

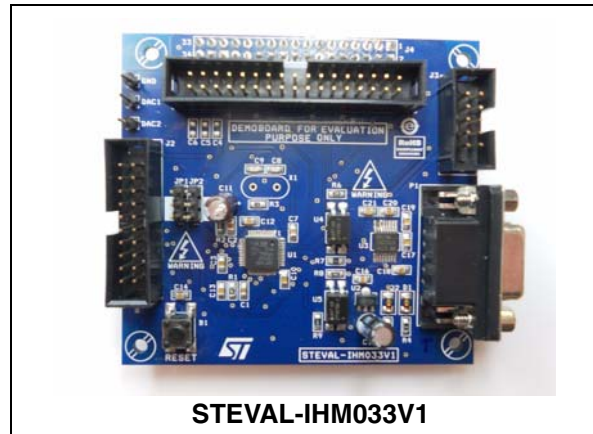


STEVAL-IHM033V1

Control stage based on the STM32F100CB microcontroller for motor control with serial communication user interface

Features

- Compact size
- Based on STMicroelectronics ARM™ Cortex-M3 core-based STM32F100CB microcontroller
- Connector for interfacing with any STMicroelectronics demonstration powerboard equipped with an MC connector (such as the STEVAL-IHM032V1) with alternate functions (current reference, current limitation/regulation, method selection, current boost)
- Compatible with sinusoidal and trapezoidal control
- Insulated USART communication interface
- Non-insulated UUSCI interface (see STEVAL-PCC009V4)
- External oscillator
- Reset button
- SWD for programming/debugging
- DAC outputs test points



STEVAL-IHM033V1

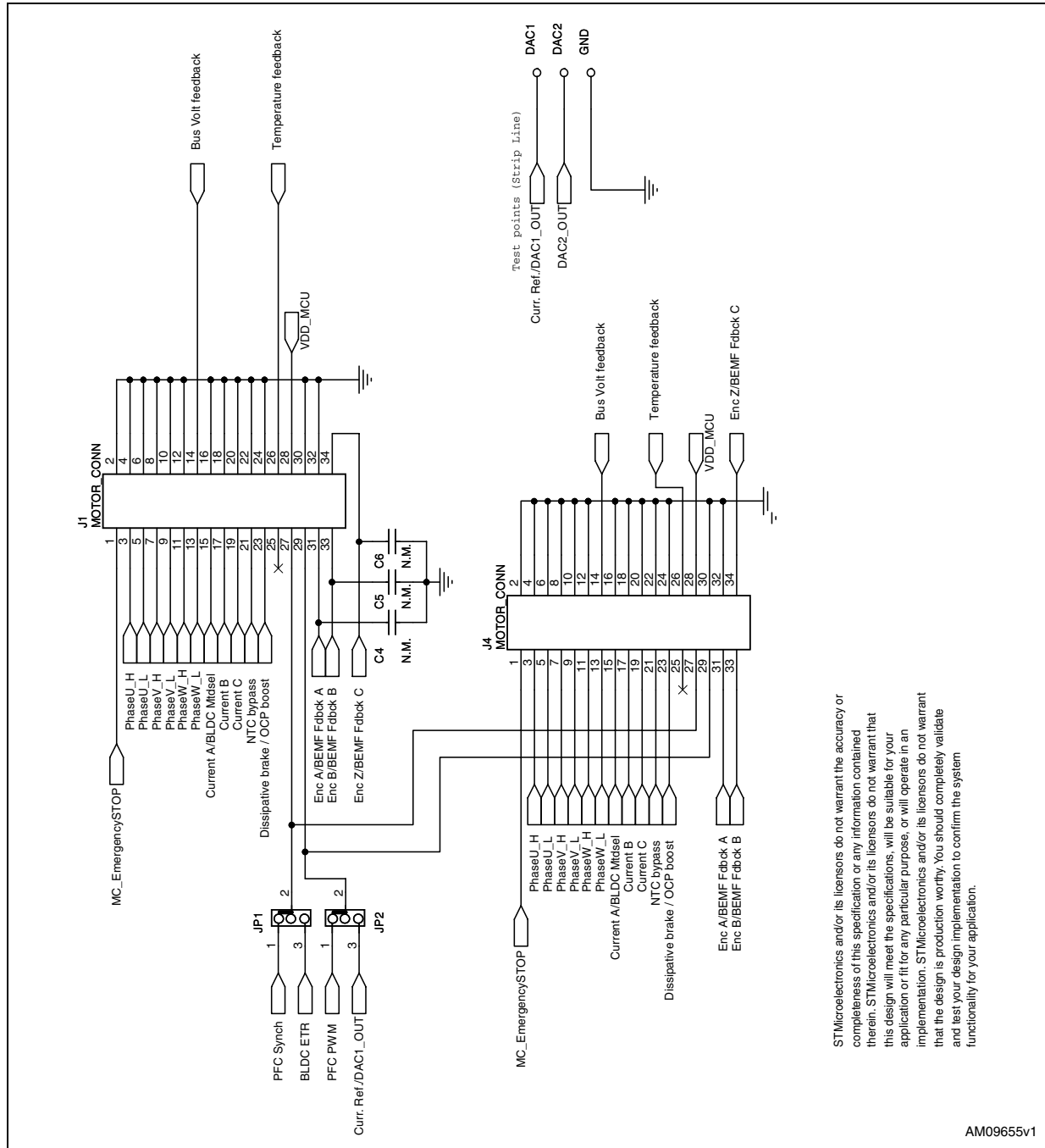
Description

The STEVAL-IHM033V1 is a control stage demonstration board based on the STM32F100CB microcontroller. The board has been designed as an evaluation environment for motor control.

The demonstration board can be used together with the STM32 PMSM single/dual FOC SDK v3.0 and an STMicroelectronics demonstration powerboard equipped with an MC connector (such as the STEVAL-IHM032V1) for a complete motor control evaluation and development platform.

1 Schematics

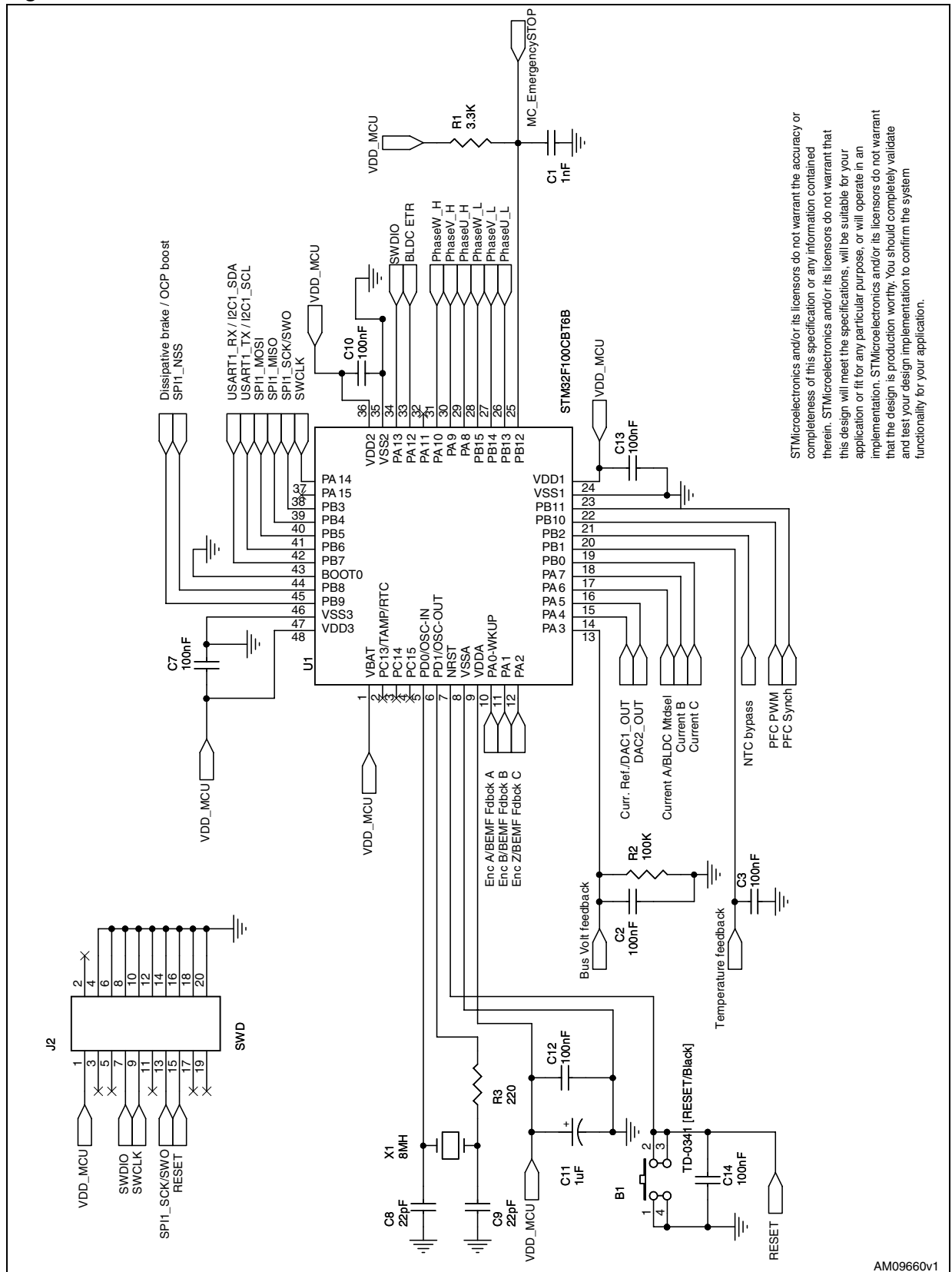
Figure 1. Connectors



STMicroelectronics and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. STMicroelectronics and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. STMicroelectronics and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

AM09655v1

Figure 2. Microcontroller



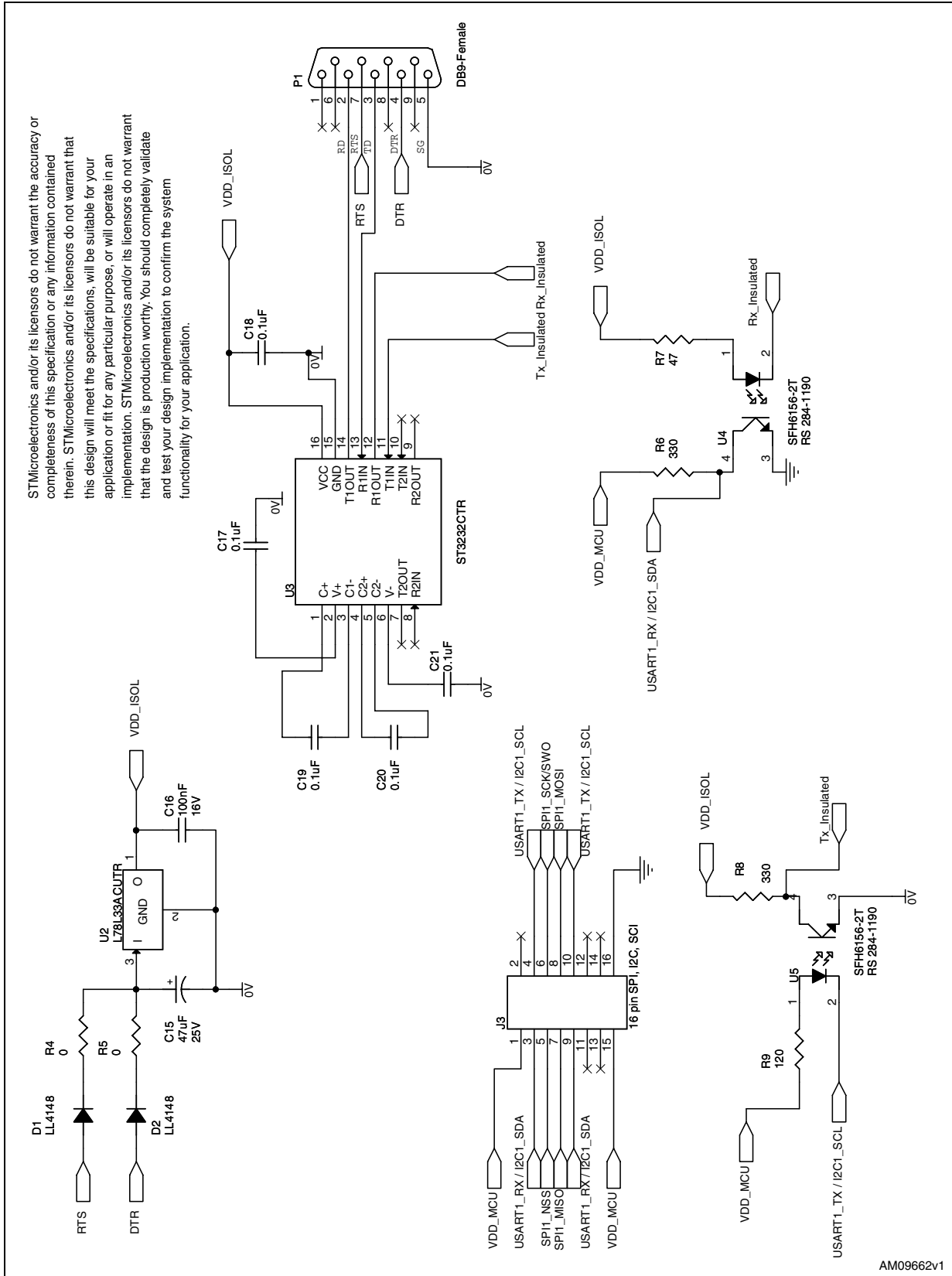
STMicroelectronics and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. STMicroelectronics and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. STMicroelectronics and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

AM09660v1



Figure 3. Communication interface

STMicroelectronics and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. STMicroelectronics and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. STMicroelectronics and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.



AM09662v1

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
19-Sep-2011	1	Initial release.
20-Oct-2011	2	Updated title in cover page.

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 TWO AUTHORIZED ST REPRESENTATIVES, 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.

© 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