



PRODUCT BULLETIN

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ISSUE DATE: 09-Oct-2014
NOTIFICATION: 16478
TITLE: Erratum "ERR008358" eSDHC Data Timeout Error - MPC837x,MPC8569,MPC8536,P2020 and P4080 Rev.B
EFFECTIVE DATE: 10-Oct-2014

DEVICE(S)

MPN
KSCU8378CZQAGDA
MPC8377CVRAGDA
MPC8377CVRAJF
MPC8377CVRAJFA
MPC8377CVRALG
MPC8377CVRALGA
MPC8377CVRANGA
MPC8377ECVRAGD
MPC8377ECVRAGDA
MPC8377ECVRAJFA
MPC8377ECVRALG
MPC8377ECVRALGA
MPC8377ECVRANG
MPC8377ECVRANGA
MPC8377EVRAGD
MPC8377EVRAGDA

MPC8377EVRAJF
MPC8377EVRAJFA
MPC8377EVRALG
MPC8377EVRALGA
MPC8377EVRANG
MPC8377EVRANGA
MPC8377VRAGD
MPC8377VRAGDA
MPC8377VRAJF
MPC8377VRAJFA
MPC8377VRALG
MPC8377VRALGA
MPC8377VRANG
MPC8377VRANGA
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MPC8378CVRAGDA
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MPC8378ECVRAGDA
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MPC8378VRAGDA
MPC8378VRAJF
MPC8378VRAJFA
MPC8378VRALG
MPC8378VRALGA

MPC8378VRANG
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MPC8379CVRALG
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MPC8535AVTANGA
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MPC8535BVTANGA
MPC8535BVTATHA
MPC8535BVTATLA
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MPC8569VTANKGB
MPC8569VTAUNLB
P2010NSE2HFC
P2010NSE2HHC
P2010NSE2KFC
P2010NSE2KHC
P2010NSE2MFC
P2010NSE2MHC

P2010NSE2NHC
P2010NSN2HFC
P2010NSN2HHC
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P4080NSE1NNB
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P4080NSN1NNB
P4080NSN1PNB
P4080NXE1MMB
P4080NXN1MMB
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PPC8536BVJAQGA
PPC8536BVJATHA
PPC8536BVJAULA
PPC8536BVJAVLA
PPC8536EBVJAQGA
PPC8536EBVJATHA
PPC8536EBVJAULA
PPC8536EBVJAVLA
SC411241C
SCWP2020C

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AFFECTED CHANGE CATEGORIES

- ERRATA

DESCRIPTION OF CHANGE

Errata Number ERR008358 : eSDHC Data timeout error may occur earlier than expected

The data timeout counter value loaded into the timeout counter is less than expected and can cause early timeout error in case of eSDHC data transactions. Below table shows the Expected vs Actual Timeout period for different values of SYSCTL[DTOCV] : DTOCV

Expected Timeout Actual Timeout Counter Value 0x0

2 ¹³ SD_CLK periods	2 ¹³ SD_CLK periods 0x1
2 ¹⁴ SD_CLK periods	2 ¹⁴ SD_CLK periods 0x2
2 ¹⁵ SD_CLK periods	2 ¹⁵ SD_CLK periods 0x3
2 ¹⁶ SD_CLK periods	2 ¹⁶ SD_CLK periods 0x4
2 ¹⁷ SD_CLK periods	2 ¹³ SD_CLK periods 0x5
2 ¹⁸ SD_CLK periods	(2 ¹⁷ – 2 ¹⁶ + 2 ¹³) SD_CLK periods 0x6
2 ¹⁹ SD_CLK periods	(2 ¹⁸ – 2 ¹⁶ + 2 ¹³) SD_CLK periods 0x7
2 ²⁰ SD_CLK periods	(2 ¹⁹ – 2 ¹⁶ + 2 ¹³) SD_CLK periods 0x8
2 ²¹ SD_CLK periods	2 ¹³ SD_CLK periods 0x9
2 ²² SD_CLK periods	(2 ²¹ – 2 ²⁰ + 2 ¹³) SD_CLK periods 0xA
2 ²³ SD_CLK periods	(2 ²² – 2 ²⁰ + 2 ¹³) SD_CLK periods 0xB
2 ²⁴ SD_CLK periods	(2 ²³ – 2 ²⁰ + 2 ¹³) SD_CLK periods 0xC
2 ²⁵ SD_CLK periods	2 ¹³ SD_CLK periods 0xD
2 ²⁶ SD_CLK periods	(2 ²⁵ – 2 ²⁴ + 2 ¹³) SD_CLK periods 0xE
2 ²⁷ SD_CLK periods	(2 ²⁶ – 2 ²⁴ + 2 ¹³) SD_CLK periods 0xF
Reserved	(2 ²⁷ – 2 ²⁴ + 2 ¹³) SD_CLK periods

Impact: For data transactions, it may cause early timeout error in case of eSDHC data transactions.

Workaround: Use higher value of SYSCTL[DTOCV] (including 0xF) to avoid early data timeout error.

REASON FOR CHANGE

The data timeout counter value provides wrong value

ANTICIPATED IMPACT OF PRODUCT CHANGE(FORM, FIT, FUNCTION, OR RELIABILITY)

No change to fit, form, function and reliability

NOTE:

THE CHANGE(S) SPECIFIED IN THIS NOTIFICATION WILL BE IMPLEMENTED ON THE EFFECTIVE DATE LISTED ABOVE. To request further data or inquire about the notification, please enter a [Service Request](#)
For sample inquiries - please go to www.freescale.com

QUAL DATA AVAILABILITY DATE: 01-Nov-2014

QUALIFICATION STATUS: N/A

QUALIFICATION PLAN:

N/A

RELIABILITY DATA SUMMARY:

N/A

ELECTRICAL CHARACTERISTIC SUMMARY:

N/A

CHANGED PART IDENTIFICATION:

N/A

ATTACHMENT(S):

External attachment(s) for this notification can be viewed at:
[16478_Errata_ERR008358_eSDHC_Data_Timeout.pdf](#)
