



# Product Change Notification

## 108060 - 00

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Should you have any issues with the timeline or content of this change, please contact the Intel Representative(s) for your geographic location listed below. No response from customers will be deemed as acceptance of the change and the change will be implemented pursuant to the key milestones set forth in this attached PCN.

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# Product Change Notification

**Change Notification #:** 108060 - 00  
**Change Title:** Pre-Alert PCN: Intel® Embedded Flash Memory (J3 v. D), 130nm to 65nm lithography change with specification change, PCN 108060-00, Product Design, Form Fit Function  
**Date of Publication:** November 12, 2007

## Key Characteristics of the Change:

Product Design

## Forecasted Key Milestones:

<b>Approximate Date of Samples Availability:</b>	Second half of 2008
<b>Approximate First Date of Production Availability:</b>	Second half of 2008

## Description of Change to the Customer:

Intel intends to change the lithography on Intel® Embedded Flash Memory (J3 v. D) product family from 130nm to 65nm. Customers should be aware of some AC timing changes in the 65nm product as compared to the existing 130nm product. This notification applies to all densities of the Intel® Embedded Flash Memory (J3 v. D) product family and is intended to help pre-enable future 65nm designs.

This is a pre-notification and 65nm availability dates are subject to change.

## Customer Impact of Change and Recommended Action:

There may be impact to some customer applications due to expected changes to AC timing characteristics (refer to Table 1).

Intel will be introducing new part numbers and ordering codes for the 65nm lithography products so customers can differentiate the 130nm from the 65nm products. The equivalent 65nm part numbers and ordering codes will be provided in a future update of this PCN.

**Recommended action:** It is recommended that customers review the AC timing changes as described in this PCN. Customers should also carefully review the technical documentation listed below.

- o Customers working on new designs are advised to take into account the planned changes in AC timing on 65nm. For any issues or concerns, customers should contact their local Intel representative.

- o Customers with current designs should assess any impact to their applications when converting to 65nm product. It is suggested that customers begin to incorporate any changes required to accommodate 65nm AC timing in their designs. For any issues or concerns, customers should contact their local Intel representative.
- o Information regarding additional features on 65nm products is available under NDA. Contact your local Intel representative for details.

**Requested action:** Customers are requested to provide feedback directly to Intel Flash Products Group by filling out a brief online survey.

This information will be used to provide targeted technical documentation and support for our customers.

Survey link:

<http://www.intelcomms.com/se.ashx?s=24C93BD24E01B1C2>

Further detailed technical and ordering information will be available upon publication of the 65nm version of Intel® Embedded Flash Memory(J3 v. D) datasheets.

For current technical documentation, please refer to the following documents:

Intel® Embedded Flash Memory (J3 v. D) Datasheet:

<http://www.intel.com/design/flcomp/datashts/316577.htm>

**Table 1: 130nm to 65nm Specification Differences**

Feature	65nm Specification Differences	Impact/Recommendation
Read Timing	32Mb-128Mb Easy BGA $t_{ACC}$ goes from 75ns to 95ns	Customers need to evaluate timings to determine impact to their designs on a case-by-case basis.
	32Mb-128Mb TSOP $t_{ACC}$ goes from 75ns to 105ns	
	256Mb TSOP $t_{ACC}$ goes from 95ns to 105ns. 256Mb Easy BGA $t_{ACC}$ remains unchanged at 95ns	
Power Up Timing	Power up timing goes from 60 $\mu$ s to 300 $\mu$ s	Customer needs to evaluate system power-up timing on a case by case basis.
Byte Write	Word programming changes from 40 $\mu$ s typ/175 $\mu$ s max to 125 $\mu$ s typ/150 $\mu$ s max	Customers should evaluate impact to their designs.

**Products Affected / Intel Ordering Codes:**

<b>Description</b>	<b>Part Number</b>	<b>S-Spec</b>	<b>MM#</b>
32Mb TSOP, Lead-free	JS28F320J3D75	872337	872337
	JS28F320J3D75	S B48	872339
	JS28F320J3D75	S B93	872341
	JS28F320J3D75	S L8YK	876989
	JS28F320J3D75	S L8YL	876990
	JS28F320J3D75	S L8YM	877042
32Mb TSOP, Leaded	TE28F320J3D75	872335	872335
	TE28F320J3D75	S B48	872334
	TE28F320J3D75	S B93	872331
	TE28F320J3D75	S L8YF	876988
32Mb Easy BGA, Lead-free	PC28F320J3D75	876051	876051
	PC28F320J3D75	S B48	876043
	PC28F320J3D75	S B93	872343
	PC28F320J3D75	S L8QX	872830
	PC28F320J3D75	S L8QY	872833
	PC28F320J3D75	S L8ZS	877053
32Mb Easy BGA, Leaded	RC28F320J3D75	876045	876045
	RC28F320J3D75	S B48	876044
	RC28F320J3D75	S B93	876023
	RC28F320J3D75	S L8QS	872859
	RC28F320J3D75	S L8ZR	877047
64Mb TSOP, Lead-free	JS28F640J3D75	872336	872336
	JS28F640J3D75	S B48	872338
	JS28F640J3D75	S B93	872340
	JS28F640J3D75	S L8YN	876721
	JS28F640J3D75	S L8YP	876722
	JS28F640J3D75	S L8YQ	876760
64Mb TSOP, Leaded	TE28F640J3D75	872333	872333
	TE28F640J3D75	S B48	872332
	TE28F640J3D75	S B93	872330
	TE28F640J3D75	S L8YJ	876761
64Mb Easy BGA, Lead-free	PC28F640J3D75	875776	875776
	PC28F640J3D75	S B48	876042
	PC28F640J3D75	S B93	875777
	PC28F640J3D75	S L8QV	872857
	PC28F640J3D75	S L8QW	872860
	PC28F640J3D75	S L8ZT	877116
64Mb Easy BGA, Leaded	RC28F640J3D75	875775	875775
	RC28F640J3D75	S B48	872380
	RC28F640J3D75	S L8ZQ	877050
128Mb TSOP, Lead-free	JS28F128J3D75	872766	872766
	JS28F128J3D75	S B48	872767
	JS28F128J3D75	S B93	872776
	JS28F128J3D75	S L9SU	884474
128Mb TSOP, Leaded	TE28F128J3D75	872764	872764
	TE28F128J3D75	Q HZ9	886770

Description	Part Number	S-Spec	MM#
	TE28F128J3D75	S B48	872762
	TE28F128J3D75	S B93	872760
	TE28F128J3D75	S L9AL	886420
128Mb Easy BGA, Lead-free	PC28F128J3D75	872865	872865
	PC28F128J3D75	S B48	872768
	PC28F128J3D75	S B93	872775
	PC28F128J3D75	S L8QT	872834
	PC28F128J3D75	S L8QU	872831
128Mb Easy BGA, Leaded	RC28F128J3D75	872765	872765
	RC28F128J3D75	S B48	872763
	RC28F128J3D75	S B93	872761
	RC28F128J3D75	S L8QN	872828
256Mb TSOP, Leaded	TE28F256J3D95	S LA2S	887793
256Mb Easy BGA, Leaded	RC28F256J3D95	Q IP4	888108
	RC28F256J3D95	S LA2T	887794
128/128Mb Easy BGA, Leaded	RC48F3300J0Z00S877434		877434
128/128Mb Easy BGA, Lead-free	PC48F3300J0Z00S877435		877435

### Reference Documents / Attachments:

Document:

Location #:

### PCN Revision History:

Date of Revision:

Revision Number:

Reason:

October 31, 2007

00

Originally Published PCN