

EVALPM8803-FWD: IEEE802.3at compliant demonstration kit with synchronous active clamp forward PoE converter

Features

- EEE 802.3at compliant
- Support for Gigabit Ethernet
- Data pass-through for the ethernet data
- Works with power supplied from Ethernet LAN cables or from local auxiliary sources
- Successful IEEE802.3at Layer1 classification indicator
- Single output 3.3 V/5 V
- 90+% converter efficiency
- Board size 10x13 cm

Description

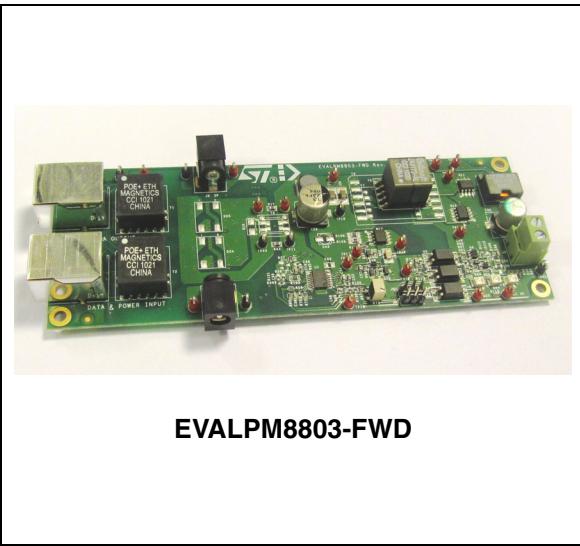
The EVALPM8803-FWD is a demonstration board implementing an IEEE802.3at compatible interface together with a self driven synchronous active clamp forward converter based on PM8803.

The board is designed to work up to 30 W, and with minimal changes the output voltage can be selected either 5 V or 3.3 V. For sake of flexibility, alternative footprint have been foreseen for the main component (MOS, transformer, etc.).

It is possible to connect auxiliary sources to one of the 2 jacks in the EVALPM8803-FWD like in real application design. In one case thanks to the PM8803 feature, prevalence of the auxiliary source can be guaranteed.

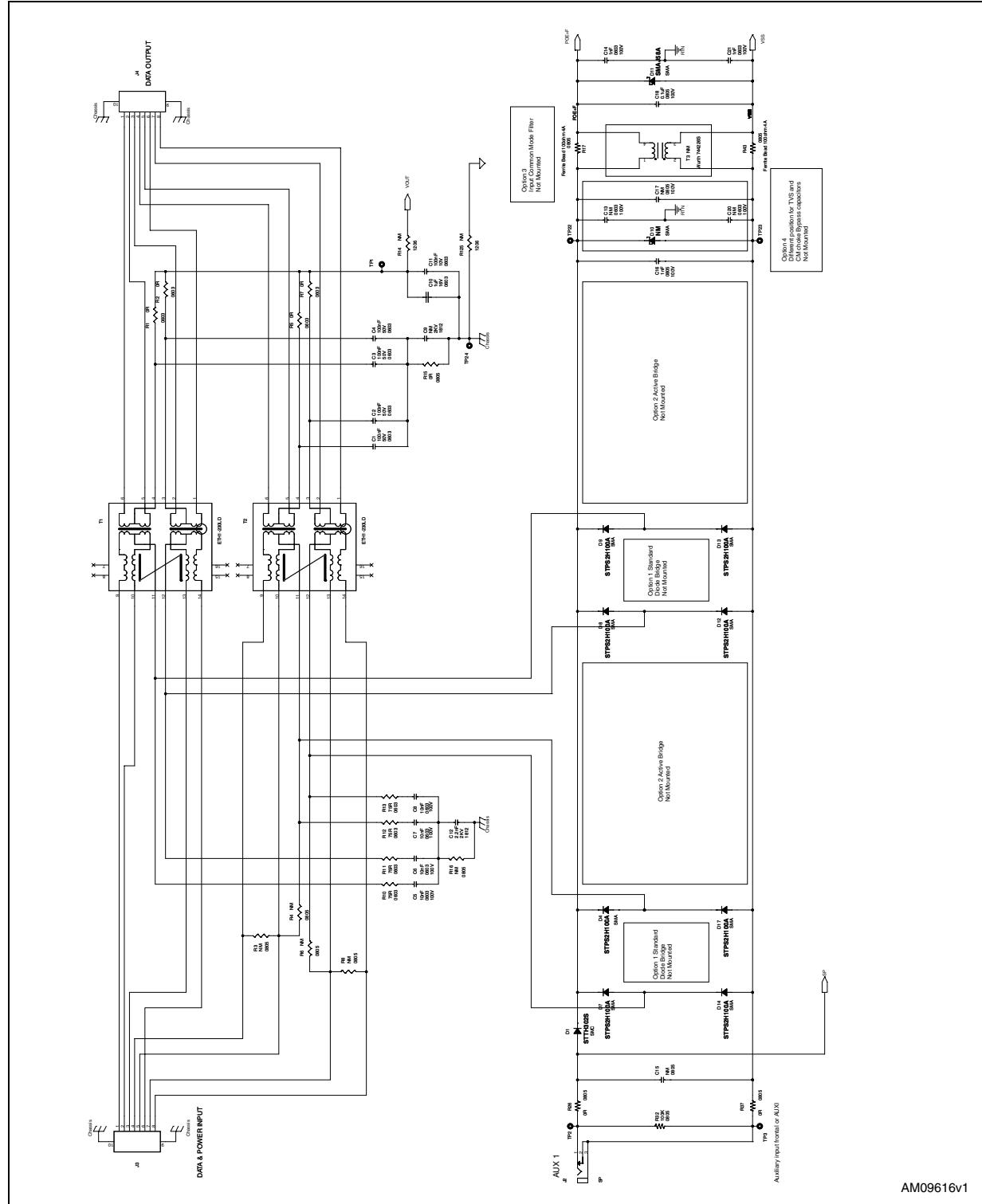
Three LEDs give indication of:

- the converter is running
- an external auxiliary source is connected to the board
- a type 2 PSE is connected to the board.



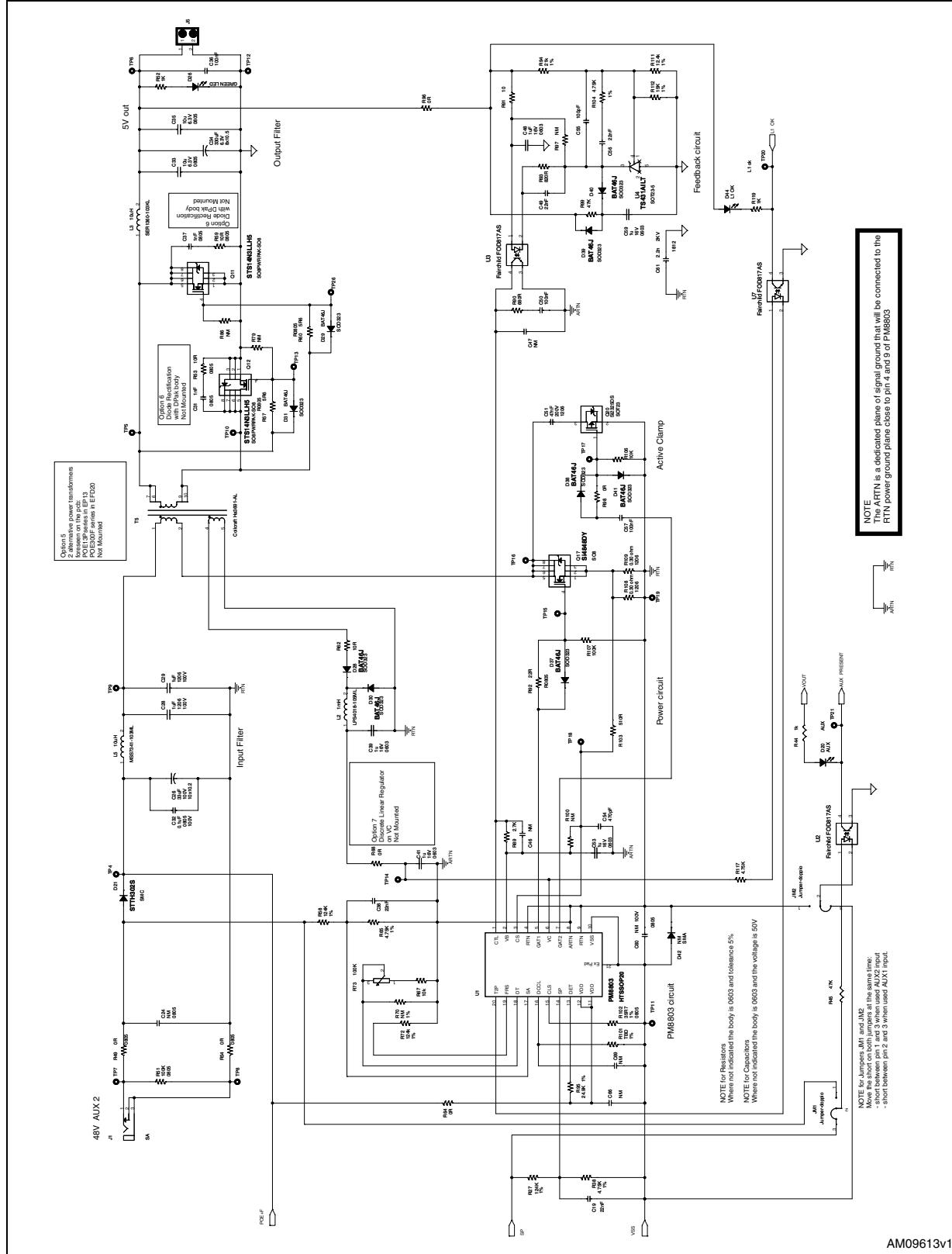
1 Schematic diagrams

Figure 1. Demonstration kit schematic: detail of the PoE+ input section including data transformer, diode bridges, protection and optional CM choke



AM09616v1

Figure 2. Demonstration kit schematic: detail of the PoE+ section based on active clamp forward topology with synchronous rectification



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
07-Apr-2011	1	Initial release.
30-Jun-2011	2	Updated coverpage

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