



Integrated Device Technology, Inc.
6024 Silver Creek Valley Road, San Jose, CA 95138

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: B1311-01 DATE: December 24, 2013		MEANS OF DISTINGUISHING CHANGED DEVICES: ☒ Product Mark Changed in orderable part# ☐ Back Mark ☐ Date Code ☐ Other													
Product Affected: 89HT0816P (Refer to Attachment I for the affected part#)															
Date Effective: March 24, 2014															
Contact: IDT PCN DESK	Attachment: ☒ Yes ☐ No														
E-mail: pcndesk@idt.com	Samples: Contact your local sales representative for sample and datasheet requests.														
DESCRIPTION AND PURPOSE OF CHANGE: <table border="0"><tr><td>☐ Die Technology</td><td rowspan="2">This notification is to advise our customers that IDT has qualified a new die revision to address the device errata. The device die revision will change from Rev YB to Rev YD.</td></tr><tr><td>☐ Wafer Fabrication Process</td></tr><tr><td>☐ Assembly Process</td><td rowspan="4">There will be a change in ordering part number and device top mark. There is no change to die technology/process. The new die revision is fully hardware and software compatible with the previous revision.</td></tr><tr><td>☐ Equipment</td></tr><tr><td>☐ Material</td></tr><tr><td>☐ Testing</td></tr><tr><td>☐ Manufacturing Site</td><td rowspan="2">Please see attachment for details.</td></tr><tr><td>☐ Data Sheet</td></tr><tr><td>☒ Other - Die Revision Change</td><td></td></tr></table>			☐ Die Technology	This notification is to advise our customers that IDT has qualified a new die revision to address the device errata. The device die revision will change from Rev YB to Rev YD.	☐ Wafer Fabrication Process	☐ Assembly Process	There will be a change in ordering part number and device top mark. There is no change to die technology/process. The new die revision is fully hardware and software compatible with the previous revision.	☐ Equipment	☐ Material	☐ Testing	☐ Manufacturing Site	Please see attachment for details.	☐ Data Sheet	☒ Other - Die Revision Change	
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☒ Other - Die Revision Change															
RELIABILITY/QUALIFICATION SUMMARY: There is no change in die technology/process.															
CUSTOMER ACKNOWLEDGMENT OF RECEIPT: IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable. IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.															
Customer: _____	☐ Approval for shipments prior to effective date.														
Name/Date: _____	E-Mail Address: _____														
Title: _____	Phone # /Fax #: _____														
CUSTOMER COMMENTS: _____															
IDT ACKNOWLEDGMENT OF RECEIPT:															
RECD. BY: _____		DATE: _____													



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ATTACHMENT I - PCN #: B1311-01

PCN Type: Die Revision Change

Data Sheet Change: No

Detail of Change:

This notification is to advise our customers that IDT has qualified a new die revision to address the device errata. The device die revision will change from Rev YB to Rev YD.

There will be a change in the ordering part number and device top mark. There is no change to die technology/process. The new die revision is fully hardware and software compatible with the previous revision.

The new die revision will address the known errata item as shown in Table 1.

Table 1

Errata Item	Affected Devices	"YB" Revision	"YD" Revision
Hot Reset in cascaded mode may not work	All	The use of the cascaded mode of Retimer may result in a deadlock condition.	Fixed
EQCONST.SLOWEQ default setting may not result in the best EQ	All	The default setting of the Slow EQ field of the EQCONST register may result in sub-optimal link quality.	Fixed
Port leaves link disabled state in 2ms without waiting for exit from EI	All	Premature exit in 2ms from link disabled state may cause unpredictable system behavior.	Fixed
Speed change failure results in Gen1 only training in some cases	All	During link training process the Retimer port could miss the speed change, and the speed change attempt fails.	Fixed
L0s to L0 transition may send transmit unaligned data (Gen1/2 only)	All	Transitions from L0s to L0 may result in unaligned data being transmitted which may lead to Recovery.	Fixed
PCTL.USESKPLSFR default value needs to be changed	All	If the LFSR value happens to be bad this may result in erroneous behavior in the Retimer.	Fixed
Link may end up at Gen1 speeds when two retimers are cascaded	All	Misalignment during de-skewing process may result in link failure which may result in the link ending up at Gen1 speed.	Fixed

Note: please refer to the device errata document for full detail.



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Table 2

Old Ordering Part Number	New Ordering Part Number
89HT0808PYBAB	89HT0808PYDAB
89HT0808PYBAB8	89HT0808PYDAB8
89HT0808PYBABG	89HT0808PYDABG
89HT0808PYBABG8	89HT0808PYDABG8
89HT0808PYBABGI	89HT0808PYDABGI
89HT0808PYBABGI8	89HT0808PYDABGI8
89HT0808PYBABI	89HT0808PYDABI
89HT0808PYBABI8	89HT0808PYDABI8
89HT0812PYBBC	89HT0812PYDBC
89HT0812PYBBC8	89HT0812PYDBC8
89HT0812PYBBCG	89HT0812PYDBC8G
89HT0812PYBBCG8	89HT0812PYDBC8G8
89HT0812PYBBCGI	89HT0812PYDBC8GI
89HT0812PYBBCGI8	89HT0812PYDBC8GI8
89HT0812PYBBCI	89HT0812PYDBC8I
89HT0812PYBBCI8	89HT0812PYDBC8I8
89HT0816PYBBC	89HT0816PYDBC
89HT0816PYBBC8	89HT0816PYDBC8
89HT0816PYBBCG	89HT0816PYDBC8G
89HT0816PYBBCG8	89HT0816PYDBC8G8
89HT0816PYBBCGI	89HT0816PYDBC8GI
89HT0816PYBBCGI8	89HT0816PYDBC8GI8
89HT0816PYBBCI	89HT0816PYDBC8I
89HT0816PYBBCI8	89HT0816PYDBC8I8

Qualification Test Plan and Result:

Qualification Plan #: QI-13-04
Qual Vehicle: 89HT0816PYDZDBC8G

Test Description	Test Method (Latest specs in effect)	Test Results (SS / Rej)
Operating Lifetest (Dynamic) 125°C@500 Hrs	JESD22-A108	0/77
ESD: Human Body Model @ 2000V	JESD22-A115	0/3
ESD: Charged Device Model @ 500V	JESD22-C101	0/3
Latch-up	JESD78	0/6

Note: * Test require moisture pre-conditioning sequence per JEDEC J-STD-020