G32A1465_1445_1425

Errata Sheet

Version: V 1.0

© Geehy Semiconductor Co., Ltd.

Content

1 Introduction 2
2 Errata List 3
3 SYSMC System Mode Controller 4
3.1 System hangs from asynchronous wakeup during VLPS entry 4
3.2 Invalid data may be read when accessing Flash in VLP mode 4
4 CMU Clock Management Unit 5
4.1 Abnormal SCG system clock switching status 5
4.2 If HSI is disabled, the SCG clock controller may block the reset process 5
5 CAN 6
5.1 Nominal-phase SJW incorrectly applied at the CRC delimiter 6
5.2 CODE field corruption when receive FIFO is used in classic CAN mode 6
6 Revision History 8

1 Introduction

This document describes known limitations of the G32A1465\1445\1425 series products. If your application matches any scenario described in this errata sheet, use the recommended solution. If no solution is provided, avoid using the product in that scenario.

2 Errata List

Table 1 Errata List

Errata List	Introduction	产品版本		
		G32A1465	G32A1445	G32A1425
SYSMC	System hangs from asynchronous wakeup during VLPS entry.	√	√	√
	Invalid data may be read when accessing Flash in VLP mode.	√	√	√
CMU (Clock Management Unit)	Abnormal SCG system clock switching status.	√	√	√
	If HSI is disabled, the SCG clock controller may block the reset process.	√	√	√
CAN	Nominal-phase SJW incorrectly applied at the CRC delimiter.	√	√	√
	CODE field corruption when receive FIFO is used in classic CAN mode.	√	√	√

Note: √ indicates present, × indicates not present.

3 SYSMC System Mode Controller

3.1 System hangs from asynchronous wakeup during VLPS entry

Problem Description

If the bus clock equals the system clock and an asynchronous wakeup (such as an external interrupt) occurs while the system is switching from RUN to VLPS mode or from VLPR to VLPS mode, the system may enter an undefined state and hang. Recovery is possible only through a power reset or a watchdog reset.

Solution

Before entering VLPS mode, ensure that the system clock is at least twice the bus clock.

3.2 Invalid data may be read when accessing Flash in VLP mode

Problem Description

When the system is in VLP mode (VLPR or VLPS), and the system clock, core clock, and bus clock are all above 1 MHz, invalid data may be read if the CPU accesses Flash while the DMA also has a Flash transfer enabled, and both masters access PFlash and DFlash at the same time.

Solution

In VLPR or VLPS mode, software must ensure that all bus masters (CPU and DMA) access only PFlash or only DFlash at any given time. When switching from PFlash-only access to DFlash-only access, let the DMA task currently accessing PFlash finish, jump to an SRAM location, and wait 40 cycles to ensure the ongoing PFlash access is complete before accessing DFlash.

If simultaneous access to both PFlash and DFlash is truly required, run the system with the system clock, core clock, and bus clock all set to 1 MHz in LVP mode.

4 CMU Clock Management Unit

4.1 Abnormal SCG system clock switching status

Problem Description

When the system clock switches from one source to another, the SCG (System Clock Generator) status register SCG_CLKCFG[SYSCLKSSEL] may hold a corrupted value.

Solution

Have software read the same [SYSCLKSSEL] value twice in a row to confirm that the clock switch is complete.

4.2 If HSI is disabled, the SCG clock controller may block the reset process

Problem Description

If HSI is disabled (for example, SCG_HSICSTS[HSIEN]=0), the device may enter a reset state and fail to operate normally when a reset type other than POR occurs.

Solution

Enable HSI by setting SCG_HSICSTS[HSIEN] to 1.

If SCG_HSICSTS[HSIEN] is disabled and a reset lockup occurs, perform a power restart to restore normal operation.

5 CAN

5.1 Nominal-phase SJW incorrectly applied at the CRC delimiter

Problem Description

When receiving a CAN-FD frame with Bit Rate Switch enabled, the synchronization jump width at the CRC delimiter incorrectly uses the arbitration-phase value, whereas the CAN specification requires the data-phase value.

Solution

No action is required. Because the CAN protocol is robust, the receiving node recovers automatically even if an incorrect synchronization jump width is applied.

5.2 CODE field corruption when receive FIFO is used in classic CAN mode

Problem Description

If the CODE field of a receive message buffer is corrupted, the buffer may be deactivated and unable to receive new messages. It may also be misinterpreted as another type of message buffer (for the receive buffer types, see the Message Buffer Structure section of the CAN chapter in the user manual).

The CODE field of a CAN receive message buffer (MB) may be corrupted if the following sequence occurs:

(1) A message is received and transferred into an MB (for example, MBx).

(2) A new message (for example, message1) begins to arrive, and serial message buffer 0 (SMB0) receives message1, which should belong to MBx.

(3) Before SMB0 is moved to MBx, software locks MBx for more than 20 CAN bit times (this duration determines how likely the erratum is to appear). As a result, SMB0 is not transferred to MBx and continues to hold message1.

(4) A later message (for example, message2) is loaded into SMB1 because SMB0 is full, and the CAN hardware evaluates it as belonging to the FIFO.

(5) While message2 is being received, MBx is unlocked. SMB0 is then transferred to MBx, and the CODE field is updated with an incorrect value.

This problem does not occur if the application uses only the Rx FIFO or only dedicated MBs (that is, Rx MBs only or Rx FIFO only). It also does not occur when CAN FD (Flexible Data-rate CAN) is used. In short, it occurs only when the application configures CAN to receive using both the FIFO and dedicated MBs at the same time.

Solution

This defect occurs only when the receive FIFO is enabled. The FIFO is controlled by the FIFOEN bit in the module configuration register (MCFG). If the Rx FIFO is not used, the CODE field will not be corrupted.

The defect also does not occur if the receive buffer lock time is 20 CAN bit times or less.

After the hardware sets the interrupt flag for the corresponding MB (the MBx bit in the IFLG register), the CPU should read (process) the received frame using the following procedure:

(1) Read the control and status word of the mailbox.

(2) Check whether the BUSY bit (CODE[0]) is cleared to confirm that the mailbox is not locked. If this bit is set, repeat step 1.

(3) Read the contents of the mailbox.

(4) Clear the corresponding flag bit in the IFLG register.

(5) Read the free-running timer register (FRTMR) to unlock the mailbox.

To complete this procedure within 20 CAN bit times, run the MB receive handling routine (steps 1 through 5 above) as a critical section, with interrupts disabled beforehand, and ensure it completes within a deterministic number of cycles.

If the MB receive handling routine cannot be guaranteed to complete within 20 CAN bit times, do not combine the Rx FIFO with receive message buffers in classic CAN applications.

6 Revision History

Table 2 Document Revision History

Date	Version	Revision History
2026.7	1.0	● Initial release

Statement

This document is formulated and published by Geehy Semiconductor Co., Ltd. (hereinafter referred to as “Geehy”). The contents in this document are protected by laws and regulations of trademark, copyright and software copyright. Geehy reserves the right to make corrections and modifications to this document at any time. Read this document carefully before using Geehy products. Once you use the Geehy product, it means that you (hereinafter referred to as the “users”) have known and accepted all the contents of this document. Users shall use the Geehy product in accordance with relevant laws and regulations and the requirements of this document.

1. Ownership

This document can only be used in connection with the corresponding chip products or software products provided by Geehy. Without the prior permission of Geehy, no unit or individual may copy, transcribe, modify, edit or disseminate all or part of the contents of this document for any reason or in any form.

The “极海” or “Geehy” words or graphics with “®” or “™” in this document are trademarks of Geehy. Other product or service names displayed on Geehy products are the property of their respective owners.

2. No Intellectual Property License

Geehy owns all rights, ownership and intellectual property rights involved in this document.

Geehy shall not be deemed to grant the license or right of any intellectual property to users explicitly or implicitly due to the sale or distribution of Geehy products or this document.

If any third party’s products, services or intellectual property are involved in this document, it shall not be deemed that Geehy authorizes users to use the aforesaid third party’s products, services or intellectual property. Any information regarding the application of the product, Geehy hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party, unless otherwise agreed in sales order or sales contract.

3. Version Update

Users can obtain the latest document of the corresponding models when ordering Geehy products.

If the contents in this document are inconsistent with Geehy products, the agreement in the sales order or the sales contract shall prevail.

4. Information Reliability

The relevant data in this document are obtained from batch test by Geehy Laboratory or cooperative third-party testing organization. However, clerical errors in correction or errors caused by differences in testing environment may occur inevitably. Therefore, users should understand that Geehy does not bear any responsibility for such errors that may occur in this document. The relevant data in this document are only used to guide users as performance parameter reference and do not constitute Geehy's guarantee for any product performance.

Users shall select appropriate Geehy products according to their own needs, and effectively verify and test the applicability of Geehy products to confirm that Geehy products meet their own needs, corresponding standards, safety or other reliability requirements. If losses are caused to users due to user's failure to fully verify and test Geehy products, Geehy will not bear any responsibility.

5. Legality

USERS SHALL ABIDE BY ALL APPLICABLE LOCAL LAWS AND REGULATIONS WHEN USING THIS DOCUMENT AND THE MATCHING GEEHY PRODUCTS. USERS SHALL UNDERSTAND THAT THE PRODUCTS MAY BE RESTRICTED BY THE EXPORT, RE-EXPORT OR OTHER LAWS OF THE COUNTRIES OF THE PRODUCTS SUPPLIERS, GEEHY, GEEHY DISTRIBUTORS AND USERS. USERS (ON BEHALF OR ITSELF, SUBSIDIARIES AND AFFILIATED ENTERPRISES) SHALL AGREE AND PROMISE TO ABIDE BY ALL APPLICABLE LAWS AND REGULATIONS ON THE EXPORT AND RE-EXPORT OF GEEHY PRODUCTS AND/OR TECHNOLOGIES AND DIRECT PRODUCTS.

6. Disclaimer of Warranty

THIS DOCUMENT IS PROVIDED BY GEEHY "AS IS" AND THERE IS NO WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT PERMITTED BY APPLICABLE LAW.

GEEHY'S PRODUCTS ARE NOT DESIGNED, AUTHORIZED, OR WARRANTED FOR USE AS CRITICAL COMPONENTS IN MILITARY, LIFE-SUPPORT, POLLUTION CONTROL, OR HAZARDOUS SUBSTANCES MANAGEMENT SYSTEMS, NOR WHERE FAILURE COULD RESULT IN INJURY, DEATH, PROPERTY OR ENVIRONMENTAL DAMAGE.

IF THE PRODUCT IS NOT LABELED AS "AUTOMOTIVE GRADE," IT SHOULD NOT BE CONSIDERED SUITABLE FOR AUTOMOTIVE APPLICATIONS. GEEHY ASSUMES NO LIABILITY FOR THE USE BEYOND ITS SPECIFICATIONS OR GUIDELINES.

THE USER SHOULD ENSURE THAT THE APPLICATION OF THE PRODUCTS COMPLIES

WITH ALL RELEVANT STANDARDS, INCLUDING BUT NOT LIMITED TO SAFETY, INFORMATION SECURITY, AND ENVIRONMENTAL REQUIREMENTS. THE USER ASSUMES FULL RESPONSIBILITY FOR THE SELECTION AND USE OF GEEHY PRODUCTS. GEEHY WILL BEAR NO RESPONSIBILITY FOR ANY DISPUTES ARISING FROM THE SUBSEQUENT DESIGN OR USE BY USERS.

7. Limitation of Liability

IN NO EVENT, UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL GEEHY OR ANY OTHER PARTY WHO PROVIDES THE DOCUMENT AND PRODUCTS "AS IS", BE LIABLE FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE DOCUMENT AND PRODUCTS (INCLUDING BUT NOT LIMITED TO LOSSES OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY USERS OR THIRD PARTIES). THIS COVERS POTENTIAL DAMAGES TO PERSONAL SAFETY, PROPERTY, OR THE ENVIRONMENT, FOR WHICH GEEHY WILL NOT BE RESPONSIBLE.

8. Scope of Application

The information in this document replaces the information provided in all previous versions of the document.

© 2026 Geehy Semiconductor Co., Ltd. - All Rights Reserved