Product Change Notification

105975 – 01

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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 #: **105975 - 01**

Change Title: **Intel® Embedded Processors and Chipsets, PCN 105975-01, Product Material, Conversion to Lead (Pb)-Free Products, Reason for Revision: Extend Last Time Order and Last Time Ship Dates, Update Affected Product List**

Date of Publication: **March 27, 2006**

Key Characteristics of the Change:

Product Material

Forecasted Key Milestones:

Date of Qualification Data Availability:	Feb 28, 2006
Date Customer Must be Ready to Receive Post-Conversion Material:	Sept 29, 2007
Date Orders will be Accepted for Post-Conversion Material:	Feb 28, 2006
Last Order date for non-Pb-Free Material	Mar 30, 2007
Last Ship date for non-Pb Free Material	Sept 28, 2007

Description of Change to the Customer:

Reason for Revision: Intel is Extending the Last Time Order and Last Time Ship Dates per the Forecasted Key Milestones above, Update Affected Product List.

The products listed in table below will undergo the following changes in order to be compliant with Intel’s Pb-free/RoHS Initiative:

1. SLI (Second Level Interconnect) solder ball material will change from Sn/Pb to Sn/Ag/Cu alloy.
2. DSC (Die Side Capacitor) attachment process on FCBGA packages will change to Pb-free paste process
3. Products will be Pb-free board process compatible and peak reflow temperature will increase to 260°C.
4. Products Level 1 name and mm# will change as shown in the Products Affected Table
5. A new marking “e1” with a circle around it will be added per Intel Marking/Labeling Specification #CG-1034 to indicate that the product SLI is now Pb-free*

* Note, Products in FCBGA packaging are not totally Pb-free, but are RoHS compliant. The first level interconnect uses high lead material which is exempt by RoHS.

Customer Impact of Change and Recommended Action:

1. Pb-free SLI products require new Pb-free board assembly process. Each customer should develop their own board profile envelope appropriate to their equipment, material and products.
2. The new products are not “drop in” or backward compatible with the conventional leaded board process. Intel recommends running solder joint evaluations in case Pb-free SLI parts are to be used in a leaded board assembly process.
3. The appearance of Sn/Ag/Cu solder balls may be grainy and dull when compared to shiny Sn/Pb balls. This may require an adjustment to vision system hardware and software.

Due to this change we will start to provide a distinctive symbol and label which identify those components or devices that are totally Pb-free and/or are capable of providing or have Pb-free 2nd level interconnects.

Lead version of these parts will no longer ship after September 28, 2007.

- Note that Lead (Pb) has not been intentionally added, but may still exist as an impurity below 1000 ppm.

Label as it will appear after change:

STD INTERMEDIATE BOX LABEL

(P) CUST PROD:

(1B) BOX: XX000013

(V) SUPPLIER: 04195 (M): (C):

(1P) IPN: ET80960JT10016

(S) SPEC: 864017 (30P) MM#: 864017

(1T) LOT: L4451234 (Q) QTY: 700 (9D) DATE: 0445

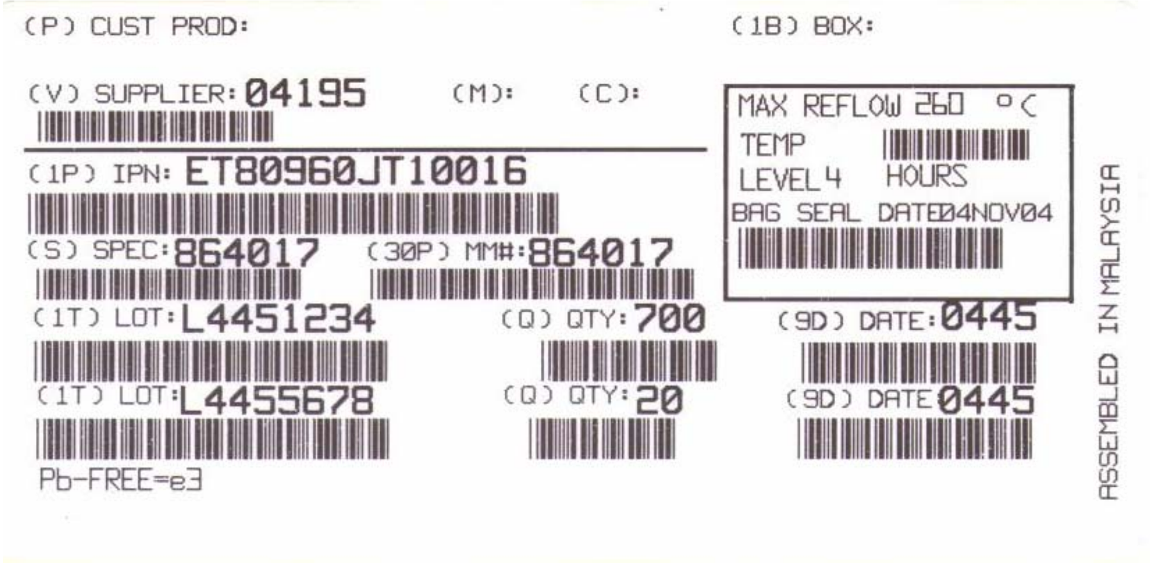
(1T) LOT: L4455678 (Q) QTY: 20 (9D) DATE 0445

Pb-FREE=e3

MAX REFLOW 260 °C
TEMP
LEVEL 4 HOURS
BAG SEAL DATE04NOV04

ASSEMBLED IN MALAYSIA

STD INTERMEDIATE BAG LABEL



(P) CUST PROD:

(1B) BOX:

(V) SUPPLIER: 04195 (M): (C):

(1P) IPN: ET80960JT10016

(S) SPEC: 864017 (30P) MM#: 864017

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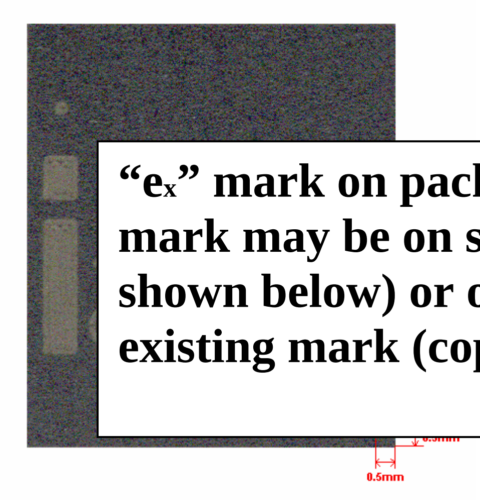
ASSEMBLED IN MALAYSIA



“e_x” mark on packages. Pb-free mark may be on separate line (as shown below) or on last line of existing mark (copyright line)

The following categories are meant to describe the Pb-free 2nd level interconnect (see figure 1) terminal
finish/material of components and/or the solder paste/solder used in board assembly.
e1 - SnAgCu (shall not be included in category e2)
e2 - Sn alloys with no Bi or Zn excluding SnAgCu
e3 - Sn
e4 - Precious metal (e.g., Ag, Au, NiPd, NiPdAu) (no Sn)
e5 - SnZn, SnZnx (no Bi)
e6 - contains Bi
e7 - low temperature solder (≤ 150 °C) containing Indium (no Bi)

The marketing package designator will also change to reflect Pb-free packaging. In order to facilitate this change a new MM# has been created for the affected products. Ceramic products are already Pb-free so the package designator will not change. However, the part mark will change to reflect Pb-free product. Please see table below.

Products Affected / Intel Ordering Codes:

Component Product Table

Pre-Conversion Product Code	Pre-Conversion MM#	Post-Conversion MM#	Post-Conversion Product Code
FW82801BA S L5WK	838027	864013	NH82801BA SL7UU
FW82815 S L5NQ	836138	864020	NH82815 SL7UT
RJ80530KZ933512	849162	863671	NK80530KZ933512S L7T3
RJ80530KZ800512	848638	863863	NK80530KZ800512S L7T4
RJ80530VY650256	846835	863865	NK80530VY650256S L7UJ
RJ80530VY400256	850928	863867	NK80530VY400256S L7UK
FW82443BX S L2VH	818428	867048	NH82443BXE S L85Y
FW82371EB S L37M	820763	867346	NH82371EBE S L87F
FW82810E S L3MD	825101	865249	NH82810E S L7XL
FW82810 S L3P7	825102	865225	NH82810 S L7XK
FW82443MX100 S L3N4	824918	869847	NH82443MX100 SL8BQ
FW82801CA SL632	843132	868447	NH82801CA S L8AN
RG82870P2 SL6SU	851130	868413	JG82870P2 SL8AM
RGE7501MC SL6NV	851316	868411	JGE7501MC SL8AL
RJ80535GC0251M SL6F7	848229	869601	LE80535GC0251M S L8BH
RJ80535NC013512S L6NM	851247	870148	LE80535NC013512 SL8FM
RJ80535LC0051M SL6NC	851287	870139	LE80535LC0051M SL8FL
RJ80535VC600512 SL7GE	860721	870152	LE80535VC600512 SL8FN
RG82845 S L5YQ	838970	869493	JG82845 S L8D8
RG82845E SL66N	845714	869485	JG82845E L8D9
FW82801ES L5AW	834851	871695	NH82801E SL8LG

Reference Documents / Attachments:

Document:	**Location #:**
Intel Pb-free Site	http://www.intel.com/research/silicon/leadfree.htm
MDDS	http://www.intel.com/design/PACKTECH/packbook.htm
JESD97	http://www.jedec.org/download/default.cfm

PCN Revision History:

Date of Revision:	Revision Number:	Reason:
February 28, 2006	00	Originally Published PCN
March 27, 2006	01	Extend Last Time Order and Last Time Ship Dates, Update Affected Product List