



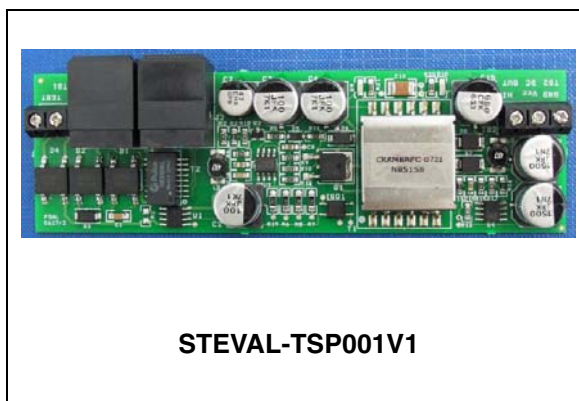
STEVAL-TSP001V1

Power over Ethernet (PoE) demonstration board based on the L6565

Data Brief

Features

- Low profile, small size: 5" x 1.5" x 0.65" (0.5" except RJ-45 Ethernet connectors)
- Complies with all IEEE 802.3-2005 (IEEE 802.3af) PoE specifications
- Respects source limitations
- Does not pollute power source
- 1500 V isolated outputs eliminate ground loops
- Economical output power (total power at output approximately 10 W)
- Useful output voltages
 - 12 V @0.65 A output (7.8 W, loose tolerance)
 - 3.3 V @0.65 A output (2.145 W, tight tolerance)
- Increased cost-effectiveness due to SMT construction (through-hole connectors for ruggedness)



could be used to supply the power without requiring DC-DC conversion.

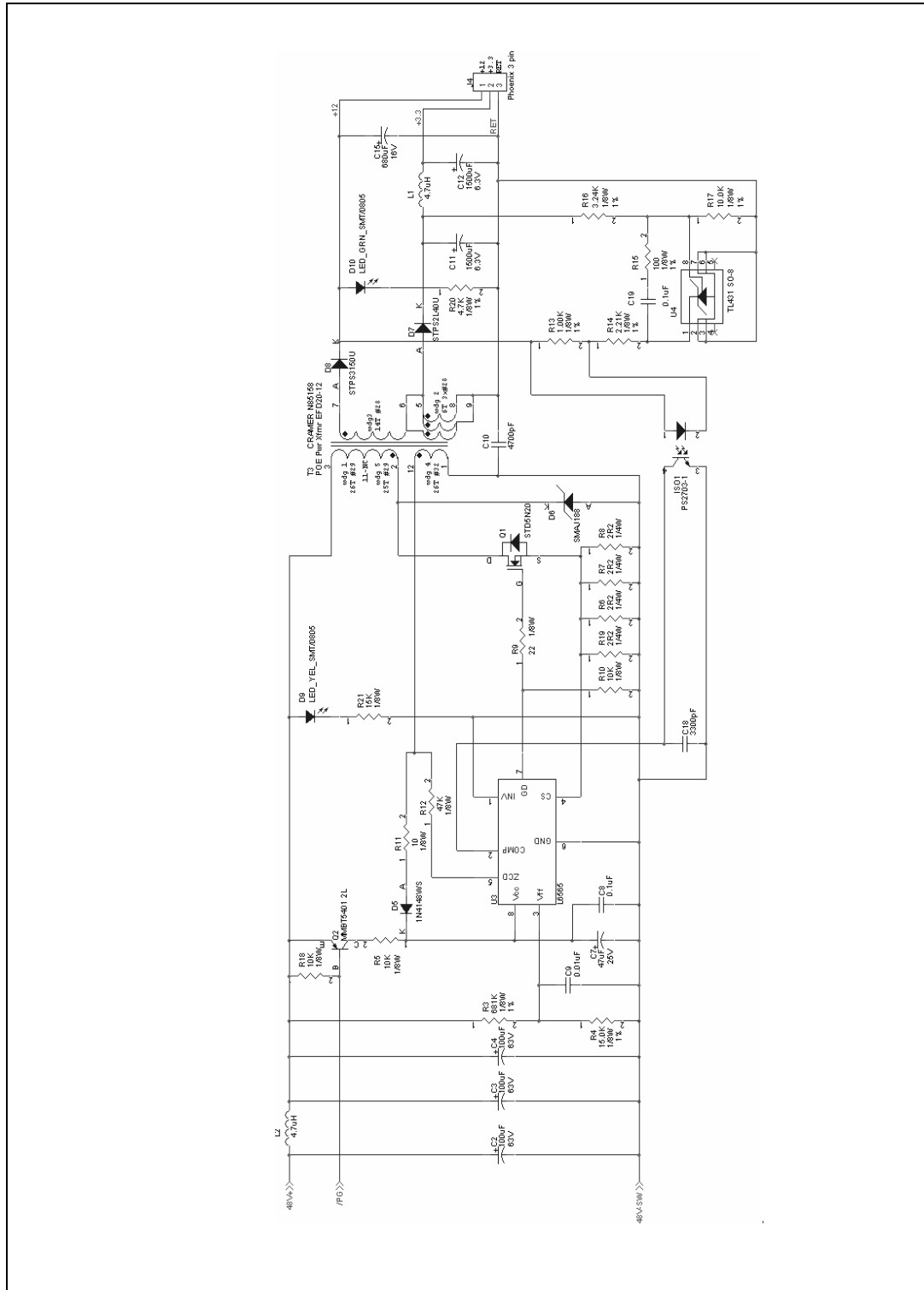
Description

This demonstration board is a Power over Ethernet (PoE) system used to transmit electrical power, along with data, to remote devices over a standard twisted-pair cable in an Ethernet network. The power supply fully complies with IEEE 802.3-2005 PoE specifications and delivers the rated output from any compliant source.

Outputs of 3.3 V and 12 V are used as examples in this document, but other requirements can be easily met with minor changes. The IEEE 802.3af specification is intended to greatly simplify the wiring to remote equipment by providing power over the same medium that carries the signal to and from the equipment. This concept is particularly suitable for applications such as security cameras, wireless access points, and internet telephones (VoIP). The cable voltage was selected so that existing 48 V telecom equipment

1 Board schematic

Figure 1. Schematic diagram



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Aug-2008	1	Initial release.

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2008 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com