



Capacitive touch demonstration board based on the STMPE321

Data brief



Features

- STM32 microcontroller is used as the main digital controller to interface the STMPE321 device
- STMPE321 device controls 3 different touch keys
- Touch events are indicated on the LEDs
- RoHS compliant

Description

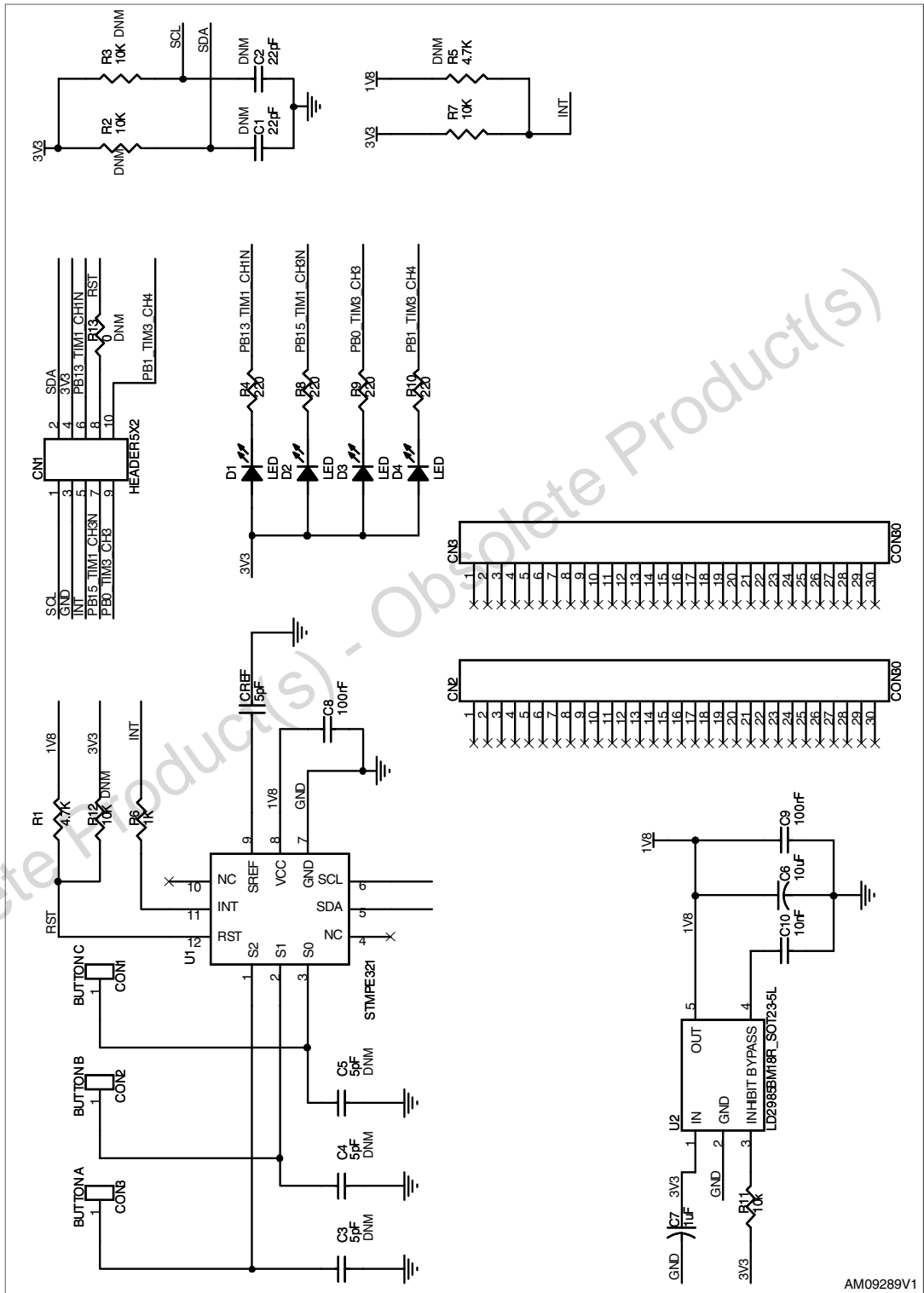
The STEVAL-ICB007V1 demonstration board employs STM32-based capacitive touch to demonstrate the functionality and performance of the STMPE321, a 3-channel capacitive touch key controller.

Capacitance measurement is implemented in fully optimized hardware, and the 3 I/Os can be configured as either capacitive touchkeys or as GPIOs (general purpose input/output). The device is capable of interfacing with a main digital ASIC/controller through the 2-line communication protocol I2C.

In the STEVAL-ICB007V1 demonstration board, the STM32 microcontroller is used as the main digital controller to interface with the STMPE321 device. The system utilizes the capacitive touchkey controller of the STMPE321 and PWM features of the STM32 to demonstrate the application.

The STMPE321 controls 3 different touchkeys using an integrated capacitive touch controller. Touch events are indicated on the LEDs using the STM32 GPIO pins, and the corresponding PWM frequency is generated on a separate LED using the STM32 timer.

1 Circuit schematic



2 Revision history

Date	Revision	Changes
03-Jun-2011	1	Initial release.

Obsolete Product(s) - Obsolete Product(s)

Disclaimer

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 anytime, 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 "AUTOMOTIVEGRADE" 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.

© 2011 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 - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com