1: EVALAg6600 Board Layout

5.2 Ag6600 Information

Full operating conditions and feature set for the Ag6600 can be found in the product datasheet, available from www.silvertel.com.

6.3 Output Adjustment

The Ag5600 has an ADJ pin, which allows the output voltage to be increased or decreased from its nominal value. Figure 3: Output Adjustment shows how the ADJ pin is connected.

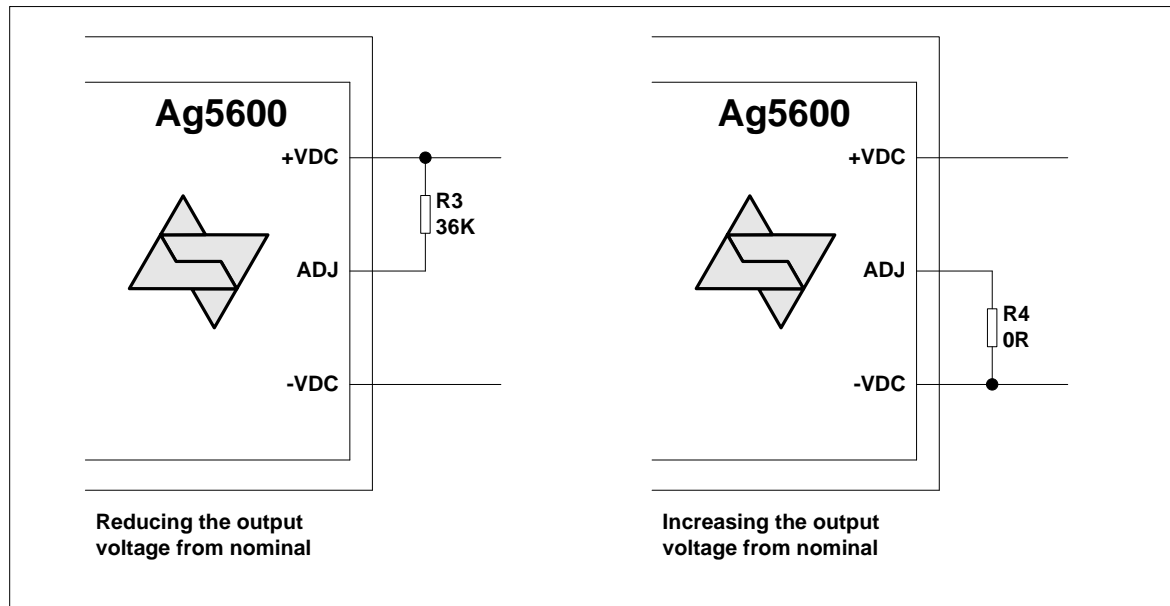


Figure 3: Output Adjustment

LK1 is connected to the ADJ pin for the PD module to either increase or decrease the voltage. When the link is connected to the top and middle pins (R4), the Ag5600 output voltage will be increased to ~30.8V. When the link LK1 is connected to the bottom and middle pins (R3), then the Ag5600 output voltage will be decreased to its minimum of ~17.5V.

6.4 Diode Selection

Due to the differences in the voltage drop across the various diodes, U1 is pluggable so that a Schottky diode or MOSFET bridge maybe chosen.

6.5 Heat Sink

As the Ag5600 is a 100W power supply thermal management is essential, as such it is designed to be used with a heat-sink at all times to distribute the heat away from the board so the board can run at full operation.

A suggest heat-sink is shown in Section 6 of the Ag5600 datasheet under Operating Temperature Range.

6.6 Ag5600 Information

Full operating conditions and feature set for the Ag5600 can be found in the product datasheet, available from www.silvertel.com.

7 Set-up

7.1 Power Supply Input

Figure 4 shows the basic set up using the EVALAG5600 evaluation board along with the EVALAG6600 evaluation board with a power supply input to JP1.

The equipment required: -

- Power supply Input +56V IN e.g. Meanwell SP-240-48 available from mouser which will give 56V
- Ethernet Data Cable (CAT5e cable) Input and Output
- CAT5e or CAT6 interlink cable(between EvalAg6600 and EvalAg5600)
- Output power cable

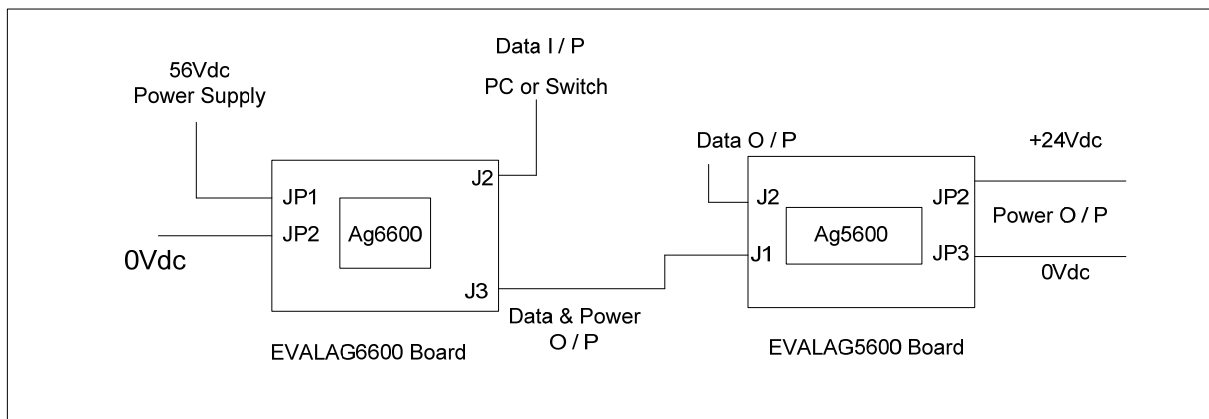


Figure 4: Basic set-up

7.2 Data Input

To pass data via the Evaluation boards, the data input (e.g. Internet) can be connected to J2 on the Ag6600 Eval Board using a cat5e cable. The data is then passed through the data transformer, where power is added and sent out via connector J3 of the Ag6600 Eval Board. The Data and power is extracted through J1 of the EVALAG5600 board and then divided into its separate power and data through the data transformer. The data output is then available from J2 of the EvalAg5600 Board, which can then be connected to your device.