Product Change Notification

Change Notification #:	**116410 - 02**
Change Title:	**Intel® FH82B360 Platform Controller Hub, Intel® FH82C242 Platform Controller Hub, Intel® FH82C246 Platform Controller Hub, Intel® FH82CM246 Platform Controller Hub, Intel® FH82H310 Platform Controller Hub, Intel® FH82H310 Platform Controller Hub, Intel® FH82H370 Platform Controller Hub, Intel® FH82HM370 Platform Controller Hub, Intel® FH82Q370 Platform Controller Hub, Intel® FH82QM370 Platform Controller Hub, and Intel® FH82Z390 Platform Controller Hub, PCN 116410-02, Product Design, Packages will exceed JEDEC high temperature coplanarity spec. Reason for Revision: Extending Date Customer Must be Ready to Receive Post-Conversion Material milestone.**
Date of Publication:	**September 27, 2018**

Key Characteristics of the Change:

Product Design

Forecasted Key Milestones:

Date of Samples Availability:	August 8, 2018
Date of Qualification Data Availability:	August 8, 2018
Date Customer Must be Ready to Receive Post-Conversion Material:	**November 26, 2018**

Description of Change to the Customer:

Reason for Revision: Extending Date Customer Must be Ready to Receive Post-Conversion Material milestone.

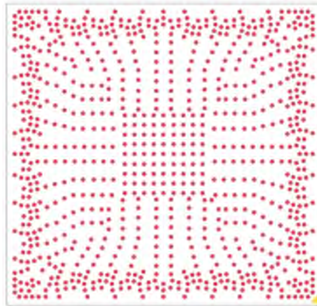
The Intel® Platform Controller Hub SKUs listed in the products affected table below will undergo the following changes:

The Platform Controller Hub packages shipping from Intel currently meet the JEDEC high temperature flatness. However, based on SMT assessments that were performed at Intel, we have confirmed additional SMT margin beyond the JEDEC high temperature flatness, up to new -140um max. This change will be reflected on the Platform Controller Hub Package Mechanical Drawing (PMD).

Customer Actions:
If a customer is currently using a 5 mil thick stencil for SMT, then there should be no stencil change required, assuming the solder paste volume targets are being met. Therefore, please confirm your current 5 mil stencil design follows the current stencil design, shown below, and is meeting the solder paste volume targets.

Current 5-Mil Thick Stencil Design
(No change to this stencil design -> Customers should double check the paste volume target is currently being met with their current stencil design)

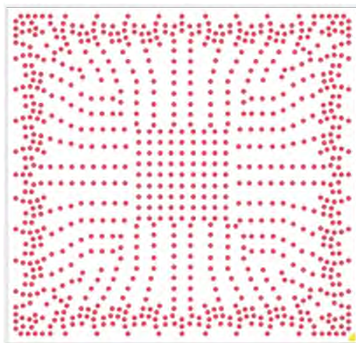
Stencil Thickness: 127 µm (5 mils) Option			
Stencil Design (Aperture)	Over-printing	Solder Paste Volume Target	Area Ratio
• All Pads (Red) 317.5 µm Circle (12.5 mils)	Yes	0.0101 cu. mm (614 cu. mils)	0.63



However, if a customer is currently using a 4 mil thick stencil for SMT, then their current stencil design must be changed to a new 4 mil stencil design with larger stencil apertures, in order to deposit more paste volume onto the customer's motherboard (from **current** 380 cu. mils to **new** 590 cu. mils per pad -> 210 additional cu. mils per pad with the new stencil). The new 4 mil thick stencil design can be phased-in before the package flatness transition date, as this new design is backwards compatible (transparent) with current packages.

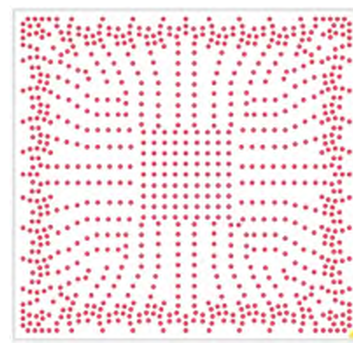
Current 4-Mil Thick Stencil Design

Stencil Thickness: 101.6 µm (4 mils) Option			
Stencil Design (Aperture)	Over-printing	Solder Paste Volume Target	Area Ratio
• All Pads (Red) 279 µm Circle (11 mils)	Varies	0.00623 cu. mm (380 cu. mils)	0.69



New 4-Mil Thick Stencil Design

Stencil Thickness: 101.6 µm (4 mils) Option			
Stencil Design (Aperture)	Over-printing	Solder Paste Volume Target	Area Ratio
• All Pads (Red) 348 µm Circle (13.7 mils)	Yes	0.0097 cu. mm (590 cu. mils)	0.86



Please also see these MAS (Manufacturing Advantage Services) documents for more information:

- Manufacturing with the Intel® Mobile Platforms Code Named Cannon Lake (RDC doc# 574188)
- Manufacturing with the Intel® Mobile Platforms Code Named Coffee Lake (RDC doc# 574187)

How to Identify Impacted Materials:

Customers can refer to the bag seal date that is present on Box ID label. One example is shown in figure below. Any bag seal date after the post conversion date is impacted by this PCN.

The bag seal date also can be found at MBB label. One example is shown in figure below. Any bag seal date after the post conversion date is impacted by this PCN.

Customer Impact of Change and Recommended Action:

The customers will get parts with higher high (reflow) temperature coplanarity. The change will be documented in the Package Mechanical Drawing (PMD) and Manufacturing Advantage Services (MAS). The MAS will also have a new stencil recommendation to manage the risk for parts with higher coplanarity spec. The customers have until November 26th, 2018 to update their stencil. Before that date the parts with higher coplanarity will not be shipped. However based on how the customers manage the builds there could be a mixture of old and new inventory. However if the customers use the new stencil, they can still build the old inventory with no incremental issues.

Please contact your local Intel Field Sales Rep if you have any further questions about these changes.

Products Affected / Intel Ordering Codes:

Marketing Name	Platform	Product Code	S-Spec	MM#
Intel® FH82B360 Platform Controller Hub.	DESKTOP	FH82B360	S R408	964265
Intel® FH82C242 Platform Controller Hub	Multiple Values	FH82C242	S R40C	964270
Intel® FH82C246 Platform Controller Hub.	Multiple Values	FH82C246	S R40A	964268
Intel® FH82CM246 Platform Controller Hub	MOBILE	FH82CM246	S R40E	964272
Intel® FH82H310 Platform Controller Hub	DESKTOP	FH82H310	S RCXY	978829
Intel® FH82H310 Platform Controller Hub.	DESKTOP	FH82H310	S R409	964267
Intel® FH82H370 Platform Controller Hub.	DESKTOP	FH82H370	S R405	964247
Intel® FH82HM370 Platform Controller Hub	MOBILE	FH82HM370	S R40B	964269
Intel® FH82Q370 Platform Controller Hub.	DESKTOP	FH82Q370	S R404	964246
Intel® FH82QM370 Platform Controller Hub	MOBILE	FH82QM370	S R40D	964271
Intel® FH82Z390 Platform Controller Hub	MOBILE	FH82Z390	S R406	964256

PCN Revision History:

Date of Revision:	Revision Number:	Reason:
August 8, 2018	00	Originally Published PCN
August 29, 2018	01	Reason for Revision: Changed implementation date, added one product, and added bag seal date pictures.
September 27, 2018	02	Extending Date Customer Must be Ready to Receive Post-Conversion Material milestone.

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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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