



STEVAl-PCC009V1

Universal USB to serial communication interface demonstration board based on the STM32

Data brief

Features

- Two PC GUIs are supported:
 - Universal dongle PC GUI: this PC GUI allows interfacing SPI, I2C and UART interface and controlling the communication parameters with the help of GUI itself
 - DFU mode PC GUI: this PC GUI allows changing the firmware if required by the user to suit its applications
- DLL files of the I2C, SPI and UART Interface are supplied
- Source code (including DFU)
- RoHS compliant

Description

This demonstration board implements an universal USB to serial communication interface (UUSCI) based on STM32.

This demoboard has a 10 pin interface. In this interface, there is a provision to connect a device which can communicate using I2C, SPI and UART. Thus UUSCI tool allows a user to connect a serial communication based device to a PC. At the same time it allows to control some GPIOs available in that 10 pin interface and set them in input/output modes as per the application requirements.

In UUSCI demonstration board, the STM32 microcontroller is used as the interface between PC and the end device. Due to intelligence available in the STM32 device, I2C, SPI and UART are multiplexed in same 10 pin interface thus leading to reduced board size and the complexity of usage.

Power to board is provided from USB Mini B-Type connector.

DLL files of the PC GUI are provided with this tool. So a user can use these DLL files to make



STEVAl-PCC009V1

their own customized PC GUI as per their requirements.

Warning: In order to use this evaluation board connected to a PC, a recent version of Windows[®], such as Windows2000[®] or Windows XP[®] must be installed.

1 Circuit schematics

Figure 1. Microcontroller section

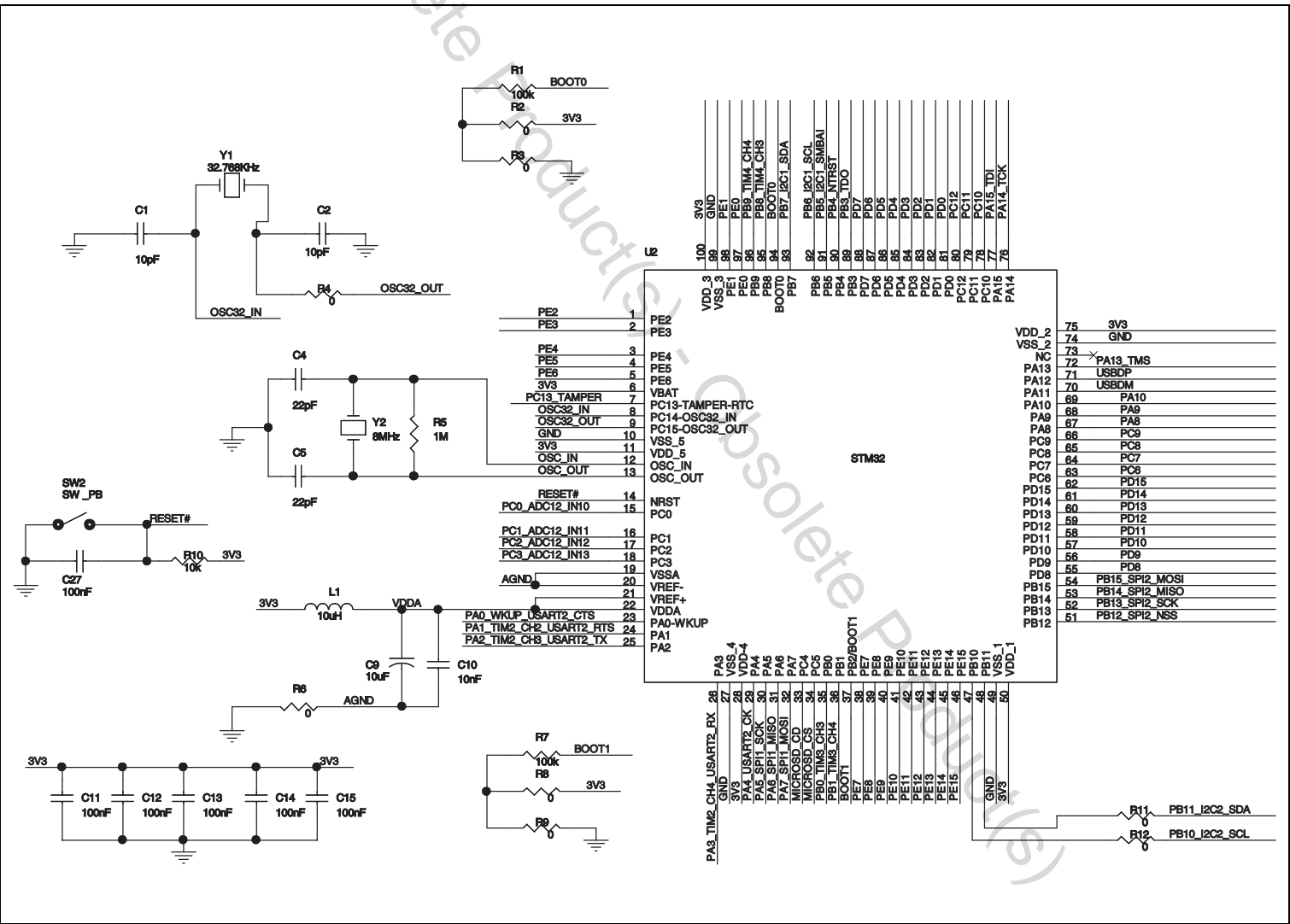
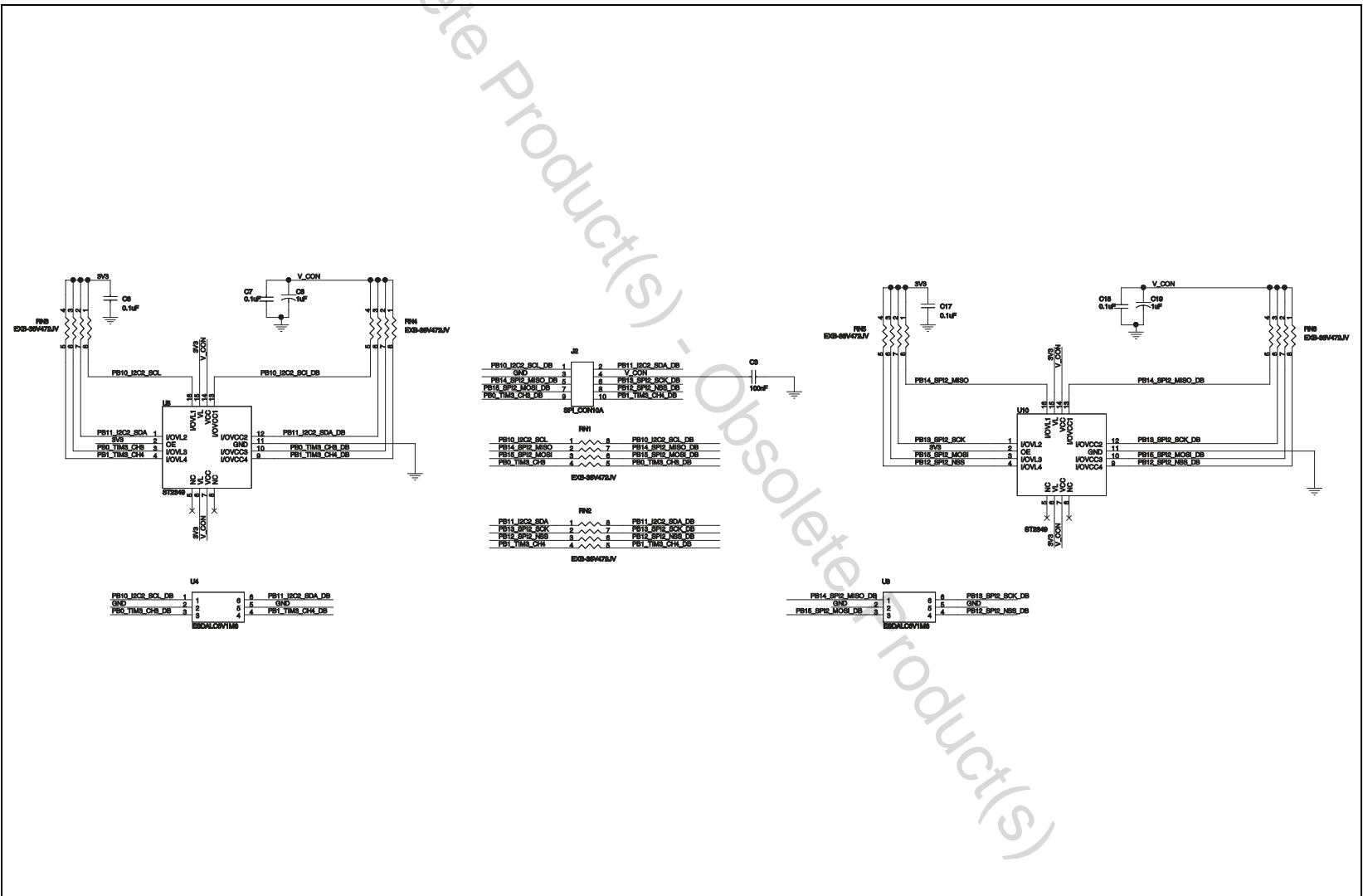


Figure 2. Synchronous COM Interface



Obsolete Product(s) - Obsolete Product(s)

Figure 3. Extension board interface

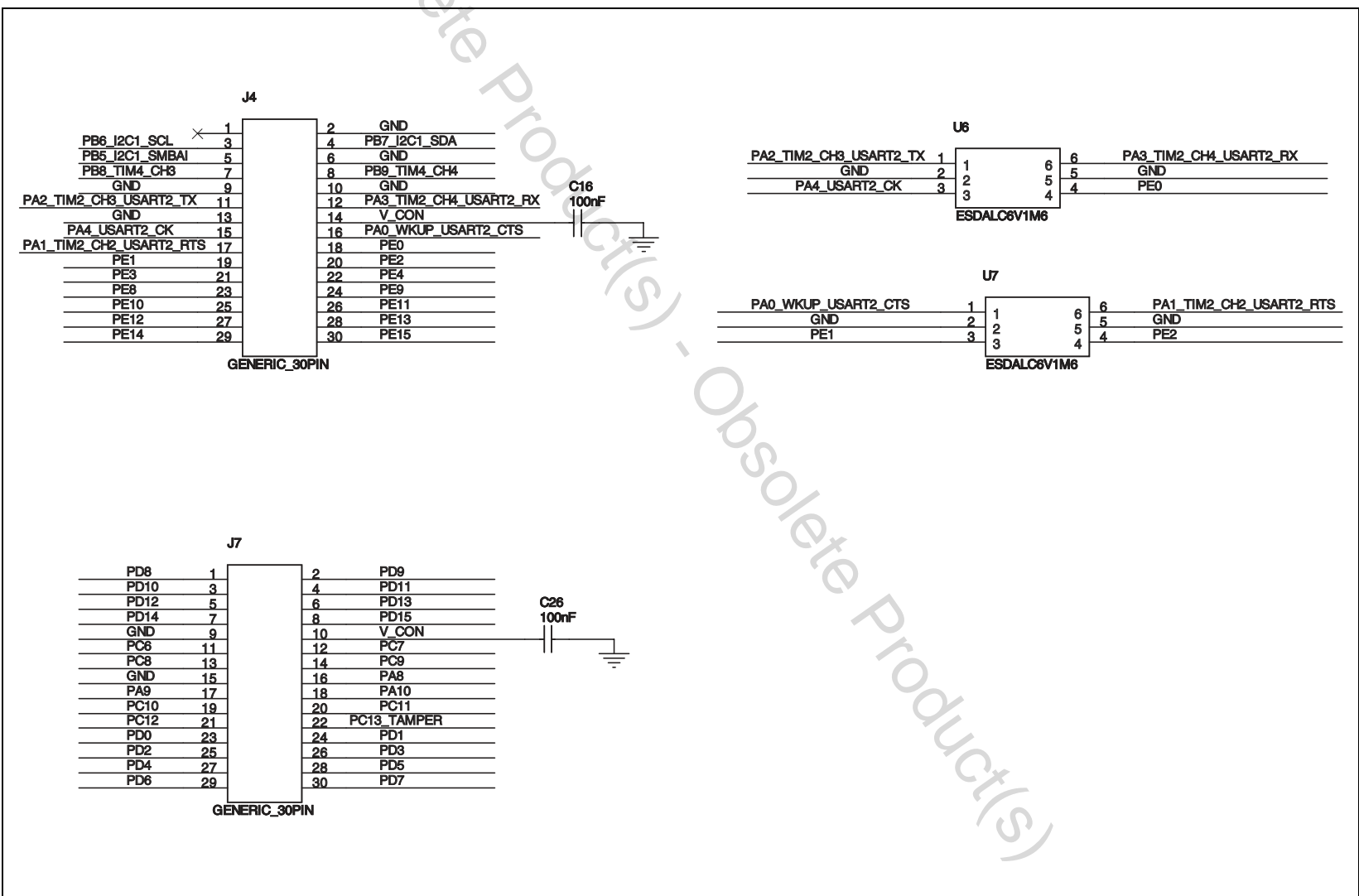
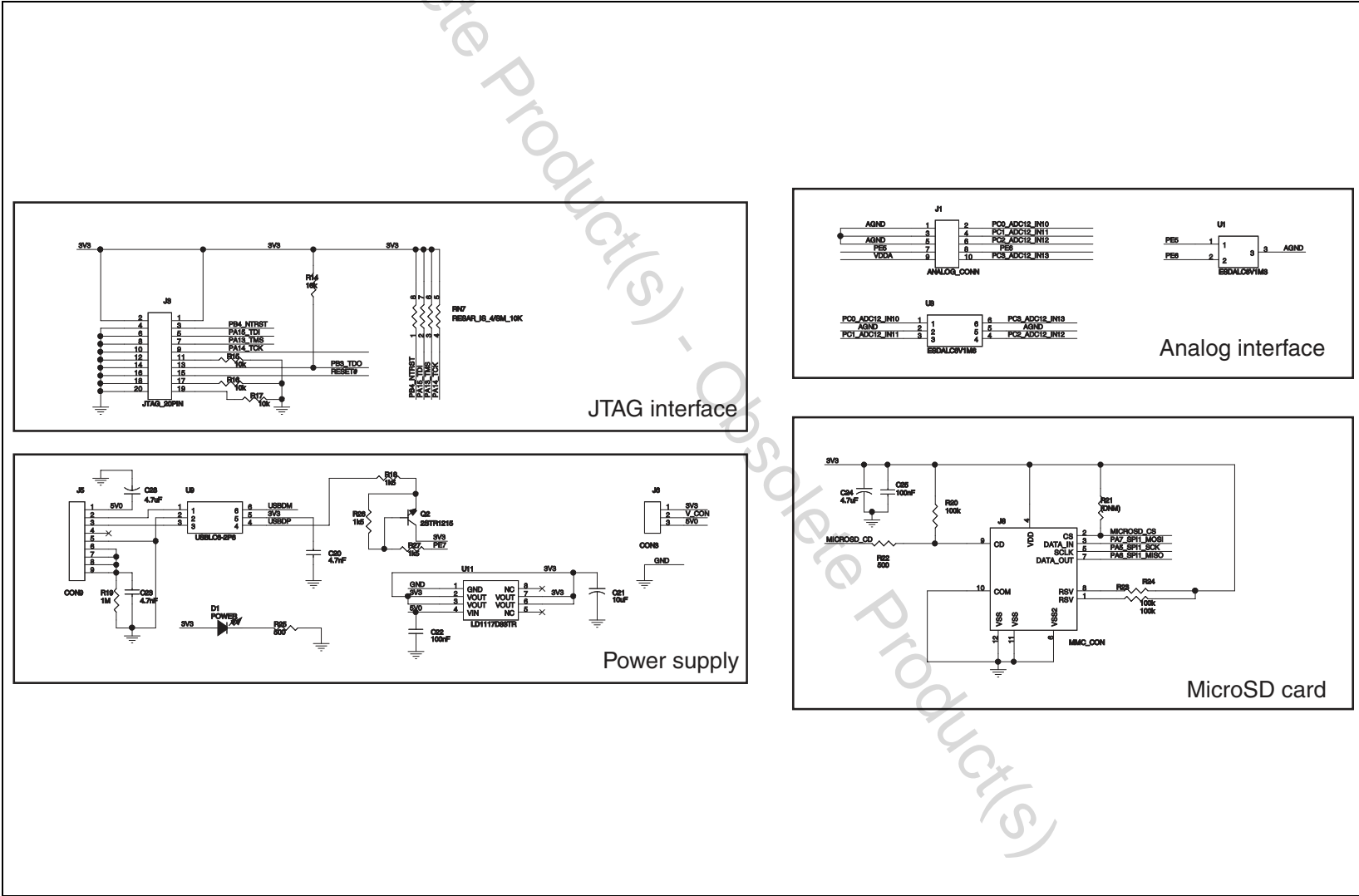


Figure 4. JTAG interface, analog interface, microSD card and power supply



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
10-Apr-2009	1	Initial release.
04-May-2010	2	Updated picture on cover page.

Obsolete Product(s) - Obsolete Product(s)

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.

© 2010 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

