TEXAS INSTRUMENTS 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20100910003A
MSP430 Flash Read Error Susceptibility
Information Only
UPDATED 9/30/2010

Dear Customer:

The purpose of this addendum is to UPDATE the Technical Document. Please note that the Technical Document was updated with important information. The Technical Document can be found at listed links in Appendix section at the end of this PCN. All changes and additions have been highlighted in yellow.

This is an informational notification of an issue regarding devices that are currently offered by Texas Instruments. You are receiving this notification because our records indicate you have purchased one or more of the affected products.

The items discussed within this PCN are for your information only. Please see the attached details for more information.

This notification is per Texas Instruments standard process. Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately. Any inquiries should be directed to your local Field Sales Representative.

For questions regarding this notice, inquiries should be directed to your local Field Sales Representative (FSE), your Field Application Engineer (FAE) or local Business Development Manager (BDM) or the PCN Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services
Phone: +1(214) 480-6037
Fax: +1(214) 480-6659

PCN Number:	20100910003A	**PCN Date:**	09/30/2010
Title:	MSP430F54xxA and MSP430F55xx Device Derivatives: Flash Read Error Susceptibility		
Customer Contact:	PCN Manager	**Phone:** +1(214) 480-6037	**Dept:** Quality Services
Proposed 1st Ship Date:		**Estimated Sample Availability:**	
Change Type:			

☐	Assembly Site	☐	Assembly Process	☐	Assembly Materials
☒	Design	☐	Electrical Specification	☐	Mechanical Specification
☐	Test Site	☐	Packing/Shipping/Labeling	☐	Test Process
☐	Wafer Bump Site	☐	Wafer Bump Material	☐	Wafer Bump Process
☐	Wafer Fab Site	☐	Wafer Fab Materials	☐	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments strives to provide its customers with the highest quality products and to remain in compliance with our strict quality standards. This is formal notification that we have identified a Flash Read error susceptibility in the MSP430F54xxA and MSP430F55xx device derivatives listed in the Affected Product section (up to and including silicon Revision D). The root cause of the issue is understood and implementation of a fix within the Flash array has been completed. Devices incorporating this fix are currently in process. In the meantime, we have stopped shipping the Affected Products and are initiating a voluntary Selected Inventory Exchange Process (SIEP). If you determine that this issue negatively affects your application or if you would like to return any affected material from your stock, please work with TI customer service on an RMR for this material. If you determine, after reviewing the attached Technical Documents (see Appendix A and B), that the application for which you are using these devices is not likely to be affected by this issue, we are implementing a waiver option to enable you to continue receiving affected devices until new material becomes available.

Texas Instruments appreciates your business and apologizes for any inconvenience this may cause. We stand ready to work with you to minimize any problems and address any concerns that you may have. Feel free to contact us at the contacts listed below, or your field sales representative, if you need more information.

Section Content

- Flash read error susceptibility description
- Customer Options
- Texas Instruments response and recommendation
- Device Fix

Flash read error susceptibility description:

A Flash Read may return invalid data under certain conditions. This occurs even though the content of the Flash remains correct. The Flash Read error susceptibility is caused by cross-talk influences and is modulated by certain application conditions such as read mode setting, idle time between reads, voltage, and temperature. Normal lot-to-lot process variation can also influence susceptibility.

The Flash read error susceptibility is described in more detail in Appendix A and B.
NOTE: These documents are available at TI.com. Search by literature number or follow the direct link below.
Appendix A: MSP430F54xxA Device Derivatives. UPDATED;#SLAA470 www.ti.com/lit/pdf/slaa470
Appendix B: MSP430F55xx Device Derivatives. UPDATED;#SLAA471 www.ti.com/lit/pdf/slaa471

Customer options:

Option 1:

Line/Field Risk is deemed unacceptable by customer or customer desires to return affected devices and receive fixed replacement devices.

- Return existing inventory
- Work with customer service to RMR this material
- Selected Inventory Exchange Process (SIEP) with new material available in December 2010

Option 2:

Customer determines that its application is not likely to be negatively affected by this issue or that Line/Field Risk is acceptable. (see Note 1).

- Retain current inventory
- Submit waiver application to continue receiving current material until new material is available
- Current material will be discontinued once new material becomes available

Note 1: Texas Instruments strongly recommends that affected devices not be used for any safety-critical application in which a failure of the device could result in an injury to persons or property.

Texas Instruments response and recommendation:

Texas Instruments has stopped production and shipment of all current MSP430F54xxA and MSP430F55xx device derivatives, which are susceptible to Flash Read error. Texas Instruments recommends that you discontinue use of any material that you have in stock and that you return that material to Texas Instruments. Texas Instruments will provide fixed replacement devices, when available. However, if you determine, after reviewing the attached Technical Document (see Appendix A and/or B), that the application for which you are using these devices is not likely to be affected by this issue, Texas Instruments is willing to work with you to supply affected devices until new material becomes available. Texas Instruments strongly recommends that affected devices not be used for any safety-critical application in which a failure of the device could result in an injury to persons or property.

Device Fix:

Texas Instruments is in the process of implementing a fix to remove this issue. The change is to eliminate device susceptibility to Flash Read error; it does not change designed device functionality or require datasheet changes. The estimated time line is as follows:

Fix implementation and design validation: September 2010
Production material available: December 2010

Product Affected:

Table 1. MSP430F54xxA device derivatives. For all listed part numbers, affected silicon revisions are up to and including Revision "D."

MSP430F5418AIPN	MSP430F5435AIPNR	MSP430F5438ACY	MSP430BT5190IPZ
MSP430F5418AIPNR	MSP430F5436AIPZ	MSP430F5438ACYS	MSP430BT5190IPZR
MSP430F5419AIPZ	MSP430F5436AIPZR	MSP430F5438AIPZ	MSP430BT5190IZQWR
MSP430F5419AIPZR	MSP430F5436AIZQW	MSP430F5438AIPZR	MSP430BT5190IZQWT
MSP430F5419AIZQW	MSP430F5436AIZQWR	MSP430F5438AIZQW	
MSP430F5419AIZQWR	MSP430F5436AIZQWT	MSP430F5438AIZQWR	
MSP430F5419AIZQWT	MSP430F5437AIPN	MSP430F5438AIZQWT	
MSP430F5435AIPN	MSP430F5437AIPNR	MSP430F5438AGACYS	

Table 2. MSP430F55xx device derivatives. For all listed part numbers, affected silicon revisions are up to and including Revision "D."

MSP430F5513IRGCR	MSP430F5517IPN	MSP430F5524IRGCR	MSP430F5527IPN
MSP430F5513IRGCT	MSP430F5517IPNR	MSP430F5524IRGCT	MSP430F5527IPNR
MSP430F5513IZQE	MSP430F5519IPN	MSP430F5524IZQE	MSP430F5528IRGC
MSP430F5513IZQER	MSP430F5519IPNR	MSP430F5524IZQER	MSP430F5528IRGCR
MSP430F5514IRGC	MSP430F5521IPN	MSP430F5525IPN	MSP430F5528IRGCT
MSP430F5514IRGCR	MSP430F5521IPNR	MSP430F5525IPNR	MSP430F5528IZQE
MSP430F5514IRGCT	MSP430F5522IRGCR	MSP430F5526IRGC	MSP430F5528IZQER
MSP430F5514IZQE	MSP430F5522IRGCT	MSP430F5526IRGCR	MSP430F5529CY
MSP430F5514IZQER	MSP430F5522IZQE	MSP430F5526IRGCT	MSP430F5529IPN
MSP430F5515IPN	MSP430F5522IZQER	MSP430F5526IZQE	MSP430F5529IPNR
MSP430F5515IPNR	MSP430F5524IRGC	MSP430F5526IZQER	

NOTE: The MSP430F550x and MSP430F5510 devices are NOT affected.

For questions regarding this notice, inquiries should be directed to your local Field Sales Representative (FSE), your Field Application Engineer (FAE) or local Business Development Manager (BDM) or to the PCN contacts given below.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
Japan	PCNJapanContact@list.ti.com

Appendix A

MSP430F54xxA Device Derivatives
Technical Assessment: Flash Read Error & Susceptibility

Note: The Technical Document was updated with additional important information. The Technical Document can be found at the following location:

SLAA470 www.ti.com/lit/pdf/slaa470

Appendix B

MSP430F55xx Device Derivatives
Technical Assessment: Flash Read Error & Susceptibility

Note: The Technical Document was updated with additional important information. The Technical Document can be found at the following location:

SLAA471 www.ti.com/lit/pdf/slaa471