Product Change Notification

105988 – 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 #:	**105988 - 01**
Change Title:	**Intel® Network Processors, PCN 105988-01, 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. Product Code 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):

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

(1P) IPN: ET80960JT10016

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

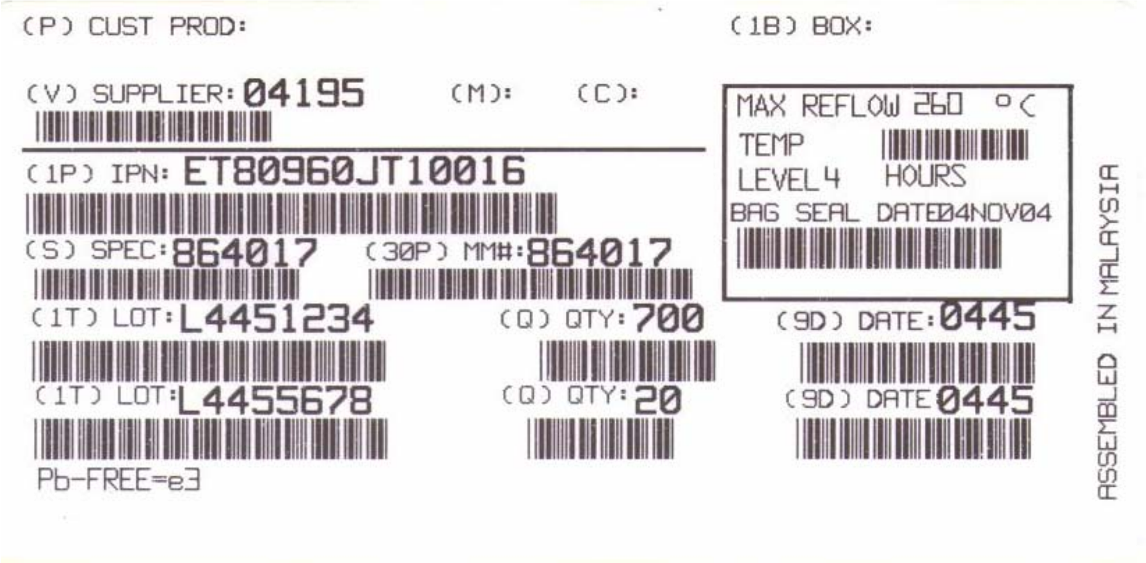
(1T) LOT: L4451234 (Q) QTY: 700 (9D) DATE: 0445

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

Pb-FREE=e3

ASSEMBLED IN MALAYSIA

STD INTERMEDIATE BAG LABEL



(P) CUST PROD:

(1B) BOX:

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

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

(1P) IPN: ET80960JT10016

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

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

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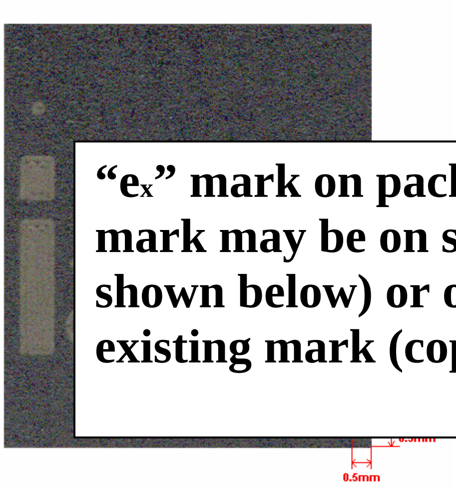
Pb-FREE=e3

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 Product Code	Post-Conversion MM#
GCIXF440AC	831001	QCIXF440AC	865555
GCIXF440ACT	838092	QCIXF440ACT	865560
GCIXF1002ED	832414	QCIXF1002ED	865551
GCIXF1002EDT	838952	QCIXF1002EDT	865553
GCIXP1200GA	839427	QCIXP1200GA	863760
GCIXP1200GB	839428	QCIXP1200GB	863761
GCIXP1200GC	839429	QCIXP1200GC	863762
GCIXP1240AB	837151	QCIXP1240AB	863764
GCIXP1240AC	837152	QCIXP1240AC	863769
GCIXP1250BA	837411	QCIXP1250BA	864648
GCIXP1250BAT	837416	QCIXP1250BAT	864651
GCIXP1250BB	837412	QCIXP1250BB	864649
GCIXP1250BC	837414	QCIXP1250BC	864650
RPIXP2400BA	850813	NPIXP2400BA	865906
RPIXP2400BAT	850811	NPIXP2400BAT	865907
RPIXP2400BB	850735	NPIXP2400BB	865905
RPIXP2400BBT	850812	NPIXP2400BBT	865908
RPIXP2800BA	862117	NPIXP2800BA	865540
RPIXP2800BB	855650	NPIXP2800BB	865539
RPIXP2800BC	862907	NPIXP2800BC	865538
RPIXP2850BA	862113	NPIXP2850BA	865537
RPIXP2850BB	862114	NPIXP2850BB	865536
RPIXP2850BC	862910	NPIXP2850BC	865535
RPIXP2805AA	876170	NPIXP2805AA	875116
RPIXP2805AB	876174	NPIXP2805AB	875115
RPIXP2805AC	876178	NPIXP2805AC	875117
RPIXP2805AD	876181	NPIXP2805AD	875118
RPIXP2855AA	876171	NPIXP2855AA	875823
RPIXP2855AB	876175	NPIXP2855AB	875825
RPIXP2855AC	876179	NPIXP2855AC	875824
RPIXP2855AD	876180	NPIXP2855AD	875826
FWIXP425BB	852264	PRIXP425BB	869046
FWIXP425BC	852266	PRIXP425BC	869083
FWIXP425BD	852279	PRIXP425BD	866108
FWIXP420BB	852278	PRIXP420BB	866260
FWIXP420BC	860131	PRIXP420BC	869743
FWIXP420BD	860130	PRIXP420BD	869566
FWIXP420BL SL7K2	861092	PRIXP420BL	877663
FWIXP421BB	852277	PRIXP421BB	869740
FWIXP422BB	852276	PRIXP422BB	869384
FWIXP423BB	866246	PRIXP423BB	869741
FWIXP423BD	877666	PRIXP423BD	879059
GWIXP420BBT	860087	EWIXP420BBT	879064
GWIXP425BBT	852267	EWIXP425BBT	867991

GWIXP425BCT	852271	EWIXP425BCT	873659
GWIXP425BDT	852272	EWIXP425BDT	866109
GWIXP465BAE	881422	EWIXP465BAE	881441
GWIXP465BAD	881431	EWIXP465BAD	881442
GWIXP460BAD	881432	EWIXP460BAD	881443
GWIXP455BAD	881433	EWIXP455BAD	881444
GWIXP455BAC	881435	EWIXP455BAC	881445
GWIXP455BAB	881436	EWIXP455BAB	881446
GWIXP465BADT	881438	EWIXP465BADT	881454

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

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