STEVAL-IME003V1

STEVAL-IME003V1 demonstration board based on the STHV748 high voltage pulser

Data brief

Features

- 4-channel outputs: high voltage and low voltage BNC connectors
- Load simulator using signal equivalent circuits
- Possibility to set up own load simulator
- 16 preset waveforms
- USB connector to connect STM32 with PC and supply power to it
- 4 MB serial Flash memory to host FPGA code and waveforms
- Memory expansion connector to add external serial Flash
- Connectors to supply high voltage and low voltage to the STHV748 output stage
- LEDs to monitor the power management stage
- Human machine interface to select, start and stop the generation of the preset waveforms
- 25 LEDs to monitor board behavior
- RoHS compliant
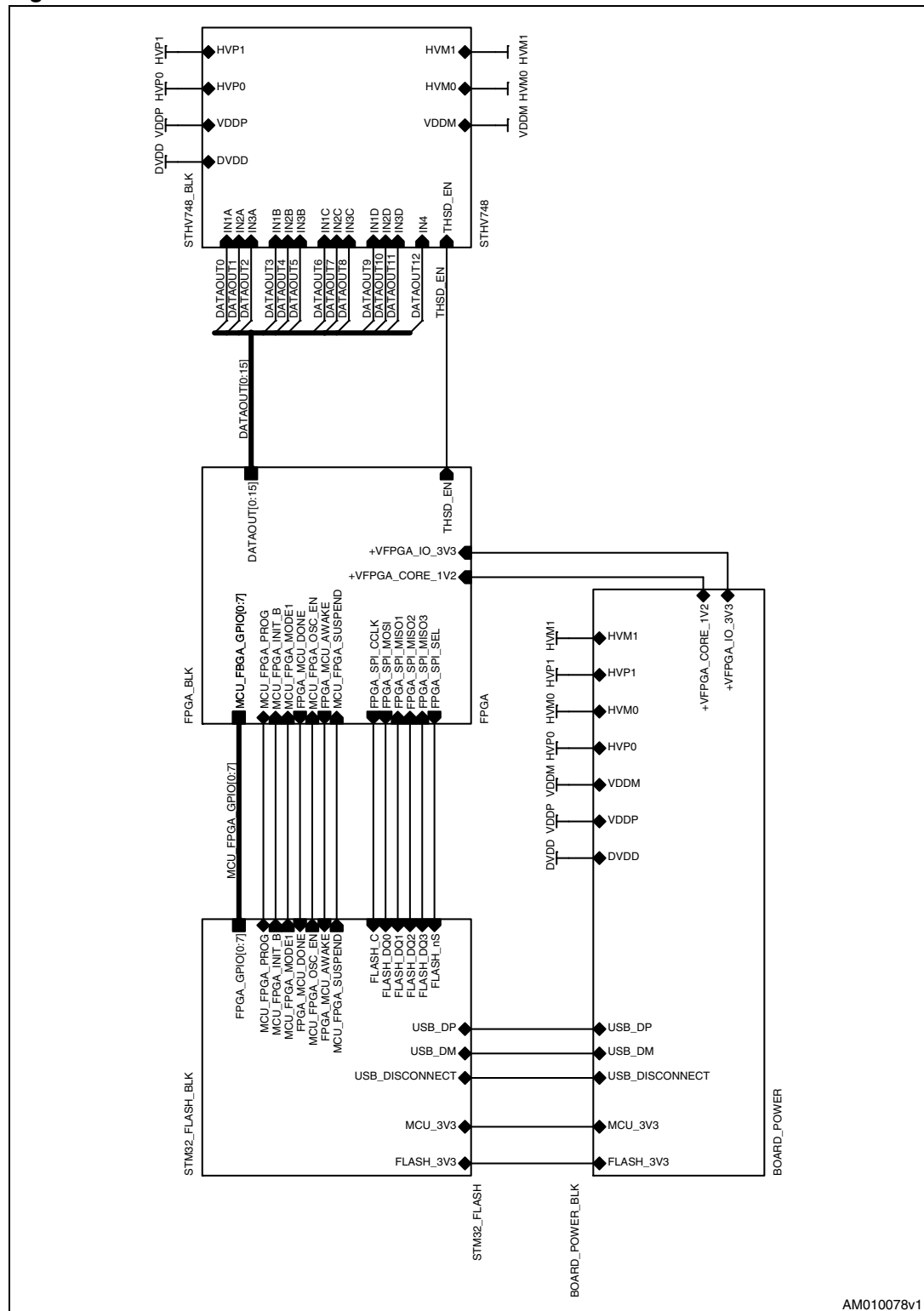

STEVAL-IME003V1

Description

The STEVAL-IME003V1 demonstration board is designed around the STHV748 4-channel high voltage pulser, a state-of-the-art device designed for ultrasound imaging applications.

The output waveforms can be displayed directly on an oscilloscope by connecting the scope probe to the relative BNCs. 16 preset waveforms are available to test the HV pulser under varying conditions.

www.st.com
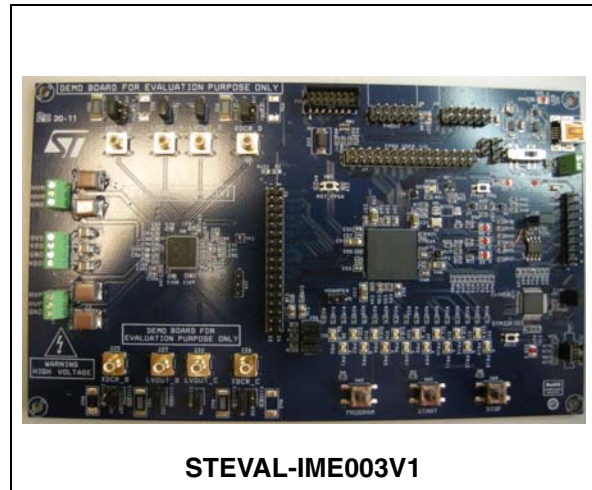
1 Schematic diagrams

Figure 1.   STEVAL-IME003V1 hierarchical blocks
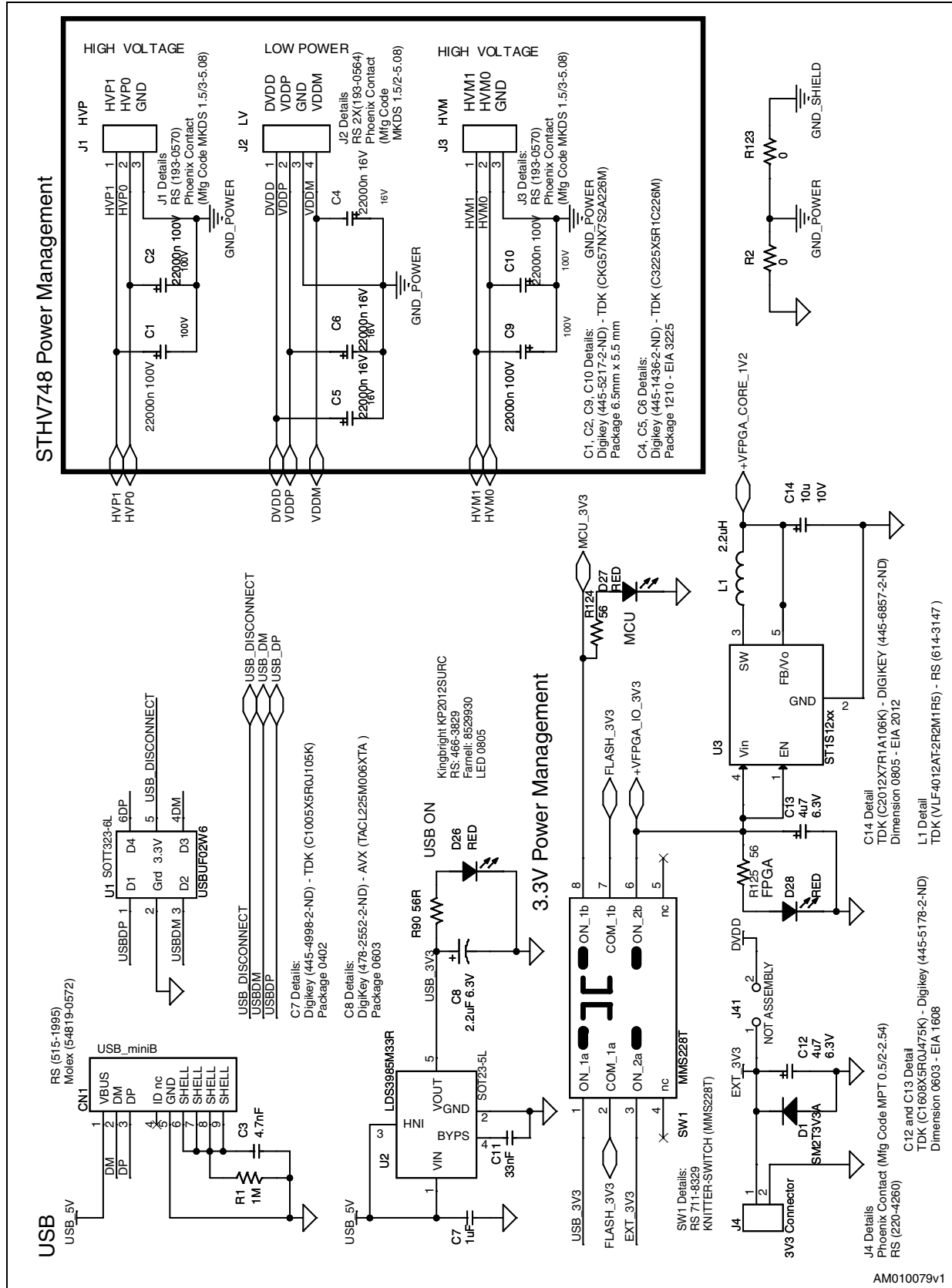
Figure 2.   STEVAL-IME003V1 FPGA bank 0 configuration

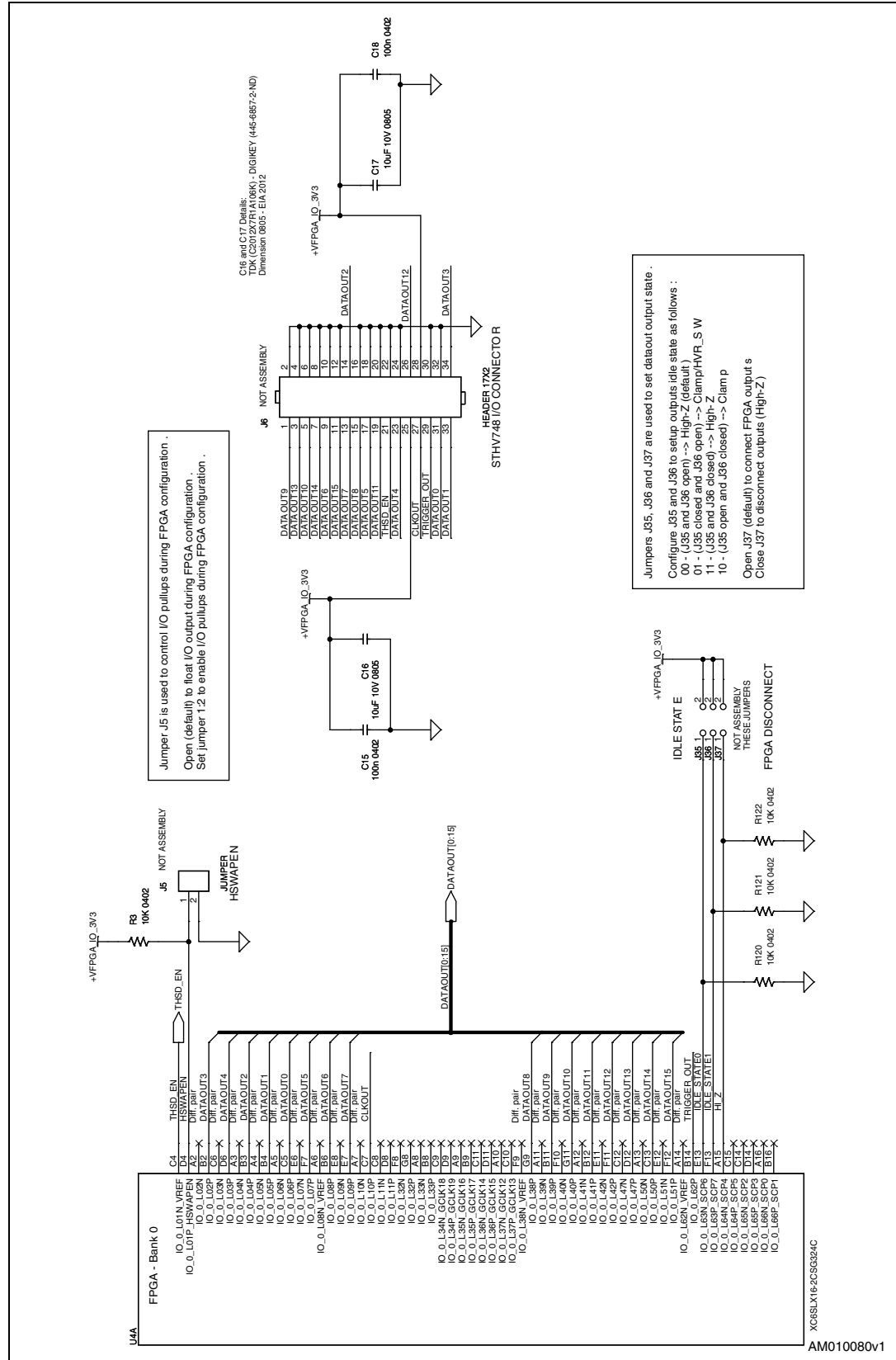AM010079v1

Figure 3.   STEVAL-IME003V1 FPGA bank 1 configuration

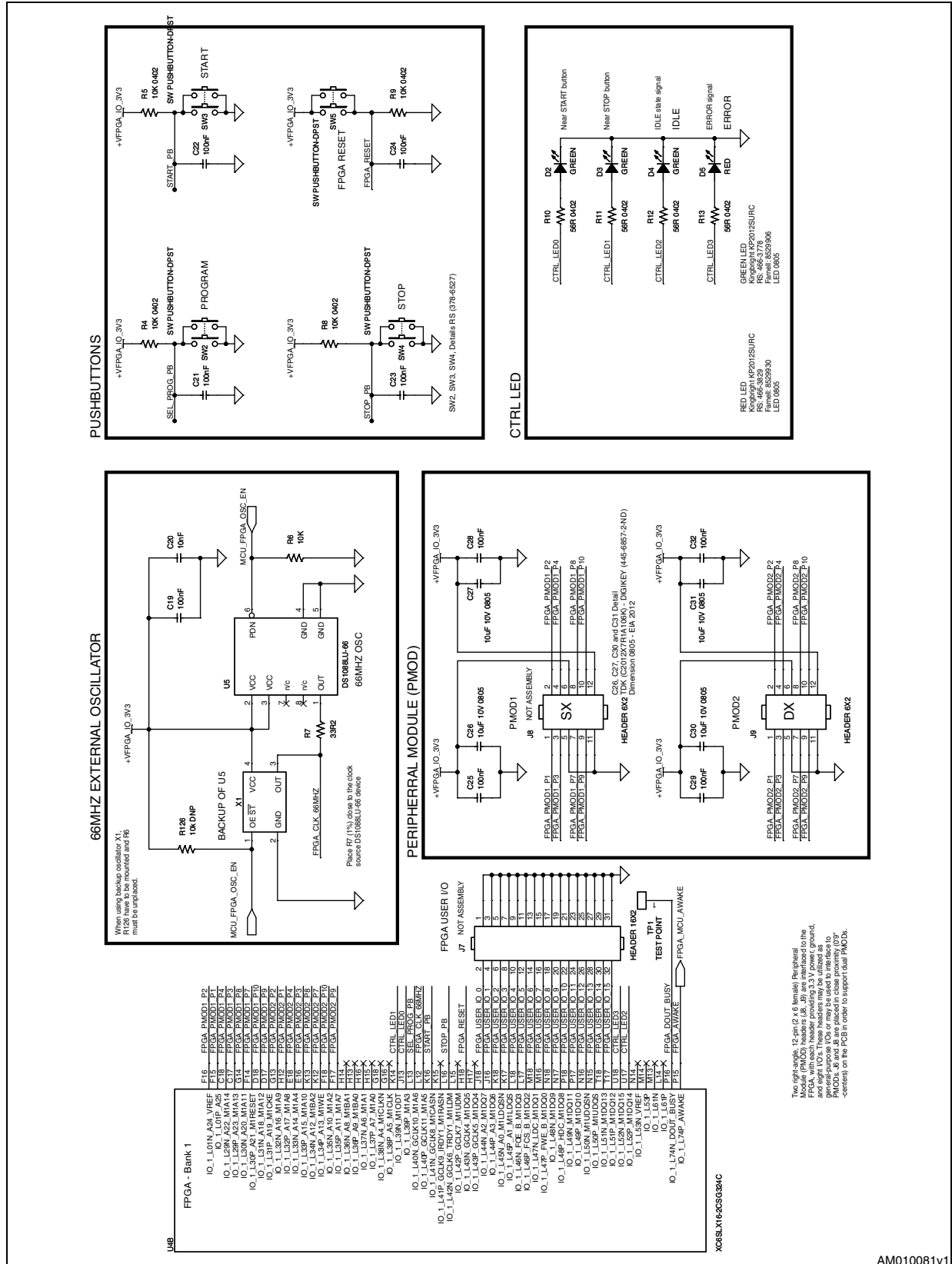**Figure 4.   STEVAL-IME003V1 FPGA bank 2 configuration**

AM010081v1

Figure 5. STEVAL-IME003V1 FPGA bank 3 configuration

AM010069v1

Figure 6.   STEVAL-IME003V1 FPGA bank 3 configuration
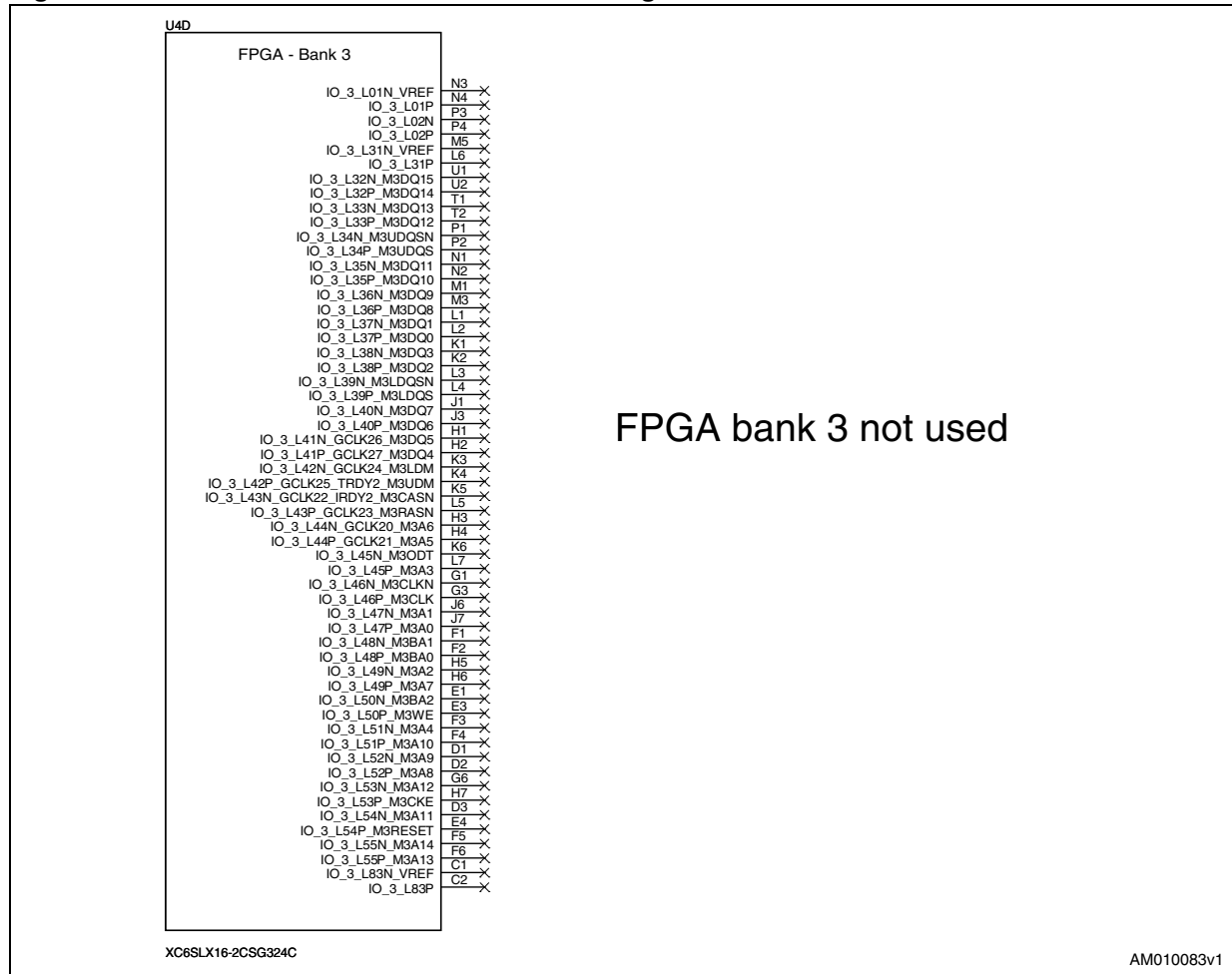
Figure 7. STEVAL-IME003V1 FPGA power and configuration
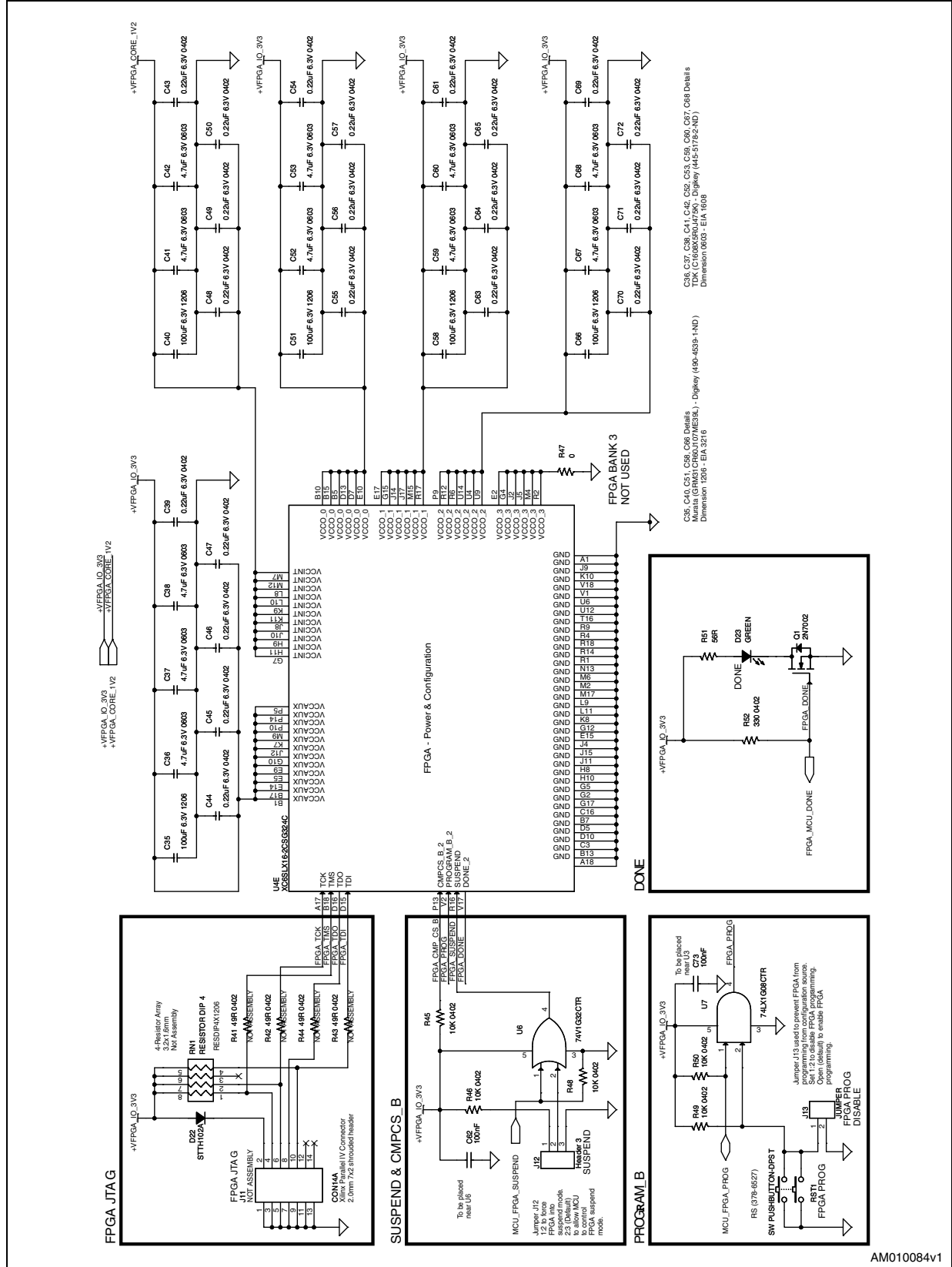

AM010084v1

Figure 8.   STEVAL-IME003V1 configuration of the STHV748
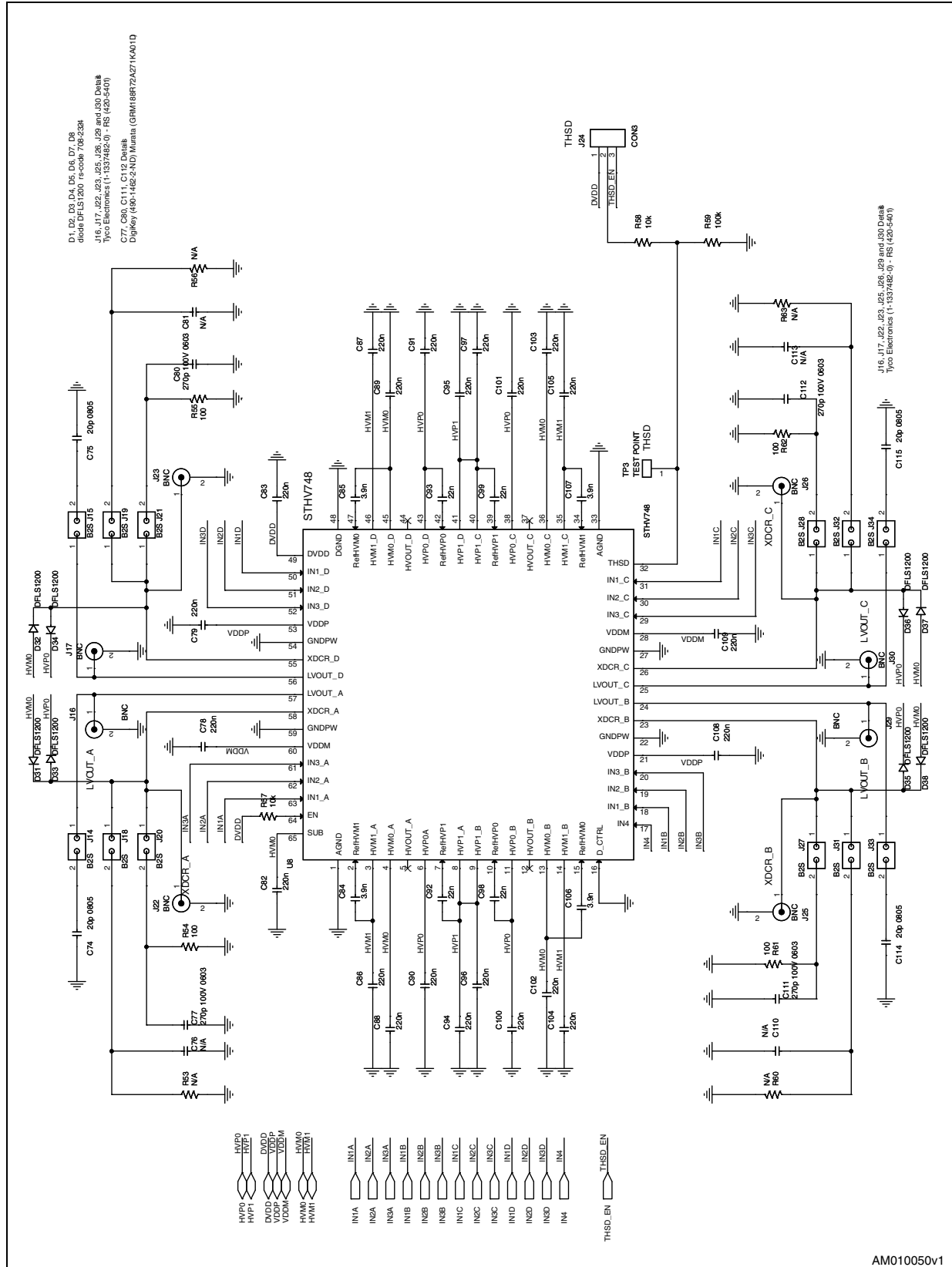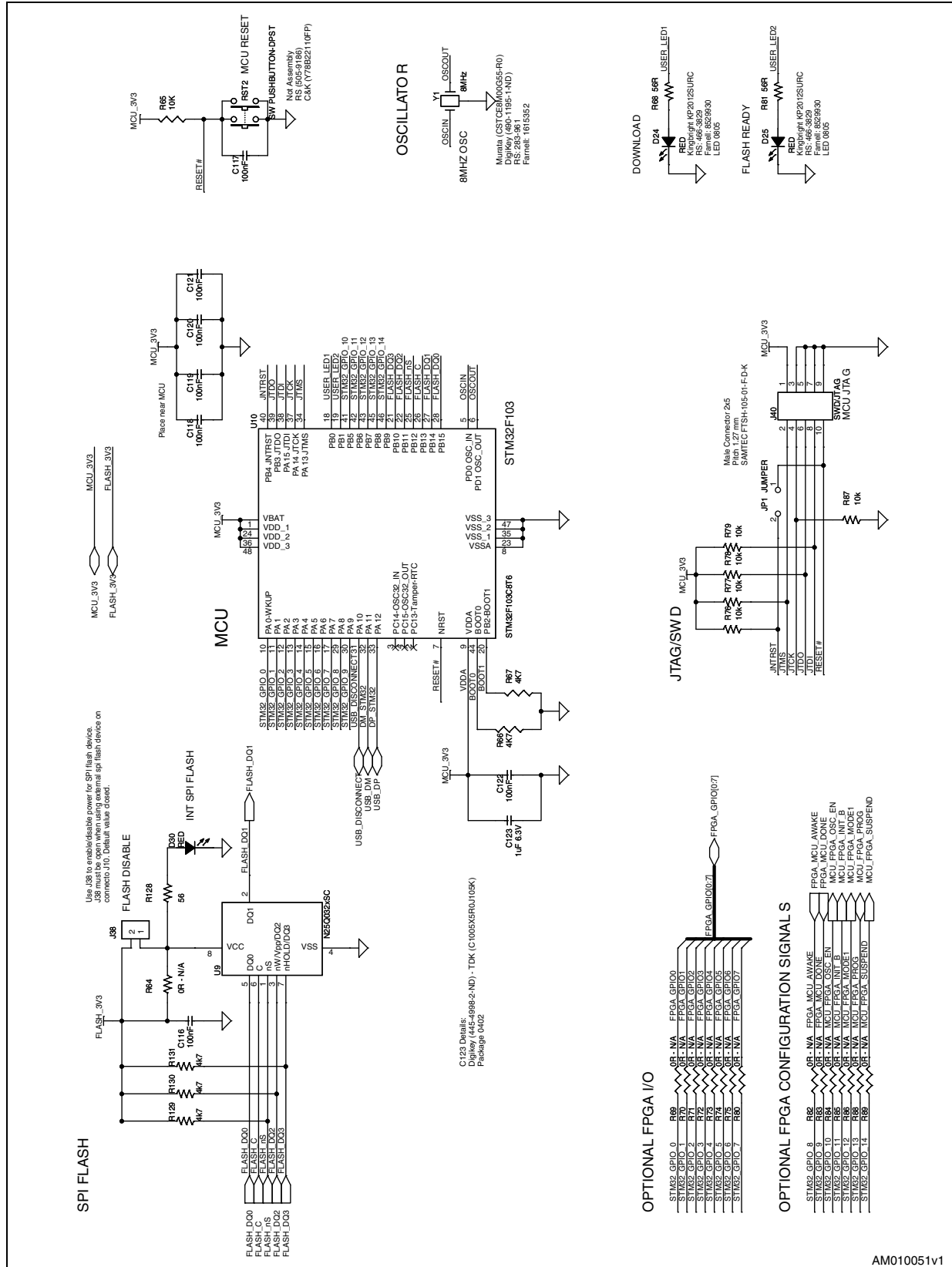

AM010050v1

Figure 9.   STEVAL-IME003V1 configuration of the STM32

AM010051v1

2 Revision history

Table 1.   Document revision history

Date	Revision	Changes
11-Aug-2011	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 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.

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