

Mask Set Errata for Mask 1N96F

Introduction

This report applies to mask 1N96F for these products:

- KINETIS_L

Errata ID	Errata Title
6070	I2C: Repeat start cannot be generated if the I2Cx_F[MULT] field is set to a non-zero value
6665	Operating requirements: Limitation of the device operating range
5472	SMC: Mode transition VLPR->VLLS0(POR disabled)->RUN, will cause POR & LVD.
6060	TSI: Out of Range interrupt shows incorrect behavior with some configurations.

e6070: I2C: Repeat start cannot be generated if the I2Cx_F[MULT] field is set to a non-zero value

Errata type: Errata

Description: If the I2Cx_F[MULT] field is written with a non-zero value, then a repeat start cannot be generated

Workaround: There are two possible workarounds:

- 1) Configure I2Cx_F[MULT] to zero if a repeat start has to be generated.
- 2) Temporarily set I2Cx_F [MULT] to zero immediately before setting the Repeat START bit in the I2C C1 register (I2Cx_C1[RSTA]=1) and restore the I2Cx_F [MULT] field to the original value after the repeated start has occurred

e6665: Operating requirements: Limitation of the device operating range

Errata type: Errata

Description: Some devices, when power is applied, may not consistently begin to execute code under certain voltage and temperature conditions. Applications that power up with either VDD \geq 2.0 V or temperature \geq -20C are not impacted. Entry and exit of low-power modes is not impacted.

Workaround: To avoid this unwanted behavior, one or both of these conditions must be met:

- a) Perform power on reset of the device with a supply voltage (VDD) equal-to or greater-than 2.0 V , or
- b) Perform power on reset of the device at a temperature at or above -20 C.

e5472: SMC: Mode transition VLPR->VLLS0(POR disabled)->RUN, will cause POR & LVD.

Errata type: Errata

Description: The Mode transition of VLPR into VLLS0 (POR disabled) then Exit, with LLWU event, back to to RUN mode will cause a POR and LVD reset instead of the expected WAKEUP exit.

Workaround: The recommendation is to transition from VLPR to RUN before entering VLLS0 with POR disabled mode.

e6060: TSI: Out of Range interrupt shows incorrect behavior with some configurations.

Errata type: Errata

Description: Out of Range interrupt does not work correctly in the following cases:

- 1)When using LPTMR as the trigger source and using LPO clock source, only when counter values of TSI scan are less than 7000.
- 2)When using LPTMR as the trigger source and the clock source is external oscillator(32.768khz), if the prescaler value and number of scan setup is less than 12.

Workaround: Use one of the following two methods for out of range interrupt:

- 1)If using LPTMR with LPO as the trigger source, ensure that the counter value reaches above 10,000 counts by fine-tuning the EXTCHRG, REFCHRG, NSCN and PS registers.
- 2)If using LPTMR with external oscillator as the trigger source, ensure that the NSCN and PS setup gives a value of higher than 12 scans. The number of scans formula is: $(NSCN + 1) * (2^{PS})$.

How to Reach Us:

Home Page:

freescale.com

Web Support:

freescale.com/support

Information in this document is provided solely to enable system and software implementers to use Freescale products. There are no express or implied copyright licenses granted hereunder to design or fabricate any integrated circuits based on the information in this document.

Freescale reserves the right to make changes without further notice to any products herein. Freescale makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does Freescale assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters that may be provided in Freescale data sheets and/or specifications can and do vary in different applications, and actual performance may vary over time. All operating parameters, including "typicals," must be validated for each customer application by customer's technical experts. Freescale does not convey any license under its patent rights nor the rights of others. Freescale sells products pursuant to standard terms and conditions of sale, which can be found at the following address: freescale.com/SalesTermsandConditions.

Freescale, the Freescale logo, AltiVec, C-5, CodeTest, CodeWarrior, ColdFire, ColdFire+, C-Ware, Energy Efficient Solutions logo, Kinetis, mobileGT, PowerQUICC, Processor Expert, QorIQ, Qorivva, StarCore, Symphony, and VortiQa are trademarks of Freescale Semiconductor, Inc., Reg. U.S. Pat. & Tm. Off. Airfast, BeeKit, BeeStack, CoreNet, Flexis, Layerscape, MagniV, MXC, Platform in a Package, QorIQ Qonverge, QUICC Engine, Ready Play, SafeAssure, SafeAssure logo, SMARTMOS, Tower, TurboLink, Vybrid, and Xtrinsic are trademarks of Freescale Semiconductor, Inc. All other product or service names are the property of their respective owners.

© 2013 Freescale Semiconductor, Inc.