



Product Change Notification

107952 - 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 #: 107952 - 00
Change Title: Pre-Alert PCN: Intel StrataFlash® Embedded Memory (P30/P33), 130nm to 65nm lithography change with specification change, PCN 107952-00, Product Design, Form, Fit, Function
Date of Publication: November 12, 2007

Key Characteristics of the Change:

Product Design

Forecasted Key Milestones:

Approximate First Date of Samples Availability:	Second half of 2008
Approximate First Date of Production Availability:	Second half of 2008

Description of Change to the Customer:

Intel intends to change the lithography on Intel StrataFlash® Embedded Memory (P30/P33) product family from 130nm to 65nm. Customer 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 StrataFlash® Embedded Memory (P30/P33) 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 and 2).

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 timings 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 Intel StrataFlash® Embedded Memory (P30/P33) datasheets.

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

Intel StrataFlash® Embedded Memory (P33) Datasheet:

<http://www.intel.com/design/flcomp/datashts/314749.htm>

Intel StrataFlash® Embedded Memory (P30) Family Datasheet:

<http://www.intel.com/design/flcomp/datashts/306666.htm>

Table 1: P33 130nm to 65nm Specification Differences

Feature	65nm Specification Differences	Impact/Recommendation
Read Timing	Easy BGA t_{ACC} goes from 85ns to 95ns	Customers need to evaluate timings to determine impact to their designs on a case-by-case basis
	64-128Mb TSOP t_{ACC} goes from 85ns to 105ns	
	256Mb-512Mb TSOP t_{ACC} goes from 95ns to 105ns	
Power Up Timing	Power up timing goes from 90 μ s to 300 μ s	Customer needs to evaluate system power-up timing on a case by case basis.
Word Program	Word program goes from 90 μ s Typ/200 μ s Max to 125 μ s Typ/150 μ s Max	Customers should evaluate impact to their designs

Table 2: P30 130nm to 65nm Specification Differences

Feature	65nm Specification Differences	Impact/Recommendation
Read Timing	Easy BGA and QUAD+ t _{ACC} goes from 85ns to 100ns	Customers need to evaluate timings to determine impact to their designs on a case-by-case basis
	64-128Mb TSOP t _{ACC} goes from 85ns to 110ns	
	256Mb-512Mb TSOP t _{ACC} goes from 95ns to 110ns	
Power Up Timing	Power up timing goes from 60μs to 300μs	Customer needs to evaluate system power-up timing on a case by case basis.
Word Program	Word program goes from 90μs Typ/ 200μs Max to 125μs Typ/150μs Max	Customers should evaluate impact to their designs

**Products Affected / Intel Ordering Codes:
Intel StrataFlash® Embedded Memory (P30):**

Description	Part Number	S-Spec	MM#
64Mb TSOP, Lead-free	JS28F640P30B85	873892	873892
	JS28F640P30B85	S B93	873895
	JS28F640P30T85	873897	873897
	JS28F640P30T85	S B93	873893
64Mb TSOP, Leaded	TE28F640P30B85	S B93	873904
	TE28F640P30T85	873905	873905
	TE28F640P30T85	S B48	873907
64Mb Easy BGA, Lead-free	PC28F640P30B85	873919	873919
	PC28F640P30B85	S B48	873912
	PC28F640P30B85	S L8XB	876094
	PC28F640P30B85	S L9EA	881954
	PC28F640P30B85	S L9LZ	883211
	PC28F640P30T85	873913	873913
	PC28F640P30T85	S B48	873976
	PC28F640P30T85	S B93	873911
	PC28F640P30T85	S B93	873911
64Mb Easy BGA, Leaded	RC28F640P30B85	873977	873977
	RC28F640P30B85	S B48	873948
	RC28F640P30B85	S B93	873941
	RC28F640P30T85	873937	873937
	RC28F640P30T85	S B93	873923
64Mb QUAD+, Lead-free	PF48F2000P0ZBQ0	874417	874417
	PF48F2000P0ZBQ0	S B93	874413
	PF48F2000P0ZTQ0	874412	874412
128Mb TSOP, Lead-free	JS28F128P30B85	873810	873810
	JS28F128P30B85	S B93	873812
	JS28F128P30T85	873824	873824
	JS28F128P30T85	S B93	873813
128Mb TSOP, Leaded	TE28F128P30B85	873825	873825
	TE28F128P30T85	873866	873866
128Mb Easy BGA, Lead-free	PC28F128P30B85	873877	873877

Description	Part Number	S-Spec	MM#
	PC28F128P30B85	S B93	873873
	PC28F128P30B85	S L9E8	881952
	PC28F128P30B85	S L9M5	883214
	PC28F128P30B85	S L9M6	883232
	PC28F128P30B85	S L9YQ	887046
	PC28F128P30T85	873880	873880
	PC28F128P30T85	S B48	873881
	PC28F128P30T85	S B93	873886
	PC28F128P30T85	S L9E9	881953
128Mb Easy BGA, Leaded	RC28F128P30B85	873868	873868
	RC28F128P30B85	S B93	873871
	RC28F128P30T85	873867	873867
	RC28F128P30T85	S B93	873863
	RC28F128P30T85	S L9E6	881951
128Mb QUAD+, Lead-free	PF48F3000P0ZBQ0	874291	874291
	PF48F3000P0ZBQ0	S B93	874214
	PF48F3000P0ZTQ0	874294	874294
	PF48F3000P0ZTQ0	S B93	874215
128Mb QUAD+, Leaded	RD48F3000P0ZBQ0	874381	874381
	RD48F3000P0ZTQ0	874297	874297
	RD48F3000P0ZTQ0	S B93	874246
256Mb TSOP, Lead-free	JS28F256P30B95	877823	877823
	JS28F256P30B95	S B48	877821
	JS28F256P30B95	S B93	877820
	JS28F256P30T95	877825	877825
	JS28F256P30T95	S B48	877824
	JS28F256P30T95	S B93	877822
256Mb TSOP, Leaded	TE28F256P30B95	877816	877816
	TE28F256P30B95	S B48	877815
	TE28F256P30B95	S B93	877803
	TE28F256P30T95	877807	877807
256Mb Easy BGA, Lead-free	PC28F256P30B85	873888	873888
	PC28F256P30B85	S B48	873891
	PC28F256P30B85	S B93	873887
	PC28F256P30B85	S L9C4	880699
	PC28F256P30B85	S L9E2	881947
	PC28F256P30B85	S L9E4	881948
	PC28F256P30B85	S LA9E	890210
	PC28F256P30T85	873900	873900
	PC28F256P30T85	S B48	873898
	PC28F256P30T85	S B93	873890
	PC28F256P30T85	S L9E3	881946
256Mb Easy BGA, Leaded	RC28F256P30B85	873883	873883
	RC28F256P30B85	S B93	873876
	RC28F256P30B85	S L8X7	876079
	RC28F256P30B85	S L9DY	881729
	RC28F256P30T85	873882	873882
	RC28F256P30T85	S B48	873878

Description	Part Number	S-Spec	MM#
256Mb QUAD+, Lead-free	PF48F4000P0ZBQ0	874085	874085
	PF48F4000P0ZBQ0	S B93	874071
256Mb QUAD+, Lead-free	PF48F4000P0ZTQ0	874090	874090
	PF48F4000P0ZTQ0	S B93	874088
256Mb QUAD+, Leaded	RD48F4000P0ZBQ0	874087	874087
	RD48F4000P0ZBQ0	S B93	874072
512Mb TSOP, Lead-free	JS48F4400P0VB00	Q GU5	882320
	JS48F4400P0VB00	S B93	883814
	JS48F4400P0VB00	S L9Q3	883828
512Mb TSOP, Leaded	TE48F4400P0VB00	S B93	883812
	TE48F4400P0VB00	S L9PZ	883826
512Mb Easy BGA, Lead-free	PC48F4400P0VB00	874457	874457
	PC48F4400P0VB00	S B48	874456
	PC48F4400P0VB00	S B93	874427
	PC48F4400P0VT00	874460	874460
	PC48F4400P0VT00	S B93	874458
512Mb Easy BGA, Leaded	RC48F4400P0VB00	874452	874452
	RC48F4400P0VB00	S B93	874426
	RC48F4400P0VT00	874454	874454
512Mb QUAD+, Lead-free	PF48F4400P0VBQ0	874561	874561
	PF48F4400P0VBQ0	S B48	874566
	PF48F4400P0VBQ0	S B93	874558
	PF48F4400P0VTQ0	874563	874563
512Mb QUAD+, Leaded	RD48F4400P0VBQ0	874461	874461
	RD48F4400P0VTQ0	874502	874502

**Products Affected / Intel Ordering Codes:
Intel StrataFlash® Embedded Memory (P33):**

Description	Part Number	S-Spec	MM#
64Mb TSOP, Lead-free	JS28F640P33B85	888231	888231
	JS28F640P33B85	Q IF5	887891
	JS28F640P33B85	Q IF6	887892
	JS28F640P33T85	888232	888232
	JS28F640P33T85	Q IF3	887889
	JS28F640P33T85	Q IF4	887890
64Mb TSOP, Leaded	TE28F640P33B85	888137	888137
	TE28F640P33B85	Q IF1	887856
	TE28F640P33T85	888162	888162
	TE28F640P33T85	Q IE9	887854
64Mb Easy BGA, Lead-free	PC28F640P33B85	888226	888226
	PC28F640P33B85	Q IG3	887684
	PC28F640P33B85	Q IG4	887687
	PC28F640P33B85	Q IG5	887691
	PC28F640P33B85	S LA8S	890075
	PC28F640P33B85	S LA8T	890076

Description	Part Number	S-Spec	MM#
	PC28F640P33T85	888227	888227
	PC28F640P33T85	Q IG1	887423
	PC28F640P33T85	Q IG2	887683
	PC28F640P33T85	Q IT2	888736
64Mb Easy BGA, Leaded	RC28F640P33B85	888237	888237
	RC28F640P33B85	Q IG0	887682
	RC28F640P33B85	Q IK8	887686
	RC28F640P33T85	888230	888230
	RC28F640P33T85	Q IF7	887422
	RC28F640P33T85	Q IF8	887679
64Mb QUAD+, Lead-free	PF48F2000P0XBQ0	890981	890981
	PF48F2000P0XBQ0	Q JA6	890251
	PF48F2000P0XTQ0	Q JA7	890252
64Mb QUAD+, Leaded	RD48F2000P0XBQ0	Q JA8	890253
	RD48F2000P0XTQ0	Q JA9	890254
128Mb TSOP, Lead-free	JS28F128P33B85	888018	888018
	JS28F128P33B85	Q ID6	887848
	JS28F128P33B85	Q ID7	887849
	JS28F128P33T85	888019	888019
	JS28F128P33T85	Q ID4	887846
	JS28F128P33T85	Q ID5	887847
128Mb TSOP, Leaded	TE28F128P33B85	888068	888068
	TE28F128P33B85	Q ID2	887844
	TE28F128P33T85	888069	888069
	TE28F128P33T85	Q ID0	887842
128Mb Easy BGA, Lead-free	PC28F128P33B85	888064	888064
	PC28F128P33B85	Q IE4	887518
	PC28F128P33B85	Q IE6	887520
	PC28F128P33B85	Q IV6	888814
	PC28F128P33B85	Q IV7	888813
	PC28F128P33B85	S LA37	888020
	PC28F128P33T85	888065	888065
	PC28F128P33T85	Q IE2	887417
	PC28F128P33T85	Q IE3	887517
	PC28F128P33T85	Q IU3	888752
	PC28F128P33T85	Q IV4	888811
128Mb Easy BGA, Leaded	RC28F128P33B85	888066	888066
	RC28F128P33B85	Q IE0	887514
	RC28F128P33B85	Q IV2	888809
	RC28F128P33T85	888067	888067
	RC28F128P33T85	Q ID8	887416
	RC28F128P33T85	Q IV0	888807
128Mb QUAD+, Lead-free	PF48F3000P0XBQ0	Q IY8	889867
	PF48F3000P0XTQ0	Q IY9	890059
128Mb QUAD+, Leaded	RD48F3000P0XBQ0	Q IY6	889866
	RD48F3000P0XTQ0	Q IY7	889901
256Mb TSOP, Lead-free	JS28F256P33B95	884143	884143
	JS28F256P33B95	Q GP5	879309

Description	Part Number	S-Spec	MM#
	JS28F256P33B95	Q HX2	886324
	JS28F256P33B95	S B93	884172
	JS28F256P33T95	883593	883593
	JS28F256P33T95	Q GP4	879303
	JS28F256P33T95	Q HU5	886443
	JS28F256P33T95	S B93	884173
256Mb TSOP, Leaded	TE28F256P33B95	884142	884142
	TE28F256P33T95	883590	883590
	TE28F256P33T95	Q GP6	879311
256Mb Easy BGA, Lead-free	PC28F256P33B85	884145	884145
	PC28F256P33B85	Q GQ1	879317
	PC28F256P33B85	Q HC2	883546
	PC28F256P33B85	Q HX6	886326
	PC28F256P33B85	Q IA3	886854
	PC28F256P33B85	S L9QE	883831
	PC28F256P33B85	S L9R6	884123
	PC28F256P33B85	S LA8F	889994
	PC28F256P33T85	883595	883595
	PC28F256P33T85	Q GQ0	879316
	PC28F256P33T85	Q HC1	883544
	PC28F256P33T85	Q HX5	886445
	PC28F256P33T85	S B93	884174
256Mb Easy BGA, Leaded	RC28F256P33B85	884144	884144
	RC28F256P33B85	Q GP9	879315
	RC28F256P33B85	Q HX4	886325
	RC28F256P33T85	883591	883591
	RC28F256P33T85	Q GP8	879314
	RC28F256P33T85	Q HX3	886444
	RC28F256P33T85	S B93	881669
256Mb QUAD+, Lead-free	PF48F4000P0XBQ0	Q IW3	888848
	PF48F4000P0XTQ0	Q IW2	888847
256Mb QUAD+, Leaded	RD48F4000P0XBQ0	Q IW1	888846
	RD48F4000P0XTQ0	Q IW0	888845
512Mb TSOP, Lead-free	JS48F4400P0TB00	887798	887798
	JS48F4400P0TB00	Q IQ2	888184
512Mb TSOP, Leaded	TE48F4400P0TB00	887797	887797
	TE48F4400P0TB00	Q IQ1	888183
512Mb Easy BGA, Lead-free	PC48F4400P0TB00	885967	885967
	PC48F4400P0TB00	Q HZ7	886760
	PC48F4400P0TB00	Q IC7	887272
	PC48F4400P0TB00	S LAFB	891111
512Mb Easy BGA, Leaded	RC48F4400P0TB00	885960	885960
	RC48F4400P0TB00	Q IC6	887270
512Mb QUAD+, Lead-free	PF48F4400P0TBQ0	Q IR4	888328
	PF48F4400P0TBQ0	Q IV9	888844
512Mb QUAD+, Leaded	RD48F4400P0TBQ0	Q IV8	888843

Reference Documents / Attachments:

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Location #:

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00

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